The implementation and enforcement of the legal environmental health mandate in South Africa

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ABSTRACT

The environment is a vital determinant of the human condition. In South Africa many people's health, well-being, and quality of life suffer from environmental health hazards. Over the last two decades government adopted numerous laws, regulations, and policies that completely altered the legal landscape insofar environmental health is concerned. In so doing government among others transformed the public health system and established a new environmental management system. Yet these developments do not seem to have had the desired effect - many environmental conditions are still in a dire state, and some are even declining.

This study therefore investigates and determines the implementation and enforcement of the legal environmental health mandate in South Africa. Towards this end the researcher develops practical definitions of environmental health and environmental health governance, records the influences that international legal instruments have on the governance of environmental health in South Africa, tracks the historical roots of and identifies the legal environmental health mandate that gives rise to environmental health governance in its current form, and evaluates the functions and powers of the personnel involved in the delivery of environmental health services.

The objective of this study is achieved by reviewing legal materials such as legislation, case law, textbooks, reports, and other academic works. Since the governance of environmental health cannot be divorced from its multidisciplinary character, other non-legal materials are also reviewed where appropriate.

The study reveals that the practice of environmental health is not co-ordinated, that the functions and powers of governmental bodies and personnel overlap in some instances, that role-clarification is not always clear or appropriate, that the provisions of some laws conflict with one another, that bureaucratic obstacles can hamper personnel from performing their functions by depriving them of essential governance tools, and that governmental bodies have to police themselves in some instances.

Keywords: environmental health governance, environmental health practice, national health act, national environmental management act, constitutional environmental health right, municipal health services, environmental health services, environmental health practitioner, environmental management inspector.

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LIST OF ABBREVIATIONS

ACHPR	African Charter on Human and Peoples' Rights (1981)
Agenda 21	United Nations Agenda 21 - United Nations Programme of Action from Rio Earth Summit (1992)
APPA	Atmospheric Pollution Prevention Act 45 of 1965
APSA	Agricultural Product Standards Act 119 of 1990
AU	African Union
Bareki-case	Bareki NO v Gencor Ltd
Basel Convention	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989)
Beja-case	Beja v Premier of the Western Cape
Blue Moonlight-case	City of Johannesburg Metropolitan Municipality v Blue Moonlight Properties 39 (Pty) Ltd
Bon Vista Mansions-case	Residents of Bon Vista Mansions v Southern Metropolitan Local Council
BP Southern Africa-case	BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs
Brundtland Report	Report of the World Commission on Environment and Development: Our Common Future 42/427, UN Doc A/42/427 (1987)
Buildings Act	National Building Regulations and Building Standards Act 103 of 1977
CMA	Catchment management agency
Constitution	Constitution of the Republic of South Africa, 1996
CPA	Criminal Procedure Act 51 of 1977
Draft EH Regs	Draft Regulations Relating to Environmental Health (2022)
Doha Amendment	Doha Amendment to the Kyoto Protocol (2012)

ECA	Environment Conservation Act 73 of 1989
EHP	Environmental Health Practitioner
EHP Norms and Standards	National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners (2015)
EHP Regulations	Regulations Defining the Scope of the Profession of Environmental Health Practitioners (2009)
EIP	Environmental Implementation Plan
EMI	Environmental Management Inspector
EMP	Environmental Management Plan
FAO	Food and Agriculture Organization
Fedsure-case	Fedsure Life Assurance Ltd v Greater Johannesburg Transitional Metropolitan Council
FFAS Act	Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act 36 of 1947
First Certification-case	Ex Parte Chairperson of the Constitutional Assembly: in re Certification of the Constitution of the Republic of South Africa, 1996
Foodstuffs Act	Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972
Fuel Retailers-case	Fuel Retailers Association of Southern Africa v Director-General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province
Gauteng Tribunal-case	City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal
Gen Not	General Notice
GG	Government Gazette
Glenister-case	Glenister v President of the Republic of South Africa
GN	Government Notice

Greys Marine-case	Greys Marine Hout Bay (Pty) Ltd v Minister of Public Works
Grootboom-case	Government of the Republic of South Africa v Grootboom
Groundwork Trust-case	Trustees for the Time Being of Groundwork Trust v Minister of Environmental Affairs
Haz Act	Hazardous Substances Act 15 of 1973
Health Act	Health Act 63 of 1977
HIV	Human Immunodeficiency Virus
Housing Act	Housing Act 107 of 1997
HPA	Health Professions Act 56 of 1974
HTF Developers-case	HTF Developers (Pty) Ltd v The Minister of Environmental Affairs and Tourism
ICCPR	International Covenant on Civil and Political Rights (1966)
ICESCR	International Covenant on Economic, Social and Cultural Rights (1966)
IGO	Intergovernmental Organisation
IGRFA	Intergovernmental Relations Framework Act 13 of 2005
IHR Act	International Health Regulations Act 28 of 1974
IHRs	International Health Regulations (2005)
ILC	International Law Commission
IMATU-case	Independent Municipal and Allied Workers Union v President of the RSA
Interpretation Act	Interpretation Act 33 of 1957
Jacobs-case	Jacobs NO v Hylton Grange (Pty) Ltd
Joseph-case	Joseph v City of Johannesburg

Justice Alliance-case	Justice Alliance of South Africa v President of Republic of South Africa, Freedom Under Law v President of Republic of South Africa, Centre for Applied Legal Studies v President of Republic of South Africa
Kgetlengrivier-case	Kgetlengrivier Concerned Citizens v Kgetlengrivier Local Municipality
Khosa-case	Khosa v Minister of Social Development, Mahlaule v Minister of Social Development
Kyalami Ridge-case	Minister of Public Works v Kyalami Ridge Environmental Association
Kyoto Protocol	Kyoto Protocol to the United Nations Framework Convention on Climate Change (1998)
LAN	Local Authority Notice
Langeberg-case	Independent Electoral Commission v Langeberg Municipality
Le Sueur-case	R A Le Sueur v Ethekwini Municipality
Libreville Declaration	Libreville Declaration on Health and Environment in Africa (2008)
Luanda Commitment	Implementation of the Libreville Declaration on Health and Environment in Africa: Luanda Commitment (2010)
Maccsand-case	Maccsand (Pty) Ltd v City of Cape Town
Makwanyane-case	S v Makwanyane
Mazibuko-case	Mazibuko v City of Johannesburg
MDGs	Millennium Development Goals
Meat Act	Meat Safety Act 40 of 2000
MEC	Member of the Executive Council
Minamata Convention	Minamata Convention on Mercury (2013)
MinMEC	Ministers and Members of Executive Councils
MN	Municipal Notice

Municipal Structures Act	Local Government: Municipal Structures Act 117 of 1998
Municipal Systems Act	Local Government: Municipal Systems Act 32 of 2000
Moonlight-case	City of Johannesburg Metropolitan Municipality v Blue Moonlight Properties 39 (Pty) Ltd
NDALR	National Department of Agriculture, Land Reform and Rural Development
NDFFE	National Department of Forestry, Fisheries and the Environment
NDHS	National Department of Human Settlements
NDWS	National Department of Water and Sanitation
NDOH	National Department of Health
NDP	National Development Plan 2030: Our Future - Make it Work (2011)
NEHP	National Environmental Health Policy (2013)
NEHS	National Environmental Health Strategy (2016-2020)
NEMAQA	National Environmental Management: Air Quality Act 39 of 2004
NEMWA	National Environmental Management: Waste Act 59 of 2008
NEMA	National Environmental Management Act 107 of 1998
New Clicks-case	Minister of Health v New Clicks South Africa (Pty) Ltd
NHA	National Health Act 61 of 2003
NHAA	National Health Amendment Act 12 of 2013
Nokotyana-case	Nokotyana v Ekurhuleni Metropolitan Municipality
NPFNS	National Policy on Food and Nutrition Security (2014)
NPHISA Act	National Public Health Institute of South Africa Act 1 of 2020

NPHISA Bill	National Public Health Institute of South Africa Bill (2017)
NSDA	Negotiated Service Delivery Agreement: A Long and Healthy Life for All South Africans (2010-2014)
NWA	National Water Act 36 of 1998
OHSA	Occupational Health and Safety Act 85 of 1993
Ottawa Charter	Ottawa Charter for Health Promotion (1986)
PAMA	Public Administration Management Act 11 of 2014
PG	Provincial Gazette
PGE	Provincial Gazette Extraordinary
PHA	Public Health Act 36 of 1919
PHC	Primary Health Care
PN	Provincial Notice
Premier WC-case	Premier, Western Cape v President of the Republic of South Africa
PSA	Public Service Act 103 of 1994
RDP	Reconstruction and Development
Rio Declaration	Rio Declaration on Environment and Development (1992)
Rio Political Declaration	Rio Political Declaration on Social Determinants of Health (2011)
Rotterdam Convention	Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998)
SADC Health Protocol	Protocol on Health in the Southern African Development Community (1999)
SADC	Southern African Development Community
SANS	South African National Standards

SARFU-case	President of the Republic of South Africa v South African Rugby Football Union
Save the Vaal-case	Director: Mineral Development, Gauteng Region and Sasol Mining (Pty) Ltd v Save the Vaal Environment
SAWIC	South African Waste Information Centre
SDGs	Sustainable Development Goals
SEMA	Specific Environmental Management Act
Soobramoney-case	Soobramoney v Minister of Health (KwaZulu-Natal)
SPS Agreement	Agreement on the Application of Sanitary and Phytosanitary Measures, Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations - Annex 1A (1994)
State Responsibility Articles	Draft Articles on Responsibility of States for Internationally Wrongful Acts (2001)
Stockholm Convention	Stockholm Convention on Persistent Organic Pollutants (2001)
Stockholm Declaration	Stockholm Declaration of the United Nations Conference on the Human Environment (1972)
Provincial Legislature-case	Premier: Limpopo Province v Speaker: Limpopo Provincial Legislature
TAC-case	Minister of Health v Treatment Action Campaign
TB	Tuberculosis
Tobacco Act	Tobacco Products Control Act 83 of 1993
Transboundary Harm Articles	Draft Articles on Prevention of Transboundary Harm from Hazardous Activities (2001)
Transforming Our World	Transforming Our World: the 2030 Agenda for Sustainable Development (2015)
UDHR	Universal Declaration of Human Rights (1948)
UN Charter	United Nations Charter
UN	United Nations

UNCHR	United Nations Commission on Human Rights
UNDP	United Nations Development Programme
UN Environment	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change (1992)
UPM-case	Unemployed Peoples Movement v Premier, Province of the Eastern Cape
WHO	World Health Organization
WHO Constitution	Constitution of the World Health Organization (1946)
WSA	Water Services Act 108 of 1997
WTO	World Trade Organization

Chapter 1: Introduction

1.1 Background

As part of its vision statement in the *National Development Plan 2030: Our Future - Make it Work* (2012) (hereafter *NDP*), government expresses that "[w]e acknowledge that each and every one of us is intimately and inextricably of this earth with its beauty and life-giving sources; that our lives on earth are both enriched and complicated by what we have contributed to its condition."[1] This basically captures the essence of the environmental health concept. People inevitably harm the environment merely by living, and while the environment deteriorates, it in turn becomes more harmful to people.[2] The latest research undertaken by the World Health Organization (hereafter WHO) indicates that 13.7 million people die annually as a result of living or working in an unhealthy environment – that is one out of every four deaths worldwide.[3] The stark reality therefore is that the condition of the environment is a vital if not the most important determinant of the human condition,[4] which also means that "human beings can only be healthy in a healthy environment".[5]

This being said, in developing states such as South Africa, people's health suffer even more from environmental hazards compared to developed states.[6] Government's *National Environmental Health Policy* (2013) (hereafter *NEHP*) reveals that an alarming 16% of all human deaths in South Africa could be attributed to the state of the environment,[7] and the *National Environmental Health Strategy* (2016-2020) (hereafter *NEHS*) echoes much of the same.[8] Over the last two decades, however, the health of the population has worsened, life expectancy has declined,

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1 See the vision statement in the *NDP* 21.
2 *NDP* 21; MacArthur and Bonnefoy *Environmental Health Services in Europe 1* 1; Streimikiene 2015 *Intellectual Economics* 67-78.
3 WHO 2018 https://bit.ly/3tNter1; Prüss-Üstün *et al Preventing Disease through Healthy Environments* x.
4 See for instance Smith *et al* 1999 *Epidemiology* 575.
5 CIEH *Agendas for Change* 7-9; MacArthur "Introduction to Environmental Health" 1-8.
6 Smith 2000 *Bulletin* 1156.
7 *NEHP* 20.
8 *NEHS* 7-8. See paras 1.1.1-1.1.8 below for more on the harmful effects that can be attributed to environmental risk factors.

and harmful environmental impacts have remained excessively high.[9] Viewed from a legal perspective this is rather perplexing considering that in the same period, government has made optimistic progress with the adoption of public health-related legislation, and environmental law reform has been significant. In the main this includes the *National Health Act* 61 of 2003 (hereafter *NHA*) that transformed the entire health system and the *National Environmental Management Act* 107 of 1998 (hereafter *NEMA*) that established a new management system for the environment; although this list also includes *many* other laws, regulations, and policies.[10] These laws and subsequent whole-system changes were also precipitated by the adoption of the *Constitution of the Republic of South Africa*, 1996 (hereafter *Constitution*) that entrenched a fundamental right to an environment that is not harmful to people's health or well-being.[11] Yet it seems that the altered legal landscape that included the adoption of a comprehensive range of laws and policies in the health and environmental sectors did not necessarily improve the status of environmental health in South Africa as would be expected,[12] suggesting that there is an issue with the implementation and enforcement of the legal environmental health mandate, or with the content of said laws themselves.[13] Some commentators refer to this reality as the "paradox of apparent progress yet worsening health outcomes", and the "gap between the promise of transformation and its practice".[14]

To illustrate this problem, or to set the scene as it were, some environmental conditions and their impacts are outlined below. They are divided into the following categories for practicality's sake: water quality and sanitation, foodstuffs, waste and land contamination, housing, communicable diseases and vectors, air quality,

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9 Bradshaw 2008 *SAHE* 51; *Negotiated Service Delivery Agreement: A Long and Healthy Life for All South Africans* (2010-2014) 5 (hereafter *NSDA*); Mathee 2011 *JPHP* 37-43; *DEA Strategic Plan* (2014-2019) 6; paras 1.1.1-1.1.8 below.

10 As will become clear from this research, the sheer volume of all the legal developments may even be partly to blame for the complexity of the legal environmental health arena - see para 4.3 below.

11 See ss 2, 24(a) of the *Constitution*; para 4.2 below. Recent examples of the interpretation of s 24(a) include *Trustees for the Time Being of Groundwork Trust v Minister of Environmental Affairs* (unreported) 2022 ZAGPPHC 2 (18 March 2022) (hereafter *Groundwork Trust*-case); Du Plessis 2018 *SAJHR* 191-208.

12 The *NEHP*, for instance, was drafted to be a "piece of wire that will assist in capitulating environmental health status to great heights" - *NEHP* 4.

13 See para 1.5 below.

14 Schaay, Sanders and Kruger *Overview of Health Sector Reforms in SA* 5-6.

chemicals and hazardous substances, and climate change.[15]

1.1.1 Water quality and sanitation

According to the National Integrated Water Information System that was last updated in May 2021, approximately 12% of the population does not have access to water of an acceptable standard,[16] and approximately 20% of the population does not have access to sanitation services of an acceptable standard.[17] The latest Blue Drop Report that was published in 2022 indicates that 34% of the country's water supply systems reside in the high and critical risk categories as far as their overall status is concerned.[18] However more alarming is that 60% of the water supply systems do not comply with the SANS 241:2015 microbiological standards and 77% do not comply with SANS 241:2015 chemical standards, and this presents serious acute and potential long-term health risks to consumers.[19] According to the latest Green Drop Report that gives account of the country's wastewater systems, none of the systems were awarded green drop certification and 88% are in a crucial state.[20] Where effluent is concerned, which is important to safeguard the health of downstream users, only 14% of the systems achieved compliance with microbiological quality standards, and only 15% achieved compliance with chemical and physical quality standards.[21] In addition, 58% of the public works regions obtain worse scores compared to 2013, meaning that they deteriorated over the

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15 These categories mimic the respective environmental health services listed in s 1 of the *National Health Act* 61 of 2003, and this study will subsequently only focus on these as found in law.

16 This decreased from 10% in 2016 - see DWS 2022 https://bit.ly/3uBqkF4; SAHRC *Report on the Right to Access Sufficient Water and Decent Sanitation* 38-39; Stats SA *The State of Basic Service Delivery in South Africa* 33.

17 DWS 2022 https://bit.ly/3uBqkF4; SAHRC *Report on the Right to Access Sufficient Water and Decent Sanitation* 39-40; Stats SA *The State of Basic Service Delivery in South Africa* 50. Note though that 95.9% of people have access to some form of sanitation service but not all of those are of an acceptable standard - Glazewski and Young "Water Law and the Environment" 2-8. For more on the availability and quality of water in South Africa - see DWS 2022 https://bit.ly/3uBqkF4.

18 DWS *Blue Drop Report 2022* 28-29. For more on the certification standards and assessment tools used in this regard - see DWS *Blue Drop Report 2022* 13-27.

19 DWS *Blue Drop Report 2022* 28-29. See also DWS *Blue Drop Report 2014* 2; De Klerk *Blue and Green Drop Project* 8.

20 DWA *Green Drop Report 2022* 8-10. See DWA *Green Drop Report 2022* 5-8 for more on the requirements to achieve green drop certification.

21 DWA *Green Drop Report 2022* 7, 23-25.

last decade.[22]

Access to basic water services is essential for good health and a lack thereof poses serious harm to people, and may even be deadly, especially where the young and elderly are concerned.[23] Adequate sanitation is so vital to the human condition that it has been voted in 2010 as the *most* important medical milestone since 1840.[24] Government has the responsibility to provide access to adequate water and sanitation services, yet despite the vital role that these services play with respect to people's health, in South Africa they are deteriorating and many are on the brink of collapse.[25] In order to address the current water crisis, government identified several critical actions that it intends to undertake between 2018-2030, which include the amalgamation of water-related legislation and an improvement in enforcement efforts.[26]

1.1.2 Foodstuffs

The consumption of food that is contaminated with pathogenic micro-organisms could be harmful to people because it may lead to food-borne disease, also known

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22 DWA *Green Drop Report 2022* 9; DWA *Green Drop Report 2013* 1-2; De Klerk *Blue and Green Drop Project* 21.

23 Mara *et al* 2010 *PLOS Medicine* 1; WHO *Guidelines for Drinking-water Quality* 1. In 2014 for example, three babies died because they consumed contaminated water, and five-hundred people fell ill to diarrhoea for the same reason. The Lekwa-Teemane Municipality was responsible for the provision of this water and a criminal case was subsequently opened against the municipal manager - SAPA 2014 http://bit.ly/1rmrdc4. Diarrhoea is among the top causes of death in the country - *NEHP* 3.

24 Mara *et al* 2010 *PLOS Medicine* 1.

25 Infrastructure is failing, water quality is declining, and the institutional landscape is overly complex - *National Water and Sanitation Master Plan: Volume 1* (2018) 1, 29-33; CSIR *Annual Report 2016/2017* 45; SAHRC *Report on the Right to Access Sufficient Water and Decent Sanitation* 55; DWA *Report on the Status of Sanitation Services* 16, 25-27; CER *Stop Treading Water* 6-19; Hofmeyr *Intergovernmental Response Measures to Address Failing Municipal Water Supply Services: A Legal Perspective* 7.

26 For more on these actions - see *National Water and Sanitation Master Plan: Volume 1* (2018) 43-44, 48-51. The regulation of water quality and sanitation services are discussed in more detail in para 4.3.2.3 below.

as food poisoning.[27] Contamination arises when unhygienic practices are followed during the production, processing, or preparation of food, especially in the case of raw food.[28] Food-borne diseases can cause cramps, vomiting, diarrhoea, fever, and sometimes even lead to death, particularly when children suffer from it.[29]

A wider range of micro-organisms is usually present in developing states, which suggests that people in South Africa are more susceptible to contract food-borne diseases.[30] The unprecedented listeriosis outbreak that has led to the death of at least 189 people between January 2017 and March 2018 clearly illustrates this point.[31] It is generally difficult to accurately estimate the burden of food-borne disease however, because such incidences are rarely reported.[32] It is nevertheless widely accepted that millions of people do in fact suffer from food-borne disease on a yearly basis,[33] and in principle these incidences could be reduced.[34]

Local government is tasked with the duty to monitor and inspect premises and facilities where foodstuffs are produced, handled, stored, processed, and distributed, and has to investigate incidences of food poisoning and complaints

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27 Taylor "Disease Processes in Foodborne Illness" 3-28; Meng and Doyle 2002 *Microbes and Infection* 395-397; FERG *WHO Initiative to Estimate the Global Burden of Foodborne Diseases* 11. For more on the different kinds of pathogenic micro-organisms - see Lampel, Al-Khaldi and Cahill *Bad Bug Book* 9-192. Foodstuffs-related health risks are not limited to food-borne diseases. In a study in 2013 for example, scientists found that 60% of all tested meat products contained DNA of animal species not listed on the labels, and mislabelling also poses health risks - M&G 2013 http://bit.ly/1sUoCZK. In another case children ate food from a school that contained pieces of glass and stone - SAPA 2014 http://bit.ly/1zWoK0I.

28 This may be because of a lack of regulation and education - Powell, Jacob and Chapman 2011 *Food Control* 817-818; Newell *et al* 2010 *IJFM* 4-5, 13-14; DOH *Food-borne Illnesses in Mpumalanga Province* 1-3.

29 Taylor "Disease Processes in Foodborne Illness" 3-28; Kuchenmüller *et al* 2009 *Eurosurveillance* 1-2.

30 Stein *et al* 2007 *PLOS NTDS* 3, 6; FERG *WHO Initiative to Estimate the Global Burden of Foodborne Diseases* 3; DOH *Food-borne Illnesses in Mpumalanga Province* 1.

31 NICD *Listeriosis Report 2018* 1-2.

32 Shonhiwa *et al* 2019 *IJID* 1-150; Smith *et al* 2007 *SAMJ* 1272.

33 DOH *Food-borne Illnesses in Mpumalanga Province* 1; Bisholo, Guhman and Haffejee 2018 *PHCFM* 1-5; Malangu and Ogunbanjo 2009 *SAJID* 14-16.

34 Food safety could be improved by fostering more health education and awareness and by enhancing the co-ordination and collaboration of the "multifaceted efforts of all role players involved in the production, processing, regulation, and preparation of food" - Du Toit and Venter 2005 *JFECS* 73. See for instance *Clinical Guidelines on Management and Control of Infectious Foodborne Diseases in South Africa* (2011); *Guidelines for an Environmental Health Officer (EHO) Engaged in the Evaluation of Food Premises within the Hazard Analysis Critical Control Point (HACCP) Principles* (2000) for more in this regard.

related thereto in order to reduce their potential health impacts.[35] Municipalities (local government) have to be authorised to conduct their food safety-related functions in their respective areas of jurisdiction however, and to date not all of them have been, which hampers their ability to perform this function.[36]

In principle contamination of food can also be reduced by compelling food handling enterprises to implement food management safety systems that comply with national standards, and even though a regulation was promulgated in 2003 for this purpose, it has still not been put it into practice by government.[37]

1.1.3 Waste and land contamination

Waste is a by-product of all human activities, and the growing population and rapid urbanisation are causing an increase in the generation of waste in South Africa.[38] If waste is not managed properly it can cause environmental degradation and pollution that could be harmful to people.[39] The potentially harmful effects of waste could be mitigated by following a waste management hierarchy which entails that the generation of waste has to be prevented in the first instance, and then re-used, recycled, and recovered, and should only be dumped as a last resort.[40]

A waste baseline report from 2012 indicates that 90% of all the waste that was generated in the reporting period was dumped in landfill sites.[41] But while the

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35 Sections 2-4, 11-14 of the *Foodstuffs, Cosmetics and Disinfectants Act* 54 of 1972; Agenbag and Balfour-Kaipa 2008 *SAHR* 155.

36 Sections 10(3)(b), 23 of the *Foodstuffs, Cosmetics and Disinfectants Act* 54 of 1972; para 4.3.4.3 below.

37 Section 2(a) of the *Regulations Relating to the Application of the Hazard Analysis and Critical Control Point System (HACCP System)* (2003); Fuller 2007 *SAJCN* 48-49; Donnelly 2018 http://bit.ly/2I1U2cH. The principal regulations relating to the permissible microbial content of foodstuffs in South Africa only refer to twelve categories of consumable items and does *not* prohibit the presence of listeria monocytogenes, the micro-organism that causes listeriosis. A number of other regulations that are published under various laws do prohibit microbial content that could cause harm to people though. See para 4.3.2.5 below for more on the regulation of food in South Africa.

38 *National Waste Management Strategy* (2020) 11; DEA *State of Waste Report 2018* 11; DEA *2nd South Africa Environment Outlook* 278-279.

39 Bosman, Alberts and Roos "Integrated Waste Management" 1056-1070; DEA *State of Waste Report 2018* 2.

40 DEA *2nd South Africa Environment Outlook* 279-280; *National Waste Management Strategy* (2020) 13-14; Bosman, Alberts and Roos "Integrated Waste Management" 1073-1085.

41 DEA *Draft National Waste Information Baseline Report* 19; DEA *2nd South Africa Environment Outlook* 285-297; DEA Draft *3rd South Africa Environment Outlook: Waste Management* 30, 35.

situation has slightly improved since then, the majority of waste is still disposed to landfill sites.[42] This indicates that millions of tonnes of waste are not managed in accordance with the waste management hierarchy on a yearly basis, which means that government is wasting the opportunity to reduce the potentially harmful impacts of waste by a large margin, and this trend will continue for the foreseeable future.[43]

The potential health and environmental risks posed by waste management activities and facilities are regulated through a licensing system, where licences may only be issued after the potential impact of such activities and facilities have been considered.[44] By 2012 only 43.6% of general landfill facilities have been licenced, which has apparently improved to 98% by 2016.[45] Yet many of those seemingly did not comply with the conditions of their licences.[46] According to the latest report published in 2018, 82% of all disposal facilities were less than 75% compliant, and none were 100% compliant.[47] This is significant not only because landfill sites promote the transmission of diseases and could cause serious harm to people if left unchecked,[48] but also because 90% of the unlicensed landfill sites are thought to be municipal landfill sites,[49] which exposes government as the biggest culprit of non-compliance in this regard.

Government also recognises among others that the current waste management infrastructure is outdated and the waste stream is becoming increasingly complex,

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42 This is according to the latest 2018 data - see DEA *State of Waste Report 2018* 48; *National Waste Management Strategy* (2020) 11; DEA Draft *3rd South Africa Environment Outlook: Waste Management* 30, 35.

43 DEA *State of Waste Report 2018* 48.

44 Sections 48-49 of the *National Environmental Management: Waste Act* 59 of 2008.

45 According to the South African Waste Information System a further 279 licences for landfill facilities have been issued between 2012-2018, and according to the national department responsible for environmental affairs a mere 15 out of 719 disposal sites were still unlicensed by 2016 - see DEA *State of Waste Report 2018* 48-53; SAWIC 2018 http://bit.ly/2kNdPop.

46 DEA *2nd South Africa Environment Outlook* 285; Godfrey 2008 *Waste Management* 1665; Environmental Affairs Portfolio Committee *Waste Management Colloquium with the Minister and Deputy Minister: Meeting Report* (14 March 2017).

47 DEA *State of Waste Report 2018* 55-58.

48 Vrijheid 2000 *Env Hlth P* 101; Bosman, Alberts and Roos "Integrated Waste Management" 1057-1061.

49 Godfrey 2008 *Waste Management* 1665.

which makes the likely failure of waste services in South Africa a reality.[50]

1.1.4 Housing

Housing is essential because it acts as a barrier that can protect people from some potentially harmful environmental hazards.[51] Housing needs to be adequate as far as its safety, habitability, and access to services are concerned, because these factors could all have an influence on people's health.[52]

South Africa is experiencing a shortage of housing and an increase in demand and the majority of the current housing options that are available to the poor have serious inadequacies, which further exacerbates this challenge.[53] Attempts to provide everyone with access to adequate housing have been tempered with retrogressive measures that include the ineffective application of existing policies, disparate approaches by local government to interpret and implement these policies, a lack of integrated planning between the three spheres of government, and problematic funding mechanisms.[54]

As a case in point, the housing backlog has grown from 1.5 million to 2.1 million from 1994 to 2017, which translates to approximately 12.5 million people that are in need of adequate housing.[55] Admittedly, and even though the quality of housing provided by government may be called into question, compared to other countries, South Africa has delivered the highest number of houses to the poor;[56] as of March

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50 DEA *2nd South Africa Environment Outlook* 279; DEA *Draft National Waste Information Baseline Report* 5-6; Bosman, Alberts and Roos "Integrated Waste Management" 1087. See para 4.3.2.2 below for more on the regulation of waste in South Africa.

51 Paragraph 4.2 of the *White Paper on Housing* (1994).

52 *Government of the Republic of South Africa v Grootboom* 2001 1 SA 46 (CC) paras 35-37 (hereafter *Grootboom*-case); Tissington *Resource Guide to Housing* 8-10, 26-30. For more on inadequate housing - see Ogunfiditimi *Assessment of Structural Quality of Houses* 59-76, 85-89, 122. Health risks emanating from inadequate housing appear to be similar in proportion to that of smoking - WHO Europe *Inadequate Housing* 6-20, 76.

53 DEA *2nd South Africa Environment Outlook* 64-69; Tissington *Resource Guide to Housing* 26-30.

54 This is caused by institutional fragmentation - SAHRC *Access to Housing* 9-11, 86-87; Tissington *Resource Guide to Housing* 9-10; para 4.3.2.4 below. Tissington contends that incompetence and corruption by local government may also play a role in this regard - Tissington *Resource Guide to Housing* 26-29.

55 Tibane *South Africa Yearbook 2016/2017* 149; Tissington *Resource Guide to Housing* 33.

56 SAHRC *Access to Housing* 8.

2021 the number of serviced sites and completed houses totalled over 5 million.[57] Despite providing millions with housing the demand still outweighs the supply though, with 12.7% of all households living in informal dwellings in 2019,[58] therefore many people remain exposed to harmful environmental conditions because of the shortage of available adequate housing.[59] The Covid-19 pandemic made this situation even more apparent.[60]

1.1.5 Communicable diseases and vectors

Communicable diseases, also known as transmissible diseases, are diseases that have the ability to spread between humans.[61] These diseases can be passed on from one person to the next through direct physical contact, droplet contact, indirect contact, airborne transmission, faecal-oral transmission, or it could be passed on from vectors.[62]

In South Africa the biggest natural cause of death is tuberculosis (hereafter TB), a communicable disease.[63] South Africa also has the highest number of people living with the human immunodeficiency virus (hereafter HIV) in the world, another communicable disease. HIV is responsible for the fifth highest number of natural deaths in the country.[64] Vector-borne communicable diseases are an equal cause

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57 DHS *Annual Report 2020/2021* 8; DHS 2018 http://bit.ly/2kNzm0c.

58 This number is actually increasing - see Mokoena *South Africa Yearbook 2020/2021* 182.

59 DHS *Annual Report 2020/2021* 8-9; DHS *Annual Report 2016/2017* 25; SAHRC *Access to Housing* 33-34. For more on the regulation of housing in South Africa in general - see Muller and Viljoen *Property in Housing*; para 4.3.2.4 below.

60 See, for example, some of the recent cases on housing: *South African Human Rights Commission v The City of Cape Town* (unreported) 2022 ZAWCHC 173 (15 July 2022); *Adonisi v Minister for Transport and Public Works Western Cape*, *Minister of Human Settlements v Premier of the Western Cape Province* 2021 4 All SA 69 (WCC); *Commando v Woodstock Hub (Pty) Ltd* 2021 4 All SA 408 (WCC); *Thubakgale v Ekurhuleni Metropolitan Municipality* 2022 8 BCLR 985 (CC).

61 Kortenbout "Introduction" 1-5.

62 See Webber *Communicable Diseases* 1-9; Kortenbout "The Agent" 9-10 for an explanation of each of these methods. For a detailed discussion on communicable diseases, particularly in relation to the environment - see Van Wyk "The Environment" 59-90. See also para 1.1.1 above and take note that a lack of sanitation services is also to blame for the spread of communicable diseases.

63 The figure dropped notably from 12.7% of all deaths in 2006, to 6% in 2018 - Stats SA *Stats in Brief* 23; Stats SA *Mortality and Causes of Death in SA* 38.

64 This is about 20% of the global burden of HIV - UNAIDS 2022 https://bit.ly/36URoa6; Mayosi and Benatar 2014 *NEJM* 1345; Shisana *et al SA National HIV Prevalence Survey* 1; Stats SA *Mortality and Causes of Death in SA* 38.

of concern, worldwide they cause more than 700 000 deaths annually.[65] The latest statistics indicate that communicable diseases account for 28.8% of all deaths in South Africa on a yearly basis.[66] These statistics do not yet even take Covid-19 into account, a new corona virus that focused the entire world's attention on its spread since 2020, and have caused havoc to health-systems worldwide. By 12 October 2022, 4 021 297 people have tested positive for the virus in South Africa and 102 246 have passed away, and many still suffer post-Covid or long-Covid effects.[67]

Communicable diseases come about when agents (for instance a virus, parasite, bacterium, or fungus) are brought together with their hosts (humans), and this transpires in the environment.[68] The environment therefore contains the mediums that facilitate the transmission of agent to host, and the more favourable the environment, the more transmissions could occur. Because this relies on factors in the environment (clean water, adequate sanitation, vector control), it could be averted.[69] At present however, notwithstanding government's efforts, many communicable diseases continue to spread unabatedly in South Africa.[70]

For example, 10% of the population is at risk of contracting malaria, a life-threatening communicable disease transmitted through mosquitoes (vector),[71] and government adopted a *Malaria Elimination Strategic Plan* (2012-2018) that aimed to eliminate the occurrences of malaria by 2018.[72] There has been a consistent increase in the prevalence of malaria since the adoption of this strategic plan however, and although this may also be partly attributed to natural variances in climatic conditions,[73] government's plan has clearly not achieved the desired

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65 WHO 2020 https://bit.ly/3Dkq0yv.

66 Stats SA *Mortality and Causes of Death in SA* 34.

67 DOH *Update on Covid-19* 12/10/2022; WHO 2022 https://bit.ly/3z4Qsvd.

68 Webber *Communicable Diseases* 10-22; Kortenbout "Introduction" 3.

69 Agents require a favourable environment to spread to their hosts - Van Wyk "The Environment" 59-60; Wisner and Adams *Environmental Health in Emergencies and Disasters* 168.

70 Mayosi *et al* 2012 *Lancet* 2032. For a study on government's attempts to reduce the prevalence communicable diseases - see Naidoo 2008 *SAJID* 10-12.

71 *NSDA* 6; *NEHP* 22. Pesticide use (for instance to combat malaria with DDT) can decrease the spread of communicable disease (beneficial), but on the other hand can also cause harm to people (harmful), a phenomenon that illustrates why environmental health can be so complex - Barnhoorn *et al* 2015 *Chemosphere* 391-397; Eskenazi *et al* 2009 *Env Hlth P* 1359-1367.

72 Mayosi *et al* 2012 *Lancet* 2032. See Morris *et al* 2013 *SAMJ* 861-864 for more on malaria risk areas in South Africa.

73 Hlongwana and Tsoka-Gwegweni 2016 *PHCFM* 9; Ramar *et al* 2016 *Malaria Journal* 442, 448.

results.[74] Government is committed to continue its efforts to eliminate malaria though and has since adopted the *Malaria Elimination Strategic Plan* (2019-2023) to achieve this goal.

1.1.6 Air quality

Globally ambient (outdoor) and household (indoor) air pollution kills an estimated 5.5 to 6.5 million people annually, which accounts for one out of every nine deaths.[75] This makes air pollution the biggest environmental risk to the human condition.[76] Air pollutants can cause many harmful symptoms and conditions such as nausea, breathing difficulties, skin irritations, asthma, pneumonia, cancer, and then also death as indicated by the figures above.[77] In addition air pollutants also exacerbate existing health conditions, thereby multiplying its harmful effects.[78]

Various parts of South Africa have ambient particulate matter concentrations (a type of pollution) that exceed safe air quality levels, the bulk of which can be attributed to the energy producers such as Eskom and Sasol.[79] Indoor air quality offers little reprise and may even be more harmful than ambient air pollution. It is estimated that one-third of the population still burn coal, wood, and paraffin for cooking and heating (a major source of household air pollution), exposing everyone in those

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74 Because of this plan's relatively short expiration date it has been described as naïve - Ramar *et al* 2016 *Malaria Journal* 442, 448. See para 4.3.2.1 below for more on the regulation of communicable disease and vectors that could cause the spread of communicable disease.

75 WHO *Ambient Air Pollution* 11; World Bank *The Cost of Air Pollution* 1-4; DEA *2nd South Africa Environment Outlook* 183. A more recent study estimates that air pollution may even cause 9 million premature deaths annually - Das and Horton 2017 *Lancet* 407.

76 WHO *Ambient Air Pollution* 11; World Bank *The Cost of Air Pollution* 29.

77 Air pollution also cause birth defects, immune-suppression, strokes, heart disease, and chronic obstructive pulmonary disease among others - Wright "Air Pollution Monitoring and Evaluation Framework for South Africa: Prioritizing Vulnerable Communities" 55-62; Rumble *et al* "Air Quality" 402-404; Kampa and Castanas 2008 *Environmental Pollution* 363-363; Wright and Oosthuizen "Air Quality Monitoring and Evaluation Tools for Human Health Risk Reduction in South Africa" 6; WHO 2021 http://bit.ly/1B8Mgp6.

78 Kampa and Castanas 2008 *Environmental Pollution* 362. For a study on the adverse health effects of air pollution in the Highveld Priority Area - see Wright *et al* 2011 *CAJ* 12-20.

79 DFFE *2022 State of Air Report and AQM Highlights* 7-10; DEA *State of Air Report and National Air Quality Indicator 2020* 43-44; DEA *2nd South Africa Environment Outlook* 190, 256-257; Rumble *et al* "Air Quality" 447-449; Van den Berg *Source Apportionment of Ambient Particulate Matter in Kwadela, Mpumalanga* 13-17; CER *The Myth of Clean Coal* 5; *Groundwork Trust*-case paras 12-148.

households to air quality levels that pose health risks.[80]

Government acknowledged that its regulation of air quality was outdated and established a new holistic air quality management regime that became fully operational in 2010.[81] This new approach involves a focus on both controlling source based emissions *and* assessing the resulting impacts on ambient air quality.[82] Government aims to do so, among others, by establishing emission and ambient air quality standards, by licensing activities that result in emissions that may have a significant detrimental effect on the environment, and by monitoring and assessing air quality for compliance with said standards and licences.[83] However, government granted exemptions to some polluters from the emission standards, which is applicable until 2025 in the case of some types of pollutants.[84]

Notwithstanding the air quality measures adopted by government, in 2020 the national department responsible for environmental affairs still observed that "many South Africans may be breathing air that is harmful to their health and well-being", and that "major policy shifts" are required to achieve government's clean air goals.[85] In financial terms the cost of air pollution from coal-fired power plants alone was

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80 Vegter *Air Quality: Missing the Wood for the Trees* 2; Albers *et al* 2015 *SAMJ* 573; Wernecke *et al* 2015 *CAJ* 12-16; Rumble *et al* "Air Quality" 447-449; Van den Berg *Source Apportionment of Ambient Particulate Matter in Kwadela, Mpumalanga* 22-31; *Strategy to Address Air Pollution in Dense Low-income Settlements* (2018) 14-15. There are various sources and types of air pollutants - see e.g. the *National Ambient Air Quality Standards* (2009).

81 Gwaze "The Management of Air Quality in South Africa" 5.

82 Rumble *et al* "Air Quality" 432-433.

83 Rumble *et al* "Air Quality" 432-443; Gwaze "The Management of Air Quality in South Africa" 9-31; ss 7-49 of the *National Environmental Management: Air Quality Act* 39 of 2004. See also *National Framework for Air Quality Management in the Republic of South Africa* (2017); *National Ambient Air Quality Standards* (2009); *List of Activities which Result in Atmospheric Emissions which have or may have a Significant Detrimental Effect on the Environment, Including Health, Social Conditions, Economic Conditions, Ecological Conditions or Cultural Heritage* (2013) (as amended up to March 2020).

84 The exemptions apply to facilities of Eskom, Sasol, PPC, Anglo American, Shell, Engen, and Total - DEA *2nd South Africa Environment Outlook* 196-199; Rumble *et al* "Air Quality" 431-432; DEA *Decisions on Applications for Postponement of Compliance Time-Frames* 7-14. For more on the legal response to air quality in South Africa and in particularly the failings thereof - see Hallowes *Slow Poison: Air Pollution, Public Health and Failing Governance* 33-52.

85 DEA *State of Air Report and National Air Quality Indicator 2020* 44. In the latest report government acknowledges that particulate matter is still of great concern and that there is a great need to strengthen provincial and municipal organisation to ensure effective implementation - see DFFE *2022 State of Air Report and AQM Highlights* 21.

estimated at R30 billion per annum.[86]

1.1.7 Chemicals and hazardous substances

Exposure to chemicals and hazardous substances such as mercury, lead, and pesticides cause noticeable adverse health effects in South Africa.[87]

Mercury can cause severe neurological and cognitive defects.[88] Coal combustion is the highest contributor of mercury emissions in South Africa and estimates on the scale of these emissions range considerably from studies conducted between 2000 and 2015. The earlier literature suggests that 83 tonnes of mercury are released into the atmosphere on a yearly basis, making the per *capita* emissions in South Africa the second highest in the world,[89] whereas the latest research suggest that the figure instead lies between 17 and 22 tonnes per year.[90] The latest published emissions figure remains undesirable though and still leaves the potential for human exposure relatively high.[91]

By the year 2000, 10% of South Africa's population had lead blood concentrations at a level at which adverse health effects could occur.[92] Leaded petrol and leaded paint are two significant sources of lead poisoning and government regulates both

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86 This figure is based on government's expenditure to treat illnesses emanating from poor air quality and from lost working days in 2017. The same study estimates that air pollution from coal-fired power plants kills 2200 people every year - Holland *Health Impacts of Coal Fired Power Plants in South Africa* 16. A newer study by Green Peace puts the figure at R94.7 billion per annum, while a study conducted in 2012 estimates it amounts to 6% of South Africa's total GDP (a much higher amount as mentioned above) - Greenpeace *Toxic Air* 6-18; Altieri and Keen *The Cost of Air Pollution in South Africa* 3. For more about air quality management in South Africa - see para 4.3.2.2 below.

87 *NEHP* 23.

88 Mercury also exerts toxic effects on kidneys, the cardiovascular system, and the immune system - Nweke and Sanders 2009 *Env Hlth P* 863; Street 2015 *CAJ* 9.

89 Pacyna *et al* 2006 *Atmospheric Environment* 4056; Dabrowski *et al* 2008 *Atmospheric Environment* 6620-6626.

90 Garnham and Langerman 2016 *CAJ* 17.

91 Dabrowski *Emissions of Mercury in South Africa* 6-7.

92 These effects include neuro-behavioural problems in children such as a reduction in IQ, decreased math and reading levels, and behaviours such as aggressiveness, impulsiveness, and delinquency - Mathee 2014 *Neuro Toxicology* 220; Naicker *et al* 2010 *Environmental Research* 355; Naicker *Lead Exposure and its Impact on the Health of Adolescents* 22-34.

of these for this purpose.[93] Literature indicates however, that the population remains vulnerable to lead exposure because there are multiple other lead sources that continue to pose public health challenges.[94]

There are vast amounts of pesticides present in the environment, mostly because of their use in the agricultural sector.[95] Pesticides can cause acute and chronic health effects, including but not limited to nerve, lung, skin and eye damage, an increased risk of developing cancer, birth defects, and impotency.[96] The use of pesticides in South Africa is governed by legislation, but government concedes that it is inadequate, outdated, and is not conducive to effectively manage pesticides.[97] As a case in point, a fairly recent study detected the presence of unregistered pesticides on 8% of fresh fruit and vegetables intended for human consumption.[98]

1.1.8 Climate change

Climate change will have a profound impact on the fundamental pillars of human

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93 The use of leaded petrol has been phased out since 2006 and the allowable lead content of paint has been restricted since 2010 and may even be complete banned by 2023 once the latest regulations become fully operational - *Declaration of Leaded Paint as Group 1 Hazardous Substance* (2009); *Regulations Relating to Lead in Paint or Coating Materials* (2021); ss 3-4 of the *Hazardous Substances Act* 15 of 1973; *Petroleum Products Specifications and Standards* (2006); s 2 of the *Petroleum Products Act* 120 of 1977; Harper *et al* 2003 *Int J Hyg Environ Health* 320.

94 This includes the formal and informal occupational sectors - Mathee 2014 *Neuro Toxicology* 227; Naicker, Mathee and Barnes 2013 *SAMJ* 935, 937.

95 Dabrowski 2015 *SAJS* 1; Quinn *et al* "Pesticide Use in South Africa: One of the Largest Importers of Pesticides in Africa" 49-50; Naidoo and Buckley *Pesticide Wastes in South Africa* iv; Giliomee "Pesticides" 746-759. In the regulatory context 'pesticide' appears to refer to 'agricultural remedy', and this includes herbicides, insecticides, and fungicides among others - *Pesticide Management Policy for South Africa* (2010) 16; s 1 of the *Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act* 36 of 1947.

96 Rother and Jacobs *Pesticide Health Risks* 2-23; Quinn *et al* "Pesticide Use in South Africa: One of the Largest Importers of Pesticides in Africa" 50-56; *Pesticide Management Policy for South Africa* (2010) 1; Dabrowski 2015 *SAJS* 1.

97 *Pesticide Management Policy for South Africa* (2010) 2-3; Giliomee "Pesticides" 759-763. To its credit, government has already attended to some of its pesticide management shortcomings, like phasing out certain persistent organic pollutants and proposing to phase-out even more - *National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants* (2012); *Proposed Regulations to Phase-out the Use of Persistent Organic Pollutants* (2018). In addition government published *Regulations to Domesticate the Requirements of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade* (2021) that ought to improve the situation, but the operation of these regulations has been suspended for a year.

98 Mutengwe, Chidamba and Korsten 2016 *J Food Prot* 1941-1942. See paras 4.3.2.2, 4.3.2.5 below for more on the regulation of chemicals and hazardous substances in South Africa.

existence,[99] which is also partly why government describes it as an "urgent threat to human societies",[100] and as one of the "greatest challenges to human development in the 21st century".[101] Evidence suggests that the global deaths attributable to climate change already exceeded 150 000 by the year 2000,[102] and it will also exacerbate already pressing public health challenges by aggravating existing health and environmental risks.[103]

South Africa is a major emitter of greenhouse gases in that it produces roughly half of all of Africa's emissions.[104] Government developed a number of legal responses to address climate change that embraces both mitigation and adaptation measures,[105] with short, medium, and long-term goals.[106] So far however, the progress in this regard has been relatively limited and substantial effort will be

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99 Garland, Stevenson and Wright "Public Health Perspectives and Climate Change Law and Governance" 2-5; WHO and WMO *Atlas of Health and Climate* 4-56; Frumkin *et al* 2008 *AJPH* 435-445; Haines *et al* 2006 *Public Health* 585-596; McMichael *et al* 2008 *BMJ* 191-194; Rumsey "Climate Change: Impacts, Adaptation, and Mitigation; Threats and Opportunities" 1054-1060.

100 Preamble to the *Climate Change Bill* (2022).

101 *National Climate Change and Health Adaptation Plan* (2014-2019) 19.

102 Frumkin *et al* 2008 *AJPH* 435. For more on the severe health risks associated with climate change - see Portier and Tart *A Human Health Perspective on Climate Change* vi-vii; US EPA 2016 http://1.usa.gov/1SwRm4V; DEA *Climate Change Implications for Human Health* 24-31.

103 These risks include most of the aforementioned factors mentioned in this overview - *National Climate Change Adaptation Strategy* (2019) 14-19; *National Climate Change and Health Adaptation Plan* (2014-2019) 15-17; DEA *Climate Change Implications for Human Health* 24-31; Patz *et al Our Planet, Our Health, Our Future* 22-26; Garland, Stevenson and Wright "Public Health Perspectives and Climate Change Law and Governance" 5-10; Dos Santos *et al* 2022 *PHCFM* 1-12.

104 *NEHP* 30; *National Climate Change Response White Paper* (2011) 8-9; *A National Climate Change Response Strategy for South Africa* (2004) iv; Garland 2014 *SAMJ* 585; DEA *2nd South Africa Environment Outlook* 215-225; Kotzé *et al* "Climate Change Law and Governance in South Africa: Setting the Scene" 6.

105 *National Climate Change Response White Paper* (2011) 12, 14-29. Recent developments include the publication of a *Climate Change Bill* (2022), a *National Climate Change Adaptation Strategy* (2019), the *Declaration of Greenhouse Gases as Priority Air Pollutants* (2017), the *National Pollution Prevention Plans Regulations* (2017), the adoption of a *Carbon Tax Act* 15 of 2019, and the development of a Climate Change Monitoring and Evaluation System. See also DEA *Draft 3rd South Africa Environment Outlook - Climate Change* 31 for a compilation of Flagship Programmes that are currently implemented in an attempt to transform South Africa to a low-carbon economy and carbon resilient country.

106 DEA *2nd South Africa Environment Outlook* 225-231; Lehmann "South Africa's Climate Change Commitments and Regulatory Response Potential" 1-27. The *Paris Agreement* (2016) is the latest international law instrument adopted in the pursuit to address the adverse effects of climate change. For more on this agreement, other international responses, and the implications it has for South Africa - see DEA *South Africa's 2nd Annual Climate Change Report 2016* 15-17; para 3.3.3.7 below.

required to meet the targets that is set in these responses.[107] The governance of climate change is challenging, among others, because it is a truly global and cross-cutting issue that requires co-operation between and within states (among every governmental sphere and department), and the financial costs required to combat climate change is expected to be very high.[108]

Evidently, as shown by this overview, the environment can have a serious impact on the human condition, whether it is because of poor water quality and a lack of access to sanitation services, the consumption of contaminated foodstuffs, exposure to waste pollution, the unavailability of adequate housing, a higher prevalence of communicable diseases, poor air quality, exposure to chemicals and hazardous substances, or climate change that could exacerbate any of the aforementioned.[109] The overview also reveals that many of these environmental conditions are in a dire state, and in some instances are even declining – all of which could benefit from some form of governmental intervention. As such it seems prudent to investigate the practice of environmental health, and in particular the implementation and enforcement of the legal environmental health.

1.2 Theoretical challenges presented by the topic of this research[110]

This study introduces theoretical challenges from the onset because the concept of environmental health has received scant definitional attention in the legal context. As such the researcher will have to examine this concept and develop a definition thereof that could serve to set the boundaries of this research. This inevitably calls for an investigation into the apparent constituent parts of environmental health, namely health and the environment, while other related concepts that are not generally the subject of legal discourse also have to be investigated towards

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107 DEA *2nd South Africa Environment Outlook* 226-228; DEA *South Africa's 2nd Annual Climate Change Report 2016* 43, 104. See also *Earthlife Africa Johannesburg v Minister of Environmental Affairs* 2017 2 All SA 519 (GP) paras 82, 91 in which Murphy J acknowledged that the effects of climate change pose substantial risks and subsequently found that climate change impacts and mitigating measures have to be taken into account during environmental decision-making.

108 Giordano *et al Governance of Climate Change in South Africa* 23; DEA *2nd South Africa Environment Outlook* 209, 231-232.

109 See paras 1.1.1-1.1.8 above.

110 The theoretical challenges are addressed in ch 2 below.

developing a contextual understanding of environmental health for present purposes, such as the determinants of health and environmental epidemiology, the quality of life and well-being, and also sustainable development. Determinants of health models and the field of environmental epidemiology both aim to identify and give an account of those factors in the environment that can be harmful to people's health, so they essentially set the agenda for environmental health and are therefore crucial to consult for the purpose of this research. Quality of life and well-being, like health, are terms that aim to capture the essence of the human condition, and as such their meaning bears relevance to this research and have to be investigated. Sustainable development is intimately connected to environmental health by its very nature because both are concerned with people's health in relation to the environment, and for this reason sustainable development's relationship with and role in environmental health have to be investigated as well. Once these are examined the researcher can formulate a practical definition of environmental health that circumscribes the scope of this research.[111]

In addition, since the adoption of a host of new laws did not improve the status of environmental health in any meaningful manner as alluded to above,[112] much of this research will have to focus on the practice of environmental health, which translates to the exercise of functions (to implement the law) and the enforcement of legal obligations (to enforce the law), or put differently, to deliver environmental health services. As such the practice of environmental health and all that it may entail will have to be examined in the theoretical sense, which among others involve the structure and functionaries of government, and how the government machinery is actioned (governance).

Considering that the advent of democracy not only brought about many changes in the legal landscape as far as environmental health is concerned, but that it also set in motion the entire restructuring of government,[113] this examination will have to be launched from a basic level, the state, society, and its government. Once these

111 See para 2.3 below.
112 See para 1.1 above.
113 See para 4.3 below.

concepts are clarified the researcher can provide an overview of the structure of government, which consists of the three spheres of national, provincial, and local government; the three branches of legislative, executive, and judicial authority; and distinct governmental bodies, such as sector specific national and provincial departments, and municipalities.[114] This is essential because each of these spheres of government, branches of authority, and governmental bodies have distinct powers and functions, not only in general, but specifically as it relates to the practice of environmental health.[115] Government operates via elected officials (as political representatives) and appointed personnel (as the public administration), and they are the ones that put environmental health into practice. As such the officials and personnel have particular roles to play as far as environmental health is concerned, and therefore their roles and functions have to be contextualised theoretically for the purpose of this research.[116]

When government's machinery, all its governmental bodies, officials, and personnel, is switched on and put into purposed action such as to operationalise environmental health, it could be said to be governing.[117] The act of governing can be described as governance, or in this instance as environmental health governance.[118] While governance seems to generally be understood to have a somewhat particular meaning within the legal context, it appears to be rather malleable still, so for this reason the researcher will have to investigate the concept and formulate a definition that could, in the theoretical sense, set out what government ought to do to operationalise environmental health. This can be done by exploring the concept of governance in general, by examining the processes and mechanisms (tools) whereby government can govern, by determining if there are any normative values or principles that governmental officials and the public administration have to comply with in this regard, and considering that there are so many role-players involved in this endeavour, by consulting the notion of co-operative governance and

114 Chapters 3, 5-7 of the *Constitution*; paras 2.4.1.4-2.4.1.6 below.
115 Schedules 4, 5 of the *Constitution*; paras 4.3.2-4.3.4 below.
116 See para 2.4.1 below.
117 Also see Du Plessis *Environmental Law and Local Government in South Africa* ch 1-3.
118 Also see May and Agenbag "Environmental Health and Municipal Public Health Services" 1-106.

intergovernmental relations as well.[119] Once all of these aspects are taken into consideration the researcher can formulate a workable definition of environmental health governance that, together with the theoretical underpinnings of the concept of environmental health itself as etched out priorly, could serve as a theoretical model or benchmark that government ought to follow to realise environmental health practice, and against which government's implementation and enforcement of its legal environmental health mandate efforts can be measured.[120]

1.3 International dimension of environmental health[121]

The environment has no regard for international boundaries, and neither does the harm that it could pose to people's health.[122] For this reason this research will be incomplete without paying due regard to the international dimension of environmental health. While this is born out of necessity based on the inherently borderless nature of environmental health hazards, environmental health also has to be explored from an international dimension because numerous international law instruments have been developed in this regard. International law instruments are relevant for this research in two ways. On the one hand some of these instruments impose obligations on government towards its own people (society), while on the other hand some only impose obligations on government *vis-à-vis* other states, meaning that they only bear relevance on the international plane.[123]

In the case of the former the instruments that relate to environmental health for present purposes include certain human rights related instruments, instruments that pertain to public health systems and their functioning, and several sector specific instruments. All of those and their domestic impacts will have to be examined and recorded in this research.[124] In the case of the latter the researcher will have to investigate states' duty to co-operate with one another, and states' duty to refrain

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119 See ch 3 of the *Constitution*; paras 2.4.2.1-2.4.2.4 below. Also see Makoti and Odeku 2021 *AJPF* 43-60; Kamara 2022 *MT* 235-266.
120 See para 2.4.2.5 below.
121 Chapter 3 is dedicated to the international dimension of environmental health.
122 See para 3.1 below.
123 See paras 3.3-3.4 below.
124 See para 3.3 below.

from causing and to prevent environmental harm (both of which is enunciated in a variety of international law instruments), as well as the legal mechanisms that states can employ to enforce compliance with such as instruments as a way to hold each other responsible for the duties that they have as far as environmental health is concerned.[125] As a whole this discussion ought to paint a succinct yet comprehensive picture of the international dimension of environmental health and the impacts that it has on the practice of environmental health in South Africa.

1.4 Determining the content of government's legal environmental health mandate and evaluating what this holds for environmental health practice[126]

Much has changed in South Africa since the advent of the democratic era. On the one hand numerous laws were adopted to bring South Africa's legal landscape and governance processes in line with its new constitutional dispensation and the fundamental guarantees that go with it. And on the other hand government itself underwent significant restructuring where new governmental bodies were established, each with their own functions and powers. All of these developments had a significant influence on the practice of environmental health both in the legal and practical sense.[127]

From a legal perspective the implications hereof are firstly that a plethora of national and provincial laws, local bylaws, regulations, and policies that are concerned with aspects of environmental health were adopted post 1994 and are currently operational. However, none of them were drafted for or regulate environmental health specifically, nor do they regulate environmental health in its totality.[128] This means that the legal environmental health mandate is scattered across various laws, regulations, and policies. In addition, some old order laws that were promulgated prior to 1994 that used to regulate aspects related to environmental health are still operational today as well, yet those laws were developed to serve in a different

125 See para 3.4 below.
126 This is addressed in chs 4 and 5 of this thesis.
127 See paras 4.1-4.5, 5.2-5.3 below.
128 Some bylaws, regulations, and policies are an exception - see para 4.4 below.

legal milieu. As such one of the main tasks in this research will be to *identify* the legal environmental health mandate by extracting all the relevant provisions from a voluminous body of legal instruments that each only regulates certain aspects that are concerned with environmental health, and where some intended to serve in a different regime.[129]

The difficulty of this task is compounded by the second development mentioned above, namely the restructuring of government. The newly established government structures post 1994, as in the national government and its national departments, the provincial governments, and the new municipalities (including metropolitan, district, and local municipalities), each obtained new functions and powers to exercise those functions as allocated by the *Constitution*.[130] None of those functions initially catered for the delivery of environmental health services specifically or totally, but instead, much like the laws referenced above, the services are scattered among a host of functions that are in some way concerned with environmental health.[131] In addition those functions are spread across all three spheres of government, as well as all the categories of municipalities, making for a highly fragmented institutional landscape. Yet in the meantime metropolitan and district municipalities have been specifically tasked with the duty to delivery municipal health services that are packaged as government's intended environmental health services function, but all the other governmental bodies are nevertheless still responsible for certain aspects in this regard.[132] As such the other main task of this research will be to determine who the personnel are that have to implement the legal mandate, as well as to examine what each of them have and may do (functions and powers) in this respect.

As stated above, most of these developments were occasioned by the *Constitution*. For this reason, prior to undertaking these tasks, the researcher will have to consult

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129 See paras 4.3.2-4.3.4 below.

130 Chapters 5-7 and schedules 4 and 5 of the *Constitution*.

131 See para 4.3.1 below.

132 This among others transpired through the promulgation of the *NHA* in which the 'municipal health service' function is defined as a set of environmental health services. See s 1 of the *NHA*; ss 83(1)-(2), 84(1)-(2) of the *Local Government: Municipal Structures Act* 117 of 1998; paras 4.3.2.1-4.3.2.6, 4.3.3, 4.3.4.1-4.3.4.3 below.

and investigate the constitutional provisions that relate to environmental health as those provisions would constitute the roots and lay the foundation for all that have followed since.[133] Once this is complete the researcher can examine the historical development of the legal environmental health mandate in a systematic manner in order to gain an understanding of the context in which it came to be, and in the process also establish its purported identity.[134] When the current legal mandate has been compiled the researcher will be able to recognise all the role-players that are responsible for its implementation, and the powers that said mandate provides to them can be examined and measured against the theoretical benchmark of environmental health governance to determine why the content of the particular laws, regulations, and policies are apparently not conducive to the effective practice of environmental health.[135]

The study therefore asks what the rules are for the implementation and enforcement of the legal environmental health mandate in South Africa?

1.5 Objectives of the study

The primary objective of this study is to determine the legal environmental health mandate's implementation and enforcement in South Africa.

The following secondary objectives are set to achieve this primary objective:

(1) to develop practical definitions of the concept of environmental health and environmental health governance that could serve as a theoretical benchmark against which government's conduct can be measured;

(2) to take cognisance of the global nature of environmental health and determine and record the influences that international legal instruments have on South Africa in this regard;

(3) to track the historical roots of and identify the legal environmental health mandate that gives rise to environmental health governance in its current

133 See para 4.2 below.
134 See para 4.3 below.
135 See ch 5 below.

form;

(4) to evaluate the functions and powers of the personnel involved in the delivery of environmental health services; and

(5) to come to a conclusion and make recommendations on possible solutions to enhance the implementation and enforcement of the legal environmental health mandate in South Africa.

1.6 Research methodology

This study is primarily concerned with the legal environmental health mandate and its content, and as such is based on a literature review of legal materials in order to achieve its primary and secondary objectives.[136] The study also uses non-legal materials as the environmental health mandate cannot be divorced from its underpinning in multi- or inter-disciplinary studies.[137] The theoretical underpinnings of this research are constructed from relevant textbooks, case law, and other academic works. The international dimension of environmental health is examined by way of perusing international law instruments such as treaties, conventions, declarations, resolutions, strategies, guideline documents, and relevant textbooks. The legal environmental health mandate is extracted from and identified by analysing national and provincial laws, local bylaws, regulations, policies, governmental guidelines and strategies, parliamentary meeting reports, academic textbooks, journal articles, and research reports. The content of the legal mandate is evaluated through an examination of the laws, regulations, and policies that make up said mandate, as well as by consulting relevant textbooks concerning the implementation and enforcement of laws in general. This study is therefore conducted by way of a literature review only.

1.7 Framework of the study

Chapter two of this research provides the theoretical foundations of this study. This

136 Also see Venter *Legal Research: Purpose, Planning and Publication*.

137 For more on multi-disciplinary and inter-disciplinary - see Kroeze 2017 *PELJ* 35-65; Du Plessis and Du Plessis "Supervision of Doctoral Level Research in Environmental Law - Part 1" 210-224.

confines the scope of this research by way of a comprehensive definition of the environmental health concept, and it establishes a benchmark against which government's practice of environmental health can be measured to determine if the content of the legal mandate makes provision for its effective implementation and enforcement.

Chapter three is dedicated to exploring the international dimension of environmental health. This provides insights into the borderless nature of the environment and what this holds for government in the legal sense with respect both to South Africa's commitments to the international community, and to its own people.

In chapter four the researcher identifies the legal environmental health mandate by tracing it from its historical roots until today, and giving an account of its current state.

Chapter five of this research provides an evaluation of some of the cardinal powers and functions of the respective role-players involved in the provision of environmental health services.

The research concludes with chapter six that contains the findings and some recommendations for a potential way forward.

Chapter 2: Theoretical foundations

2.1 Introduction

The aim of this chapter is to scrutinise the environmental health concept with the view to establish the theoretical foundations and scope of this study, and by necessary implication this will involve a discussion of the theory behind the environmental health concept on the one hand, and the practical demands that the operationalisation of environmental health could theoretically place on government on the other.

The discussion commences with an analysis of 'health' and 'environment' as the constituent dimensions of environmental health in order to determine what the environmental health concept entails. This is followed with a brief discussion of the 'multiple determinants of health' and 'environmental epidemiology' to explore which factors can influence people's health. Then the terms 'quality of life' and 'well-being' are analysed, as they, like 'health', also express some aspects of the human condition. The notion of 'sustainable development' is analysed thereafter to determine whether it has an influence on environmental health. The discussion concludes with the formulation of a definition of environmental health for the purpose of this research.

Following the analysis, the concepts 'state', 'society', and 'government' are described in order to contextualise the operationalisation of environmental health. This includes a discussion of the different spheres and branches of government and their respective roles, powers, and functions. The operation of government in the form of 'governance' is examined thereafter, with a specific focus on the tools of governance, its underlying principles, and co-operative governance, which culminates in an exposition of environmental health governance – the vehicle for the operationalisation of environmental health.

2.3 Environmental health and its theoretical underpinnings

Environmental health is an evolving concept.[138] The core idea behind environmental health is that some factors in the environment can have an adverse effect on people and that these specific factors have to be addressed for the benefit of the human condition.[139] As the concept continues to evolve, several possible interpretations thereof have emerged, and attempting to define the term poses to be a difficult task.[140]

Some scholars view environmental health simply as the impact that the environment can have on people, or as the incidence where environmental factors adversely affect human health.[141] Other scholars contend that as the concept has evolved its interpretation requires a more holistic approach, and although lacking in consensus, environmental health is mostly described following this approach as the "effects of the natural, built, and social environment on human health and the quality of life of the present and future generations".[142]

Notwithstanding the various interpretations, environmental health remains inherently complex. Its 'health' and 'environment' dimensions are analysed below to determine what the concept entails.

2.3.1 Health and environment

Even a superficial look at environmental health seems to suggest that it consists of

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138 Environmental health has evolved as a branch of public health. MacArthur and Bonnefoy explain that it is "only one supporting rib in the protective umbrella of public health" - MacArthur and Bonnefoy *Environmental Health Services in Europe 1* 5-9; Reynolds *Public and Environmental Health Law* 3-7. For a brief history on how the environmental health concept evolved - see Friis *Essentials of Environmental Health* 16-21; Yassi *et al Basic Environmental Rights* 10-15.

139 Frumkin "Introduction to Environmental Health" 4-5; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 6; *NEHP* 10.

140 Ball *Environmental Health Policy* 7; Friis *Essentials of Environmental Health* 16; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 5; CIEH *Agendas for Change* 19.

141 NEHA 1996 http://bit.ly/1kGnnMy. For an ensemble of environmental health definitions - see Spellman and Stoudt *The Handbook of Environmental Health* 1; US DOHHS 1998 http://1.usa.gov/1m0VHgK.

142 MacArthur "Introduction to Environmental Health" 7-8; CIEH *Agendas for Change* 9-13; WHO 2013 http://bit.ly/1qbNyqN; Harrison and Coussens *Global Environmental Health in the 21st Century* 14; WHO Commission on Health and Environment *Our Planet, Our Health* 1-15; Steer *et al World Development Report 1992* 1-97.

at least two dimensions, 'health' and 'environment'.[143] The terms 'health' and 'environment' in themselves represent two broad multidisciplinary disciplines that have traditionally been approached separately.[144] The meaning of each of these terms has been the subject of considerable academic debate. The prevailing consensus on 'health' appears to be that it refers to a "state of complete physical, mental, and social well-being and not merely the absence of disease of infirmity",[145] while 'environment' generally appears to refer to everything that is external to a person, as opposed to internal factors.[146]

2.3.1.1 Health

It is rather apparent that good health appeals to all people.[147] This largely stems from the universal recognition that it is fundamentally important to be healthy, among others because of health's "intrinsic value and singular contribution to human functioning".[148] The greater uncertainty in this respect lies with what the word 'health' actually epitomises, and therefore what it really means to be healthy.[149]

Dictionaries ordinarily depict 'health' in the negative sense as the human state or condition to be free from disease or injury, where the degree of health could be described as poor, acceptable, or good, depending on the absence or presence of

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143 Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 5.

144 This approach is steadily changing as can be seen from the rise of modern legal instruments that give recognition to the dependence of human health on the quality of the environment - WHO Europe *Environmental Health Action Plan for Europe* 1-9; *Stockholm Declaration of the United Nations Conference on the Human Environment* (1972); *Rio Declaration on Environment and Development* (1992) (hereafter *Rio Declaration*).

145 Preamble to the *Constitution of the World Health Organization* (1948) (hereafter *WHO Constitution*); *NEHP* 8; Larson 1999 *Med Care Res Rev* 128. This definition of health has not been amended since 1948, which is indicative of its universal acceptance - see para 2.3.1.1 below.

146 Friis *Essentials of Environmental Health* 14; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 5; Moeller *Environmental Health* 2-10. See also paras 2.3.1.2, 4.2.2.1 below.

147 'Health' is of central importance and a primary human need - Green *et al Health Promotion* 3; Blaxter *Health* 2.

148 Gostin 2007 *J Health Care L and Pol'y* 2.

149 Levin likened the task of defining 'health' to that of "shovelling smoke" - Green *et al Health Promotion* 2.

disease or injury.[150] In other words, 'health' essentially refers to a status of the human condition that could be either good (healthy), acceptable, or poor (unhealthy).

From a legal perspective, surprisingly, the term appears to have received scant attention. It has not been included in a definition of terms in any of the primary laws that deal with the subject of health in South Africa.[151] Fortunately a definition of 'health' for legal purposes is not that elusive because of the seminal work conducted by the WHO to conceptualise the term.[152]

The WHO took a holistic approach and opted to define it as a "state of complete physical, mental, and social well-being and not merely the absence of disease of infirmity", as also mentioned above.[153] Prior to this undertaking by the WHO 'health' was only viewed as the objective manifestation of the physical domain of the human condition. In other words 'health' pertained only to the human body (expressed as the presence or absence of disease). The subjective manifestation of 'health', that is the mental and social domains of the human condition, also known as the 'self', was usually considered separately from 'health'.[154] This conceptualisation by the WHO gives credence to the idea that 'health' includes both the 'body' and the 'self', which led to the acceptance that descriptions of the term may also need to include the mental and social domains of the human condition.

Some critique on this definition by the WHO includes that it is too subjective because the inclusion of the social domain will imply that the cultural norms of the day can influence its measurement.[155] For instance, if a specific lifestyle (like wearing revealing clothes) is culturally unacceptable in a particular society, then partaking

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150 See for instance Wehmeier *Oxford Advanced Learner's Dictionary* 690; Larson 1999 *Med Care Res Rev* 123.

151 Section 159 of the *Public Health Act* 36 of 1919; s 1 of the *Health Act* 63 of 1977; s 1 of the *National Health Act* 61 of 2003.

152 'Health' was first defined in the preamble to the *WHO Constitution* and has since been referred to as such in all subsequent work undertaken by the WHO.

153 Preamble to the *WHO Constitution*; *NEHP* 8. See also Marks "The Emergence and Scope of the Human Right to Health" 3-6 for commentary on the development of this definition.

154 Nobile 2014 *Medicine and Law* 35.

155 Nobile 2014 *Medicine and Law* 36-37; Green *et al Health Promotion* 7; Larson 1999 *Med Care Res Rev* 126-127; Huber *et al* 2011 *BMJ* 1-3.

in that lifestyle will contravene the society's normative values.[156] By including the social domain within the concept of 'health', any conduct that is in contravention with the normative values that underlie that society's social domain will be regarded as a disease. This means that it could be considered unhealthy to wear revealing clothes, as per the aforementioned explanation. Such a possibility will also make it nearly impossible to establish a standard of 'health', which makes it rather pointless to develop a universal definition for the concept in the first place.

It has further been argued that the portrayal by the WHO equates 'health' more to happiness.[157] The problem in this respect is that if 'health' also refers to happiness, then the delivery of health care services that are intended to address people's health will have to address their happiness as well – a prospect that is hopelessly impractical.[158]

The most prominent criticism on the WHO definition however, is firstly that the presence of the word 'complete' in relation to the physical, mental, and social domains makes health unrealistic and unattainable because if completeness is the measurement of being healthy, then everyone will be unhealthy.[159] Secondly, this definition is descriptive of a static state, whereas people have the ability to adapt to their circumstances and subsequently also to their prevailing condition as it were, which suggests that 'health' has to be described dynamically.[160]

Evolving from this criticism, the latest research on the subject proposes that a uniform definition of 'health' may be ill-suited as a means to express a status of the human condition, and that 'health' should instead be viewed as a dynamic concept, which at its core refers to the ability to "adapt and to self-manage in the face of

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156 As a culturally unacceptable norm, a negative value will be attributed to that lifestyle.

157 Nobile 2014 *Medicine and Law* 36-37; Saracci 1997 *BMJ* 1-2; Green *et al Health Promotion* 3.

158 The presence of disease might lead to unhappiness, but health care services can only treat the disease, not the unhappiness that results from by the disease. For more criticism on the WHO definition - see Larson 1999 *Med Care Res Rev* 128; Blaxter *Health* 4-10; Marks "The Emergence and Scope of the Human Right to Health" 3-6.

159 Huber *et al* 2011 *BMJ* 1; Huber *et al* 2016 *BMJ Open* 2.

160 Humans have a capacity for resilience and for coping with new situations, hence the inadequacy of a static definition - Huber *et al* 2016 *BMJ Open* 1-2; Nobile 2014 *Medicine and Law* 37; Huber *et al* 2011 *BMJ* 1-2.

social, physical, and emotional challenges".[161] This proposal is based on the idea that 'health' can be considered from the negative, in the form of absence of disease, and from the positive, in the form of having the ability to cope.[162] The expression of 'health' as a dynamic concept gives credence to the latter positive view.

Dubos argues that positive health is merely a mirage as it is fleeting and always unattainable, but still worth pursuing.[163] For this reason 'health' should be described as residing in the pursuance of positive health, where the pursuit involves enhancing the ability to cope (dynamic condition). From this perspective good health would imply being *able* to pursue and enhance one's coping ability, whereas poor health would reflect the inability to do so. Consequently, according to this theory, 'health' should be regarded as a dynamic ability (measured by a person's adaptability) and not a static condition (measured as a standard towards completeness) as advanced by the WHO.

Unfortunately, this latter view of 'health', however novel, poses some challenges in conceiving a workable definition of environmental health for present purposes. Insofar environmental health relates to the need to address environmental factors for the benefit of the human condition, 'health' has to be defined in a manner that will provide a measurable objective (standard) towards which environmental factors must be addressed. Since this latter portrayal regards 'health' as a dynamic concept that resides in an endless pursuit of the unattainable however, it could accommodate a possibly infinite improvement on the human condition (adaptability) and is therefore unsuitable for this purpose.[164]

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161 Huber *et al* 2011 *BMJ* 2-3; Jadad 2008 *BMJ* 1-2. For a critical overview of this new approach - see Nobile 2014 *Medicine and Law* 37-40. The work on this theory is still ongoing and more research needs to be conducted before it can be operationalised - Huber *et al* 2016 *BMJ Open* 1-2; Huber *et al* 2011 *BMJ* 1-3. See also Larson 1999 *Med Care Res Rev* 125-134; Ereshefsky 2009 *SHPBBS* 221-227 for commentary on different models and approaches to the 'health' concept.

162 Blaxter *Health* 4-10; Green *et al Health Promotion* 4-5; Yassi *et al Basic Environmental Health* 8.

163 Green *et al Health Promotion* 4-5. The pursuit to 'health' has also been described as the "desire to become more and more what one idiosyncratically is, to become everything that one is capable of becoming" - Maslow *Motivation and Personality* 46.

164 It will be difficult to establish a universally acceptable standard of 'health' based on this view because each individual will always have a better health status to pursue. That is, a particular person's health status may never be good enough, or sufficiently good for that matter.

In consideration of the critique and practical challenges posed by these definitions, for present purposes 'health' should be regarded as the human ability to achieve the highest attainable physical, mental, and social state, where its practical measurability vests in the extent to which each individual is able to achieve his or her highest attainable standard of health.[165]

2.3.1.2 Environment

'Environment' is an amorphous term, and depending on the context, can take on many different meanings.[166] The prior reference to 'environment' as everything that is external to a person,[167] although indicative of its potential scope, may have been rather generous in consideration of the difficulty in defining the term for practical purposes as required in the context of this research. The tendency appears to be to regard 'environment' in either a restrictive or an expansive manner, although there seems to be a lack of uniformity with these approaches. The former approach entails that 'environment' consists only of physical, chemical, and biological factors (green perspective), whereas the latter approach includes social, cultural, and economic factors (brown perspective) and their interrelationships in its conception.[168]

In the environmental health context, the definition of 'environment' needs to set the parameters of the environmental health effort. In other words it will have to indicate which environmental factors ought to be addressed for the purpose of human health. For this reason 'environment' has to be defined in a manner that will

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165 The WHO has developed 'health' indicators and corresponding outcomes that could be used for this purpose. For more on these - see WHO *100 Core Health Indicators* 18-20. Note further there are also 'environmental health' specific indicators that are based upon a "known or postulated relationship between environmental exposure and health" and which serve as the "expression of the link between environment and health" - Prüss-Üstün *et al Introduction and Methods: Assessing the Environmental Burden of Disease at National and Local Levels* 24. See also para 4.2.2.1 below for a discussion of 'health' in the constitutional context.

166 Birnie, Boyle and Redgwell *International Law and the Environment* 4-6. See e.g. Stirling 2007 *GIQ* 414-428 for an extensive list of glossaries that all contain definitions of 'environment' and environmental-related terminology.

167 See para 2.3.1 above.

168 Van der Linde and Basson "Environment" 14; Nel and Alberts "Environmental Management and Environmental Law in South Africa: An Introduction" 1-7; Du Plessis and Nel "An Introduction" 14-16. For more on these approaches and the difficulties in defining 'environment' in the environmental health context - see Smith *et al* 1999 *Epidemiology* 573-575.

accommodate all those factors that could influence human health, but it must also limit the scope of 'environment' only to those factors. It is therefore imperative to consider which factors could influence human health when formulating a definition of 'environment', where the definition could take on either a restrictive or expansive form depending on the scope of these factors.[169]

It is commonly accepted, and considered to be the least contentious, that the natural environment consisting of physical, chemical, and biological factors, including their interaction as an ecosystem and the disruptions thereof, do have an influence on human health.[170] Other environmental factors that could influence human health, ranging from the least to the most ambiguous, are the consequences of natural disasters (for instance earthquakes, severe weather conditions – exacerbated by climate change), the man-made or built environment (for instance housing and infrastructure), social (behaviours) and psychosocial factors (attitudes),[171] cultural and economic factors (for instance the practice of potentially dangerous traditions, crime, and unemployment), and lastly genetic traits.[172]

Theoretically all these factors could influence people's health because their potential impact only depends on the timeline of environmental exposure. On the one hand, by viewing environmental impacts over an extended period of time, genetic variations will emerge, and therefore, ambiguous as it may seem, genetic traits as shaped by the environment over time could be regarded as an environmental factor that influences people's health. Whereas on the other hand, by viewing environmental impacts over a shorter period of time, natural disasters and climate change may appear to be non-existent, and therefore some of the more conventional factors could be excluded from those recognised as having an

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169 See para 2.3.2 below for an analysis of the determinants of health and environmental epidemiology, which informs this discussion.

170 Pekkanen and Pearce 2001 *Env Hlth P* 1, 4; Yassi *et al Basic Environmental Health* 6; Moeller *Environmental Health* 6-7; Smith *et al* 1999 *Epidemiology* 573-575. For a discussion on the importance of ecosystems and biodiversity on human health - see Patz *et al Our Planet, Our Health, Our Future* 7-9, 16-21; McMichael "Population Health: A Fundamental Marker of Sustainable Development" 94-97.

171 For instance alcohol consumption, smoking, exercise, hygiene practices, and so on.

172 Moeller *Environmental Health* 2-15; Smith *et al* 1999 *Epidemiology* 573-575; Yassi *et al Basic Environmental Health* 5-6.

influence human health.[173] It appears plausible then that the "total burden, if not the incidence, of nearly every disease and injury is affected to some degree by environmental factors".[174] Sensibility calls for the need to draw a line at some point however, as it may be impractical to aim to address every single environmental impact, yet it may also be improper to limit the scope of environmental health to only of few of these.[175]

Furthermore, even though all these environmental factors might influence people's health given enough time,[176] not all of them are reasonably modifiable.[177] Some factors are unmodifiable like the presence of pollen (biological factor), the incidences of earthquakes (natural disasters), or hereditary conditions (genetic traits). Some factors are difficult to modify, particularly human behaviour and attitudes (social and psychosocial factors). For instance, if people have access to sanitary services they may be able to wash their hands before handling food (hygienic practice), yet they still have to choose to do so, and the same applies to alcohol abuse, exercising, or making healthy food choices.[178] On the other hand some factors may be reasonably modifiable, such as high unemployment rates or the prevalence of crime in a particular area (economic and cultural factors), yet not all of these are susceptible to modification exclusively from environmental health interventions.[179] If an environmental factor cannot be reasonably modified, or at

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173 Smith *et al* 1999 *Epidemiology* 575. For an explanation of the distinction between genetics (internal) and environment (external) - see Yassi *et al Basic Environmental Health* 5.

174 Smith *et al* 1999 *Epidemiology* 575.

175 See para 2.4.2.5 below for more on environmental health interventions.

176 It is interesting to note that even though people could be subjected to the same or similar harmful environmental conditions, the impact on each individual's condition could still vary considerably - Burke *et al Environmental Health 2012* 27-30.

177 This means that the environmental factor must be realistically amenable to change - Prüss-Üstün and Corvalán *Preventing Disease through Healthy Environments* 8.

178 See e.g. CAHP *The Future of the Public's Health* 57-71; Bellinger and Adams "Environmental Pollutant Exposures and Children's Cognitive Abilities" 157-188; Bouchard and McGue 2002 *Journal of Neurobiology* 4-38. Not all behaviours and attitudes are related to a person's health. E.g. choosing to smoke and to consume large amounts of alcohol would be health-related human behaviour, although choosing to swear and lie may not be related to a person's health. Therefore some social and psychosocial factors might be relevant because they could influence a person's health, whereas others are not the subject of the environmental health concern because they do not have a bearing on people's health - Green *et al Health Promotion* 39-40; Maxwell *Understanding Environmental Health* 2-3; Thomas *Statistical Methods in Environmental Epidemiology* 2.

179 Prüss-Üstün *et al Preventing Disease through Healthy Environments* x; Prüss-Üstün and Corvalán *Preventing Disease through Healthy Environments* 21-23.

least not in the environmental health context, then its inclusion in a definition of the 'environment' for present purposes would be superfluous as nothing could be done to reduce its potentially harmful effects.[180]

From a legal perspective, the term 'environment' has been defined in the largely repealed *Environment Conservation Act* 73 of 1989 (hereafter *ECA*) as the "aggregate of surrounding objects, conditions, and influences that influence the life and habits of man or any other organism or collection of organisms".[181] This definition has been described by Claasen J to be as "all-embracing as may be imagined" and that it "surely would include socio-economic conditions and influences".[182] The legislature clearly followed an expansive approach in defining 'environment', and although not drafted with environmental health in mind, its ambit nevertheless accommodates all those factors that could influence people's health. From a practical point of view this definition may have been too expansive, however.[183] By adopting this definition the environmental dimension of environmental health would essentially refer to everything external to a person (the aggregate of surrounding objects, conditions, and influences), and as such the scope of environmental health will extend to every external factor since all of these could influence people's health given enough time, which is clearly impractical.[184]

A more recent legal definition of 'environment' appears in the current *National Environmental Management Act* 107 of 1998 (hereafter *NEMA*), and it prescribes that 'environment' must be regarded as:

> The surroundings within which humans exist and that are made up of-
> (i) the land, water and atmosphere of the earth;
> (ii) micro-organisms, plant and animal life;
> (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and
> (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.[185]

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180 Thomas *Statistical Methods in Environmental Epidemiology* 2.
181 Section 1 of the *ECA*.
182 *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* 2004 5 SA 124 (W) 145 (hereafter *BP Southern Africa*-case).
183 Kidd *Environmental Law* 2-3.
184 Maxwell *Understanding Environmental Health* 2.
185 Section 1 of the *NEMA*.

This definition is narrower than its preceding counterpart, yet it still includes elements from both the green and brown perspectives.[186] From a practical point of view it is slightly restrictive by listing specific environmental factors as a legal concern,[187] although it also casts the environmental net sufficiently wide by incorporating the influences that the properties and conditions of these specific environmental factors can have on human health in its ambit.[188] Interestingly, environmental health generally revolves around this latter addition, and in particular around identifying and addressing the potentially *harmful* properties and conditions of the 'environment' in order to reduce their impacts on human health.[189]

A few uncertainties nevertheless arise with respect to this definition in the *NEMA*. Firstly, it is unclear whether 'environment' includes only the natural environment, or also the built environment; and secondly, it is unclear whether it has an ecocentric or anthropocentric character.[190] With regard to the first aspect, 'environment' could be described to consist of its natural or built form. The natural environment refers to surroundings as they naturally occur, including all the animals, plants, micro-organisms, land, water, air, and the interrelationships between these;[191] and the built environment refers to the man-made surroundings that provide the setting for human activity, for instance buildings that make up houses and offices, infrastructure such as sanitation services and transport systems, and so forth.[192] The *NEMA* definition appears to describe 'environment' in its natural form and no mention is made to the built environment. In the environmental health context a definition of 'environment' may have to include both the natural and built

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186 Du Plessis and Nel "An Introduction" 14-16.

187 See part (i)-(iv) of the definition in s 1 of the *NEMA*.

188 Kidd *Environmental Law* 3-4; Nel and Alberts "Environmental Management and Environmental Law in South Africa: An Introduction" 3-7; Du Plessis 2011 *SAJHR* 292-293; Kidd "Environment" 518-519; Glazewski "The Environmental Right" para 19.4.

189 Frumkin "Introduction to Environmental Health" 4-5; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 6; Maxwell *Understanding Environmental Health* 2; para 2.3.5 below.

190 Nel and Alberts "Environmental Management and Environmental Law in South Africa: An Introduction" 3-7; Scholtz 2005 *TSAR* 70-75. See also Du Plessis and Nel "An Introduction" 15 where the authors argue that this definition is in fact rather anthropocentric.

191 Nel and Alberts "Environmental Management and Environmental Law in South Africa: An Introduction" 3-6; Yassi *et al Basic Environmental Health* 6.

192 Renalds, Smith and Hale 2010 *Fam Com Health* 68; Srinivasan, O'Fallon and Dearry 2003 *AJPH* 1446.

environment because the conditions of both of these could potentially affect people's health.[193]

With respect to the second aspect the uncertainty in the *NEMA* definition essentially revolves around whether its priority lies with the environment or with people. From an ecocentric view, in very basic terms, the environment (natural form) has intrinsic value and has to be protected for its own sake, making it nature-centred. Anthropocentrism on the other hand refers to a human-centred perspective where the environment is viewed to exist for human needs and must be protected for people's sake.[194] Environmental health is not principally concerned with the environment but rather with human health and therefore necessitates an anthropocentric take on the meaning of 'environment'.[195]

In light of the above it is argued that 'environment' should be viewed for present purposes as the reasonably modifiable natural and built surroundings within which humans exist, which are made up of physical, chemical, and biological factors, including both the living (micro-organisms, plants, animals) and non-living (land, water, atmosphere), and their interrelationships (ecosystems), as well as the influences that the conditions of these factors can have on health-related human

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193 Proclamation 1 of the *Stockholm Declaration of the United Nations Conference on the Human Environment* (1972) reads: "Both aspects of man's environment, the natural and the man-made, are essential to his well-being". See also Srinivasan, O'Fallon and Dearry 2003 *AJPH* 1446-1448; Maxwell *Understanding Environmental Health* 2; Moeller *Environmental Health* 8-10.

194 From an anthropocentric perspective humans are the subject and the environment the object, whereas humans are the object and the environment the subject from an ecocentric perspective. For more on the ecocentric and anthropocentric perspectives - see Hoffman and Sandelands 2005 *Organisation and Environment* 141-149; Kortenkamp and Moore 2001 *JEP* 261-263. See also Scholtz 2005 *TSAR* 70-75; Glazewski "The Environmental Right" 19.2.1; Glazewski "The Nature and Scope of Environmental Law" 8; Kidd "Environment" 516-517; Feris 2008 *SAJHR* 30-33; para 4.2.2.1 below for more on the anthropocentric approach to 'environment' from a legal perspective.

195 The concept of environmental health originated from the need to address environmental factors specifically for human health, and not for environmental protection (this is incidental) - Maxwell *Understanding Environmental Health* 2; Frumkin "Introduction to Environmental Health" 4-5; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 6; paras 2.3.1.3, 2.3.5 below.

behaviour and attitudes.[196]

2.3.1.3 The health and environment relationship

In consideration of the content of the terms 'health' and 'environment' as explained above it is unsurprising that there is an increasing recognition that human health and the status of environmental conditions are inextricably linked.[197] In fact, newer research on the link between people's health and their environment may even have led to what has been described as a "renaissance in environmental health".[198] Environmental health gives effect to this linkage by facilitating a marriage between these two disciplines.[199] This marriage (environmental health) can be described as a "multidimensional and multidisciplinary … interactive process between the environment and health".[200]

Unlike a marriage between these concepts would suggest however, environmental health is more than merely a sum of its health and environmental dimensions.[201] By considering environmental health only as a construct made up of these two independent dimensions, it could be described as a "conceptual domain covering the interrelationship between human health and the environment", which links the protection and improvement of human health to the protection and improvement of the environment.[202] In other words, environmental health would describe the

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196 The social and psychosocial factors in the environment are excluded from this definition because they could incorporate aspects that are not related to people's health into its scope, where instead, only *health-related* human behaviour is included to cover those aspects related to the social and psychosocial factors in the environment. Since genetic traits, economic factors, and cultural factors cannot be modified by environmental health interventions they are also excluded from this definition. See para 4.2.2.1 below for a discussion of 'environment' in the constitutional context.

197 This has been documented over a century ago - Yassi *et al Basic Environmental Health* 6-7; CIEH *Agendas for Change* 7.

198 Section 7.1 of the *Draft National Environmental Health Policy* (2011).

199 The "linkages created between the status of the environment and human health is [called] … 'environmental health'" - CIEH *Agendas for Change* 7. See also *NEHP* 10; Yassi *et al Basic Environmental Health* 6-7.

200 Paragraph 11.1.1(b) of the *White Paper for the Transformation of the Health System in South Africa* (1997).

201 CIEH *Agendas for Change* 7; *NEHP* 10; Yassi *et al Basic Environmental Health* 6-7.

202 WHO Europe *Environment and Health* 10. See Yassi *et al Basic Environmental Health* 4-11 for a discussion on the ethical dilemma between improving human health and protecting the environment and note that the improvement of human health is a first-order principle, whereas environmental protection is a second-order principle.

interface between the environment and people's health.

The concept of environmental health not only involves this interface though, it is specifically concerned with the *adverse effects* that environmental factors have on people's health and with the *practice* of addressing those factors to protect and improve their health.[203] So even though environmental health also gives recognition to the interface between health and the environment, it is concerned more with the protection and improvement of human health in particular (not the environment), *and* the need to regulate environmental factors for this purpose.[204]

Building on this understanding of the concept an earlier attempt drafted by the WHO in 1972 suggests that 'environmental health' refers to:

> The control of all physical, chemical, and biological processes, influences, and factors that exercise or may exercise, by direct or indirect means, a significant effect on the physical and mental health and social well-being of man and his society.[205]

Evidently this description approaches 'health' holistically because it incorporates the physical, mental, and social well-being of humans as a concern for environmental health, and it approaches the 'environment' somewhat restrictively since it is limited to the physical, chemical, and biological factors and the influences that they might have on human health. More significantly though is that the WHO identifies that

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203 *Environmental Health: A Strategy for the African Region* 52/10, WHO Doc AFR/RC52/10 (2002) paras 2-6.

204 The maintenance and improvement of the human condition is at the centre of all environmental health action - Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 6. International instruments also indicate that human survival should take precedence over all others, including environmental degradation, and people are entitled to a healthy and productive life in harmony with nature - principle 1 of the *Rio Declaration*; art 25 of the *Universal Declaration of Human Rights* (1948); MacArthur "Introduction to Environmental Health" 1; Frumkin "Introduction to Environmental Health" 10-18. The improvement of health and the protection of the environment are not mutually exclusive, but rather mutually reinforcing. In other words when the status of the environment improves, so should people's health, and *vice versa* - Onzivu 2006 *Am U Int'l L Rev* 600.

205 WHO *Development of Environmental Health Criteria for Urban Planning* 6. This definition stems from a conference hosted by the United Nations (hereafter UN) on the topic of human development, where the interaction between humans and their environment was the main issue that was discussed - Kidd *Environmental Law* 52-53; para 3.3.1 below. This conference culminated in the adoption of the *Stockholm Declaration of the United Nations Conference on the Human Environment* (1972) (hereafter *Stockholm Declaration*). Principle 1 of the *Stockholm Declaration* reads that "[m]an has the fundamental right to … adequate conditions of life, in an environment of quality that permits a life of dignity and well-being…".

'environmental health' is not only an articulation of the recognition that the environment has an impact on the human condition, but rather that it calls for something to be done about it, which in this instance is expressed as the *control* of environmental factors *specifically* for the purpose of *human health*.[206]

Keeping this in mind, a discussion on a few other considerations that relate to environmental health follows – all of which may influence how the concept must be understood.

2.3.2 Determinants of health and environmental epidemiology

Most people have different health statuses.[207] It is commonly accepted, partly because there are no "biological or otherwise predetermined factors" that cause differences in health from one individual to the next, that these differences occur because of the varying circumstances in which people grow, live, work, and age.[208] In order to address these differences in health, the need arose to determine what factors influence (albeit threaten or enhance) human health within these circumstances, which is where 'determinants of health' models and 'environmental epidemiology' come in.[209]

Determinants of health models attempt to give account of the range of factors that can influence human health and their use originated out of the prevalence of vast inequalities in health worldwide.[210] Epidemiology is concerned with the study of conditions that worsen human health, and in particular with the distribution of

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206 This is the core idea of environmental health - Frumkin "Introduction to Environmental Health" 4-5; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 6; Maxwell *Understanding Environmental Health* 2.

207 Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 13-14.

208 Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 7, 11; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 2-3; WHO 2014 http://bit.ly/VPYd2l. See also Northridge *et al* 2003 *AJPH* 209-214 for a discussion on the unequal distribution of environmental hazards according to race and social class. For commentary on the impacts of urbanisation on human health - see Bai *et al* 2012 *Cosust* 1-6.

209 Marmot "Social Determinants of Health Inequalities" 164-169; Dahlgren and Whitehead *European Strategies for Tackling Social Inequities in Health* 21-22; Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 11.

210 See the definition of 'determinants of health' in the *National Health Promotion Policy and Strategy* (2015-2019) iii. See also Link and Phelan "McKeown and the Idea that Social Conditions are Fundamental Causes of Disease" 73-77; Bradshaw 2008 *SAHE* 51-69; WHO *Health Promotion Glossary* 6.

factors that cause poor health.[211] In other words, epidemiological studies seek to identify health risks and is therefore the evidence-based discipline that serves as a source from which models of health determinants can be developed.[212] Evidently then both environmental epidemiologic research and models of health determinants ought to fulfil a prominent role in setting the environmental health agenda, since they could contribute in the identification of environmental factors that affect human health.[213]

Based on environmental epidemiological research several theories and models on which factors or set of factors (determinants) influence human health have emerged,[214] and although there is no finality on the subject,[215] the most referenced hypothesis is the 'rainbow model' developed by Dahlgren and Whitehead in 1991,[216] shown in Figure 2-1 below.

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211 Kreis "Introduction to Environmental Epidemiology for Health Protection" 3; Friis *Essentials of Environmental Health* 28; WHO *Health Promotion Glossary* 7.

212 This research is only concerned with 'environmental' epidemiology, which is the study of environmental-related health risks - WHO *Basic Environmental Epidemiology* 3. See e.g. Blumenthal *et al* "Epidemiology: A Tool for the Assessment of Risk" 131-145 for an explanation of different kinds of epidemiological study designs (usually observatory and not experimental). For more on environmental epidemiology - see Bind 2019 *ARMH* 24-38; Kreis "Introduction to Environmental Epidemiology for Health Protection" 3-7; Leonardi "Epidemiology of Environmental Hazards" 8-20; Thomas *Statistical Methods in Environmental Epidemiology* 1-350; Friis *Essentials of Environmental Health* 27-45.

213 Environmental epidemiology is *fundamental* to the study of environmental health - Friis *Essentials of Environmental Health* 27, 29. For a review on the status of the population's health based on a determinants of health model - see Bradshaw 2008 *SAHE* 51-69.

214 Corvalán, Kjellström and Smith 1999 *Epidemiology* 657.

215 The environmental factors that influence human health are constantly changing and evolving, so research in this regard is ongoing - MacArthur *Local Environmental Health Planning* 17. See e.g. Markovic *et al* 2021 *One Health* 1-6; Kollamparambil and Oyenubi 2021 *PLOS One* 1-16 for more on the application of epidemiological models during the Covid-19 pandemic.

216 CAHP *The Future of the Public's Health* 52-56. See for instance WHO *Basic Environmental Epidemiology* 3; Schulz and Northridge 2004 *Health Educ Behav* 456-459, 466-468 for other theories and models.

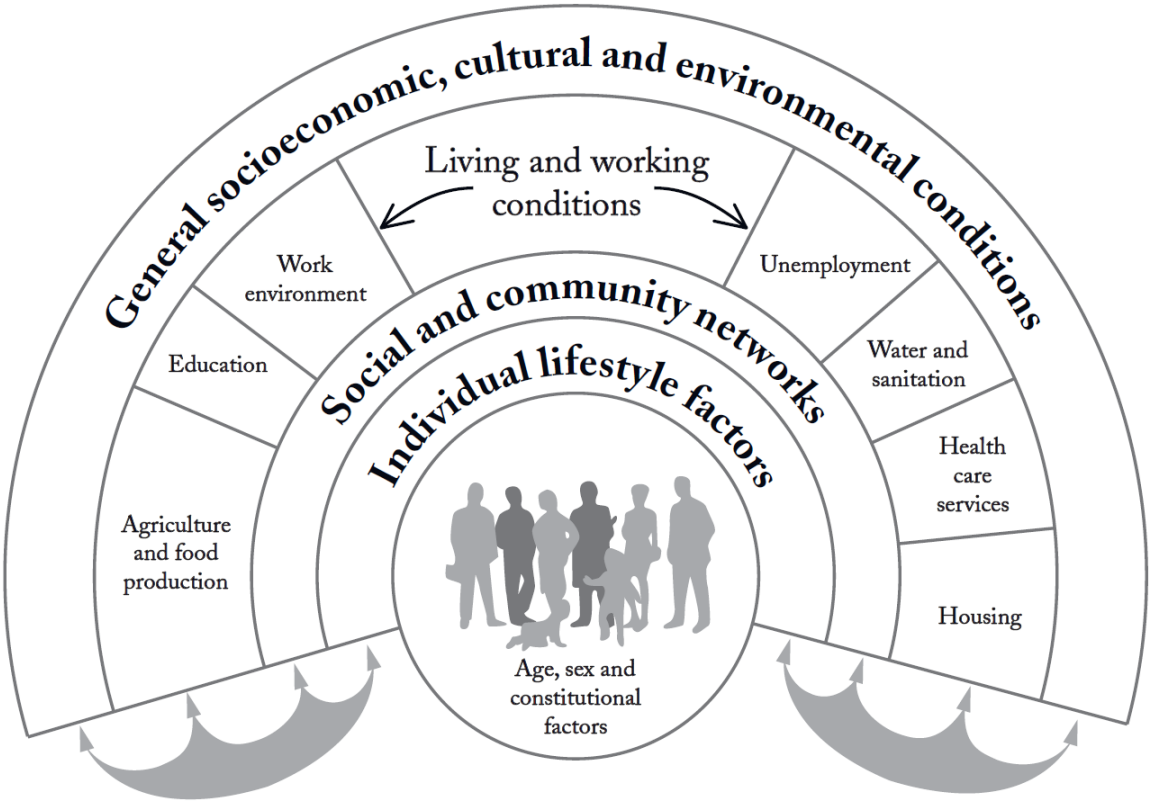

Figure 2-1: Rainbow model of health determinants[217]

This model maps the relationship between human health and the environment, and advances that people's health is affected by various layers of influence, where each layer requires a distinct level of intervention.[218] The centre of this model represents people, endowed with their unique constitutional factors such as age, sex, genetic makeup, and hereditary conditions. Different layers of influence surround people in the centre of the model, and each layer consists of numerous factors or determinants that could influence their health.[219] The innermost layer of influence represents individual lifestyle factors. These are influences on health that result from actions taken by individuals themselves, such as poor diet choices, a lack of

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217 Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 11; Dahlgren and Whitehead *European Strategies for Tackling Social Inequities in Health* 20.

218 Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 11.

219 Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 11; Whitehead, Dahlgren and Gilson "Developing the Policy Response to Inequities in Health: A Global Perspective" 313.

physical activity, and smoking and drinking habits.[220] Since people do not exist in a vacuum this inner layer is embedded in a social and community network layer that represents influences from social and community ties and interactions, consisting among others of mutual support from family, friends, neighbours, and the local community.[221] This layer in turn is surrounded by the wider material living and working conditions layer that represents influences that emanate from living and workings conditions and consists of factors that are determined by various sectors such as housing, water and sanitation, education, health care, agriculture, employment, and so on.[222] The outermost layer that wraps all the preceding influences is the major structural environment, which is comprised of economic, cultural, and environmental conditions.[223]

These four layers attempt to represent the totality of conditions in which human health is determined.[224] Of course, not all of the health determinants located within these layers can be ascribed to the environment, yet some of the environmental health-related factors do reside within them. The environmental health specific factors are mostly indistinguishable from other types of factors, and are scattered

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220 This layer requires interventions that will enable people to make healthy choices, e.g. providing health education - Dahlgren and Whitehead *European Strategies for Tackling Social Inequities in Health* 36-56; Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 12; Whitehead, Dahlgren and Gilson "Developing the Policy Response to Inequities in Health: A Global Perspective" 316.

221 This layer requires interventions that can facilitate community participation and individual inclusion, and can empower individuals and organisations to jointly improve their health - Dahlgren and Whitehead *European Strategies for Tackling Social Inequities in Health* 57-79; Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 12; Whitehead, Dahlgren and Gilson "Developing the Policy Response to Inequities in Health: A Global Perspective" 315-316.

222 This layer requires interventions from multiple sectors - Dahlgren and Whitehead *European Strategies for Tackling Social Inequities in Health* 80-83; Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 12; Whitehead, Dahlgren and Gilson "Developing the Policy Response to Inequities in Health: A Global Perspective" 315. Note further that health care falls within this layer of influence, and it only plays a small part in the overall health status of an individual - WHO 2014 http://bit.ly/VPYd2l. See also Colgrove 2002 *AJPH* 725-729 for commentary on the influence that changes in social and economic conditions have on the health of populations versus the influence of health care services.

223 This layer requires interventions at a national level that can achieve long term structural changes - Dahlgren and Whitehead *European Strategies for Tackling Social Inequities in Health* 84-97; Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 12; Whitehead, Dahlgren and Gilson "Developing the Policy Response to Inequities in Health: A Global Perspective" 314-315.

224 Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 3-4; Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 12.

over all four layers of influence, and for this reason they are also particularly difficult to extract as a separate set of factors.[225] Notwithstanding this difficulty, the 'rainbow model' nevertheless contributes towards identifying environmental-related human health influences by aiding as a source for this purpose.[226]

The environmental health specific factors, also referred to as hazards (basically an environmental source of danger to human health), can be described in terms of their nature, their route of exposure, or the setting in which they occur.[227] The purpose of analysing environmental hazards via these descriptions are to make them easier to identify, study, and eventually to address. A generalised description of these hazards in terms of their nature largely correspond with the description of environment in the environmental health context as examined above,[228] in that health influences transpire through the physical, chemical, biological, social, and psychosocial factors in the environment.[229] The same also applies to a description in terms of their routes of exposure, which include air (atmosphere), water, soil (land), food (some plants and animals), and buildings (built environment).[230] The

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225 Leonardi "Epidemiology of Environmental Hazards" 10. The assessment of environmental impacts on human health is arguably one of the most difficult elements of environmental assessment - Boer, Fritschi and O'Beirne "Human Health in Environmental Assessment and Management" 810.

226 Further note that these layers overlap with one another, which conveys the difficulty in pinpointing an exact health influence (the latter almost always consists of more than one factor in any case). This is also why these factors need to be addressed holistically - Burke *et al Environmental Health 2012* 18; Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 13.

227 Yassi *et al Basic Environmental Health* 53-55; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 17-18.

228 See para 2.3.1.2 above.

229 'Physical' factors refer to those measurable physical manifestations induced naturally or through human activity that could have damaging effects on people's health. 'Chemical' factors refer to those chemical entities that pose a risk to people's health through their ingestion, inhalation, inoculation, or absorption, and those that interfere in biological systems to the detriment of people's health. 'Biological' factors refer to those biological elements of the natural and built environment that present a direct risk to people's health through their ingestion, inhalation, inoculation, or physical contact, and those miscellaneous elements that may influence biological systems to the detriment of people's health. 'Social' factors refer those behaviours associated with human life that are a consequence of settlement in communities and habitation and which could be harmful to people's health. 'Psychosocial' factors refer to those attitudes of mind and mental processes that may have an adverse impact on people's health - Burke *et al Environmental Health 2012* 4; Moeller *Environmental Health* 6-7; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 17-18; Maxwell *Understanding Environmental Health* 2.

230 See also para 2.3.1.2 above.

settings in which environmental hazards could influence human health can be divided into the home, work, and recreational environment, which together make up the entire living environment.[231] The model in Figure 2-2 below illustrates some of the environmental hazards that could influence human health through a combination of these descriptions.[232]

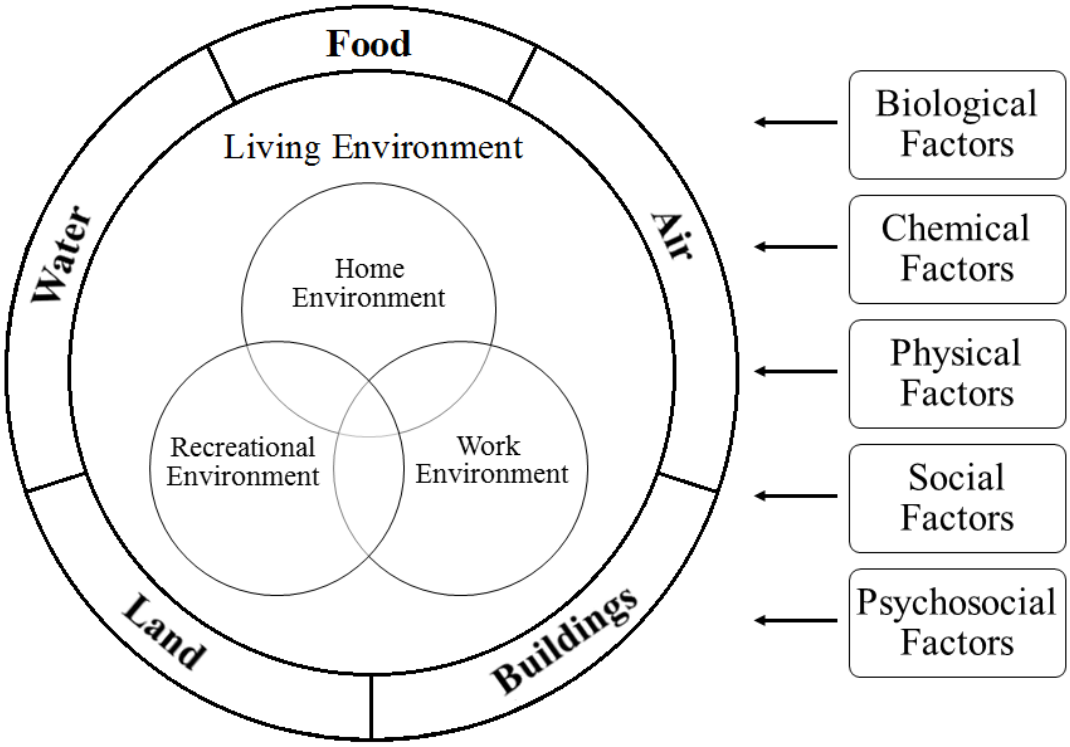

Figure 2-2: Environmental health influences[233]

It is inherently difficult to establish a causal link between environmental factors

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231 Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 17-18; Burke *et al Environmental Health 2012* 4; Yassi *et al Basic Environmental Health* 53-55.

232 Environmental health factors can be categorised as 'traditional' or 'modern'. Traditional factors are those associated with a lack of development such as vector-borne diseases, a shortage of safe water and sanitation, and inadequate housing. Modern factors are those associated with unsustainable development such as transport, environmental degradation, and the overuse of chemicals. For more examples - see Corvalán, Kjellström and Smith 1999 *Epidemiology* 657; Yassi *et al Basic Environmental Health* 53-54. Take further note that in African states traditional environmental factors are the most prevalent, whereas South Africa faces both traditional and modern human health hazards because of its developmental level - *NEHP* 3-4; Bradshaw 2008 *SAHE* 53-60; Nweke and Sanders 2009 *Env Hlth P* 863, 868-869.

233 Adapted from Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 17; Burke *et al Environmental Health 2012* 4.

(hazards) and their impact on people.[234] For example, incidences of melanoma (skin cancer – an unhealthy human condition) became more prevalent at one stage, and it was thought that this was purely coincidental. However, a study of these incidences determined that the surge was caused by an increase in carbon dioxide emissions (environmental hazard), which at first glance seemed unrelated. A suitable intervention to reduce the incidences of melanoma, therefore, would be to reduce the carbon dioxide emissions – a solution that was revealed by using a health determinants model backed up by evidence-based epidemiological research.[235] For this reason it is not only useful but may even be necessary to make use of a determinants of health model, because it can serve as an essential tool to identify environmental health hazards and thereby aid with the development of suitable responses (intervention) thereto.[236]

This discussion, admittedly, merely scratches on the surface of an otherwise broad and complex field. A basic understanding of determinants of health models and environmental epidemiology is required for this research however, since they play an essential role in the identification of environmental hazards as pointed out above, which in turn could enable states to develop specific focus areas around which services can be built to operationalise environmental health.[237] For example, the WHO deduced that the following aspects have the potential to effect human health and have to be the subject of environmental health interventions, namely: pollution of environmental mediums (air, water, soil) by any physical or chemical agents, ultraviolet and ionising radiation, noise and electromagnetic fields, occupational environmental risks, the built environment, the utilisation of adverse agricultural

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234 Moeller *Environmental Health* 50-52; Bradshaw 2008 *SAHE* 52. For an interesting discussion on the differences between 'causation in law' and 'causation in epidemiology' - see Goodman 2007 *J Health Care L and Pol'y* 159-162. See Briggs *Environmental Health Hazard Mapping for Africa* 8-62 for an explanation on how environmental hazards can be identified via mapping.

235 Parkes, Panelli and Weinstein 2003 *Env Hlth P* 670. See also e.g. Moeller *Environmental Health* 52-53 for a discussion on how Snow (arguably the founder of epidemiology) determined that cholera was transmitted through the presence of sewage in drinking water.

236 See e.g. Patz *et al Our Planet, Our Health, Our Future* 10-12. See para 2.4.2.5 below for more on environmental health interventions.

237 Prüss-Üstün *et al Introduction and Methods: Assessing the Environmental Burden of Disease at National and Local Levels* 9-12; WHO *A Conceptual Framework for Action on the Social Determinants of Health* 3. See para 2.4 below for a discussion on the operationalisation of environmental health.

methods, man-made climate change and ecosystem changes, and environmental dependant human behaviours.[238]

The National Department of Health (hereafter NDOH) identified another set of environmental factors that falls within the purview of environmental health, which gave rise to the prescription of associated services that government has to deliver, namely: water quality monitoring, food control, waste management, surveillance of premises, communicable diseases control, vector control, environmental pollution control (air, water, soil), disposal of the dead, chemical safety and noise control, port health, hazardous substances control, and air quality management.[239] Although there are many similarities between these services and the hazards identified by the WHO, some do not correspond. The difference between these sets of factors is indicative that neither must be considered as exhaustive, but instead should merely be viewed as a kind of categorisation, where any undertaking to identify environmental hazards must remain flexible to accommodate their dynamic nature.[240]

It has to be pointed out that the NDOH views the determinants of health to consist of a range of "personal, social, physical, economic, and environmental factors that determine the health status of individuals or groups of people".[241] Following this position the NDOH adopted a 'social ecological model' that is predicated on the idea that there is a dynamic linkage between human behaviour and the environment. This entails that people affect their surrounding environment through their behaviours and attitudes, and that the environment conversely has an effect on people's behaviours and attitudes, which means that there is a relationship of reciprocal causality between people and the environment.[242] Some environmental health impacts are therefore actually mediated by people's behaviours and attitudes,

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238 Prüss-Üstün *et al Preventing Disease through Healthy Environments* 3-4.

239 *NEHP* 7-8; s 1 of the *National Health Act* 61 of 2003. These services are discussed in greater detail in paras 2.4.2.5, 4.3.2.1 below.

240 MacArthur *Local Environmental Health Planning* 17. For more on the dynamic nature of environmental hazards - see Schulz and Northridge 2004 *Health Educ Behav* 467-468.

241 *National Health Promotion Policy and Strategy* (2015-2019) iii.

242 This is the foundation of the 'social ecological model' adopted by the NDOH - McLeroy *et al* 1988 *HEQ* 354-355; *National Health Promotion Policy and Strategy* (2015-2019) 11-12; Sallis, Owen and Fisher "Ecological Models of Health Behavior" 465-470.

which means that people cause the very conditions that can harm them. The social ecological model also identifies different levels in which the environment affects people and their behaviour (and subsequently their health), namely the individual, interpersonal, community, society, and the public policy level, and the NDOH advocates that health issues must be understood and addressed within this model.[243]

Keeping in mind the adoption of the social ecological model by the NDOH, as well as the categorisation of environmental factors by the NDOH, the researcher proposes that a reconstructed model as shown in Figure 2-3 below could serve as a guide to identify environmental hazards in South Africa for which suitable responses can be developed.

[243] *National Health Promotion Policy and Strategy* (2015-2019) 11-12; Kumar *et al* 2012 *Health Educ Behav* 229-243. For more on this model - see Sallis, Owen and Fisher "Ecological Models of Health Behavior" 465-482; Golden and Earp 2012 *Health Educ Behav* 367-371; McLeroy *et al* 1988 *HEQ* 354, 355.

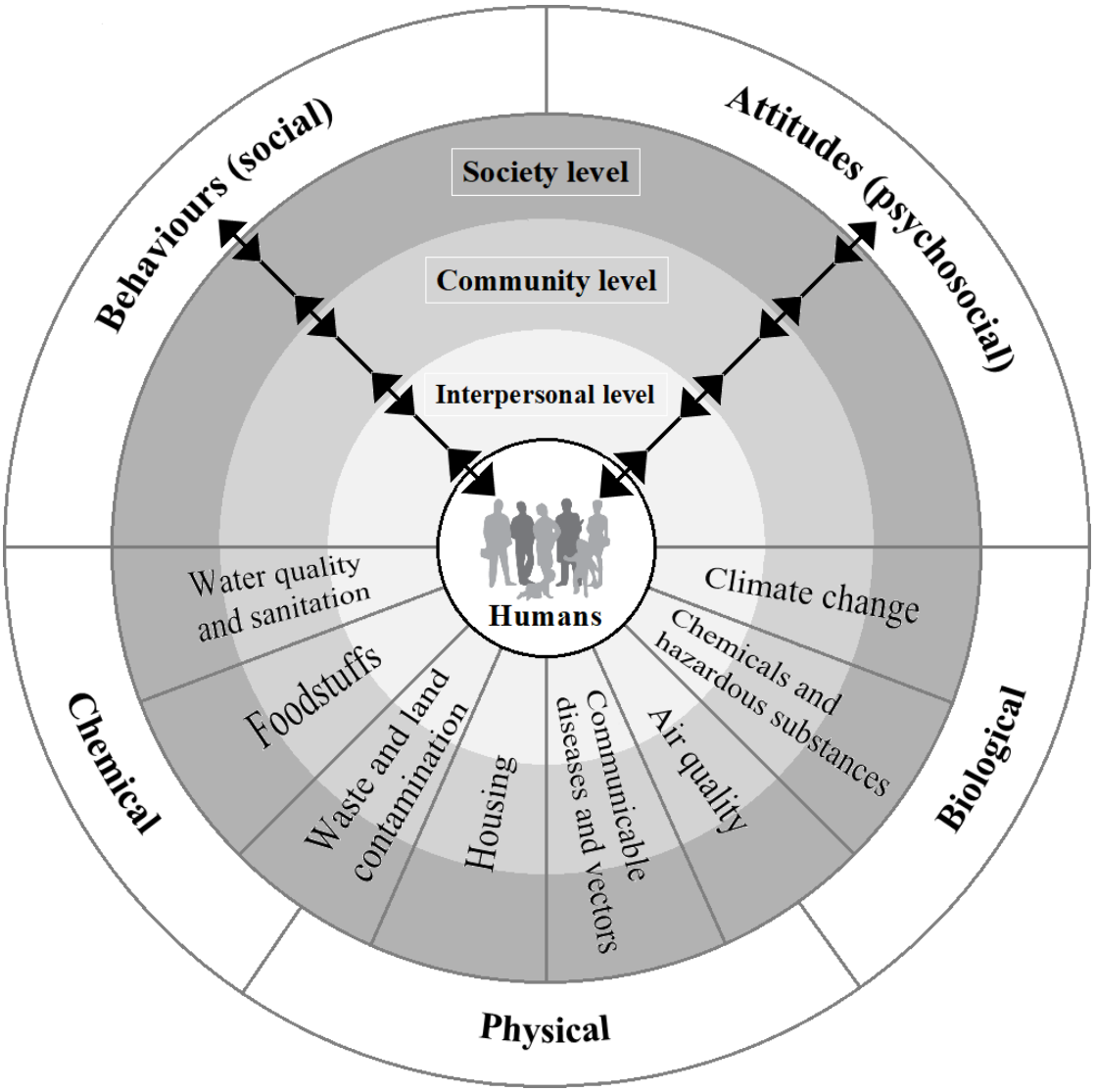

Figure 2-3: Reconstructed environmental determinants of health model[244]

The centre of the model represents the foundational level of individuals (age, sex, race and so on) that has a bearing on their behaviours and attitudes. The interpersonal level represents the influences that interactions with family and friends (social networks and support systems) have on individuals' behaviours and attitudes. The community level represents the influences from the relationships among the various settings (home, work, play) with which people are involved. The society level represents the broader population at which the prevailing socio-economic, cultural, and environmental conditions influence individuals' behaviours

[244] The design of this model is based on the 'social ecological model' *and* the 'rainbow model', and the NDOH's categorisation of environmental health hazards was adopted to represent the total environment - Dahlgren and Whitehead *Policies and Strategies to Promote Social Equity in Health* 11; *National Health Promotion Policy and Strategy* (2015-2019) 11-12.

and attitudes.[245]

In line with the categorisation of environmental factors by the NDOH as mentioned above, this model also distinguishes between specific environmental factors, as shown by its bottom half.[246] The model also illustrates that people have a reciprocal relationship with the environment, and that people's influence on the environment, and the environment's influence on people, occur at different levels.[247] By viewing human behaviours and attitudes in relation to these environmental factors at the different levels of influence, this model could contribute in the identification of potential environmental hazards and the subsequent development of suitable interventions to combat them.[248]

2.3.3 Quality of life and well-being

While 'health' is used to express a status of the human condition, as was explained above,[249] 'quality of life' and 'well-being' render a similar function. The 'quality of life' and 'well-being' concepts rely on different attributes than 'health' though, and they therefore express other aspects of the human condition.[250] A brief theoretical discussion of each follows below since they may also be regarded as environmental health concerns.

2.3.3.1 Quality of life

The 'quality of life' concept originated from both the medical and sociological

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245 *National Health Promotion Policy and Strategy* (2015-2019) 11-12; McLeroy *et al* 1988 *HEQ* 356, 359-356.

246 *NEHP* 7-8; s 1 of the *National Health Act* 61 of 2003. This representation of 'environment' does not intend to restrict its scope, it is merely categorised for the sake of convenience. The outer circle serves to indicate that this categorisation represents the total environment, and that it can accommodate the varying nature of environmental hazards - Schulz and Northridge 2004 *Health Educ Behav* 467-468.

247 MacArthur "Introduction to Environmental Health" 9; CIEH *Agendas for Change* 8-9; WHO Europe *European Charter and Commentary* 23-24.

248 Golden and Earp 2012 *Health Educ Behav* 368-370; Sallis, Owen and Fisher "Ecological Models of Health Behavior" 470-486; *National Health Promotion Policy and Strategy* (2015-2019) 11-12, 20.

249 See para 2.3.1.1 above.

250 These other features refer for instance to an individual's happiness or satisfaction with life, which is not reflected in the status of a person's 'health'. This is discussed in further detail in paras 2.3.3.1-2.3.3.3 below.

disciplines that hold two distinct points of view on the subject. During the 1970s technological advances began to make it possible to significantly prolong and improve people's physical conditions through medical intervention. This gave rise to the need to weigh up the potential benefits and disadvantages that medical intervention could have against one another. Even though a person's physical condition could be measured and expressed meaningfully as a status of health, other aspects of the human condition that could also be affected through such medical intervention could not be measured and expressed in a meaningful manner, and this is where 'quality of life' came in.[251] For example, an individual's life may be prolonged with medical treatment after suffering serious injuries in a motor vehicle accident, but the disadvantage might be that the person may have to live with chronic pain after the treatment, or that he or she may not be able to function in the same manner as before.[252] In such a case the measurement of 'quality of life' can be used to determine whether it will be worthwhile to undergo specific medical treatment. So essentially a person's 'quality of life' can serve as the evaluative criteria for medical intervention in the medical context.[253]

On the sociology front the measurement of the human condition as more than a purely objective physical state was recognised as far back as 1948 when the WHO developed their definition of 'health' to also include the mental and social domains.[254] It was only later though that real meaning was attached to this recognition. Sociologists realised that statistics were available on death and illness (physical), but not on vigour and emotion (mental), and similarly that there were statistics on the levels and distribution of income (social – objective), but not on the satisfaction that such income brings (social – subjective).[255] From there references to 'quality of life' began to feature more prominently in literature and the concept developed into a means to distinguish between social progress and distress, where specific social indicators, the totality of which makes up an individual's 'quality of

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251 Armstrong and Caldwell 2004 *STH* 361-371; Haas 2007 *Nurs Schol* 215.

252 The choice to undergo chemotherapy as treatment for cancer is another example - Smid *et al* 2016 *Klin Onkol* 279-286.

253 'Quality of life' sets the limits of technological excess and it provides the counterpoint to medical success - Armstrong and Caldwell 2004 *STH* 361-371.

254 Preamble to the *WHO Constitution*; Prutkin and Feinstein 2002 *YJBM* 82; para 2.3.1.1 above.

255 Prutkin and Feinstein 2002 *YJBM* 82-83.

life', could show the difference.[256]

There appears to be little consensus on a uniform definition of 'quality of life' and the medical and sociological views as explained above seem instead to have morphed into even more diverse approaches thereto.[257] Some definitions for example state that it is "the sum of having, loving, and being",[258] or that it refers to "an evaluation about selected aspects or the entirety of a life situation",[259] all of which are somewhat vague.[260] The WHO defines 'quality of life' more comprehensively as "an individual's perceptions of their position in life in the context of the culture and value system where they live, and in relation to their goals, expectations, standards and concerns".[261]

It is Felce and Perry's definition that most clearly articulates the more commonly accepted nuances of 'quality of life' though. They explain it as:

> An overall general well-being that comprises objective descriptors and subjective evaluations of physical, material, social, and emotional well-being together with the extent of personal development and purposeful activity, all weighted by a personal set of values.[262]

Commentators largely agree, notwithstanding the various approaches thereto, that an individual's 'quality of life' is inherently subjective, and it is also precisely this subjective character that makes it rather elusive.[263] Research further suggests that 'quality of life' is multidimensional given that it in the least incorporates the physical, social, and psychological domains of an individual, his or her developmental state and activity, and the environment within which all of the above transpire and

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256 Hughes 2006 *Social Forces* 611-614; Armstrong and Caldwell 2004 *STH* 361-363.

257 Kironji *Measuring Quality of Life in South Africa* 8-10; Felce and Perry 1995 *Res Dev Disabil* 51-54; Kuyken 1995 *Soc Sci Med* 1404; Galloway *Quality of Life and Well-being* 9-12; Haas 2007 *Nurs Schol* 215; Prutkin and Feinstein 2002 *YJBM* 79-80.

258 Bullock *et al Quality of Life and the Environment* 8.

259 Gasper 2010 *J Soc-Eco* 351.

260 For more on the different definitions - see Galloway *Quality of Life and Well-being* 12-14; Barcaccia *et al EJOP* 2013 2-8.

261 The WHO in addition explains that 'quality of life' is a "broad ranging concept, incorporating in a complex way a person's physical health, psychological state, level of independence, social relationships, personal beliefs and relationship to salient features of the environment" - WHO *Health Promotion Glossary* 17-18.

262 Felce and Perry 1995 *Res Dev Disabil* 60-62.

263 Prutkin and Feinstein 2002 *YJBM* 79-80; Barcaccia *et al* 2013 *EJOP* 1; Kuyken 1995 *Soc Sci Med* 1404-1406; Gaibie and Davids "Quality of Life among South Africans" 3-4; Kuyken 1994 *Int J Ment Health* 28.

exist.[264] The measurement of 'quality of life' depends on the assessment of an individual's perceptions of these domains in relation to how he or she functions, both objectively and subjectively (levels of perception).[265] Put differently, it revolves around an individual's evaluation of objective life conditions (the multiple domains), and an individual's subjective feelings (cognitive satisfaction or dissatisfaction) about these conditions.[266] 'Quality of life' therefore reflects the totality of an individual's perceptions of their conditions, both as they exist (objectively evaluated), and to what extent the individual is satisfied or dissatisfied with these conditions (subjective feeling).[267]

Some of the recognised domains of 'quality of life' (physical, social, and psychological) and those of 'health' (physical, mental, and social) noticeably overlap with one another, which cause some confusion between these terms. Despite the uncertainties surrounding the precise content of an individual's 'quality of life', as an expression of objective evaluations and subjective feelings, it nevertheless refers

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264 Other iterations include an emotional state instead of the psychological domain, the material domain instead of the environment, and some include spirituality, religion, and personal beliefs as further dimensions - Streimikiene 2014 *JIS* 10-11; Kuyken 1995 *Soc Sci Med* 1405; Felce and Perry 1995 *Res Dev Disabil* 54-63.

265 The WHO, for instance, focuses on the formulation of questions that could determine a person's evaluation of his or her behaviours, states, and capacities (as opposed to functioning) in relation to the different domains, and his or her feelings of satisfaction or dissatisfaction in this respect - WHO *WHOQOL* 3-4; Kuyken 1995 *Soc Sci Med* 1405; Kuyken 1994 *Int J Ment Health* 28-29; Marans 2003 *LUP* 73-77; Bullock *et al Quality of Life and the Environment* 8-10.

266 Various sets of attributes are assessed to determine a person's 'quality of life' and theorists seem to agree that there are four recognised approaches to do so: a) to only consider life conditions, b) to consider satisfaction with life, c) to consider a combination of life conditions and satisfaction as explained above, and d) to consider a combination of life conditions and satisfaction weighted by a scale of importance - Kuyken 1995 *Soc Sci Med* 1405-1406; Kironji *Measuring Quality of Life in South Africa* 33-39; Kuyken 1994 *Int J Ment Health* 28-29; Felce and Perry 1995 *Res Dev Disabil* 59-63; Marans 2003 *LUP* 73-77. Hughes argues that 'meaning' should be considered in addition to the objective (evaluation) and subjective (satisfaction or dissatisfaction) perceptions, which adds another subjective level that relates to a scale of importance - Hughes 2006 *Social Forces* 614-625.

267 For more information on other approaches to 'quality of life' - see Greyling *A Composite Index of Quality of Life for the Gauteng City-Region* 5-6; Prutkin and Feinstein 2002 *YJBM* 80-87; Barcaccia *et al EJOP* 2013 3; Bowling *Measuring Disease* 1-11; Galloway *Quality of Life and Well-being* 17-29; Haas 2007 *Nurs Schol* 216. See also Gaibie and Davids "Quality of Life among South Africans" 3-4 for an explanation of a bottom-up or top-down approach to 'quality of life', where the former refers to the understanding as explained above, and the latter refers to a somewhat opposing view, where overall satisfaction determines an individual's perception regarding his or her various domains.

to a much broader range of attributes than that of 'health'.[268] In fact 'health' only makes up a part of the totality of conditions that are objectively evaluated, which together with an individual's subjective feelings about those evaluations, reflect his or her 'quality of life'.[269] As straightforward as this may sound, it remains difficult to draw a clear distinction between 'health' and 'quality of life'.[270] For this reason, 'health' and 'quality of life' are hard to separate as distinct concepts,[271] and unsurprisingly, the terms are sometimes used interchangeably.[272]

For the purpose of this research 'quality of life' should be viewed as a distinct concept relating to an individual's objective evaluations and subject feelings regarding his or her life conditions, where 'health', which refers to the ability to achieve the highest attainable physical, mental, and social state, should only be considered as one of those conditions that contribute to an individual's overall 'quality of life'.[273]

2.3.3.2 Well-being

As an expression of the human condition, 'well-being' could in basic terms be described to refer to an individual's perception that his or her life is going well.[274] Other commentators contend that 'well-being' refers to personal fulfilment in that

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268 Incidentally this feature also makes 'quality of life' much harder to address than 'health', as the criteria comprising 'quality of life' relates to subjective perceptions and could therefore be different from one individual to the next even though their 'health' statuses are the same - Marans 2003 *LUP* 74.

269 Haas 2007 *Nurs Schol* 218; Kironji *Measuring Quality of Life in South Africa* 5. Many tools have been developed to assess 'quality of life', and all of them rely of different indicators for this purpose. See for example in the South African context Greyling *A Composite Index of Quality of Life for the Gauteng City-Region* 3-4, 6-9, 24-25. See WHO 2016 http://bit.ly/2hdPX8Z for the WHO's 'quality of life' assessment tool. For 'environmental' specific 'quality of life' indicators - see Eurostat 2013 http://bit.ly/2hcbBfX.

270 At the most basic level it could be said that 'health' refers to the human condition as it objectively exists, whereas the 'quality of life' represents a subjective state of mind. Both concepts are much more comprehensive though, for instance 'health' also contains a subjective element through the inclusion of the social domain, and 'quality of life' incorporates an objective evaluation of multiple domains - Prutkin and Feinstein 2002 *YJBM* 79; para 2.3.1.1 above.

271 They complement one another as well - WHO *Health Promotion Glossary* 17-18.

272 See e.g. Du Plessis 2011 *SAJHR* 293 where the author argues that 'health' should be interpreted to include 'quality of life' in the context of the constitutional environmental right. See also Haas 2007 *Nurs Schol* 218; para 2.3.3.3 below.

273 See Gaibie and Davids "Quality of Life among South Africans" 6-22 for a discussion on 'quality of life' in South Africa.

274 CDC 2016 http://bit.ly/2hgaWdh.

an individual is free from mental stress,[275] or that it refers to the ability to be content and at ease, and having a "sense of place".[276] A more abstract explanation goes that 'well-being' refers to a "sort of dynamic dance" to reach an equilibrium between an individual's physical, social, and psychological resources and challenges, where the functionality of the dance reflects that individual's 'well-being'.[277] It can perhaps be best explained in the practical sense by a recent matter that was heard in the High Court, where Rogers J, in reference to offensive odours that was caused by a commercial mushroom farm, noted that it would be "harmful to a person's well-being if it is repulsive to the senses of an ordinary person".[278]

A precise description of 'well-being' appears to be elusive, as demonstrated by the descriptions above.[279] There seems to be agreement though that well-being essentially expresses the subjective aspects of the human condition.[280] This is partly derived from the contention that 'well-being' could be considered to refer exclusively to the mental domain of 'health' (this discounts the physical and social domains), which is the element that lends a degree of subjectivity to the 'health' concept.[281]

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275 See Kidd "Environment" 519-522 and note that the author describes 'well-being' as the expression of a spiritual and aesthetic dimension to the condition of life.

276 Du Plessis 2011 *SAJHR* 295-297.

277 Dodge *et al* 2012 *IJW* 229-232.

278 *Jacobs NO v Hylton Grange (Pty) Ltd* (unreported) 2020 ZAWCHC 14 (27 February 2020) (hereafter *Jacobs*-case) para 86. In another High Court matter, where the respondents had to work near a foul-smelling environment (stench), Leach J noted that it would be "adverse to one's well-being" to be exposed to such a stench at a workplace - *Hichange Investments (Pty) Ltd v Cape Produce Co (Pty) Ltd t/a Pelts Products* 2004 2 SA 393 (E) 415. See Duraiappah *Exploring the Links* 11 in which the author identifies 10 determinants of well-being that include:

> to be adequately nourished; be free from avoidable disease; live in an environmentally clean and safe shelter; have adequate and clean drinking water; have clean air; have energy to keep warm and to cook; use traditional medicine; continue using natural elements found in ecosystems for traditional cultural and spiritual practices; cope with extreme natural events including floods, tropical storms and landslides; and make sustainable management decisions that respect natural resources and enable the achievement of a sustainable income stream.

It becomes clear in consideration of these determinants that environmental health is not only concerned with people's 'health', but also with their 'well-being'.

279 Murphy J describes it as "open-ended and manifestly … incapable of precise definition" - *HTF Developers (Pty) Ltd v The Minister of Environmental Affairs and Tourism* 2006 5 SA 512 (T) para 18 (hereafter *HTF Developers*-case); Snyman and Gildenhuys 2015 *PELJ* 1697; Kidd "Environment" 520; Galloway *Quality of Life and Well-being* 9-12.

280 Vittersø 2004 *Soc Indic Res* 299-302; Higgs 2007 *Soc Indic Res* 332-333; Dodge *et al* 2012 *IJW* 229-230.

281 Galloway *Quality of Life and Well-being* 32; Spiro and Bossé 2000 *Int'l J AHD* 299-300; Green *et al Health Promotion* 8-9; Resnik *Environmental Health Ethics* 12-13.

However, this contention is rejected on the basis that 'well-being' transcends 'health' as an expression of the human condition, it extends beyond health and reflects more than a particular aspect of an individual's health status, albeit in reference to the physical, mental, or social domains.[282]

A more plausible contention is that like 'quality of life', 'well-being' is an expression of the human condition in relation to subjective feelings arising from an individual's perceptions regarding his or her life conditions (the multiple domains).[283] For this reason, since individuals have different subjective perceptions, 'well-being', unlike 'health', will also differ from one person to the next even though their life conditions may be the same.[284]

An investigation into the use of the term also reveals that 'well-being' and 'quality of life' are often used interchangeably, so much so that they may very well be regarded as synonyms.[285] Shin and Johnson for instance, while still maintaining that these concepts are distinct, describe 'well-being' as a "global assessment of a person's quality of life according to his own chosen criteria".[286] Such an interpretation leaves little room to draw further distinction between these concepts, barring the individual choosing his or her own assessment criteria of course.

There are ongoing debates among commentators concerning potential differences between 'well-being' and 'quality of life' (depending on the context in which they

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282 Haas 2007 *Nurs Schol* 218; Du Plessis 2011 *SAJHR* 295-297; Langlois and Anderson 2002 *CJRS* 503-505.

283 Higgs 2007 *Soc Indic Res* 332-333.

284 Glazewski "The Bill of Rights and Environmental Law" 3-5; Kidd "Environment" 520.

285 Langlois and Anderson 2002 *CJRS* 502-503, 506-508; Gaibie and Davids "Quality of Life among South Africans" 3; Galloway *Quality of Life and Well-being* 30-35; Higgs 2007 *Soc Indic Res* 332-333. This argument is discussed in greater detail below.

286 Shin and Johnson 1978 *Soc Indic Res* 478.

are used), but so far no consensus has been reached.[287] One of the more enticing arguments in this regard is that 'well-being' does not incorporate objective evaluations, but instead only reflects subjective feelings in the form of happiness or unhappiness in relation to an individual's life conditions. What this means is that whereas 'quality of life' consists of objective evaluations and subjective feelings, 'well-being' only reflects the latter aspect of the human condition and as such only makes up a constituent part of 'quality of life'.[288] In light of the various descriptions of 'well-being' and the ongoing debates surrounding its meaning and relationship with 'quality of life', the latter stance is also adopted in this research.[289] In other words 'well-being', like 'health', should only be regarded as part of the sum that makes up the total 'quality of life'.

A last point to ponder on with respect to the features and distinguishing characteristics of 'quality of life' and 'well-being' is that they are "[n]ot just ingredients alone, but also how they are cooked determine the taste of the final meal".[290]

2.3.3.3 Quality of life and well-being as environmental health concern

References to 'health' frequently appear in legal texts and academic literature in relation to environmental health and in particular as the primary concern of environmental health. It is rarely cited alone, however. More often than not, the

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287 Vittersø 2004 *Soc Indic Res* 324. 'Well-being' is used in many disciplines, such as social sciences, behavioural sciences, and economics, and because of this wide application there are several debates among academics about what it really means - Diener and Suh 1997 *Soc Indic Res* 189-213; Langlois and Anderson 2002 *CJRS* 502-503; Barcaccia *et al EJOP* 2013 3-8. These differences include among others that a) 'quality of life' reflects the deficits in human functioning (negative), as opposed to 'well-being' that reflects the assets in human functioning (positive), b) that 'quality of life' expresses the status of the human condition as a measurement between individuals, and that 'well-being' focuses only on individuals, and c) insofar 'quality of life' consists of subjective feelings of satisfaction and dissatisfaction (cognitive) in relation to an individual's objective evaluations of his or her life conditions, that 'well-being' instead consists of an individual's subject feelings of happiness and unhappiness (emotional) - CDC 2016 http://bit.ly/2hgaWdh; Galloway *Quality of Life and Well-being* 33-35; Spiro and Bossé 2000 *Int'l J AHD* 298-300; Langlois and Anderson 2002 *CJRS* 506-507; para 2.3.3.1 above.

288 Diener and Suh 1997 *Soc Indic Res* 289-214; Haas 2007 *Nurs Schol* 218-219; Vittersø 2004 *Soc Indic Res* 299-300; Higgs 2007 *Soc Indic Res* 332-333; Galloway *Quality of Life and Well-being* 34-35.

289 This is substantiated by the frequent use of 'well-being' to describe 'quality of life' - para 2.3.3.1 above.

290 Diener and Suh 1997 *Soc Indic Res* 207.

environmental health concern is expressed as 'health' and 'quality of life', 'health' and 'well-being', or as 'quality of life' and 'well-being'.[291] These concepts are therefore certainly relevant in the environmental health context, which is also why they are examined in the preceding paragraphs.[292]

What should be clear as pointed out in the discussions above is that all three are distinct concepts and that each reflects some aspects of the human condition. Although theoretically it may be possible to distinguish between them, as was also illustrated above, it need not be necessary from an environmental health perspective.[293] Such a distinction would not be required *if* the protection and improvement of health, quality of life, *and* well-being were to be considered as an overall aim, which is also the case with environmental health.

Confirmation that all three must be regarded as a concern of environmental health stems among others from a) the articulation of environmental health locally and internationally, b) the importance of the need to improve the quality of life, well-being, and health of all South Africans as provided for in legal instruments, c) the purpose of sustainable development, and d) the impact that people's health have on their quality of life and well-being, and *vice versa* as determined by the environment.[294]

Most articulations of environmental health feature either health, quality of life, well-being, or any combination thereof as its concern.[295] This is also true in South Africa as environmental health is defined by the NDOH with reference to human health *and* quality of life in the *NEHP*.[296] The work undertaken by the WHO also mirror this view as can be seen from their first definition of environmental health that referred to the "physical and mental health and social well-being of man and his society".[297] This was followed by a later version that instead mentioned "human

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[291] This happens in other contexts as well, not only where environmental health is concerned.
[292] See paras 2.3.1.1, 2.3.3.1-2.3.3.2 above.
[293] These terms are sometimes used interchangeably in any case - see paras 2.3.1.1, 2.3.3.1-2.3.3.2 above.
[294] An explanation of each follows below.
[295] Frumkin "Introduction to Environmental Health" 4-5.
[296] *NEHP* 7; para 2.3.5 below.
[297] WHO *Development of Environmental Health Criteria for Urban Planning* 6.

health and disease",[298] and their latest rendition refers to "health, including quality of life".[299] The same trend is noticeable from other descriptions of environmental health as well, for example one refers to the "effects (often indirect) on health and well-being",[300] and another formulates this concern plainly as the "impacts of the environment on people".[301]

The improvement of the quality of life of all South Africans ranks very highly from a legal perspective because it is included in the preamble to the *Constitution of the Republic of South Africa*, 1996 (hereafter *Constitution*) as a reason for its adoption.[302] As one of the ways to achieve the improvement of the quality of life of all people in South Africa, an environmental right has been enunciated in the *Constitution* that entitles everyone to the right to an environment that is "not harmful to their health or well-being".[303] The *National Health Act* 61 of 2003 (hereafter *NHA*) was likewise adopted in recognition of the need to improve people's 'quality of life' as referenced in the *Constitution*, among other reasons.[304] An objective of the *NHA* is to protect, respect, promote, and fulfil the right of everyone to an environment that is not harmful to their health and well-being.[305] It is also the mission of the NDOH, through environmental health, to "improve the health of the environment and the quality of life of all communities".[306] Lastly, government also envisions in its *NDP* that by 2030, the quality of life will be greatly improved in

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298 WHO Europe *European Charter and Commentary* 18; WHO Europe *Environment and Health* 11; WHO Europe *Terminology for the European Health Policy Conference* 19.

299 MacArthur and Bonnefoy *Environmental Health Services in Europe 1* 5-6; WHO 2013 http://bit.ly/1qbNyqN.

300 Frumkin "Introduction to Environmental Health" 5.

301 Moeller *Environmental Health* 1; Spellman and Stoudt *The Handbook of Environmental Health* 2. For more definitions - see US DOHHS 1998 http://1.usa.gov/1m0VHgK.

302 See the preamble to the *Constitution* that stipulates: "[we] therefore … adopt this Constitution as the supreme law of the Republic so as to … [i]mprove the quality of life of all citizens and free the potential of each person". See also Du Plessis 1999 *Sask L Rev* 314-315; Du Plessis *Re-Interpretation of Statutes* 239-242; Rautenbach *Constitutional Law* 74-75 for more on the function of a preamble as a guide to constitutional interpretation.

303 Section 24 of the *Constitution*; para 4.2.3 below. Du Plessis argues that s 24 of the *Constitution* aims to secure a basic quality of life - Du Plessis 2011 *SAJHR* 282.

304 Preamble to the *NHA*.

305 Section 2(c)(ii) of the *NHA*.

306 This is according to the NDOH - *NEHP* 14. To achieve government's vision of "a long and healthy life for all South Africans", the NDOH has been tasked with the duty to improve the health status of the entire population - *NSDA* 4.

South Africa.[307]

Government's commitment to sustainable development also contributes to the need to incorporate people's health, quality of life, and well-being into the environmental health concern.[308] This view is derived from the finding by the WHO that "health and well-being are the ultimate aim of social and economic development",[309] which is also echoed by the National Department of Forestry, Fisheries and the Environment (hereafter NDFFE) that pronounced that the "purpose of human development is to improve human well-being and quality of life".[310] The argument that people's quality of life (including their health as part of this package) is the overall goal of sustainable development further supports this view.[311]

Lastly, the relationship between health, quality of life, and well-being is also a reason for the inclusion of all of these in the environmental health concern. If environmental factors affect people's health, it will also affect their quality of life because their quality of life is partly dependant on good health.[312] On the other hand, environmental factors could affect people's perceptions (well-being and quality of life), which in turn may influence their behaviour that lead to or cause conditions that do affect their health.[313] Consequently, an environmental hazard will typically affect all of a person's health, quality of life, *and* well-being, either directly or indirectly.

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307 *NDP* 167, 216, 330-350.

308 See para 2.3.4 below for a discussion on 'sustainable development' and its relationship with environmental health.

309 Article ii of the *WHO Health-for-All Policy for the Twenty-First Century*.

310 *National Strategy for Sustainable Development and Action Plan* (2011-2014) 13. Note that the composition and nomenclature of the national departments and ministries have changed numerous times since 1994. For present purposes the NDFFE should be read to include all the previous iterations of the national department that was responsible for the environmental affairs of the country, and the same principle applies to other national government departments whose names have changed over the years.

311 The text reads 'human welfare' although it refers to 'quality of life' - DEA *2nd South Africa Environment Outlook* 19; Streimikiene 2015 *Intellectual Economics* 67; para 2.3.3.1 above. See also paras 2.3.4, 3.3.3.1 below.

312 Battersby "Historical Context, Philosophy and Principles of Environmental Health" 33-34; Du Plessis 2011 *SAJHR* 287; para 2.3.3.1 above.

313 Booth *et al* 2009 *NR* 21-39; Eurostat 2013 http://bit.ly/2hcbBfX; MacArthur and Bonnefoy *Environmental Health Services in Europe 1* 8; Streimikiene 2014 *JIS* 9-17; paras 2.3.2, 2.3.3.1-2.3.3.2 above.

In consideration of the above it will only be appropriate to extend the concern of environmental health to also include people's 'quality of life' and 'well-being' when formulating a definition of environmental health for the purpose of this research.[314] It also has to be kept in mind though that it might not be possible to address all the aspects that relate to an individual's quality of life and well-being from an environmental health perspective, therefore environmental health should only be concerned with health-related quality of life and well-being.[315]

2.3.4 Sustainable development and environmental health

The notion of 'sustainable development' has received considerable endorsement from the international community, it has developed into an integral part of international law, and it forms the basis upon which the current world development goals have been built.[316] South Africa has accordingly developed a national sustainable development vision and adopted an accompanying framework, strategy, and action plan to give effect to it.[317] 'Sustainable development' is also the "fundamental building block around which environmental legal norms have been

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314 MacArthur "Introduction to Environmental Health" 10.

315 For example, environmental health cannot address income levels, happiness originating from non-environmental factors (winning the lottery, getting married), or hereditary conditions. The WHO has managed with some difficulty to develop quality of life indicators specifically in relation to health and the environment that could prove useful to demarcate relevant 'quality of life' and 'well-being' concerns - WHO *WHOQOL* 1-12; Ferrans *et al* 2005 *Nurs Schol* 336-342; Rogerson 1995 *Soc Sci Med* 1373-1383; CDC 2014 http://1.usa.gov/1qeFBW6; Streimikiene 2015 *Intellectual Economics* 67-78; Eurostat 2013 http://bit.ly/2hcbBfX; Spiro and Bossé 2000 *Int'l J AHD* 297-300, 302.

316 *BP Southern Africa*-case 143-144; *Fuel Retailers Association of Southern Africa v Director-General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province* 2007 6 SA 4 (CC) para 46 (hereafter *Fuel Retailers*-case). See Du Plessis and Feris 2008 *SAJELP* 157-168; Couzens 2008 *SAJELP* 23-56; Retief and Kotzé 2008 *SAJELP* 139-155 for more on the judgment in the *Fuel Retailers*-case. For more on the current world developmental goals, known as the 'Sustainable Development Goals' - see *Transforming Our World: The 2030 Agenda for Sustainable Development* (2015) (hereafter *Transforming Our World*); para 3.3.3.1 below.

317 *National Framework for Sustainable Development in South Africa* (2008); *National Strategy for Sustainable Development and Action Plan* (2011-2014). The vision was expressed in the *National Framework for Sustainable Development in South Africa* (2008) and reads as follows:

> South Africa aspires to be a sustainable, economically prosperous, and self-reliant nation state that safeguards its democracy by meeting the fundamental human needs of its people, by managing its limited ecological resources responsibly for current and future generations, and by advancing efficient and effective integrated planning and governance through national, regional, and global collaboration.

fashioned" in South Africa,[318] and the *NDP* moreover identifies that it is critical to implement sustainable development practices if poverty is to be eliminated and inequality reduced by the year 2030.[319]

The popularisation of 'sustainable development' triggered an extensive analysis of the interaction between the environment and human health in the context of development, of which the findings had rather significant impacts on the development of environmental health from thereon forward.[320] This research will therefore not be complete without deliberating on the linkages between 'sustainable development' and environmental health.

Evidenced from the widespread use of 'sustainable development' and 'sustainability' either as interchangeable terms or as distinct concepts, the researcher accepts as a point of departure that 'sustainable development' refers to a pathway to achieve 'sustainability', and that 'sustainability' refers to the maintenance of a desired condition.[321] In other words 'sustainable development' is a process, and 'sustainability' the outcome.[322]

It may be useful to consider that humans have basic needs and development is necessary to fulfil all these needs. However, the process of development usually places high demands on the environment, which suffers as a result. Conversely, humans also depend on the environment to fulfil their basic needs, which means

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318 *BP Southern Africa*-case 143-144.

319 *NDP* 34, 198-216. The *NDP* refers to 'environmental' sustainability, which is a subset of sustainable development.

320 See WHO Commission on Health and Environment *Our Planet, Our Health* for these findings. See Steer *et al World Development Report 1992* for a similar report conducted by the World Bank.

321 Sustainable development is not a "fixed state of harmony, but rather a process of change" - *Report of the World Commission on Environment and Development: Our Common Future* 42/427, UN Doc A/42/427 (1987) para 30 (hereafter *Brundtland Report*); *National Strategy for Sustainable Development and Action Plan* (2011-2014) 8; Kotzé 2003 *PELJ* 86. See also Scholtz 2005 *TSAR* 76-79 where 'sustainable development' is described not as a principle but rather as an ideal.

322 It is acknowledged that subsequent to 'sustainable development' and 'sustainability', theoretical debates are currently moving towards the Anthropocene and earth systems governance, but for the purpose of this study the researcher will still refer to the terminology as current found in South Africa's legislation and international law instruments. For more in this regard - see e.g. Kotzé *Environmental Law and Governance for the Anthropocene* 3-54, 165-188, 269-288; Earth Systems Governance 2022 https://bit.ly/36N4sOW.

that the environment needs to be protected against degradation from human activities, the very same activities that are necessary for human development.[323] It is in this context that the notion of 'sustainable development' needs to be viewed.

The notion of 'sustainable development' is notoriously uncertain,[324] but it essentially necessitates that "development [must] meet the needs of the present without compromising the ability of future generations to meet their own needs".[325] These needs have been articulated into three dimensions, known as the pillars of sustainable development, which are social equality (people), environmental protection (planet), and economic growth (profit).[326] A fundamental basis of 'sustainable development' is that these three pillars are all interdependent and mutually reinforcing, which means that one cannot exist without the others, and that the improvement of one should improve the others.[327]

Since the three pillars are interdependent, they have to be integrated continuously during the developmental process toward their mutual compatibility. In other words the attainment of social equality, environmental protection, and economic growth have to be reconciled for their mutual interest, much like a process of convergence. Development will only be sustainable if this integration remains mutually compatible

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323 Patz *et al Our Planet, Our Health, Our Future* 1; Parker, Rhodes and Schwartz "Sustainability and Health" 60-66; WHO Commission on Health and Environment *Our Planet, Our Health* xiv; *Fuel Retailers*-case paras 113, 118.

324 Birnie, Boyle and Redgwell *International Law and the Environment* 4; Sands *et al International Environmental Law* 206-207.

325 The UN commissioned an independent body, the World Commission on Environment and Development, to conduct research on environmental issues. Their findings were published in a report entitled *Our Common Future*, commonly known as the *Brundtland Report*, which introduced the notion of 'sustainable development' - *Brundtland Report* ch 1 para 27, ch 2 para 1. The 'sustainable development' notion was also included in subsequent international law instruments, among others the *Rio Declaration*, the *Agenda 21 - United Nations Programme of Action from Rio Earth Summit* (1992) (hereafter *Agenda 21*), the *Johannesburg Declaration on Sustainable Development* (2002), and the *Plan of Implementation of the World Summit on Sustainable Development* (2002). For more on these international law instruments - see Birnie, Boyle and Redgwell *International Law and the Environment* 48-53; Glazewski and Du Toit "International Climate Change Law" 6-18; para 3.3.3.1 below.

326 Principle 5 of the *Johannesburg Declaration on Sustainable Development* (2002); Strange and Bayley *Sustainable Development* 25, 27; Glazewski "The Nature and Scope of Environmental Law" 16-22; Du Plessis and Nel "An Introduction" 10. The NDFFE views these dimensions not so much as pillars, but rather as systems embedded in one another - *National Framework for Sustainable Development in South Africa* (2008) 14.

327 Principle 5 of the *Johannesburg Declaration on Sustainable Development* (2002); *Resolution on the World Summit on Sustainable Development* Res 57/253, UN Doc A/Res/57/253 (2002) 2; Gladwin, Kennelly and Krause 1995 *AOMR* 877-880.

over time.[328] In theory this means that the growth of the economy should not exacerbate social inequality or transpire at the cost of environmental degradation, that the attainment of social equality should not hinder environmental protection or economic growth, and that the protection of the environment should not prevent economic growth or the realisation of social equality. Instead, all three these concerns are equally important and have to be pursued simultaneously so that they can be balanced.[329]

The balancing of the three pillars requires a consideration of the developmental needs of the present generation, but it *also* requires a consideration of the needs of future generations, which are known as intra- and inter-generational equity, respectively.[330] For this reason, in addition to the integration of the three pillars, 'sustainable development' also aims to equalise both the benefits (for instance poverty alleviation through the distribution and sharing of resources) and responsibilities (for instance environmental protection) in respect of the three pillars among *all* living people on the one hand, and it aims to safeguard the potential needs of future generations on the other.[331]

In summary then, 'sustainable development' may be described to involve the recognition that social equality, environmental protection, and economic growth are interdependent, that the attainment of these must transpire through their integration toward mutual compatibility, and that this has to be done for the benefit

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328 *Fuel Retailers*-case para 55; *BP Southern Africa*-case 142-144.

329 For more in this regard - see Birnie, Boyle and Redgwell *International Law and the Environment* 54; *National Framework for Sustainable Development in South Africa* (2008) 15; *Fuel Retailers*-case para 45; Kidd *Environmental Law* 17-18; Glazewski "The Nature and Scope of Environmental Law" 16-22; Feris 2010 *PELJ* 78-92.

330 Blewitt *Understanding Sustainable Development* 16; Birnie, Boyle and Redgwell *International Law and the Environment* 55, 117-118.

331 Claasen J held, based on s 24(b) of the *Constitution*, that "[t]he balancing of environmental interests with justifiable social and economic development is to be conceptualised well beyond the present living generation" - *BP Southern Africa*-case 142-144; Sands *et al International Environmental Law* 209-210; Kidd *Environmental Law* 17-18; Glazewski "The Environmental Right" para 19.7; Birnie, Boyle and Redgwell *International Law and the Environment* 55; Atkinson *et al* "Introduction" 6-8.

of both the present and future generations.[332]

The idea that the three pillars have to be integrated raises some concerns.[333] For instance at one stage, and even today still, some regard the attainment of economic growth chiefly among the three pillars, where the attainment of social equality and environmental protection mostly play second fiddle.[334] An implicit characteristic of 'sustainable development' however, is that none of the values attached to any of the three pillars should trump the others, and instead the attainment of each must be pursued simultaneously and equally.[335] Yet, even if their attainment is to be pursued equally as a means to integrate the pillars, the purpose of their integration remains elusive.[336] In other words, it is unclear as to why they have to be integrated in the first place. Further uncertainty also stems from the numerous ways in which 'sustainable development' can be interpreted and implemented, which makes it, as Kidd describes, an "infinitely flexible concept that can be used to justify all manner

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332 'Sustainable development' can also be viewed as "a mediating principle in reconciling environmental and developmental considerations" - *Fuel Retailers*-case para 55. For further explanations of 'sustainable development' and the reasoning behind its conception - see *Brundtland Report* ch 2; Sachs *The Age of Sustainable Development* 1-44.

333 There were even calls for the abandonment of 'sustainable development' because of the vagueness and malleability of the concept - Springett and Redclift "Sustainable Development: History and Evolution of the Concept" 17; Du Plessis and Nel "An Introduction" 9-10.

334 The 'sustainable development' notion arguably originated because of the need to protect the 'environment' in light of the exploitation of resources as a consequence of socio-economic development. In other words, 'sustainable development' is an 'environmental' concept. If this view is to be accepted, 'sustainable development' will only become relevant where environmental interests are at stake. This means that the achievement of sustainability cannot be used as justification to attain economic growth and/or social equality specifically, because the three pillars *only* have to be reconciled once the 'environment' is threatened - *Brundtland Report* ch 1 paras 8-9, 39-54; *Fuel Retailers*-case paras 50, 113, 118; Du Plessis and Rautenbach 2010 *PELJ* 27-28; Feris "Environmental Rights and Locus Standi" 140-142; Du Plessis and Feris 2008 *SAJELP* 157-168; Retief and Kotzé 2008 *SAJELP* 139-155; para 4.2.2.1 below.

335 Birnie, Boyle and Redgwell *International Law and the Environment* 39, 54-55, 115. The economy and ecology "are both equally relevant for improving the lot of humankind" - *Brundtland Report* ch 1 para 42. Claasen J similarly, in light of the application of 'sustainable development' through s 24(b)(iii) of the *Constitution*, made it very clear that "[p]ure economic principles will no longer determine, in an unbridled fashion, whether a development is acceptable" - *BP Southern Africa*-case 144.

336 There is no clear solution on how the potential needs of future generations will be identified either. For more on these uncertainties - see Springett and Redclift "Sustainable Development: History and Evolution of the Concept" 17-20; Birnie, Boyle and Redgwell *International Law and the Environment* 54-58.

of activities".[337]

Because of these uncertainties and the potential flexibility in its application, Birnie, Boyle, and Redgwell recommend, however vague this might still be, that it should simply be understood to mean that development will only be sustainable "if it benefits the disadvantaged, without disadvantaging the needs of the future", and this explanation is also adopted for present purposes.[338]

The eventual goal of the attainment of social equality, environmental protection, and economic growth, is the betterment of human lives.[339] One of the primary human needs is to be healthy, and it therefore follows that the attainment of acceptable levels of health is part and parcel to the betterment of human lives.[340] As such, human health may be regarded as central to sustainable development.[341] To put it differently, the intended outcome of sustainable development is to enable

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337 Kidd *Environmental Law* 18; Birnie, Boyle and Redgwell *International Law and the Environment* 54; Redclift 2005 *Sust Dev* 212-214. See also Nel and Alberts "Environmental Management and Environmental Law in South Africa: An Introduction" 3 in which the authors describe it as having a "nebulous" paradigm, and Redclift 2005 *Sust Dev* 225 in which the author calls it an oxymoron. For other views on 'sustainable development' - see Blewitt *Understanding Sustainable Development* 34-37; Sands *et al International Environmental Law* 206-207; Redclift 2005 *Sust Dev* 212-227.

338 Birnie, Boyle and Redgwell *International Law and the Environment* 55. The authors also explain that 'sustainable development' consists of substantive and procedural elements that can be extracted from the principles in the *Rio Declaration*. The substantive elements are the integration of environmental protection and economic development, the right to development, the sustainable utilisation of natural resources, the equitable allocation of resources both within the present generation and between present and future generations (intra- and inter-generational equity), and the procedural elements include public participation in decision-making and environmental impact assessments - Birnie, Boyle and Redgwell *International Law and the Environment* 116-123; *Fuel Retailers*-case para 51. The *NEMA* defines 'sustainable development' as "the integration of social, economic, and environmental factors into planning, implementation, and decision-making so as to ensure that development serves present and future generations".

339 The betterment of human lives may therefore be viewed as a desired state that needs to be maintained, which could also be regarded as a feature of sustainability - Blewitt *Understanding Sustainable Development* 37-38. See also art ii of the *WHO Health-for-All Policy for the Twenty-First Century*, which provides that "health and well-being are the ultimate aim of social and economic development".

340 Church "Public Health, Environmental Health and Sustainable Development" 199; para 2.3.1.1 above.

341 Principle 1 of the *Rio Declaration*; Patz *et al Our Planet, Our Health, Our Future* 43. The WHO for instance launched a 'healthy cities initiative' that focuses on the creation of healthy communities through sustainable development practices - Dannenberg and Capon "Healthy Communities" 393-398. See also Boone and Modarres *City and Environment* 138-145; Werna *et al Healthy City Projects in Developing Countries* 1-134; WHO Europe *Healthy Cities around the World* 2-13; WHO ROA *Healthy Cities Initiative* 1-40 for more on this initiative.

humans to live a "*healthy* and productive life in harmony with nature".[342] For this reason, one of the objectives of the implementation of sustainable development practices ought to be to achieve and maintain an acceptable standard of health for all people.[343] Corvalán illustrates this view of health as central to sustainable development in Figure 2-4 below.

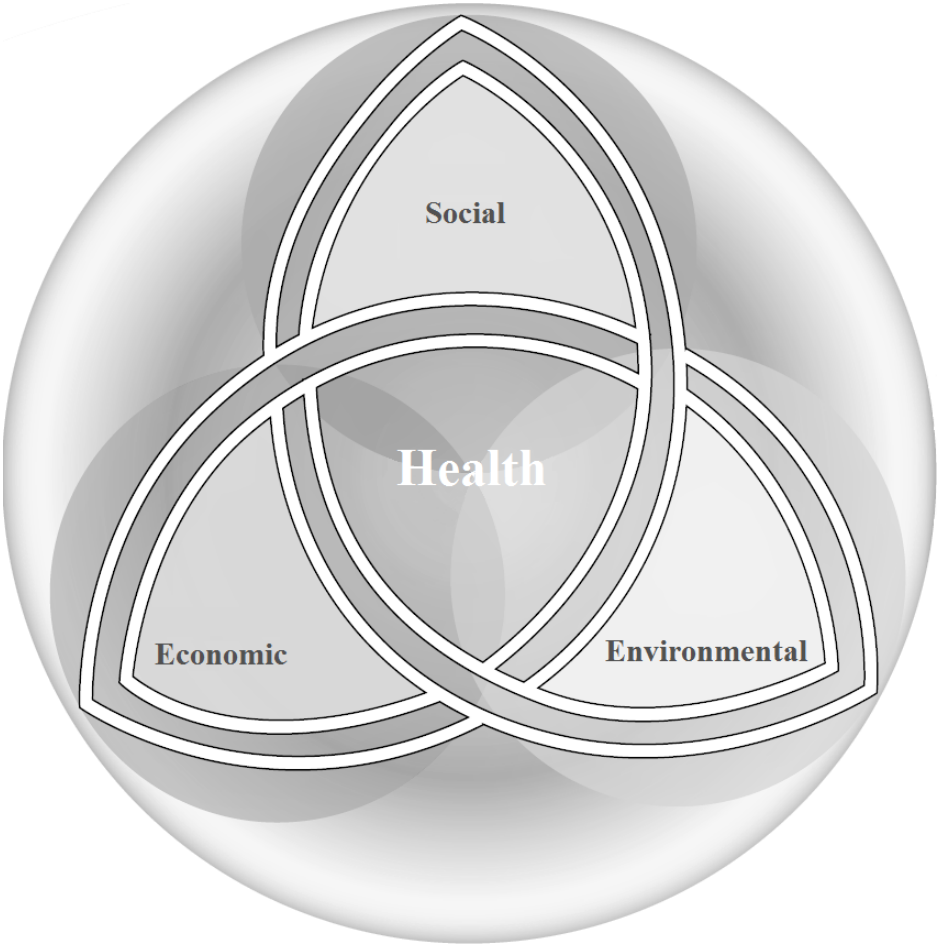

Figure 2-4: Interlocking pillars of sustainable development[344]

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342 Emphasis was added - principle 1 of the *Rio Declaration*; *Brundtland Report* ch 2 para 81; Patz *et al Our Planet, Our Health, Our Future* 6; para 3.3.3.1 below.

343 In the South African context, 'sustainable development' is explained as being concerned with "enhancing human well-being and quality of life for all time" - *National Framework for Sustainable Development in South Africa* (2008) 6. See also the *National Strategy for Sustainable Development and Action Plan* (2011-2014) 15 which identifies people's health and other environmental health-related aspects as indicators whereby government's progress towards implementing its action plan to achieve sustainability can be measured.

344 Patz *et al Our Planet, Our Health, Our Future* 51. This Figure is not representative of the approach to sustainable development in South Africa. South Africa relies on the systems approach represented by a 'nested model of embedded systems' - *National Framework for Sustainable Development in South Africa* (2008) 15; DEA *2nd South Africa Environment Outlook* 19; Du Plessis and Nel "An Introduction" 10-13. The purpose of this Figure is merely to illustrate the centrality and importance of 'health' in the sustainable development context.

Von Schirnding and Mulholland also explain that the purpose of development is presumably to improve human lives, but that people's health has been seen as an incidental beneficiary or casualty of the developmental process. They further point out that a person's health status is actually an ecological characteristic that reflects the wider conditions of the environment.[345] This argument is based on the acceptance that people have a reciprocal relationship with the environment because when people damage the environment through their behaviour, the environment in turn become harmful to people, which is why people's health is indicative of the status of the environment.[346] For this reason they argue that 'health' is a central criterion of 'sustainable development', and if development is not conducive to sustained improvements in health then it cannot be regarded as sustainable development.[347]

Not only is the health of a population a criterion or indicator of sustainable development, it is also a precondition. If people have poor health it hampers the developmental process, and development will not be sustainable if it worsens people's health even further. On the other hand, if populations become healthier it should lead to an improvement in the implementation of sustainable development practices, which makes health not only a precondition but also a resource for sustainable development.[348]

The NDFFE explains specifically in the South African context that human welfare or a human's quality of life is the "holy grail of sustainability".[349] This explanation is premised on the idea that if society collapses, the welfare of individuals will suffer,

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345 Von Schirnding and Mulholland *Health in the Context of Sustainable Development* 10; CIEH *Agendas for Change* 8-9; WHO Europe *European Charter and Commentary* 23-24; *Brundtland Report* ch 2. The *Agenda 21* also recognises that development is "intimately interconnected" with human health - paras 6.1-6.3 of *Agenda 21*.

346 Patz *et al* observe that there is a "growing confluence" between people's health and global environmental change - Patz *et al Our Planet, Our Health, Our Future* 43; para 2.3.2 above.

347 Von Schirnding and Mulholland *Health in the Context of Sustainable Development* 10; McMichael "Population Health: A Fundamental Marker of Sustainable Development" 100; Patz *et al Our Planet, Our Health, Our Future* 7. The centrality of 'health' was affirmed at the World Summit on Sustainable Development - Von Schirnding 2005 *Global Health* 3-4.

348 *The Future We Want* (2012) para 138; McMichael "Population Health: A Fundamental Marker of Sustainable Development" 101; MacArthur "Introduction to Environmental Health" 9.

349 DEA *2nd South Africa Environment Outlook* 19. Take note of the reference to 'quality of life' instead of 'human health', an aspect that is discussed in paras 2.3.3.1, 2.3.3.3 above.

if the economy collapses, the society will be weakened, and if the environment collapses, the economy will be damaged.[350] In other words, human welfare will be the eventual casualty of the collapse of all three pillars, which denotes unsustainable development. From this perspective human welfare is described to consist of several satisfiers that are categorised in terms of four existential and nine axiological human needs.[351] The needs identified within these categories include for example food, shelter, friendships, and equal rights, but particularly noteworthy is that it also includes physical health, mental health, and health systems.[352] Health should in other words only be viewed as part of the broader notion of human welfare. Subsequently, according to the DEA, human welfare (comprising of several human needs) should be regarded as the primary purpose of sustainable development, where 'health' only makes up a part of the human welfare package.[353]

As a central concern of environmental health and sustainable development, people's 'health' creates a parallel between the two.[354] The WHO Commission on Health and Environment offers perhaps the best explanation of the linkage between environmental health and sustainable development in one of their reports when they stated:

> Human health ultimately depends on society's capacity to manage the connection between human activities and the … environment in ways that safeguard and promote health but do not threaten the integrity of the natural systems on which

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350 This premise is also the reason why the three dimensions of sustainable development are considered interdependent, which is illustrative of the 'nested model' of sustainable development - DEA *2nd South Africa Environment Outlook* 19; *National Framework for Sustainable Development in South Africa* (2008) 15.

351 The existential needs are 'being', 'having', 'doing', and 'interacting', and the axiological needs are 'subsistence', 'protection', 'affection', 'understanding', 'participation', 'idleness', 'creation', 'identity', and 'freedom' - Max-Neef *Human Scale Development* 16-19, 30-37; DEA *2nd South Africa Environment Outlook* 19-20.

352 Max-Neef *Human Scale Development* 30-37; DEA *2nd South Africa Environment Outlook* 19-20.

353 See for instance *Fuel Retailers*-case para 44 where two of the three pillars are described by Ngcobo J as "essential to the well-being of human beings". See also para 2.3.1.2; Scholtz 2005 *TSAR* 85 with respect to contention that South Africa's environmental rights are anthropocentric in nature and note that this appears to be the case with sustainable development as well.

354 CIEH *Agendas for Change* 20. The *WHO Health-for-All Policy for the Twenty-First Century* is an international initiative aimed specifically at bringing together 'sustainable development' and 'health' - WHO Europe *Health 21* 1-172; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 16; *National Strategy for Sustainable Development and Action Plan* (2011-2014) 42. See also para 11.4 of the *White Paper for the Transformation of the Health System in South Africa* (1997) which stipulates that environmental health services should contribute positively towards sustainable physical and socio-economic development.

the … environment depends.[355]

Sustainable development permits economic growth while securing environmental protection and achieving social equality, which ought to improve human welfare and subsequently human health. Environmental health necessitates environmental protection to prevent harmful human health impacts. In this sense, sustainable development and environmental health have similar goals, which is to improve human health through environmental protection.[356]

Sustainable development and environmental health are also complementary to one another. The provision of environmental health services ought to reduce the presence of environmental hazards and their causes, and thereby prevent their harmful human health impacts, which means that people's health should improve. As people become healthier, their activities also ought to become more sustainable, which means that people should have less of an impact on the environment. This in turn will be beneficial to environmental health as there ought to be fewer environmental hazards, which means that it should become easier to provide environmental health services effectively.[357]

The opposite also remains true though because development that is not sustainable could lead to environmental degradation, which could increase the presence of environmental hazards, which may cause more harm to even more people, so the population's health will be poorer, making it more difficult for people to undertake sustainable activities. Frumkin agrees with this reasoning and even goes as far as to say that environmental health is at the core of sustainable development, and that

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355 WHO Commission on Health and Environment *Our Planet, Our Health* 6-7.

356 *Agenda 21* paras 6.1-6.46; *The Future We Want* (2012) para 138. Corvalán, Kjellström and Smith 1999 *Epidemiology* 659; para 2.3.1 above. Note that "sustainable development … [lies] at the core of environmental protection" - *Fuel Retailers*-case para 45.

357 This is also the reason why people's health and sustainable development are intimately interconnected, which could be described as a snowball effect - *Agenda 21* para 6.1; *Patz et al Our Planet, Our Health, Our Future* 43-51. Unfortunately the risks and benefits to people's health are not always automatically prioritised where development is concerned, even though it really needs to be - Dora "Including Health into Rio + 20 Debates and Decisions" 3. In South Africa a direct reference to 'health' is notably absent from the strategic sustainable priorities for instance, although it could still be linked to some of them - *National Framework for Sustainable Development in South Africa* (2008) 33; *National Strategy for Sustainable Development and Action Plan* (2011-2014) 7.

sustainable development is a central theme of environmental health.[358] From a more practical perspective Flowers, Gray, and Battersby also remark that environmental health could provide a strong basis for the implementation of and deliver practical solutions to sustainable development.[359] The interplay between environmental health and sustainable development therefore makes it increasing difficult to deny that these concepts do influence one another.

The influence that environmental health could have on sustainable development will depend on the potential impact of environmental health practices (provision of services), which could loosely be inferred from the current legal environmental health mandate.[360] On the other hand, and perhaps more significant for the purpose of formulating a definition of environmental health, is the influence that sustainable development has on the conceptualisation of environmental health. This can be derived, theoretically at least, from examining the legal measures adopted and implemented by government towards achieving its sustainable development vision.[361] In summary, these measures can be described to involve "shared and accelerated growth, targeted interventions and community mobilisation to eradicate poverty, and [to] ensure the ecologically sustainable use of … natural resources and ecosystem services".[362]

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358 The author derives this view from principle 1 of the *Rio Declaration* - Frumkin "Introduction to Environmental Health" 10-18; para 3.3.3.1 below.

359 Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 5. Environmental impact assessments, for example, can also be used as a tool to achieve sustainability - Du Plessis and Britz 2007 *TSAR* 276.

360 See ch 4 below for more on the legal mandate.

361 See for instance the *National Framework for Sustainable Development in South Africa* (2008); *National Strategy for Sustainable Development and Action Plan* (2011-2014); s 2(3)-(4) of the *NEMA*; Glazewski "The National Environmental Management Act" 13; Glazewski "The Nature and Scope of Environmental Law" 18-22; Kidd *Environmental Law* 25; Nel and Alberts "Environmental Management and Environmental Law in South Africa: An Introduction" 7-11; *Fuel Retailers*-case paras 56-62; *BP Southern Africa*-case 141-149.

362 *National Framework for Sustainable Development in South Africa* (2008) 14. An in-depth analysis of the legal regime concerning 'sustainable development' does not fall within the scope of this research, which is why only a brief overview follows. For more on this - see s 24(b)(iii) of the *Constitution*; s 2(3)-(4) of the *NEMA*; Glazewski "The Nature and Scope of Environmental Law" 16-22; Kidd *Environmental Law* 17-21; Du Plessis and Du Plessis "Striking the Sustainability Balance in South Africa" 431-458; Kotzé 2003 *PELJ* 81-95; para 4.2.2.1 below. Government has also identified strategic objectives and interventions to achieve sustainability in the long term - *National Strategy for Sustainable Development and Action Plan* (2011-2014) 5, 7, 14-15, 17-34.

From a legal position the above is to be realised through a systems based approach involving a three phased plan that is founded on a set of substantive and procedural principles derived from section 24(b)(iii) of the *Constitution*.[363] What this holds for environmental health is firstly further legal justification to operationalise environmental health, even if only as a tool to achieve sustainability,[364] and secondly, that the inherent characteristics of sustainable development must be implanted into the environmental health concept. In the latter instance the relationship between human health and the environment as a mutual feature of environmental health and sustainable development will not be considered again as this was explained above. What has to be incorporated into the environmental health concept though is the understanding that the society, economy, and environment are interconnected and interdependent, that they require equal consideration towards their mutual compatibility, and that this consideration must heed intra- and inter-generational equity.

Consequently, where the aim of environmental health is to address factors in the environment, it must be borne in mind that this process could influence the balance that ought to be reached among environmental protection, social equality, and economic growth. By influencing one of these pillars through the provision of environmental health services, the others will also be affected as an interdependent system. Environmental health hazards should therefore not be neutralised at the

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363 *Fuel Retailers*-case paras 44-45, 57-58; *BP Southern Africa*-case 146; Kidd *Environmental Law* 25; Glazewski "The Nature and Scope of Environmental Law" 18-22. For more on the three phased plan and some strategic focus areas that have been identified for this purpose (recognised pathways) - see *National Framework for Sustainable Development in South Africa* (2008) 32-43, 47-51; *National Strategy for Sustainable Development and Action Plan* (2011-2014) 15; DEA *2nd South Africa Environment Outlook* 22-23. The substantive principles upon which this plan is based are a) efficient and sustainable use of natural resources, b) ensuring that socio-economic systems are embedded within, and dependent upon, eco-systems, c) recognising that basic human needs must be met to ensure resources necessary for long-term, and d) making sure that survival is not destroyed for short term gain. The procedural principles are a) integration and innovation, b) consultation and participation, and c) implementation in a phased manner. For more on these principles - see *National Framework for Sustainable Development in South Africa* (2008) 20.

364 Section 24(b)(i)-(iii) of the *Constitution* proclaims the right of everyone to have the environment protected through reasonable legislative and 'other' measures that will secure ecological sustainable development. Environmental health could be utilised as one of those 'other' measures to secure sustainable development. For more on 'sustainable development' in the constitutional context and the interpretation of the constitutional environmental right - see paras 4.2.2.1.4, 4.2.3 below.

expense of any one of the dimensions of sustainable development in particular, but instead should be addressed whilst still having regard to their interdependent nature.[365]

To give recognition to intra-generational equity the provision of environmental health services should benefit all sectors of society, whether rich or poor, or old or young, and as such their delivery may need to be prioritised in those situations where people are disproportionately exposed to environmental hazards.[366] Additionally, with respect to inter-generational equity, environmental health practice should not favour short term solutions over long term gains, and it should be focused on current environmental hazards and also anticipate potential future threats, which will complement the preventative character of the environmental health concept.[367]

Taking into account all the aspects discussed in the preceding paragraphs, including 'health', 'environment', the 'multiple determinants of health' and 'environmental epidemiology', 'quality of life' and 'well-being', and the notion of 'sustainable development', an environmental health definition will be formulated in the paragraphs to follow.

2.3.5 Environmental health – a definition[368]

A plethora of environmental health definitions have emerged over the years, each attempting to encapsulate the complex concept of 'environmental health'.[369] What most of these have in common is that they all proclaim that environmental factors

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365 *NEHP* 33.

366 Pieterse 2014 *SAPL* 182-184.

367 Environmental health aims to prevent conditions that are potentially harmful to people's health and is not intended to serve a curative health system - Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 6; Glazewski "The Nature and Scope of Environmental Law" 26-29; Listorti and Doumani *Environmental Health: Bridging the Gaps* 18; CIEH *Agendas for Change* 19; para 2.4.2.5 below. See para 3.3.3.1 below for more on 'sustainable development' from an international law perspective.

368 Note that "if a … definition is slippery, then the knowledge built upon it is likely to be similarly loose and, in turn, the policies constructed on the basis of that knowledge can very well be misguided", which is why it is important to formulate a comprehensive and precise definition - Scholte *Globalization* 54; Kotzé *Global Environmental Governance* 16.

369 See among others Spellman and Stoudt *The Handbook of Environmental Health* 1; US DOHHS 1998 http://1.usa.gov/1m0VHgK.

can adversely affect the human condition on the one hand, whilst simultaneously emphasising that something has to be done about this on the other.[370] It is therefore critical for present purposes that environmental health must be viewed specifically in this context and not for example as a profession, a field of study, the health (condition) of the environment, or simply a merger of the distinct 'environment' and 'health' concepts, among other things.[371]

As a point of departure cognisance should be taken that the NDOH considers the 'environment' to be that as defined in the *NEMA*,[372] and 'health' to be that as defined by the WHO.[373] The NDOH subsequently adopted the definition of 'environmental health' as formulated by the WHO in a previous proposal, which reads as follows:

> Environmental health encompasses those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social and psychosocial factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that can potentially affect adversely the health of present and future generations.[374]

Based on the reasons advanced in the previous paragraphs in this chapter however, these constructions of 'health', 'environment', and 'environmental health' cannot be accepted for the purpose of this research.[375] The WHO have since proposed a new definition of 'environmental health', which is also their latest, and it reads that:

> Environmental health addresses all the physical, chemical, and biological factors external to a person, and all the related factors impacting behaviours. It encompasses the assessment and control of those environmental factors that can potentially affect health. It is targeted towards preventing disease and creating health-supportive environments. This definition excludes behaviour not related to

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370 Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 5.

371 MacArthur and Bonnefoy *Environmental Health Services in Europe 1* 5; Frumkin "Introduction to Environmental Health" 5; para 2.3.1.3 above.

372 Section 1 of the *NEMA*; *NEHP* 8; para 2.3.1.1 above.

373 Preamble to the *WHO Constitution*; *NEHP* 8; para 2.3.1.2 above.

374 MacArthur and Bonnefoy *Environmental Health Services in Europe 1* 5-6; *NEHP* 8. See also WHO Europe *Environment and Health* 11; WHO Europe *European Charter and Commentary* 18 for a prior version of this definition, but note that it was not universally accepted.

375 'Health' cannot be expressed as a state of completeness, for it will be unattainable - see para 2.3.1.1 above. This definition of 'environment' excludes the urban environment - see para 2.3.1.2 above. Not all the social and psychosocial factors in the 'environment' can be addressed through the provision of environmental health services and not all of these are reasonably modifiable, which makes their inclusion redundant - Prüss-Üstün and Corvalán *Preventing Disease through Healthy Environments* 21-23; MacArthur "Introduction to Environmental Health" 1; para 2.3.1.2 above.

> environment, as well as behaviour related to the social and cultural environment, and genetics.[376]

On the one hand this formulation addresses some of the shortcomings of their earlier proposal, but on the other hand it also excludes some significant attributes from its realm like the failure to incorporate the intrinsic characteristics underlying sustainable development and a concern for a person's quality of life.[377] Building from this proposal, and in keeping with the meaning of 'environment' and 'health' as set out above,[378] and the analysis of the other relevant considerations,[379] 'environmental health' must be understood for the purpose of this research as:

> The concept that addresses those reasonably modifiable natural and built surroundings within which humans exist, which are made up of the physical, chemical, and biological factors, their interrelationships, and the influences that their conditions can have on related human behaviours and attitudes and *vice versa*, which can potentially adversely affect the health, quality of life, or well-being of the present or future generations, through the delivery of interventions that are appropriate in light of everyone's developmental needs.[380]

Keeping this definition in mind, the practical implications that the operationalisation of 'environmental health' could demand on a theoretical level is examined next.

2.4 The practice of environmental health

However essential and revealing the environmental health concept for the human condition may be, it serves little purpose unless it could be operationalised. This much is apparent in consideration of the definition of environmental health as formulated above, since it indicates that *something* has to be *done* to protect the human condition from environmental hazards. Notwithstanding the discussion on the theoretical foundation of environmental health though, it remains unclear what must be done, how it must be done, and by whom it must be done. These

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376 WHO 2013 http://bit.ly/1qbNyqN.

377 See paras 2.3.3.3, 2.3.4 above.

378 See para 2.3.1 above.

379 This includes the relationship between 'health' and 'environment', the 'determinants of health', 'quality of life' and 'well-being', and 'sustainable development' - see paras 2.3.1-2.3.4 above.

380 This definition does not include all human behaviours (social) and attitudes (psychosocial) in its ambit, its scope is limited *only* to those that have the potential to adversely affect the human condition. This includes the influences that environmental factors can have on people's behaviours and attitudes (to adopt healthy habits) on the one hand, and the influences that people's behaviours and attitudes can have on the environment (the cause of harmful environmental conditions) on the other - see paras 2.3.1-2.3.2 above.

uncertainties are addressed in the paragraphs to follow, which include an outline of the role, functions, and powers of the state and its government as the entity responsible for the operationalisation of environmental health (who), an overview of the operation of a government in general (how), and an investigation into government's conduct in relation to environmental health in particular (what).

2.4.1 A state, society, and its government

Every person is responsible for his or her own condition, albeit health, quality of life, or well-being.[381] This is understandable in consideration of those impacts that are dependent on individuals themselves, such as choosing to eat healthy food and to exercise regularly, to avoid adopting generally harmful habits like smoking and drinking alcohol excessively, or to engage in any other potentially harmful activities as a matter of course.[382] However, not all those factors that could influence the human condition are necessarily within the control of every individual and this is especially true of environmental-related impacts. For instance, a factory might dump hazardous waste into a potable water supply source that poses a threat to people that need to drink that water; it could release harmful gases into the air that pose a threat to people that breathe that air; or it could follow unhygienic practices in the manufacturing of food that pose a threat to people that eat that food – all of which are hazards that are mostly out of the control of the individuals that could suffer from the potential harm that they hold.

People design societal constructs to control or influence human behaviour to overcome situations as illustrated by the examples above, and this materialises through the establishment of rules that are expressed in terms of law.[383] In other

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381 See para 1.1 of the *White Paper for the Transformation of the Health System in South Africa* (1997) which states that "the people of South Africa have to realise that, without their active participation and involvement, little progress can be made in improving their health status". See also Resnik 2007 *J Med Ethics* 444-445; Minkler 1999 *Health Educ Behav* 121-141; Steinbrook 2006 *NEJM* 753-756 for some comments on the responsibility that people have for their own health, and that not every human health impact can be ascribed to the state.

382 It is interesting to note, for instance, that the yearly average household expenditure on health in 2014/2015 was R935-00, and on alcoholic beverages it was R911-00 - Stats SA *Living Conditions Survey* 7.

383 Kotzé *Global Environmental Governance* 2, 152; Bekink *Principles of South African Constitutional Law* 30-32; Humby *et al* "Introduction" 1-5; para 2.4.2.2 below.

words individuals as a collective (society) create and follow agreed upon rules (law) as a means to maintain order among them. Law therefore enables people to live together and to fulfil their mutual obligations and responsibilities in "the shared public spaces of [their] mutual affiliation",[384] which for present purposes refers to individuals' conduct in relation to the environment and the potential harm it holds for the human condition.[385]

A state, through its government, is entrusted with the law making process on behalf of its society, and the government ensures that society abides by the law.[386] A state also exists to serve its society and is responsible for them, which means that individuals' concerns are also the concerns of the state.[387] For these reasons among others, a state and its government could play a pivotal role with respect to the interaction that occurs between people, which subsequently also includes their health, quality of life, and well-being. Accordingly, a brief examination of 'state', 'society', and 'government' is conducted below to explain their roles, functions, and powers in relation to environmental health, thereby also identifying *who* is responsible for the operationalisation of environmental health.

2.4.1.1 The role of a state

On a practical level it is very difficult to conceive of life without a state. All people begin and end their lives within the confines of a state, and a state penetrates and regulates much of human living. A state also represents many aspects associated with modern civility, such as acceptable human behaviour and practices, and the institutions that go along with them.[388] On a theoretical level however, it is not as easy to define the 'state' concept, reflected among others by the many theories that

384 *NDP* 18.
385 See also Kotzé *Global Environmental Governance* 153.
386 See para 2.4.1.3 below.
387 See paras 2.4.1.1-2.4.1.2 below.
388 Vincent *Theories of the State* 2-4; Rautenbach *Constitutional Law* 3-4, 6-7; Bekink *Principles of South African Constitutional Law* 19-22.

have emerged for this very purpose.[389]

Baxter argues that 'state' is no more than a metaphysical legal term and that it is more suited to a *description* of how it is used in law as opposed to relying on a *definition* thereof.[390] Following this line of argument Rautenbach and Malherbe explain 'state' through several descriptions that they derived from uses of the term, which they call the features of a 'state'.[391] The so-called features include a specific territory, a collective of people (society) that live in a specific territory, the exercise of authority by a government over a society (making laws, imposing taxes), independence in relation to and from other states, and different types of political systems (democratic, socialistic).[392]

Dryzek and Dunleavy too have identified a broad set of defining features of 'state' that serve to explain the term, but from a more practical point of view.[393] They include, according to the authors, that a) a 'state' must have a set of organised governing institutions which are formally connected to each other and have some cohesiveness, b) a 'state' must operate in a particular territory, where a substantial population lives as a distinct society, c) the role of 'state' institutions is to reach collectively binding decisions, and to ensure that decisions are obeyed by those living in the territory claimed by the state, d) the 'state' claims the monopoly of the legitimate use of physical force within a given territory, e) the 'state' must claim sovereignty, f) the existence of 'state' institutions helps define a public realm, a part

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389 For more on these theories, their development, and the difficulties in defining 'state' - see Bekink *Principles of South African Constitutional Law* 13-23; Vincent *Theories of the State* 45-217; Pierson *The Modern State* 4-6; Marinetto *Social Theory, the State and Modern Society* 11-17; De Wet "Public Administration in a Democratic Developmental State" 29-30. The meaning of 'state' is discussed only briefly in this research as the intent is merely to contextualise the concept of 'government'.

390 Baxter 1982 *SALJ* 220-222, 236.

391 Rautenbach *Constitutional Law* 3-4. Note that 'state' refers to more than the sum of its features (hence its metaphysical character). This can be evidenced from criminal matters for example, where accused persons are prosecuted in the name of the state, which means that 'state' is a personification of society's interests - Currie and De Waal *The New Constitutional and Administrative Law* 229.

392 Rautenbach *Constitutional Law* 3-4; Bekink *Principles of South African Constitutional Law* 17-29. Note the distinction between 'state' and 'society' - Currie and De Waal *The New Constitutional and Administrative Law* 4-7; para 2.4.1.2 below.

393 The authors contend that these features are a requirement for statehood - Dryzek and Dunleavy *Theories of the Democratic State* 1-2. See Vincent *Theories of the State* 19-21; Pierson *The Modern State* 6-26 for other so-called features of a 'state'.

of social life different from the private sphere of concern only to the individuals or organisations involved, and that g) the 'state' must be able to define citizens, those who are members of its society, and it must be able to control entry to and exit from its territory by citizens and others.[394]

A 'state' will only be considered as such in the legal sense if it meets all the criteria set out in article 1 of the *Montevideo Convention on the Rights and Duties of States* (1933). The criteria include that it has to have a permanent population, a defined territory, a government, and it has to have the capacity to enter into relations with other states.[395]

Keeping in mind the above, 'state' may for present purposes be considered to be a term used to refer to a "set of institutions that possess or has obtained the authority to make and enforce the rules that govern the people in a particular society and which has internal and external sovereignty over a defined territory".[396]

2.4.1.2 A state and its society

A 'state' can only exist if there are individuals living in its territory. It exists *for* these individuals.[397] The collective of these individuals makes up the state's 'society' and they can be categorised as citizens or aliens. Citizens refer to those individuals that are permanent inhabitants of a state, whereas aliens are non-permanent. The

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394 The authors identified five other associated features as well, namely that a) the 'state' must claim to be advancing the common interests of society, b) the 'state' should be accepted as legitimate, c) the 'state' must have developed a bureaucracy and tax system, d) the 'state' operates with a legal system, and that e) the 'state' is recognised by other states - Dryzek and Dunleavy *Theories of the Democratic State* 1-7.

395 Dugard contends that a further criterion needs to be present, which is that a 'state' needs to respect human rights and the right to self-determination - Dugard *International Law* 134-137. South Africa is not a party to this international instrument, but it may be regarded as international customary law - see ch 3 below for more on international law. The term 'government' is discussed in para 2.4.1.3 below.

396 This explanation is adopted from Bekink's general description of 'state' - Bekink *Principles of South African Constitutional Law* 17-19. See also Baxter 1982 *SALJ* 225-226 who argues that the term 'state' appears to be used as a collective noun for:

> the conglomeration of organs, instruments and institutions which have as their common purpose the management of the public affairs, in the public interest, of the residents of the Republic of South Africa as well as those of her citizens abroad in their relations with the South African government.

397 Bekink *Principles of South African Constitutional Law* 169-173; Rautenbach *Constitutional Law* 37-40. See Shaapera 2012 *ESJ* 20-21 for a brief discussion on the purpose of a 'state'.

distinction between the two classifications relates to the different rights and obligations that they could have within a state.[398]

A state is responsible for its 'society' by virtue of its existence.[399] This responsibility manifests through a state's authority over its people. There is some debate concerning the relationship between a 'state', 'society', and 'individuals'. On the one hand a state holds immense power and control over its people through the authority it has over them, but on the other hand a state is duty bound to protect its people with this power.[400] Ideally though, notwithstanding the unequal relationship between a state and individuals, the aggregate of individuals' interests should be the state's interests.[401] Therefore, based on the responsibility that a state has for its 'society', people ought to be able to rely on the state where their interests are concerned, which for present purposes mean that people should be able to obtain relief from the state when environmental health hazards emerge.

2.4.1.3 Government – its structure and functions

Although a 'state' is responsible for its 'society', a person cannot simply approach the 'state', knock at its door, and ask for its assistance. A 'state' remains an abstract entity representative of the aggregate of its features, and is therefore in itself unapproachable.[402]

A state renders its functions through its 'government', and 'government' exercises

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398 Currie and De Waal *The New Constitutional and Administrative Law* 6-7; Bekink *Principles of South African Constitutional Law* 169-173; s 3 of the *Constitution*. The rights and obligations discussed in this research are applicable to both citizens and aliens they are derived from the constitutional rights that are applicable to everyone - Currie and De Waal "Application of the Bill of Rights" 34-35. For more on citizenship in South Africa - see Bekink *Principles of South African Constitutional Law* 173-184.

399 Rautenbach and Malherbe explain that a state "does not exist for its own sake – it exists to serve the people" - Rautenbach *Constitutional Law* 6-8; Bekink *Principles of South African Constitutional Law* 169-170; Currie and De Waal *The New Constitutional and Administrative Law* 4-7.

400 An examination of the finer details of this relationship does not fall within the scope of this research. See Marinetto *Social Theory, the State and Modern Society* 17-30; Pierson *The Modern State* 50-77; Rautenbach *Constitutional Law* 6-7; Bodasing "Public Administration" 3 for more on this relationship.

401 Law functions as a tool that can resolve conflicts between the state and individuals (balance their interests).

402 See para 2.4.1.1 above.

authority over society on the state's behalf. The term 'government' could therefore be described as the tangible machinery of a state that holds its power of authority.[403] A 'government' consists of numerous governmental bodies that are made up of individuals or groups of people (public officials).[404] So when people need to approach the 'state' they can do so by approaching governmental bodies that embody the government of the state that they inhabit, rather than the state *per se*.

South Africa's (state) governmental bodies (government) are divided into three branches of authority, the legislative, executive, and judicial branches.[405] In the simplest of terms the legislative branch could be described as the law making branch, the executive as the branch that implements and enforces the law, and the

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[403] The terms 'state' and 'government' are sometimes mistakenly used interchangeably even though they convey different things. E.g., the President of South Africa is both the head of 'state' and the head of the 'national executive authority' (governmental body) - s 83(a) of the *Constitution*; *Independent Electoral Commission v Langeberg Municipality* 2001 3 SA 925 (CC) para 27 (hereafter *Langeberg*-case); Baxter 1982 *SALJ* 227-233; Currie and De Waal *The New Constitutional and Administrative Law* 4-6, 228-229; Bekink *Principles of South African Constitutional Law* 196-205; DPSA *The Machinery of Government* 11.

[404] Rautenbach *Constitutional Law* 6-7, 53-58; Bekink *Principles of South African Constitutional Law* 196-197. Governmental bodies, also known as organs of state, are statutorily defined in s 239 of the *Constitution* as:

> (*a*) any department of state or administration in the national, provincial or local sphere of government; or
> (b) any other functionary or institution –
> (i) exercising a power or performing a function in terms of the Constitution or a provincial constitution; or
> (ii) exercising a public power or performing a public function in terms of any legislation,
> but does not include a court or a judicial officer.

This definition includes the majority of the governmental bodies that are discussed in these paragraphs, except for the judicial authority. Their exclusion in this instance may simply be ascribed to the existence of certain constitutional provisions that apply *only* to organs of state but not to the courts, and they may therefore still be regarded as governmental bodies for present purposes - Rautenbach *Constitutional Law* 55; De Vos and Freedman *South African Constitutional Law* 334-336.

[405] See among others *Ex parte Chairperson of the Constitutional Assembly: in re Certification of the Constitution of the Republic of South Africa, 1996* 1996 4 SA 744 (CC) paras 110-111 (hereafter *First Certification*-case); Seedorf and Sibanda "Separation of Powers" 21-30; Bekink *Principles of South African Constitutional Law* 100-114; De Vos and Freedman *South African Constitutional Law* 268-271. The distribution of power among different branches is derived from the 'separation of powers' doctrine. The rationale behind this doctrine is to avoid a concentration of power because it could easily lead to an abuse of such power, where the distribution thereof instead creates a system of checks and balances which ensures that power is not exercised unduly. For more on the separation of powers - see Seedorf and Sibanda "Separation of Powers" 1-20, 39-85; Currie and De Waal *The New Constitutional and Administrative Law* 91-96; Rautenbach *Constitutional Law* 59-65; De Vos and Freedman *South African Constitutional Law* 60-77.

judicial as the branch that resolves disputes through the application of law.[406] The governmental bodies are also distributed geographically over three spheres, the national, provincial, and local spheres,[407] where each has authority over specific functional areas.[408]

2.4.1.4 National government

At the national sphere the governmental bodies consist among others of the Parliament (legislative authority), the President and Cabinet (executive authority), and the courts (judicial authority). Parliament as the national legislative authority is made up of the National Assembly and the National Council of Provinces, and its functions are to enact, amend, and repeal laws that apply to the whole territory of the state.[409] The President is the head of the national executive authority, and exercises this authority together with the Cabinet. The Cabinet consists of the President, and also a Deputy President and Ministers, all appointed by the

406 *Minister of Public Works v Kyalami Ridge Environmental Association (Mukhwevho Intervening)* 2001 3 SA 1151 (CC) para 37 (hereafter *Kyalami Ridge*-case); Currie and De Waal *The New Constitutional and Administrative Law* 95; Rautenbach *Constitutional Law* 59; Seedorf and Sibanda "Separation of Powers" 2, 22.

407 Section 40(1) of the *Constitution*; Rautenbach *Constitutional Law* 65-69; Bekink *Principles of South African Constitutional Law* 200-201.

408 Sections 44(1)(a)(ii), 104(1)(b), 156(1)(a) of the *Constitution*; Rautenbach *Constitutional Law* 55-57; paras 2.4.1.4-2.4.1.6 below. See para 2.4.1.4 below for more on the relationship between the three spheres of government, which includes their duty to co-operate as mandated by the *Constitution*.

409 Sections 42(1), 43(a), 44, 46-72 of the *Constitution*. National government may not legislate on functional areas over which provincial government has exclusive authority (unless necessitated to do so on the grounds listed in the *Constitution*), and its legislative powers concerning the functional areas of local government are constrained in that it may only frame local government's functions and not determine their detail - ss 44(2), 151(4), 155(7) of the *Constitution*; Steytler and De Visser "Local Government" 51-58; Currie and De Waal *The New Constitutional and Administrative Law* 219-220; Freedman 2014 *PELJ* 572-573; Humby 2014 *PELJ* 1678-1679; *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC) (hereafter *Gauteng Tribunal*-case) para 59. For more on the national legislative authority - see Bekink *Principles of South African Constitutional Law* 293-366; Bishop and Raboshakga "National Legislative Authority" 1-115; ch 4 of the *Constitution*; Rautenbach *Constitutional Law* 83-128; Currie and De Waal *The New Constitutional and Administrative Law* 133-198; Mphaisha "Functioning between the Branches of Government: Ensuring Democracy" 78-85.

President.[410] The functions of the President and Cabinet, among others, are to implement national legislation and to co-ordinate the functions of national state departments and the public administration.[411] The judicial authority vests in the courts, and they comprise of the Constitutional Court, the Supreme Court of Appeal, the High Courts, and the Magistrates' Courts.[412] The courts are independent, and their functions are to resolve disputes by interpreting and applying the law impartially.[413]

2.4.1.5 Provincial government

The territory of the state is divided into nine provinces that make up the provincial sphere of government.[414] Each province has its own provincial legislature (legislative authority) and also a Premier and Executive Council (executive authority). Similar to the functions conferred on the corresponding governmental bodies at the national sphere, the provincial legislatures can also pass or amend legislation for their provinces, although they may only do so with respect to specific functional areas allocated to them by the *Constitution*.[415] The Premiers together with their Executive Councils (as elected by said Premiers) are responsible for the

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410 For more on the national executive authority - see ss 83-102 of the *Constitution*; Bekink *Principles of South African Constitutional Law* 367-405; Murray and Stacey "National Executive Authority" 1-65; Bodasing "Public Administration" 1-24; Rautenbach *Constitutional Law* 129-162; Currie and De Waal *The New Constitutional and Administrative Law* 230-257; Mphaisha "Functioning between the Branches of Government: Ensuring Democracy" 90-94. The President can also appoint Deputy Ministers, but they do not form part of the Cabinet.

411 For a complete list of functions - see ss 84(1)-(2), 85(1)-(2) of the *Constitution*. The roles and functions of the national state departments and the public administration are discussed in para 2.4.1.7 below.

412 Sections 165(1), 166 of the *Constitution*.

413 For more on South Africa's courts - see ss 165-180 of the *Constitution*; Bekink *Principles of South African Constitutional Law* 469-577; Rautenbach *Constitutional Law* 163-192; Currie and De Waal *The New Constitutional and Administrative Law* 268-314; Mphaisha "Functioning between the Branches of Government: Ensuring Democracy" 94-97; Barnard-Naudé "Adjudication, Interpretation and Dispute Resolution" 193-198.

414 Section 103(1)(a)-(i) of the *Constitution*; Bekink *Principles of South African Constitutional Law* 408-410.

415 The functional areas are listed in schedules 4 and 5 of the *Constitution*. The provincial legislative powers are also constrained as far as the functional areas of local government are concerned - ss 104(1), 151(4), 155(7) of the *Constitution*; Muir 2015 *SAPL* 567-568; Currie and De Waal *The New Constitutional and Administrative Law* 219-220; Freedman 2014 *PELJ* 572-573; Steytler and De Visser "Local Government" 51-58; *Gauteng Tribunal*-case para 59; para 2.4.1.4 above. For more on the provincial legislative authority - see ss 104-124 of the *Constitution*; Madlingozi and Woolman "Provincial Legislative Authority" 1-19; Rautenbach *Constitutional Law* 197-211; Bekink *Principles of South African Constitutional Law* 410-418.

implementation of national legislation as well as their provinces' own provincial legislation, and they have to co-ordinate the functions of their provincial departments and provincial administrations, among other things.[416]

2.4.1.6 Local government

The local sphere currently consists of 257 governmental bodies known as municipalities,[417] which are classified as category A (metropolitan), category B (local), or category C (district) municipalities.[418] In substance the distinction among these categories are that metropolitan municipalities are self-standing bodies, local municipalities are bodies that form part of a comprehensive co-ordinating structure, and district municipalities are the bodies that perform co-ordinating functions.[419] The establishment of a particular category of municipality depends on specific criteria as set out in the *Local Government: Municipal Structures Act* 117 of 1998 (hereafter *Municipal Structures Act*).[420] Based on these criteria eight metropolitan municipalities have been established in areas that could be described, plainly so, as large urban settlements, where each metropolitan municipality has exclusive authority in its own demarcated area. There are 44 district municipalities spread across the remaining territory of South Africa, and many local municipalities have been established within the geographical area of each district municipality, to a total

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416 For more on the provincial executive authority - see ss 124-141 of the *Constitution*; Murray and Ampofo-Anti "Provincial Executive Authority" 1-33; Rautenbach *Constitutional Law* 211-220; Bekink *Principles of South African Constitutional Law* 428-436.

417 This is the latest number of municipalities as of 2018. Note the definition of 'municipality' in s 2 of the *Local Government: Municipal Systems Act* 32 of 2000, which essentially provides that a municipality a) consists of political structures, an administration, and a community, b) exercises legislative and executive authority in a demarcated area, and that it c) functions in accordance with its relationships among its political structures, political office bearers, administration, and community.

418 Sections 151(1), 155(1) of the *Constitution*; s 1 of the *Local Government: Municipal Structures Act* 117 of 1998; s 2 of the *Local Government: Municipal Systems Act* 32 of 2000; Main *The Local Government Handbook: South Africa 2017* 33; De Vos and Freedman *South African Constitutional Law* 292-293. Municipalities are wall-to-wall, which means they cover the entire territory of the state.

419 *Ex Parte Chairperson of the Constitutional Assembly: in re Certification of the Amended Text of the Constitution of the Republic of South Africa, 1996* 1997 2 SA 97 (CC) para 77. For more on the categories of municipalities - see Bekink *Principles of South African Local Government Law* 114-126; Steytler and De Visser *Local Government Law of South Africa* ch 2 19-22; Rautenbach *Constitutional Law* 240-241; Bekink *Principles of South African Constitutional Law* 456-458.

420 The criteria for a metropolitan municipality are outlined in s 2 of the *Municipal Structures Act*. As per s 3 of the *Municipal Structures Act*, areas that do not comply with the criteria for the establishment of a metropolitan municipality must have both district and local municipalities.

of 205 in the whole of the state. Local municipalities share their authority with the specific district municipality in whose area they are located.[421]

Every municipality has a Municipal Council that consists of a number of Councillors, and the legislative and executive authority of municipalities vest in their Municipal Councils.[422] As far as a municipality's legislative authority is concerned, Municipal Councils are tasked with the function to make laws that are applicable in their respective spatially demarcated areas, also known as municipal bylaws.[423] Bylaws however, may only be drafted and adopted in relation to matters within a municipality's functional areas, and if a bylaw conflicts with national or provincial legislation it will be invalid.[424] There may be exceptions where municipalities could legislate on matters not *explicitly* allocated to them, but are instead implied. The High Court for instance found that local government may legislate on environmental matters (a functional area of national and provincial government),[425] and the main reasoning behind the judgment was that the ambit of municipal planning services (a functional area of local government) also include environmental matters.[426] It has to be pointed out though that this was a rather controversial judgment as the Constitutional Court previously found that the functional areas are not contained in

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421 Section 155(1) of the *Constitution*; Main *The Local Government Handbook: South Africa 2017* 33.

422 Section 18(1) of the *Municipal Structures Act*; ss 4(1)(b), 11(1) of the *Local Government: Municipal Systems Act* 32 of 2000. For more on Municipal Councils and their composition - see Bekink *Principles of South African Local Government Law* 157-193, 241-279; Steytler and De Visser *Local Government Law of South Africa* ch 3 3-8; s 157 of the *Constitution*.

423 Section 156(2) of the *Constitution*; ss 11(3)(m), 12-14 of the *Local Government: Municipal Systems Act* 32 of 2000; Nel, Du Plessis and Du Plessis "Instrumentation for Local Environmental Governance" 34-41; Currie and De Waal *The New Constitutional and Administrative Law* 217-220; Bekink *Principles of South African Local Government Law* 230-234; Steytler and De Visser *Local Government Law of South Africa* ch 5 10-17; Nel, Du Plessis and Retief "Key Elements for Municipal Action" 6-13.

424 Section 156(3), part B of schedules 4, 5 of the *Constitution*; Bekink *Principles of South African Local Government Law* 219-221; Olivier and Gouws "Co-operative Government and the Intergovernmental Division of Environmental Powers and Functions" 12; *Freedman 2014 PELJ* 568-584.

425 *R A Le Sueur v Ethekwini Municipality* 2013 JDR 0178 (KZP) (hereafter *Le Sueur*-case).

426 The Court argued that municipal planning had to be interpreted having regard to ss 24 and 152(1)(d) of the *Constitution*, which imposes environmental-related obligations on local government - *Le Sueur*-case paras 19-22; Freedman 2014 *PELJ* 584-588; Humby 2014 *PELJ* 1661-1671; Du Plessis and Van den Berg 2014 *Stell LR* 582-589; Snijman and Petterson "Environmental Law Compliance and Enforcement" 2, 9-11. The Court further found that the power to legislate was assigned to local government - *Le Sueur*-case para 20. See para 2.4.2.4 below for more on assignment.

hermetically sealed compartments *but* they do remain distinct from one another, which means that one functional area (municipal planning for instance) should not include another (environment).[427] Several commentators nevertheless agree that municipalities do have authority to legislate on environmental matters even though it is not explicitly listed as one of their functional areas.[428] It is therefore conceivable that municipalities could legislate on matters that are not explicitly allocated to them.

A distinction must be drawn between the types of municipalities that may be established, since the type of municipality will determine where its executive authority lies. Municipalities can follow a collective, mayoral, or plenary executive system, in which case an Executive Committee, an Executive Mayor (supported by a Mayoral Committee), or Municipal Council itself exercises the municipality's executive authority, respectively.[429] Local government is the sphere that is the closest to people,[430] and the functions of its executive bodies emulate this position because municipalities among others have to administer the affairs of their local communities,[431] implement applicable national and provincial legislation as well as their own municipal bylaws, provide municipal services to their local communities (including environmental health services), promote and undertake development,

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427 *Gauteng Tribunal*-case paras 55-56; *Maccsand (Pty) Ltd v City of Cape Town* 2012 4 SA 181 (CC) para 47 (hereafter *Maccsand*-case); Muir 2015 *SAPL* 559-565; Humby 2014 *PELJ* 1671-1681; Freedman 2014 *PELJ* 588-592.

428 Du Plessis and Van den Berg 2014 *Stell LR* 593-594; Humby 2014 *PELJ* 1685; Freedman 2014 *PELJ* 592; Muir 2015 *SAPL* 571-579; Snijman and Petterson "Environmental Law Compliance and Enforcement" 9-11.

429 In addition, metropolitan municipalities may opt to make use of a sub-council or a ward participatory system with any of the other systems, or a combination of these two, and local municipalities may make use of a ward participatory system in conjunction with any of the three principal systems - ss 7(a)-(e), 8-10 of the *Municipal Structures Act*; Steytler and De Visser *Local Government Law of South Africa* ch 2 25-30; Bekink *Principles of South African Local Government Law* 130-136; De Vos and Freedman *South African Constitutional Law* 294-295. For more on the inner workings of these systems - see Bekink *Principles of South African Local Government Law* 126-132; Steytler and De Visser *Local Government Law of South Africa* ch 3; Currie and De Waal *The New Constitutional and Administrative Law* 261-264; ss 42-78 of the *Municipal Structures Act*.

430 See for instance *Joseph v City of Johannesburg* 2010 4 SA 55 (CC) para 46 (hereafter *Joseph*-case) where Skweyiya J emphasised that "[m]unicipalities are, after all, at the forefront of government interaction with citizens".

431 A 'community' in relation to a municipality is comprised of the municipality's residents, ratepayers, civic organisations, non-governmental bodies, private sector, labour organisations, and visitors - s 1 of the *Local Government: Municipal Systems Act* 32 of 2000. Society is made up by the collective of communities in the state.

and promote a safe and healthy environment.[432] While metropolitan municipalities have to perform all these local government functions in their respective jurisdictions, they are subdivided between district and local municipalities.[433]

2.4.1.7 Public administration

A further set of distinctive bodies, which could be described as the administrative branch of government,[434] also make up a part of the South African government. The former exposition gives an account of the political representation of government, whereas the public administration consists of the governmental bodies that represent the operational arm of government.

In essence the public administrative bodies are concerned with the day-to-day running of government.[435] As such, Currie and De Waal aptly describe the public administration as the "body of bureaucrats and officials that runs the state".[436] In practice the running of government translates to the implementation of its laws and

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[432] Section 11(3) of the *Local Government: Municipal Systems Act* 32 of 2000. For more on the functions of municipalities - see Bekink *Principles of South African Local Government Law* 213-230; Steytler and De Visser *Local Government Law of South Africa* ch 9 5-15; Du Plessis and Nel "An Introduction" 25-31.

[433] Section 83(1)-(2) of the *Municipal Structures Act*. The division of functions between local and district municipalities is not without problems, as will become evident in later chapters - Steytler and De Visser *Local Government Law of South Africa* ch 5 31-42; Du Plessis and Nel "An Introduction" 26-27; Olivier and Gouws "Co-operative Government and the Intergovernmental Division of Environmental Powers and Functions" 21-25; para 4.3.4.3 below.

[434] Hoexter and Penfold *Administrative Law in South Africa* 7-10; Bekink *Principles of South African Local Government Law* 59; Burns and Beukes *Administrative Law* 30.

[435] Burns and Beukes *Administrative Law* 12-14. See Bodasing "Public Administration" ch 23A 3-6 and take note of the authors contention, which is based on the *Green Paper on Transforming Public Service Delivery* (1996), that these governmental bodies can be divided into three categories, namely administrative bodies, service delivery bodies, and statutory bodies. The *Public Administration Management Act* 11 of 2014 (hereafter *PAMA*) and the *Public Service Act* 103 of 1994 (hereafter *PSA*) regulates the public administrative bodies.

[436] Currie and De Waal *The New Constitutional and Administrative Law* 5.

policies that manifest among others in the delivery of public services.[437]

The governmental bodies of the public administration are also distributed among the three spheres of government.[438] At the national sphere they make up the national state departments with a Director-General at the head of each department,[439] and other function specific bodies that are called government components.[440] Each national state department is tasked with the administration of particular affairs of government.[441] They include, for instance, the NDOH whose aim is to improve the health of all South Africans, and the NDFFE who is responsible for environmental matters.[442]

At the provincial sphere the public administration consists of an Office of the Premier for each province, with a Director-General at the head of each of the offices, and provincial departments with their respective heads as well.[443] The provincial departments, although differing in nomenclature, mimic those at the national sphere to an extent, but they only operate within the geographical area of each province. The powers of the provincial public administrations are also limited only to the

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437 *Greys Marine Hout Bay (Pty) Ltd v Minister of Public Works* 2005 6 SA 313 (SCA) para 24 (hereafter *Greys Marine*-case); s 197(1) of the *Constitution*; Hoexter and Penfold *Administrative Law in South Africa* 7-10, 73-74; Bodasing "Public Administration" ch 23A 3-4. Note the similarity between the functions of the executive authority and the public administration and that for this reason it could be argued that the public administration resorts under the executive branch of government. The activities performed by the public administration actually straddle *all* three branches of government, which will become apparent in the discussion that follows below - Hoexter and Penfold *Administrative Law in South Africa* 32-36, 69-74; Currie and De Waal *The New Constitutional and Administrative Law* 228-229; *President of the Republic of South Africa v South African Rugby Football Union* 2000 1 SA 1 (CC) para 139 (hereafter *SARFU*-case); para 2.4.2.2 below.

438 See the definition of 'public administration' in s 1 of the *PAMA*.

439 Section 7(2)(a), schedule 1 columns 1-2 of the *PSA*. Ministers from the Cabinet are the political heads of the national state departments as appointed by the President - see para 2.4.1.4 above. The Ministers and Director-Generals have distinct functions as the respective heads of the national state departments, where the former is political and the latter administrative - Currie and De Waal *The New Constitutional and Administrative Law* 228-229; Muthien 2014 *Strategic Review* 126-142.

440 The national government components include bodies such as the Government Pensions Administration Agency, the Government Printing Works, and so forth - s 7(2)(c), schedule 3 part A of the *PSA*.

441 For more on the creation of national state departments - see DPSA *The Machinery of Government* 57-58.

442 The work undertaken by the national state departments and their relevance to this research are addressed in chs 4-5 below. For a full list of the national state departments - see s 7(1)-(3), schedule 1 column 1 of the *PSA*; GCIS *National Government Directory* 2-25.

443 Section 7(2)(a)-(b), schedules 1-2 of the *PSA*.

functional areas allocated to provincial government in the *Constitution*.[444]

At the local sphere each municipality consists of an administration with a Municipal Manager serving as its head.[445] A municipality has to tailor the organisation of its administration to the needs of its community and it therefore varies from municipality to municipality.[446] The public administration at the local sphere typically also consists of numerous departments and other functional units that ought to be structured in a manner that is operationally effective and appropriate.[447] The public administration of municipalities is tasked with the function to render services to their local communicates, and this, as imparted by Rampai J in a High Court judgment, is "the point of contact between the governor and the governed",[448] which of course refers to government and the people. For this reason the lives of individuals are predominantly affected through the conduct of the public administration at the local sphere.[449] The duties that the local public administration may perform, however, are also confined only to those matters that local government may administer as outlined in the *Constitution*.[450] Local public administrations have the exclusive authority to administer these matters though in the sense that national and provincial government may only play an overseeing role

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444 Provincial administrations may administer other matters, but only if so authorised by national legislation - s 125(2), schedules 4 and 5 of the *Constitution*; Muir 2015 *SAPL* 566; paras 2.4.1.5 above, 2.4.2.4 below.

445 The Municipal Manager is appointed by the Municipal Council - s 2(b)(i), 54A(1)(a) of the *Local Government: Municipal Systems Act* 32 of 2000. For more on the functions of a Municipal Manager - see Van der Walt "Municipal Structures" 81-83; Steytler and De Visser *Local Government Law of South Africa* ch 8 27-60; Craythorne *Municipal Administration* 193-194; Bekink *Principles of South African Local Government Law* 329-333; s 55(1) of the *Local Government: Municipal Systems Act* 32 of 2000.

446 Craythorne *Municipal Administration* 190-193; Bekink *Principles of South African Local Government Law* 324-329; s 153(a) of the *Constitution*.

447 Van der Walt "Municipal Structures" 85-86; Bekink *Principles of South African Local Government Law* 282-308; s 51(g)(i) of the *Local Government: Municipal Systems Act* 32 of 2000.

448 *Beck v Kopanong Local Municipality* (unreported) 2003 ZAFSHC 34 (20 March 2003) para 18; Steytler and De Visser *Local Government Law of South Africa* ch 9 6.

449 Steytler and De Visser "Local Government" 64; Bekink *Principles of South African Local Government Law* 86, 308-320, 472; s 152(1)(b) of the *Constitution*; s 50(2) of the *Local Government: Municipal Systems Act* 32 of 2000; *Greys Marine*-case para 24. Note also the *dictum* of Langa DP in *City Council of Pretoria v Walker* 1998 2 SA 363 (CC) para 93, in which it is affirmed that "[l]ocal government is as important a tier of public administration as any".

450 Section 156(1)(a), part B of schedules 4 and 5 of the *Constitution*; para 2.4.1.6 above. There are also exceptions in this regard, for instance when a duty or function has been assigned or delegated to local government by national or provincial government - see para 2.4.2.4 below.

as far as their functions are concerned.[451]

To conclude, based upon the outline above, it is clear that a 'state' consists of a 'society' made up of individuals and a 'government' made up of various governmental bodies; a 'state' has a responsibility to serve its 'society' and this responsibility is exercised through its 'government'; South Africa's 'government' is made up of numerous governmental bodies that represent different branches of authority, which function at three spheres; each branch of authority at each sphere of government is tasked with specific functions; and the exercise of these functions culminate in the realisation of government's responsibility for each person in South Africa. An investigation into how government operates and performs its functions follows next – this will show *how* government could operationalise environmental health and *what* it must do for this purpose.

2.4.2 A government in action

The operation of government is examined and described in the paragraphs to follow in order to illustrate *how* the operationalisation of environmental health can transpire, and *what* government must do to be able to do so. The following will be investigated for this purpose: 'governance', the tools of governance, the underlying principles of governance, 'co-operative governance' and intergovernmental relations, and 'environmental health governance'.

2.4.2.1 Governance – the operation of government

Governance is the latest notion that people employ to articulate the act of governing.[452] The roots of governance can arguably be traced back to the origin of a state, and in particular to that moment when states had to develop public administrative services in order to satisfy the emerging needs of their societies for

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451 Section 156 of the *Constitution*; *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 2 SA 554 (SCA) para 28; Humby 2014 *PELJ* 1672; Freedman 2014 *PELJ* 571.

452 Bevir *Governance* 3. Kotzé remarks that 'governance' is the "new kid on the block", used by many as a "magic wand" to address ubiquitous challenges - Kotzé "Environmental Governance" 103-104.

the first time.[453] It is from this operation of a state, exercised by government on the state's behalf, that the current concept of 'governance' was born.[454]

Initially the processes and mechanisms that government used to exercise its functions referred to its 'public administration'. The manner in which government operated was therefore embedded in the features of 'public administration' of that time.[455] However, as society developed and people's needs became greater, so too did the need for government to provide a greater range of public services arose, which means that its functions increased. Because of this growing responsibility, government began to rely on the assistance of the private sector (through public-private partnerships) to fulfil its duties. This in turn led to the adoption and integration of a 'management' perspective into government's activities, which also resulted in the proliferation of bodies that performed public functions.[456] The latest development in this regard entails that government shares its functions and public service delivery responsibilities with communities (non-governmental partners),[457] whereby government can rely on organisational networks (government *and* private sector) and not on hierarchical institutions (government *versus* private sector) to deliver services to the public, and this form of administration is called

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453 Thornhill "The Development of the Discipline of Public Administration" 5.

454 Du Plessis for instance explains in reference to the local government sphere, that 'governance' refers to "government in action" - Du Plessis 2010 *Stell LR* 274.

455 The term 'public administration' should not be confused with the set of governmental bodies that make up government's public administration as discussed in para 2.4.1.7 above. In this context 'public administration' refers to the *operation* of government.

456 This form of administration is known as 'new public management' - Thornhill "The Development of the Discipline of Public Administration" 5-22; Pyper "Public Administration, Public Management and Governance" 13-31; Klijn "New Public Management and Governance: A Comparison" 202-212.

457 Government is still accountable to society though. The dichotomy of steering (to make policy) and rowing (to provide services) illustrates this point – 'governance' actually entails that government has to steer and that non-governmental partners can do the rowing, where government's accountability remains rooted in its responsibility to steer society. This clearly has virtue in the environmental health context in consideration of the personal nature of environmental health impacts and the role that individuals and communities could play with regard to their own circumstances. For more on the distribution of responsibility between government and society - see Osborne and Gaebler *Reinventing Government* 25-48; Peters 2011 *Urb Res and Prac* 5-12.

'governance'.[458]

There appears to be a lack of consensus on a definitive meaning of 'governance', which is also why the concept has been described as versatile, perplexing, and often as vague.[459] As a case in point, the World Bank alone has defined 'governance' as "the manner in which power is exercised in the management of a country's economic and social resources for development", as "[t]he process by which authority is conferred on rulers, by which they make the rules, and by which those rules are enforced and modified", and as "the traditions and institutions by which authority in a country are exercised".[460]

In an attempt to obtain the core meaning of the concept, Kotzé examined several theories thereof and came to the conclusion that:

> Governance arises where there is human activity; governance could be used to describe the objective steering; governance is thus a social construct and an institutional response to steer human interaction with a view to achieving some common or collective goal or to solve a collective social problem; governance facilitates co-operation to achieve the foregoing; governance could be private and/or public, formal and/or informal; governance has a normative foundation embedded in rules which dictate its design, substantive content and procedural aspects; and governance requires some form of authority to be present, whether in a public and/or private sense.[461]

Much has already been written on the subject, so there is no need for further

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458 This is a basic overview of public administration. For more in this regard - see Thornhill "The Development of the Discipline of Public Administration" 5-22; Pyper "Public Administration, Public Management and Governance" 13-31; Louw 2012 *JPA* 88-101; Cameron "Public Service Reform in South Africa: From Apartheid to New Public Management" 135-141; Klijn "New Public Management and Governance: A Comparison" 202-212; Kotzé *Global Environmental Governance* 91-94. See Addink "Principles of Good Governance: Lessons from Administrative Law" 29 in which the author explains how 'governance' may be regarded as synonymous with 'administration', hence the contention that it is a form of administration. Also take note of the views that 'administration' and 'governance' are distinct concepts - see e.g. Du Plessis 2010 *Stell LR* 274-276.

459 UNDP *Reconceptualising Governance* 9-10; Kotzé "Environmental Governance" 103-104; Kotzé *Global Environmental Governance* 8-11. See CEPA *Definition of Basic Concepts and Terminologies in Governance and Public Administration* 2-4 for an array of 'governance' definitions.

460 World Bank *Governance* vii-xiv; World Bank 2014 http://bit.ly/1tvVSbv; World Bank 2014 http://bit.ly/1rwwuAb.

461 Kotzé *Global Environmental Governance* 51-99.

deliberation on the notion's theoretical foundation.[462] For present purposes a pragmatic approach will be followed instead, relying in part on Kotzé's analysis above as a point of departure.[463]

Firstly, as far as 'governance' relates to human activity, in the context of a state's responsibility *for* its people and their concerns with respect to environmental health, it may be considered to relate only to governmental conduct (public) and not to the contribution of communities or the private sector (public or private).[464] Secondly, while 'governance' signifies the steering of human interaction by government as a response to achieve a societal goal or to solve a societal problem, it could give rise to unique variants of governance that each relates to a *particular* goal or problem. Thirdly, insofar government can be regarded as a set of institutions (governmental bodies), 'governance' can be regarded as a description of the *operation* of these institutions.[465] Fourthly, since 'governance' relates to governmental conduct, it is involved with the processes and mechanisms whereby government operates. Fifthly, considering that rules (law) dictate the design, substantive content, and procedural aspects of 'governance', the processes and mechanisms that government use to govern have to be derived from law.[466] Sixthly, seeing that 'governance' is concerned with the operation of government's *institutions*, it also pertains to the

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462 See e.g. World Bank *Governance* 1-36, 55-59; Levi-Faur *Handbook of Governance* 3-758; Bevir *A Theory of Governance* 15-214; Ansell and Torfing *Handbook on Theories of Governance* 21-550; Du Plessis 2010 *Stell LR* 279-282; Kotzé "Environmental Governance" 104-106; Müller "Environmental Governance in South Africa" 72-73; Malcolm "Regulation and Environmental Health Governance" 129-131.

463 Gunningham argues, within the context of environmental protection, that it is futile to try to define 'governance' and that it should instead be considered as a cluster that involves specific characteristics. The characteristics, according to the author, include a) participatory dialogue and deliberation, b) devolved decision-making, c) flexibility rather than uniformity, d) inclusiveness, e) transparency, f) institutionalised consensus-building practices, g) and a shift from hierarchy to heterarchy - Gunningham 2009 *Law and Society* 146.

464 This research is only concerned with the role of 'government' and not that of individuals in their personal capacity. Their exclusion does not discount the potentially invaluable part they can play in improving environmental health though.

465 Du Plessis uses the analogy that if 'government' represents a factory that produces commodities, 'governance' will represent the manufacturing process of such commodities - Du Plessis 2010 *Stell LR* 275; Bevir *Governance* 1-5; Kotzé "Environmental Governance" 106.

466 See para 2.4.2.2 below regarding the 'rule of law' and the 'doctrine of legality'. See also Kotzé *Global Environmental Governance* 2, 52, 99; Kotzé "Environmental Governance" 106, 108.

relations between them.[467] Lastly, because 'governance' derives from a normative foundation, it is rooted in underlying values or principles, which implies that government's conduct can be measured against said values or principles.[468]

Based on the aforementioned, for the purpose of this research 'governance' may broadly be regarded as the processes, mechanisms, institutions (including their interrelationships), and underlying values whereby the exercise of governmental authority to manage particular affairs of the state transpires.[469] The following components can be distilled from this description and are scrutinised in further detail below: a) the exercise of governmental authority with law as its source, and the processes and mechanisms that government could use in this respect, b) the application of governance principles derived from its normative foundation, c) the relations between government's institutions, and d) particular affairs of the state that culminates in a particular variant of governance, which in this instance introduces environmental health governance.

2.4.2.2 Tools of governance

The outline in the paragraphs above indicated that government has the power to exercise legislative, executive, and judicial authority through a variety of governmental bodies. Governance transpires through the exercise of this authority, therefore the conduct of the legislative, executive, and judicial branches of government will be indicative of the processes and mechanisms that government use to govern. These processes and mechanisms may be described as tools of governance, and they are examined below.[470]

All governmental conduct must be authorised by law. This view is underpinned in

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467 This is particularly relevant to environmental health in light of its multidisciplinary nature - Müller "Environmental Governance in South Africa" 72; Bevir *Governance* 1-5; Gunningham 2009 *J Envtl L* 203, 206-209; Gunningham 2009 *Law and Society* 146.

468 See for instance Kotzé *Global Environmental Governance* 62-64; Addink "Principles of Good Governance: Lessons from Administrative Law" 29-36; Müller "Environmental Governance in South Africa" 72-73.

469 See UNDP *Reconceptualising Governance* 9-10 for a similar definition on which this description is based.

470 A tool of governance can be deemed to be anything that can be used to achieve a particular outcome - Nel, Du Plessis and Du Plessis "Instrumentation for Local Environmental Governance" 3.

the 'rule of law' and the 'doctrine of legality' that is entrenched in the *Constitution*.[471] Effectively this means that governmental bodies "in every sphere are constrained by the principle that they may exercise no power and perform no function beyond that conferred upon them by law".[472] It follows then that government has to act or govern in accordance with the law. For this reason the tools of governance, that is the processes and mechanisms that government may use to govern, need to be derived from the law.

Evidently, since governance tools must be derived from law, the making of law may be considered a prerequisite of governance.[473] For present purposes law refers to original and delegated legislation. When the legislative authorities at all three spheres of government, that is Parliament, Provincial Legislatures, and Municipal Councils draft and adopt laws, they produce original legislation.[474] Original legislation are regulative instruments of government that contain written legal rules, and they are "characteristically general in their scope of operation and application".[475] Original legislation can take on the form of national legislation, provincial statutes, or local bylaws.[476] These laws may be passed by the legislative authorities on their own volition, as long as their content are concerned with the functional areas of the sphere that adopt them, and as long as the authorities follow

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471 Section 1(c) of the *Constitution*. For more on the 'rule of law' - see Rautenbach *Constitutional Law* 8-1-; Bekink *Principles of South African Constitutional Law* 118-133; Currie and De Waal "Introduction to the Constitution and the Bill of Rights" 10-14; Hoexter and Penfold *Administrative Law in South Africa* 181-182; Burns and Beukes *Administrative Law* 20-25; De Vos and Freedman *South African Constitutional Law* 78-84; *Fedsure Life Assurance Ltd v Greater Johannesburg Transitional Metropolitan Council* 1999 1 SA 374 (CC) paras 56-58 (hereafter *Fedsure*-case). The 'doctrine of legality' is an incident of the 'rule of law' that acts as a safety net for society against the exercise of public power. It essentially entails that public power may only be exercised if such power was conferred by law, that it must be exercised in good faith, and that it may not be exercised arbitrarily or irrationally. For more on the 'doctrine of legality' - see Hoexter and Penfold *Administrative Law in South Africa* 157-161; *Pharmaceutical Manufacturers Association of South Africa: in re Ex Parte President of the Republic of South Afric*a 2000 2 SA 674 (CC) paras 17-57, 85.

472 *Fedsure*-case para 58.

473 See for instance Fuo 2013 *PELJ* 2; Kotzé *Global Environmental Governance* 156-158.

474 The *Constitution* grants original powers to these bodies to be able to do so - s 43 of the *Constitution*; Du Plessis *Re-Interpretation of Statutes* 45; paras 2.4.1.4-2.4.1.6 above.

475 Du Plessis *Re-Interpretation of Statutes* 21-22.

476 See s 1 of the *Interpretation Act* 33 of 1957 (hereafter *Interpretation Act*); s 239 of the *Constitution*. Local bylaws are subordinate to provincial statutes, and provincial statutes are subordinate to national legislation - Du Plessis *Re-Interpretation of Statutes* 37.

the proper processes that have been put in place for this purpose.[477]

Legislative authorities may delegate legislative powers to executive authorities and if the executive authorities exercise this power, that is the President and Cabinet, the Premiers and Executive Councils, as well as Municipal Councils, they make delegated legislation.[478] It should be noted however, as clarified by the Constitutional Court, that the "primary reason for delegation is to ensure that the legislature is not overwhelmed by the need to determine minor regulatory details".[479] For this reason delegated legislation typically contains the detail that may be lacking in original legislation.[480] Delegated legislation is mostly expressed in terms of proclamations or regulations, but its nomenclature is not the decisive factor since strategies, notices, directives, or even policies among others may be regarded as delegated legislation, or may have the same legal status.[481]

Government can confer powers and impose functions on governmental bodies and public officials (enable and compel them to do something), and it can grant rights and impose obligations on people (to regulate human interaction) through the writing of legal rules that are enunciated in terms of legislation.[482] In this way government can construct the processes and mechanisms whereby it could govern, and through the assignment of powers, functions, rights, and obligations, legislation *itself* can also serve as a tool of governance.

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477 In general the legislative process requires public involvement and legislation must be published (made available) - ss 59(1)(a), 81, 118(1)(a), 123, 162 of the *Constitution*; s 12 of the *Local Government: Municipal Systems Act* 32 of 2000; s 13 of the *Interpretation Act*. The proposed legislation cannot become law if the correct processes are not followed. For more on the legislative process - see ss 73-82, 104-124 of the *Constitution*; s 12 of the *Local Government: Municipal Systems Act* 32 of 2000; Du Plessis *Re-Interpretation of Statutes* 63-88; Du Bois "Sources of Law: Legislation" 46-48; Currie and De Waal *The New Constitutional and Administrative Law* 185-188, 212-213, 217-219; paras 2.4.1.4-2.4.1.6 above.

478 Du Plessis *Re-Interpretation of Statutes* 37-41; paras 2.4.1.4-2.4.1.6 above.

479 *Justice Alliance of South Africa v President of Republic of South Africa, Freedom Under Law v President of Republic of South Africa, Centre for Applied Legal Studies v President of Republic of South Africa* 2011 5 SA 388 (CC) para 61 (hereafter *Justice Alliance*-case).

480 Du Plessis *Re-Interpretation of Statutes* 38.

481 Steytler 2011 *SAPL* 489; Fuo 2013 *PELJ* 20-33; Hoexter and Penfold *Administrative Law in South Africa* 40-41.

482 There is a distinction between peremptory and directive provisions. The former is mandatory, which means that strict compliance with such a provision is required, and the latter is permissive, which means that non-compliance may likely even be acceptable - Hoexter and Penfold *Administrative Law in South Africa* 66-69; Burns and Beukes *Administrative Law* 193-194.

The mere passing of legislation however will not have any practical effect unless government implements its provisions (the written legal rules) and ensures that people (including government itself) actually comply with them. This duty lies with the executive branch of government together with its extrapolation, the public administration.[483] Government implements legislation when it carries out the provisions contained therein. To put it differently, when executive or administrative bodies exercise the powers and perform the functions conferred upon them by legislation, they are implementing that legislation.[484]

Governmental conduct with respect to the implementation of legislation amounts to 'administrative action', and it is through the execution of administrative acts by governmental bodies that the actual running of government for society and the governing by government over society materialise for individuals.[485] As such 'administrative action' is an embodiment of government in action, which also makes it a key governance tool.[486]

In general terms, as Nugent JA explains in the *Greys Marine*-case, administrative

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483 The implementation and enforcement of laws are essential to 'governance' - s 85(2) of the *Constitution*; Hoexter and Penfold *Administrative Law in South Africa* 33; *SARFU*-case paras 138-143; Kotzé "Environmental Governance" 108-109; Kotzé *Global Environmental Governance* 2; paras 2.4.1.4-2.4.1.7 above.

484 Government can be compelled to implement legislation - Currie and De Waal *The New Constitutional and Administrative Law* 247-248. The National Assembly has to oversee and monitor the exercise of the national executive authority (President, Cabinet, national state departments), which includes the implementation of legislation - s 55(2) of the *Constitution*. This means that these bodies are accountable to the National Assembly. The Constitutional Court affirmed as much when Mogoeng CJ exclaimed "Yes!" to the question on whether holding the Executive accountable is a primary obligation of the National Assembly - see *Economic Freedom Fighters v Speaker of the National Assembly, Democratic Alliance v Speaker of the National Assembly* 2016 3 SA 580 (CC) paras 41-43; s 55(2)(b)(i) of the *Constitution*.

485 Hoexter and Penfold *Administrative Law in South Africa* 69-74; Burns and Beukes *Administrative Law* 107-113. 'Administrative action' is subject to its own legal discipline (administrative law), and the discussion hereof will be limited to its relevance for this research. See Hoexter and Penfold *Administrative Law in South Africa* 1-74, 218-353; Klaaren and Penfold "Just Administrative Action" 20-58; Burns and Beukes *Administrative Law* 3-26, 73-150 for more on 'administrative action' and administrative law.

486 See s 1 of the *Promotion of Administrative Justice Act* 3 of 2000 which describes 'administrative action' as a decision of an administrative nature, that is made in terms of an empowering provision, by an organ of state or by a natural or juristic person exercising a public power or performing a public function, that adversely effects rights, that has a direct external legal effect, and that is not specifically excluded from the definition. This definition is criticised because it is highly convoluted and extremely narrow - Hoexter and Penfold *Administrative Law in South Africa* 347-353; Klaaren and Penfold "Just Administrative Action" 59-75; Kotzé 2004 *PELJ* 76; Burns and Beukes *Administrative Law* 113.

acts may be viewed as the "conduct of the bureaucracy … in carrying out the daily functions of the state which necessarily involves the application of policy…, with direct and immediate consequences for individuals or groups of individuals", but it does not extend to the "exercise of legislative powers by deliberative elected legislative bodies", the "ordinary exercise of judicial powers", or the "formulation of policy or the initiation of legislation by the executive".[487] Even though administrative acts should be distinguished from ordinary judicial, legislative, or certain executive acts as pointed out in this judgment,[488] because of the multifarious functions that the public administration has to perform, they could nevertheless take on a judicial, legislative, or purely administrative character.[489]

Judicial administrative acts refer to the conduct of public administrative bodies when they adjudicate on disputes, that is, when they provide platforms for individuals to present their cases. Adjudicative platforms can take on the form of tribunals for instance, but can also transpire through a range of other administrative settings. Public administrative bodies are often better suited to resolve disputes because they can do so informally, quickly, cheaply, and expertly, whereas the same could not necessarily be said of courts.[490]

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487 *Greys Marine*-case para 24; *Fedsure*-case paras 21-42. This explanation is derived from the intended meaning of 'administrative action' as used in s 33 of the *Constitution*. For more on s 33 of the *Constitution*, which entitles everyone to 'just administrative action' - see Klaaren and Penfold "Just Administrative Action" 20-58; Klaaren and Penfold "Just Administrative Action" 167-184.

488 Not all the actions of the executive authority amount to 'administration action'. The same institution or public official could perform both an administrative and executive act. What matters most in determining whether particular conduct is administrative or executive in nature is not the 'functionary', but rather the 'function' - *SARFU*-case paras 140-143; Klaaren and Penfold "Just Administrative Action" 28-33.

489 Hoexter and Penfold *Administrative Law in South Africa* 69-74; Burns and Beukes *Administrative Law* 151-152; *SARFU*-case paras 140-143; Klaaren and Penfold "Just Administrative Action" 26-34; Kidd *Environmental Law* 266-268. 'Administrative action' is subject to reasonableness and procedural fairness, meaning that those who are adversely affected by an administrative act are entitled to reasons for such action, and the matter will qualify for judicial review. This is generally a higher level of scrutiny in comparison to non-administrative conduct, which in turn is subject to the 'doctrine of legality' - s 33 of the *Constitution*; ss 3-6 of the *Promotion of Administrative Justice Act* 3 of 2000; *Minister of Health v New Clicks South Africa (Pty) Ltd* 2006 2 SA 311 (CC) paras 107-109 (hereafter *New Clicks*-case); *Minister of Defence and Military Veterans v Motau* 2014 5 SA 69 (CC) para 27; Klaaren and Penfold "Just Administrative Action" 80-119; Hoexter and Penfold *Administrative Law in South Africa* 452-625; Currie and De Waal "Introduction to the Constitution and the Bill of Rights" 10-14.

490 See Hoexter and Penfold *Administrative Law in South Africa* 72-73, 236-238; Burns and Beukes *Administrative Law* 156-159; Klaaren and Penfold "Just Administrative Action" 26-28.

On the legislative front administrative acts refer to the making of legislation by the executive authority or public administration, although these bodies may only make delegated legislation and only if this function is conferred upon them through a lawful source, as also mentioned in the paragraphs above.[491]

The majority of administrative acts are purely administrative in nature and as Hoexter clarifies, they include "every conceivable aspect of government activity – granting a licence, promoting an employee, stamping a passport, arresting a suspect, [and] paying out a pension".[492] Basically then all the functions assigned to governmental bodies through legislation, apart from those that have a judicial or legislative character, will be purely administrative in nature.[493] The provision of environmental health services will mostly also resort under the latter type of conduct.[494]

In addition to its implementation by way of administrative action, government must also ensure that its bodies comply with the functions assigned to them by legislation (perform the administrative acts), *and* it must ensure that individuals comply with

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491 *New Clicks*-case paras 113-135; Hoexter and Penfold *Administrative Law in South Africa* 70-72, 212; Burns and Beukes *Administrative* Law 153-156; Klaaren and Penfold "Just Administrative Action" 33-34, 44-48.

492 Hoexter and Penfold *Administrative Law in South Africa* 73-74, 228-245; Burns and Beukes *Administrative Law* 159-178.

493 In *Steele v South Peninsula Municipal Council* 2001 3 SA 640 (C) 642-644, interestingly, the Court found that where a Municipal Council made the decision to remove speed bumps from two roads in town, it did not amount to 'administrative action' since the Council did not implement any particular law, although Klaaren and Penfold contend that it may very well be administrative because the Council made the decision based on a general statutory obligation to do so - Klaaren and Penfold "Just Administrative Action" 33. The Constitutional Court found that it "may be difficult" to determine which conduct should be characterised as administrative as opposed to judicial, legislative, or executive. The outcome of the Constitutional Court's decision was that factors such as the source of the power from which the conduct originates, the nature of the power, whether it involves the exercise of a public duty, and how closely it is related to policy matters (non-administrative) versus the implementation of legislation (administrative) have to be considered, and that uncertainties in this respect have to be dealt with on a case-to-case basis - *SARFU*-case para 143; Klaaren and Penfold "Just Administrative Action" 20-21.

494 *Joseph*-case para 47; Rautenbach "Introduction to the Bill of Rights" para 1A79.2; Beukes 2003 *SAPL* 293-294; Mfene 2009 *JPA* 214-217; Kotzé 2004 *PELJ* 59, 64; para 2.4.2.5 below. It matters not whether conduct affects the public at large or individuals only, in both instances it will amount to an administrative act - *Police and Prisons Civil Rights Union v Minister of Correctional Services* 2008 3 SA 91 (E) para 53.

the obligations imposed on them by legislation.[495] By necessary implication this entails that government must employ mechanisms to detect non-compliance, for example through monitoring, inspections, reporting, and auditing.[496] Once government detects non-compliance it has to employ mechanisms to achieve compliance, otherwise known as enforcement.[497] The enforcement mechanisms that government could use to achieve compliance are also tools of governance.

Ayres and Braithwaite developed a so-called enforcement pyramid whereby they illustrate that compliance can be achieved through a variety of mechanisms, ranging from persuasion at the bottom of the pyramid, to coercion in the middle, and to punishment at its top.[498] This strategy is based on the idea that compliance will most likely occur if moderate (promoting voluntary compliance) as opposed to harsher (deterrence) enforcement mechanisms are employed to achieve legal compliance. The authors argue that if governmental bodies only had harsh mechanisms of enforcement at their disposal they would probably be reserved for severe cases of non-compliance, and as a result government may overlook less serious instances of non-compliance. For this reason the pyramid strategy proposes a gradual *escalation* in the use of enforcement mechanisms, where the choice of mechanism should depend on the severity of the non-compliance at hand.[499]

By viewing the enforcement mechanisms though this lens they could be described, ranging from least to most severe, as incentive-based measures, civil measures,

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495 See Craigie, Snijman and Fourie "Dissecting Environmental Compliance and Enforcement" 41-44 for more on the meaning of 'compliance' and the theories that exist in this respect.

496 A permit or licensing system could be used to detect non-compliance - Craigie, Snijman and Fourie "Dissecting Environmental Compliance and Enforcement" 47-51; Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 5-6.

497 Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 3-4.

498 Ayres and Braithwaite *Responsive Regulation* 35.

499 Ayres and Braithwaite *Responsive Regulation* 35-40; Mascini 2013 *Reg and Gov* 48-57; Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 3-4. There are two approaches to this pyramid, a top-down or bottom-up approach. In the case of the former government uses the harshest mechanisms (from the top) first and then the less imposing mechanisms later on, whereas the latter entails that that the less serious mechanisms are used first, and the harsher ones later on - Kotzé "Environmental Governance" 108-109.

administrative measures, and criminal measures.[500] Incentive based measures are mechanisms that reward those that comply with their functions and obligations, or those that exhibit positive behaviour, so to speak. These mechanisms can take on the form of market-based incentives, regulatory incentives, or information-based incentives.[501] Civil measures refer to the use of courts to effect legal compliance by way of common law remedies, which include interdicts, abatement orders, self-help, and action for damages.[502] Administrative measures essentially consist of the issuing of orders by the public administration in a variety of forms such as compliance notices or directives, whereby those that do not comply with their functions or obligations are instructed to take specific action to do so, failing which the instruction could become an order of the court or amount to a criminal offence.[503] Criminal measures refer to the criminalisation and subsequent prosecution of specific conduct, for example by failing to obtain the necessary approval to undertake an activity as prescribed by legislation, whereby offenders, upon conviction, will be sentenced for their non-compliance with the law.[504]

In summary then the collection of governance tools could be described to reside in the making and promulgation of legislation (exercise of legislative authority); in the

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500 Self-regulatory and co-regulatory measures can also be used as mechanisms for enforcement. This is when individuals or the private sector abide by certain standards without being compelled to do so by law (voluntarily) - Lehmann "Voluntary Compliance Measures" 269-295; Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 49-52; Snijman and Petterson "Environmental Law Compliance and Enforcement" 9-32.

501 Market-based incentives refer to mechanisms that influence economic behaviour, such as tax exemptions. Regulatory incentives refer to the reduction of regulatory obligations for those that out-perform regulatory standards, like reporting for instance. Information-based incentives refer to the distribution of information to the public as a means to mould behaviour towards legal compliance. For more on incentive-based measures - see Paterson "Incentive-based Measures" 298-306; Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 53-54; Malcolm "Regulation and Environmental Health Governance" 132-134.

502 For more on common law remedies - see Summers "Common-Law Remedies for Environmental Protection" 339-369; Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 11-16; Kidd "Administrative Law and Implementation of Environmental Law" 249-250.

503 These mechanisms are 'administrative acts' - Winstanley "Administrative Measures" 225-239; Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 6-11; Kidd "Administrative Law and Implementation of Environmental Law" 247-249.

504 Kidd "Criminal Measures" 240-268; Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 16-31; Kidd "Administrative Law and Implementation of Environmental Law" 235-244; Malcolm "Regulation and Environmental Health Governance" 131-132; Nel, Du Plessis and Du Plessis "Instrumentation for Local Governance" 1-86.

functions, powers, rights, and obligations assigned by legislation; in the administrative actions performed by government to implement legislation (exercise of executive authority); and in the mechanisms employed by government to enforce compliance with legislation (exercise of executive and judicial authority).[505] Since these governance tools constitute the processes and mechanisms that government use to govern, government will also have to use any combination of these to operationalise environmental health.[506]

2.4.2.3 Principles of governance

Governance is rooted in a normative foundation, which suggests that governance could be measured against a set of values derived from this foundation to determine whether government's conduct is good or bad.[507] As far as these values are concerned it should be noted that the conduct of the public administration (the governmental bodies that implement legislation) is subject to a set of principles listed in the *Constitution*.[508] These principles include the following: a) that efficient, economic and effective use of resources must be promoted, b) that public administration must be development-oriented, c) that services must be provided impartially, fairly, equitably and without bias, d) that people's needs must be responded to, and the public must be encouraged to participate in policy-making,

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505 See Nel, Du Plessis and Du Plessis "Instrumentation for Local Environmental Governance" 3-85 for a thorough exposition on the governance tools of local government with respect to environmental matters. See also Kotzé *Global Environmental Governance* 95 with respect to the relationship between 'law' and 'governance', in which the author succinctly explains that law "provides the mechanisms by means of which governance is executed; it justifies governance, legitimises it; creates and controls the system of rules inherent in governance; and it provides the means to achieve the objectives of governance".

506 See para 2.4.2.5 below for more on the selection of tools that government may have to use.

507 See Kotzé "Environmental Governance" 120 in which the author distilled similar principles to the ones mentioned below from a variety of definitions of the notion of 'good governance'. They are transparency, democracy, participation, representation, accountability, cohesion and co-operation, equality, fair-dealing, rule of law, political stability, anti-corruption, measures against nepotism and public mismanagement, effectiveness and improved service delivery, integrity, proper administrative procedures, and the promotion of all sustainable development considerations. See also Müller "Environmental Governance in South Africa" 72; Kotzé *Global Environmental Governance* 62.

508 Section 195 of the *Constitution*. The *Promotion of Administrative Justice Act* 3 of 2000 also gives effect to these constitutional principles because it was adopted among others to promote an efficient administration and good governance, and to create a culture of accountability, openness, and transparency in the public administration. These principles appear in s 4 of the *PAMA* as well.

e) that public administration must be accountable, and f) that transparency must be fostered by providing the public with timely, accessible and accurate information.[509]

The provision of public services, a function of the public administration, is also subject to the *Principles of Batho Pele*. These essentially entail that a) government has a duty to consult with people with respect to the level and quality of services that they receive, b) people should be made aware of the standard of services they can expect, c) people should have equal access to services, d) people should be entitled to redress in cases of non-delivery of services, e) people should be treated with courtesy and consideration, and that f) government must conduct itself in an open and transparent manner.[510]

Governmental bodies must abide by both of these sets of principles when they perform their functions. For this reason these principles may be regarded as a set of values that contribute to and make up the normative foundation of governance.[511] Accordingly, the quality of government's conduct could be gauged by measuring governmental bodies' compliance with these principles, and this applies to

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509 There are other constitutional principles and values of democracy that apply to the public administration as well, such as the principle of constitutionalism, public participation, accountability, and transparency - s 195(1) of the *Constitution*; Currie and De Waal "Introduction to the Constitution and the Bill of Rights" 7-22; De Vos and Freedman *South African Constitutional Law* 57-59; Bodasing "Public Administration" 8-17; Bekink *Principles of South African Constitutional Law* 599-603; Beukes 2003 *SAPL* 292-294. See for instance the *dictum* in the *Joseph*-case para 46 in which Skweyiya J emphasises that government must "act in a manner that is responsive, respectful and fair when fulfilling its constitutional and statutory obligations", and that "[c]ompliance by local government with its procedural fairness obligations is crucial …, not only for the protection of citizens' rights, but also to facilitate trust in the public administration and in our participatory democracy".

510 *White Paper on Transforming Public Service Delivery* (1997) 17-24. These principles are concerned with 'how' public services have to be delivered, and not with the 'type' of services that have be delivered. The same could also be said of governance (how) in relation to individuals' entitlement to specific rights, such as the right to environmental health (what) - see para 4.2.3 below. For more on the *Principles of Batho Pele* - see Kuye 2006 *JPA* 299-308.

511 The *NDP* 410-443 recognises that government needs to a) stabilise the political-administrative interface, b) strengthen delegation, accountability, and oversight, c) improve interdepartmental co-ordination, and d) that government has to take a proactive approach to improve relations between its national, provincial, and local spheres – all of which are aspects that relate to the improvement of 'governance'.

environmental health governance too.[512]

2.4.2.4 Co-operative governance and intergovernmental relations

While government governs over society it does so through any number of its governmental bodies from any of its spheres and branches of authority, who could use any one of a variety of tools at any given time.[513] In addition, although governmental bodies have specific functions, it is also remains possible that their activities could overlap, making governance a rather complex intersecting matrix to say the least.[514] For this reason governmental conduct will require some form of harmonisation in order to reduce potential conflicts and disputes between governmental bodies, and to prevent the possible duplication or omission of their respective functions.[515]

To this end the *Constitution* intends to enable the three spheres of government to work together in a coherent fashion, while also allowing them to function relatively autonomously.[516] It foremost prescribes that the three spheres of government are distinctive, interdependent, and interrelated. They are distinctive because they each have authority (the responsibility) to govern over specific matters listed in the *Constitution*.[517] They remain interdependent and interrelated however because they ought to work together to fulfil government's functions as a whole. Yacoob J explains this in the *Langeberg*-case, in which he pronounces that:

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512 It should be noted that there is a distinction between values that create a 'propensity towards something', and a right that is 'directly enforceable'. The governance principles reflect values and not rights - Bekink *Principles of South African Constitutional Law* 75-78. For more on the monitoring and evaluation of government's performance - see *Policy Framework for the Government-wide Monitoring and Evaluation System* (2007) 1-3; *National Evaluation Policy Framework* (2011) 2; *A Framework for Strengthening Citizen-Government Partnerships for Monitoring Frontline Service Delivery* (2013) 5-7; Ile "Monitoring and Evaluating the Quality of Policy Implementation" 178-207.

513 See paras 2.4.1.3-2.4.1.7, 2.4.2.2 above.

514 *Maccsand*-case para 47; De Vos and Freedman *South African Constitutional Law* 271-273; Malan 2005 *Politeia* 238.

515 For more on the current model of co-operative governance in South Africa - see Woolman and Roux "Co-operative Government and Intergovernmental Relations" 3-6; Bekink *Principles of South African Constitutional Law* 275-292; Burns and Beukes *Administrative Law* 43-48.

516 *Premier WC*-case para 58; Woolman and Roux "Co-operative Government and Intergovernmental Relations" 35; ss 40-41 of the *Constitution*.

517 Schedules 4 and 5 of the *Constitution*; Mathebula 2011 *JPA* 842-843; paras 2.4.1.4-2.4.1.6 above.

> All the spheres are interdependent and interrelated in the sense that the functional areas allocated to each sphere cannot be seen in isolation of each other. They are all interrelated. None of these spheres of government nor any of the governments within each sphere have any independence from each other. Their interrelatedness and interdependence is such that they must ensure that while they do not tread on each other's toes, they understand that all of them perform governmental functions for the benefit of the people of the country as a whole.[518]

The *Constitution* also contains a number of principles that aims to establish a government of co-operation.[519] These principles instruct governmental bodies to respect one another, to refrain from assuming any power or function except those conferred on them in terms of the *Constitution*, to exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional, or institutional integrity of bodies in other spheres, and to co-operate with one another.[520] In the practical sense this means, as Stretch J explains: "[t]he branches of government are not in competition with one another. Rather they are symbiotic. They are part of a beautiful mosaic which will work only if we bring all our public goodness to the fore".[521]

Five predominant features of co-operative governance are derived from these principles for present purposes. Firstly, governmental bodies may not exercise their powers in a way that will undermine the effective functioning of another, which means that they should *only* do what they are empowered to do.[522]

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518 *Langeberg*-case para 26; Malan 2005 *Politeia* 227; Mathebula 2011 *JPA* 842-843; Steytler and De Visser *Local Government Law of South Africa* ch 16 3.

519 This implies that the governmental bodies have to co-operate vertically (with different spheres) and horisontally (bodies in same sphere) - Burns and Beukes *Administrative Law* 43-49; Currie and De Waal *The New Constitutional and Administrative Law* 119-121. Du Plessis and Du Plessis "Striking the Sustainability Balance in South Africa" 434 describe these principles as laudable.

520 The 'co-operation' requirement has been delineated even further and includes that governmental bodies have to assist and support each other, inform and consult with one another on matters of common interest, co-ordinate their actions and legislation with one another, and have to avoid legal proceedings against one another - s 41(a)-(h) of the *Constitution*; Malan 2005 *Politeia* 229-230; Woolman and Roux "Co-operative Government and Intergovernmental Relations" 10-20; Steytler and De Visser *Local Government Law of South Africa* ch 16 7-9; *National Gambling Board v Premier of KwaZulu-Natal* 2002 2 SA 715 (CC) paras 31-37. Only some of these principles impose positive obligations on government - Steytler and De Visser *Local Government Law of South Africa* ch 16 4.

521 *Unemployed Peoples Movement v Premier, Province of the Eastern Cape* (unreported) 2020 ZAECHHC 1 (14 January 2020) (hereafter *UPM*-case) para 94.

522 *Premier WC*-case para 58; Woolman and Roux "Co-operative Government and Intergovernmental Relations" 14-18; Currie and De Waal *The New Constitutional and Administrative Law* 122-124.

Secondly, as a means to support and assist one another, governmental bodies that perform executive tasks may assign (transfer responsibility in full) or delegate (to act in their stead) their powers or functions to other bodies in other governmental spheres.[523] On this point it bears reminding that the *Constitution* allocates specific functional areas to the respective governmental spheres, and their legislative and executive powers apply only to those functions.[524] It appears though that the governmental spheres can override the constitutional division of their functional areas through the possibility of assignment, since it enables national government to assign its functions to provincial or local government, and provincial government to assign its functions to local government.[525]

Thirdly, to ensure that each sphere performs its functions, the national government may intervene when a provincial government cannot or does not fulfil its executive obligations in terms of the *Constitution* or other legislation, and a provincial government may likewise intervene when a municipality cannot or does not fulfil its executive obligations in terms of the *Constitution* or other legislation.[526] The power

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523 Delegation and assignment have to be consistent with the legislation in terms of which the power is exercised or the function is performed - ss 99, 126, 238 of the *Constitution*; *Executive Council, Western Cape Legislature v President of the RSA* 1995 4 SA 887 (CC) para 173; Murray and Stacey "National Executive Authority" 60-63; Murray and Ampofo-Anti "Provincial Executive Authority" 27; Bekink *Principles of South African Constitutional Law* 365-367. The *Constitution* permits the national legislative authority to delegate its law making powers to its provincial and local counterparts, and the provincial legislative authority can do so to its local counterparts - ss 44(1)(a)(iii), 104(1)(c) of the *Constitution*; *Premier: Limpopo Province v Speaker: Limpopo Provincial Legislature* 2011 6 SA 396 (CC) paras 20-24 (hereafter *Provincial Legislature*-case).

524 See paras 2.4.1.3-2.4.1.7 above.

525 Section 156(4) of the *Constitution*; Steytler and De Visser "Local Government" 58-63; Olivier and Gouws "Co-operative Government and the Intergovernmental Division of Environmental Powers and Functions" 7-11; *Guidelines on Allocation of Additional Powers and Functions to Municipalities* (2007).

526 Sections 100, 139, 155(6) of the *Constitution*. Intervention will only be permitted if there is a genuine failure on the part of the governmental body to perform its executive functions. In *MEC of the KwaZulu-Natal for Local Government, Housing and Traditional Affairs v Amajuba District Municipality* 2011 1 All SA 401 (SCA) the Court rejected an appeal by a provincial government to intervene in the matters of a district municipality because it found that the reason for the intervention was politically motivated. In a more recent matter provincial government dissolved the Municipal Council of a metropolitan municipality, and while the Court was asked to pronounce on a possible ulterior motive for the intervention, it found it unnecessary to do so because it found the dissolution to be unlawful in any event - *Democratic Alliance v Premier for the Province of Gauteng* (unreported) 2020 ZAGPPHC 119 (29 April 2020) para 105. See also the *UPM*-case paras 84-97 in which the Court found that provincial government may intervene where a municipality fails to comply with its constitutional obligations to deliver services to its community.

to intervene involves that national government may take appropriate steps to ensure that provincial administrations fulfil their obligations and provincial government may take appropriate steps to ensure that municipalities fulfil their obligations. The appropriate steps include that the intervening governmental body can assume responsibility to fulfil the obligation by itself, it can issue a directive to the non-performing body and set out what steps need to be taken to fulfil the function, and in the case of non-performance by a municipality the provincial administration can dissolve the municipality's Municipal Council and appoint an administrator until a new Municipal Council has been elected.[527]

Fourthly, as a means to co-operate governmental bodies have to co-ordinate their actions.[528] The *Intergovernmental Relations Framework Act* 13 of 2005 (hereafter *IGRFA*) was promulgated to facilitate co-ordination in the implementation of policy and legislation among the governmental bodies with the aim to establish and maintain a coherent government, to enable the effective provision of services, to monitor the implementation of policy and legislation, and to realise national priorities.[529] The *IGRFA* deploys three mechanisms to do so and they are a) the creation of a host of mandatory and optional intergovernmental forums whereby governmental bodies can exchange information to improve co-ordination among them,[530] b) the adoption and use of implementation protocols (binding agreements) in which governmental bodies' respective responsibilities are set out when the

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527 For more on governmental intervention - see Malan 2005 *Politeia* 239-240; Steytler and De Visser "Local Government" 111-126; Olivier and Gouws "Co-operative Government and the Intergovernmental Division of Environmental Powers and Functions" 25-35.

528 De Vos and Freedman argue that co-ordination forms the heart of South Africa's co-operative governance system - De Vos and Freedman *South African Constitutional Law* 273.

529 Section 4 of the *IGRFA*; Malan 2005 *Politeia* 228-229; Mathebula 2011 *JPA* 835-840; Olivier and Gouws "Co-operative Government and the Intergovernmental Division of Environmental Powers and Functions" 18-19. The *IGRFA* applies to the executive and administrative authority of government but not to the legislative or judicial branches - s 2(2) of the *IGRFA*; Woolman and Roux "Co-operative Government and Intergovernmental Relations" 24-25; De Vos and Freedman *South African Constitutional Law* 275.

530 These forums include a President's Co-ordinating Council, a Forum for South Africa's Directors-General, and several national, provincial, and local intergovernmental forums - ss 6-29 of the *IGRFA*; Malan 2005 *Politeia* 232-234; Woolman and Roux "Co-operative Government and Intergovernmental Relations" 36-38; Glazewski and Rumble "Administration and Governance" 4-5; Steytler and De Visser *Local Government Law of South Africa* ch 16 20-26.

exercise of a function requires the participation of more than one of them,[531] and c) the establishment of measures to settle intergovernmental disputes.[532]

Fifthly, governmental bodies may only approach the courts for relief if conflict arises between them once *all* other mechanisms of dispute resolution have been exhausted.[533]

In theory all these mechanisms ought to facilitate the harmonisation of the governance system by prohibiting governmental bodies from undermining each other, by allowing and encouraging them to co-operate, by empowering them to hold each other accountable, and by enabling them to co-ordinate the exercise of their powers and the performance of their functions.[534] Considering the multifaceted nature of environmental health, numerous governmental bodies may be involved in its operationalisation, therefore they may also have to rely on some of the mechanisms that facilitate co-operation and co-ordination to be able to do so effectively.[535] Finally, also keep in mind that the "profoundly facilitative nature [of co-operative governance and intergovernmental relations] squares-in the centrality of *human* relations for its success because it is the *humans* and not structures in government that are relating".[536]

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531 Sections 35-38 of the *IGRFA*; Woolman and Roux "Co-operative Government and Intergovernmental Relations" 38-39; Steytler and De Visser *Local Government Law of South Africa* ch 16 27-30.

532 Sections 39-45 of the IGRFA; Woolman and Roux "Co-operative Government and Intergovernmental Relations" 39-52; De Vos and Freedman *South African Constitutional Law* 276; Steytler and De Visser *Local Government Law of South Africa* ch 16 30-39. The national government departments have been divided into six clusters to align government's priorities with the aim to improve planning, decision-making, and service delivery. Interestingly, the NDFFE and the NDOH do not feature in any of the same clusters - Tibane *South Africa Yearbook 2016/2017* 127-128.

533 Section 41(3) of the *Constitution*; Woolman and Roux "Co-operative Government and Intergovernmental Relations" 18-24; De Vos and Freedman *South African Constitutional Law* 274; De Vos and Freedman *South African Constitutional Law* 276-277; *Beja v Premier of the Western Cape* 2011 3 All SA 401 (WCC) (hereafter *Beja*-case) para 162-172.

534 Commentators are of the view that at this stage the national sphere of government is still in the position to coerce the provincial and local government to abide by its will, since it has both the power of the purse (revenue, taxation, spending) and the ability to override their decisions. For commentary on the successes and failures of the current system of co-operative governance - see Woolman and Roux "Co-operative Government and Intergovernmental Relations" 2, 52-55; Malan 2005 *Politeia* 240-242; Bekink *Principles of South African Constitutional Law* 289-292; Du Plessis and Du Plessis "Striking the Sustainability Balance in South Africa" 435-437.

535 See paras 2.4.2.5, 4.4 below.

536 Emphasis and wording were added for the sake of clarity - Mathebula 2011 *JPA* 851.

2.4.2.5 Environmental health governance

Since governance denotes a governmental response to achieve a common societal goal or to solve a common societal problem, it pertains to government's conduct with respect to a *particular* goal or problem.[537] This means that government's conduct, or governance for that matter, relates to a specific topic (goal or problem), leading to the manifestation of unique variants of governance.[538] Seeing that the current topic is environmental health, the variant of governance relevant to this research is 'environmental health governance'. A description of this variant of governance will be considered and formulated in the paragraphs that follow in order to determine what the operationalisation of environmental health by government will have to involve.[539]

The preceding paragraphs provided an overview of the components of governance in general.[540] In order to produce a description of 'environmental health governance' specifically, some of these components will have to be reconsidered while taking into account the specific features of environmental health as discussed in the first half of this chapter.[541]

It bears reminding that all governmental conduct, including environmental health governance, has to be authorised by law.[542] This means that government will have to draft and promulgate legislation that permits and enables environmental health governance, which can be described as a legal environmental health mandate. The legal mandate will contain the processes and mechanisms whereby government can operationalise environmental health, so the mandate will essentially serve as a foundation for environmental health governance.[543] When government implements and enforces the legal mandate, environmental health governance will transpire. It

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537 See para 2.4.2.1 above.

538 The applicable institutions, processes, and mechanisms whereby governmental conduct transpires depend on the goal or problem at hand.

539 This description will be used throughout this research as a basis to measure government's current efforts in this regard.

540 See paras 2.4.1.3-2.4.1.7, 2.4.2.1-2.4.2.4 above.

541 See para 2.3 above.

542 See para 2.4.2.2 above.

543 The *NEHP* aims to provide a national framework for the provision of environmental health services in South Africa - *NEHP* 11.

stands to reason then that a legal environmental health mandate has to be designed in accordance with the specifications that the successful operationalisation of environmental health will demand from government, because if the legal mandate falls short in any of those respects, environmental health governance will in all probability fail. The discussion that follows should therefore be viewed not only as an analysis of environmental health governance, but also as an exposition of the substantive content and procedural aspects that a legal environmental health mandate will have to provide.[544]

To begin with it will be useful to consider what environmental health intends to achieve. The environmental health concept primarily exists to safeguard people from environmental hazards,[545] and its objective is specifically to protect people's health, quality of life, and well-being.[546] Consequently, the purpose of environmental health governance also has to be to protect people's health, quality of life, and well-being from environmental harm.

The demarcation of the environment in the environmental health context provides the parameters of environmental health governance. In other words environmental health governance only has to be concerned with matters that fall within the scope of the 'environment' as defined above.[547] This research showed that there are numerous variable environmental factors that can affect the human condition.[548] It appears to be conventional practice to divide environmental factors into distinct categories for the sake of practicality.[549] The purpose of their division is to guide government's focus and to set targets for environmental health, it does not intend

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544 The key aspects are derived from the theoretical underpinnings of environmental health and from the operation of government in general as set out in paras 2.3.1-2.4.2.4 above.

545 See paras 2.3.1, 2.3.5 above.

546 Each of these terms expresses some aspects of the human condition in one way or another - see paras 2.3.1.1, 2.3.3 above. According to the NDOH the mission of environmental health in South Africa is to improve the 'health' of the environment and the 'quality of life' of all communities - *NEHP* 17; Malcolm "Regulation and Environmental Health Governance" 130.

547 See para 2.3.1.2 above.

548 See para 2.3.1 above.

549 Environmental health literature reveals that environmental health practice always transpires in line with some form of categorisation of environmental hazards. See e.g. the WHO's categorisation in Prüss-Üstün *et al Preventing Disease through Healthy Environments* 3-4; and the categorisation of environmental hazards for discussion in Battersby *Clay's Handbook of Environmental Health* 436-975; Moeller *Environmental Health* 102-328; Frumkin *Environmental Health: from Global to Local* 273-722. See also para 2.3.2 above.

to exclude any environmental factor through its categorisation.[550] There is no uniform set of environmental categories, so for present purposes the environmental factors are divided largely based on their routes of exposure, and they are water quality and sanitation, foodstuffs, waste and land contamination, housing, communicable diseases and vectors, air quality, chemicals and hazardous substances, and climate change.[551] As a collective these categories incorporate all the potential factors in the environment that could pose a threat to humans (hazards), and all of them have to be a concern of environmental health governance.[552]

Further to this point, as was mentioned earlier in this research, people usually precipitate environmental hazards through their behaviours and attitudes.[553] In other words people cause the very conditions that could be harmful to them. For this reason environmental health governance has to be concerned not only with the potential harm that environmental hazards pose, but also with the people that actually cause them.

Environmental health is fundamentally preventative in nature.[554] This means that its purpose is to *prevent* people from suffering from environmental harm. A comparison with traditional curative health care services perhaps explains this most clearly. The purpose of health care services is to treat and cure individuals that who have already suffered harm (for example doctors that treat patients in a clinic or hospital). Unlike these 'traditional' health care services, environmental health is not concerned with people who have already suffered harm, even if from exposure to

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550 It is essential to categorise environmental hazards because it is impractical to try to influence the environment without having specific targets in mind. It does not intend to constrain environmental health governance but rather to guide it - Golden and Earp 2012 *Health Educ Behav* 364-365.

551 This division intentionally mimics the categorisation of environmental hazards by the NDOH because the conceptualisation of 'environmental health governance' in this chapter will be used as the yardstick for the current practice of environmental health in South Africa - *NEHP* 7-8; s 1 of the *NHA*; para 2.3.2 above. Climate change has been included and is listed as a separate category because it has the potential to exacerbate most of the other environmental hazards, but due to its sheer scope cannot be discussed in great detail in this research as that warrants a separate study all on its own - see paras 2.2.8, 2.3.1.2 above.

552 See paras 2.3.1.2, 2.3.2 above.

553 See paras 2.3.2-2.3.3 above.

554 See para 2.3.1.3 above.

an environmental hazard. The purpose of environmental health practice, instead, is to prevent harm from occurring in the first place.[555]

In order to achieve this purpose, government will have to launch interventions that specifically target environmental hazards and their causes *before* they actually affect people's health, quality of life, or well-being, and these interventions could be labelled as environmental health services.[556] Environmental health services therefore refer to the *product* that environmental health governance has to deliver. To be effective in this endeavour, government will have to be able to identify and repair *past* environmental damage, assess, reduce, monitor, and control *present* environmental hazards and their causes, and anticipate and prevent possible *future* environmental risks through the provision of environmental health services.[557] The scope that environmental health services have to assume seem rather comprehensive, and government will have to confer all the powers that may be required to *enable* its bodies and public officials to utilise adequate governance tools (processes and mechanism) to deliver them.[558] In other words, the governmental bodies and officials tasked with the delivery of environmental health services will have to be empowered to the extent that they could undertake *all* those acts necessary to prevent environmental harm from occurring.

Two further aspects require consideration as far as governmental intervention is concerned: the existence of different levels of health influences, and the implication of government's commitment to undertake development in a sustainable manner.

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555 Prevention should be at the centre of all environmental health action and curative services do not fall within the purview of environmental health - *NEHP* 15; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 6; Listorti and Doumani *Environmental Health: Bridging the Gaps* 18; CIEH *Agendas for Change* 19; Moeller *Environmental Health* 22-24; May and Agenbag "Environmental Health and Municipal Public Health Services" 4-6.

556 The provision of environmental health services amounts to administrative action - see para 2.4.1.7 above.

557 This scope is derived among others from the NDOH's and WHO's definitions of 'environmental health services' - *NEHP* 10; WHO Europe *Environment and Health* 11. See also Malcolm "Regulation and Environmental Health Governance" 128; Flowers, Gray and Battersby "Philosophy and Principles of Environmental Health" 6; Listorti and Doumani *Environmental Health: Bridging the Gaps* 18; CIEH *Agendas for Change* 19, 21. The need to address past, present, and future environmental hazards also stem from the need to achieve inter-generational equity - see para 2.3.4 above.

558 See para 2.4.2.2 above. See chs 4-5 below for more on the content of these services and the governance tools that go with it.

It was explained earlier in this chapter that people can be affected by environmental hazards at different levels and that each level may require distinct governmental intervention.[559] Frieden developed a health impact intervention pyramid as part of a conceptual framework for public health action that caters precisely for this need.[560] The application of this pyramid demonstrates that some interventions have a greater impact than others, particular those aimed at conditions that affect the larger population (community and society level) versus those aimed at the treatment of specific individuals (foundational and interpersonal level).[561] This implies that government may have to prioritise the delivery of environmental health services intended for hazards that are present in the outer levels of influence.[562] Environmental health services should also not be delivered at the expense of the attainment of social equality, environmental protection, or economic growth, but rather for the betterment of all three of these concerns in order to contribute towards the achievement of sustainability.[563] Government may consequently have to prioritise the delivery of environmental health services according to people's overall developmental needs.[564]

Environmental hazards could be small or larger in scale, so specific hazards could affect some individuals, entire communities, or the population at large.[565] Because

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559 They are the foundational-, interpersonal-, community-, and society level. The NDOH advocates that health issues have to be addressed in a 'social ecological framework', and this framework likewise emphasises that environmental influences occur at different levels and that each level requires distinct intervention - Golden and Earp 2012 *Health Educ Behav* 364-365; para 2.3.2 above.

560 Unfortunately this pyramid has limited application for present purposes because it includes a variety of health interventions that ranges from broader environmental interventions that could affect the public at large, to individual clinical interventions that resort under a curative health system (unlike environmental health that is preventative in nature) - Frieden 2010 *AJPH* 591.

561 Frieden 2010 *AJPH* 591-596; Golden and Earp 2012 *Health Educ Behav* 364-365, 368-370.

562 Malcolm argues that governmental intervention has to meet certain requirements, which are that it has to be a) responsive, b) the least intrusive, c) cost-effective, and d) that it must deliver maximum benefits. This squares with the prioritisation of interventions that could benefit entire communities as opposed to individuals only - Malcolm "Regulation and Environmental Health Governance" 136.

563 See para 2.3.4 above.

564 For instance, government may have to prioritise the delivery of environmental health services in poorer areas where people face the biggest brunt of harmful conditions, and this could equalise the share in benefits from a safer environment (to improve their health). This also goes hand in hand with intra-generational equity - *National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners* (2015) 13; para 2.3.4 above.

565 See para 3.4 below for more on transboundary environmental health hazards.

municipalities may only operate within their demarcated areas, provinces only within their demarcated areas, and national government operates nationally, environmental health governance will require the participation of all three spheres of government.[566] It was explained in the paragraphs above that the spheres of government consist of governmental bodies that have specific powers and functions.[567] The *Constitution* allocates various functional areas to each sphere of government that can be associated with aspects of environmental health,[568] and this division of functions (and the powers that go with it) will determine what role each sphere and particular body can play in the governance of environmental health.[569]

Ideally local government should provide environmental health services because it is the sphere of government that directly interacts with people.[570] At face value it would seem however, based on the nature of environmental hazards and the division of functional areas between the governmental spheres, that all three spheres will be involved in the delivery of environmental health services to some extent. In addition, governmental departments at the national and provincial spheres are also tasked with the management of *specific* affairs, such as health, the environment, and water, but environmental health hazards clearly span across the mandates of multiple governmental departments.[571] This means that environmental health governance will not only involve all three spheres of government, but also numerous governmental bodies at each sphere. Each of the governmental bodies involved in environmental health cannot aim to address harmful environmental conditions in isolation though, because if "energies [are] dissipated in a series of piecemeal interventions [it may] fail to address the fundamental problems underlying poor environmental health".[572] All these bodies at all three spheres of

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566 See paras 2.4.1.4-2.4.1.6 above.
567 See paras 2.4.1.4-2.4.1.6 above.
568 Schedules 4 and 5 of the *Constitution*.
569 Each sphere has legislative and executive authority over their own functional areas - see paras 2.4.1.4-2.4.1.7 above. See paras 4.3.2, 4.3.4.3 below for more on the division of functional areas.
570 See paras 2.4.1.6-2.4.1.7 above, 3.3.2, 3.3.3.1 below.
571 See para 2.4.1.7 above.
572 CIEH *Agendas for Change* 21.

government will therefore have to co-operate with one another and they will have to co-ordinate their efforts to be able to deliver environmental health services effectively.[573]

Keeping in mind the above, environmental health governance may generally be described for the purpose of this research as:

> The execution of the processes and mechanisms embedded in law, through the co-operation and co-ordination of the efforts of all the governmental bodies and officials mandated by law to do so, which are intended to protect the health, quality of life, and well-being of all people from every reasonably modifiable environmental hazard, in a manner that is sustainable and preferably to the benefit of the larger population.

Environmental health governance could also be described simply as the implementation and enforcement of the legal environmental health mandate, although the design of the mandate will have to be conducive to the effective operationalisation of environmental health as set out in this research. Figure 2-5 below offers to illustrate environmental health governance as formulated above.

[573] See para 2.4.2.4 above. The *NEHP* demands the establishment of a National, Provincial, and Local Environmental Health Forum that could facilitate co-operation among the governmental spheres - *NEHP* 41; para 4.4 below.

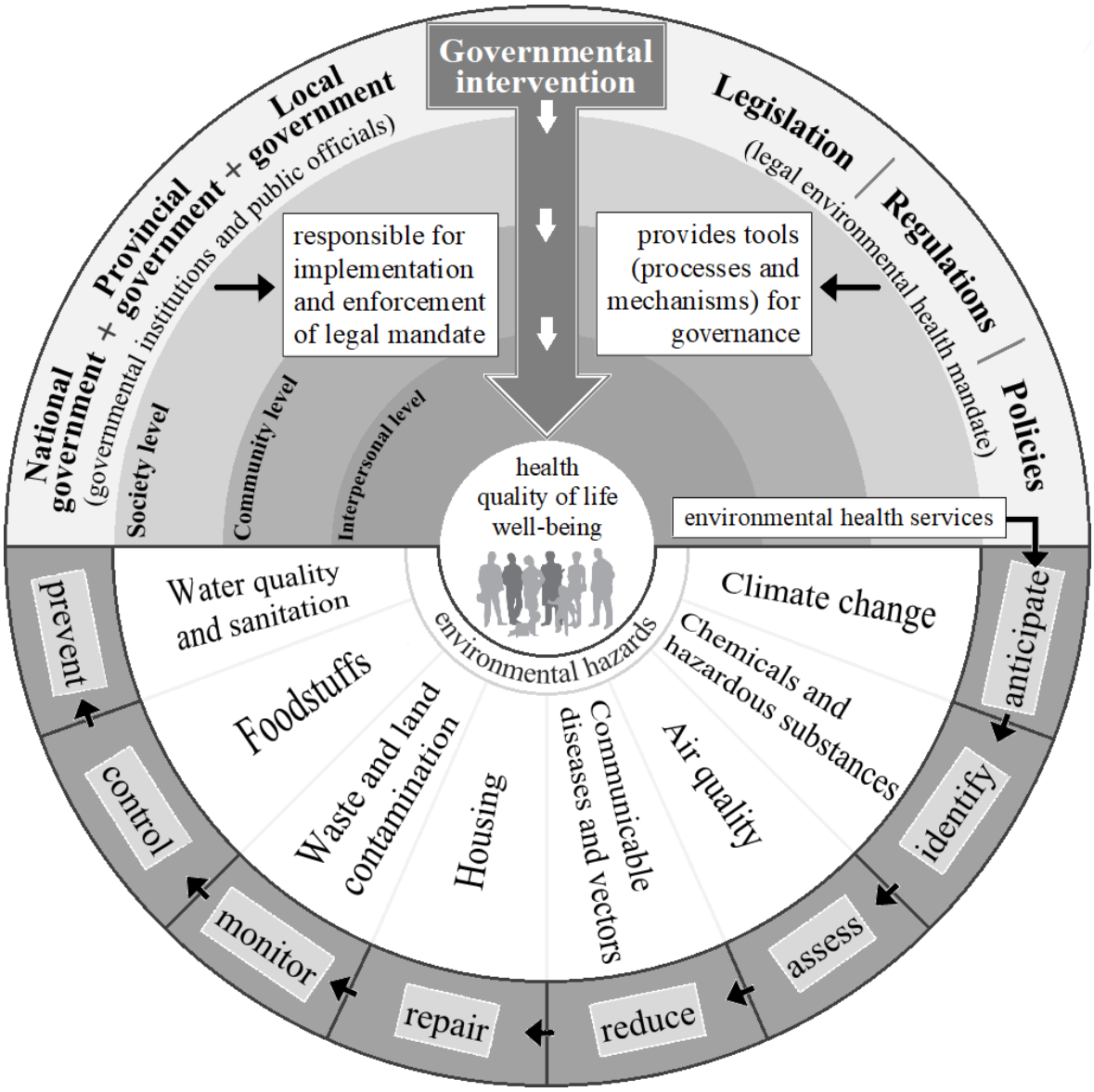

Figure 2-5: Environmental health governance model[574]

2.5 Chapter summary

This chapter was dedicated to a theoretical discussion of the environmental health concept and the practical implications of its operationalisation. The theoretical discussion of the environmental health concept commenced with an analysis of its two dimensions, health and environment. The analysis showed that people's health is inextricably linked to their environment, and that the environmental health

574 This model builds on the reconstructed environmental health hazard model (Figure 2-3) above and incorporates additional elements associated with the operationalisation of environmental health into its design - *National Health Promotion Policy and Strategy* (2015-2019) 11-12; Sallis, Owen and Fisher "Ecological Models of Health Behavior" 465-470; para 2.3.2 above.

concept is reflective of this recognition. It further revealed that environmental health should be understood not only as a reference to the interface between people's health and the environment, but rather as the articulation of the acknowledgement that the environment can be harmful to the human condition and that environmental factors and influences have to be regulated specifically for this purpose.[575] In follow-up to this understanding of environmental health and before formulating a definition thereof, the researcher also deliberated on the potential influences that the determinants of health and environmental epidemiology, other expressions of the human condition, and the notion of sustainable development have on the environmental health concept.

The discussion indicated that a distinct discipline (epidemiology) arose to investigate the determinants of health and several models have been developed to identify them. In general these models indicate that the factors that influence the human condition can be divided into distinct levels and that each level of influence requires particular intervention. As far as environmental health is concerned, the discussion pointed out that environmental hazards are present in all the levels of influence and that they can be difficult to identify (to determine a causal link), which is why it may be necessary to use an environmental determinants of health model to be able to develop suitable interventions to address them. It further showed that people are in a reciprocal relationship with the environment. In other words, as people affect the environment, the environment in turn has an effect on people, which means that interventions have to be aimed at environmental hazards, but also at the people that cause them. Based on these findings, a reconstructed environmental determinants of health model, presented in Figure 2-3 above, can serve as a guide to identify environmental hazards in South Africa and to develop suitable interventions to address them.[576]

The researcher identified that health is not the only term that describes the status of aspects of the human condition, but that quality of life and well-being serve a similar purpose. The latter two are more comprehensive than health though, as

[575] See para 2.3.1 above.
[576] See para 2.3.2 above.

they also give an account of people's subjective feelings, among others. It was found that it need not be necessary to distinguish between these terms on a theoretical level, as long as the scope of all three is incorporated as a concern for environmental health.[577]

The analysis of the relationship between environmental health and sustainable development confirmed that there is a linkage between them. It found that the improvement of environmental health will contribute towards achieving sustainability, and that development that is sustainable will improve the status of environmental health. For this reason environmental health interventions can be used as a practical tool to contribute to government's efforts to achieve sustainability, which in turn will also benefit environmental health.[578]

Given these considerations, environmental health was defined for the purpose of this research as:

> The concept that addresses those reasonably modifiable natural and built surroundings within which humans exist, which are made up of the physical, chemical, and biological factors, their interrelationships, and the influences that their conditions can have on related human behaviours and attitudes and *vice versa*, which can potentially adversely affect the health, quality of life, or well-being of the present or future generations, through the delivery of interventions that are appropriate in light of everyone's developmental needs.[579]

The substantive content of environmental health in South Africa will be measured against this definition of environmental health throughout this research.

The researcher then went ahead to investigate the operationalisation of the environmental health concept. This was contextualised through a discussion on the role-players involved in environmental health, namely the state, government, and society. An examination of these revealed that government has a responsibility for society, and by this virtue it also has a duty to protect society, which in this case means that *government* has to operationalise environmental health to protect people from environmental hazards.[580] The discussion further explained that

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577 See para 2.3.3 above.
578 See para 2.3.4 above.
579 See para 2.3.5 above.
580 See paras 2.4.1.1-2.4.1.3 above.

government consists of numerous governmental bodies that operate at the national, provincial, and local sphere, that the respective governmental bodies are endowed with legislative, judicial, or executive authority that empower them to make laws, resolves disputes through the application of the law, and to implement and enforce laws, and that each governmental body has specific functions that it has to perform.[581]

Government governs over society when its bodies exercise their authority and it is through the exercise of this authority that government can operationalise environmental health. For this reason, the researcher set out to explore how government can exercise its authority, wherefore the concept of governance and some of its components, including the tools of governance, the principles of governance, and co-operative governance, were investigated.

The investigation showed that the tools of governance refer to the processes and mechanisms that government uses to govern over society. These tools reside in the promulgation of legislation, in the assignment of powers, functions, rights, and obligations through legislation, in its subsequent implementation, and when necessary also in its enforcement. Through the promulgation of legislation government can a) confer powers and impose functions on its bodies that on the one hand enable them and on the other compel them to perform specific functions, which in this case will be to deliver environmental health services that could protect people from environmental hazards, and government can b) grant rights to members of society and impose obligations on them, which in this case can entitle them to an environment that is not harmful on the one hand and prohibit them from causing environmental hazards on the other. The processes and mechanisms that government utilises to implement legislation (to carry out the relevant provisions) will depend on the particular function that its bodies have to perform, which in this case will have to involve the identification, repair, assessment, reduction, monitoring, control, anticipation, and prevention of environmental hazards and their causes. Government can enforce compliance when its bodies fail to perform their

[581] See paras 2.4.1.4-2.4.1.7 above.

functions or when members of society fail to abide by their obligations, and government has a variety of tools at its disposal to do so, whose selection will depend on the transgressor, the particular function or obligation, and the severity of the non-compliance at hand. Here it will mean that if a governmental body or public official does not deliver environmental health services, another will have to compel the body or official to do so, and if a person causes an environmental hazard, government will have to compel that person to refrain from doing so (or to neutralise the threat that the hazard holds).[582]

The discussion further displayed that government's conduct is subject to a normative foundation, which means that governmental bodies must abide by prescribed principles when they govern. These principles have been legally entrenched in section 195(1) of the *Constitution* and the *PAMA*, which were listed above. In addition government also adopted eight service delivery principles to transform public service delivery, known as the *Principles of Batho Pele*, and they also apply to the public administration.[583]

The investigation moreover revealed that governance is a rather complex intersecting matrix as far as the institutional arrangements and the allocation of functions and powers between the governmental bodies are concerned. This much is also evident in consideration of the division of functional areas between the governmental spheres in schedules 4 and 5 of the *Constitution*, as all three spheres are tasked with the administration of matters that relate to environmental health, and the same goes for the respective mandates of national state departments. This implies that governmental bodies can perform duplicate functions or no functions at all, and that conflicts may arise between them in this regard. The *Constitution*, however, prescribes that governmental bodies have to co-operate with one another, and to this end it specifies that the respective bodies may only do what they are empowered to do, it permits them to assign and delegate their functions to other bodies at other spheres of government, it permits the spheres to intervene when others do not fulfil their executive obligations, and it restricts them in cases of

582 See para 2.4.2.2 above.
583 See para 2.4.2.3 above.

conflict by only allowing them to seek judicial relief as a last recourse. In addition the *IGRFA* also imposes specific obligations on governmental bodies with the aim to enhance co-operation and to enable them to co-ordinate their actions.[584]

Flowing from this investigation of governance and its components, as well as the theoretical underpinnings of the environmental health concept, the researcher was able to explain what must be done to operationalise environmental health by investigating environmental health governance, which culminated in the formulation of its description as:

> The execution of the processes and mechanisms embedded in law, through the co-operation and co-ordination of the efforts of all the governmental bodies and officials mandated by law to do so, which are intended to protect the health, quality of life, and well-being of all people from every reasonably modifiable environmental hazard, in a manner that is sustainable and preferably to the benefit of the larger population.[585]

That being said, this research also indicated that environmental health governance has to be authorised by law, which means that government has to develop a legal environmental health mandate. Environmental health governance will transpire through the implementation and enforcement of this mandate. For this reason the investigation of environmental health governance also served as an exposition of the substantive content and procedural aspects that the legal environmental health mandate has to provide, which is represented in Figure 2-5 above.[586] This exposition will be used throughout this research as the benchmark against which the implementation and enforcement of South Africa's legal environmental health mandate will be measured.

The international dimensions of the environmental health concept are examined in the next chapter.

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584 See para 2.4.2.4 above.
585 See para 2.4.2.5 above.
586 See para 2.4.2.5 above.

Chapter 3: An international perspective of environmental health

3.1 Introduction

A discussion on environmental health from an international perspective is cardinal for two main reasons. The first reason is that government has made commitments to comply with numerous international law instruments and the obligations that arise from some of these instruments could influence or even shape environmental health governance in South Africa, both from a legal and practical point of view.[587]

Human rights jurisprudence articulates the human right to health as a comprehensive right, extending its application to include all the determinants of health, including the environment. The human right to health may therefore validate the need to operationalise environmental health from a legal perspective and it could impose this obligation on South Africa insofar government has to realise this right as well. For this reason the international human right to health is analysed in this chapter.[588]

Post-apartheid South Africa brought with it a reform of the entire health system, including a new approach to public health.[589] The basis for this reform stems among others from international developments on human health concerns and the subsequent approaches that emanated in this regard. Government ought to have moulded its reform of South Africa's public health system to conform to these developments because it is bound by the commitments that it made to a number of international law instruments adopted in this respect. Accordingly the international health agenda is examined in order to determine the contextual setting within which South Africa's health system (including the delivery of *environmental* health services) should be viewed.[590]

Most of the environmental hazards as categorised in the previous chapter are the

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587 See para 3.3 below.
588 See para 3.3.1 below.
589 Hall, Haynes and McCoy *The Long Road to the District Health System* 6; Coovadia *et al* 2009 *Lancet* 828.
590 See para 3.3.2 below.

subject of distinct international law instruments.[591] Government has made commitments to comply with some of these instruments and they could therefore have an impact on the governance of environmental health domestically. These international law instruments are examined in this chapter to determine what their potential impact should mean for environmental health governance in South Africa.[592]

The second reason is that the environment is not confined to the national borders of states, which means that it is possible that transboundary environmental harm could occur, and this possibility may add an international dimension to environmental health governance in South Arica.[593]

Government's ability to repair, reduce, control, and prevent environmental hazards are limited by the very nature of the environment.[594] The pollution of water, air, or soil could easily transcend states' national boundaries.[595] It could therefore become difficult, if not impossible, for an individual state to effectively address environmental hazards of a transboundary nature, which means that states may have to co-operate with one another for this purpose.[596] For this reason the legal instruments that enable or compel states to co-operate are investigated to determine if states have to co-operate with one another and what this duty could entail.[597]

The borderless nature of the environment makes it possible for states to cause

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591 See para 2.4.2.5 above.

592 See para 3.3.3 below.

593 See para 3.4 below.

594 Kotzé explains that "[w]hile people cannot control nature, the environment, and natural processes, we are able to mitigate anthropogenic impacts on the environment … through the social constructs we design and implement" - Kotzé *Global Environmental Governance* 37; Fidler *International Law and Public Health* 16.

595 The same applies to other environmental hazards, such as the contamination of food, the spread of vectors and communicable diseases, and climate change - Kidd *Environmental Law* 45; Glazewski "International Environmental Law: The International Dimension" 3-4; Jacobs and Nienaber 2011 *Water SA* 665-678; Gostin and Taylor 2008 *PHE* 53-55; Von Schirnding, Onizvu and Adede 2002 *Bulletin* 970. See also paras 2.2.1, 2.2.3, 2.2.6 above.

596 Johnson *Environmental Policy and Public Health* 325; Sands 1989 *Harv Int'l L J* 393.

597 The view that international environmental law and health-related international law enable co-operation among states is widely endorsed - Sands 1989 *Harv Int'l L J* 396; Taylor 2002 *Bulletin* 975; Fidler 2001 *Bulletin* 844; para 3.4.1 below.

harmful environmental conditions in the territory of other states. In other words, one state could cause an environmental hazard, whereas people in another state could be exposed to that hazard. This possibility warrants an analysis of the legal mechanisms that prohibit states from causing transboundary environmental harm, and that compel them to take responsibility should transboundary environmental harm do occur.[598]

The chapter commences with a brief theoretical clarification on the sources of international law instruments and their application in South Africa, and an overview of international organisations and South Africa's membership to them, as these form an integral part of the discussion that follows. The legal international influences on environmental health governance in South Africa are explored thereafter, with a focus on the international human right to health, the developments pertaining to public health systems, and the domestic impacts of specific international law instruments. This is followed with an exposition on states' responsibilities concerning transboundary environmental harm, paying attention in particular to their duty to co-operate, their duty to refrain from causing and to prevent environmental harm, and the legal mechanisms that states can use to compel others to comply with said duties.

3.2 International law instruments and international organisations – a theoretical clarification

The discussions in this chapter will involve international law instruments and international organisations, which is why it is necessary to explain what they are. In the paragraphs that follow the different types of international law instruments are identified and described and their application in South Africa, both directly and indirectly, are explained. Thereafter international organisations are described, and those whose work relate to environmental health and to which South Africa is a member are identified.

[598] See paras 3.4.1-3.4.2 below.

3.2.1 International law instruments

International law can in the simplest of terms be described as a collection of rules that states obey in their mutual relations with one another.[599] In other words, international law embodies the rules that govern the relations among states.[600] These rules (law) are not created by a central legislative authority and they are not enforced by a central executive authority.[601] States instead create international law by agreement,[602] and they *inter alia* abide by the law "due to a relationship of reciprocity".[603] States that do not comply with their international law commitments (violate international law) may still face legal ramifications, even in the absence of a central executive authority.[604] There are various sources of international law,[605] which means that there are distinct types of international law instruments.[606] Treaties, international customary law, soft law, and the general principles of

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599 Henderson *Understanding International Law* 5. For a theoretical discussion on the purpose of international law - see Koskenniemie "What is International Law for?" 29-52. O'Connel contends that international law "persists as the single, generally accepted means to solve the world's problems" and further explains that it is "the closest thing we have to a neutral vehicle for taking on the world's most complex issues and pressing problems" - O'Connel *The Power and Purpose of International Law* 19; Cottrell and Trubek 2012 *TLCP* 364-375.

600 Dugard *International Law* 2; Fidler *International Law and Public Health* 31.

601 Unlike municipal law that is adopted by a legislative authority and enforced by an executive authority (operating vertically), international law operates horisontally where states impose rules upon themselves as subjects - Kaczorowska *Public International Law* 12-16; Dugard *International Law* 3-9. See Dugard *International Law* 9-11; Kaczorowska *Public International Law* 12-14 for more on the debate about whether international law is really law.

602 Non-state actors involved in law-making can create non-state law, which has the effect of privatising parts of international law - Kotzé *Global Environmental Governance* 105-109, 162-165, 171-175.

603 Henkin comments that "almost all nations observe almost all principles of international law and almost all of their obligations almost all of the time" - Henkin *How Nations Behave* 47. See Koh 1997 *YLJ* 2599-2659; Simmons 1998 *ARPS* 75-93 for a further explanation on why states obey international law.

604 These could include reputational sanctions, direct sanctions (retaliatory measures), and punitive sanctions - Guzman 2002 *CLR* 1861-1872; Henderson *Understanding International Law* 6; para 3.4.2 below.

605 The sources of international law are listed in art 38(1) of the *Statute of the International Court of Justice* (1946) as:

> a) international conventions (treaties), whether general or particular; b) international custom, as evidence of a general practice accepted as law; c) the general principles of law recognised by civilised nations; and d) judicial decisions and the teachings of the most highly qualified publicists, as subsidiary means for the determination of rules of law.

606 Article 38(1) of the *Statute of the International Court of Justice* (1946) no longer accurately reflects all the sources of international law, and some even argue that the concept of sources should be replaced by one of recognised manifestations of international law - Dugard *International Law* 28-56; Thirlway "The Sources of International Law" 91-94.

international law are the international law instruments that are relevant for present purposes.

3.2.1.1 Sources of international law instruments

A treaty is defined in article 2(1)(a) of the *Vienna Convention on the Law of Treaties* (1969) as "…an international agreement concluded between states in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation".[607] In other words, treaties are instruments that contain specific rules that have been negotiated by states, and they create legally binding obligations upon those states who consent to them.[608] A treaty will become legally binding once a state expresses its intention to be bound to it, which can be done through signature, ratification, or accession, among others.[609] States have to comply with the provisions of a treaty once they are bound to it. If they do not, they will commit a violation of international law.[610] The prerogative to negotiate and sign treaties lies with the President and Cabinet (national executive authority) in South Africa,[611] and a treaty will only create binding rights and obligations for South Africa *vis-à-vis* other states, barring some exceptions,[612] once both the National Assembly and the National Council of

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607 All the rules relating to treaties are set out in the *Vienna Convention on the Law of Treaties* (1969) and the *Vienna Convention on the Law of Treaties between States and International Organisations or Between International Organisations* (1986). Note that a treaty can go by many names, such as convention, charter, covenant, declaration, pact, and protocol - Dugard *International Law* 609.

608 States must have the intention to create legally binding obligations in order to create treaties - Fitzmaurice "The Practical Working of the Law of Treaties" 167. A distinction is sometimes drawn between contractual treaties and law-making treaties - Kaczorowska *Public International Law* 28-29; Dugard *International Law* 29-30. Treaties can be bilateral (binding only two states) or multilateral (binding many states) - Dugard *International Law* 29-30; Thirlway "The Sources of International Law" 94-96.

609 Article 11 of the *Vienna Convention on the Law of Treaties* (1969); Fitzmaurice "The Practical Working of the Law of Treaties" 170-172; Henderson *Understanding International Law* 69-71; DIRCO 2016 http://bit.ly/1sxFp97. States conduct negotiations to create treaties via diplomatic representatives - UN *Treaty Handbook* 5-6.

610 See Kaczorowska *Public International Law* 68-124 for more on treaties in general; Dugard *International Law* 72-81 for more on treaties in South Africa.

611 Section 231(1) of the *Constitution*.

612 International agreements of a technical, administrative, or executive nature, or an agreement that does not require ratification or accession, do not need parliamentary approval - s 231(3) of the *Constitution*; Dugard *International Law* 76; Olivier *International Law in South African Municipal Law* 251-256.

Provinces (Parliament) have approved it.[613]

International customary law can be described as rules that have developed through settled practice and that have subsequently been accepted as legal obligations by states. A rule will only be regarded as international customary law once the requirements of *usus* (settled practice) and *opinion juris* (the acceptance to be bound by obligation) are met.[614] The former is an objective requirement and entails that a state has to repeat certain behaviour for a length of time, thereby establishing a rule (certain behaviour) through settled practice.[615] The behaviour of a state will only qualify as settled practice if it is consistent, uniform, and widespread.[616] The latter is a subjective requirement and it means that a state must consider the particular behaviour or rule as binding in law, or a state must feel obligated to abide by it.[617] The *opinion juris* requirement is difficult to prove however, and is therefore sometimes inferred from the settled practice of specific behaviour.[618]

Soft law is a relatively new source of international law. It generally refers to an assortment of non-legally binding rules or agreements between states.[619] Whereas treaties consist of strict rules or obligations that states have to follow, soft law instruments instead usually prescribe that states have to behave in a *preferred*

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613 In other words Parliament must ratify or accede to a treaty - s 231(2) of the *Constitution*; Dugard *International Law* 415-417; *Glenister v President of the Republic of South Africa* 2011 3 SA 347 (CC) paras 95-96 (hereafter *Glenister*-case); para 2.4.1.4 above. South Africa relies on a combination of the monist and dualist approach concerning the application of international law - Ferreira and Ferreira-Snyman 2014 *PELJ* 1471-1491; Dugard *International Law* 57-64; s 231 of the *Constitution*. Note the distinction between binding *on* South Africa and binding *in* South Africa, which is discussed below. See also the *Practical Guide and Procedures for the Conclusion of International Agreements* (2016) 4-17.

614 Dugard *International Law* 31-37; Kaczorowska *Public International Law* 30.

615 The required length of time is not specified, so a rule may be established very rapidly in some instances and much longer in others - Dugard *International Law* 31-37.

616 Widespread practice does not mean universal practice, and if a state persistently objects to a particular practice it will not become bound to it - Dugard *International Law* 31-37; Kaczorowska *Public International Law* 30, 37-38.

617 Dugard *International Law* 31-37; Kaczorowska *Public International Law* 39.

618 Some judgments of the International Court of Justice indicate that acceptance must still be proved and cannot be inferred or presumed - Kaczorowska *Public International Law* 34-37; Dugard *International Law* 36-37.

619 Shelton "Soft Law" 69; Boyle and Chinkin *The Making of International Law* 212-213. Soft law and treaties do not necessarily have a mutually exclusive role because soft law can eventually lead to the making of a treaty, it can be incorporated as part of a treaty, or it can become international customary law - Boyle "Soft Law in International Law Making" 121-133; Chinkin 1989 *ICLQ* 850-866.

manner, which can be expressed as norms or principles among others (as opposed to rights and obligations).[620] When states undertake to comply with soft law, they do so by making a political or moral commitment, not a legal one.[621] Therefore states cannot be held legally liable if they do not comply with soft law, even if they consented to it.[622] Soft law instruments do remain legal in nature though.[623] Soft law can take on the form of declarations, resolutions, comments, codes of conduct, and guidelines among others, because "[it] comes in almost infinite variety".[624]

There is no consensus on the nature and scope of general principles of international law. As a source of international law it generally refers to those principles that are common to most domestic legal systems and to those that have emerged from the international legal context as well.[625] They are inherently abstract, broad, and open-textured, which also implies that they lack precision.[626] It is largely accepted that the principles of international law apply to all states, although the manner of their applicability will depend on the circumstances of each case.[627] Many of the principles have been applied in international judicial decisions (courts and tribunals) and can therefore be derived from those decisions, and they can also be found in

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620 An international law instrument can be described as *soft* if it lacks enforceable rights and obligations - Shelton "Soft Law" 68-69; Boyle "Soft Law in International Law Making" 119-120; Glazewski "International Environmental Law: The International Dimension" 8.

621 Li 2013 *Manchester J Int'l Econ L* 364; Kaczorowska *Public International Law* 58; Boyle "Soft Law in International Law Making" 119. See Shelton "Soft Law" 78 where the author explains that soft law is "politically binding, morally binding, and expectations can be extremely strong of compliance with the norms contained in the instrument".

622 Kaczorowska *Public International Law* 58-59; para 3.4.2 below.

623 The non-binding character of soft law does not detract from its legal nature, and as Boyle and Chinkin assert: "It is certainly a fallacy to dismiss soft law, properly understood, as not law…" - Boyle and Chinkin *The Making of International Law* 212, 220-222.

624 Shelton "Soft Law" 69; Boyle "Soft Law in International Law Making" 120. The substance of an agreement determines whether it is hard or soft law, not its label - Boyle and Chinkin *The Making of International Law* 212-214. See also Shelton "Soft Law" 74-79; Footer 2010 *MJIL* 4-6; Baxter 1980 *ICLQ* 549-566 for more on soft law.

625 They were initially included as a source of international law to fill potential legal gaps during the settlement of disputes between states, or to prevent a *non liquet* as it were - art 38(1)(c) of the *Statute of the International Court of Justice* (1946); Carpanelli "General Principles of International Law: Struggling with a Slippery Concept" 125-129; Kaczorowska *Public International Law* 48-51.

626 Kaczorowska *Public International Law* 48-51.

627 The following can be considered to determine if a particular principle will apply and what it will hold for the states in question: a) the source of the principle, b) its textual content and language, c) the specific activity at issue, d) the consequences of the activity, and e) the circumstances in which it occurs - Lang 1999 *Max Planck UNYB* 157-159; Sands *et al International Environmental Law* 199-200.

numerous treaties and soft law instruments.[628] Some of them have been known to take on the character of international customary law (including the subsequent legal status), others reflect emerging international customary law, and some possess an inferior legal status because they cannot be applied directly.[629]

The international law instruments that could have a bearing on environmental health in South Africa consist of all these sources of international law.[630] The need to distinguish between them become relevant where their applicability in South Africa is concerned, which is explained below.

3.2.1.2 Application of international law instruments in South Africa

International law instruments can have direct and indirect application in South Africa. Direct application occurs when a particular instrument creates legal rights and obligations in South Africa, and indirect application refers to the use of international law instruments as a tool to interpret domestic legislation. It is also essential to note at this stage that some international law instruments could be binding *on* South Africa, but may not necessarily be applicable *in* South Africa.[631] If an international law instrument is binding on South Africa, South Africa as a state will incur responsibilities towards other member states of that particular instrument, but once the instrument becomes applicable in South Africa, it will create rights and obligations as part of South African law (direct application) as well.[632]

Section 231(4) of the *Constitution* provides that international law instruments will only find direct application once they have been enacted into national legislation,

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628 The principles applicable to this study are discussed in para 3.4 below.

629 For more on the general principles of international law - see Verschuuren 2006 *PELJ* 1-57; Sands *et al International Environmental Law* 197-251; Lang 1999 *Max Planck UNYB* 157-172; Kravchenko, Chowdhury and Bhuiyan "Principles of International Environmental Law" 43-60.

630 See paras 3.3-3.4 below.

631 Section 231(2) of the *Constitution*; Scholtz 2004 *SAYIL* 213.

632 Ngcobo JC, in the *Glenister*-case para 92, summarised this position as follows:

> An international agreement that has been ratified by resolution of Parliament is binding on South Africa on the international plane. And failure to observe the provisions of this agreement may result in South Africa incurring responsibility towards other signatory states. An international agreement that has been ratified by Parliament under section 231(2), however, does not become part of our law until and unless it is incorporated into our law by national legislation. An international agreement that has not been incorporated in our law cannot be a source of rights and obligations.

thereby becoming part of municipal law (South African law).[633] The enactment of international law instruments can transpire by duplicating their provisions in national legislation, by including an instrument as a schedule to national legislation, or through proclamation in the *Government Gazette* that a particular instrument forms part of national law.[634]

It bears mention that section 231(4) of the *Constitution* refers specifically to the term 'international agreement'.[635] The meaning of this term has been the subject of much scholarly debate.[636] Dugard contends the prevailing view is that 'international agreement' is synonymous with 'treaty' as defined in article 2(1)(a) of the *Vienna Convention on the Law of Treaties* (1969).[637] The Constitutional Court had a chance to weigh in on the subject and ruled that in determining whether an international law instrument is an 'international agreement' as portrayed in the *Constitution*, the decisive factor has to be that "the instrument is intended to create international legal rights and obligations between the parties".[638] In line with this *dictum* treaties can be regarded as 'international instruments' in this context and can be applied directly in South Africa once enacted into national legislation as per section 231(4) of the *Constitution*.[639] International customary law does not fall within the ambit of 'international agreement' as envisaged in the *Constitution*, however it will be directly applicable in South Africa by virtue of section 232 of the

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633 *Glenister*-case paras 92-99; *Azanian Peoples Organisation (AZAPO) v President of the Republic of South Africa* 1996 4 SA 672 (CC) para 26. Self-executing provisions of international agreements (excluding those inconsistent with the *Constitution*) can become part of South African law without enactment - s 231(4) of the *Constitution*; Olivier *International Law in South African Municipal Law* 283. See Scholtz and Ferreira 2008 *CILSA* 324-338; Dugard *International Law* 81-86 for more on what a 'self-executing' provision is.

634 Dugard *International Law* 79-81; Olivier *International Law in South African Municipal Law* 257-259.

635 Unlike the term 'international law instrument' that is used throughout this research.

636 Section 231 of the *Constitution* has been the "focal point of lively discourse and discontent amongst legal scholars", and "the courts have considerable difficulty with the interpretation of this provision" - Scholtz and Ferreira 2008 *CILSA* 338; Olivier *International Law in South African Municipal Law* 237-240.

637 Dugard *International Law* 87-88. See para 3.2.1.1 above for this definition.

638 *Harksen v President of the Republic of South Africa* 2000 2 SA 825 (CC) para 21. In other words the terminology does not matter but rather what the parties intended - Dugard *International Law* 87-88; Olivier 2003 *PELJ* 32-41.

639 The relationship between domestic law and international law is not static and the nature of the divide between the two systems of law (municipal and international) is ever changing, which also implies that the conditions pertaining to the direct application of international law in South Africa may not be well-established - Ferreira and Ferreira-Snyman 2014 *PELJ* 1475-1485.

Constitution, as long as it is not inconsistent with the *Constitution* or any other national law.[640] Soft law does not impose legally binding obligations on states which means that a soft law instrument cannot qualify as an 'international agreement' as envisaged in section 231(4) of the *Constitution* either. As such the *Constitution* does not provide a clear mechanism for the direct application of soft law.[641] Nothing prevents Parliament from enacting a particular soft law instrument into national legislation though, so soft law could still be applied directly if translated into legal rights and obligations via a national law by the national legislature. Government could therefore still give effect to the political commitment that it may have made to comply with a particular soft law instrument.[642] The general principles of international law are also excluded by the use of 'international agreement' in the *Constitution*, and if not voluntarily enacted into law through the promulgation of national legislation to this effect, cannot be applied directly.

Government committed to comply with various international law instruments that pertain to specific environmental hazards, and some of them could be directly applicable. The possible domestic impacts of these instruments are discussed at a later stage in this chapter.[643]

International law instruments can have indirect application in South Africa by virtue of sections 39(1)(b) and 233 of the *Constitution*. In terms of these sections, courts *must* consider international law in the interpretation of the fundamental rights entrenched in the *Constitution*, and legislation *must* be interpreted to be consistent with international law.[644] In *S v Makwanyane* the Constitutional Court held that both binding and non-binding international law instruments may be considered for

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640 See Dugard *International Law* 67-71 for the customary international law rules that apply in South Africa.

641 Olivier *International Law in South African Municipal Law* 263-264.

642 See for instance the *NEMA* that incorporates many soft law principles. See also the *Fuel Retailers*-case paras 46-56 in which the presiding officer relied on soft law as a guide to interpret the meaning of 'sustainable development' in the *Constitution*. Many non-binding policies, guideline documents, and strategic plans also reflect soft law commitments, such as the *National Strategy for Sustainable Development and Action Plan* (2011-2014); *District Health Management Information System Policy* (2011); *Department of Environmental Affairs Strategic Plan* (2014-2019); *Department of Health Strategic Plan* (2015-2019); and the *NDP*.

643 See para 3.3.3 below.

644 Olivier *International Law in South African Municipal Law* 262; *Grootboom*-case para 26.

this purpose, although based on Dugard's contention, the Court further ruled that non-binding agreements still have to be a source of international law as set out in article 38(1) of the *Statute of the International Court of Justice* (1946).[645] In the *Grootboom*-case the Constitutional Court reflected on the decision in the *Makwanyane*-case, agreed with it, and added that "international law can be a guide to interpretation but the weight to be attached to any particular principle or rule of international law will vary".[646] In other words, even though binding and non-binding international law instruments must be considered for interpretive purposes, the influence that each has could differ.

Treaties, international customary law, and general principles of international law qualify as international law in terms of article 38(1) of the *Statute of the International Court of Justice* (1946) and should therefore be used as tools of interpretation in South Africa. Soft law however, is not included in the list, and has to be excluded from consideration as an interpretive tool according to the judgment in the *Makwanyane*-case. It appears though that soft law has in fact been used to interpret some of the fundamental rights entrenched in the *Constitution* in both the *Fuel Retailers*-case and the *Grootboom*-case. In the *Fuel Retailers*-case Ngcobo J consulted international law to determine the meaning of 'sustainable development' in the South African context even though the notion is a product of soft law – so soft law was used an interpretive aid.[647] In the *Grootboom*-case the Court entertained an argument regarding the application of a provision of the *International Covenant on Economic, Social and Cultural Rights* (1966) (hereafter *ICESCR*) in

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645 See *S v Makwanyane* 1995 3 SA 391 (CC) para 35 (hereafter *Makwanyane*-case) where it was held:

> … public international law would include non-binding as well as binding law. They may both be used … as tools of interpretation. International agreements and customary international law accordingly provide a framework within which [fundamental rights] can be evaluated and understood, and for that purpose … may provide guidance as to the correct interpretation of particular [fundamental rights].

This judgment was made in the context of s 35(1) of the *Constitution of the Republic of South Africa* 200 of 1993, which is the equivalent of s 39 of the *Constitution*. See also Olivier 2003 *PELJ* 30; Dugard "International Human Rights" 192-195 for more in this regard.

646 *Grootboom*-case para 26.

647 *Fuel Retailers*-case paras 46-56.

South Africa, which at that time was signed, but not yet ratified.[648] In the absence of ratification government was not legally obligated to comply with the provisions of the Treaty (direct application),[649] but the Court still willingly considered its content to interpret a similar socio-economic right in the *Constitution* (indirect application).[650] The Court furthermore heard and accepted an argument that the right as portrayed in the *ICESCR* creates a minimum core obligation on states, but this 'minimum core obligation' is described in a *General Comment* published in respect of the Treaty, and not in the Treaty itself. The Court did rule that such an obligation does not apply to the *Constitution*,[651] however, Yacoob J added that "there may be cases where it may be possible and appropriate to have regard to the content of a minimum core obligation...".[652] In doing so the Constitutional Court illustrated that a *General Comment* can be used as a tool to interpretation. *General Comments* do not usually create legally binding rights and obligations, but do have "authoritative status under international law",[653] and as such could be regarded as soft law.[654] Based on the views espoused in these judgments, an argument could be made that soft law should therefore be included under the umbrella of international law that needs to be considered for the purpose of interpretation.[655]

Numerous international law instruments have a bearing on environmental health, but South Africa is not necessarily party to all of them. Some of them are soft law instruments as well, so they do not find direct application in South Africa in any

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[648] The *ICESCR* was signed in 1994 but only ratified on 12 January 2015 and only entered into force on 12 April 2015 - DIRCO 2022 https://bit.ly/2N4rIMB; Viljoen and Orago 2014 *PELJ* 2574-2576.

[649] In addition to ratification, the *ICESCR* also has to be enacted into national legislation as required by s 231(4) of the *Constitution*.

[650] Sections 39(1)(b), 233 of the *Constitution*.

[651] See also *Mazibuko v City of Johannesburg* 2010 4 SA 1 (CC) paras 51-55 (hereafter *Mazibuko*-case) for more on this decision. See para 4.2.2.2 below for more on the application of a 'minimum core obligation' in South Africa.

[652] *Grootboom*-case paras 27-33.

[653] *Residents of Bon Vista Mansions v Southern Metropolitan Local Council* 2002 6 BCLR 625 (W) paras 14-17.

[654] Shelton "Commentary and Conclusions" 449-451.

[655] Olivier argues that the position on soft law remains unclear - Olivier *International Law in South African Municipal Law* 237-264. For more in this regard - see Church, Schulze and Strydom *Human Rights from a Comparative Law Perspective* 215-217; Ssenyonjo *Economic, Social and Cultural Rights in International Law* 164-167.

event.[656] Despite the fact that government did not make any legal or political commitments to comply with some of the environmental health-related international law instruments however, they could still have an influence on the governance of environmental health in South Africa through their indirect application as an interpretive aid because the *Constitution* demands as much.[657] International environmental health instruments could therefore still be transplanted onto the domestic casting of environmental health in South Africa through their indirect application.[658]

3.2.2 International organisations

International organisations are entities that are recognised as legal subjects that function at global or regional levels.[659] There are several types of international organisations, but this chapter will only focus on one, namely intergovernmental organisations (hereafter IGOs).[660] Broadly speaking an IGO is a "formal, continuous structure established by agreement between members … from at least two sovereign states with the aim of pursuing the common interest of the membership".[661] Prospective members (states) can create an IGO by concluding an agreement to that effect, and the founding agreement, which takes the form of

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656 Unless government willingly adopts these developments and incorporate them into domestic legislation on its own accord - s 231(4) of the *Constitution*.

657 Sections 39(1)(b), 233 of the *Constitution*.

658 This is especially relevant as far as the interpretation of the fundamental rights that pertain to environmental health in the *Constitution* are concerned - see e.g. paras 3.3.1-3.3.3, 4.2.2 below.

659 Dugard *International Law* 443-444; Karns and Mingst *International Organizations* 5.

660 Archer *International Organizations* 35-64; Bennett and Oliver *International Organizations* 2-4; Sands and Klein *Bowett's Law of International Institutions* 15-17; Alvarez *International Organizations as Law-Makers* 1. The others are non-governmental organisations with varying classifications. The International Federation of Environmental Health is one such example, and it seeks to promote co-operation between states on environmental health-related matters. The work of non-governmental organisations does not relate to the law and will therefore not be discussed in this research. See MacArthur "Introduction to Environmental Health" 14-15; IFEH 2015 http://bit.ly/1CvdDeC for more on non-governmental organisations whose work relate to environmental health.

661 Archer *International Organizations* 35. A definitive definition of an IGO seems to be elusive, but there appears to be consensus among several authors that an IGO needs to possess at least the following characteristics: a) its membership must be composed of at least two states, b) it must be established by a treaty, c) it must have an autonomous will distinct from that of its members and be vested with legal personality, and d) it must have a permanent secretariat - Archer *International Organizations* 30-64; Dugard *International Law* 444-446; Bennett and Oliver *International Organizations* 2-4; Sands and Klein *Bowett's Law of International Institutions* 15-17; Alvarez *International Organizations as Law-Makers* 4-17; Davies and Woodward *International Organizations* 13-18.

a treaty, will be the constituent document of the IGO. Eligible states that take part in the negotiations to create an IGO become members of the IGO upon their choosing, and the IGO is comprised of such membership.[662]

IGOs have diverse functions and varying powers,[663] which ranges from serving as platforms for dispute resolution and providing channels of communication between its members (hosting international conferences), to producing international law instruments.[664] IGOs can therefore facilitate co-operation among states and they can contribute to the making and development of international law.[665] With these powers, IGOs are in the unique position to "construct the social world in which co-operation and choice take place".[666]

Several IGOs operate within the domain of environmental health. Some operate within specific fields of environmental health,[667] whereas others have a more general purpose that sometimes includes environmental health.[668] The UN is undoubtedly the most prominent IGO and it operates at the centre of international relations, with near universal membership (almost all states in the world).[669] The UN was established after World War II with the *Charter of the United Nations* (1945)

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662 Eligible states that do not partake in the negotiations to create an IGO can also become members - Dugard *International Law* 442-446; Archer *International Organizations* 30-35; Bennett and Oliver *International Organizations* 2.

663 The powers that they have will depend on their purpose and objectives - Birnie, Boyle and Redgwell *International Law and the Environment* 58-59.

664 Birnie, Boyle and Redgwell *International Law and the Environment* 45; Karns and Mingst *International Organizations* 6; Archer *International Organizations* 65-108; Alvarez *International Organizations as Law-Makers* 273-279, 402; Bennett and Oliver *International Organizations* 3; Fidler *International Law and Public Health* 72.

665 Birnie, Boyle and Redgwell *International Law and the Environment* 45; Taylor 2002 *Bulletin* 975; Bennett and Oliver *International Organizations* 3. There are several schools of thought on the role that international organisations play in society. For more in this regard - see Barnett and Finnemore "Political Approaches" 43-52; Rittberger, Zangl and Kruck *International Organization* 15-34.

666 Barnett and Finnemore "The Power of Liberal International Organizations" 162.

667 For instance, health, development, or the environment.

668 There are many international organisations, but only those relevant to this research are discussed here.

669 Karns and Mingst *International Organizations* 95; Weiss and Daws "World Politics: Continuity and Change Since 1945" 3.

(hereafter *UN Charter*) as its founding document.[670] The *UN Charter* is the UN's constitution and it sets out the functions and powers of the UN and the rights and obligations of its members.[671] The primary purpose of the UN, as revealed by the *UN Charter*, is to maintain international peace and security and to achieve international co-operation to solve economic, social, cultural, and humanitarian problems.[672] The UN also aims to promote universal respect for human rights and to promote solutions to international economic, social, and health problems.[673] South Africa is one of the 193 member states of the UN and therefore has to abide by the rights and obligations set out in the *UN Charter*.[674]

The UN has a number of subsidiary bodies and specialised agencies that are IGOs in their own right, and some of them are also involved with matters that relate to environmental health.[675] The subsidiary bodies of the UN to which South Africa is

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670 Bennett and Oliver *International Organizations* 46, 60; Sands and Klein *Bowett's Law of International Institutions* 22-23; Karns and Mingst *International Organizations* 97. South Africa was a founding member and played a prominent part in the creation of the UN. General Smuts, the then Prime Minister of South Africa, was mainly responsible for drafting the preamble to the *UN Charter* - Dugard *International Law* 22.

671 Article 2 of the *UN Charter*; Bennett and Oliver *International Organizations* 59, 61; Sands and Klein *Bowett's Law of International Institutions* 22-23. The UN consists of six principal organs and each has specific functions and powers as set out in arts 9-32, 61-72, 86-101 of the *UN Charter*. The organs are the General Assembly, Security Council, Economic and Social Council, Secretariat, Trusteeship Council, and the International Court of Justice. The General Assembly is the paramount and plenary organ of the UN and serves as the platform for global deliberation on any matter within the scope of the *UN Charter* - arts 7(1), 10 of the *UN Charter*; Bennett and Oliver *International Organizations* 65; Sands and Klein *Bowett's Law of International Institutions* 25-26, 28-29; Peterson "General Assembly" 102-106. The General Assembly also operates as the organisational supervisor of all six principle organs of the UN and it plays a central role in the development of international law (it is not its main function though). It should further be noted that there is an ongoing debate on whether the General Assembly has legislative powers - Sands and Klein *Bowett's Law of International Institutions* 27-28; Karns and Mingst *International Organizations* 103; Alvarez "Legal Perspectives" 59-68, 98-103; Birnie, Boyle and Redgwell *International Law and the Environment* 60.

672 Article 1 of the *UN Charter*. Compared to other IGOs the UN covers the broadest range of issues - Bennett and Oliver *International Organizations* 46, 60; Sands and Klein *Bowett's Law of International Institutions* 22; Karns and Mingst *International Organizations* 95.

673 Article 55(b)-(c) of the *UN Charter*.

674 South Africa signed the *UN Charter* on 7 November 1945 - DIRCO 2022 https://bit.ly/2N4rIMB. UN 2015 http://bit.ly/1NKvKB8. The rights and obligations that the UN's international law instruments impose on government are discussed in para 3.3 below. South Africa was not allowed to participate in the UN's plenary organ (General Assembly) during 1974-1994 because of its racial policies - Dugard *International Law* 22-23.

675 According to art 7(2) of the *UN Charter* the UN's General Assembly and Security Council are empowered to establish subsidiary bodies in order to fulfil their respective functions. For an overview on other subsidiary bodies - see Sands and Klein *Bowett's Law of International Institutions* 65-74.

a member include the United Nations Environmental Programme (hereafter UN Environment) that is responsible for environmental matters,[676] the United Nations Development Programme (hereafter UNDP) that is responsible for development,[677] the United Nations Commission on Human Rights (hereafter UNCHR) that focuses on human rights,[678] and the International Law Commission (hereafter ILC) that was established to develop and codify international law.[679] The specialised agencies of the UN to which South Africa is a member include the WHO, the World Trade Organization (hereafter WTO), and the Food and Agriculture Organization (hereafter FAO). The WHO was established via the *WHO Constitution* to promote and protect the health of all peoples.[680] Many of the functions of the WHO revolve around public health matters and by this virtue environmental health as well. The WHO is the leading IGO as far as environmental health is concerned, so South Africa's membership to this organisation could play a significant role in the development of environmental health domestically.[681] The WTO deals with the rules of trade between states and its goal is to ensure that trade flows as smoothly, predictably, and freely as possible.[682] States among others trade foodstuffs and hazardous waste, both of which are an environmental health concern. For this reason, some of the WTO's work relates to environmental health. The purpose of the FAO is to eradicate hunger and eliminate poverty and some of the work of the FAO relate to

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676 The UN Environment's main function is to co-ordinate environmental conventions, agreements, and institutions - Ivanova "UNEP as Anchor Organization for the Global Environment" 151-173; Andresen and Rosendal "The Role of the United Nations Environment Programme in the Co-ordination of Multilateral Environmental Agreements" 133-150. For more on the UN Environment - see Sands and Klein *Bowett's Law of International Institutions* 71; Kotzé *Global Environmental Governance* 140; UN Environment 2015 http://bit.ly/1CQqpn0; Mee 2005 *IEA* 231-238.

677 See Sands and Klein *Bowett's Law of International Institutions* 70 for more on the UNDP.

678 The UNCHR was replaced by the UN Human Rights Council in 2006 but the work of the UNCHR remains relevant to this research. For more on the UNCHR and the current UN Human Rights Commission - see Von Freiesleben *et al Managing Change at the United Nations* 79-96; OHCHR 2016 http://bit.ly/28OCCOx.

679 Dugard *International Law* 47-49.

680 Preamble to the *WHO Constitution*.

681 This is explained in further detail in para 3.3 below. See Clift *The Role of the World Health Organization in the International System* 11-14; Fidler 1998 *VJTL* 1080-1126 for more on the WHO.

682 See VanGrasstek *The History and Future of the World Trade Organization* 3-81, 549-570 for more on the WTO.

environmental health as well.[683] Government has to comply with a variety of international obligations that stem from numerous international law instruments that these IGOs have adopted by virtue of South Africa's membership to them, and those obligations could have an impact on environmental health domestically.[684]

South Africa is also a member of regional IGOs, which include the African Union (hereafter AU) and the Southern African Development Community (hereafter SADC). The AU was established through the *Constitutive Act of the African Union* (2002) and consists of African states. It is a fairly new IGO that replaced the prior Organisation of African Unity.[685] The AU has many objectives, most noteworthy for the purpose of this study are the objectives to defend African states' territorial integrity, to promote and protect human rights, to promote sustainable development, to promote co-operation, and to eradicate preventable diseases and promote good health.[686] The SADC complements the AU and is an IGO comprised of Southern African states.[687] The SADC was established by the *Treaty of the Southern African Development Community* (1992) and the aims of the SADC is *inter alia* to enhance the standard and quality of life of all people in Southern Africa, to achieve effective protection of the environment, and to combat communicable diseases.[688] Both these IGOs also developed international law instruments that government has to comply with by virtue of South Africa's membership to them, and they may therefore have an impact on environmental health domestically as

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683 See Small and O'Broin *70 Years of the FAO* 15-95; *Constitution of the Food and Agriculture Organization of the United Nations* (1945) for more on the FAO.

684 A discussion hereof follows in para 3.3 below.

685 Dugard *International Law* 794-800; Viljoen *International Human Rights Law in Africa* 163-177. Except for Morocco, all African states are members of the AU. For more on the AU's environmental-related work, and in particular its legal response to climate change and its undertaking to protect the environment through human rights - see Strydom "Introduction to Regional Environmental Law in the African Union" 23-50; Pallangyo and Scholtz "Africa and Climate Change: Legal Perspectives from the AU" 51-71; Scholtz "Human Rights and the Environment in the African Union Context" 102-129.

686 Article 3(b), (e), (h), (i), (k), (n) of the *Constitutive Act of the African Union* (2002). See Dugard *International Law* 800-837 for more on the AU's functions and structures.

687 For more on the SADC and its institutions - see SADC 2012 http://bit.ly/28Pw9Ue; Saurombe 2012 *PELJ* 454-478.

688 Article 5(1)(a), (g), (i) of the *Treaty of the Southern African Development Community* (1992). South Africa signed this treaty on 29 August 1994 and it entered into force on the same date - DIRCO 2022 https://bit.ly/2N4rIMB.

well.[689]

The theoretical clarification on international law instruments and their application in South Africa, and the theoretical clarification on IGOs and South Africa's membership to these, form the background to this chapter. A discussion on the substantive content follows below.

3.3 International influences on environmental health governance in South Africa

The influences that international law instruments can have on the governance of environmental health in South Africa are discussed in the paragraphs that follow. The discussion commences with an examination of the human right to health as core driver of the international environmental health concern, which is followed by an investigation into the international developments on approaches to public health systems, and it concludes with an overview of the domestic impacts of specific international law instruments.

3.3.1 The human right to health

At its core environmental health intends to safeguard people from harmful environmental impacts.[690] From a legal perspective this calls for clarity on whether there are any rights that imitate this notion, and if so, what they entail.

The answer can be found in the work of the WHO and other subsidiary bodies of the UN whose domains relate to human rights in general, and to a right to health and a healthy environment in particular.[691] The WHO took the initiative by listing as a principle in the preamble of its *WHO Constitution* that the "enjoyment of the highest attainable standard of health is one of the fundamental rights of every

689 See paras 3.3-3.4 below.
690 See paras 2.3.1, 2.3.5, 2.4.2.5 above.
691 See Marks "The Emergence and Scope of the Human Right to Health" 3-11 for a succinct overview on the development of the human right to health.

human being…".[692] Through this inclusion the human right to health was born.[693]

At roughly the same time the legally non-binding *Universal Declaration of Human Rights* (1948) (hereafter *UDHR*) was drafted by the UNCHR as a road map to complement the constitution of the UN, the *UN Charter*.[694] The *UDHR* was adopted and accepted by all states as a means to prevent the atrocities that occurred during World War II from recurring.[695] Article 25(1) of the *UDHR* stipulates that "[e]veryone has the right to a standard of living adequate for the health and well-being of himself…". The presence of this right in the *UDHR* gave further credence to the right to health as a human right, albeit a non-binding standard that members of the UN (including South Africa) ought to strive for.[696]

Inspired by the *UDHR*, the UNCHR turned some provisions of the *UDHR* into legally binding obligations in the form of two covenants.[697] The covenants are the *ICESCR* and the *International Covenant on Civil and Political Rights* (1966) (hereafter

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692 Other noteworthy principles include that "the achievement of any state in the promotion and protection of health is of value to all" and that "the health of all peoples is fundamental to the attainment of peace and security and is dependent upon the fullest co-operation of … states" - preamble to the *WHO Constitution*.

693 The *WHO Constitution* binds the member states of the WHO, and they are therefore also bound to this principle. South Africa signed the *WHO Constitution* on 22 July 1946 and it entered into force on 7 April 1948 - DIRCO 2022 https://bit.ly/2N4rIMB. See OHCHR *The Right to Health* 1-2 for more on how the human right to health was included in the preamble. See also Ngwena and Cook "Rights concerning Health" 108-111 for more on different iterations of the right to health.

694 Alvarez "Legal Perspectives" 67; Dugard *International Law* 460-462. See Lauterpacht 1948 *Brit YB Int'l L* 356-375 for a deliberation on the legal character of the *UDHR*. The *UDHR* evolved from being a non-binding instrument that reflects a common standard to having a political, moral, and legal influence, and serving as a model of many constitutions, laws, and regulations. In other words the *UDHR* is not a treaty, and it could be argued, although unknown at the time of its adoption, that it conformed to a soft law type of instrument. The *UDHR* is currently recognised as international customary law - Hannum 1995 *GA J Int'l and Comp L* 289; Boyle and Chinkin *The Making of International Law* 213.

695 UN 2015 http://bit.ly/1vDJgRn. South Africa (and seven other states) abstained from voting to adopt the *UDHR*, but its position has changed since then - UNBISNET 2016 http://bit.ly/1TKD6bc.

696 Ngwena and Cook "Rights concerning Health" 111-112. See Von Bernstorff 2008 *EJIL* 903-924 for a summary of the reception of the *UDHR* as a legal instrument. Within the background of World War II there was little awareness that the environment would need protection for the purpose of human health, which is why the drafters did not consider or include a similar right for environmental protection in the *UDHR* - Birnie, Boyle and Redgwell *International Law and the Environment* 58-59; art 1 of the *UN Charter*.

697 The General Assembly requested that these covenants be drafted on the very same day that the *UDHR* was adopted - Von Bernstorff 2008 *EJIL* 915; UN 2015 http://bit.ly/1zptEyF; Dugard *International Law* 465-473; OHCHR *The International Bill of Human Rights* 2.

ICCPR),[698] and they, together with the *UDHR*, make up the International Bill of Human Rights.[699] The *ICESCR* creates a normative rights-based framework for states concerning the human rights of individuals. Article 12 of the *ICESCR* requires that states recognise the right of everyone to the "enjoyment of the highest attainable standard of physical and mental health". This articulation is similar to its equivalent in the preamble to the *WHO Constitution* and has been described as the most comprehensive formulation of the right to health in international human rights law.[700] Many other international law instruments have subsequently been adopted that also recognise the human right to health in some form or another, most notably the *Stockholm Declaration*,[701] and the *Declaration of Alma-Ata* (1978).[702]

Principle 1 of the *Stockholm Declaration* reads:

> Man has the fundamental right to … adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations.[703]

This principle vaguely depicts the human right to health through its reference to "adequate conditions of life" and a "life of dignity and well-being". What is of more significance though is that the formulation of this principle exhibits that humans are dependent on the environment, or rather that the environment could affect the human condition. It therefore recognises and accepts that there is a linkage

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698 South Africa ratified both these instruments - DIRCO 2022 https://bit.ly/2N4rIMB; Dugard *International Law* 465-473.

699 OHCHR *The International Bill of Human Rights* 1. The *ICCPR* does not contain any provisions that relate to environmental health and will therefore not be discussed any further. For more on the *ICCPR* - see Harland 2000 *HRQ* 187-260.

700 UN CESCR *General Comment No 14* para 2; OHCHR *The Right to Health* 1, 9-10. See also Ngwena and Cook "Rights concerning Health" 112-119; Taylor 2013 *J Juris* 276-278.

701 For insightful commentary on the drafting and finalisation of the *Stockholm Declaration* - see Sohn 1973 *HILJ* 423-515. The *Stockholm Declaration* is a non-binding and therefore soft law instrument, but some of its provisions have since been accepted as international customary law.

702 See for instance art 16 of the *African Charter on Human and Peoples' Rights* (1981) (hereafter *ACHPR*) that relies on the same wording used in art 12 of the *ICESCR*; art 5(e)(iv) of the *International Convention on the Elimination of All Forms of Racial Discrimination* (1965); arts 1, 4 of the *Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment* (1984); arts 11(1)(f), 12, 14(b) of the *Convention on the Elimination of All Forms of Discrimination against Women* (1979); art 24 of the *Convention on the Rights of the Child* (1989); and art 26 of the *Convention on the Rights of Persons with Disabilities* (2006).

703 South Africa supported the declaration as a whole, except for principle 1, citing that it infringed upon the internal affairs (apartheid regime) of the state - UN *Report on the UN Conference on the Human Environment* 65; Sohn 1973 *HILJ* 433.

between the human condition and the environment. For this reason the principle reflects not only a human right to health, but a right to an environment that will permit or enable humans to live a life of dignity.[704] As a result this principle also imposes an 'environmental responsibility' in that humans have to ensure that the environment is of a quality that will not harm their own condition, and it thereby acknowledges the notion of environmental health in a legal sense.

Article 1 of the *Declaration of Alma-Ata* (1978) declares:

> … health, which is a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is a most important world-wide social goal whose realisation requires the action of many other social and economic sectors in addition to the health sector.

This declaration further ingrains the human right to health into the international legal arena and stresses the importance of its realisation. It also asserts that the human right to health cannot be realised in isolation as 'health' comprises of more than disease and the treatment of traditional health care services (rendered by health departments),[705] which is why a multisectoral effort (more than one state department) will be required for its realisation.[706] This declaration therefore emphasises that the human right to health is comprehensive by its very nature and that it subsequently has a multisectoral reach.

The commitments that states need to make in order to realise the human right to health are set out in article 12(1) and 12(2)(a)-(d) of the *ICESCR*. The article firstly stipulates that "states must recognise the right of everyone to the enjoyment of the highest attainable standard of physical and mental health", and secondly that states should take the necessary steps to a) provide for a "reduction in the rate of stillbirths and infant mortality", b) "improve all aspects of environmental hygiene", c) "prevent, treat and control … diseases", and d) "create conditions that will assure medical services and attention to all in the event of sickness".[707] By identifying these four objectives, the *ICESCR* confirms that the realisation of the human right

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704 The existence of an 'environmental right' as a 'human right' is discussed below.
705 WHO and UNICEF *Primary Health Care Report* 38.
706 See paras 4.3.2, 4.4 below.
707 See also UN CESCR *General Comment No 14* paras 14-17; Pieterse *Can Rights Cure?* 10-16.

to health is not confined to the delivery of health care service only, but that it involves environmental influences and the prevention of disease among other things as well, which hints at its comprehensive nature.

The content of this right has been wholly unpacked in the *ICESCR*'s authoritative *General Comment No 14* that was published for this purpose.[708] The General Comment describes the four listed objectives as a "non-exhaustive catalogue of examples" and it explains that they "provide guidance in defining the action to be taken by states" and "illustrate the content of the right" – thereby acknowledging the comprehensive nature of the right to health.[709] The General Comment further explains that "the right embraces a wide range of socio-economic factors that promote conditions in which people can lead a healthy life", which also "extends to the underlying determinants of health".[710] The underlying determinants of health are described to include "access to safe potable water and adequate sanitation, an adequate supply to safe food, nutrition and housing, [and] healthy occupational and environmental conditions".[711] Owing to the need to pay due regard to all these determinants of health in order to fully realise the human right to health, the General Comment also suggests that this right has to be interpreted to be all-inclusive.[712]

The legal basis for the operationalisation of environmental health arises from states' obligation to create conditions that are conducive for people to attain their highest

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708 Hendriks 1994 *Eur J Health L* 187.

709 UN CESCR *General Comment No 14* para 13. Note 'content' refers to the scope of the obligations imposed by this right, whereas 'interpretation' refers to how states understand the content (scope of the obligations). For more on the content of the right to health - see *The Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health* 2003/58, UN Doc E/CN.4/2003/58 (2003) paras 10-36.

710 UN CESCR *General Comment No 14* para 4. This description confirms the understanding that there is a linkage between the environment and people's health as implied by principle 1 of the *Stockholm Declaration*.

711 UN CESCR *General Comment No 14* paras 4, 11; OHCHR *The Right to Health* 1, 3-5. Evidently the determinants of heath relate to other human rights as well, and its comprehensive nature makes it indispensable for the exercise of any other human right - UN CESCR *General Comment No 14* paras 1, 3.

712 UN CESCR *General Comment No 14* para 11. The right to health is also dichotomised into freedoms and entitlements. The 'freedoms' relate to a person's right to control his or her own health and body, and the 'entitlements' relate to a person's right to have access to a system of health protection that will provide him or her with the opportunity to attain the highest level of health. In order to realise the human right to health both its freedoms and entitlements have to be satisfied. For more in this regard - see Taylor 2013 *J Juris* 278-279; UN CESCR *General Comment No 14* para 8; OHCHR *The Right to Health* 3-4.

standard of health (realising the human right to health), and specifically from the all-inclusive nature of this obligation.[713] Environmental health practice can contribute to the overall efforts of states to address the underlying determinants of health, which in turn could enable them to realise the all-inclusive human right to health.[714] This view is derived from one of the four objectives that states must achieve to realise the right, namely to improve all aspects of environmental hygiene, as conveyed by article 12(2)(b) of the *ICESCR*. The objective essentially implies that states have to prevent environmental conditions that could directly or indirectly affect the human condition (ensure safe environmental conditions).[715] The need for the operationalisation of environmental health can therefore be read into this objective listed in the *ICESCR*.

The identification of a set of minimum obligations pertinent to this right further substantiates the view that the legal basis for environmental health is rooted in the human right to health. The accordant obligations listed in the General Comment require that states have to a) "ensure access to the minimum essential food which is safe", b) "ensure access to basic shelter, housing and sanitation, and an adequate supply of safe and potable water", and c) "adopt and implement a national public health strategy and plan of action, on the basis of epidemiological evidence, to address the health concerns of the whole population".[716] In consideration of the similarities between these obligations and the scope of environmental health, it appears, patently so, that the human right to health delivers the legal justification

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713 See *Resolution on Human Rights and the Environment* HRC Res 25/21, UN Doc A/HRC/Res/25/21 (2014) para 4 and note the confirmation that international human rights law imposes obligations on states regarding the enjoyment of a safe, clean, healthy, and sustainable environment.

714 Bilchitz argues that the human right to health is a composite right with two elements, the right to 'health care services' and the right to 'healthy conditions'. Environmental health practice ought to give effect to the latter - Bilchitz "Health" 25-27; para 2.4.2.5 above.

715 The obligations emanating from this objective have been detailed to include that states must ensure access to safe drinking water and adequate sanitation (and make it available in sufficient quantity), supply adequate access to safe food, and prevent and reduce people's exposure to harmful substances and chemicals - UN CESCR *General Comment No 14* para 15. Principle 1 of the *Stockholm Declaration* is also incorporated into art 12(2)(b) of the *ICESCR* as per UN CESCR *General Comment No 14* para 15.

716 UN CESCR *General Comment No 14* para 43. These obligations set a minimum that has to be achieved, and they therefore have to be realised immediately (as opposed to progressively) - *The Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health* 62/214, UN Doc A/62/214 (2007) paras 28-29; para 4.2.2.2 below.

for the practice of environmental health.

It also bears mention that an argument could be made that the need for the delivery of environmental health services from a legal perspective arises not so much from the human right to health, but instead from an environmental right. Until recently however, human rights jurisprudence did not explicitly confirm that such a right does in fact exist.[717] One of the debates in this respect is that as a human right, an environmental right could be inferred from other human rights, such as the right to life and the right to health. This research submits that it makes little difference whether environmental health practice manifests from the duty to realise the human right to health or whether it is the product of an environmental right, albeit a self-standing right or a right derived from other human rights, since the legal implications, both from a content and obligation point of view, will be similar.[718]

All human rights impose a duty on states to respect, protect, and fulfil them, which applies to the right to health as well.[719] This trio of duties necessitate that states have to refrain from interfering with any person that exercises the right (respect), states have to take measures to prevent third parties from interfering with the right (protect), and states have to adopt measures to realise the right (fulfil).[720] In relation to the human right to health, and in particular its environmental health-related features, the 'duty to respect' entails among others that states have to refrain from unlawfully polluting air, water and soil.[721] The 'duty to protect' obliges states to adopt legislation or to take other measures to ensure that no one limits people's access to health services, which could include services related to

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717 The UN Human Rights Council appointed a Special Rapporteur in 2014 to conduct research into the relationship between human rights and the environment - *Resolution on Human Rights and the Environment* HRC Res 25/21, UN Doc A/HRC/Res/25/21 (2014) para 4; Hayward *Constitutional Environmental Rights* 36-47.

718 Both will impose the trio of duties associated with human rights on states, and the right to health already incorporates the determinants of health in its scope (therefore also an environmental concern). This will become apparent in the discussion that follows in para 3.3.3.1 below regarding the human right to a healthy environment as portrayed in the *ACHPR*. See also Feris and Tladi "Environmental Rights" 250-255; Scholtz "Human Rights and the Environment in the African Union Context" 107-110.

719 *The Right to Adequate Food as a Human Right: Final Report* 1987/23, UN Doc E/CN.4/Sub.2/1987/23 (1987) paras 67-69; Shue *Basic Rights: Subsistence, Affluence and U.S. Foreign Policy* 52-53; UN CESCR *General Comment No 3* paras 1-14.

720 UN CESCR *General Comment No 14* para 33.

721 UN CESCR *General Comment No 14* para 34.

environmental health.[722] As far as the 'duty to fulfil' is concerned, states have to give recognition to the human right to health in their legal systems on the one hand by formulating and implementing legislation and policies that will ensure that everyone has equal *access* to the underlying determinants of health, such as potable drinking water, basic sanitation, nutritiously safe food, and adequate housing and living conditions, and on the other hand states have to adopt measures to *safeguard* people from environmental health hazards, which is to say that they "should formulate and implement national policies aimed at reducing and eliminating air, water and soil pollution".[723]

The *General Comment No 14* furthermore distils four essential elements from the human right to health that states need to comply with, namely availability, accessibility, acceptability, and quality.[724] The element of availability entails that states must make facilities and services for public health and health-care available in sufficient quantities.[725] Since the human right to health speaks to the underlying determinants of health, states must among others make facilities and services related to the provision of access to safe drinking water, access to adequate sanitation, and safe and healthy environmental conditions available in sufficient quantities. The element of accessibility denotes that states may not discriminate against any person in providing access to the facilities and services for public health and health care.[726] Acceptability means that states have to design facilities and services that will improve the health status of individuals, but that it should be culturally appropriate as well.[727] The last element, that of quality, requires that states must ensure that their facilities and services are scientifically and medically

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722 UN CESCR *General Comment No 14* para 35.

723 Pieterse *Can Rights Cure?* 10-16; UN CESCR *General Comment No 14* para 36; para 4.2.2.2 below. The duty to fulfil the human right to health could also be distilled into a duty to facilitate (enable and assist individuals to enjoy the right), provide (to those who cannot realise it by themselves), and promote (create, maintain, and restore the health of their populations) - UN CESCR *General Comment No 14* para 37.

724 Their application will depend on the prevailing conditions in every state - UN CESCR *General Comment No 14* para 12; OHCHR *The Right to Health* 3-4.

725 UN CESCR *General Comment No 14* para 12(a).

726 Accessibility also refers to physical accessibility, economic accessibility, and accessibility of information - UN CESCR *General Comment No 14* para 12(b)(i)-(iv).

727 UN CESCR *General Comment No 14* para 12(c).

appropriate and of good quality.[728]

In summary, to realise the human right to health, states have to respect, protect, and fulfil it. In so doing states have to pay due regard to the comprehensive content of the right, including the underlying determinants of health. In addition, states have to focus in particular on the objectives listed in article 12(2)(a)-(d) of the *ICESCR*, which includes that they have to prevent the occurrence of harmful environmental conditions. They also have to apply the four elements of the right to the extent that the conditions in each particular state allow. In consideration of all these aspects, the operationalisation of environmental health might not only aid but could even be crucial in this endeavour.

It has to be pointed out though that states' obligation to realise the right to health is qualified in that they must aim only to realise the right within their available resources, and by having regard to their level of development.[729] This means that states do not have to realise the right to health immediately, but instead should strive to realise it progressively. The 'progressive realisation' qualification does not absolve states from their obligations though.[730] They still have to ensure that the human right to health is realised as expeditiously and effectively as possible.[731] States therefore still have to respect, protect, and fulfil the human right to health,

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728 UN CESCR *General Comment No 14* para 12(d).

729 Taylor 2013 *J Juris* 281-283; UN CESCR *General Comment No 14* para 9; OHCHR *The Right to Health* 5.

730 States still have to 'strive' to realise all human rights. See for instance the judgment in *City of Johannesburg Metropolitan Municipality v Blue Moonlight Properties 39 (Pty) Ltd* 2012 2 SA 104 (CC) paras 69, 74 (hereafter *Moonlight*-case) that dealt with a municipality's duty to provide emergency housing to potential evictees that occupied a building unlawfully. The particular municipality contended that it did not budget for the provision of emergency housing because this duty rests with the other spheres of government, and it therefore did not have resources available (funds) to provide such housing. Van der Westhuizen J found that "it would be quite inappropriate for a court to order an organ of state to do something that is impossible", but added that "it is not good enough for the [municipality] to state that it has not budgeted for something, if it should indeed have planned and budgeted for it in the fulfilment of its obligations".

731 UN CESCR *General Comment No 14* paras 30-31; art 2(2) of the *ICESCR*. For more on the 'availability of resources' and the 'progressive realisation' of the right in the South African context - see *Soobramoney v Minister of Health (KwaZulu-Natal)* 1998 (1) SA 765 (CC) paras 11-36; *Minister of Health v Treatment Action Campaign* 2002 5 SA 703 (CC) paras 5-21 (hereafter *TAC*-case); para 4.2.2.2 below.

but only insofar they have the resources available to do so.[732]

Although the parameters of the content of the human right to health have been clearly defined as shown above, as a human right, the right to health is indivisible, interdependent, and interrelated to all the other human rights.[733] This relationship becomes apparent when considering that many of the underlying determinants of health, such as safe water and adequate sanitation,[734] adequate food,[735] and adequate housing,[736] are by themselves all recognised as international human rights as well,[737] and more so because the obligations imposed on states by each of these rights mostly overlap with those of the human right to health.[738] On account of the relationship between human rights, and in particular the human right to health and the other rights that relate to its application, states should not take isolated steps to realise the human right to health independently, but instead should put in concerted efforts to realise all human rights conjunctively, as is also recognised in article 1 of the *Declaration of Alma-Ata* (1978).[739] Accordingly, the need to operationalise environmental health can be derived not only from states' duty to respect, protect, and fulfil the human right to health in particular, but also from the other related human rights,[740] and by realising *all* those human rights, states ought

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732 The qualification of 'progressive realisation' will also apply in the environmental health context in so far as its practice is based on the realisation of the human right to health - see para 4.2.2.2 below.

733 Article 5 of the *Vienna Declaration and Programme of Action* (1993).

734 UN CESCR *General Comment No 15* paras 2-6; OHCHR *The Right to Water* 3-14; *The Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health* 62/214, UN Doc A/62/214 (2007) paras 45-102; *Resolution on the Human Rights to Safe Drinking Water and Sanitation* Res 70/169, UN Doc A/Res/70/169 (2015); paras 3.3.3.2, 4.2.2.1 below.

735 UN CESCR *General Comment No 12* paras 1, 10, 36-39; OHCHR *The Right to Adequate Food* 2-9; paras 3.3.3.3, 4.2.2.1 below.

736 OHCHR *The Right to Adequate Housing* 3-9; paras 3.3.3.4, 4.2.2.1 below.

737 This is by virtue of their inclusion in art 11 of the *ICESCR* which among others provide that everyone is entitled to an adequate standard of living. The human right to a "general satisfactory environment" as enumerated in art 24 of the *ACHPR* for example also accommodates these health determinants, and as a human right it too will invoke a duty to respect, protect, and fulfil them towards the full realisation of the right - Strydom "Introduction to Regional Environmental Law in the African Union" 37-38; paras 3.3.3.1, 4.2.2.1 below.

738 OHCHR *The Right to Health* 6; OHCHR *The Right to Water* 12-14; OHCHR *The Right to Adequate Food* 5-6; OHCHR *The Right to Adequate Housing* 9.

739 See Kinney 2001 *Ind L Rev* 1467-1474 for a critical evaluation of the implementation of the right to health. See also Marks "The Emergence and Scope of the Human Right to Health" 12-17 for a discussion on the linkages between health and other human rights.

740 Pieterse *Can Rights Cure?* 151-153.

to be able to create conditions that are conducive for people to attain their highest level of health as originally envisaged in the *WHO Constitution*.[741]

A further aspect that should be borne in mind at this juncture is that not every concern related to the human condition can be addressed through a relationship between a state and an individual. In other words, a person's health is not entirely dependent on a state's obligation to realise the human right to health.[742] A state for instance cannot ensure that a person is in good health, it cannot protect people from any and every possible cause of ill-health, and it cannot control people's personal lifestyle choices.[743] The obligations imposed on states to realise the human right to health must also be viewed in this context, which is why states are obliged to create conditions for individuals that are *conducive* to attaining their highest standard of health, and not to *guarantee* that every individual *will* achieve this standard.[744]

To conclude, it should be clear from the above examination that international law instruments produce a universally applicable human right to health, that this right is comprehensive in nature and has to be interpreted all-inclusively, and that its content and the subsequent obligations that it imposes on states give rise to the need to operationalise environmental health in the legal sense.

There has been considerable development internationally on approaches to health systems that could enable and assist states to realise the human right to health. The paragraphs below provide an overview of these developments to illustrate what influences they could have on the public health landscape in South Africa and what

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741 *Resolution on the Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health* Res 58/173, UN Doc A/Res/58/173 (2003) paras 1, 3-4. For more on the application of the human right to health in South Africa - see Pieterse *Can Rights Cure?* 16-24; para 4.2.2 below.

742 This also applies to people's 'quality of life' and 'well-being'.

743 See Chapman 1998 *Tenn L Rev* 389-398 for a critical discussion on the relative nature of the human right to health. Government has tried to do so e.g. by banning the sale and transport of tobacco and alcohol products during the Covid-19 pandemic, but this did not achieve the desired result as people instead simply sourced their stock from illicit trade - see Filby, Van der Zee and Van Walbeek 2020 *BMJ* 1-7.

744 States should facilitate conditions in which individuals could discharge their personal responsibilities toward their own health - UN CESCR *General Comment No 14* paras 9, 42; OHCHR *The Right to Health* 5.

this could mean for the governance of environmental health.

3.3.2 The public health system and its influences

The WHO heads the developments in the field of health systems and their approaches have been enunciated in several international law instruments. These approaches include the 'primary health care' (hereafter PHC) approach, the 'health for all strategy', the 'health promotion' initiative, Africa's 'health-for-all' policy, and the call for 'health in all policies'. Government has made commitments to most of these developments in some form or another,[745] and they are therefore supposed to have a bearing on the development of South Africa's health system, including the environmental health effort.[746] For this reason, a chronological investigation into each of these developments is conducted below.

3.3.2.1 The primary health care approach

The PHC approach is the product of the *Declaration of Alma-Ata* (1978), a non-binding international law instrument adopted by the WHO with the aim to protect and promote the health of all people.[747] According to the *Declaration of Alma-Ata* (1978) states have a responsibility for the health of their people and this responsibility can only be fulfilled through the provision of adequate health care services *and* the incorporation of social measures – which is what the PHC approach

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745 All the WHO instruments discussed in these paragraphs can be described as soft law, and government is politically and morally obligated to comply with the recommendations that they contain by virtue of art 23 of the *WHO Constitution* to which South Africa is legally bound - Sekalala *Soft Law and Global Health Problems* 165-167. See also Olivier 2002 *CILSA* 296 and note further in this respect:

> The potential authority of such [instruments] and their ability to generate obligations should not be underestimated; [they] exert pressure, even on objecting states; they formulate shared expectations and mobilise public opinion. Even though [these instruments] may not be legally binding, it is reasonable to expect that states which accept [them] without reservation, are prepared to comply with [their] terms.

746 For a summary on the developments of health systems and the relationship between health systems, public health, and the human right to health - see *Promotion and Protection of All Human Rights, Civil, Political, Economical, Social and Cultural Rights* 7/11, UN Doc A/HRC/7/11 (2008) paras 20-33. See Coovadia *et al* 2009 *Lancet* 817-834 for an overview on the history and development of South Africa's health system.

747 For more on the *Declaration of Alma-Ata* (1978) - see Schaay and Sanders 2008 *SAHR* 3-16; Kautzky and Tollman 2008 *SAHR* 17-30. South Africa adopted the PHC approach domestically in 1994 - Kautzky and Tollman 2008 *SAHR* 18-23; Naledi, Barron and Schneider 2011 *SAHR* 17-28; *White Paper for the Transformation of the Health System in South Africa* (1997) paras 1.1, 2.6; para 4.3.2.1 below.

proposes.[748] PHC is defined as:

> Essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.[749]

PHC developed out of the recognition that people's health is interdependent and interrelated to social and economic development,[750] and that health systems and the delivery of health care services subsequently need to form an integral part of the entire socio-economic development process.[751]

Based on this recognition the *Declaration of Alma-Ata* (1978) proposes that the delivery of PHC services must be the central function and main focus of a state's health system, but in addition, PHC should be co-ordinated and undertaken concurrently with other social measures (such as the provision of access to safe water and adequate housing) as part of the overall social and economic development of communities.[752] To this end PHC services are described to at least include:

> Education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunisation against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases

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748 Article 5 of the *Declaration of Alma-Ata* (1978). The official report on the *Declaration of Alma-Ata* (1978) notes that "health systems are all too often being devised outside the mainstream of social and economic development. These systems frequently restrict themselves to medical care, although industrialisation and deliberate alteration of the environment are creating health problems whose proper control lies far beyond the scope of medical care" - WHO and UNICEF *Primary Health Care Report* 38.

749 Article 6 of the *Declaration of Alma-Ata* (1978); WHO and UNICEF *Primary Health Care Report* 16.

750 This view corresponds with the notion of 'sustainable development' in that healthier people are more likely to contribute to social and economic development, and better development in turn ought to provide additional resources that can facilitate the improvement of people's health. All three these concerns have to be addressed simultaneously precisely because they are mutually supportive - WHO and UNICEF *Primary Health Care Report* 39, 45-46; para 2.3.4 above.

751 Articles 1-3 of the *Declaration of Alma-Ata* (1978); WHO and UNICEF *Primary Health Care Report* 16-17.

752 Articles 1-3, 5-6 of the *Declaration of Alma-Ata* (1978); Lawn *et al* 2000 *Lancet* 918-920. Note however that the PHC approach is more than a mere extension of basic health services, it should influence the very way in which a health system functions - WHO and UNICEF *Primary Health Care Report* 16-17, 38, 46-48.

and injuries; and provision of essential drugs.[753]

The power of the PHC approach lies in its pursuit to link the delivery of health services with other sectors, which in theory should enable states to address people's health concerns in a holistic manner – an approach that the all-inclusive human right to health demands from states.[754] In this respect, the *Declaration of Alma-Ata* (1978) emphasises that states should address health problems in communities through the provision of "promotive, preventative, curative, and rehabilitative services", which is clearly indicative of the holistic nature of this approach.[755] Environmental health, incidentally, is preventative in nature, it involves multiple sectors, and its scope includes similar areas of application to that of PHC services.[756] A PHC-based health system therefore ought to comfortably accommodate and even require that environmental health services must form part of its scope as well.[757]

The WHO also recommends that states have to decentralise their health systems if they are to achieve health for all, and decentralisation is identified as a key feature of the PHC approach.[758] Decentralisation itself is a rather complex and uncertain concept and can be described in general terms as the "transfer of authority, or dispersal of power, in public planning, management and decision-making from the national level to subnational levels, or more generally from higher to lower levels of government".[759] There are different types of decentralisation found in practice, known as deconcentration, devolution, and delegation, and each of these involves different degrees of decentralisation as well as different approaches thereto.[760] The

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753 These are the essential elements of PHC - art 7(3) of the *Declaration of Alma-Ata* (1978).

754 See paras 2.3.2, 2.4.2.5, 3.3.1 above.

755 Article 7(2) of the *Declaration of Alma-Ata* (1978); Sanders and Chopra 2001 *IJIC* 2-3.

756 As per the description of PHC services above. See also para 2.4.2.5 above.

757 The provision of preventative health services in addition to traditional curative services is integral to the PHC approach - Gillam 2008 *BMJ* 538; para 2.4.2.5 above.

758 Mills *et al Health System Decentralisation* 5.

759 Mills *et al Health System Decentralisation* 11, 15-16; Stanton *Decentralisation and Municipalities in South Africa* 30-55.

760 'Deconcentration' refers to the transfer of administrative authority to locally based offices of national government. 'Devolution' refers to the creation of independent local bodies that are mostly autonomous with a legal status and that have the authority to raise revenue and make expenditures (municipalities). 'Delegation' refers to the transfer of specific functions to other bodies. For more on the different types of decentralisation - Mills *et al Health System Decentralisation* 16-24; Stanton *Decentralisation and Municipalities in South Africa* 40-44; Hendricks *et al* 2014 *SAHR* 60; *The District Health System in South Africa: Progress Made and Next Steps* para 3.1.

potential benefits of a decentralised health system are that it ought to reduce the duplication of services, it ought to improve intersectoral co-ordination, and it may improve service delivery (including health services), which in theory should lead to an improvement in people's health as well.[761] Because of the potential benefits of a decentralised health system, PHC services should be delivered at a community or local government level, and it should be "the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitute the first element of a continuing health care process".[762]

The *Declaration of Alma-Ata* (1978) envisioned that states would have attained an acceptable level of health for all people by the year 2000 if they implemented the PHC approach successfully. Commentators argued that the *Declaration of Alma-Ata* (1978) was setting forth "a number of pious but impractical hopes" because of this optimistic goal,[763] and it was subsequently found to be too idealistic.[764] This led to the implementation of 'selective' PHC by states, which focused only on the most severe public health problems and culminated in the delivery of very specific health services that undermined the PHC ideology.[765]

3.3.2.2 The health for all strategy

Soon after the conceptualisation and partial implementation of the PHC approach in

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761 Mills *et al Health System Decentralisation* 38, 142; Stanton *Decentralisation and Municipalities in South Africa* 33-34. The opposite may be true in South Africa, perhaps because the health system is only partially decentralised - see paras 4.3.2.1, 4.4 below.

762 Article 6 of the *Declaration of Alma-Ata* (1978); WHO and UNICEF *Primary Health Care Report* 39. For more on the decentralisation of South Africa's health system - see Hendricks *et al* 2014 *SAHR* 61-69; *White Paper for the Transformation of the Health System in South Africa* (1997) paras 1.1, 2.3.1; Sanders and Chopra 2001 *IJIC* 4; *The District Health System in South Africa: Progress Made and Next Steps* para 4; para 4.3.2.1 below.

763 Passmore 1979 *The Lancet* 1005; art 5 of the *Declaration of Alma-Ata* (1978).

764 Bryant and Richmond 2008 *IEPH* 157. For a discussion on the possible failures of the *Declaration of Alma-Ata* (1978) - see Hall and Taylor 2003 *MJA* 17-20; Passmore 1979 *The Lancet* 1005-1008; Emmel 1998 *EPW* 577-580.

765 Health services were limited to growth monitoring, oral rehydration therapy, breastfeeding, and immunisation - Emmel 1998 *EPW* 577-580; Magnussen, Ehiri and Jolly 2004 *Health Affairs* 168-169. For more on the differences between the PHC approach and selective PHC - see Magnussen, Ehiri and Jolly 2004 *Health Affairs* 169-175; Bryant and Richmond 2008 *IEPH* 158. See also *Ouagadougou Declaration on Primary Health Care and Health Systems in Africa* (2008) for the latest legal commitment that African states made to implement PHC.

the form of selective PHC, the WHO launched a report detailing the need for health for all and explained that *all* people in *all* states should have such a level of health that they are "capable of working productively and of participating actively in the social life of the community in which they live".[766] The WHO adopted the *Global Strategy for Health for All* (1981) to this end.[767] The purpose of this strategy was to initiate a process that was to lead to the progressive improvement of the health of all people.[768] The WHO reiterated the importance of the PHC approach in this strategy and again urged states to develop a comprehensive PHC-system as set out in the *Declaration of Alma-Ata* (1978).[769] The 'health for all' strategy also addressed some of the shortcomings of the *Declaration of Alma-Ata* (1978) by outlining specific steps and details that states should take toward improving their implementation of the PHC approach.[770]

Some of the practical considerations recommended by the strategy are a) that health systems have to be organised in levels of delivery, where local levels (local government) should deliver PHC services, intermediary levels (provincial government) should provide more specialised services, and a central level (national government) should co-ordinate the entire system and facilitate collaboration between the bodies and sectors involved in the delivery of services,[771] b) that *one* body (health departments) should take responsibility to co-ordinate the health system and channel the activities of all the sectors at all levels of delivery,[772] and c) that states have to monitor and evaluate their implementation efforts to determine

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766 *Global Strategy for Health for All* (1981) 15. This is to give effect to the WHO's goal to enable all people to attain their highest possible level of health - preamble to *WHO Constitution*.

767 This strategy is based on the recognition that health is a fundamental human right and a worldwide social goal, that there is gross inequality as far as the health of people around the world are concerned and that this is of common concern to all states, that people have a right to participate in the planning and implementation of their health care, that governments have a responsibility for the health of their people, and that states must become self-reliant in health matters - *Global Strategy for Health for All* (1981) 34.

768 *Global Strategy for Health for All* (1981) 31.

769 *Global Strategy for Health for All* (1981) 13.

770 *Global Strategy for Health for All* (1981) 39-77. The UN endorsed this strategy and urged states to implement it - *Resolution on Global Strategy for Health for All by the Year 2000* Res 36/43, UN Doc A/Res/36/43 (1981).

771 *Global Strategy for Health for All* (1981) 39-43. The strategy therefore essentially identified that decentralisation could be a solution to some of the initial challenges that states faced in implementing the PHC approach.

772 *Global Strategy for Health for All* (1981) 55-56.

whether they are improving the health of their people, and to be able to respond accordingly if that is not the case.[773]

3.3.2.3 Health promotion

To further strengthen the PHC approach, the 'health promotion' initiative as set out in the *Ottawa Charter for Health Promotion* (1986) (hereafter *Ottawa Charter*) was adopted. This initiative builds on the WHO's strategy to achieve health for all and aims to do so through health promotion. At its core the 'health promotion' initiative advances the idea that health should not be the object of living, but instead should be a resource for everyday life.[774] According to this Charter the resources for everyday life, also referred to as the prerequisites of health, are peace, shelter, education, food, income, a stable eco-system, sustainable resources, and social justice and equity.[775]

According to the *Ottawa Charter*, if states are to achieve health for all, they must pay due regard to all the resources of everyday life in their health systems, and the Charter prescribes that this could be done through advocating, enabling, and mediating.[776] In this respect the Charter explains that political, economic, social, cultural, environmental, behavioural, and biological factors can either be *favourable* or *harmful* to the human condition.[777] In order to ensure that these factors are favourable and not harmful, states must promote health by 'advocating' for it. The Charter further explains that humans can only achieve their fullest health potential if they are able to control those things that determine their health, and health promotion entails that they must be 'enabled' to do so. It lastly explains that health departments cannot single-handedly tend to people's health needs and that all the sectors involved in this endeavour will have to co-ordinate their actions for this purpose. All these sectors may have different interests (mandates) though, which

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773 *Global Strategy for Health for All* (1981) 73-77.

774 Article 1 of the *Ottawa Charter*.

775 Article 1(a) of the *Ottawa Charter*. Note the similarity between the 'resources for everyday life' and the human right to health - see para 3.3.1 above.

776 Article 1(a)-(d) of the *Ottawa Charter*.

777 These factors presumably refer to the resources of everyday life, although the *Ottawa Charter* is not clear on this aspect.

is why these interests need to be 'mediated' in the pursuit of health for all.[778]

The Charter also recognises and endorses the notion that health systems have to go beyond health care, and it subsequently identifies a set of additional actions that may be required to achieve health for all. These are a) that states need to build public policy that is health orientated, b) that states need to create environments that are supportive of health, c) that communities need to be empowered so that they can take control of their own destinies to achieve better health, d) that people need to develop their personal skills to enable them to exercise more control over their own health, and e) that health services need to be reoriented so that governments and communities can share the responsibility to promote health.[779] Of particular relevance for present purposes is that states need to create environments that are supportive of health, and in this regard the *Ottawa Charter* stresses that the inextricable link between people and their environment constitutes the basis for a socio-ecological approach to health (health promotion).[780] It further proclaims that the overall guiding principle of 'health promotion' is the need to encourage reciprocal maintenance, which means that people need to take care of each other and the environment. For this purpose the *Ottawa Charter* marks the systemic assessment of health impacts in the rapidly changing environment as essential, and it calls for states to follow this up with actions that are appropriate to ensure a positive benefit to everyone's health, which should include the protection of the natural and built environment.[781] Evidently then the 'health promotion' initiative also recognises the significant role that the environment plays as far as people's health is concerned and for this reason it encourages states to incorporate environmental services into their health systems.

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778 Article 1(b)-(d) of the *Ottawa Charter*. For more on health promotion - see Catford 2011 *Health Promot Int* 163-167. South Africa did not partake in the negotiations that led to the adoption of the 'health promotion' initiative as formulated in the *Ottawa Charter*, which is a non-binding international law instrument, but it has since been incorporated into South Africa's health system through the *National Health Promotion Policy and Strategy* (2015-2019) - Ntuli 2000 *HST Update* 5-6; Sanders and Chopra 2001 *IJIC* 3-4.

779 Article 2(a)-(e) of the *Ottawa Charter*.

780 See para 2.3.2 above and note that the NDOH adopted a 'socio-ecological model' for health in South Africa.

781 Article 2(b) of the *Ottawa Charter*.

3.3.2.4 Africa's health-for-all policy

The health system developments up to this point have continually been monitored and reviewed by the WHO and their outcomes were published in corresponding reports. The WHO reaffirmed the need to implement a PHC approach in its report released in 1998 entitled *Life in the 21st Century* and added that states should incorporate further action to improve their health systems.[782] This includes that states have to focus on enhancing people's health and contributing to a better quality of life for all within the context of development, that states have to concern themselves with the improvement of people's health potential and quality of life at all phases of the life cycle,[783] and that states have to make outcome-oriented health services their primary objective.[784]

African states endorsed the recommendations in the *Life in the 21st Century* report by adopting a *Health-for-All Policy for the 21st Century*.[785] This policy identifies four strategic directions that could help states to improve their health systems, of which the creation and management of environments that enable health is one, as also referred to above.[786] The policy prescribes with regard to this strategic direction that states have to enhance environmental health, guarantee access to safe water and sanitation, ensure continued access to safe food, promote healthy lifestyles, and guarantee decent and safe housing.[787] This policy therefore also encourages states to incorporate the delivery of environmental health services in their health systems by virtue of these recommendations.

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782 WHO *Life in the 21st Century* 139-163, 201-212.

783 This includes preventative, protective, promotive, curative, and rehabilitative measures.

784 States have to focus on enhancing the outcomes of their health systems (improvement of health) and not their outputs (who has access to health services) - WHO *Life in the 21st Century* 206.

785 *Health-for-All Policy for the 21st Century in the African Region: Agenda 2020* 50/8, WHO Doc AFR/RC50/8 2000 paras 30-50.

786 The others are that states have to a) reform their health systems by drawing upon PHC principles, b) empower and provide support at individual, family and community levels, and c) create conditions that will enable women to participate in health development - *Health-for-All Policy for the 21st Century in the African Region: Agenda 2020* 50/8, WHO Doc AFR/RC50/8 2000 para 37.

787 The policy added accompanying targets for each of these requirements - *Health-for-All Policy for the 21st Century in the African Region: Agenda 2020* 50/8, WHO Doc AFR/RC50/8 2000 para 39.

Further, as acknowledged by the PHC approach and the 'health promotion' initiative, this policy also recognises that the major determinants of health fall outside the scope of health departments.[788] In this respect the policy specifies that health departments must be accountable for harnessing essential inputs from other sectors (such as the environmental sector), and that health departments must foster effective intersectoral action for health.[789] In other words health departments should take the lead to co-ordinate the actions of all the sectors (multisectoral approach) involved in matters that could have an influence on people's health.

Additionally, the *Health-for-All Policy for the 21st Century* reiterates that the environment has significant impacts on the human condition and in consideration hereof the WHO developed a strategy entitled *Environmental Health: A Strategy for the African Region*, which is specifically aimed at the implementation of environmental health services in African states.[790] According to this strategy health departments of states must develop national policies that will enable them to address the environmental determinants of health, and they must establish appropriate structures for the delivery of services that could achieve just that. The strategy lists as one of its guiding principles that states must provide environmental health services to all people, but that they should prioritise the delivery of *some* services to all people instead of delivering *all* services to some people (equity). States must further establish intersectoral collaboration to ensure integrated planning and implementation of their environmental health services.[791] Therefore, in consideration of the provisions of both this strategy and the aforementioned policy that was adopted by African states, African states *have* to incorporate environmental health services into their health service packages as part of the

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788 This was also conveyed through the examination of the human right to health in para 3.3.1 above.

789 *Health-for-All Policy for the 21st Century in the African Region: Agenda 2020* 50/8, WHO Doc AFR/RC50/8 2000 paras 40, 52-55, annex 1. For the latest health promotion strategy for African states - see *Health Promotion: Strategy for the African Region* 62/9, WHO Doc AFR/RC62/9 (2012); WHO ROA *Health Promotion* 1-43.

790 *Environmental Health: A Strategy for the African Region* 52/10, WHO Doc AFR/RC52/10 (2002).

791 *Environmental Health: A Strategy for the African Region* 52/10, WHO Doc AFR/RC52/10 (2002) paras 20-28. The strategy also proposes that states should utilise health impact assessments as a mechanism to improve the provision of environmental health services. See *Management of EIAs of Proposed Development Activities: A Guiding Handbook for EHPs* (2017) for South Africa's approach to health impact assessments.

evolving PHC approach to be able to create conditions that are conducive for their people to attain the highest standard of health.[792]

3.3.2.5 Health in all policies

Another noteworthy health system development that has since emerged is the 'health in all policies' approach that builds on the previous developments and has given rise to the adoption of the legally non-binding *Rio Political Declaration on Social Determinants of Health* (2011) (hereafter *Rio Political Declaration*). States reaffirmed their commitment to the *Declaration Alma-Ata* (1978) (PHC approach) and the *Ottawa Charter* (health promotion initiative) in the *Rio Political Declaration*,[793] and they acknowledged the following as well:

> Health inequities within and between countries are politically, socially and economically unacceptable, as well as unfair and largely avoidable, and that the promotion of health equity is essential to sustainable development and to a better quality of life and well-being for all.[794]

The *Rio Political Declaration* pronounces that health inequalities arise from the societal conditions in which people are born, grow, live, work, and age (social determinants of health),[795] and states accordingly re-confirmed in this Declaration that it is imperative to involve other sectors in their health systems if they are to look after the health of their people properly.[796] Following this stance, the *Rio Political Declaration* also urges states to facilitate multisectoral and multidisciplinary collaboration at all their levels of government and across all their activities to

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792 See the *Libreville Declaration on Health and Environment in Africa* (2008) with regard to African states' commitments concerning the influence of the environment on human health. See also the *Brazzaville Declaration on Non-communicable Disease Prevention and Control* (2011) for African states' commitments concerning non-communicable diseases.

793 *Rio Political Declaration* para 3; paras 3.3.2.1, 3.3.2.3 above. See WHO *A Conceptual Framework for Action on the Social Determinants of Health* 9-65 for more on this declaration.

794 *Rio Political Declaration* para 4. See also the *Resolution on Outcome of the World Conference on Social Determinants of Health* Res 65/8, WHA Doc WHA/Res/65/8 (2012).

795 See para 2.3.2 above for more on the 'determinants of health'.

796 See paras 6-7 of the *Rio Political Declaration*. According to the PHC approach a health system has to form part of the overall social and economic development of communities, whereas this latest development considers a health system within the context of states' responsibility to achieve sustainability - see paras 2.3.4, 3.3.2.1 above.

address human health concerns.[797]

States agreed and adopted the *Helsinki Statement on Health in All Policies* (2013) that promotes the 'health in all policies' approach as well. This approach arose as a practical response to the multisectoral nature of human health influences and it attempts to enable states to take the health implications of their decisions into account systematically and to synergise the activities of all their departments to avoid harmful health impacts.[798] Essentially the 'health in all policies' approach encourages states to adapt their approach to governance to mimic the interdependent nature of the determinants of human health. To do this, the Statement suggests that states should incorporate health considerations into the policies of all their sectors, where health departments need to engage with all of them insofar their activities could affect people's health, thereby reiterating that health departments should assume the leadership role to co-ordinate states' health systems.[799]

In follow-up to the *Helsinki Statement on Health in All Policies* (2013) states also adopted the *Shanghai Declaration on Promoting Health in the 2030 Agenda for Sustainable Development* (2016). This declaration was the outcome of the latest global conference on 'health promotion' and states essentially reaffirmed all their previous commitments to improve people's health by promoting health and by incorporating the 'health in all policies' approach. In addition member states also recognise in this Declaration that health cannot be separated from economic growth and environmental protection, and they therefore pledge to promote people's health

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797 States pledge to "work across different sectors and levels of government" in the *Rio Political Declaration* para 11.2(i). The WHO African Region also adopted *A Strategy for Addressing the Key Determinants of Health in the African Region* 60/3, WHO Doc AFR/RC60/3 (2010) as a guide for states to address the social determinants of health.

798 *Helsinki Statement on Health in All Policies* (2013) 1.

799 *Helsinki Statement on Health in All Policies* (2013) 2; WHO *Adelaide Statement on Health in All Policies* 1-4. African states are also urged to implement the 'health in all policies' approach by the *Health Promotion: Strategy for the African Region* 62/9, WHO Doc AFR/RC62/9 (2012) para 2(c). See *Promotion and Protection of All Human Rights, Civil, Political, Economical, Social and Cultural Rights* 7/11, UN Doc A/HRC/7/11 (2008) paras 67-73 for an exposition on the building blocks of a modern health system.

by implementing sustainable development practices.[800]

3.3.2.6 The ideal health system

The approaches investigated above strive to equip states with the knowledge and skills to develop health systems that will enable them to create conditions that are conducive for their people to attain the highest standard of health, and by adopting these approaches states should be in a better position to comply with their obligations to realise the human right to health.

The common thread binding these international developments is the recognition that the determinants of health are vast and that a health system should therefore not be built upon the mistaken belief that human health concerns can be addressed effectively in isolation, as these concerns span across the mandates of multiple sectors. For this reason, the WHO primarily asserts that states have to develop health systems that consist of more than the delivery of traditional curative health care services so that they can address all those factors that influence the human condition. In other words, states have to address the health concerns of people in a holistic manner and develop health systems that are capable of doing so.

In consideration of all these developments the recommendations of the WHO can be summarised as follows: a) states have to adopt the PHC approach as the foundation of their health systems, which needs to include the involvement of all the sectors (departments) whose mandates relate to matters that could affect people's health,[801] b) states must develop health systems that provide a comprehensive range of services to address people's health needs in a holistic manner (to take all the determinants of health into account), which by necessary implication means that states need to incorporate environmental health services into their health systems,[802] c) states should facilitate co-operation and collaboration

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800 States agree that they will aim to put health at the forefront of the latest world development goals - *Shanghai Declaration on Promoting Health in the 2030 Agenda for Sustainable Development* (2016) 1-2; para 3.3.3.1 below. See also para 2.3.4 above for more on sustainable development.

801 See paras 3.3.2.1-3.3.2.5 above. See also WHO *Primary Health Care Now More than Ever* 5-14 for the latest call to implement PHC in its current reformed form.

802 See paras 3.3.2.1, 3.3.2.3-3.3.2.5 above.

between all the departments involved in matters related to people's health,[803] d) health departments should take up the responsibility and play the leading role by taking charge and channelling the actions of all these departments,[804] e) states should decentralise their health systems and assign the delivery of health services to local bodies because they understand the particular needs of their communities, which from a governance perspective implies that the delivery of environmental health services should fall within the purview of local government,[805] and f) states should incorporate health considerations into all the policies and actions of all their departments.[806]

The reform of South Africa's health system had to be based on these recommendations insofar government is politically and morally obligated to comply with the international law instruments through which they have been articulated – that is, if it is to create conditions that will enable all South Africans to attain their highest standard of health. Whether government actually followed these recommendations is examined in later chapters of this research, suffice to say at this stage that these developments could clearly influence and shape South Africa's health system and in consequence environmental health practice as well.[807] This discussion can therefore serve as a contextual setting within which South Africa's health system can be viewed.

The paragraphs that follow provide an overview of the impacts that specific international law instruments have on the domestic environmental health effort.

3.3.3 Domestic impacts of specific international law instruments

The nature of government's commitment to comply with the provisions of international law instruments can be either political or legal, depending on the type of instrument. Legally binding instruments in turn could be binding *on* South Africa

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803 See paras 3.3.2.1-3.3.2.5 above.
804 See paras 3.3.2.2, 3.3.2.4-3.3.2.5 above.
805 This should lead to better service delivery, in theory - see paras 3.3.2.1-3.3.2.2 above.
806 See para 3.3.2.5 above.
807 The nature of their impacts will depend on whether government translated these recommendations into policies and guideline documents (non-binding) or legal obligations (binding) domestically - see para 4.3.2.1 below.

as a state against the international community (other states), or it could be binding *in* South Africa if it creates rights and obligations domestically.[808] For this reason some of the commitments that government made to comply with environmental health-related international law instruments could have an impact on environmental health governance domestically, where the extent of the impacts will depend on the type of instrument, and on the nature of government's commitment thereto.[809] An overview of these instruments and their domestic impacts follows below.[810]

The overview commences with a discussion of the instruments that could have an impact on the practice of environmental health in general, after which the instruments that relate to specific environmental hazards are discussed. This includes a) water quality and sanitation-related instruments, b) foodstuffs-related instruments, c) housing-related instruments, d) communicable disease-related instruments, e) hazardous substances, chemicals, and waste-related instruments, and f) climate change-related instruments.

3.3.3.1 International law instruments related to environmental health in general

African states are compelled through their ratification of the legally binding *ACHPR* to uphold the human right of all people to a "general satisfactory environment favourable to their development" as formulated in article 24, and since it is a human right, government has to respect, protect, promote, and fulfil it.[811] Admittedly, the meaning of this right is rather vague and ambiguous, and the *ACHPR* does not provide any clarification in this regard. The UN's Special Rapporteur (on human rights and the environment) and academics have deliberated on the content of an environmental right in general, and from their work it appears that the right imposes

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808 See paras 3.2.1.1-3.2.1.2 above.

809 *NEHP* 15-18.

810 It will be impossible to organise all the environmental health-related international law instruments into a manageable form because of their sheer complexity - Fidler *International Law and Public Health* 333.

811 Human rights in the *ACHPR* impose a quartet of duties on states to realise them (it includes the additional 'promote' duty) - preamble to the *ACHPR*; Dugard *International Law* 495; Strydom "Introduction to Regional Environmental Law in the African Union" 37-41; *Social and Economic Rights Centre (SERAC) v Nigeria* (2001) AHRLR 60 (hereafter *SERAC*-case) para 44; Viljoen *International Human Rights Law in Africa* 239-241. See para 3.3.1 above for more on what these duties entail in relation to human rights. South Africa signed and ratified the *ACHPR* on 9 July 1996 and it entered into force on 9 October 1996 - DIRCO 2022 https://bit.ly/2N4rIMB.

both substantive and procedural obligations on states.[812]

The substantive obligations that can be derived from an environmental right include that states should adopt a constitutional environmental right if their legal systems permit,[813] they should adopt *and* implement legal frameworks that protect against environmental harm,[814] and they should consider establishing dedicated environmental courts to facilitate the resolution of environmental cases.[815] Environmental harm in this context refers to a comprehensive set of factors that could influence the human condition and as such necessitate a variety of considerations to protect against it, which *inter alia* include the prevention of environmental pollution and degradation, the preservation of air, water, soil, flora, fauna, and ecosystems, ensuring access to safe and adequate food and water, ensuring access to adequate housing, and ensuring equitable benefit sharing from the conservation and sustainable use of natural resources.[816] The substantive obligations imposed by an environmental right could therefore essentially be summarised to entail that states should take legal measures to ensure that people will be free from environmental harm and states have to take a wide range of environmental factors into consideration for this purpose.

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812 *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment* 37/59, UN Doc A/HRC/37/59 (2018) 7-20; *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Compilation of Good Practices* 28/61, UN Doc A/HRC/28/61 (2015); *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Implementation Report* 31/53, UN Doc A/HRC/31/53 (2015); Hayward *Constitutional Environmental Rights* 27-36; Van der Linde and Louw 2003 *AHRLJ* 173-179; Wondalem 2015 *IJOIL* 215-217.

813 See s 24 of the *Constitution*; paras 4.2.2-4.2.3 below for more on South Africa's constitutional environmental right.

814 See chs 4-5 below for more on South Africa's legal environmental framework, including the laws that relate to environmental health.

815 *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Compilation of Good Practices* 28/61, UN Doc A/HRC/28/61 (2015) paras 72-83; *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Implementation Report* 31/53, UN Doc A/HRC/31/53 (2015) paras 55-59.

816 Hayward *Constitutional Environmental Rights* 29-30; *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment* 37/59, UN Doc A/HRC/37/59 (2018) 11-12, 14-20. Note the similarity between these considerations and those inherent in the comprehensive human right to health. It is precisely because they are so similar that the legal justification for the operationalisation of environmental health could be derived from either a 'human right to health' or from a 'human right to a healthy environment', and why the implications in either case will be the same - see paras 3.3.1 above, 4.2.3 below.

The procedural obligations that can be derived from an environmental right include that states have to "make environmental information public", they have to "facilitate public participation in environmental decision-making", they have to "protect the rights of expression and association", and they have to "provide access to legal remedies with respect to environmental matters".[817] According to other provisions in the *ACHPR* and the *ICCPR* states have to provide most of these entitlements to their people in any event, so these obligations may therefore simply be regarded as environmental specific manifestations of those entitlements.[818]

The African Commission on Human and Peoples' Rights had the opportunity to elaborate on the meaning of the environmental right as articulated in article 24 of the *ACHPR* specifically, and they confirmed that it is the *ACHPR*'s version of the right to a healthy environment.[819] They have also distilled a number of obligations from this right, primary being that states have to "take reasonable legislative and other measures to prevent pollution and ecological degradation, to promote conservation, and to ensure that development and the use of natural resources are ecologically sustainable".[820] The other obligations include that states should at least permit independent scientific monitoring of threatened environments, undertake environmental and social impact assessments prior to industrial development, provide access to information to involved communities, and grant those affected by decisions an opportunity to be heard and participate in the development process.[821]

It stands to reason, based on the above, that if government is to comply with its commitment to respect, protect, promote, and fulfil article 24 of the *ACHPR*, it has to adopt and implement legal measures that will ensure a healthy environment,

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817 *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment* 37/59, UN Doc A/HRC/37/59 (2018) 7-13; *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Compilation of Good Practices* 28/61, UN Doc A/HRC/28/61 (2015) paras 25-71; Hayward *Constitutional Environmental Rights* 30-31.

818 Articles 19, 22, 25 of the *ICCPR*; arts 9-10, 13 of the *ACHPR*. See ss 16, 18, 32-33 of the *Constitution*; paras 4.2.1-4.2.3 below for more on South Africa's domestic casting of some of these rights.

819 *SERAC*-case para 52.

820 *SERAC*-case para 52. See paras 4.2.2-4.2.3 below and note that the African Commission in all probability based their finding on s 24 of the *Constitution*.

821 *SERAC*-case para 53; Van der Linde and Louw 2003 *AHRLJ* 178; Wondalem 2015 *IJOIL* 215-217; Scholtz "Human Rights and the Environment in the African Union Context" 107-110.

which by implication requires the inclusion of a consideration of all the environmental factors that pose a threat to the human condition. Government's commitment to realise this right therefore substantiates the need to adopt laws in relation to environmental health (create a legal mandate), and to implement them (provide environmental health services).[822]

African states have also made commitments in relation to the linkage between human health and the environment, and in particular to people's vulnerability to environmental hazards, through the *Libreville Declaration on Health and Environment in Africa* (2008) (hereafter *Libreville Declaration*).[823] According to the *Libreville Declaration* government has to develop or update South Africa's national legal framework to address the impacts of the environment on human health more effectively, implement intersectoral programmes to strengthen its health system, and institute practices and procedures to systemically assess health and environment risks.[824] The *Implementation of the Libreville Declaration on Health and Environment in Africa: Luanda Commitment* (2010) (hereafter *Luanda Commitment*) was adopted as a means to accelerate the implementation of the *Libreville Declaration*, and it binds government to make it a top priority to provide safe drinking water, sanitation, and hygiene services, manage environmental and health risks, manage water, soil, and air pollution, control vectors, manage chemicals and waste, and to ensure food safety.[825] Both these instruments stress that the environment plays the significant role with respect to the human condition, and they implore government to recognise the same, to give effect to this recognition in South Africa's legal system, and to make the delivery of services in this regard a priority.[826]

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822 See Viljoen *International Human Rights Law in Africa* 556-560 for more on the application of the *ACHPR* in South Africa.

823 South Africa signed the *Libreville Declaration* on 29 August 2008.

824 Articles 2-3, 8-9 of the *Libreville Declaration*.

825 Article 10(b)(i)-(x) of the *Luanda Commitment*. Take further note that a Health and Environment Strategic Alliance was set up to enhance the implementation of the *Libreville Declaration* - the *Health and Environment Strategic Alliance for the Implementation of the Libreville Declaration* (2010) paras 1-17. South Africa signed the *Luanda Commitment* on 26 November 2010.

826 Both of these are soft law instruments and they therefore do not create legally binding obligations. Government is instead politically and morally obligated to comply with them.

Government is at least politically committed to two instruments that embedded the 'sustainable development' notion in the international legal sphere,[827] namely the *Rio Declaration* and the *Agenda 21*.[828] The *Rio Declaration* consists of a collection of succinct principles that are based on the foundation of sustainable development.[829] Principle 1 of the *Rio Declaration* proclaims that "[h]uman beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature". As noted earlier, there is a clear linkage between human health and sustainable development, and the ultimate purpose of the notion may even be to ensure that people are health.[830] Specifically because of this linkage, government's commitments pertaining to sustainable development will also influence South Africa's approach to human health concerns, and therefore the environmental health effort.[831]

Other noteworthy principles in the *Rio Declaration* include the 'precautionary principle' and the 'polluter pays principle'.[832] Government subscribes to both of these.[833] The 'precautionary principle' essentially entails that when states need to decide on whether to permit or undertake activities that could pose environmental harm, they should choose the option that will prevent environmental harm (albeit to forbid or forgo an activity), even if there is no conclusive proof that harm will in fact occur.[834] The 'polluter pays principle', as the name suggests, entails that

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827 For more in this regard - see principles 3-9 of the *Rio Declaration*, Glazewski "International Environmental Law: The International Dimension" 9; *Brundtland Report* ch 12; para 2.3.4 above.

828 They are both soft law instruments - Wirth 1995 *Ga L Rev* 615; Kovar 1993 *Colo J Int'l Envtl L and Pol'y* 124. Representatives of South Africa were not present when states agreed to and signed the *Rio Declaration* and the *Agenda 21*, but government has since made its intention to comply with these instruments clear, among others by declaring so in the nineteenth special session of the UN General Assembly that was held to review and appraise the implementation of *Agenda 21* in 1997.

829 Preamble to the *Rio Declaration*; Glazewski "International Environmental Law: The International Dimension" 9. For more on the *Rio Declaration* - see Kovar 1993 *Colo J Int'l Envtl L and Pol'y* 119-140.

830 See para 2.3.4 above for more on this linkage.

831 For more on 'sustainable development' in South Africa and government's legal obligations in this regard - see paras 2.3.4 above, 4.2.2 below.

832 Principles 15-16 of the *Rio Declaration*. A further principle that is relevant for this research is the 'principle of no-harm' that is depicted in both the *Rio Declaration* (principle 2) and the *Stockholm Declaration* (principle 21). See para 3.4.1.6 below for more on this principle.

833 Kidd *Environmental Law* 8-9; Glazewski "The Nature and Scope of Environmental Law" 26-29.

834 Glazewski and Plit 2015 *Stell LR* 194-202; Cameron and Abouchar 1991 *BC Int'l and Comp L Rev* 2; McIntyre and Mosedale 1997 *J Envtl L* 222; para 3.4.1.8 below.

polluters should bear the cost of their pollution.[835]

The *Agenda 21* further endorses the link between health and development and describes it as "intimate interconnectedness".[836] It explains that a lack of development can lead to possible poverty, whereas inappropriate development can lead to possible overconsumption – and the occasion of either or both can result in "severe environmental health problems".[837] In this regard the *Agenda 21* calls for action by states in the form of intersectoral efforts to address the primary health needs of their populations and it identifies a number of programmes that states should focus on for this purpose, among others to control communicable diseases and to reduce human health risks from environmental pollution and hazards.[838]

In line with these programmes, the *Agenda 21* advocates that states must undertake several activities each with its own objectives, where the majority of the activities and their corresponding objectives relate to environmental health. These include, for example, that states have to a) develop primary health care systems that are practical, community-based, and meet people's basic health needs (clean water, safe food, and sanitation), b) support the use of mechanisms that improve co-ordination between their health departments and other sectors at all levels of government, c) strengthen environmental health services by adopting health impact assessment procedures, d) adopt measures to reduce and minimise health risks from environmental pollution (air, water, waste, pesticides, radiation, noise), and e) establish environmental monitoring capacities for the surveillance of their

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835 Kidd *Environmental Law* 9; Glazewski "The Nature and Scope of Environmental Law" 28-29. These principles are especially relevant where environmental conditions of a transboundary nature are concerned, which are discussed in para 3.4.1.7 below.

836 Paragraph 6.1 of the *Agenda 21*. The recognition of the need to integrate human health and environmental considerations in the context of development is prevalent throughout *Agenda 21*.

837 The *Agenda 21* identifies that development will not be sustainable without healthy people, and that development that is sustainable will alleviate poverty and promote health. 'Healthy people' and 'sustainable development' therefore go hand in hand - para 6.1 of the *Agenda 21*; para 2.3.4 above.

838 Note how this requirement corresponds with the health system approaches of the WHO as discussed in paras 3.3.2.1-3.3.2.6 above, where both emphasise the need for intersectoral efforts by states - *Agenda 21* para 6.1.

environments (quality) and populations (health status).[839]

The *Agenda 21* also points out that many of the problems and solutions that it aims to address, such as environmental health, have their roots in local activities. As such it emphasises that local authorities (municipalities), which is the level of government that is the closest to the people, should play a vital if not the primary role in fulfilling its objectives.[840] The *Agenda 21* subsequently implores local authorities to adopt a *Local Agenda 21* whereby they can involve their communities to develop and implement local programmes of action to promote sustainable development.[841]

Three subsequent soft law instruments were adopted in relation to the *Agenda 21*, namely the *Johannesburg Declaration on Sustainable Development* (2002), its *Plan of Implementation of the World Summit on Sustainable Development* (2002), and the *Johannesburg Principles on the Role of Law and Sustainable Development* (2002).[842] The aim of these instruments are to expedite the implementation of the *Agenda 21* in the pursuance of sustainability. To this end they too list numerous activities and action-oriented principles that states have to initiate to enhance their efforts in this respect.[843] As such these instruments clarify *what* states still need to do to achieve sustainability, as well as *how* this can be done.[844]

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839 Chapters 6, 18-22 of the *Agenda 21*; Church "Public Health, Environmental Health and Sustainable Development" 203-204. The *Agenda 21* also emphasises that in addressing human health needs, the focus should shift from a remedial or curative approach towards the inclusion of preventative programmes instead (like the practice of environmental health) - para 6.1 of the *Agenda 21*. For more on the implementation of the *Agenda 21* - see UN *National Implementation of Agenda 21* 1-63.

840 Chapter 28 of *Agenda 21*; Glazewski "International Environmental Law: The International Dimension" 9-11.

841 *Agenda 21* paras 28.1, 28.3. Du Plessis describes that ch 28 of *Agenda 21* serves as an "international framework for local authorities in the move towards environmental action" - Du Plessis *Fulfilment of South Africa's Constitutional Environmental Right in the Local Government Sphere* 82.

842 South Africa hosted the conference that led to the adoption of these instruments, and government pledged to comply with their content by participating in the proceedings.

843 Article 30 of the *Johannesburg Declaration on Sustainable Development* (2002); principle 1 of the *Johannesburg Principles on the Role of Law and Sustainable Development* (2002); chs 1, 6, 8, 10-11 of the *Plan of Implementation of the World Summit on Sustainable Development* (2002); Glazewski "International Environmental Law: The International Dimension" 10-11; Birnie, Boyle and Redgwell *International Law and the Environment* 48-53.

844 For a summary of their content - see Hens and Nath 2003 *ED and S* 21-34.

Government's commitment to achieve the Millennium Development Goals (hereafter MDGs) and subsequently also the Sustainable Development Goals (hereafter SDGs), complements South Africa's efforts to achieve the aims of sustainable development. The MDGs are the outcome of the largest gathering of heads of state, a meeting convened by the UNDP on behalf of the UN at the eve of the 21st century, to determine the world's developmental agenda for the next 15 years.[845] The MDGs include eight politically binding goals (soft law) derived from the *United Nations Millennium Declaration* (2000),[846] the international law instrument adopted at this meeting.[847] Each MDG has concrete targets that states had to reach by the year 2015, and states could measure their progress by corresponding indicators set out in this declaration.[848] States had to make the MDGs national goals and had to reach their prescribed targets in order to fulfil their commitments thereto.[849] All eight MDGs are interdependent, all of them influence people's health, and most are strongly linked with the environment, which means that the actions that states undertook to achieve them should have enhanced their environmental health statuses.[850] The provision of environmental health services in turn also should have contributed toward achieving the MDGs, which made them mutually beneficial.[851]

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845 It was the largest gathering of heads of state at that time - *United Nations Millennium Declaration* (2000) paras 1-7; Salil 2005 *Sur-Int'l J on Hum Rts* 8. South Africa is committed to achieve the MDGs by virtue of its membership to the UN and the fact that the General Assembly of the UN adopted the *United Nations Millennium Declaration* (2000).

846 As per WHO 2016 http://bit.ly/1X3gVzr the goals are:

> 1) to eradicate extreme poverty and hunger, 2) to achieve universal primary education, 3) to promote gender equality and empower women, 4) to reduce child mortality, 5) to improve maternal health, 6) to combat HIV/AIDS, malaria, and other diseases, 7) to ensure environmental sustainability, and 8) to develop a global partnership for development.

Incidentally, all these goals are also linked to specific international human rights as established in provisions of the *UDHR* and *ICESCR* - *Salil 2005 Sur-Int'l J on Hum Rts* 11.

847 For more on the development of the MDGs - see Li 2013 *Manchester J Int'l Econ L* 367-372.

848 Some authors argue that because the MDGs include quantifiable outcomes (targets) that can be measured objectively (indicators), the MDGs are a more powerful tool than other forms of soft law instruments, such as many of the non-binding UN declarations and resolutions discussed above, because the MDGs create a framework of accountability at international level - Fakuda-Parr 2004 *Global Governance* 397.

849 *Road Map towards the Implementation of the United Nations Millennium Declaration* 56/326, UN Doc A/56/326 (2001) para 81. For a discussion on the shortcomings of the MDGs, including the lack of political will to convert them to rights, and not taking a human rights-based approach to them - see Dorsey *et al* 2010 *Neth Q Hum Rts* 516-522.

850 WHO 2016 http://bit.ly/1X3gVzr; Ruis 2005 *Envtl Pol'y and L* 84.

851 Note the argument below concerning the relationship between SDGs and environmental health (which applies to the MDGs as well).

States were largely successful in achieving the MDGs' targets, but most have not been reached by South Africa yet.[852] For instance, government failed to reach its target to reduce the incidences of TB and it failed to achieve a two-thirds reduction in the mortality rate of children.[853] Government did however reach it targets as far the improvement of access to water and sanitation services are concerned, although it should be noted that access is not so much a problem but rather how reliable and sustainable these services are.[854]

The MDGs have since been superseded by the latest world developmental agenda that was proposed in the declaration *The Future We Want* (2012), which culminated in the SDGs.[855] The SDGs are seventeen goals listed in the resolution *Transforming Our World* adopted by the UN in 2015.[856] Similar to the MDGs, each SDG also has corresponding targets and indicators to measure states' progress toward reaching them, and all the members of the UN committed to reach them collectively by the

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852 By 2015 South Africa only met 22 of its 59 targets to reach all 8 MDGs - Stats SA *Millennium Development Goals* xxi-xxvii; 1-17. For more information on South Africa's progress in this respect - see Stats SA *Millennium Development Goals* 1-122; UN ECA *MDG Report 2015* 1-83; UN *The Millennium Development Goals Report 2015* 1-71; Chopra *et al* 2009 *Lancet* 1023-1031.

853 Stats SA *Millennium Development Goals* 8, 11.

854 Stats SA *Millennium Development Goals* 12.

855 Paragraphs 245-251 of *The Future We Want* (2012); Luther 2013 *Asia Pac J Envtl L* 243-244, 248-249; UN *A New Global Partnership* 5. For a discussion on the decision to develop SDGs to compliment the MDGs instead of replacing them in their entirety - see Soyeju 2015 *PELJ* 370-372.

856 As per *Transforming Our World* 14-28, the SDGs are:

> 1) to end poverty in all its forms everywhere, 2) to end hunger, achieve food security and improved nutrition and promote sustainable agriculture, 3) to ensure healthy lives and promote well-being for all at all ages, 4) to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all, 5) to achieve gender equality and empower all women and girls, 6) to ensure availability and sustainable management of water and sanitation for all, 7) to ensure access to affordable, reliable, sustainable and modern energy for all, 8) to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all, 9) to build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation, 10) to reduce inequality within and among countries, 11) to make cities and human settlements inclusive, safe, resilient and sustainable, 12) to ensure sustainable consumption and production patterns, 13) to take urgent action to combat climate change and its impacts, 14) to conserve and sustainable use the oceans, seas and marine resources for sustainable development, 15) to protect, restore, promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss, 16) to promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels, and 17) to strengthen the means of implementation and revitalise the global partnership for sustainable development.

year 2030.[857] The SDGs differ from MDGs in the sense that they integrate all three dimensions of sustainable development (social, environmental, and economic). As is the case with the sustainable development notion, the SDGs also recognise that social equality, environmental protection, and economic growth are inextricable linked to each other, and that human health is inextricably linked to each of these.[858] The SDGs further recognise that the relationship between these indivisible and interlinked dimensions are dynamic and reciprocal and that they therefore have to be implemented *universally* – none of them can be addressed in isolation.[859] In other words social, economic, and environmental interests, including human health as an interconnected component of each of these, have to be addressed through a co-ordinated and collective effort. Many of the corresponding targets of the SDGs directly touch on environmental health-related aspects, among others the target to substantially reduce the number of deaths and illnesses from hazardous chemicals and pollution contamination (air, water, soil), and the target to achieve universal access to safe and affordable drinking water and adequate sanitation.[860] In consideration of the similarities in substance between environmental health and the SDGs, it becomes evident that the provision of environmental health services, short of being necessary, will actually accelerate states' progress toward achieving the SDGs, and could therefore be used as a vehicle or instrument by states to realise the SDGs by 2030. By this virtue then, environmental health services should be delivered especially because it will enable government to comply with South Africa's international obligations concerning the SDGs.[861]

3.3.3.2 Water quality and sanitation-related instruments

The *ICESCR* is significant for this research not only because it imposes several environmental health-related obligations on government by virtue of article 12, the

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857 South Africa is committed to achieve the SDGs by virtue of its membership to the UN and the fact that the General Assembly of the UN adopted the resolution *Transforming Our World* in 2015.

858 WHO *Health in 2015* 7-8; *Transforming Our World* paras 13, 55, 71; para 2.3.4 above.

859 WHO *Health in 2015* 7-8; *Transforming Our World* para 71.

860 *Transforming Our World* paras 3.9, 6.1-6.3; WHO *Health in 2015* 32.

861 The *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Implementation Report* 31/53, UN Doc A/HRC/31/53 (2015) para 59 calls on states to implement the SDGs to promote human rights and environmental protection.

comprehensive human right to health,[862] but also because of the entitlements guaranteed by article 11(1), the right to an "adequate standard of living … and the continuous improvement of living conditions".

International human rights law jurisprudence indicates that the obligation to provide access to safe drinking water and adequate sanitation is implicit in both articles 11(1) and 12 of the *ICESCR*,[863] and it has been recognised as a self-standing human right by the UN.[864] Government has also recognised it as such on several occasions, included it as a fundamental right in the *Constitution*, and is committed to realise the obligations that it imposes.[865] This right essentially entitles people to have access to sufficient, safe, acceptable, accessible, and affordable water for personal and domestic use, and to have access to sanitation that is affordable, safe, hygienic, secure, acceptable, and that provides privacy and ensures dignity.[866]

The human right to safe water and adequate sanitation is unpacked in UN CESCR *General Comment No 15* of the *ICESCR*. As far as the content of the right is concerned, the General Comment indicates that water has to be adequate, where its adequacy depends on its availability, accessibility, and quality. These requirements denote that water has to be available in quantities that are sufficient for consumption and sanitation purposes, that it has to be physically and economically accessible, and that it has to be safe in the sense that it does not constitute a threat to people's health.[867] The right also imposes the trio of duties (respect, protect, fulfil) on states to realise it, but as a human right, they only need

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862 See para 3.3.1 above.

863 UN CESCR *General Comment No 15* para 3; *The Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health* 62/214, UN Doc A/62/214 (2007) paras 50, 63-64; OHCHR *The Right to Water* 3-7; *Resolution on the Human Rights to Safe Drinking Water and Sanitation* Res 70/169, UN Doc A/Res/70/169 (2015) para 1.

864 *Resolution on the Human Right to Water and Sanitation* Res 64/292, UN Doc A/Res/64/292 (2010) para 1.

865 Section 27(1)(b) of the *Constitution*; Amnesty International *Human Rights to Water and Sanitation* 102-103; para 4.2.2 below.

866 *Resolution on the Human Rights to Safe Drinking Water and Sanitation* Res 70/169, UN Doc A/Res/70/169 (2015) para 2.

867 UN CESCR *General Comment No 15* paras 11-12; *The Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health* 62/214, UN Doc A/62/214 (2007) paras 73-76; OHCHR *The Right to Water* 8-11, 27-28.

to do so progressively.[868]

The General Comment also points out that states have to utilise all appropriate means to realise this right, which include in particular that states have to adopt legislative measures towards implementing their obligations.[869] For South Africa this means that government has to adopt legislation that will entitle people to a right of access to safe water and sanitation, and that it has to implement such legislation to make the delivery of safe water and adequate sanitation a reality.[870] The General Comment further recognises that the delivery of these services are usually devolved to local authorities, and it advises that if this is the case, that states' central or national authorities should retain the responsibility to progressively realise this right but should ensure that their local bodies have sufficient resources at their disposal to provide and maintain the necessary water and sanitation services in their respective communities – and this also applies to South Africa.[871]

3.3.3.3 Foodstuffs-related instruments

Article 11(1) of the *ICESCR* includes the right to adequate food in its ambit as well, and states can realise this right by ensuring that their people have access to food that is available and adequate.[872] Environmental health is concerned with the adequacy of food insofar its consumption can be detrimental to the human condition (quality), and not so much on food security (availability, accessibility, quantity) – all of which are features that form part of the right to adequate food.[873]

As far as the requirement of quality is concerned, the right necessitates that food must be free from adverse substances, and in this respect states must take measures to prevent contamination of foodstuffs.[874] The right also imposes a duty

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868 UN CESCR *General Comment No 15* paras 17, 20-29; *Resolution on the Human Rights to Safe Drinking Water and Sanitation* Res 70/169, UN Doc A/Res/70/169 (2015) para 5(a). See para 3.3.1 above for more on what these duties entail. See also paras 38-39 of the UN CESCR *General Comment No 15* for the minimum core obligations that this right impose.

869 UN CESCR *General Comment No 15* para 45.

870 See s 27(1)(b) of the *Constitution*; para 4.2.2 below for more on this right in South Africa.

871 UN CESCR *General Comment No 15* para 51; OHCHR *The Right to Water* 32.

872 The right does not guarantee an entitlement to be fed, but rather to feed oneself in dignity - UN CESCR *General Comment No 12* para 6; OHCHR *The Right to Adequate Food* 2-92-4.

873 OHCHR *The Right to Adequate Food* 4-5; para 2.3.5 above.

874 UN CESCR *General Comment No 12* para 10.

on states to respect, protect, and fulfil it, and in this endeavour government has entrenched a right of access to safe food in the *Constitution*.[875] The content of this right as an international human right ought to influence its domestic interpretation and application in South Africa, and will therefore also have implications for environmental health governance insofar food safety is concerned.

As a member of the WTO South Africa ratified the *Agreement on the Application of Sanitary and Phytosanitary Measures, Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations - Annex 1A* (1994) (hereafter *SPS Agreement*).[876] The *SPS Agreement* is concerned with the actions that states' take to protect their people from harm that may be caused by consuming unsafe food (animals and plants), known as sanitary and phytosanitary measures. According to the *SPS Agreement* states may implement sanitary and phytosanitary measures to protect human, animal, and plant health in their territories, but their measures have to be consistent with the *SPS Agreement*.[877] This entails that states may set their own standards in this regard, but that they have to be based on science, they may only be applied to the extent necessary to protect human, animal, or plant health, and they may not arbitrarily discriminate against other states where similar conditions apply.[878] These measures can involve testing, inspection, certification, and approval procedures, quarantine treatments, packaging and labelling requirements related to food safety, and so forth, and states can implement them through the enactment of laws and regulations to this effect.[879] The *SPS Agreement* therefore circumscribes government's powers to protect people from unsafe food as far as its freedom to implement *any* sanitary and phytosanitary measure is

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875 UN CESCR *General Comment No 12* para 15; s 27(1)(b) of the *Constitution*. For more on this right in South Africa - see para 4.2.2 below.

876 The *SPS Agreement* is an annex to the *Marrakesh Agreement Establishing the World Trade Organization* (1994). South Africa signed the latter on 15 April 1994 and it entered into force on 1 January 1995, which is why government is also obligated to comply with the *SPS Agreement*.

877 Article 3 of the *SPS Agreement*. For more on the *SPS Agreement* - see Feris and Bondi "Trade and the Environment" 857-864; DALR 2016 http://bit.ly/1VldRyN.

878 The *SPS Agreement* also encourages states to use international standards, guidelines, and recommendations when they exist - arts 2-3 of the *SPS Agreement*. Art 16 of the *Protocol on Trade in the Southern African Development Community (SADC) Region* (1996) imposes similar obligations on South Africa. South Africa signed this regional protocol on 24 August 1996 and it entered into force on 25 January 2000 - DIRCO 2022 https://bit.ly/2N4rIMB.

879 Articles 2, 13, annex A(1) of the *SPS Agreement*.

concerned. On the other hand, the *SPS Agreement* also serves as an aid in the sense that government should be able to protect people from risks that could arise from the presence of additives, contaminants, toxins, or disease-causing organisms in foods and beverages, and risks that could arise from diseases carried by animals, plants, or pests if it does implement sanitary and phytosanitary measures that are consistent with the agreement.[880]

The WHO and FAO have established a Codex Alimentarius Commission that created a collection of international standards, guidelines, and codes of practice concerning food, known as the *Codex Alimentarius*, with the purpose to protect people from food-borne disease.[881] The *Codex Alimentarius* contains hundreds of standards and many guidelines and codes of practice that serve as recommendations pertaining to all aspects of food safety, and any state may apply them domestically on a voluntary basis.[882] Government is therefore at liberty to integrate these international food standards into South Africa's legal system by translating them into laws or regulations in order to protect people from potential food-borne diseases.[883]

3.3.3.4 Housing-related instruments

In addition to the other rights, article 11(1) of the *ICESCR* also portrays a right to adequate housing. This means that the right to adequate housing is an international human right. The *UN CESCR General Comment No 4* that was published in respect

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880 For more on the regulation of food in South Africa as far as sanitary- and phytosanitary measures are concerned - see para 4.3.2.5 below; *Plant Health (Phytosanitary) Policy for South Africa* (2014); *Draft Sanitary and Phytosanitary Strategy* (2014); *Foodstuffs, Cosmetics and Disinfectants Act* 54 of 1972 and its regulations; *Agricultural Product Standards Act* 119 of 1990 and its regulations; *Agricultural Pests Act* 36 of 1983; *Animal Diseases Act* 35 of 1984; *Meat Safety Act* 40 of 2000; *International Trade Administration Act* 71 of 2002.

881 For more on the *Codex Alimentarius* - see WHO and FAO *Understanding the Codex Alimentarius* 1-38; WHO and FAO *Codex Alimentarius Commission Procedural Manual* 3-26.

882 WHO and FAO *Understanding the Codex Alimentarius* 10-12. See FAO 2016 http://bit.ly/1TMI1K6 for a list of all these standards.

883 South Africa has been a member of the Codex Alimentarius Commission since 28 July 1994 and as such is committed to comply with the standards in the *Codex Alimentarius*. South Africa is also a member of the World Organisation for Animal Health, an IGO that is concerned with the welfare of animals. The World Organisation for Animal Health works closely with the WHO and FAO in matters concerning the *Codex Alimentarius* to the extent that people can contract food-borne diseases from animals. South Africa also has some obligations by virtue of its membership to this IGO, such as having to report incidences of certain diseases in animals (like foot and mouth disease) - OIE 2018 https://bit.ly/2C22MB1.

of this right describes that adequacy in relation to housing in the least involves a) legal security of tenure, b) the availability of services, facilities, and infrastructure, and c) its affordability, habitability, accessibility, and location.[884] The General Comment further explains, as far as the requirement of 'availability of services' is concerned, that services in this context relates to those that can influence people's health, which includes access to safe drinking water, energy for cooking and heating, sanitation, refuse disposal, and site drainage, to name a few.[885] The requirement of 'habitability' has similarly been unpacked, and the General Comment explains in this respect that housing has to be habitable in the sense that it should protect people from hazards, which include heat, damp, cold, rain, wind, structural risks, and disease vectors.[886]

States have to take "whatever steps are necessary" to respect, protect, and fulfil this right, which in effect means that states should develop national housing strategies (that may be rooted in law) to realise and therefore deliver access to adequate housing to their people.[887] Government also entrenched a right of access to adequate housing in the *Constitution*, which ought to give effect to South Africa's obligations arising from its commitment to the *ICESCR*.[888] The domestic application of this right, particularly in relation to its entitlements pertaining to the availability of services that could influence the human condition and the habitability of housing in as far it ought to protect people's health, is also concerned with environmental health, and may likewise have an impact on the governance of environmental health in South Africa.

3.3.3.5 Communicable disease-related instruments

The WHO developed legally binding international health regulations in 1969 in order to monitor and control serious communicable diseases that have the potential to

884 UN CESCR *General Comment No 4* para 8; OHCHR *The Right to Adequate Housing* 3-4.
885 UN CESCR *General Comment No 4* para 8(b); OHCHR *The Right to Adequate Housing* 8-9.
886 UN CESCR *General Comment No 4* para 8(b); OHCHR *The Right to Adequate Housing* 8-9.
887 UN CESCR *General Comment No 4* paras 12, 15.
888 See s 26(1)-(2) of the *Constitution*; para 4.4.2 below for more on this right in South Africa.

spread across state borders, and government adopted these regulations.[889]

The *International Health Regulations* (1969) have since been replaced however by the more recent and updated *International Health Regulations* (2005) (hereafter *IHRs*) that came into effect in 2007.[890] The goal of the *IHRs* are to "prevent, protect against, control, and provide a public health response to the international spread of disease".[891] The *IHRs* impose specific duties on states in relation to a variety of communicable diseases, *inter alia* in reference to surveillance, notifications, information sharing, consultation, and verification activities.[892] Although government ratified the *IHRs*, it was not enacted as law. In other words, the *IHRs* bind South Africa on the international plane, but as of yet need not be applied domestically.[893]

Another instrument that is indirectly related to disease and therefore perhaps relevant for present purposes is the legally binding *Framework Convention on Tobacco Control* (2003) that the WHO adopted to protect people from the devastating consequences of tobacco use.[894] The Treaty provides a framework for tobacco control measures that states have to implement to reduce the prevalence of tobacco use.[895] Government ratified the Treaty but did not incorporate it into national law, partly because it already enacted the *Tobacco Products Control Act* 83 of 1993 (hereafter *Tobacco Act*) prior to its ratification.[896] Both the Treaty and the

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889 *International Health Regulations* (1969). South Africa committed to comply with these regulations by virtue of its membership to the WHO, and government subsequently ratified and enacted these in the form of the *International Health Regulations Act* 28 of 1974, which is still in operation.

890 South Africa ratified the *IHRs* on 23 May 2005 and it entered into force on 15 June 2007 - DIRCO 2022 https://bit.ly/2N4rIMB.

891 Article 2 of the *IHRs*. See para 4.3.2.1 below for more on government's legal response to communicable disease.

892 Articles 5-8, 10 of the *IHRs*. For more on communicable diseases in the context of international law - see Aginam 2002 *Bulletin* 946-951; Fidler and Gostin 2006 *JL Med and Ethics* 85-94; Fidler 2005 *Chinese JIL* 325-392.

893 The *International Health Regulation Bill* (2013) was published for this purpose, but so far there has been no progress in this regard. For more on this process - see paras 3.2.1.2 above, 4.4 below.

894 For more on the treaty - see Meier 2005 *Yale J Health Pol'y L and Ethics* 137-192.

895 Preamble and art 3 of the *Framework Convention on Tobacco Control* (2003).

896 South Africa ratified the *Framework Convention on Tobacco Control* (2003) on 19 April 2005 and it entered into force on 18 July 2005 - DIRCO 2022 https://bit.ly/2N4rIMB. Government did however amend the *Tobacco Act* in 2007 to align it with the *Framework Convention on Tobacco Control* (2003).

Tobacco Act regulate matters related to tobacco use, which involve aspects such as advertisement restrictions, imposing an age limit for the sale of tobacco products, and banning the use of tobacco products in public places.[897] Since the use of tobacco products are harmful to human health, the implications of government's commitment to this Treaty also ought to impact environmental health to the extent that the *Tobacco Act* is less stringent in this regard.[898]

3.3.3.6 Hazardous substances, chemicals, and waste-related instruments

Government ratified four international law instruments that relate to hazardous substances, chemical substances, and waste. They are the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* (1989) (hereafter *Basel Convention*), the *Stockholm Convention on Persistent Organic Pollutants* (2001) (hereafter *Stockholm Convention*), the *Minamata Convention on Mercury* (2013) (hereafter *Minamata Convention*), and the *Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade* (1998) (hereafter *Rotterdam Convention*).

The *Basel Convention*, a product of the work initiated by the UN Environment, aims to reduce the generation and transboundary movement of hazardous waste by imposing specific rules on states in this regard.[899] These rules criminalise the illegal trade of hazardous waste, they compel states to take measures to ensure that hazardous waste generation is kept to a minimum, and they compel states to respect other states' decision to prohibit the import of hazardous waste into their territories.[900] Government participates in the international effort to reduce the

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897 Sections 2-4 of the *Tobacco Products Control Act* 83 of 1993. For a discussion on government's compliance with the *Framework Convention on Tobacco Control* (2003) through its prior enactment of the *Tobacco Products Control Act* 83 of 1993 - see Buthelezi and Reddi 2003 *JJS* 175-198.

898 Government recently published a *Draft Control of Tobacco Products and Electronic Delivery Systems Bill* (2018) with which it intends replace the current *Tobacco Act*. For more on the regulation of tobacco in South Africa - see para 4.3.2.1 below.

899 South Africa ratified the *Basel Convention* on 4 May 1994 and it entered into force on 3 August 1994 - DIRCO 2022 https://bit.ly/2N4rIMB.

900 For more on what these rules entail - see arts 4, 6-10 of the *Basel Convention*; Olivier and Funmi 2008 *SAYIL* 203-204.

harmful effects of hazardous waste by complying with the provisions of the *Basel Convention*, for which it also published the *Regulations Regarding the Control of the Import or Export of Waste* (2019), and the contribution of South Africa in this endeavour also ought to benefit people locally as far as their health and the potential exposure to hazardous waste are concerned.[901] It also bears mention that some lesser developed states are willing to import hazardous waste (even though it is harmful for people and the environment) for economic gain, and other states may exploit those states to get rid of their hazardous waste because the less developed (poorer) states could really benefit from the financial compensation, which exacerbates the threat that hazardous waste hold for people's health.[902] For this reason African states adopted the *Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa* (1991) that bans the trade of hazardous waste completely.[903] South Africa did not ratify this agreement however, and it therefore does not impose any obligations on government.

Negotiations on the drafting of the *Stockholm Convention* were also initiated by the UN Environment with the purpose to create a treaty that will eliminate the use and production of persistent organic pollutants, especially because these chemicals are harmful to people's health and the environment.[904] The *Stockholm Convention* was ratified by South Africa in 2002, and barring some exceptions, it prohibits government from producing, using, importing, or exporting several chemicals listed

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901 For more on the *Basel Convention* and its impact on South Africa - see Glazewski "International Environmental Law: The International Dimension" 29-31; Devine "International Environmental Law" 149-150. See the *Hazardous Substances Act* 15 of 1973; *National Environmental Management: Waste Act* 59 of 2008; paras 4.3.2.1, 4.3.2.5 below for more on the domestic regulation of hazardous substances.

902 Poorer states may also be less equipped to prevent the possible harm that hazardous waste may cause.

903 See Umenze 2019 *SAJELP* 146-184; Tladi 2000 *CILSA* 210-222 for more in this regard.

904 Persistent organic pollutants are described in the introduction to the *Stockholm Convention* as chemicals with toxic properties that "resist degradation, bio accumulate, and are transported through air, water, and migratory species across international boundaries and can be deposited far from their place of release, where they accumulate in terrestrial and aquatic ecosystems".

in the Treaty.[905] Government adopted a *National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants* (2012), the *Regulations Phase-out the Use of Persistent Organic Pollutants* (2019), and the *Regulations Prohibiting the Production, Distribution, Import, Export, Sale and Use of Persistent Organic Pollutants that are listed by the Stockholm Convention on Persistent Organic Pollutants* (2021) to comply with the provisions of the *Stockholm Convention*.[906]

The *Minamata Convention* entered into force in 2017 and aims to reduce mercury emissions and releases to protect human health and the environment from its harmful effects.[907] It does so among others by compelling states to phase-out certain mercury containing products, disallowing the manufacture of such products, disallowing the use of mercury in certain manufacturing processes, to take measures to control emissions and releases thereof, to store mercury in an environmentally sound manner, and to dispose of mercury containing waste in an environmentally sound manner.[908] As of 2019 government is obligated to comply with the provisions of the *Minamata Convention*, and have published the *Draft National Regulations for the Management of Mercury in South Africa* (2022) to give effect to the Convention.[909]

The *Rotterdam Convention* is a treaty drafted under the guidance of the UN Environment and the FAO and was adopted to protect people from harm that may be caused by certain hazardous chemicals, including pesticides.[910] The *Rotterdam*

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905 Articles 3(1)(a), 3(2), annex A of the *Stockholm Convention*. South Africa ratified the *Stockholm Convention* on 4 September 2002 and it entered into force on 17 May 2004 - DIRCO 2022 https://bit.ly/2N4rIMB. See also art 3(1)(b), annex B of the *Stockholm Convention* for a list of chemicals whose use and production must be restricted. For more on persistent organic pollutants and the *Stockholm Convention* in South Africa - see Bouwman 2004 *SAJS* 323-328; Glazewski "International Environmental Law: The International Dimension" 28-29.

906 These regulations were published under s 44(1)(aA) read with s 47 of the *NEMA*.

907 Article 1 of the *Minamata Convention*.

908 Articles 3-11 of the *Minamata Convention*. For more on the *Minamata Convention* - see Ross *An Analysis of the Minamata Convention on Mercury and its Implications for the Regulation of Mercury in South Africa* 16-30.

909 South Africa signed the *Minamata Convention* on 10 October 2013 and ratified it on 29 April 2019 - DIRCO 2022 https://bit.ly/2N4rIMB.

910 Article 1 of the *Rotterdam Convention*; Glazewski "International Environmental Law: The International Dimension" 28. For more on the regulation of pesticides in South Africa - see *Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act* 36 of 1947; Giliomee "Pesticides" 745-764; para 4.3.2.5 below.

Convention prescribes specific procedures that states must follow in dealing with the import and export of banned and severely restricted chemicals and pesticide formulations, and it draws states' attention to the risks associated with the import and export of these chemicals if they cannot be managed safely.[911] These procedures include that states have to label chemicals and that the labels have to comply with specific requirements, they have to exchange information on chemicals, they have to provide export notifications for certain chemicals, and states have to provide prior informed consent forms for imports and exports of certain chemicals.[912] Government acceded to this Treaty in 2002 and therefore has to comply with these procedures.[913] In May 2021 government published regulations to domesticate the *Rotterdam Convention* procedures.[914]

3.3.3.7 Climate change-related instruments

Government ratified many climate change related instruments, beginning with the *United Nations Framework Convention on Climate Change* (1992) (hereafter *UNFCCC*).[915] The *UNFCCC* was the first international law instrument adopted by states to address climate change, and for this purpose it underpins essential principles that states could follow to achieve a stabilisation of greenhouse gas concentrations in the atmosphere within a time frame sufficient to prevent adverse climate change impacts.[916] The principles among others include that climate change must be addressed in accordance with states' common but differentiated

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911 Articles 5-6 of the *Rotterdam Convention*.

912 Articles 10-15 of the *Rotterdam Convention*.

913 *Pesticide Management Policy for South Africa* (2010) 7. South Africa ratified the *Rotterdam Convention* on 4 September 2002 and it entered into force on 24 February 2004 - DIRCO 2022 https://bit.ly/2N4rIMB. For more on the *Rotterdam Convention* - see VanDorn 1998 *Colo J Int'l Envtl L and Pol'y* 281-290.

914 *Regulations to Domesticate the Requirements of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade* (2021). In addition government recently published the *Draft Group I, Category A, Hazardous Substances: Declaration* (2022) and *Draft Group I, Category B, Hazardous Substances: Declaration* (2022) for public comment, and both of these contain measures to restrict or ban the use of substances that are the subject of the *Rotterdam Convention*, the *Minamata Convention*, and the *Stockholm Convention*.

915 The *UNFCCC* is a binding treaty signed by South Africa on 15 June 1993 and it entered into force on 27 November 1997 - DIRCO 2022 https://bit.ly/2N4rIMB. For more on the *UNFCCC* - see Glazewski and Du Toit "International Climate Change Law" 6-18; Rumsey "Climate Change: Impacts, Adaptation, and Mitigation; Threats and Opportunities" 1047-1077.

916 Article 2 of the *UNFCCC*.

responsibilities and respective capabilities, that the needs of developing states must be considered, that states must adhere to the precautionary principle, and that they have to promote sustainable development.[917] The general obligations imposed on government by the *UNFCCC* are mostly limited to the monitoring and reporting of greenhouse gas emissions, the development of mitigation programmes and strategies, preparing for adaptation, and co-operating in research.[918]

The *UNFCCC* was designed as an umbrella instrument under which states could agree to further action towards combating climate change, and consultations in this regard led to the *Kyoto Protocol to the United Nations Framework Convention on Climate Change* (1998) (hereafter *Kyoto Protocol*), its *Doha Amendment to the Kyoto Protocol* (2012) (hereafter *Doha Amendment*), and the *Paris Agreement* (2016) follow-up.[919]

The *Kyoto Protocol* entered into force in 2005 and set legally binding emission reduction targets for developed states that ratified the instrument.[920] The *Kyoto Protocol* does not set any compulsory emission reduction targets for developing states (including South Africa) and they could therefore reduce their emissions on a voluntary basis, which caused some controversy.[921] Similar to the obligations imposed by the *UNFCCC*, the *Kyoto Protocol* prescribes that government has to

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917 Article 2(1)-(5) of the *UNFCCC*; Glazewski and Du Toit "International Climate Change Law" 7-8.

918 Article 4 of the *UNFCCC*; Rumsey "Climate Change: Impacts, Adaptation, and Mitigation; Threats and Opportunities" 1052; Kidd *Environmental Law* 60-61. Most obligations imposed by the *UNFCCC* relate to developed states, and South Africa is a developing state. Government has however published the *National Greenhouse Gas Emission Reporting Regulations* (2017) towards complying with its obligations in this regard.

919 Rumsey "Climate Change: Impacts, Adaptation, and Mitigation; Threats and Opportunities" 1052. For a discussion on the chronological development of the *UNFCCC* meetings and instruments - see Glazewski and Du Toit "International Climate Change Law" 18-26; Carter and Barnard "Demystifying the Global Climate Change Regime" 1-21.

920 Article 3 of the *Kyoto Protocol*. This is in line with the common but differentiated responsibility principle as prescribed in the *UNFCCC*. See also principle 12 of the *Stockholm Declaration*; Scholtz 2008 *SAYIL* 113-136. For a discussion on the justiciability of the obligations imposed by the *UNFCCC* and the *Kyoto Protocol* - see Strydom 2011 *TSAR* 373-382.

921 Kidd *Environmental Law* 60; Rumsey "Climate Change: Impacts, Adaptation, and Mitigation; Threats and Opportunities" 1052-1054; Scholtz 2008 *SAYIL* 114. The *Kyoto Protocol* identifies three flexible mechanisms that states can apply to achieve a reduction of greenhouse gas emissions, and the 'clean development mechanism' is one that South Africa as a developing state could utilise. For more on the 'clean development mechanism' in South Africa - see Scholtz 2009 *CILSA* 166-182; Glazewski and Du Toit "International Climate Change Law" 14-15; art 12 of the *Kyoto Protocol*; *White Paper on the Renewable Energy Policy of the Republic of South Africa* (2003).

monitor and report South Africa's greenhouse gas emissions, and in addition government is also obligated to develop a national climate change response strategy.[922] The first commitment period of the *Kyoto Protocol* reduction targets stretched from 2008 up until 2012, after which it was extended further by the *Doha Amendment* until 2020.[923] The *Doha Amendment* however, will only enter into force once ratified by 144 states, and this number has not yet been reached.[924]

The *Paris Agreement* (2016) is the latest international law instrument that was adopted in pursuance of addressing the adverse effects of climate change. Through this instrument states agree to attempt to hold the increase of the global average temperature to well below 2°C or even to limit it to 1.5°C above pre-industrial levels.[925] According to the *Paris Agreement* (2016) states are entitled to determine for themselves to what extent they will contribute to the global response to climate change.[926] South Africa signed and ratified the *Paris Agreement* (2016) and is therefore obligated to comply with its provisions,[927] and it is also in the process of developing legislation, currently in the form of a *Climate Change Bill* (2022), for this purpose.[928]

Government's efforts to combat climate change, and the commitments that it made to comply with the *Kyoto Protocol*, the *Doha Amendment*, and the *Paris Agreement* (2016), are paramount in consideration of the global threat that climate change pose to human health. These commitments also influence government's local approaches to climate change, and therefore the broader environmental health aims

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922 Article 10 of the *Kyoto Protocol*. See also the *National Climate Change Response White Paper* (2011) and the *National Climate Change Response Strategy for South Africa* (2004) for more on government's compliance to the *Kyoto Protocol*. For more on the *Kyoto Protocol* - see Tladi 2005 *Codicillus* 42-49; Telesetsky 1999 *Ecology LQ* 797-814.

923 Article 1(A) of the *Doha Amendment*; Glazewski and Du Toit "International Climate Change Law" 12. South Africa acceded to the *Doha Amendment* on 7 May 2015 - DIRCO 2022 https://bit.ly/2N4rIMB.

924 Articles 20-21 of the *Kyoto Protocol*; UNFCCC 2018 https://bit.ly/2wDGqjm.

925 The agreement set goals toward mitigation *and* adaptation - art 2(1)(a)-(b) of the *Paris Agreement* (2016).

926 The Agreement therefore moves away from the pre-determined compulsory reduction targets as set out in the *Kyoto Protocol* - arts 3, 4, 7, 9, 10-11, 13 of the *Paris Agreement* (2016).

927 South Africa signed the *Paris Agreement* (2016) on 22 April 2016 and it entered into force on 1 December 2016 - DIRCO 2022 https://bit.ly/2N4rIMB. See also arts 20-21 of the *Paris Agreement* (2016); UN 2016 http://bit.ly/23EY1Py; UNFCCC 2016 http://bit.ly/1saxGxy.

928 See also the *National Climate Change Adaptation Strategy* (2019); para 4.3.2.6 below.

and subsequent regulation thereof.[929]

The overview above sought to illustrate that international law instruments do impose environmental health-related obligations on South Africa.[930] The ensuing chapters will explain and put these obligations in the proper context through an examination of the legal environmental health mandate in South Africa, and the implementation and enforcement of said mandate.[931] The following observations can be made in respect of the above overview at this stage: a) numerous international law instruments have a bearing on environmental health in South Africa and they impose diverse obligations on government, b) these instruments can be divided into two groups, those that impose obligations on government that pertain to environmental health in South Africa, and those that impose obligations on government that pertain to South Africa's relationships and interactions with other states,[932] c) South Africa's commitment to comply with these obligations are not necessarily legally binding (it could be moral and/or political), which means that the impact of these obligations will depend on the type of instrument from which they arise,[933] d) even if South Africa committed to comply with these international law instruments, they will still only apply indirectly domestically as interpretive aids for the courts, unless government incorporates them into South African law, in

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929 Take further note of the possible role that human rights obligations can play with respect to climate change - *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Climate Change* 31/52, UN Doc A/HRC/31/52 (2016) 9-19. For more on South Africa's legal climate change regime - see Kotzé *et al* "Climate Change Law and Governance in South Africa: Setting the Scene" 21-26.

930 See also the *Montreal Protocol on Substances that Deplete the Ozone Layer* (1987) and the *Vienna Convention for the Protection of the Ozone Layer* (1985), two treaties that South Africa ratified as part of the international legal response to restore damage to the ozone layer (phasing out ozone-depleting substances). South Africa, like many other states, adhered to the legally binding obligations imposed by these treaties, which is why both were very successful in their respective goals. Although these treaties are not relevant to this research, they nevertheless show that states can successfully address global environmental problems by adhering to international law. For more on these treaties - see Glazewski "International Environmental Law: The International Dimension" 27; Devine "International Environmental Law" 147-148.

931 See chs 4-5 below.

932 The *SPS Agreement* (foodstuffs-related), *IHRs* (communicable disease-related), *Basel Convention*, *Stockholm Convention*, and *Rotterdam Convention* (hazardous substances, chemicals, and waste-related) impose obligations on South Africa that relate only to other states, whereas all the other instruments impose obligations that relate to environmental health practice on the domestic plane - see paras 3.3.3.1-3.3.3.7 above. See para 3.2.1.1 above for more on the different types of international law instruments.

933 That is whether it is a treaty or a soft law instrument - see para 3.2.1.1 above.

which case they will create obligations for government on the domestic plane,[934] e) the provisions of the instruments that have been incorporated into South African law will form part of South Africa's legal environmental health mandate and will therefore have a direct influence on the practice of environmental health,[935] f) the international law instruments that apply indirectly in South Africa could still play a vital role, particularly where the interpretation of some of the fundamental rights in the *Constitution* are concerned,[936] and could subsequently inform and shape the constitutional foundation of environmental health domestically,[937] g) the sheer number of legally binding obligations imposed on government by the environmental health-related international law instruments is indicative of the comprehensive scope of environmental health, its complexity, and the broad range of issues environmental health governance has to address – which also partly explains why South Africa's legal environmental health mandate may be fragmented.[938]

Seeing that the environment is not bound by states' national borders, an exposition on states' duties and responsibilities concerning transboundary environmental harm follows below.

3.4 International environmental health responsibility[939]

It might be futile, in some instances, for an individual state to attempt to prevent environmental harm without the co-operation of its neighbouring states, especially where the spread of disease or the pollution of environmental mediums are

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934 South Africa will still incur a responsibility towards other states to fulfil its obligations where it made commitments to comply with treaties (create legally binding obligations), even if it fails to incorporate such instruments domestically - see para 3.2.1.2 above.

935 See chs 4-5 below for more on the legal environmental health mandate.

936 For instance the human right to health in art 12 of the *ICESCR*, the right to a healthy environment in art 24 of the *ACHPR*, and the rights to adequate water, sanitation, food, and housing as portrayed by art 11(1) of the *ICESCR* may influence their domestic iterations as entrenched in ss 24, 26-27 of the *Constitution* - see paras 3.3.1, 3.3.3.1-3.3.3.4 above, 4.2.1-4.2.2 below.

937 See para 4.2.3 below for a discussion hereof. Even though some of the instruments that impose obligations on South Africa are soft in nature, and therefore only binding in the political sense, they need not be disregarded, as they too contribute as interpretive aids, and could still inform environmental health governance in South Africa as well.

938 See para 4.3 below.

939 Every state must realise "it is not in its interest to retreat into a domestic sphere or to detach itself from global responsibility" - Fidler *International Law and Public Health* 27.

concerned. Malaria, for example, is a communicable disease that is transmitted through mosquitoes (vector) that can easily move across state borders.[940] If one state were to attempt to eradicate mosquitoes to reduce or prevent the occurrence of malaria in its territory, mosquitoes can simply migrate back from other states, which will render the effort futile. However, if states co-operate with one another and combine their efforts to eradicate mosquitoes in all their territories, they could have more success to combat malaria.[941] The same also applies to air pollution or the pollution of a watercourse for instance, as air moves easily and water can easily flow across state borders. This means that one state, the offender so to speak, could cause an environmental hazard in the territory of another, where the people in the victim state will suffer from such a hazard.[942] It is therefore unsurprising that commentators generally agree that "…the distinction between national and international public health is no longer relevant…", which is especially evident as recently shown by the ongoing Covid-19 pandemic.[943]

Harmful environmental conditions could emerge from within states' own territories, from the territories of other states (transboundary environmental hazards), or may even occur globally.[944] This raises the following issues for present purposes: a) a state's duty to co-operate, b) its duty to refrain from causing and to prevent

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940 In South Africa the transmission of malaria occurs mostly in the Limpopo, Mpumalanga, and KwaZulu-Natal provinces. Malaria is also prevalent in the states that border these provinces (Zimbabwe, Mozambique, and Swaziland). For more on the malaria risk areas in South Africa - see DOH 2018 https://bit.ly/2HkhQMJ.

941 A tri-national malaria control programme was launched in 1999 between South Africa, Swaziland, and Mozambique to reduce the spread of malaria and it reduced the occurrence of malaria markedly - Sharp *et al* 2007 *Am J Trop Med Hyg* 42-47. The spread of the Ebola virus in West Africa during 2014 (a haemorrhagic communicable disease that is transmitted through direct contact of blood or bodily fluids of an infected person) also illustrates the transboundary nature that environmental hazards can assume. At that time it was described as the "most severe acute public health emergency in modern times", although the current Covid-19 pandemic probably dwarfs it in comparison - Stein 2015 *Int J Clin Pract* 49-58; Aylward *et al* 2014 *NEJM* 1482; Frieden *et al* 2014 *NEJM* 1177-1180; Gatherer 2014 *JGV* 1619-1624; WHO 2014 http://bit.ly/1byemSq.

942 Some environmental hazards can also be global in nature. Climate change, for example, represents an urgent and potentially irreversible threat to the *planet* - preamble to the *Climate Change Bill* (2022); See also para 3.4.1.6 below.

943 Fidler *International Law and Public Health* 16.

944 Kotzé remarks that the environment has "distinct global properties" - Kotzé *Global Environmental Governance* 36; Brundtland 2005 *TEJPH* 3; Johnson *Environmental Policy and Public Health* 325.

environmental harm, and c) the enforcement of a state's responsibility.[945] 'State co-operation' refers to a state's obligation to co-operate with other states to address environmental health challenges of a transboundary nature.[946] The 'duty to refrain from causing and to prevent environmental harm' refers to a state's obligation to *refrain* from causing harmful environmental conditions in other states, and to take measures to *prevent* environmental harm in another state that could arise from activities within its own territory.[947] The 'enforcement of a state's responsibility' refers to the legal mechanisms that states have at their disposal whereby they could call others to account should they fail to comply with their duties to co-operate and to refrain from causing and to prevent environmental harm.[948] Each of these issues are scrutinised below.

3.4.1 Duty to co-operate, and duty to refrain from causing and to prevent environmental harm

Sands observes, albeit with specific reference to environmental problems and not environmental health as such, that "*ad hoc* and disparate responses by individual states will not solve these pressing problems".[949] This much is apparent in consideration of the environment's complete disregard for state borders, and the associated transboundary or global health risks that could arise in consequence thereof. What is not as apparent, however, is *how* states could be compelled to co-operate with one another when presented with a harmful environmental condition of a transboundary nature, and equally, *why* states must refrain from causing harmful environmental conditions in other states and take measures to prevent such conditions. These duties stem from states' commitments to comply with specific

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945 Kotzé *Global Environmental Governance* 47, 187-191; Kidd *Environmental Law* 45.

946 The preamble to the *UNFCCC*, for example, acknowledges that "the global nature of climate change calls for the widest possible co-operation by all countries and their participation in an effective and appropriate international response". See para 3.4.1 below for more on this duty.

947 See paras 3.4.1.1-3.4.1.8 below for more on this duty.

948 See para 3.4.2 below for more on these mechanisms.

949 Sands 1989 *Harv Int'l L J* 393; Sands *et al International Environmental Law* 3; Fidler *International Law and Public Health* 16. Fidler holds a somewhat opposing view and argues that it is "tempting to opine that solutions must be international or global. While such opinions have substance, they obscure the fact that all disease is ultimately local in impact and that humanity still remains divided into sovereign states" - Fidler *International Law and Public Health* 69.

treaties and soft law instruments,[950] and in the absence of such commitments,[951] from general principles of international law and international customary law.[952]

3.4.1.1 Human rights instruments

The duties that a state has towards other states that pertain to environmental health matters of a transboundary nature foremost originate from a state's obligation to realise all human rights, including the human right to health.[953] In terms of the provisions of both the *UN Charter* and the *ICESCR*, states are individually responsible to realise the human right to health in their territories, but they should also do so through international assistance and co-operation.[954] The *ICESCR's* General Comment on the right to health elaborates on this point and explains that states "should recognize the essential role of international co-operation and comply with their commitment to take joint and separate action to achieve the full realisation of the right to health".[955] It is in other words essential that states co-operate to realise the human right to health, as per these instruments.

In addition, the trio of duties that arise from a state's obligation to realise all human rights also apply to states *vis-à-vis* other states. This means, as far as the human right to health is concerned, that states have a duty to respect people's enjoyment of the right to health in its own territory and in the territory of other states, a duty to prevent parties in its own territory from violating the right in other states and to

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950 International law instruments (global health law) are receiving "unprecedented attention as a mechanism of global health co-operation" - Taylor and Bettcher 2002 *Bulletin* 923; Fidler *International Law and Public Health* 44-53. For an examination and definition of 'global health law' - see Gostin and Taylor 2008 *PHE* 55-56; Gostin and Sridhar 2014 *NEJM* 1732-1733.

951 The obligations that treaties and soft law instruments impose on states will only be applicable once states have actually committed to comply with them - see para 3.2.1.2 above.

952 Some of the rules and principles that can be found in treaties and soft law instruments have evolved into international customary law. This will be explained below.

953 This is also the case as far as the human right to a healthy environment is concerned. Principle 13 of the latest report by the UN's Special Rapporteur on Human Rights and the Environment specifically affirms that "[s]tates should co-operate with each other to establish, maintain, and enforce effective international legal frameworks in order to prevent, reduce, and remedy transboundary and global environmental harm that interferes with the full enjoyment of human rights" - *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment* 37/59, UN Doc A/HRC/37/59 (2018) 15-16.

954 Articles 55-56 of the *UN Charter*; art 2 of the *ICESCR*.

955 UN CESCR *General Comment No 14* para 38; UN CESCR *General Comment No 3* para 13.

prevent other states from violating the right in its own territory (protect), and a duty to provide the necessary aid to other states if required (fulfil).[956] The duty to refrain from causing and to prevent environmental harm in other states can be derived from this trio of duties, and is therefore arguably implicit in states' obligation to realise the human right to health.[957]

3.4.1.2 Health-related instruments

The duty to co-operate further emanates from some health-related international law instruments. One of the principles in the preamble to the *WHO Constitution* reads that "the health of all peoples … is dependent on the fullest co-operation of … states".[958] The *Declaration of Alma-Ata* (1978) asserts that the gross inequality in the health status of people all around the world is unacceptable, and it therefore declares that people's health should be a "common concern" to all states,[959] which also means that states have to co-operate in order to redress this inequality.[960] The *Declaration of Alma-Ata* (1978) furthermore stresses that the health of people in any state concerns and benefits every other state, which is why it also declares that states have to co-operate in a spirit of partnership to ensure that every human could achieve his or her highest attainable standard of health.[961]

According to the WHO's *Global Strategy for Health for All* (1981) states must become

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956 UN CESCR *General Comment No 14* paras 34-37, 39; para 3.3.1 above. The 'fulfil' duty causes some controversy in this context because it might translate more to an obligation to provide international assistance. The primary duty to fulfil a human right should still reside with the domestic state, and the extraterritorial duty ought to be complementary only. The researcher accepts that the provision of aid towards fulfilling the right to health extraterritorially must be regarded as complementary to the receiving state's primary obligation to fulfil the right within its own territory, as is also the current status quo - Bulto 2011 *SAJHR* 274-278.

957 Human rights are obligations *erga omnes*. These obligations are a concern for the international community as a whole, and as an international human right, the right to health is also an *erga omnes* obligation. Although *erga omnes* obligations do not inherently impose a duty on states to co-operate, this much can be inferred from the provisions relating to the human right to health as discussed in para 3.3.1 above - Den Exter *Health Care Law-making in Central and Eastern Europe* 63-66. For more on *erga omnes* obligations in this context - see Sands *et al International Environmental Law* 155-159.

958 The *WHO Constitution* is a treaty that is legally binding on member states of the WHO, and South Africa and all the states that share borders with South Africa are WHO members - see para 3.1.1 above.

959 Article 2 of the *Declaration of Alma-Ata* (1978).

960 UN CESCR *General Comment No 14* para 38; para 3.3.1 above.

961 This Declaration instils a sense of responsibility between states - art 9 of the *Declaration of Alma-Ata* (1978).

self-reliant (independent) as far as their health matters are concerned, but it concedes that no state can be self-sufficient (competent) in this regard.[962] For this reason the Strategy contends that states will only be able to overcome the obstacles to achieve the realisation of the highest standard of health for all through international solidarity.[963]

These health-related instruments therefore essentially provide that people's health is a concern for the international community as a whole, and that states (the individual parts that make up the international community) subsequently have to co-operate in the interest of people's health.[964]

3.4.1.3 Environmental-related instruments

The duties that states have toward one another in relation to environmental health can also be inferred from environmental-related international law instruments, among others the *Stockholm Declaration* and the *Rio Declaration*.[965] The *Stockholm Declaration* stipulates that co-operation between states will be "essential to control, prevent, reduce, and eliminate adverse environmental effects resulting from activities conducted" by states, and that "international matters concerning the protection and improvement of the environment should be handled in a co-operative spirit".[966] The *Rio Declaration* likewise proclaims that states "shall co-operate in good faith and in a spirit of partnership".[967] In addition the *Rio Declaration* prescribes that "states must co-operate to discourage and prevent the relocation and transfer of any activities and substances that may cause severe environmental

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962 This Strategy basically implores states to realise the right to health on their own initiative (independently), whereas it also notes that states will rarely be able to do so without the help of others.

963 *Global Strategy for Health for All* (1981) 34-35; para 3.3.2.2 above.

964 Note however that the *Declaration of Alma-Ata* (1978) and the *Global Strategy for Health for All* (1981) are soft law instruments and therefore do not create legally binding obligations - see para 3.2.1.1 above.

965 As legally non-binding soft law instruments, the obligations imposed on states by these declarations serve only as guidelines - Devine "International Environmental Law" 159; paras 3.3.1, 3.3.3.1 above.

966 Principle 24 of the *Stockholm Declaration*.

967 Principle 27 of the *Rio Declaration*. Note the similarity between this principle and art 9 of the *Declaration of Alma-Ata* (1978), although the former pertains to the environment and the latter to human health.

degradation or are found to be harmful to people's health in other states",[968] and that states must "provide prior and timely notification and relevant information to potentially affected states on activities that may have a significant adverse transboundary environmental effect".[969] The provisions of these instruments therefore make it clear that states must co-operate with one another to protect people from environmental hazards.[970]

3.4.1.4 Regional instruments

On the regional front Southern African states are compelled by the *Protocol on Health in the Southern African Development Community* (1999) (hereafter *SADC Health Protocol*) to promote, co-ordinate, and support their individual and collective efforts to attain an acceptable standard of health for all their people.[971] This is perhaps the most pertinent source of the duty to co-operate from a South African perspective considering that environmental health challenges of a transboundary nature that could affect South Africa will most likely involve its bordering states, and this Protocol binds these states as well.[972] The *SADC Health Protocol* prescribes that states:

> Shall collaborate, co-operate, and assist each other in a cross-sectoral approach in addressing regional environmental health issues and other concerns, including toxic waste, waste management, port health services, pollution of air, land, and water, and the degradation of natural resources.[973]

This provision explicitly compels South Africa and its bordering states to co-operate with one another for the purpose of environmental health. The Protocol further provides that states must co-operate to a) co-ordinate activities that have the potential to improve the health of their people, b) co-ordinate efforts to prevent,

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968 Principle 14 of the *Rio Declaration*.

969 Principle 19 of the *Rio Declaration*.

970 See also principles 5, 7, 9, 12 of the *Rio Declaration* that require state co-operation with respect to specific topics. They are poverty eradication, restoring the integrity of earth's ecosystem, strengthening endogenous capacity building for sustainable development, and promoting a supportive and open international economic system.

971 Article 2 of the *SADC Health Protocol*.

972 The *SADC Health Protocol* is a legally binding treaty open for signature to all members of the SADC. All the states that share borders with South Africa ratified the *SADC Health Protocol*, except for Swaziland who only signed the treaty. South Africa ratified this treaty on 4 July 2000 and it entered into force on 14 August 2004 - DIRCO 2022 https://bit.ly/2N4rIMB.

973 Article 23 of the *SADC Health Protocol*.

control, and eradicate communicable and non-communicable disease, c) assist in regional surveillance of communicable and non-communicable disease, d) prevent disease and promote well-being, and e) to reduce the prevalence of malaria and tuberculosis.[974]

As for to the duty to refrain from causing and to prevent environmental harm, the *Revised Protocol on Shared Watercourses in the Southern African Development Community* (2000) prescribes, specifically in relation to watercourses shared by Southern African states, that states must prevent, reduce, and control pollution of such watercourses if their pollution could cause harm to the environment or to people's health in other states.[975]

Some general principles of international law impose similar duties or nuanced versions thereof on states as well. These include the principle of co-operation, the principle of responsibility, the precautionary principle, and the polluter pays principle, each of which is discussed in more detail below.

3.4.1.5 Principle of co-operation

The 'principle of co-operation' originated as a derivative product from the 'principle of good-neighbourliness',[976] which is articulated in article 74 of the *UN Charter*, and is currently regarded as international customary law.[977] As a derivative yet distinct principle, it has been depicted in many international law instruments that call for co-operation among states, like those discussed above. Kiss and Shelton explain that the duty to co-operate "emerges from the very rationale of international agreements".[978] For this reason they argue that the 'principle of co-operation'

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974 Articles 2(a)-(b), 6(c), 8(a), 9, 11(2), 12-13 of the *SADC Health Protocol*.

975 Article 4(2)(b) of the *Revised Protocol on Shared Watercourses in the Southern African Development Community* (2000). South Africa signed this protocol on 28 August 1995 and it entered into force on 28 August 1998. This treaty also binds all the other Southern African states - DIRCO 2022 https://bit.ly/2N4rIMB.

976 For more on the 'principle of good-neighbourliness' - see Lynham 1995 *JCULR* 172-189.

977 The principle evolved from the traditional maxim *sic utere tuo et alienum non laedas*, meaning property may not be used to injure the rights of another - *Lake Lanoux Arbitration France v Spain* (1957) 24 ILR 101; Devine "International Environmental Law" 136; Sands *et al International Environmental Law* 213-214. The 'principle of responsibility' is also a derivative of this maxim - see para 3.4.1.6 below.

978 Kiss and Shelton *A Guide to International Environmental Law* 12.

underlies all obligations that come from treaties, but also that treaties could specify the context in which co-operation is required.[979] The content of this principle was at the heart of the dispute in the *MOX Plant Case Ireland v United Kingdom* case,[980] in which it was affirmed that states do have a duty to co-operate, albeit with respect to the prevention of marine pollution – an obligation that arose from a treaty related to the law of the sea.[981] From this *dictum* it would appear that the 'principle of co-operation' has crystallised into international customary law, as Sands *et al* point out.[982] This means that it will apply to all states even in the absence of ratification of specific international law instruments to this effect.[983] Consequently, all states have to co-operate to address occurrences of harmful environmental health conditions of a transboundary nature by virtue of this principle, which is also an international customary law rule.[984]

3.4.1.6 Principle of responsibility

Principle 21 of the *Stockholm Declaration* and principle 2 of the *Rio Declaration* express the 'principle of responsibility'. The respective Declarations provide that states have:

> The sovereign right to exploit their own resources pursuant to their own environmental … policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

From this premise, the 'principle of responsibility' clearly consists of two parts, namely a state's sovereign right to exploit its own resources, and the responsibility to refrain from causing harm to the environment in territories of other states (also

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979 Kiss and Shelton *A Guide to International Environmental Law* 12-13. This can be seen, for instance, in the *SADC Health Protocol* and the *Rio Declaration* as discussed in paras 3.4.1.3-3.4.1.4 above.

980 *MOX Plant Case Ireland v United Kingdom* (2002) 41 ILM 405.

981 See also Devine "International Environmental Law" 138; Sands *et al International Environmental Law* 227; arts 123, 197 of the *United Nations Convention on the Law of the Sea* (1982).

982 Sands *et al International Environmental Law* 225-228; Devine "International Environmental Law" 138.

983 See para 3.2.1.1 above.

984 Birnie, Boyle and Redgwell *International Law and the Environment* 137-143, 152-164; *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Mapping Report* 25/53, UN Doc A/HRC/25/53 (2013) 17-18. This discussion does not aim to address the scope of the 'principle of co-operation', but merely serves to indicate that state do in fact have a duty to co-operate with one another.

sometimes referred to as the no-harm principle), the latter being most relevant for present purposes.

As subject of international jurisprudence, particularly in the *Trail Smelter Arbitration United States v Canada* case,[985] the principle has been described, in the specific context of injury that arose from fumes, to mean that "no state has the right to use or permit the use of its territory in such a manner so as to cause injury of a *serious consequence*".[986] In other words environmental harm has to be serious or significant, which has also been described to mean more than *de minimus*. This *dictum* relies on the assertion that the 'principle of responsibility' too is a derivative product of the 'principle of good-neighbourliness', which in itself embodies the obligation of "every state not to use its territory for acts contrary to the rights of other states".[987] This was also partially confirmed in the subsequent *Lake Lanoux Arbitration France v Spain* case that involved the diversion of a river across state borders,[988] in which it was held that "France is entitled to exercise her rights; she cannot ignore the Spanish interests. Spain is entitled to demand that her rights be respected and that her interests be taken into consideration".[989]

It therefore appears that the principle of responsibility in the least entails that states must respect the rights of other states when using their own territories, where the respect of other states' rights could include the duty to refrain from causing harm to the environment in the territories of other states, as that would be in their interest.

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985 *Trail Smelter Arbitration United States v Canada* (1941) 3 RIAA 1907.

986 Emphasis added - see *Trail Smelter Arbitration United States v Canada* (1941) 3 RIAA 1907. States that wish to rely on this principle have to prove "by clear and convincing evidence" that significant environmental harm was caused by or in another state - Beyerlin and Marauhn *International Environmental Law* ch 6.1; Sands *et al International Environmental Law* 207-208; Glazewski "International Environmental Law: The International Dimension" 12-20. This principle has also been scrutinised in subsequent international jurisprudence and has been reproduced in various other international law instruments. For more on these - see Sands *et al International Environmental Law* 206-210.

987 Article 74 of the *UN Charter*; Sands *et al International Environmental Law* 206-208; Thorp *Climate Justice* paras 5.4.5, 6.5.5. See also the explanation of the maxim *sic utere tuo et alienum non laedas* above.

988 *Lake Lanoux Arbitration France v Spain* (1957) 24 ILR 101.

989 Sands *et al International Environmental Law* 208; Glazewski "International Environmental Law: The International Dimension" 12-20; Devine "International Environmental Law" 133-136.

Kidd argues that the principle of responsibility imposes an additional duty on states to take measures to prevent environmental harm.[990] Based on this understanding the principle of responsibility contains a prohibitive and a preventative function, which means that states are forbidden to cause harm, *and* that states have to take measures to prevent or avoid harm.[991] In this context, environmental harm (or pollution for that matter) is generally accepted to refer to:

> The introduction by [hu]man, directly or indirectly, of substances or energy into the environment resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems, and impair or interfere with amenities and other legitimate uses of the environment.[992]

Based on this interpretation of the principle it is argued that a state's ability to progressively achieve the full realisation of the human right to health may be impeded (respecting the rights or interests of other states) through another state's conduct (prohibitive function) that causes environmental harm, or another state's failure (preventative function) to prevent environmental harm. As such this suggests that the application of the 'principle of responsibility' extends to matters concerning harmful transboundary environmental health conditions insofar states may not *cause* environmental harm that could endanger the health of people in other states, and must *prevent* environmental harm that could endanger the health of people in other states.[993]

It has to be pointed out though, having regard to states' sovereign right to use their own territories (the first part of the principle), that even though a state's freedom to carry out any activity in its territory regardless of the consequences is limited by the principle of responsibility, states do not have the absolute right to be free of

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990 Kidd *Environmental Law* 57-58.

991 See Beyerlin and Marauhn *International Environmental Law* paras 6.2-6.4 for more on the substantive obligations and procedural duties that arise in this regard.

992 *OECD Council Recommendation on Measures Required for Further Air Pollution Control* C (74) 219 of 14 November 1974; Kiss and Shelton *A Guide to International Environmental Law* 90. There is no universally accepted definition of 'environmental harm', but this definition appears in most major international texts.

993 Its application will depend on the proof of a causal link between the harm that people suffered and the environmental hazard that caused such harm, which in itself is very difficult to establish. This principle could not be applied to climate change, for instance, since there is no immediate link between its cause and its harmful effects as of yet (climate change does not fit the traditional conception of transboundary pollution) - Schwarte *No-harm Rule and Climate Change* 2-3.

harmful impacts from other states.[994] The limitation imposed on state sovereignty by the duty to prevent environmental harm (second part of the principle) invokes more of a duty of due diligence, which means that states must only act reasonably in preventing environmental harm, and not prevent environmental harm at all costs – hence a restriction on the absoluteness to be free from harmful impacts.[995]

There still seems to be some uncertainty regarding the normative content of this principle though, partly because there is no universally accepted definition of environmental harm,[996] its required threshold (any or serious injury) is unclear, and because the principle imposes varying standards of care and subsequent liability (fault or strict liability) on states through its application.[997] Notwithstanding these uncertainties however, it is still widely accepted as international customary law.[998] For this reason it can be construed that all states do have a duty to refrain from causing harmful environmental health conditions in other states, and all states have a duty to take measures to prevent environmental harm, where the extent of these duties (threshold of harm, standard of care) will depend on the facts of each case.[999]

3.4.1.7 Polluter pays principle

The 'polluter pays principle', as the name suggests, entails that the polluter should bear the cost of pollution.[1000] This implies that if one state is responsible for causing

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994 Birnie, Boyle and Redgwell *International Law and the Environment* 146.

995 Due diligence is the generally accepted standard, but this does not imply that it will be the standard in every case - Kiss and Shelton *A Guide to International Environmental Law* 20, 91; Birnie, Boyle and Redgwell *International Law and the Environment* 147-148.

996 This also relates to the question of whether this duty extends to human health impacts.

997 Sands *et al International Environmental Law* 201-202; Beyerlin and Marauhn *International Environmental Law* paras 6.2-6.4.

998 Sands *et al International Environmental Law* 206-207; Glazewski "International Environmental Law: The International Dimension" 8-9; Kiss and Shelton *A Guide to International Environmental Law* 20; Devine "International Environmental Law" 133-134, 159.

999 Birnie, Boyle and Redgwell *International Law and the Environment* 137-152; *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Mapping Report* 25/53, UN Doc A/HRC/25/53 (2013) 17-18. States will incur responsibility for environmental harm as a general rule, irrespective of whether the cause of the harm can be attributed to governmental bodies or private parties, as long as the harm is caused in the territory of that state, or in a territory under its control - Kiss and Shelton *A Guide to International Environmental Law* 21. This aspect is addressed in more detail in para 3.4.2 below.

1000 Kidd *Environmental Law* 9; Glazewski "The Nature and Scope of Environmental Law" 28-29; para 3.3.3.1 above.

pollution in another state, it may have to compensate that state financially. Admittedly this principle does not impose a duty on states to co-operate or to refrain from causing and to prevent environmental harm, but by holding polluters economically liable for polluting (internalising environmental externalities), it may discourage states from causing pollution in the first place, which is an indirect way to urge states to not cause and to prevent environmental harm.[1001] This principle has received broad support internationally,[1002] but it is doubtful whether it has achieved the status of a general principle of international law or international customary law.[1003] As such, its application will depend on which states are involved in a particular dispute, and whether they have committed to comply with international law instruments that contain this principle.[1004]

3.4.1.8 Precautionary principle

Some activities may cause environmental harm, but scientific evidence might not always be available or able to show that this will in fact happen. This does not mean, however, that people should be able to undertake any activity that has the potential to damage the environment simply because there is no evidence (available at that time) that prove that harm will definitely occur. The 'precautionary principle' has evolved precisely because of this need to protect the environment in the absence of scientific evidence to that effect. The principle basically necessitates that if there is no scientific evidence to indicate that a certain activity will cause environmental harm, states must nevertheless exercise caution to prevent such harm.[1005] States should in other words rather err in favour of environmental

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[1001] The 'polluter pays principle' appears in principle 16 of the *Stockholm Declaration* as well - Du Plessis and Kotzé 2007 *Stell LR* 179-183; Oosthuizen 1995 *SAJELP* 356-357. See also the *OECD Council Recommendation on the Implementation of the Polluter Pays Principle* C (74) 223 of 14 November 1974.

[1002] It also finds application domestically in South Africa - ss 2(4)(p), 28 of the *NEMA*. See also *Bareki NO v Gencor Ltd* 2006 1 SA 432 (T) (hereafter *Bareki*-case) for a flawed interpretation of this section. This provision in the *NEMA* has subsequently been amended to apply retrospectively. For more in this regard - see Du Plessis and Kotzé 2007 *Stell LR* 161-193.

[1003] For more on the 'polluter pays principle' - see Sands *et al International Environmental Law* 240-243.

[1004] See para 3.3.3.1 above.

[1005] Sands *et al International Environmental Law* 229-240; Cameron and Abouchar 1991 *BC Int'l and Comp L Rev* 2; McIntyre and Mosedale 1997 *J Envtl L* 222; Glazewski "The Nature and Scope of Environmental Law" 26-28; Devine "International Environmental Law" 139; Wirth 1995 *Ga L Rev* 634-637; para 3.3.3.1 above.

overprotection, and not the other way around. The principle has also been articulated in the *Stockholm Declaration* as follows:

> In order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.[1006]

There is still some debate as to whether the precautionary principle has developed into international customary law, predominantly because international courts are reluctant to declare it as such.[1007] Sands *et al* however, still argue that the principle should in the very least contribute to the interpretation of international law instruments by endorsing environmental protection in cases of scientific uncertainty.[1008] Therefore, based on this argument, and insofar the principle may be regarded as international customary law, if states were to conduct activities that could cause environmental harm, and thereby create possible human health risks, they should rather err on the side of caution to prevent such harm.[1009]

As evidenced from the discussion above, treaties, soft law instruments, general principles of international law, and international customary law rules clearly dictate that states have a duty to co-operate with one another when people's health and environmental harm is at stake, and they dictate that states have a duty to refrain from causing and to prevent environmental harm – a duty that underlies the entire environmental health effort where hazards of transboundary nature are concerned. South Africa is bound by these duties because of the commitments that it made to comply with these international law instruments, which means that government must co-operate with other states, it must refrain from causing environmental harm in other states, and it must prevent environmental harm in other states that originate from its territory. By virtue of the fact that these duties among others

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1006 Principle 15 of the *Stockholm Declaration*.

1007 Glazewski and Plit 2015 *Stell LR* 199-202; Cameron and Abouchar 1991 *BC Int'l and Comp L Rev* 2; Sands *et al International Environmental Law* 240; McIntyre and Mosedale 1997 *J Envtl L* 223-235.

1008 Sands *et al International Environmental Law* 240.

1009 In South African law the principle is reflected in s 2(4)(a)(vii) of the *NEMA*. For more on the 'precautionary principle' in South Africa - see Glazewski and Plit 2015 *Stell LR* 215-218; Kidd *Environmental Law* 9.

emanate from human rights instruments (which apply to all states), the principles of international law, and customary international law, government could also expect as much from most other states.[1010] This applies to the states that border South Africa as well, and more so because of the regional treaties that they have ratified.[1011] States may not always voluntarily comply with these duties however, therefore a discussion on the legal mechanisms that states could use to enforce compliance follows below.

3.4.2 Legal mechanisms to enforce state compliance with international environmental health-related duties

The proliferation of international law instruments that impose duties on states that relate to environmental health matters will be meaningless in the absence of voluntary compliance – unless there are mechanisms that make it possible for states to call others to account for their non-compliance. To put it differently, government will not be able to launch an adequate response to harmful environmental health conditions of a transboundary nature if it cannot ensure that other states will co-operate in this endeavour, or ensure that South Africa's bordering states will refrain from causing and prevent transboundary environmental harm in its territory.[1012] Accordingly, an analysis of the legal mechanisms whereby states can hold others accountable for breaches of their international obligations related to environmental

[1010] See paras 3.4.1.1, 3.4.1.5-3.4.1.8 above.
[1011] See para 3.4.1.4 above.
[1012] That is, if it cannot ensure that other states will comply with their international environmental health obligations.

health is warranted.[1013]

The discussions above reveal that states' international environmental health-related obligations stem from numerous international law instruments.[1014] The enforceability of these obligations depend on the type of instrument that imposes the specific obligation. Soft law commitments are not legally binding, and therefore even if states do not comply with their obligations that arise from soft law commitments, they cannot be held accountable in the legal sense.[1015] This means that government is not empowered by any legal means to compel other states to fulfil their obligations that derives from soft law commitments. Treaties, customary international law, and many of the general principles of international law do create legally binding obligations however, so it should be possible to hold states legally accountable to comply with their obligations that pertain to environmental health issues of a transboundary nature that come from these instruments, and specifically the duty to co-operate and the duty to refrain from causing and to prevent environmental harm.[1016]

States that fail to comply with their international obligations are in breach thereof,

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[1013] The purpose of this discussion is not to explain the role of law in relation to interstate relationships, but rather to examine what legal mechanisms states have at their disposal to call each other to account. For more in this regard - see Sands *et al International Environmental Law* 10; Fidler *International Law and Public Health* 27; Kotzé *Global Environmental Governance* 152-156. A discussion on the enforcement of the human right to health will not be included in this chapter either. Human rights are drafted with respect to 'individuals' specifically, whereas 'states' are the legal subject of the obligations discussed in these paragraphs. A distinction must therefore be drawn between a state that acts on behalf of its people (as subject), and an individual that lays a complaint against a state for a human right violation. The focus of this chapter is on a state's duties and states' duties towards each other, and not on an individual that wishes to hold a state accountable for is conduct (albeit action or inaction). See the *Resolution on Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law* Res 60/147, UN Doc A/Res/60/147 (2005) that was adopted by the UN, which sheds more light on the remedies available to victims of international human rights violations.

[1014] See paras 3.4.1.1-3.4.1.8 above.

[1015] This does not exclude states' possible discontent and subsequent retaliation at a political level (whichever form it may take), since soft law commitments are binding at a political level - see para 3.2.1.1 above.

[1016] See paras 3.2.1.1, 3.4.1 above.

and such breaches could give rise to disputes between them.[1017] Disputes between states can be resolved through dispute settlement.[1018] Treaties usually prescribe which dispute settlement procedures states *have* to follow in the event of a dispute regarding the interpretation and or application of the obligations imposed by a particular treaty.[1019] Government will therefore be bound to follow the settlement procedures of a treaty if a dispute arises between South Africa and another state with regard to environmental health obligations that arise from treaties. Naturally, the same cannot be said for disputes concerning international customary law or general principles of law, although the *UN Charter* does call on all states to settle their disputes through peaceful means.[1020] Dispute settlement can take on a number of forms, including 'diplomatic means' such as negotiation, consultation, mediation, and conciliation, and 'legal proceedings' in the form of arbitration or judicial settlement.[1021] States retain control of the proceedings and subsequent outcomes when they attempt to resolve their disputes through diplomatic means – thus it is not legally binding. By instituting legal proceedings however, states will be bound to the findings of the arbiter or court, whichever the case may be.[1022] Government can therefore institute either legally binding or non-binding proceedings in the hopes of inducing other states to comply with their duty to co-operate and to refrain from causing and to prevent environmental harm that arise from customary international law or general principles of international law. It must be pointed out though that disputes with other states will probably arise after the

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[1017] Other issues could also give rise to disputes between states, but this chapter is only concerned with the breach of international obligations. Note for instance developed and developing states' different perspectives on how climate change ought to be addressed (common but differentiated responsibility) - Wei *et al* 2016 *AAS* 632-643; Mayer 2014 *Chinese JIL* 7-12; Posner and Sunstein 2008 *Geo L J* 1565-1612.

[1018] See the UN *Handbook on the Peaceful Settlement of Disputes between States* 1-154 for more on dispute settlement between states.

[1019] Sands *et al International Environmental Law* 167. See e.g. art 75 of the *WHO Constitution* that prescribes that states must negotiate to settle disputes, and if negotiation fails, they must approach the International Court of Justice for judicial settlement; art 14 of the *UNFCCC* that prescribes that disputes must be settled through negotiation or any other peaceful means; art 30 of the *SADC Health Protocol* that prescribes that states must approach the SADC Tribunal. The SADC Tribunal has been disbanded however - Nathan 2013 *HRQ* 870-892.

[1020] Article 33 of the *UN Charter* prescribes that states must attempt negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, regional arrangements, or any other peaceful means to resolve their disputes.

[1021] See Sands *et al International Environmental Law* 167-189 for more on these mechanisms.

[1022] Sands *et al International Environmental Law* 167.

fact (after environmental harm has occurred or after people's health have been affected), which means that government might be able to move other states to cease conduct that causes environmental harm, or even to provide reparation for harm that already occurred, but it will rarely prevent states from causing environmental harm in the first place. Dispute settlement may therefore be inadequate to address issues of a transboundary nature as far as environmental health is concerned.[1023]

The breach of an international obligation might amount to an internationally wrongful act. In terms of the international rules governing state responsibility, states can be compelled to comply with their international obligations once an internationally wrongful act has been committed.[1024] The ILC codified the international rules that relate to state responsibility in the form of the authoritative *Draft Articles on Responsibility of States for Internationally Wrongful Acts* (2001) (hereafter *State Responsibility Articles*).[1025] The *State Responsibility Articles* is a restatement of the international rules on state responsibility,[1026] and it explains what an internationally wrongful act is, when an internationally wrongful act can be attributed to a state, which states may invoke other's international responsibility, and what the consequences of such invocation are.

The *State Responsibility Articles* provides that a state will commit an internationally wrongful act if its conduct, whether through an act or an omission, constitutes a breach of an international obligation.[1027] The breach of an international obligation refers to any state conduct that is "not in conformity with what is required of it by [an] obligation, regardless of its origin or character".[1028] In other words a state will

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[1023] Environmental health is fundamentally preventative in nature - see paras 2.3.1.3, 2.4.2.5 above.

[1024] The obligations that states have toward one another and toward the international community as a whole are known as the primary rules (substantive), whereas the rules that relate to state responsibility and the consequences that result from violations of these obligations are known as the secondary rules (procedural) - Dugard *International Law* 391; ILC *Yearbook of the International Law Commission 2001* 31. The latter is discussed in these paragraphs.

[1025] The *State Responsibility Articles* reflects the law as it currently stands and has been cited with approval in many international disputes, hence its authoritative status - Dugard *International Law* 392-393. For the sake of clarity, an 'internationally wrongful act' can be viewed as a delict (domestic) that a state commits at international level.

[1026] Dugard *International Law* 392.

[1027] Article 2(b) of the *State Responsibility Articles*.

[1028] Article 12 of the *State Responsibility Articles*.

commit an internationally wrongful act if it does not comply with its international obligations,[1029] and this applies to obligations that stem from *any* type of legally binding international law instrument.[1030] The *State Responsibility Articles* further provides that a state will only commit an internationally wrongful act if the wrongful conduct can be attributed to that state.[1031] In general, the only conduct attributable to a state is that of its governmental bodies or organs, or of others acting under the direction, instigation, or control of the state.[1032] The conduct of private persons could only be attributed to a state if the state 'acknowledges' *and* 'adopts' such conduct as its own.[1033] The mere endorsement or support of private persons' conduct by a state does not constitute acknowledgement and adoption though, states still have to accept responsibility for the conduct of private persons before their conduct will be attributed to the state.[1034] Therefore, if a state, through its government, authorised agents, or private persons whose conduct was accepted by the state, does not co-operate or does not refrain from causing or prevent environmental harm (as required by all the legally binding international law instruments discussed above),[1035] then that state will have committed an

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[1029] Non-compliance can take on many forms and goes as far as to include *any* behaviour that is *incompatible* with a state's particular obligation.

[1030] Soft law does not fall within this purview - ILC *Yearbook of the International Law Commission 2001* 54-57. A state must be bound by the international obligation at the time that the breach occurs - art 13 of the *State Responsibility Articles*; ILC *Yearbook of the International Law Commission 2001* 57-59.

[1031] Article 2(a) of the *State Responsibility Articles*.

[1032] Articles 4-10 of the *State Responsibility Articles*; ILC *Yearbook of the International Law Commission* 2001 38-52.

[1033] Article 11 of the *State Responsibility Articles*.

[1034] ILC *Yearbook of the International Law Commission 2001* 52-53; Dugard *International Law* 393-398. Dugard argues that states have an obligation to ensure that private persons within their territories do not cause environmental harm in other states specifically because states may not use or allow their territory to be used in such a way as to cause harm or injury in the territory of or to persons in another state - Dugard *International Law* 588-591; para 3.4.1.6 above. Kiss and Shelton are similarly of the view that states should incur international responsibility for the conduct of private persons whenever environmental harm is caused in the territory of the responsible state because such activities usually require state approval or licensing, and if states grant approval they will fulfil the obligation of acknowledgment and adoption (to take responsibility) - Kiss and Shelton *A Guide to International Environmental Law* 21-22.

[1035] See paras 3.4.1.1-3.4.1.8 above.

internationally wrongful act.[1036]

Once a state has breached an international obligation, the state against whom such an obligation was owed may invoke the breaching state's 'international responsibility'.[1037] In other words, if a state has an international obligation towards South Africa, and breaches that obligation, then government may invoke that state's international responsibility. This can be done by either presenting a claim, or by instituting legal proceedings against that state, thereby effectively 'accusing' it of committing an internationally wrongful act.[1038]

Once a state's responsibility for the breach of an international obligation has been invoked, it is obligated, as indicated by the *State Responsibility Articles*, to cease the conduct of wrongfulness, to offer assurances and guarantees of non-repetition of the conduct, and to make full reparation for any injury caused by the wrongful conduct.[1039] The purpose of 'cessation of the wrongful conduct' is to put an end to the violation of the international obligation.[1040] The obligation to 'offer assurances and guarantees of non-repetition' serves to restore confidence in a continuing

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[1036] Sands *et al International Environmental Law* 739-740. These international obligations do not befall private persons. In other words, private persons do not have to co-operate with other states or refrain from causing or prevent environmental harm. Private persons are accountable to their own governments though (who can expect and impose as much), and states therefore remain responsible for their conduct if so permitted or accepted. Wrongfulness may also be precluded under certain circumstances - arts 20-27 of the *State Responsibility Articles*.

[1037] Article 43(a)-(b) of the *State Responsibility Articles*; ILC *Yearbook of the International Law Commission 2001* 117-120. Some obligations arise from bi-lateral treaties (between two states only), and is therefore not applicable to other states. Similarly, multilateral treaties will only apply to those states who are members of that treaty. For this reason the obligation *must* be owed to the state that invokes the other's international responsibility. However, the international obligations applicable to transboundary environmental health issues mostly apply to all states (customary international law and general principles of international law). See also arts 44-48 of the *State Responsibility Articles*; ILC *Yearbook of the International Law Commission 2001* 120-128; Dugard *International Law* 402-405 for more on the procedural arrangements with regard to the invocation of state responsibility, and how an unaffected state may invoke another's responsibility in the case of breaches of obligations *erga omnes*.

[1038] For more on the invocation of state responsibility, including examples thereof - see Sands *et al International Environmental Law* 155; Birnie, Boyle and Redgwell *International Law and the Environment* 232-235.

[1039] Articles 30-31 of the *State Responsibility Articles*; Dugard *International Law* 400-402.

[1040] ILC *Yearbook of the International Law Commission 2001* 88-89. If a state bordering South Africa were to pollute a river flowing into South Africa for instance, the requirement of cessation would demand that the offending state has to stop polluting the river, thereby ceasing its wrongful conduct of violating the obligation to not harm the environment or territory of another state. The river may remain polluted though, which will necessitate reparation - an aspect that is addressed in further detail below.

relationship between states, and as the wording suggest, implies that the other state has to be put at ease that the violation will not be repeated.[1041] The obligation to 'make full reparation' means that the responsible state must endeavour to "wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if the act had not been committed".[1042]

An offending state must make reparations for either material or moral damage, depending on which was suffered as a result of its breach, and the scope thereof is limited to the injury that results from and can be ascribed to the wrongful act, it does not extend to any and all of the consequences of the breach.[1043] Reparation can take the form of restitution, compensation, satisfaction, or any combination of these.[1044] 'Restitution' refers to the re-establishment of a condition or situation to the same state that it was (or as near as possible) before a breach of an international obligation has occurred.[1045] It may not always be possible to re-establish a condition or situation, however, in which case compensation has to follow.[1046] 'Compensation' has to be given to all financially assessable injury suffered as a result of a breach that was not already made good by restitution. Compensation is usually monetary, but can also take on other forms of value.[1047] 'Satisfaction' is the last form of reparation and means that an offending state has to satisfy the state against whom the obligation was owed insofar restitution and compensation was insufficient to eliminate the consequences its breach. Satisfaction is a rather vague concept and has been performed in the past by issuing an apology or by making a declaration

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[1041] Take note however that an offer of assurances and guarantees of non-repetition may not be appropriate in all instances and will only be required when appropriate - ILC *Yearbook of the International Law Commission 2001* 89-91.

[1042] ILC *Yearbook of the International Law Commission* 2001 91.

[1043] For more on the causal link between the breach and the injury suffered - see ILC *Yearbook of the International Law Commission 2001* 91-94.

[1044] Article 34 of the *State Responsibility Articles*.

[1045] In this context restitution should be viewed as restoration of the environment to its prior condition, if at all possible.

[1046] ILC *Yearbook of the International Law Commission 2001* 96-98. It is especially difficult to provide restitution where environmental health is concerned, both for environmental damage and the human suffering that may have ensued.

[1047] ILC *Yearbook of the International Law Commission 2001* 98-105. Financial compensation could aid in rectifying the consequences of environmental harm and subsequent human health impacts, for instance by contributing to the rehabilitation of the environment, or by covering medical costs, but it may not be adequate to eliminate all the consequences, especially if there are irreparable environmental damage and incurable or irreversible health impacts.

admitting that a wrongful act was committed.[1048]

The invocation of a state's responsibility and the potential relief that it may provide is not without problems however, especially in relation to environmental health.[1049] The first relates to when a state will actually 'commit' an internationally wrongful act by not complying with its obligation to refrain from causing or to prevent environmental harm in light of the uncertainty concerning the normative content of this particular obligation.[1050] This uncertainty relates to whether 'environmental harm' refers to any or only serious harm (threshold), and whether fault has to be proven by the alleging state or if strict liability applies (standard of care).[1051] It may very well be that states could incur responsibility for their conduct sooner rather than later seeing that *any* conduct that does not conform to an international obligation will amount to an internationally wrongful act, but the wrongful act nevertheless has to be committed first.[1052]

Secondly, because of the potentially vast distance between the cause of environmental harm and its eventual consequences, it could be difficult or even impossible to establish a 'causal link' between its source and the actual injury that results from it.[1053] The harmful effects that the environment could have on people's health might take years to emerge, and sometimes only occur due to continuous exposure to environmental pollutants (not a single but continuous breach of an international obligation), exacerbating the difficulty in establishing a causal link even further, and therefore to prove that a state committed an internationally wrongful

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[1048] ILC *Yearbook of the International Law Commission 2001* 105-107; Sands *et al International Environmental Law* 714-715. Evidently, this will serve no purpose in the environmental health context.

[1049] An examination of possible solutions and answers to these problems do not fall within the scope of this research.

[1050] This is addressed in para 3.4.1.6 above.

[1051] Sands *et al International Environmental Law* 749-751. Depending on the obligation in question, some scholars argue that malice or culpable negligence (fault) is not a requirement, where others argue that states cannot be held responsible for causing harm that they could not objectively foresee - Birnie, Boyle and Redgwell *International Law and the Environment* 215-219; para 3.4.1.6 above.

[1052] ILC *Yearbook of the International Law Commission 2001* 54-57.

[1053] The source of pollution, particularly water and air pollution, and the harmful impacts thereof, could be hundreds of kilometres apart. See Briggs 2003 *BMB* 2-14 for a discussion on the difficulties in determining a causal link between environmental hazards and the harm that they may have caused, or to even identify the source of such harm.

act.[1054]

Thirdly, some environmental damage could be irreparable and the harm that people may have suffered as a result could be incurable – so it might not always be possible to eliminate the consequences of the wrongful conduct of a state through cessation, and reparation might prove insufficient to rectify all the harm that was caused.[1055] Prevention (compliance with international obligation) will therefore be more desirable than reparation (consequence of invoking state responsibility because of a breach of international obligation) in cases where the environment and people's health are concerned.[1056]

Based on these uncertainties, difficulties, and the shortcomings of reparation as opposed to prevention, Dugard contends that the existing mechanisms for the enforcement of international obligations (rules of international state responsibility) is an "inadequate legal system for … environmental protection".[1057] Birnie, Boyle and Redgwell similarly describe that the invocation of state responsibility in this context has "serious deficiencies".[1058] It currently remains however, as the only other mechanism whereby states can call each other to account for breaches of international obligations, apart from initiating dispute settlement proceedings.[1059]

The ILC has developed and adopted *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities* (2001) (hereafter *Transboundary Harm Articles*) to

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1054 Kiss and Shelton *A Guide to International Environmental Law* 20-21.

1055 It could be difficult to retrieve pollutants from the air or a river, and the clean-up and restoration of the environment may not be economically feasible. See Boyle "Reparation for Environmental Damage in International Law: Some Preliminary Problems" 17-26 for a discussion relating to the inadequacy of reparation in cases of environmental harm. See also Birnie, Boyle and Redgwell *International Law and the Environment* 225-232 for examples of reparation in cases where breaches of environmental-related international obligations occurred.

1056 The same applies to the quantification of environmental damage in economic terms - Kiss and Shelton *A Guide to International Environmental Law* 21-23; Sands *et al International Environmental Law* 749-754.

1057 Dugard *International Law* 592.

1058 Birnie, Boyle and Redgwell *International Law and the Environment* 236. Fidler explains that "international law is necessary but not sufficient for protecting and promoting public health on a global basis" - Fidler *International Law and Public Health* 372.

1059 Lastly also note that if a state refuses to comply with its duties after another state has invoked its responsibility to do so in terms of the *State Responsibility Articles*, then the injured state may also utilise countermeasures to induce the offending state to fulfil its obligations - arts 49-54 of the *State Responsibility Articles*; ILC *Yearbook of the International Law Commission 2001* 279-281.

supplement the *State Responsibility Articles*.[1060] The *Transboundary Harm Articles* is essentially a codification of international obligations that aim to prevent transboundary environmental harm, which are based on international legal precedents.[1061] The goal of the *Transboundary Harm Articles* is to prevent environmental harm as opposed to reaching the phase where the breach of an international obligation could lead to a need for reparation instead.[1062] The *Transboundary Harm Articles* only applies to activities that could cause significant transboundary environmental harm,[1063] and in this context 'significant' denotes something more than detectable, but not at the level of serious or substantial, and 'harm' pertains to both people and the environment.[1064] The *Transboundary Harm Articles* will therefore apply in cases where states intend to undertake activities that could cause harm to people's health in the territories of other states. To this end the *Transboundary Harm Articles* prescribes that states must take all appropriate measures to prevent transboundary environmental harm and it also specifies what these measures involve.[1065] This includes the following: a) that states must co-operate with one another,[1066] b) that authorisations must be obtained for any

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[1060] Kiss and Shelton *A Guide to International Environmental Law* 27. The ILC developed the *Transboundary Harm Articles* separately from the *State Responsibility Articles*, intending for them to be used in conjunction with each other where transboundary environmental harm is concerned - Percival "International Responsibility and Liability for Environmental Harm" 685. The addition of the *Transboundary Harm Articles* also indicates that the ILC is aware that the *State Responsibility Articles* may not always be adequate where environmental harm is concerned. Another reason why the *Transboundary Harm Articles* was adopted is because private parties are often responsible for environmental harm, but states are not willing to accept responsibility on a strict liability basis for the conduct of private parties - Birnie, Boyle and Redgwell *International Law and the Environment* 221-225

[1061] Birnie, Boyle and Redgwell *International Law and the Environment* 141.

[1062] ILC *Yearbook of the International Law Commission 2001* 148.

[1063] It is also only applicable to activities that are *not* prohibited by any international law instrument - art 1 of the *Transboundary Harm Articles*; ILC *Yearbook of the International Law Commission 2001* 149-151; Dugard *International Law* 591-592.

[1064] The *Transboundary Harm Articles* will apply in instances where an activity has a low probability of causing disastrous transboundary harm or a high probability of causing significant harm, taking cognisance of the combined effect of risk and harm - ILC *Yearbook of the International Law Commission 2001* 152-153.

[1065] Article 3 of the *Transboundary Harm Articles*. The standard of care imposed by the obligation to take all appropriate measures is one of due diligence on the part of the state. Due diligence manifests in the "reasonable efforts by a state to inform itself of factual and legal components that relate foreseeably to a contemplated [activity], and to take appropriate measures, in timely fashion, to address them" - ILC *Yearbook of the International Law Commission 2001* 154.

[1066] Article 4 of the *Transboundary Harm Articles*.

activity that might cause significant transboundary environmental harm,[1067] c) that states must assess the risks of these activities,[1068] d) that states must notify other states that might be affected by its activities,[1069] e) that states must consult with each other in this regard,[1070] and f) that states must exchange information to the extent that it is necessary to prevent their activities from causing transboundary environmental harm.[1071] It would seem then that if all states do comply with these measures, and perhaps most importantly those that share borders with South Africa, that South Africa will be able to prevent transboundary environmental harm from occurring domestically, and it will be in a position to co-operate with other states in this endeavour. Additionally the *Transboundary Harm Articles* also prescribes that states should settle any disputes that may arise with respect to the obligations that it imposes as expeditiously as possible through peaceful means of dispute settlement toward preventing transboundary environmental harm.[1072] Government could therefore initiate dispute settlement procedures to compel other states to comply with the obligations imposed by the *Transboundary Harm Articles* if they do not do so of their own accord.

[1067] This requirement effectively means that states must regulate activities that could cause transboundary environmental harm, thereby forcing states to take responsibility for the conduct of private parties and to play an active role in preventing environmental harm - art 6 of the *Transboundary Harm Articles*; ILC *Yearbook of the International Law Commission 2001* 157.

[1068] Risk assessment will enable states to determine what measures they must take to prevent environmental harm - art 7 of the *Transboundary Harm Articles*; ILC *Yearbook of the International Law Commission 2001* 157-159.

[1069] Article 8 of the *Transboundary Harm Articles*; ILC *Yearbook of the International Law Commission 2001* 159-160.

[1070] States must consult with one another in order to come to an agreement on the measures that they can take to prevent transboundary environmental harm, and they must do so in good faith - art 9 of the *Transboundary Harm Articles*; ILC *Yearbook of the International Law Commission 2001* 160-161.

[1071] This requirement seeks to nurture an ongoing relationship between states in order to minimise the possible transboundary environmental harm that could arise from a specific activity - art 12 of the *Transboundary Harm Articles*; ILC *Yearbook of the International Law Commission 2001* 164-165.

[1072] Article 19 of the *Transboundary Harm Articles*; ILC *Yearbook of the International Law Commission 2001* 169-170. The ILC drafted a set of principles that impose a duty on states to take measures to ensure that compensation is available to victims of transboundary environmental harm caused by hazardous activities, and the principles were also adopted by the UN - *Draft Principles on the Allocation of Loss in the Case of Transboundary Harm arising out of Hazardous Activities* (2006); ILC *Yearbook of the International Law Commission 2006* 110-182; *Resolution on Allocation of Loss in the Case of Transboundary Harm arising out of Hazardous Activities* Res 61/36, UN Doc A/Res/61/36 (2006); principle 13 of the *Stockholm Declaration*; principle 22 of the *Rio Declaration*.

To summarise, states do have legal mechanisms at their disposal whereby they can hold each other accountable to co-operate to address environmental health challenges of a transboundary nature, and to comply with their international obligation to refrain from causing and to prevent harmful environmental conditions. This can be done through dispute settlement, by invoking a state's responsibility, or by applying the measures prescribed in the *Transboundary Harm Articles*. Government could raise a dispute with other states in the event that they do not comply with their obligations and subsequently cause environmental harm in South Africa towards resolving such situations, and follow dispute settlement procedures for this purpose – whether prescribed by a treaty or through any other peaceful means as required by the *UN Charter*. Government could invoke the international responsibility of another state and rely on reparation to address harmful environmental health conditions of a transboundary nature. The success of this approach however, will depend on how effective and appropriate the reparation could be, keeping in mind the possible inadequacies thereof in relation to environmental health matters. A bordering state, for example, could be compelled to co-operate with South Africa to combat a transboundary environmental hazard, which may be adequate to eliminate the threat that it holds, whereas if environmental pollution occurred in a bordering state that already caused harmful human health impacts in South Africa, inducing that state to perform reparation and to pay compensation could be less effective from an environmental health perspective. Government could also play its part and comply with the measures as prescribed in the *Transboundary Harm Articles* to prevent environmental harm from occurring in the first place and can expect that other states will do the same, and if they do not government can initiate dispute settlement proceedings as set out in said *Transboundary Harm Articles* towards compelling them to do so.

3.5 Chapter summary

The researcher set out to achieve two main goals in this chapter. The first was to determine how government's commitments to international law instruments, and specifically those that relate to human rights, health system approaches, and to distinct environmental hazards, could influence and shape environmental health

governance in South Africa. The second was to determine what South Africa's rights and obligations *vis-à-vis* other states are, considering that states might need to work together to address some environmental health hazards, and that states could actually cause environmental harm in territories that are not their own (because of the borderless nature of the environment), which is why environmental health governance may have an international dimension as well. To this end the chapter commenced with a clarification of what international law instruments and international organisations are, which was followed by an exploration of the influences that international law instruments could have on environmental health governance domestically, and it concluded with an exposition of states' international legal obligations and responsibilities concerning environmental health issues of a transboundary nature, including how to enforce them.

The theoretical clarification forms the background of this chapter and it showed that there are different types of international law instruments, namely treaties, international customary law, soft law, and the general principles of international law, and it explained that all of these could impose legally binding obligations on states, except for soft law that is mostly politically binding.[1073] In this regard the researcher also explained that an international law instrument will become binding on South Africa as far as its relationships with other states are concerned once government signs, ratifies, or accedes (commits) to it, and that instruments could become binding in South Africa, that is to create legally binding rights and obligation on the domestic plane, once government incorporates them into municipal law.[1074] The theoretical clarification further showed that there are numerous IGOs, that many of them operate within the domain of environmental health, and that South Africa is a member of most of them.[1075] The researcher also explained that as a member to these IGOs, South Africa can benefit by participating in their activities, and government will usually have to comply with the international law instruments

[1073] Soft law could become legally binding, domestically at least, if incorporated into municipal law - see para 3.2.1.1 above.

[1074] If government fails to incorporate international law instruments they will still apply indirectly because the courts must consider them in interpreting the fundamental rights in the *Constitution*, as well as the provisions of other domestic legislation - see para 3.2.1.2 above.

[1075] See para 3.2.2 above.

that the respective IGOs have adopted.[1076] The benefits of membership are that government could work with other states to create international law instruments through the IGOs, it can co-operate with other states on environmental health-related matters on equal footing, and it can also utilise the platforms provided by IGOs to resolve potential disputes with other states if necessary.[1077]

As far as the influences of government's commitments to international law instruments are concerned, three distinct matters were considered.[1078] The first discussion revealed that government is compelled to progressively realise the human right to health by virtue of South Africa's commitment to comply with the provisions of the *ICESCR*, among others,[1079] and that the realisation of a human right entails that government has to respect, protect, and promote it.[1080] It became clear from the examination of the human right to health that it has a comprehensive scope and includes the underlying determinants of health, which by implication means that this right also incorporates environmental impacts in its ambit. This effectively means that government *has* to address environmental hazards while striving to realise the human right to health, which is why the content and subsequent obligations imposed by this right also substantiate and even necessitate the need to provide environmental health services for this purpose. The fact that government has to progressively realise the human right to health (as required by all the international law instruments) therefore justifies and validates the need to operationalise environmental health from a legal perspective.[1081] The legal environmental health mandate that underlies environmental health practice in South Africa could accordingly also be informed by and developed from the environmental health-related obligations that arise out of government's commitment to realise the

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[1076] This is especially true as far as the international developments on health system approaches are concerned - see para 3.3.1 above.

[1077] See para 3.2.2 above.

[1078] See paras 3.3.1-3.3.3 above.

[1079] For example, art 16(1) of the *ACHPR*; art 25(1) of the *UDHR*; principle 1 of the *Stockholm Declaration*; art 1 of the *Declaration of Alma-Ata* (1978); and the preamble to the WHO *Constitution* all purport the same - see para 3.3.1 above.

[1080] See para 3.3.1.

[1081] The argument was also made that the right to a healthy environment could serve the same purpose, which may be the case in South Africa considering of the existence s 24 of the *Constitution* - see paras 3.3.1, 3.3.3.1 above, 4.2.3 below.

human right to health.[1082]

The international developments on health system approaches as led by the WHO were investigated in the second discussion, which included the PHC approach, the health for all strategy, the health promotion initiative, Africa's health-for-all policy, and the call for health in all policies. The investigation showed that these approaches aim to provide states with the knowledge to build and mould their health systems in a way that will enable them to create conditions wherein people can attain their highest standard of health, and to thereby comply with their obligation to realise the human right to health.[1083] Government ought to have based the reform of South Africa's health system on these approaches because it is committed to comply with the instruments that purport as much by virtue of its membership to the WHO.[1084] The discussion of these approaches can therefore serve as the contextual setting within which South Africa's health system must be viewed.[1085] In short this entails that government has to adopt a health system that will enable it to address people's health concerns in a holistic manner, the system has to make provision for the delivery of a comprehensive range of health services that specifically include environmental health services, it has to involve multiple sectors (government departments) with the NDOH at the helm, and local government should be tasked with the delivery of health services.[1086]

The final discussion in this regard illustrated that government has made commitments to comply with numerous international law instruments that relate to environmental health in general and that relate to distinct environmental hazards as well, the majority of which create legally binding obligations for South Africa. The overview showed that the *ACHPR* compels government to progressively realise the right to a healthy environment, and this right contains obligations and entitlements similar to that of health inasmuch as the latter is concerned with the

[1082] See paras 2.4.2.5 above, 4.2 below.
[1083] See paras 3.3.2.1-3.3.2.6 above.
[1084] See paras 3.2.2, 3.3.2 above.
[1085] Chapters 4-5 below partially reveal if South Africa's health system conforms to these approaches as far as environmental health is concerned.
[1086] See paras 3.3.2 above, 4.3.2.1 below.

environment as a determinant of people's health.[1087] It therefore also substantiates the need to operationalise environmental health in the legal sense.[1088] The overview showed that access to adequate water and sanitation, safe food, and adequate housing are independent human rights in themselves, all of which are factors that could influence people's health, and that government has to respect, protect, and promote each of these rights to progressively realise them.[1089] As for foodstuffs in particular the overview revealed that government has to implement sanitary and phytosanitary measures that comply with the provisions of the *SPS Agreement* to ensure that food in South Africa is safe.[1090] On the disease front the overview showed that government has to perform specific duties to minimise the international spread of certain communicable diseases as required by the *IHRs*, and government has to implement specific control measures to reduce tobacco use according to the *Framework Convention on Tobacco Control* (2003).[1091] The discussion revealed that four instruments, the *Basel Convention*, *Stockholm Convention*, *Minamata Convention*, and the *Rotterdam Convention*, respectively compel government to implement certain measures in relation to the import and export of hazardous waste, the production and use of persistent organic pollutants, the presence of mercury and mercury compounds, and in relation to procedures that need to be followed in dealing with the import and export of various chemicals such as pesticides.[1092] In the last place the overview showed that South Africa has to contribute to the global climate change response and for this reason government has to take steps to mitigate and adapt to climate change in accordance with the *Paris Agreement* (2016).[1093] Government will have to incorporate these instruments into municipal law before they can create any legal rights and obligations

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[1087] In addition the *Libreville Declaration* and *Luanda Commitment* also implore government to prioritise the delivery of environmental health services - see paras 3.3.1, 3.3.3.1 above.

[1088] The instruments that encourage government to follow sustainable development practices essentially do the same seeing that the provision of environmental health services could contribute in the endeavour. Government's progress to achieve the SDG-targets might be partially indicative of the success and effectiveness of the domestic practice of environmental health - see para 3.3.3.1 above.

[1089] See paras 3.3.3.2-3.3.3.4 above.

[1090] Government is also at liberty to adopt the standards and guidelines for food safety provided by the *Codex Alimentarius* - see para 3.3.3.3 above.

[1091] See para 3.3.3.5 above.

[1092] See para 3.3.3.6 above.

[1093] See para 3.3.3.7 above.

domestically.[1094] All the legislation and policies that government adopt for this purpose will form part of South Africa's legal environmental health mandate because their content will have an impact on the practice of environmental health.[1095]

The environment's inherent disregard for states' national borders brought with it two main issues that needed to be addressed in this chapter, namely states' duties in relation to one another regarding potential transboundary environmental harm, and the legal mechanisms that states can use to enforce compliance with these duties. The discussion of the former showed that states have a duty to co-operate with one another where environmental health matters are concerned, and that they have a duty to refrain from causing and to prevent environmental harm in other states. These duties stem from human rights instruments, some health-related instruments, some environmental-related instruments, some regional instruments, some of the general principles of international law, and customary international law.[1096] South Africa, its bordering states, and most other states are therefore all compelled to comply with these duties, which means that government can expect that other states will co-operate with South Africa in matters concerning transboundary environmental harm, that states may not cause transboundary environmental harm in South Africa, and that they have to prevent such harm from occurring.[1097] The extent to which states have to comply with these duties will depend on the circumstances from which they arise, on the states involved, and on the particular instruments that could apply in each case.[1098]

The analysis of the latter established that states do have mechanisms at their disposal to compel other states to comply with their duties that relate to transboundary environmental harm, and thereby to safeguard the health of the people in their territories. This can transpire through dispute settlement between states, by invoking a state's responsibility to comply with its duties, or through the application of the *Transboundary Harm Articles*.[1099] It has to be reiterated though,

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[1094] See para 3.2.1.2 above.
[1095] For more on these influences - see para 4.3 below.
[1096] See paras 3.4.1.1-3.4.1.8 above.
[1097] South Africa has the same obligations towards other states - see para 3.4.1.8 above.
[1098] See paras 3.4.1.1-3.4.1.8 above.
[1099] See para 3.4.2 above.

as was also pointed out above, that both dispute settlement and the invocation of a state's responsibility (and subsequent reparation) clearly have their shortcomings considering that it may not always be possible to restore the environment or to successfully treat people whose health may have suffered as result of states' failure to comply with any of these duties, and for this reason government will be better off to implement the measures provided by the *Transboundary Harm Articles* (which could prevent environmental harm from occurring in the first place) and to urge other states to do the same.[1100]

The fact that environmental hazards can move across states' national borders also means that environmental health governance in South Africa does have an international dimension as well, as is evidenced from government's duty to work with other states to address hazards of a transboundary nature, and government's duty to refrain from causing and to prevent environmental harm in the territories of other states.

The domestic legal environmental health mandate and the implementation and enforcement thereof are examined in the chapters to follow.

[1100] Environmental health is concerned with the *prevention* of harm after all - see para 3.4.2 above.

Chapter 4: Roots and content of the legal environmental health mandate

4.1 Introduction

In the previous chapter, and in particular with the discussions relating to the international human right to health and the developments in the fields of health system approaches, the researcher aimed to create a contextual background against which the governance of environmental health in South Africa has to be viewed.[1101]

Building on this international perspective, the researcher identifies the foundation of South Africa's legal environmental health mandate, which calls for an examination of the primary laws, regulations, and policies promulgated by government in this regard. To this end the chapter commences with a discussion of the constitutional provisions that relate to environmental health, which includes a brief explanation of the application and interpretation of constitutional rights, an in-depth analysis of the provisions that embody the human right to health, and a deliberation on the existence of a constitutional environmental health right.[1102] This is followed by a discussion of the processes that were instituted after 1994 that led to the formation of the legal mandate in its current form, which includes an overview of the transition and restructuring of government, an examination of the transformation of various sectors including the numerous laws that were adopted to facilitate the processes and how this shaped environmental health governance into what it is today,[1103] as well as an analysis of a policy that was developed specifically for environmental health and what its influences are.[1104]

4.2 The constitutional foundation of environmental health

The *Constitution* is the supreme law in South Africa,[1105] and for this reason a discussion on the substance of South Africa's legal environmental health mandate has to commence with an examination of the constitutional provisions that relate to

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[1101] See paras 3.3.1-3.3.2 above.
[1102] See paras 4.2.1-4.2.3 below.
[1103] See paras 4.3.1-4.3.4 below.
[1104] See para 4.4 below.
[1105] Section 2 of the *Constitution*.

environmental health. It was argued in the previous chapter that the legal basis for the environmental health concept generally stems from the entitlements guaranteed by the human right to health, and in particular because of the inclusion of the environment as a determinant of health.[1106] In line with this argument, the articulation of the human right to health in the *Constitution* will be explored in this chapter with the purpose to identify the legal basis of environmental health in South Africa.[1107] Before this will be done however, a brief explanation of the application and interpretation of the fundamental rights entrenched in chapter two of the *Constitution* follows, since this is where the health-related rights can be found.

4.2.1 The application and interpretation of the rights in the Bill of Rights

4.2.1.1 Application of the Bill of Rights

Human rights are enshrined in chapter two of the *Constitution*, also known as the Bill of Rights. A deliberation on the application of these rights gives way to two correlative considerations, the first of which refers to the beneficiaries of the rights in the Bill of Rights, and the second to those who are tasked with the duty to uphold them.[1108]

The majority of the rights in the Bill of Rights entitle everyone to their benefits.[1109] In this context 'everyone' refers to natural persons (individuals) and juristic persons (legal entities), where the former includes both citizens and aliens.[1110] The *Constitution* usually clearly states when a right applies to everyone, or when it applies only to a specific category of beneficiaries.[1111] All the human rights in the Bill of Rights that are relevant to this research apply to 'everyone', therefore all

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[1106] See para 3.3.1 above.

[1107] Numerous constitutional provisions are examined for this purpose - see paras 3.3.1 above, 4.2.2.1 below.

[1108] Currie and De Waal "Application of the Bill of Rights" 34.

[1109] Some apply only to children, and some only to South African citizens.

[1110] Woolman "Application" 33-42; Currie and De Waal "Application of the Bill of Rights" 34-38; Rautenbach "Introduction to the Bill of Rights" para 1A20; De Vos and Freedman *South African Constitutional Law* 324.

[1111] The wording of each right as they appear in the *Constitution* indicates as much. Juristic persons are sometimes excluded from the application of a right because of its content. Juristic persons cannot possess human dignity, for example, and the right that everyone has to human dignity will therefore not apply to them - s 10 of the *Constitution*; Woolman "Application" 34, 39-42.

people in South Africa may be regarded as the holders of these rights in their individual capacity for present purposes.[1112]

Much like the trio of obligations imposed by international human rights, the *Constitution* provides that government must respect, protect, promote, and fulfil the rights in the Bill of Rights.[1113] These obligations entail that government may not infringe upon or interfere with any of the rights in the Bill of Rights (respect), government must ensure that no one else infringes upon or interfere with these rights (protect), government must raise awareness and bring these rights to the attention of their holders (promote), and government must facilitate the exercise of these rights by providing a means for their exercise (fulfil).[1114] The scope of these obligations in relation to each of the rights in the Bill of Rights will depend on their substantive content and on the station (sphere and branch) of the governmental body involved in its realisation, and will therefore vary.[1115]

Simply put therefore, all individuals in South Africa are the beneficiaries of the rights in the Bill of Rights, and government has the duty to uphold them. If government fails to uphold a right, it could amount to the violation of a constitutional right. Individuals have constitutional remedies at their disposal to address such violations.[1116]

The Bill of Rights applies to all law in South Africa, and binds all governmental bodies

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[1112] See para 4.2.2 below.

[1113] Section 7(2) of the *Constitution*. Pieterse describes the four obligations as a "domestic recasting" of the trio of duties found in international human rights instruments - Pieterse *A Benefit-focused Analysis of Constitutional Health Rights* 49; para 3.3.1 above. The drafters of the *Constitution* opted to refer mostly to 'state' in the Bill of Rights, although the terms 'state', 'government', and even 'Republic' appear to be used interchangeably throughout. For the sake of consistency and clarity this research will only refer to 'government' from here onwards - see paras 2.4.1.1-2.4.1.3 above.

[1114] These duties could impose a positive (to act) or negative (refrain from) obligation on government and involves the 'direct application' of the *Constitution* - Currie and De Waal "Application of the Bill of Rights" 31, 34-56; De Vos and Freedman *South African Constitutional Law* 671-672; Rautenbach "Introduction to the Bill of Rights" para 1A23; Davis "Rights" para 2.1.4; paras 3.3.1 above, 4.2.2.2 below.

[1115] See para 4.2.1.2 below.

[1116] For more on the justiciability of constitutional rights and constitutional remedies - see Currie and De Waal "Justiciability" 72-89; Currie and De Waal "Remedies" 176-208. Further note that the rights in the Bill of Rights may be limited by s 36 of the *Constitution*. See Currie and De Waal "Limitation of Rights: 150-175; Rautenbach "Introduction to the Bill of Rights" paras 1A43-1A55; Cheadle and Davis "Structure of the Bill of Rights" para 1.4 for more in this regard.

in all the spheres and branches of government as far as their conduct is concerned.[1117] Generally speaking this means that all legislation, whether national, provincial, or local, must conform to the Bill of Rights (legislature), all action undertaken to implement and enforce these laws must conform to the Bill of Rights (executive and administrative) and the courts' adjudication over disputes arising from the application and implementation of these laws must conform to the Bill of Rights (judiciary).[1118]

By the above virtue, all the rights within in the Bill of Rights also create an objective normative value-based system,[1119] and the development, interpretation, and application of all laws by government must conform to this value system.[1120] If laws and their application are in conflict with the value system or any of the provisions in the Bill of Rights upon which such laws are based, it will be unenforceable and invalid.[1121]

4.2.1.2 Interpretation of the Bill of Rights

The substantive content of the rights enshrined in the Bill of Rights and the subsequent impact of their application depend on their *meaning* as formulated in the *Constitution*. In order to determine their meaning, section 39(1) of the *Constitution* requires that they have to be interpreted in a manner that will "promote

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[1117] Section 8(1) of the *Constitution*; Woolman "Application" 45; Currie and De Waal "Application of the Bill of Rights" 42-45. See also para 2.4.1 above for more on the different branches and spheres of government, and the governmental bodies that they consist of.

[1118] Woolman "Application" 57-62. This discussion only reflects the position of government, also known as the vertical application of the Bill of Rights. It is not concerned with the horisontal application of the Bill of Rights (between private parties), which is regulated by s 8(2)-(4) of the *Constitution*. For more on the vertical and horisontal application of the Bill of Rights - see Rautenbach "Introduction to the Bill of Rights" para 1A30; Currie and De Waal "Application of the Bill of Rights" 41-45; De Vos and Freedman *South African Constitutional Law* 329-346.

[1119] The values that underlie this system are human dignity, equality, and freedom - s 7(1) of the *Constitution*; *Carmichele v Minister of Safety and Security* 2001 4 SA 938 (CC) para 54; Davis "Rights" para 2.1.3.

[1120] The *Constitution* finds 'indirect application' through this value system - Currie and De Waal "Application of the Bill of Rights" 31, 34, 56-60; De Vos and Freedman *South African Constitutional Law* 338-344; Woolman "Application" 93-95.

[1121] Section 2 of the *Constitution*; *Barkhuizen v Napier* 2007 5 SA 323 (CC) para 29; Davis "Rights" para 2.1.4. Seeing that government may only act in accordance with the law, governmental conduct will be subjected to this value system through the law that authorises such conduct - Cheadle and Davis "Structure of the Bill of Rights" para 1.2; para 2.4.2.2 above. For more on the application of the Bill of Rights - see Woolman "Application" 33-113; Cheadle "Application" paras 3.1-3.6; Currie and De Waal "Application of the Bill of Rights" 34-65.

the values that underlie an open and democratic society based on human dignity, equality, and freedom", and that international law has to be considered as well.[1122]

As a point of departure, the meaning of a particular right could be determined from the portrayal of its text. In other words, the process of interpretation could be initiated through a consideration of the wording of a right. A solely literal approach, however, will not be conclusive because it does not take consideration of the influence that the constitutional values and international law may have on a right's intended meaning, as is required.[1123]

To discern and impart onto a right its appropriate meaning as instructed by the *Constitution* it becomes necessary to look beyond the text,[1124] and a contextual, generous, and purposive approach to interpretation could assist in this exercise. The contextual approach recognises that the meaning of words depend on their context, which for present purposes necessitates that South Africa's political history, the drafting history of the *Constitution*, and the textual context of the *Constitution* as a whole has to be considered when interpreting the meaning of a right in the Bill of Rights.[1125] An approach to interpretation that is generous entails that rights must be viewed as broadly as their language permit, which means that the rights in the Bill of Rights must preferably be regarded as extensive and should not be viewed as having narrow meanings.[1126] A purposive approach gives meaning to a right through a consideration of its purpose, and the purpose of the rights in the Bill of Rights can be derived from the value system created by their collective

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[1122] Section 39(1)(a)-(b) of the *Constitution*; Du Plessis *Re-Interpretation of Statutes* 272-237; Du Plessis "Interpretation" 29-31. See the *Fuel Retailers*-case para 46-56 for an example of the use of international law as an interpretive tool.

[1123] Note however that the language of a right still has to be respected, and it cannot be interpreted to mean simply what the courts wish for it to mean - *S v Zuma* 1995 2 SA 642 (CC) para 17; *S v Mhlungu* 1995 3 SA 867 (CC) para 46; Rautenbach "Introduction to the Bill of Rights" paras 1A9-1A10.

[1124] This also means that the rights in the Bill of Rights have to be viewed in light of the *Constitution* as a whole (holistically) - *Makwanyane*-case para 9; De Vos and Freedman *South African Constitutional Law* 30-33; Currie and De Waal "Interpretation of the Bill of Rights" 135-136; Rautenbach "Introduction to the Bill of Rights" 1A11. Note also a prior decision where the Court found that rights should "as far as language permits be given a broad construction" - *S v Zuma* 1995 2 SA 642 (CC) para 17.

[1125] Currie and De Waal "Interpretation of the Bill of Rights" 140-145; Du Plessis *Re-Interpretation of Statutes* 111-115; Du Plessis "Interpretation" 33-35.

[1126] Currie and De Waal "Interpretation of the Bill of Rights" 138-140.

entrenchment, which means that the value system of the *Constitution* has to be considered when determining the meaning of any of the rights in the Bill of Rights.[1127] In view of the constitutional requirements to interpretation and the implications of each of these approaches, a process of interpretation that includes all of them may need to be followed to interpret the rights in the Bill of Rights to determine their appropriate meaning.

It also bears mention that the *Constitution* is an organic instrument and there is no correct interpretation of every right in the Bill of Rights.[1128] The meaning of these rights will always depend on the perspective of the interpreter (courts, legislative bodies, and executive bodies),[1129] the context within which the right is to be applied, and any of a variety of other factors that could influence their interpretation at a particular moment.[1130] For this reason the explanation above should be regarded as a guideline and not as a strict set of rules that has to be followed whenever the meaning of a constitutional right has to be determined.

Keeping in mind the applicability of the rights in the Bill of Rights, the nature of the obligations that they impose on government, and the guidelines that can be followed to interpret their meaning, an exploration of the rights that comprise the human right to health as depicted in the *Constitution* follows below.

4.2.2 The human right to health in the Constitution

Pieterse accurately observes that the *Constitution* does not contain one single

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1127 The generous and purposive approaches have been used interchangeably in the Constitutional Court - *Soobramoney v Minister of Health (Kwazulu-Natal)* 1998 1 SA 765 (CC) para 17 (hereafter *Soobramoney*-case); Du Plessis "Interpretation" 160; Cheadle and Davis "Structure of the Bill of Rights" para 1.3; Currie and De Waal "Interpretation of the Bill of Rights" 136-139. For more on interpretive approaches - see Du Plessis *Re-Interpretation of Statutes* 1-18, 89-119, 133-147, 225-274.

1128 Du Plessis "Interpretation" 191-193.

1129 Du Plessis "Interpretation" 24-27.

1130 Rautenbach "Introduction to the Bill of Rights" para 1A9. For instance, although a purposive approach usually means that a provision has to be interpreted generously, it could also, depending on the context, mean that a narrow or more specific meaning must be attached to a particular provision, depending on its purpose - *Soobramoney*-case para 17.

provision that reflects the international human right to health in its entirety.[1131] Instead, the *Constitution* contains scattered provisions that together aim to embody the human right to health. Accordingly, a number of rights will be explored in order to extrapolate the human right to health as it exists in South Africa.[1132] This will commence with an analysis of the meaning and substantive content of these rights,[1133] which is followed by an examination of the duties that they impose on government.

4.2.2.1 Substantive content of the human right to health in South Africa

Features of the human right to health can be found in the enunciation of some of the cluster of socio-economic rights and the environmental right in the Bill of Rights.[1134] For present purposes only those rights that are relevant to environmental health will be analysed, and they include the right of access to adequate housing, the right of access to health care services, the right of access to sufficient food and sufficient water, and the right to an environment that is not harmful to people's health or well-being.[1135] Each of these rights are discussed separately in the following paragraphs.

1131 Pieterse *A Benefit-focused Analysis of Constitutional Health Rights* 58; Pieterse *Can Rights Cure?* 16-24; Ngwena and Cook "Rights concerning Health" 126-127. These among others include the right to human dignity, the right to life, the right to freedom and security of person, the environmental right, the right of access to housing, the right of access to health care, food, water, and social security, and the rights of children - ss 10-12, 24, 26-28 of the *Constitution*.

1132 In other words, this discussion aims to illustrate that environmental health has its legal roots in the *Constitution*.

1133 The discussion does not intend to give a complete account of each of these rights. It is only concerned with their content insofar it relates to environmental health.

1134 For more on the relationship between the human right to health and other human rights - see Ngwena and Cook "Rights concerning Health" 109, 126-127; UN CESCR *General Comment No 14* paras 1, 3; UN CESCR *General Comment No 15* para 8; Pieterse *Can Rights Cure?* 16-24; para 3.3.1 above.

1135 Sections 24, 26-27 of the *Constitution*. The entitlements guaranteed by these rights depend on their interpretation by the courts and as of yet none of these rights' substantive content have been established conclusively - Bilchitz 2003 *SAJHR* 7-9. The socio-economic rights have been modelled on the *ICESCR* and for this reason (in addition to the interpretive requirements set out by the *Constitution*) the *ICESCR* constitutes a significant guide or source that must be used to interpret their meaning - Brickhill and Ferreira "Socio-Economic Rights" 571; De Vos and Freedman *South African Constitutional Law* 675; s 39(1)(b) of the *Constitution*; paras 3.2.1.2, 4.2.1.2 above.

4.2.2.1.1 Housing

The first of the socio-economic rights is found in section 26 of the *Constitution* and it among others provides that "everyone has the right to have access to adequate housing" and that government must take "reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right".[1136] The meaning of this right was at the heart of a dispute heard in the Constitutional Court in the *Grootboom*-case. In this regard Yacoob J found:

> [Section 26] recognises that housing entails more than bricks and mortar. It requires available land, appropriate services such as the provision of water and the removal of sewage and the financing of all of these, including the building of the house itself. For a person to have access to adequate housing all of these conditions need to be met: there must be land, there must be services, there must be a dwelling. … [Government] must create the conditions for access to adequate housing for people at all economic levels of our society.[1137]

Clearly then, based on this *dictum*, the right of access to adequate housing in the least comprises the provision of access to land, access to dwellings, and access to services.[1138] The Court relied heavily on the two *General Comments* that pertain to the right of adequate housing as portrayed in the *ICESCR* to come to this finding.[1139] Unfortunately, the Court did not deem it necessary to elaborate on the meaning of 'adequacy' in respect of this right and therefore on what the content of services and dwellings could assume in relation to this right in the South African context.[1140] The

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[1136] Section 26(1)-(3) of the *Constitution*. There are both affirmative and defensive qualities to this right, whereas this research will only focus on the former. The defensive quality relates to the prevention of arbitrary evictions - *Prevention of Illegal Eviction from and Unlawful Occupation of Land Act* 19 of 1998; Van Bueren "Housing" para 21.5; Dickinson 2011 *SAJHR* 470-473; *Residents of Joe Slovo Community, Western Cape v Thubelisha Homes* 2010 3 SA 454 (CC) paras 63, 215, 230-232; *Occupiers of Erven 87 and 88 Berea v De Wet N.O.* 2017 8 BCLR 1015 (CC) paras 40-48; *Moonlight*-case paras 16-29, 36; Tissington *Resource Guide to Housing* 45-53.

[1137] *Grootboom*-case para 35; Brickhill and Ferreira "Socio-Economic Rights" 584-585.

[1138] De Vos "The Right to Housing" 102-104; Van Bueren "Housing" para 21.3.2. Note also a similar finding in the *Beja*-case para 52. The 'access to land' component does not fall within the scope of this research and will not be addressed any further.

[1139] See e.g. UN CESCR *General Comment No 4* para 8; UN CESCR *General Comment No 3*. Yacoob J also pointed out that there is a significant difference between the right in the *ICESCR* and the right in the *Constitution*, since the latter refers to 'access', whereas the former does not, and for this reason the Court held that government's obligations with respect to this right are context-sensitive - *Grootboom*-case para 28; art 11(1) of the *ICESCR*; para 3.3.3.4 above.

[1140] The meaning of these two words has been extensively unpacked in the *General Comments* - see para 3.3.3.4 above. Muller argues that the Court could have done more to give substantive meaning to this right - Muller 2015 *SAPL* 72, 76-80.

Court did, however, refer to the *Housing Act* 107 of 1997 (hereafter *Housing Act*) that was promulgated to give effect to this right.[1141] In the *Housing Act,* services are defined to include potable water, adequate sanitary facilities, and domestic energy supply; and habitability is defined to include dwellings that ensure adequate protection against the elements (environment).[1142] The Constitutional Court had a further opportunity to give meaning to this right by having to decide on whether adequate housing also includes sanitation services in another matter, but Van der Westhuizen J found it unnecessary to make such a finding.[1143] It appears therefore that the Constitutional Court is reluctant to give definitive meaning to the right of access to adequate housing.[1144] In the absence of any rulings to the contrary however, it is accepted that the entitlements that this right guarantees are similar to its counterpart in the *ICESCR* and may be regarded as such for present purposes.[1145]

Access to adequate housing, and particularly access to housing that is adequate as far as its habitability and the accompanying services are concerned, is essential for people to attain their highest standard of health. For this reason this right of access to adequate housing represents some of the entitlements inherent in the

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[1141] McLean "Housing" 3-7. See para 4.3.2.4 below for more on the regulation of housing in South Africa.

[1142] Section 1 of the *Housing Act*; *Grootboom*-case paras 47-51. Government's previous *National Housing Code* (2000) stated that the scope of 'housing' in the South African context is equal to its extensive delineation as set out in the UN CESCR *General Comment No 4* - McLean "Housing" 35-36; vol 1 part 1 of the *National Housing Code* (2000) 7. The technical guidelines for housing as complied in the latest *National Housing Code* (2009) published as per the *Housing Act* also specify that each dwelling at least needs to have a single standpipe (water) and a ventilated pit latrine (sanitation), that it must be built to have ventilation to prevent and reduce potentially detrimental health impacts from indoor air pollution, and that potential exposure to harmful building materials must be kept in mind during its construction - s 3(2)(1)(a), 3(3) of the *Housing Act*; vol 2 part 3 of the *National Housing Code* (2009) 26, 32, 36, 46-47; Tissington *Resource Guide to Housing* 19-20; para 4.3.2.3 below.

[1143] *Nokotyana v Ekurhuleni Metropolitan Municipality* 2010 4 BCLR 312 (CC) (hereafter *Nokotyana*-case) para 47. The same could also be said of the other socio-economic rights, as will become clear later in this discussion - Bilchitz 2010 *SALJ* 597.

[1144] McLean holds the view that the right is interpreted restrictively in the *Grootboom*-case in comparison to its scope as set out in the UN CESCR *General Comment No 4*, and ascribes this to the Court's reluctance to engage in a discussion on the substantive content of the right - McLean "Housing" 34-36; Tissington *Resource Guide to Housing* 25-27; Bilchitz 2010 *SALJ* 604-605.

[1145] See para 3.3.3.4 above. The Constitutional Court also reiterated that the UN CESCR *General Comment No 4* is a valuable tool to interpret the content of this right - *Jaftha v Schoeman, Van Rooyen v Stoltz* 2005 2 SA 140 (CC) paras 23-24; Muller 2015 *SAPL* 83-86, 90. The same cannot be said for the obligations imposed by this right - see para 4.2.2.2 below for more in this regard.

comprehensive human right to health as envisaged in the *ICESCR*.[1146] Additionally, since these entitlements are underlying determinants of health and by their nature also fall under the purview of those environmental factors that could influence the human condition,[1147] this right also cements two of the broad environmental health hazards categories listed in chapter two, namely 'housing' and 'water quality and sanitation', as legally protected rights.[1148]

4.2.2.1.2 Health care, food, and water

Section 27 of the *Constitution* contains a more traditional health-related socio-economic right, but also contains other entitlements that speak to the comprehensive nature of the human right. It stipulates among others that:

> (1) Everyone has the right to have access to –
> (a) health care services, including reproductive health care;
> (b) sufficient food and water; …
> (2) [Government] must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights.[1149]

Evidently, based on this articulation, everyone is entitled to a) access to health care services, b) access to sufficient food, and c) access to sufficient water – all to the extent that government can progressively realise these. Yet, it is unclear what these entitlements fully entail.

In relation to the first entitlement, that is the right of access to health care services, a cursory reading seems to suggest that it typifies a generic right to health, but limited only to services related to medical care and not to a comprehensive set of

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[1146] States have to provide access to adequate housing to fully realise the right to health - art 12 of the *ICESCR*; UN CESCR *General Comment No 15* paras 15, 43; UN CESCR *General Comment No 15* paras 30-36; Van Bueren "Housing" para 21.3.2; para 3.3.1 above.

[1147] See paras 2.3.2, 3.3.1 above.

[1148] See para 2.4.2.5 above. Note that 'air quality', another environmental health hazard category, may also be partially confirmed as a legally protected right by s 26 of the *Constitution* on account of housing having to have adequate ventilation so as to prevent and reduce harmful impacts from indoor air pollution as per vol 2 part 3 of the *National Housing Code* (2009) 32, 46.

[1149] The rights listed in s 27(1)(c) and 27(3) of the *Constitution* do not fall within the scope of this research. For more on their content - see *Khosa v Minister of Social Development, Mahlaule v Minister of Social Development* 2004 6 SA 505 (CC) paras 38-47 (hereafter *Khosa*-case); *Oppelt v Head: Health, Department of Health Provincial Administration: Western Cape* 2016 1 SA 325 (CC) paras 34-84.

health services as advanced in the *ICESCR* (which includes environmental health services).[1150] The Special Rapporteur that was appointed by the UN to examine the right to health explains that "the right to … health is narrowly understood to mean a right to medical care".[1151] He then adds:

> … this view is inconsistent with international human rights law, which encompasses both medicine and public health. The International Covenant on Economic, Social and Cultural Rights, for example … clearly affirm that the right to health is more than access to medical care. … [T]he right to health includes access to nutritious food, clean drinking water, environmental sanitation and so on, as well as medical care. Equating the right to health with a right to medical care is a misinterpretation of international human rights law.[1152]

In the South African context, as Bilchitz argues, the entitlements guaranteed by the international human right are actually split into two parts in the *Constitution*, a right to health care and a right to healthy conditions. Bilchitz further contends that the right of access to health care services is fairly narrow and only makes provision for the one part and that section 24(a) of the *Constitution* (the environmental right) makes provision for the other part.[1153] The Constitutional Court supports this view – in one matter Chaskalson P described the content of section 27(1)(a) of the *Constitution* to relate to medical treatment and in another matter Ngcobo J described it to include access to medicine that is affordable.[1154] The NDOH seems to favour this approach as well seeing that the *NHA* and the *NEHP* that were both drafted by the NDOH distinguishes between 'health care services' (as mentioned in the *Constitution*) and 'municipal health services' (environmental health services),[1155]

[1150] The right of access to health care is not synonymous with the international human right to health and does not purport to guarantee the same entitlements - Bilchitz "Health" 5-6; Ngwena and Cook "Rights concerning Health" 107-108; Pieterse *Can Rights Cure?* 20-24.

[1151] *The Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health* 62/214, UN Doc A/62/214 (2007) para 46.

[1152] *The Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health* 62/214, UN Doc A/62/214 (2007) para 46.

[1153] Bilchitz "Health" 5. For more on the laws that were adopted in this respect - see paras 4.3.2.1-4.3.2.2 below.

[1154] *Soobramoney*-case para 19; *New Clicks*-case para 514. See also Van Bueren "Health" paras 22.2, 22.3.1-22.3.2; Brickhill and Ferreira "Socio-Economic Rights" 591. It has to be pointed out, even though the Constitutional Court made use of the *ICESCR* as a tool to interpret s 27 of the *Constitution* in the leading jurisprudence of this right, all those cases were adjudicated prior to the ratification of the *ICESCR* by South Africa, which could also have an impact on the interpretation of this right by the courts in future.

[1155] Section 1 of the *NHA*; *NEHP* 8.

showing that 'health care services' exclude non-medically related services.[1156] Therefore, insofar as the human right to health is concerned, the entitlement of access to health care services should only be seen as a reference to medical care services and it only contributes to the embodiment of a comprehensive right to health in the *Constitution* to this extent.[1157] In other words, this right does not entitle everyone to environmental health services.[1158]

The courts have not had the opportunity to deliberate on the substantive content of the second entitlement, the right of access to sufficient food.[1159] In consideration of the role that international law has to play in the interpretation of the rights in the Bill of Rights,[1160] the author proposes that the meaning of this right as set out in the *General Comment* of the *ICESCR* should be accepted here, that is, until the courts rule otherwise.[1161] Government adopted a policy on food security to fulfil the constitutional guarantee of access to sufficient food, but the policy, oddly, among others refers to the work undertaken by the FAO, but not to this *General Comment*.[1162] Be that as it may, the policy still identifies that both 'safety' and 'quality' of food are dimensions of this right.[1163] For present purposes is therefore accepted that this right in the least entitle everyone to have access to food that are

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1156 The drafters of the *Constitution* also opted to make use of the wording 'health care', and not only 'health' - s 27(1)(a) of the *Constitution*. Legal disputes on the right of access to health care services as portrayed in the *Constitution* have not yet given rise to the need to consider an interpretation that will include a comprehensive set of services within its ambit.

1157 It is also interesting to note that art 15(2) of the *ACHPR*, which contains the *ACHPR*'s version of the right to health, imposes an obligation on South Africa to protect the health of its people *and* to ensure that people receive medical treatment when they are sick. The scope of the right to health care in the *Constitution* appears to echo only the latter part of this obligation.

1158 Environmental health services cannot be included under the scope of this right even with a broad and generous interpretation - Pieterse *A Benefit-focused Analysis of Constitutional Health Rights* 69-70; paras 3.3.1, 4.2.1.2 above. For this reason this right of access to health care services will not be discussed any further in this research.

1159 Section 27(1)(b) of the *Constitution*. This right contains elements of food safety (adequacy) and food security (availability, accessibility), but this research is only concerned with the former - Brand "The Right to Food" 157-159.

1160 See paras 3.2.1.2, 4.2.1.2 above.

1161 Article 11(1) of the *ICESCR*; UN CESCR *General Comment No 12*; para 3.3.3.3 above.

1162 *National Policy on Food and Nutrition Security* (2014) 5, 8; para 3.2.2 above.

1163 *National Policy on Food and Nutrition Security* (2014) 8, 20.

free from harmful substances.[1164]

The substantive content of the third entitlement, the right of access to sufficient water,[1165] has not been confirmed by the courts either even though it has been the subject of the Constitutional Court's scrutiny in the *Mazibuko*-case.[1166] In this case the Court had the opportunity to give substantive meaning to the entitlement by having to rule on the quantity of free water that municipalities have to provide to households. O'Regan J declined to do so, however, and instead stated that the obligation imposed by this right "will vary depending on the circumstances".[1167] For this reason the scope of this entitlement as explained in the *General Comment* of the *ICESCR* should also hold true until the courts indicate otherwise,[1168] and is therefore accepted as such for the purpose of this research. If domestic legislation is of any guidance, then it also bears mention that sufficiency of water relates to its quantity *and* its quality.[1169] Therefore, in accordance with this right, everyone is entitled to access to water of a certain quantity and of a certain quality, where the latter denotes that it has to be safe and may not constitute a hazard to people's

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[1164] For instance, government must "prevent contamination of foodstuffs through adulteration and/or through bad environmental hygiene or inappropriate handling" - UN CESCR *General Comment No 12* paras 8-10. For an analysis of the constitutional right of access to sufficient food in South Africa - see Brand "The Right to Food" 161-189. See also Snyman and Gildenhuys 2015 *PELJ* 1695-1701 for a discussion on the linkage between the right of access to sufficient food and the environmental right, which is discussed in further detail below. See paras 4.3.2.1, 4.3.2.5 below for more on the regulation of food control in South Africa.

[1165] Section 27(1)(b) of the *Constitution*.

[1166] *Mazibuko*-case paras 1-3; Algotsson and Murombo *Water Supply and Sanitation in South Africa* 10-12.

[1167] *Mazibuko*-case paras 6, 62. Another example of this appears in *Residents of Bon Vista Mansions v Southern Metropolitan Local Council* 2002 6 BCLR 625 (W) paras 11-20 (hereafter *Bon Vista Mansions*-case) where the Court found that the disconnection of water supply amounts to a breach of the constitutional obligation imposed by s 27(1)(b) of the *Constitution*, but the Court failed to elaborate any further on what the entitlement entails as a whole. See also De Vos and Freedman *South African Constitutional Law* 682; Belinskij, Kotzé and Fuo 2017 *Afr J Int'l and Comp L* 273-290 for more in this regard.

[1168] The *General Comment* does not ascribe a specific quantity of water to this right either - arts 11-12 of the *ICESCR*; UN CESCR *General Comment No 15*; Kok and Langford "The Right to Water" 198-200; para 3.3.3.2 above.

[1169] Section 1 of the *Water Services Act* 108 of 1997; *National Norms and Standards for Domestic Water and Sanitation Services* (2017) 15, 21-23

health.[1170]

In consideration of the content of these rights, it is evident that they are intrinsically linked to the right to health, specifically because food and water is essential for human health.[1171] This also means that they both further contribute toward the manifestation of a comprehensive human right to health in the *Constitution*, and thereby provide legal protection from the 'water quality' and 'foodstuffs' environmental health hazards as categorised in chapter two as well.[1172]

4.2.2.1.3 Sanitation

The *Constitution* does not explicitly refer to a right of access to adequate sanitation, although it can be read into the other socio-economic rights as discussed above.[1173] According to the judgment in the *Grootboom*-case its existence could be partially inferred from the right of access to adequate housing because it includes having access to services (access to potable water, sanitary facilities),[1174] although in the *Nokotyana*-case, Van der Westhuizen J elected not to verify it as such, as stated above.[1175] The right of access to adequate sanitation can also be linked to that of sufficient water as is done in the UN CESCR *General Comment No 15* of the *ICESCR*. This *General Comment* emphasises that adequate sanitation is a principle mechanism to protect water quality and therefore argues that the provision of

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[1170] UN CESCR *General Comment No 15* paras 8, 12. See Kok and Langford "The Right to Water" 197-208; De Visser, Cottle and Mettler 2003 *LDD* 27-50; Langford, Stacey and Chirwa "Water" 21-39; Cooper 2017 *J Afr L* 57-76 for more on the right of access to sufficient water. See para 4.3.2.3 below for more on water and sanitation in South Africa. The right of access to sanitation is discussed below.

[1171] Van Bueren "Health" para 22.5; Marks "The Emergence and Scope of the Human Right to Health" 12-17. See *The Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health* 62/214, UN Doc A/62/214 (2007) para 50, where the UN's then Secretary-General Ban Ki-moon said the following:

> Safe water and adequate sanitation are two integral and closely related underlying determinants which are essential for the realisation of the right to the highest attainable standard of health. Inadequate access to water and sanitation can threaten life, devastate health, destroy opportunities, undermine human dignity and cause deprivation.

See also UN CESCR *General Comment No 15* para 8 and note the link between water, human health, and environmental hygiene (health), and the recognition that water is indispensable to all the other human rights.

[1172] See paras 2.4.2.5, 3.3.1 above.

[1173] Sections 24(a), 26(1), 27(1)(b) of the *Constitution*; Kok and Langford "The Right to Water" 208.

[1174] *Grootboom*-case para 35.

[1175] *Nokotyana*-case para 47.

sanitation services can be distilled from the right of access to water as a primary obligation.[1176] The right of access to adequate sanitation "beyond [a] doubt" resorts under the environmental right as well.[1177] The latest *National Sanitation Policy* (2016) too indicates that the right of access to adequate sanitation is implied in the environmental right and the policy subsequently relies on this interpretation as legal justification for its application, and the *Water Services Act* 108 of 1997 (hereafter *WSA*) also purports as much.[1178] The existence of this right is therefore undeniable. As far as its content is concerned, the Constitutional Court's approach to the other socio-economic rights could be followed, which means that it too is not set in stone. It may therefore be regarded for present purposes as a right to have access to physical and affordable sanitation that is safe, hygienic, provides privacy, and that ensures dignity, as explained in the related *General Comment* of *ICESCR*, and as such affords a legal guarantee for the 'sanitation' aspect of the relevant environmental health hazard category referred to in chapter two.[1179]

4.2.2.1.4 Environment

Section 24 of the *Constitution* delivers South Africa's environmental right by stipulating that everyone has the right "to an environment that is not harmful to their health or well-being", and also to "have the environment protected, for the benefit of present and future generations".[1180] While not reflective of the human right to health *per se* considering its environmental focus,[1181] even a superficial look at this right reveals its linkage to human health. Du Bois and Glazewski describe

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[1176] UN CESCR *General Comment No 15* paras 12, 29, 37; Langford, Stacey and Chirwa "Water" 66-79; para 3.3.3.2 above.

[1177] This *dictum* emanated from a case in which a five year old boy drowned in his school's pit latrine - *Komape v Minister of Basic Education* (unreported) 2018 ZALMPPHC 18 (23 April 2018) par 62. The environmental right is discussed in para 4.2.2.1.4 below.

[1178] *National Sanitation Policy* (2016) 3, 13; ss 2(a), 3(1) of the *WSA*; *Mazibuko*-case para 20; Kok and Langford "The Right to Water" 208. See also *Beja*-case para 73-74 in which Erasmus J confirms that everyone is entitled to a right of access to basic sanitation services.

[1179] *Resolution on the Human Rights to Safe Drinking Water and Sanitation* Res 70/169, UN Doc A/Res/70/169 (2015) para 2; UN CESCR *General Comment No 15* para 12; para 3.3.3.2 above. See para 4.3.2.3 below for more on water and sanitation in South Africa.

[1180] Section 24(a), (b) of the *Constitution*. For a discussion on the history behind the inclusion of the environmental right in the Bill of Rights - see Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B2.1.

[1181] The right is after all coined as an 'environmental right' - Feris and Tladi "Environmental Rights" 257.

this right as the "primary source of constitutional entitlements in respect of the environment",[1182] and Glazewski further argues that the "underlying rationale" behind it is environmental protection.[1183] Despite this environmental crux though, the objective of environmental protection in this context, at least in relation to section 24(a) of the *Constitution*, lies with people's health and well-being, as emphasised through the inclusion of these terms in its phraseology.[1184] Consequently, its human health concern, and therefore its connection to the human right to health, cannot be ignored.[1185]

This right consists of two parts. The first is the unqualified entitlement of everyone to an environment that is not harmful to their health or well-being. The second is the entitlement of everyone to have the environment protected through reasonable legislative and other measures.[1186] Absent definitive judicial scrutiny,[1187] several scholars have deliberated on the content of this right. In relation to the first part of the right, the focus of discussions revolves around the interpretation of the words 'environment', 'health', and 'well-being', and their meaning will be indicative of the scope of its content.

It is thought that the scope of 'environment' in the constitutional context has to be understood to be inclusive, meaning that it should not be limited to the natural environment (physical, chemical, and biological dimensions) as a literal reading

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1182 Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B3.

1183 Glazewski "The Environmental Right" para 19.6.

1184 Scholtz argues that the *Constitution* contains an anthropocentric (human centred) environmental right, a view that appears to be supported by many scholars - Scholtz 2005 *TSAR* 70-75; Kidd "Environment" 517; Glazewski "The Environmental Right" 19.2.1; Glazewski "The Nature and Scope of Environmental Law" 8-11; Feris 2008 *SAJHR* 30-33; Feris and Tladi "Environmental Rights" 259-260. Note also, as Du Plessis points out, that this right could cater for both the brown (human) and green (ecological) agendas - Du Plessis 2015 *PELJ* 1864-1865.

1185 There are differing views on whether the environmental right is also a socio-economic right, although it appears to be widely accepted that s 24(a) of the *Constitution* has the character of a fundamental right (negative obligation) and s 24(b) has a socio-economic character that elicits the trio of positive obligations inherent in human rights - Glazewski "The Bill of Rights and Environmental Law" 10(2)-10(3); Feris 2008 *SAJHR* 42-43; Du Plessis 2011 *SAJHR* 282; Kotzé 2003 *PELJ* 81. See also para 4.2.2.2 below where it is argued that both s 24(a)-(b) of the *Constitution* impose negative and positive duties on government.

1186 Section 24 of the *Constitution*; Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4; Kidd "Environment" 518-526. See para 4.3.2.2 for more on the regulation of the environment in South Africa.

1187 Feris 2008 *SAJHR* 30, 38-39; Du Plessis 2011 *SAJHR* 281.

suggests, but rather expanded to include the built environment and humans' interrelationship with the environment (social, psychosocial, and cultural dimensions) as well, as also partly portrayed in the *NEMA*.[1188] Nel and Alberts furthermore argue, in line with the constitutional values that need to be considered for this purpose, that the interpretation of 'environment' must include a consideration of both anthropocentric and ecocentric views in order to accommodate its social and cultural dimensions on the one hand, and to pay due regard to ecological protection on the other.[1189]

Du Bois and Glazewski point out that by conferring too wide a meaning to the term (the totality of people's surroundings for instance), it might engulf most of the rights in the Bill of Rights, and the authors caution that a "whatever we might wish it to mean"-stance therefore has to be avoided.[1190] For this reason it has to be accepted, even by following a generous and purposive approach to its interpretation, that the drafters of the *Constitution* intended to circumscribe the meaning of 'environment' to avoid rendering most of the other rights in the Bill of Rights redundant, wherefore 'environment' in this context cannot be regarded as all-embracing.[1191] Its exact parameters might as such be legally uncertain, suffice to say that it comprises of physical, chemical, biological, social, psychosocial, and cultural dimensions, and therefore include all those environmental conditions that could pose a threat to people's health.[1192]

In the constitutional context 'health' is mostly described in line with the definition of

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[1188] Even though the *NEMA* was enacted to give effect to s 24 of the *Constitution*, its definition of 'environment' may not be as broad as implied in the *Constitution* - see s 1 of the *NEMA*; s 1 of the *ECA*; Kidd "Environment" 518-519; Glazewski "The Environmental Right" para 19.4; Feris and Tladi "Environmental Rights" 259-260; Du Plessis 2011 *SAJHR* 292-293; Van der Linde and Basson "Environment" 12-13; *BP Southern Africa*-case 145. For more on the meaning of 'environment' - see para 2.3.1.2 above.

[1189] Nel and Alberts "Environmental Management and Environmental Law in South Africa: An Introduction" 2-7; Du Plessis 2015 *PELJ* 1864-1865.

[1190] Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4.1.

[1191] Rabie also cautions against an all-embracing interpretation of 'environment', because a possibly unrestricted interpretation would also make all law environmental law - Rabie "Nature and Scope of Environmental Law" 89.

[1192] The scope of 'environment' in the environmental health context should comfortably resort under the constitutional interpretation of the term. This aspect is discussed in greater detail in para 4.2.3 below.

the WHO as mentioned earlier in this research.[1193] In other words, 'health' seems to be interpreted in the widest possible manner and no adverse human condition is excluded from its ambit in the biological sense.[1194] Du Plessis makes the point, however, that in this particular context 'health' should be viewed to refer only to the human condition insofar as the *environment* can adversely affect a person's health, and further only if those environmental factors that can be *controlled* by government, which makes sense considering that this is an environmental right.[1195] The scope of 'health' must therefore be viewed restrictively in the sense that it is only environmental-related and only to the extent that the environment is actually reasonable modifiable.[1196]

Of the three, 'well-being' seems to be the more uncertain and frequently debated term, and its content has as of yet also not been thoroughly delineated.[1197] Academic discourse appears to have reached consensus that 'well-being' at least implies something more than 'health' and that it incorporates more dimensions of the human condition in its domain compared to that of 'health'.[1198] The incorporation of such a concern into any right requires very careful consideration though, because it will mean that each person's well-being is unique and hard to pinpoint, which makes it virtually impossible to refute that a particular person's 'well-being' was not adversely affected by almost anything.[1199] Glazewski argues that that the term 'well-being' in this regard "encompasses the essence of environmental concern, namely a sense of environmental integrity; a sense that we ought to utilise the environment in a morally responsible, considered and ethical manner".[1200] The

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[1193] Preamble to the *WHO Constitution*; Feris and Tladi "Environmental Rights" 260; Kidd "Environment" 519; Van der Linde and Basson "Environment" 13-14; para 2.3.1.1 above.

[1194] See para 4.2.3 below for a comparison of the meaning of 'health' in the constitutional versus the environmental health context.

[1195] Du Plessis 2011 *SAJHR* 293.

[1196] This view conforms to the rationale behind environmental health, as it is also only concerned with those reasonably modifiable environmental factors that could be harmful to the human condition - see para 2.3.5 above.

[1197] See para 2.3.3.2 above for more on the meaning of 'well-being'.

[1198] Feris and Tladi "Environmental Rights" 260; Kidd "Environment" 520-522; Du Plessis 2011 *SAJHR* 295-297; Glazewski "The Environmental Right" para 19.5.2; Van der Linde and Basson "Environment" 16-18.

[1199] Glazewski "The Bill of Rights and Environmental Law" 16-18; Kidd "Environment" 520-522.

[1200] Glazewski "The Environmental Right" para 19.5. Murphy J agreed with this view in the *HTF Developers*-case para 18.

author therefore views 'well-being' not as a reference to the subjective dimension of the human condition, which could have potentially unlimited legal application, but rather as a standard, where conduct towards the environment must comply with that standard to satisfy people's 'well-being'. In a recent matter in the High Court Rogers J equated something that is harmful to one's 'well-being' as being "repulsive to the senses of an ordinary person".[1201] This reaffirms that 'well-being' refers to a person's subject feelings, but it also anchors its scope to an objective standard through the added qualifier of 'an ordinary person', which circumscribes the term somewhat.

Notwithstanding the precise scope of 'well-being', its inclusion in addition to 'health' is nevertheless indicative of the broad application that the environmental right may assume.[1202] There is also support, especially in light of a generous approach to the interpretation of this right, that 'health' and 'well-being' in this context could collectively refer to the total 'quality of life' – the term that is reflective of all the objective evaluations and subject feelings that a person has regarding his or her own life conditions.[1203]

The meaning of these three terms as portrayed in the *Constitution* represents the extensive scope of application of section 24(a), which clearly gives everyone a right to not be harmed by many of the underlying determinants of the human condition, such as the quality of environmental mediums (air, water, land), unsafe food, the spread of communicable disease, exposure to hazardous substances, and even climate change – all of which fall within the broad categories of environmental health

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1201 *Jacobs*-case para 86.

1202 The drafters of the *Constitution* could have only referred to 'health', or only to 'well-being', but elected to include both. See para 4.2.3 below for an analysis of the meaning of 'well-being' in relation to its meaning as explained in para 2.3.3.2 above.

1203 The *Constitution* was adopted, among others, to improve the 'quality of life' of all South Africans, and the environmental health right, like all the other rights in the Bill of Rights, was entrenched to achieve this goal - preamble to the *Constitution*; Du Bois and Glazewski "The Environment and the Bill of Rights" paras 2B2.1, 2B4.1; Du Plessis 2011 *SAJHR* 193. The *Constitution* serves as a typical example of how the words 'health', 'well-being', and 'quality of life' are sometimes used interchangeably. It is also an equally typical example of how confusing the meaning of these words can be - see paras 2.3.3.1-2.3.3.3 above. The scope of this right cannot be interpreted so generously so as to entitle everyone to a right to not be poor (if environment includes the social environment, and if well-being includes economic security) - Du Plessis 2011 *SAJHR* 305; Kidd "Environment" 521.

hazards listed in chapter two.[1204] This also means that the first part of the environmental right assumes features of the human right to health and it therefore contributes to the overall suite of provisions that constitute the human right to health.[1205] As a case in point, in a High Court matter Hart J ruled that the operation of a sawmill that generated smoke which produced noxious and offences gases amounts to an infringement of this environmental right,[1206] and in another instance the Supreme Court of Appeal found that a rail commuter service that made use of coaches that were built with hazardous materials could also infringe upon this right.[1207] It is therefore clear that the entitlement inherent in this environmental right advances the human right to health because it aims to afford people protection from environmental hazards.

The second part of the environmental right dictates that government must take measures to realise environmental protection and it specifies a number of aims in this regard.[1208] These aims are to prevent pollution and ecological degradation, to promote conservation, and to secure ecologically sustainable development – all for the benefit of present and future generations.[1209] The entitlements afforded by this provision are contributory to the human right to health because it is beneficial to people's health if the environment is protected and because it compels government to undertake development in a sustainable manner.[1210] The latter is significant because the intended goal of the notion of sustainable development is the betterment of human lives, whereas people's health are part and parcel to the

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1204 See paras 2.3.1, 2.3.5, 3.3.1 above.

1205 Pieterse *A Benefit-focused Analysis of Constitutional Health Rights* 65-67; Kidd "Environment" 525-526.

1206 *Minister of Health and Welfare v Woodcarb (Pty) Ltd* 1996 3 SA 155 (N) 156, 164. This judgment was delivered in terms of s 29 of the *Constitution of the Republic of South Africa* 200 of 1993, but its provisions guarantee the same entitlements as s 24 of the *Constitution* does. See also Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4.1 where the authors explain how s 24(a) of the *Constitution* came to function as the public law counterpart to traditional neighbour law.

1207 *Transnet Ltd t/a Metrorail v Rail Commuters Action Group* 2003 6 SA 349 (SCA) 380.

1208 Section 24(b) of the *Constitution*; Glazewski "The Bill of Rights and Environmental Law" 18-22; Feris 2008 *SAJHR* 36; Du Plessis 2011 *SAJHR* 297-298.

1209 Section 24(b)(i)-(iii) of the *Constitution*.

1210 Also take note of the principles listed in s 2 of the *NEMA* that further entrenches sustainable development into South Africa's legal arena.

betterment of their lives.[1211]

It bears mention that the *Constitution* refers to "ecologically sustainable development" and that it has to be secured "while promoting justifiable economic and social development".[1212] These qualifications gave rise to some conflicting views on whether the *Constitution* actually establishes a specific variant of sustainable development in South Africa.[1213] Feris argues that the *Constitution* entrenches an environment centred variant of sustainable development in South Africa,[1214] and she derives this view from the dissenting judgment in the *Fuel Retailers*-case in which Sachs J found that the balancing of social and economic interest only become relevant once they pose a threat to the environment, and the fact that the *Constitution* refers to 'ecologically' sustainable development.[1215] Glazewski has a somewhat contrary view and argues that the environmental right must be seen in the context of the inclusion of the socio-economic rights as a whole, which places environmental interests on equal footing to the provision of adequate housing, sufficient food, sufficient water, and adequate sanitation (social development).[1216] This view is based on the judgment in the *Kyalami Ridge*-case in which Chaskalson P found that the provision of housing in emergencies supersede environmental concerns,[1217] as well as the fact that the *Constitution* explicitly states that sustainable development must be secured *while* "promoting justifiable economic and social development".[1218] Even though the *Constitution* may entrench a specific variant of sustainable development in the legal sphere as argued by these authors, it still afford benefits to people's health, albeit through the prioritisation of

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1211 See para 2.3.4 above. Du Plessis 2011 *SAJHR* 297-298 explains that sustainable development has a lot to do with the quality of the environment and it also follows that an environment of a higher quality will be less harmful to people's health.

1212 The drafters of the *Constitution* chose to include these words in s 24(b)(iii) of the *Constitution*.

1213 Kidd views these qualifiers merely as the "result of clumsy drafting" - Kidd "Environment" 525.

1214 Feris 2010 *PELJ* 89-92; Nel and Alberts "Environmental Management and Environmental Law in South Africa: An Introduction" 7-10.

1215 This judgment is not based exclusively on s 24 of the *Constitution*, but also on the principles listed in s 2 of the *NEMA* that give effect to the notion of sustainable development - *Fuel Retailers*-case paras 113, 118.

1216 Sections 26-27 of the *Constitution*; Glazewski "The Environmental Right" paras 19.12-19.13.

1217 *Kyalami Ridge*-case paras 69, 104. This judgment was not made having regard to the demands that sustainable development *per se* require, but rather on the principles listed in s 2 of the *NEMA* and the need to balance differing interests (rights) - Kotzé 2003 *PELJ* 88-94.

1218 Glazewski "The Environmental Right" paras 19.12-19.13.

environmental protection or social development,[1219] which means that this entitlement nevertheless indirectly contributes towards the overall guarantees provided by the human right to health.[1220]

Without making a finding on whether the sum of these constitutional provisions discussed above embody the human right to health as portrayed in the *ICESCR* in its entirety,[1221] this research is content with the confirmation that these rights do in the least make provision for those entitlements guaranteed by the human right to health that underscore environmental health.[1222] The collective of these provisions also constitute the legal basis of environmental health in South Africa and may even amount to a constitutional environmental health right,[1223] but whether this is the case is addressed at a later stage in this research.[1224] In the paragraphs that follow the duties that each of these rights impose on government are examined in order to determine what impact they could have on the operationalisation of environmental health.

4.2.2.2 Duties imposed by the constitutional provisions that comprise the human right to health

Since all the rights in the Bill of Rights impose an obligation on government to

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[1219] It has to be reiterated though that the three pillars of sustainable development have to be reconciled for their mutual interest, which means that one interest should not be favoured above the others - Van der Linde and Basson "Environment" 24-26; *BP Southern Africa*-case 142-144; *Fuel Retailers*-case paras 71-82, 93; para 2.3.4 above.

[1220] See also Kotzé 2003 *PELJ* 92-94 for a further take on the interpretation of sustainable development through the author's critique on the judgment in the *Kyalami Ridge*-case. See Du Plessis 2015 *PELJ* 1848-1868 for a thoughtful analysis of the conflicts between the green (environmental) and brown (socio-economic) agendas, but note that this discussion relates more to the environmental right as a whole and not to sustainable development in particular.

[1221] Pieterse is of the view that all the elements of the human right to health enjoy constitutional protection - Pieterse *Can Rights Cure?* 17-20. Not all of those elements/rights have been discussed in this research because they are not relevant to environmental health.

[1222] See para 4.2.3 below for confirmation of this.

[1223] This view is derived from the argument that environmental health has its legal roots in the human right to health, and that the provisions discussed in these paragraphs contain entitlements that relate to the essence of the environmental health concept - see paras 3.3.1 above, 4.2.3 below.

[1224] See para 4.2.3 below.

respect, protect, promote, and fulfil them,[1225] the same also applies to the rights that partially enumerate the human right to health and that serve as the legal basis of environmental health, as discussed above.[1226] This quartet of obligations have been distilled into positive and negative duties. In the case of the former it plainly means that government must do something (duty to protect, promote, and fulfil), whereas the latter imposes a duty on government to refrain from doing something (generally the duty to respect).[1227]

The positive duties that arise from the socio-economic rights enumerated in sections 26 and 27 of the *Constitution* are twofold. Government must take both reasonable 'legislative' measures and reasonable 'other' measures to realise the respective rights. The first entails that government must draft and enact legislation that will grant individuals the privileges that will enable them to pursue the entitlements guaranteed by these rights. The second duty is less clear but it generally means that government must adopt measures that are appropriate to realise the entitlements afforded by each of the socio-economic rights.[1228] The development of a so-called reasonableness test by the Constitutional Court is partly indicative of what the positive duties may entail.[1229]

The reasonableness test was etched out in the *Grootboom*-case, and subsequently applied (and augmented) in the *TAC*-case, the *Khosa*-case, and the *Mazibuko*-

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[1225] For more on what each of these duties entail in relation to the socio-economic rights - see Liebenberg "Interpretation of Socio-Economic Rights" 6; Brand "Introduction to Socio-Economic Rights in the South African Constitution" 37-42; De Vos and Freedman *South African Constitutional Law* 671-674; De Vos "The Right to Housing" 98; Brand "The Right to Food" 170-188; Langford, Stacey and Chirwa "Water" 45-56; De Visser, Cottle and Mettler 2003 *LDD* 28-29; para 3.3.1 above.

[1226] Section 7(2) of the *Constitution*; para 4.2.1.1 above.

[1227] Liebenberg *Socio-Economic Rights* 82-87; Brand "Introduction to Socio-Economic Rights in the South African Constitution" 9-10.

[1228] Brickhill and Ferreira "Socio-Economic Rights" 570-573; UN CESCR *General Comment No 3* paras 3-4; para 3.3.1 above. See for instance UN CESCR *General Comment No 4* paras 12-15 in relation to housing; UN CESCR *General Comment No 12* paras 14-20 in relation to food; UN CESCR *General Comment No 15* paras 17-29 in relation to water.

[1229] Liebenberg *Socio-Economic Rights* 146-154; Brickhill and Ferreira "Socio-Economic Rights" 573-584; De Vos and Freedman *South African Constitutional Law* 707-220; Brand "Introduction to Socio-Economic Rights in the South African Constitution" 42-52.

case.[1230] The application of this test essentially involves an enquiry by the Court to determine whether the steps taken by government to realise a socio-economic right are reasonable, and if so, government will have complied with its positive duties.[1231] This means that the scope of the positive duties required by these rights can be derived from an assessment of their reasonableness and government does not have to undertake *specific* steps for this purpose.[1232] Based on these judgments Liebenberg distilled a number of features that constitutes reasonableness. They are that government's measures must a) be capable of facilitating the realisation of the right, b) be comprehensive, coherent, and co-ordinated, c) be appropriately financed, d) be balanced and flexible, e) make appropriate provision for short, medium, and long-term needs, f) be reasonably conceived and implemented, g) be transparent and its content must be made known effectively to the public, h) make short-term provision for those whose needs are most urgent and who are living in intolerable conditions, and i) its impact on other rights have to be considered when ascertaining its reasonableness.[1233]

The reasonableness test relates to the adoption of legislation *and* other measures that government may take to realise the socio-economic rights. In fact, government will only comply with its positive duties if it does take other measures as well. The adoption of legislation alone will not be sufficient. Yacoob J in the *Grootboom*-case stressed this point when he stated that:

> Legislative measures by themselves are not likely to constitute constitutional compliance. Mere legislation is not enough. [Government] is obliged to act to achieve the intended result, and the legislative measures will invariably have to be supported by appropriate, well-directed policies and programmes implemented by the executive. These policies and programmes must be reasonable both in their conception and their implementation. The formulation of a programme is only the first stage in meeting [government's] obligations. The programme must also be

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[1230] Note also the description of this test as a "shifting standard of scrutiny", meaning that it was applied differently in all these cases - De Vos and Freedman *South African Constitutional Law* 708-710; Liebenberg "Interpretation of Socio-Economic Rights" 33-41; Brand "Introduction to Socio-Economic Rights in the South African Constitution" 43-43; *Grootboom*-case paras 41-42; *Khosa*-case paras 43-44; *TAC*-case paras 67-73, 123; *Mazibuko*-case paras 61, 160-162.

[1231] *Grootboom*-case para 41.

[1232] *Grootboom*-case para 42.

[1233] Liebenberg *Socio-Economic Rights* 152-153. The last feature was added as per the judgment in the *Khosa*-case para 44. See also De Vos and Freedman *South African Constitutional Law* 712-720; Brickhill and Ferreira "Socio-Economic Rights" 574-580; Brand "Introduction to Socio-Economic Rights in the South African Constitution" 46-52.

> reasonably implemented. An otherwise reasonable programme that is not implemented reasonably will not constitute compliance with the [government's] obligations.[1234]

The positive duties that government therefore has to perform to realise the socio-economic rights includes that government has to promulgate and implement legislation, and if this is not sufficient to achieve the intended result (substantive content) of each of the rights, it will also have to supplement its efforts through the adoption and implementation of policies and programmes towards their realisation – all of which need to be able to survive a test of reasonableness if subjected to the Constitutional Court's scrutiny.[1235]

The positive duties imposed on government by these socio-economic rights are also qualified because everyone is only entitled to 'access' to their respective content, government only needs to 'progressively realise' them, and government only has to do so 'within its available resources'.[1236] The first qualification entails that government does not have to deliver adequate housing on demand, nor, sufficient food, sufficient water, nor adequate sanitation, but instead government must facilitate or enable everyone to have access to these.[1237]

The second qualification was included in the *Constitution* in recognition that it may be difficult for government to realise all the socio-economic rights in their entirety from the outset. This qualification provides some relief in this regard because it implies that government does not have to realise these rights immediately. Government is not entirely absolved from the positive duties that arise from its obligation to realise the socio-economic rights by this qualification though. The qualification merely serves as a "necessary flexibility device" and nevertheless imposes a duty on government to move "as expeditiously and effectively as

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[1234] *Grootboom*-case para 42.

[1235] Brickhill and Ferreira "Socio-Economic Rights" 573-580; De Vos and Freedman *South African Constitutional Law* 712-716; Liebenberg "Interpretation of Socio-Economic Rights" 32-41.

[1236] Sections 26(1)-(2), 27(1)-(2) of the *Constitution*.

[1237] *Grootboom*-case para 35; Liebenberg "Interpretation of Socio-Economic Rights" 22; Brickhill and Ferreira "Socio-Economic Rights" 584-585; Van Bueren "Housing" para 21.3.1; Van Bueren "Health" paras 22.3.2, 22.5.1-22.5.2. Some authors contend that the qualification of 'access' does not make a significant difference compared to the unqualified rights in the *ICESCR* - Langford, Stacey and Chirwa "Water" 37-39. Also note that access relates to physical and economic access - Kok and Langford "The Right to Water" 200-201.

possible" to realise all these rights.[1238] In the *Grootboom*-case Yacoob J also explained:

> …the requirement of progressive realisation means that [government] must take steps to achieve this goal. It means that accessibility should be progressively facilitated: legal, administrative, operational and financial hurdles should be examined and, where possible, lowered over time.[1239]

In other words, it is a pace-oriented qualification that affords government some leeway to realise the socio-economic rights in their entirety over the course of time.

The third qualification relates to the availability of resources. Government is only obligated to realise the socio-economic rights insofar as it has resources available to do so. The rate at which government realises these rights (progressiveness) are as such "governed by the availability of resources".[1240] This qualification could have a dual impact. On the one hand government can use this qualification as an excuse to not comply with its positive duties by claiming that there is a lack of resources, but on the other hand it also means that government at least has to make some resources available to realise these rights.[1241] The allocation of resources is also subject to the measurement of reasonableness though, which means that government should not be able to abuse this qualification. The judgment in the *Soobramoney*-case illustrates this point. In this case the appellant needed renal dialysis to prolong his life, but the hospital had limited facilities and could not assist him. The hospital adopted a guideline in terms of which only selected people could receive this treatment and based on the appellant's condition he did not qualify.[1242] Chaskalson P explained that if this appellant were to receive renal dialysis the hospital would have to provide this treatment to all those in the same circumstances,

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1238 UN CESCR *General Comment No 3* para 9; Brickhill and Ferreira "Socio-Economic Rights" 580-581; Liebenberg "Interpretation of Socio-Economic Rights" 41-42; McLean "Housing" 36-38.

1239 *Grootboom*-case para 45.

1240 Liebenberg "Interpretation of Socio-Economic Rights" 44-47; Brickhill and Ferreira "Socio-Economic Rights" 580-582. The 'reasonableness' of government's conduct is partially judged in accordance with the availability of resources - *Soobramoney*-case para 11; *Grootboom*-case para 56.

1241 There must be a balance between the intended goal of realising a particular right and the resources that are made available in this regard - Liebenberg "Interpretation of Socio-Economic Rights" 44; Brand "Introduction to Socio-Economic Rights in the South African Constitution" 52.

1242 The guideline takes several factors into consideration - *Soobramoney*-case paras 1-4.

and if this happens the system will collapse.[1243] He therefore ruled that the hospital's (government) use of a guideline is not unreasonable because more patients will be able to benefit from renal dialysis.[1244] The impact of this qualification and the subsequent allocation of resources by government must also be understood in this light,[1245] which means that government *has* to make resources available and that the allocation thereof *has* to be based on reasonableness.[1246]

A final aspect that deserves mention with respect government's positive duties to realise the socio-economic rights, is the applicability of a 'minimum core obligation'. The *ICESCR*, the international instrument upon which the socio-economic rights have been modelled, details and imposes an obligation on states to provide at least a minimum essential level of each of these rights.[1247] This means that government has to provide a basic minimum in relation to access to adequate housing, sufficient food, sufficient water, and adequate sanitation. The Constitutional Court,[1248] however, has declined to accept and establish a minimum core obligation in South Africa and opted to rely on the measurement of reasonableness instead, so it is not currently applicable here.[1249]

The negative duties that arise from the socio-economic rights enumerated in sections 26 and 27 of the *Constitution* include that government has to a) refrain

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1243 *Soobramoney*-case para 26.

1244 *Soobramoney*-case paras 24-25.

1245 See for instance *City of Johannesburg Metropolitan Municipality v Blue Moonlight Properties 39 (Pty) Ltd* 2012 2 SA 104 (CC) (hereafter *Blue Moonlight*-case) paras 68-75 where the Court found that government is not absolved from realising a socio-economic right if it failed to budget for such an expense, but that government also cannot be compelled to spend money that it does not have.

1246 Bilchitz "Health" 8-10, 40-46; De Vos and Freedman *South African Constitutional Law* 718-720.

1247 The *ICESCR* "would be largely deprived of its *raison d'être*" in the absence of a minimum core obligation - UN CESCR *General Comment No 3* paras 10-12; Ngwena and Cook "Rights concerning Health" 114-118; Brickhill and Ferreira "Socio-Economic Rights" 571; De Vos and Freedman *South African Constitutional Law* 675; Fuo and Du Plessis 2015 *LDD* 7-16; paras 3.2.1.2, 3.3.1 above.

1248 *Grootboom*-case para 33, *TAC*-case para 36; *Mazibuko*-case paras 52-56; *Nokotyana*-case para 47; Brickhill and Ferreira "Socio-Economic Rights" 582-584; McLean "Housing" 39-42; Bilchitz "Health" 28-37; Liebenberg "Interpretation of Socio-Economic Rights" 22-32; Bilchitz 2003 *SAJHR* 1-11.

1249 These judgments were delivered prior to the ratification of the *ICESCR* in 2015, which suggests that this position might change in the future - SAHRC 2015 http://bit.ly/1GjsESj; Liebenberg *Socio-Economic Rights* 148-151; Bilchitz 2003 *SAJHR* 12-23; para 3.3.1 above. Note also Liebenberg's argument that the reasonableness test implicitly gives recognition to a minimum core obligation - Liebenberg "Interpretation of Socio-Economic Rights" 30.

from interfering with people's existing enjoyment of these rights, b) mitigate any interference in those cases where it could not avoid to interfere with people's existing enjoyment of these rights, and c) refrain from impairing people's access to the entitlements guaranteed by these rights.[1250] This effectively means that government may not directly infringe upon any of these rights, which translates to a prohibition on government to deny or prevent anyone from exercising the right of access to adequate housing, sufficient food, sufficient water, and adequate sanitation.[1251]

The courts have illustrated the ambit of this duty in a number of judgments, which for example, in relation to the right of access to adequate housing, includes that government may not arbitrarily evict someone, that government must consider all relevant circumstances (like the availability of suitable alternative accommodation) before evicting someone, and that government can refuse to grant an eviction order;[1252] and in relation to the right of access to sufficient water includes that government may not arbitrarily disconnect existing household water supply.[1253]

The two parts of the environmental right, section 24(a) and (b) of the *Constitution*, also impose positive and negative duties on government. As far as the first part of this right is concerned it is useful to consider that it guarantees an environment of a certain quality, where quality denotes those environmental conditions that are not harmful to people's health or well-being. Based on this premise the positive duties (to do something – protect, promote, fulfil) that emanate from this right could be described to be concerned with the *improvement* of those environmental conditions

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1250 De Vos and Freedman *South African Constitutional Law* 697-670; Brand "Introduction to Socio-Economic Rights in the South African Constitution" 10-12; Liebenberg "Interpretation of Socio-Economic Rights" 17-19. See also *First Certification*-case para 78 in which it was found that "[a]t the very minimum, socio-economic rights can be negatively protected from improper invasion".

1251 This negative duty has also been described as a prohibition on the part of government to subject anyone to deliberate retrogressive measures - UN CESCR *General Comment No 3* para 9; Brickhill and Ferreira "Socio-Economic Rights" 568-571.

1252 *Port Elizabeth Municipality v Various Occupiers* 2004 12 BCLR 1268 (CC) paras 20-23; *Ross v South Peninsula Municipality* 2000 1 SA 589 (C) 596; De Vos "The Right to Housing" 92-96.

1253 *Bon Vista Mansions*-case para 20. See further in this regard Brand "Introduction to Socio-Economic Rights in the South African Constitution" 30-37; De Vos and Freedman *South African Constitutional Law* 698-674; Brand "The Right to Food" 163-170; Kok and Langford "The Right to Water" 203-204. See also paras 3.3.3.2-3.3.3.4 above for more on the duties that these rights impose on government.

that fall foul of the required standard of quality, whereas the negative duties (to not do something – respect) could be described to revolve around the *preservation* of environment conditions that satisfy this standard.[1254]

There does not appear to be consensus on whether the first part of the environmental right actually imposes positive duties on government. The alternating views on this conceivably stem from a lack of judicial precedent, the absence of instructive language in its formulation,[1255] its broad content, and its unqualified guarantee (unlike the second part of this right and the other socio-economic rights),[1256] which means that the implications for government will be severe if it does impose positive duties. As such some authors contend that section 24(a) of the *Constitution* only imposes a negative duty on government, whereas section 24(b) of the *Constitution* imposes positive duties on government.[1257] It has to be borne in mind though that no right in the Bill of Rights can escape government's obligation to protect, promote, and fulfil them, and the same should apply here.[1258] The positive duty to 'protect' this entitlement manifests in governments' responsibility to ensure that no one infringes upon or interferes with

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1254 Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4.2. This depiction corresponds with the obligation that arises from the international human right to health in the *ICESCR* seeing that it imposes a duty on government to *improve* all aspects of environmental hygiene - see para 3.3.1 above.

1255 The *Constitution* does not specify that government must take legislative or other measures to realise this entitlement, as is the case with the other socio-economic rights.

1256 The realisation of this right is not subject to the guarantee only of 'access', nor the qualification of 'progressive realisation', nor that of 'available resources'.

1257 See for instance Glazewski "The Bill of Rights and Environmental Law" 18-19; Feris and Tladi "Environmental Rights" 257; Du Plessis 2011 *SAJHR* 298-300; Mubangizi 2002 *TSAR* 345-346; Van der Linde and Basson "Environment" 11. However, see De Wet and Du Plessis 2010 *AHRLJ* 363; Du Bois and Glazewski "The Environment and the Bill of Rights" paras 2B4, 2B4.2 in which mostly the same authors argue that s 24(a) of the *Constitution* also imposes positive duties on government.

1258 Section 7(2) of the *Constitution*. Du Bois and Glazewski argue that government will *have* to act to improve those environmental conditions that fall foul of the required standard of quality - Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4.2. Du Plessis petitioned for the internalisation of s 24(a) of the *Constitution* in the execution of all the work that government has to undertake, which suggests that the first part of the right *should* impose a positive duty on government to always consider what impacts its actions will have on the environment in order to create a better living environment for everyone (and to ultimately realise this right) - Du Plessis 2015 *PELJ* 1867. Incidentally this view also corresponds with the judgment in *Director: Mineral Development, Gauteng Region and Sasol Mining (Pty) Ltd v Save the Vaal Environment* 1999 2 SA 709 (SCA) (hereafter *Save the Vaal*-case) para 20 in which Olivier JA stated that the *Constitution* "requires that environmental considerations be accorded appropriate recognition and respect in the administrative processes in our country".

it. This means that government should not permit private parties to undertake activities that will result in harmful environmental conditions,[1259] and government should not make decisions that may prompt other parties to act in ways that make environmental degradation inevitable.[1260] In other words, government has to take measures that could prevent others from causing environmental conditions that pose a threat to people, which generally transpires through the establishment (enactment and implementation) of a regulatory framework for this purpose.[1261] In order to comply with its positive duties to 'promote' and 'fulfil' this entitlement, government will have to provide a means for everyone to exercise it.[1262] A number of substantive and procedural duties can be extrapolated from human rights discourse in this regard,[1263] which among others include that a) government should conduct environmental assessments in instances where proposed activities may interfere with the enjoyment of this right,[1264] b) government must make environmental information public,[1265] c) government must provide a means for effective public participation in environmental decision-making,[1266] d) government must provide effective remedies to those affected by environmental harm,[1267] e) government must protect the rights of individuals that wish to speak out against

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1259 See among others *Save the Vaal*-case para 20; *Van Huyssteen v Minister of Environmental Affairs and Tourism* 1996 1 SA 283 (C) 284-285.

1260 *Diepsloot Residents' and Landowners' Association v Administrator, Transvaal* 1994 3 SA 336 (AD) paras 29-31; *Kyalami Ridge*-case paras 66-76.

1261 Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4.2; De Wet and Du Plessis 2010 *AHRLJ* 363-368; para 3.3.3.1 above.

1262 Government can do so through legislative, administrative, financial, educational, or social measures, among others - UN CESCR *General Comment No 3* para 7.

1263 *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment* 37/59, UN Doc A/HRC/37/59 (2018) 7-20; OHCHR *Mapping Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment* paras 45-58; para 3.3.3.1 above.

1264 For more on environmental assessments in South Africa - see among others s 24(1)-24(1A) of the *NEMA*; De Wet and Du Plessis 2010 *AHRLJ* 353-358, 363-368; Glazewski "The Environmental Right" para 19.8.7; Van der Linde and Basson "Environment" 36-41.

1265 For more on access to information - see s 32 of the *Constitution*; *Promotion of Access to Information* Act 2 of 2000; s 31 of the *NEMA*; Du Bois and Glazewski "The Environment and the Bill of Rights" paras 2B12-2B14; Van der Linde and Basson "Environment" 46-48; Currie and De Waal "Access to Information" 691-709; Klaaren and Penfold "Access to Information" 1-24.

1266 See for instance s 23(2)(d) of the *NEMA*; Du Plessis 2008 *PELJ* 171-194.

1267 For more on environmental remedies - see Van der Linde and Basson "Environment" 60-68; Glazewski "The Environmental Right" para 19.2.3; Bishop "Remedies" 1-199; Currie and De Waal "Remedies" 176-208. See also s 38 of the *Constitution*; Currie and De Waal "Justiciability" 72-89; Pieterse *A Benefit-focused Analysis of Constitutional Health Rights* 87-110; Pieterse 2006 *SAJHR* 473-502 for more on the justiciability of the environmental and socio-economic rights as well as who may approach a court (*locus standi*) for this purpose.

activities that may cause environmental harm,[1268] f) government must consider the establishment of dedicated environmental courts,[1269] and g) government must clean-up environmental pollution.[1270] A further duty that arises in this regard, as argued by Du Bois and Glazewski, is that government will have to provide those public goods without which the environment will be harmful to people's health or wellbeing. This typically includes the entitlements guaranteed by the other environmental-related socio-economic rights, such as the right of access to adequate housing, sufficient food, sufficient water, and adequate sanitation.[1271] Government may not have to do all of the above, although conversely, it may have to do even more. The scope of the positive duties that this entitlement imposes will ultimately depend on whether the totality of the measures that government undertakes is sufficient for its realisation.[1272]

The negative duty imposed by this entitlement becomes apparent by considering the ways in which it could be infringed. Perhaps most palpable is that government could engage in activities that render the environment harmful, or it could make decisions that lead to environmental harm, whereas this duty demands that government must refrain from such conduct.[1273] Therefore, if government is to comply with the negative duty imposed by the first part of this right it will have to preserve those environmental conditions that are not currently harmful to people's

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1268 Section 31 of the *NEMA*; *Protected Disclosures Act* 26 of 2000; Isparta *The Position of the Whistle-blower in South African Law* 50-81, 90-92, 208-241.

1269 *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Implementation Report* 31/53, UN Doc A/HRC/31/53 (2015) para 56; Van der Linde and Basson "Environment" 52-54. The courts can still contribute to the realisation of the environmental right without being dedicated environmental courts. For example, contempt of court proceedings was sanctioned as a recognised method to enforce the environmental imperatives contained in s 24 of the *Constitution* in *Minister of Water Affairs and Forestry v Stilfontein Gold Mining Co Ltd* 2006 5 SA 333 (W) 333-335, 353.

1270 *SERAC*-case para 69; Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4; Van der Linde and Basson "Environment" 13.

1271 Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4. This aspect is discussed in further detail in para 4.2.3 below.

1272 See para 4.2.3 below for more on these.

1273 See e.g. *Verstappen v Port Edward Town Board* 1994 3 SA 569 (D) 569-572. Many scholars agree that this right in the least imposes a negative duty on government because of its negative phraseology (an environment that is *not* harmful) - Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4.2; Mubangizi 2002 *TSAR* 345-346; Du Plessis 2011 *SAJHR* 298-300; Kidd *Environmental law* 21-26.

health and well-being.[1274]

Whilst the first part of this right imposes unqualified duties on government, the positive and negative duties that emanate from the second part are both qualified and specified. They are qualified because much like the other socio-economic rights, government must also realise section 24(b) of the *Constitution* through reasonable legislative and other measures. For this reason the scope of the positive duties imposed by this entitlement is similar to the ones discussed in relation to the other socio-economic rights. In addition these duties are also specified because the *Constitution* lists three objectives that have to be achieved to realise environmental protection. They are that government must undertake measures to a) prevent pollution and ecological degradation, b) promote conservation, and c) to secure ecologically sustainable development while promoting justifiable economic and social development.[1275] Government therefore has to take legislative and other measures that are "capable of facilitating the realisation of this right" whilst focusing in particular on the objectives listed in the *Constitution*,[1276] and these measures have to be able to pass the muster of the reasonableness test devised by the Constitutional Court in the *Grootboom*-case before government will comply with its positive duties in this respect.[1277] Necessary measures, for example, could include the development of an integrated environmental management system as mentioned in the *BP Southern Africa*-case,[1278] or the establishment of "agencies, policies, education, capacity building, facilitation of disputes, and the funding of these initiatives".[1279]

As for the negative duty imposed by this entitlement, the same would also apply as is the case with the other socio-economic rights. This means that government may

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[1274] See Kotzé 2007 *Reciel* 300 in which the author argues that the environment only needs to be preserved to the extent that it does not become harmful to people's health or well-being, so as to still allow for some measure of development.

[1275] Section 24(b)(i)-(iii) of the *Constitution*.

[1276] *BP Southern Africa*-case 142.

[1277] *Grootboom*-case paras 41-42; Liebenberg *Socio-Economic Rights* 146-154; Kidd "Environment" 522-526, 528-529; Glazewski "The Environmental Right" paras 19.8-19.13; Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4.3; Van der Linde and Basson "Environment" 12-13, 26-41.

[1278] *BP Southern Africa*-case 145-149.

[1279] Glazewski "The Environmental Right" para 19.9.

not deny or prevent anyone from exercising the right to have the environment protected (by causing environmental harm). This duty also illustrates the link between the first and second part of the environmental right as their scope clearly overlap. In fact, the measures that government ought to employ to realise the second part of the environmental right should facilitate the realisation of the entitlement guaranteed by the first part of the right, and *vice versa*.[1280] As such, from a practical point of view the argument could be made that there is little need to distinguish between the duties imposed by the first and second part of the environmental right, as they should all be able to contribute to the realisation of all the entitlements afforded by the environmental right as a whole.[1281] It has to be pointed out though that section 24(a) of the *Constitution* will in all probability demand more from government than section 24(b), which means that government will have to do even more to realise the entitlement that everyone has to an environment that is not harmful compared to their entitlement to have the environment protected.[1282]

The discussion above sought to reveal all the legislative and other measures that government has to take as required by the rights entrenched in the *Constitution* that pertain to environmental health, and it is evident that government has much to do in this regard. Although the collective of these rights constitutes the legal basis of environmental health, at first glance their accompanying duties do not seem to explicitly require that government has to operationalise environmental health. This may be attributed to the fact that all these duties arise from distinct rights that are each concerned with particular entitlements. The existence of a potential constitutional environmental right may shed more light in this regard and is

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[1280] The Supreme Court of Appeal found that if government performs the positive duties imposed by s 24(b) of the *Constitution* it will ultimately achieve the outcome desired by s 24(a) of the *Constitution - MEC for Agriculture, Conservation, Environment and Land Affairs v Sasol Oil (Pty) Ltd* 2006 5 SA 483 (SCA) para 14; Kidd "Environment" 528-529; Feris and Tladi "Environmental Rights" 257.

[1281] Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4.2; Kidd "Environment" 528-529; Feris and Tladi "Environmental Rights" 257; *MEC for Agriculture, Conservation, Environment and Land Affairs v Sasol Oil (Pty) Ltd* 2006 5 SA 483 (SCA) para 14.

[1282] The first part of the right covers a broader range of interests and therefore demands more from government - Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4; para 4.2.3 below.

investigated in the paragraphs that follow.

4.2.3 A constitutional environmental health right?

Each of the rights discussed above entitles everyone to their respective content and imposes duties on government to realise them. In other words, government has an obligation to ensure that everyone can enjoy the entitlements guaranteed by these rights. Evidently the socio-economic rights give everyone a right to enjoy some aspects of environmental health, which include access to adequate housing, access to food and water that is safe to consume, and access to adequate sanitation services, and government has to take reasonable legislative and other measures within its available resources to progressively realise each of them.[1283] The environmental right seems to give everyone a right to enjoy environmental health in its entirety (protection from all the environmental health hazard categories) by virtue of its first part, and government has to take reasonable legislative and other measures in terms of its second part to ensure that the environment is protected towards the full realisation of this right.[1284] A number of uncertainties arise in this regard as far as environmental health is concerned, namely: a) whether the scope of the entitlement guaranteed by section 24(a) of the *Constitution* (substantive content) correlate with the scope of environmental health in the theoretical sense, b) whether the obligation that government has to respect, protect, promote, and fulfil the environmental right gives rise to the duty to adopt a legal framework and to provide environmental health services (as the product of the operationalisation of the concept), and c) what contribution the other socio-economic rights make.

In an effort to conceptualise the environmental right, Feris explains that humans have the ability to manipulate the environment, not only to the detriment of the environment (degradation), but also to their own detriment.[1285] In other words, some of the environmental hazards that pose a harm to people are caused by people themselves through their ability to manipulate and thereby degrade the

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[1283] They therefore form part of the environmental health package of constitutional entitlements - see paras 3.3.1, 3.3.3.2-3.3.3.4, 4.2.2.1-4.2.2.2 above.

[1284] See paras 3.3.3.1, 4.2.2.1-4.2.2.2 above.

[1285] Feris 2008 *SAJHR* 33.

environment.[1286] She then argues that it is precisely for this reason that there is a need for an environmental right which could enable people to lay claim against each other to protect the environment for their own sake.[1287] Given that the environmental health concept is a manifestation of the recognition that the environment can cause harm to the human condition and that it exists specifically because of the need to safeguard people from environmental hazards, it would appear that the legal basis of environmental health can be derived directly from section 24(a) of the *Constitution* (first part of the environmental right) because it serves the same purpose. A comparison between the meaning and scope of the terms 'environment', 'health', and 'well-being' in the constitutional and environmental health contexts supports this contention.

From the broad interpretation of 'environment' in the constitutional context, it appears correct to assume that those reasonably modifiable environmental factors that fall within the scope of environmental health will comfortably resort within its constitutional ambit.[1288] Insofar the definition of 'environment' as formulated in the *NEMA* reflects the scope of 'environment' in the *Constitution*,[1289] an argument could be made that the social and psychosocial factors in the environment as well the built environment may not be included within the context of the *Constitution*,[1290] and as such it could fall short of the scope of 'environment' as construed in environmental health terms. However, as many commentators have observed,[1291] 'environment' in the constitutional context may be given an even wider meaning than that of the *NEMA* because constitutional rights have to be interpreted generously and purposively.[1292] Furthermore, 'environment' in the environmental health context does not include the totality of the social and psychosocial factors in the

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1286 This is explained in paras 2.3.2, 2.3.4 above.

1287 Feris further argues that the entrenchment of the environmental right actually serves as "a basic condition for human existence" - Feris 2008 *SAJHR* 32-33. Ngcobo J shares this view in the *Fuel Retailer*-case para 102 in which he remarked that the environment's protection "is vital to life itself".

1288 See paras 2.3.1.2, 2.3.5, 4.2.2.1 above.

1289 As defined in s 1 of the *NEMA*.

1290 'Environment' as defined in the *NEMA* does not make provision for social or psychosocial factors, nor does it appear to incorporate the built environment - see para 2.3.1.2 above.

1291 See among others Du Plessis 2011 *SAJHR* 292-293; Kidd "Environment" 518; Glazewski "The Environmental Right" para 19.4; paras 2.3.1.2, 4.2.2.1 above.

1292 See para 4.2.1.2 above.

environment, but is limited only to those aspects that influence people's behaviour and mental processes in an adverse manner, which could in any event be argued to subsist in the *NEMA* definition.[1293] Consequently, this research accepts that the scope of 'environment' in the *Constitution* can be interpreted sufficiently wide to include all aspects of environmental health.

There are still considerable uncertainties when it comes to the precise meaning of 'health' and 'well-being' as portrayed in the *Constitution*. Generally, 'health' is assumed to refer to a state of complete mental and physical well-being and not merely the absence of disease or infirmity as defined by the WHO, and 'well-being' is considered to refer to more than that.[1294] Although this interpretation of 'health' makes it an unattainable goal and therefore renders it impractical for present purposes, as has been explained above,[1295] its scope is still broad enough to accommodate all the features that the term aims to represent in the environmental health context. Environmental health further necessitates a consideration not only of 'well-being', but of a human's 'quality of life' as well, which refers to an even greater range of aspects that give account of the human condition.[1296] Considering, however, that the delineation of the respective features that these three concepts supposedly represent are mostly inconclusive, that they are often used interchangeably, and that the overall aim of the *Constitution* is to improve the 'quality of life' of all South Africans,[1297] the reference in the first part of the environmental right is in all probability similar in scope to the human concern in the environmental health context.

Based on the aforementioned the author therefore accepts that the substantive content of the first part of the environmental right does accommodate the benefits that can be attributed to environmental health practice (scope) as contemplated in

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[1293] See para 2.3.1.2 above. Take note that the *NEMA* definition of 'environment' is adopted in the *NEHP* - *NEHP* 7; s 1 of the *NEMA*.

[1294] See para 4.2.2.1 above. The DOH also adopted the WHO definition of 'health' in the *NEHP* - *NEHP* 8.

[1295] See para 2.3.1.1 above.

[1296] See para 2.3.3 above.

[1297] Preamble to the *Constitution*; para 2.3.3.3 above.

chapter two,[1298] and because of its broad and open-ended nature, as Pieterse puts it, it "obviously guarantees environmental health".[1299] As such, section 24(a) of the *Constitution* amounts to a constitutional environmental health right. What is less clear, however, is if the obligation that government has to respect, protect, promote, and fulfil the environmental health right imposes a duty on government to enact legislation (create a legal mandate) whereby it can *compel* its bodies and officials to provide comprehensive environmental health services,[1300] and *enable* its bodies and officials to do so effectively – all to ultimately realise this right.[1301]

It was explained in the paragraphs above that the *Constitution* is not prescriptive with respect to the measures that government has to take to realise the environmental health right (first part), in fact, it does not refer to any measures at all.[1302] The second part of the environmental right imposes a duty on government to take legislative and other measures to give effect to its content,[1303] but it is unlikely that the obligation that government has to protect the environment as per this second part will invoke it's responsibility to safeguard people from environmental hazards as well,[1304] so this duty probably does not extend as far to include the development of a legal environmental health mandate.[1305] Section 7(2)

1298 See para 2.3.5 above.

1299 Pieterse *Can Rights Cure?* 19.

1300 This means that the legal mandate will have to empower governmental bodies and public officials so that they can use suitable governance tools to identify, repair, assess, reduce, monitor, control, anticipate, and prevent environmental hazards and their causes (implement and enforce legal mandate) - see para 2.5 above.

1301 This means that the legal mandate will have to identify which governmental bodies and public officials have to perform this function, it will have to specify which tasks they have to perform, it will have to provide an operational framework that will enable and facilitate co-operation among the multitude of governmental bodies and officials involved in this endeavour, and the mandate will have to designate a body to co-ordinate environmental health practice - see para 2.5 above.

1302 This is in contrast to the second part of the environmental right and the other socio-economic rights - see para 4.2.2.2 above.

1303 Section 24(b) of the *Constitution*; paras 4.2.2.1-4.2.2.2 above.

1304 Environmental health services involve the repairing of past environmental damage, addressing present harmful conditions, and to prevent potential future threats (both traditional and modern hazards), whereas environmental protection appears to relate only to the maintenance of the environment as is (to prohibit people from causing harm) - Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B4; Feris 2008 *SAJHR* 33; para 4.2.2.2 above.

1305 The measures that government has to take in this regard could still impose duties on its bodies and public officials to render services related to environmental health, so it can be complementary to, conflict with, or make up a part of the legal environmental health mandate - see para 4.3.2.2 below.

of the *Constitution* nevertheless imposes positive and negative duties on government to realise this entitlement, some of which were identified above, including that government has to adopt a regulatory framework for this purpose.[1306] Unfortunately, other than this, there is very little legal precedent on the form that the duties imposed by the first part of the right could assume as far as the provision of environmental health services are concerned,[1307] which implies that government may take *any* measures to realise the environmental health right. It may still be useful to draw from international human rights law at this juncture to give some substance to the duties required by this right, especially because government has made a number of commitments to comply with international law instruments in this regard and because the *Constitution* also demands as much.[1308]

The human right to health is interdependent and interrelated to all other human rights, which makes sense considering that many of the entitlements guaranteed by the right (underlying determinants of health), such as access to housing, food, water, and sanitation, are human rights in themselves.[1309] This actually applies to all human rights though. The *Vienna Declaration and Programme of Action* (1993), the international law instrument that emerged from the World Conference on Human Rights, confirms this notion in article 5 by stating that "[a]ll human rights are universal, indivisible, and interdependent and interrelated". This means that no human right can be enjoyed without the others. The Special Rapporteur that was appointed by the UN to examine and study human rights obligations relating to a healthy environment published a report containing a set of principles that aim to give account of said obligations. According to the first principle in this report, states should ensure a healthy environment to be able to fulfil all human rights, and

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[1306] See para 4.2.2.2 above. This also means that government must still give effect to this right and can be called to account if it fails to do so. People have constitutional remedies at their disposal for this purpose - see para 4.2.1.1 above.

[1307] It stands to reason that the contours of the duties imposed by this right will also accommodate those measures required to operationalise environmental health considering that the substantive content does the same.

[1308] Government has to abide by its international law obligations (directly or indirectly), so those that arise from the numerous legal instruments discussed in ch 3 could inform and concretise the duties imposed by the domestic iterations of the right to health, the socio-economic rights, and the environmental right - see para 3.3 above.

[1309] These are also separate socio-economic rights enshrined in the *Constitution* as discussed above - see para 4.2.2 above.

according to the second principle, states should fulfil all human rights to ensure a healthy environment.[1310] The Special Rapporteur therefore came to the same conclusion – the right to a healthy environment (a human right) is dependent on all other human rights as well.[1311] This is also true in the South African context as can be evidenced from the judgment in the *Fuel Retailers*-case in which Ngcobo J remarked that the protection of the environment is "vital to the enjoyment of the other rights contained in the Bill of Rights",[1312] and the *Beja*-case in which Erasmus J pronounced, in relation to the right of access to housing, that it "must be seen as a whole, in light of its close relationship with other socio-economic rights, all read together in the setting of the *Constitution*".[1313] This latter *dictum* was based on the finding in the *Grootboom*-case and in this case Yacoob J further explained that "their interconnectedness needs to be taken into account in interpreting the socio-economic rights, and, in particular, in determining whether the state has met its obligations in terms of them".[1314]

The significance of the interrelated nature of these rights is that the duties that government has to realise the environmental health right in general, can be derived from the duties that it has in relation to a *particular* right (such as access to adequate housing, food, or water) that is threatened by environmental harm (such as air or water pollution).[1315] For example, if the pollution of a water source infringes upon the right that a person has to have access to adequate water, then the duties that government has to realise the right of access to adequate water will also apply to the duties that government has to realise the environmental health right. This

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1310 *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment* 37/59, UN Doc A/HRC/37/59 (2018) 7.

1311 The Special Rapporteur explains that environmental harm interferes with the full enjoyment of human rights, and the obligation of states to respect, protect, and fulfil human rights apply in the environmental context no less than in any other way - *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment* 37/59, UN Doc A/HRC/37/59 (2018) 4.

1312 *Fuel Retailers*-case paras 44, 102.

1313 *Beja*-case para 39. Du Bois and Glazewski argue that the interpretation of s 24 should be "informed by its coexistence with these other provisions" - Du Bois and Glazewski "The Environment and the Bill of Rights" para 2B3.

1314 *Grootboom*-case para 24. See also *Khoza*-case para 40; De Vos and Freedman *South African Constitutional Law* 669-670.

1315 *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Mapping Report* 25/53, UN Doc A/HRC/25/53 (2013) 12.

happens to be where the role of the socio-economic rights come into play because this means that because government has to promulgate and implement legislation to realise the right of access to adequate housing, sufficient food, sufficient water, and adequate sanitation, it will also have to do so in terms of the environmental health right insofar *environmental harm* threaten these entitlements, and the same applies to the second part of the environmental right (environmental protection).[1316] This much is also confirmed by De Wet and Du Plessis who point out:

> section 24 [of the *Constitution*] is likely to cover those environmentally-relevant obligations that can be distilled from non-environmental human rights. If these obligations can already be generated by relying on human rights not directly aimed at protecting the environment, it is hard to see how such obligations could not be implied by a right explicitly directed at environmental protection. This overlap suggests that the positive obligations generated through relevant international jurisprudence create a minimum threshold for environmental protection.[1317]

The Special Rapporteur further found that in addition to these derivative duties, the environmental right generally also in itself imposes a duty on states to "establish, maintain and enforce effective legal and institutional frameworks" for its enjoyment.[1318] This includes that states have to set standards pertaining to all the categories of environmental hazards, such as air quality, water and sanitation, waste management, and so forth,[1319] and these have to be implemented (monitored, investigated, enforced) by governments via their legal and institutional

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[1316] Although these rights are mutually reinforcing, which also corresponds with the notion of sustainable development, the entitlement guaranteed by the environmental right is often pitted against those guaranteed by the socio-economic rights in the *Constitution*, whereas people actually need both (access to public goods in an environment that is not harmful) - Murcott 2015 *SALJ* 894-895; Humby 2013 *RGD* 108-109; Feris 2008 *SAJHR* 43, 45-46; Fuo 2013 *Obiter* 89-90; *Kyalami Ridge*-case paras 104-110; *Mazibuko*-case paras 1-8; para 2.3.4 above.

[1317] De Wet and Du Plessis 2010 *AHRLJ* 362. The Constitutional Court relies on a subsidiary approach as far as the application of the rights in the Bill of Rights are concerned. This entails that the Court will not infer entitlements from other rights if a particular right in the *Constitution* makes specific provision for the dispute at hand. So, if a person alleges that his or her right of access to adequate water has been violated, the Court will consider the matter in terms of s 27(1)(b) of the *Constitution*, and not infer such an entitlement from the environmental right. This also means that even though the environmental health right entitles everyone to an unqualified guarantee, s 24(a) of the *Constitution* does not confer the same status on the socio-economic rights as well. Government still only has to take reasonable measures within its available resources to progressively realise the socio-economic rights - *Soobramoney*-case paras 14-18; *Nokotyana*-case para 50.

[1318] *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment* 37/59, UN Doc A/HRC/37/59 (2018) 14.

[1319] See para 2.4.2.5 above for a list of the environmental health hazard categories.

structures.[1320] In addition hereto government has a duty to take all those measures that are *necessary* to provide a reduction in infant mortality, improve all aspects of environmental hygiene, and to prevent diseases – this is in terms of the obligation that government has to realise the international human right as set out in the *ICESCR*.[1321] The *ACHPR* in similar vein provides that government *has* to adopt and implement a legal framework to protect people from environmental harm.[1322] Other international law instruments also impose duties on government in this regard, such as the *Libreville Declaration* which provides that government has to institute practices and procedures to systemically assess health and environment risks,[1323] and the *Agenda 21* which advocates that government needs to adopt measures to reduce and minimise health risks from environmental pollution and establish environmental monitoring capacities for the surveillance of environmental health impacts.[1324] It therefore stands to reason that government does have to enact and implement legislation that pays due regard to all the aspects of environmental health, which is to say that it has to adopt a legal environmental health mandate whereby it can compel its officials and personnel to provide services to comply with the duties imposed by the environmental health right. And, as made clear in the *Grootboom*-case and these international law instruments, government will also have to take other measures, which for present purposes can take on the form of policies or programmes whereby it can support and assist its bodies and officials to provide environmental health services effectively, so as to *ensure* that it realises this right. For these reasons the author contends that government has a constitutional obligation to operationalise environmental health by virtue of section 24(a) of the *Constitution*, and that this section, read with sections 26(1) and 27(1) that affords

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1320 *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment* 37/59, UN Doc A/HRC/37/59 (2018) 14-15; *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Mapping Report* 25/53, UN Doc A/HRC/25/53 (2013) 13-16.

1321 Article 12(2)(a)-(d) of the *ICESCR*; para 3.3.1 above. The UN CESCR *General Comment No 14* para 43 provides that government must adopt and implement a national public health strategy and plan of action on the basis of epidemiological evidence to address the health concerns of the whole population towards realising the right to health.

1322 Articles 16, 24 of the *ACHPR*; *SERAC*-case paras 1, 52; De Wet and Du Plessis 2010 *AHRLJ* 354, 362, 376; para 3.3.3.1 above.

1323 Articles 2-3, 8-9 of the *Libreville Declaration*; para 3.3.3.1 above.

1324 Chapters 6, 18-22 of the *Agenda 21*; para 3.3.3.1 above.

everyone access to environmentally-related public goods, imposes a duty on government to enact and implement a legal environmental health mandate for this purpose, and to provide effective environmental health services towards realising this right.

The legislative and other measures that government has taken to realise the constitutional environmental health right are examined in the next section of this chapter.

4.3 Emergence and shaping of the legal environmental health mandate post 1994

Much has changed in South Africa since the advent of democracy and this also holds true for environmental health. During the apartheid era the government of that time discriminated against people along racial lines. The majority of people were oppressed, displaced to overcrowded rural areas, and deprived of access to basic goods such as adequate housing, a healthy environment, sufficient water supply and sanitation services, and essential levels of food necessary for dignified survival.[1325] In addition, health services were delivered via a mostly curative and highly fragmented system consisting of fourteen departments that functioned independently and in different areas of the state, so the majority of people did not receive health services of an acceptable quality or quantity and the provision of preventative environmental health services were neglected.[1326] Many people were therefore exposed to a wide range of potentially harmful environmental hazards in those times.[1327] Government set out to rectify the situation post 1994, among others by undertaking to transform the health system to a unified one that is capable of delivering quality health care to all people, to create a society that lives in harmony with the environment, and to provide everyone access to basic goods.[1328]

[1325] SAHRC *Reflections on Democracy and Human Rights* 1-3, 53, 67, 73, 79-80, 85, 91; Van Rensburg and Harrison 1995 *SAHR* 87-102; Coovadia *et al* 2009 *Lancet* 817-828.

[1326] At that stage environmental health services were mostly provided in response to complaints (reactively) - Mathee, Swanepoel and Swart 1999 *SAHR* 281; Kautzky and Tollman 2008 *SAHR* 20-22.

[1327] *White Paper for the Transformation of the Health System in South Africa* (1997) ch 11; Mathee, Swanepoel and Swart 1999 *SAHR* 278-280.

[1328] See para 4.3.2 below for more on these processes.

This coincided with the restructuring of government in accordance with the new constitutional dispensation, which is markedly different from the previous system of parliamentary sovereignty, including the allocation of new powers and functions to every sphere of government.[1329] It is during all these processes that the foundation of the current legal mandate (and institutional structures) for the provision of environmental health services came to be.

4.3.1 Transition and restructuring of government

Government currently consists of three distinctive, interdependent, and interrelated spheres that each derive specific powers and functions directly from the *Constitution* as explained in chapter two above.[1330] This was not always the case, however. Prior to the adoption of the *Constitution* government was structured hierarchically and the parliament of national (central) government reigned supreme. The provincial governmental authorities were subordinate to the central government and they derived their existence, powers, and functions from acts of parliament. The local governmental authorities were regarded as mere administrative agencies and they were subject to the provincial authorities.[1331]

The central government regulated most environmental matters (pollution and conservation) and conferred the health-related service delivery functions to provincial departments. The provincial departments provided some services in some areas but also passed this function on to some locally based authorities which had

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[1329] See paras 4.3.1, 4.3.3-4.3.4 below.

[1330] See paras 2.4.1.3-2.4.1.7 above for more on the structures, powers, and functions of the different spheres of government.

[1331] Government consisted of tiers and the provincial and local tiers were creatures of statute. Local government was wholly subject to and under the control of provincial government which in turn was subject to central government. For more on the previous regime - see Steytler and De Visser "Local Government" 1-4; Steytler and De Visser *Local Government Law of South Africa* ch 1 2-27; Bekink *Principles of South African Local Government Law* 1-4, 15-17; De Vos and Freedman *South African Constitutional Law* 290-302. This study acknowledges the introduction of the so-called independent states and self-governing territories, but due to the scope of the study, the implications thereof for environmental health cannot be discussed in any detail. The fragmentation of legislation by the creation of these states and territories are illustrated in Du Plessis 1995 *SAJELP* 23-36.

the capacity to do the same.[1332] Since the adoption of the *Constitution* and the transition to a democratic state, government's structures and the allocation of power and functions among its bodies have changed, and so did the manifestation of and responsibility for the governance of environmental health within the machinery of government.[1333]

The restructuring of government gave rise to the formation of the three distinct spheres of government as they are known today, and unlike in the past, each have the power (legislative and executive authority) to govern over their own affairs.[1334] This power, however, only extends to those functional areas that are *allocated* to them by the *Constitution*.[1335] The means that municipalities may only govern over *some* of the affairs of their own communities, the provincial governments may only govern over *some* of the affairs of their own provinces and municipalities within their jurisdictions, and national government may only govern over *some* affairs of the entire state. The implication hereof is that the division of functional areas among the spheres of government in the *Constitution* determines what role each may play in the governance of environmental health.[1336]

Environmental health itself is not recognised as a distinct functional area in the *Constitution*, which perhaps is not that surprising considering its comprehensive nature.[1337] But the *Constitution* does refer to many functional areas that relate to

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1332 Kidd *Environmental Law* 12-14; Oosthuizen, Van der Linde and Basson "National Environmental Management Act 107 of 1998 (NEMA)" 125-126; Glazewski and Rumble "Administration and Governance" 2-5; Glazewski "The National Environmental Management Act" 2-5; Agenbag *The Management and Control of Milk Hygiene in the Informal Sector by Environmental Health Services in South Africa* 4-5; Agenbag and Balfour-Kaipa 2008 *SAHR* 150-151; May and Agenbag "Environmental Health and Municipal Public Health Services" 7-8.

1333 For instance, newer laws have mostly replaced the *Health Act*; *ECA*; *Atmospheric Pollution Prevention Act* 45 of 1965; and the *Water Act* 54 of 1956, all of which regulated aspects of environmental health.

1334 See ss 44(1), 85(1)-(2), 104(1), 125(1)-(2), 156(1)-(2) of the *Constitution*; paras 2.4.1.4-2.4.1.6 above.

1335 National government is responsible for all the matters that are listed in the *Constitution* - schedules 4, 5 of the *Constitution*; paras 2.4.1.4-2.4.1.6 above.

1336 In this context 'govern' refers to the making of laws and their implementation (to enforce, to provide a service). Jafta J explained in the *Gauteng Tribunal*-case paras 55-56 that "the constitutional scheme propels one ineluctably to the conclusion that, barring functional areas of concurrent competence, each sphere of government is allocated separate and distinct powers which it alone is entitled to exercise".

1337 See para 2.3.5 above.

aspects of environmental health. They are allocated as follows by the *Constitution*: national and provincial government are responsible for the 'environment', 'health services', 'housing', 'pollution control', and 'abattoirs';[1338] and local government is responsible for 'air pollution', 'building regulations', 'municipal health services', 'municipal planning', 'water supply and sanitation services', 'cemeteries, funeral parlours, and crematoria', 'control of public nuisances', 'noise control', 'animal burial facilities', 'control of undertakings that sell food to the public', and 'refuse removal and solid waste disposal'.[1339] The functional areas of local government are subdivided among the three categories of municipalities by the *Municipal Structures Act* as follows: metropolitan municipalities are responsible for all the local government functions;[1340] district municipalities are responsible for 'water supply and sanitation services', 'solid waste disposal sites' (those that cater for more than one local municipality), 'municipal health services', 'integrated development planning', 'fresh produce markets and abattoirs' (serving the area of a major proportion of municipalities in the district), and 'cemeteries, funeral parlours, and crematoria' (serving the area of a major proportion of municipalities in the district);[1341] and local municipalities are responsible for 'air pollution', 'noise control', 'public nuisances', 'building regulations', 'solid waste (including diseased animals) disposal and refuse removal services', 'fresh produce markets and abattoirs', and 'cemeteries, funeral parlours, and crematoria'.[1342] Clearly then, based on this division, all three spheres of government are responsible for some aspects that have a bearing on environmental health, and so are all three categories of

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1338 Provincial government has exclusive authority over 'abattoirs', which means that national government may not enact legislation that pertain to abattoirs. That did not prevent national government from doing so however - see para 4.3.2.5 below.

1339 Schedules 4, 5 of the *Constitution*.

1340 See para 2.4.1.6 above for more on the different categories of municipalities. See ch D paras 2-3 of the *White Paper on Local Government* (1998) for the recommendations that were made in this regard.

1341 The *White Paper on Local Government* (1998) proposed that district municipalities should really *only* provide services if local municipalities do not have the administrative capacity to do so themselves, but this proposal seems to have been disregarded - ch D para 3 of the *White Paper on Local Government* (1998); Steytler and De Visser *Local Government Law of South Africa* ch 1 20-22.

1342 District and local municipalities share responsibility for certain functions - ss 83(1)-(2), 84(1)-(2) of the *Municipal Structures Act*. See also Provincial and Local Government Portfolio Committee *Division of Powers and Functions of District and Local Councils and Related Financial Issues: Briefing: Meeting Report* (2 April 2001) 1-6 for a discussion on why the functions were divided in this manner.

municipalities.[1343]

The governmental bodies at national government that have mandates that involve the functional areas above and are therefore partially responsible for environmental health matters include the NDOH, NDFFE, National Department of Water and Sanitation (hereafter NDWS), National Department of Human Settlements (hereafter NDHS), and the National Department of Agriculture, Land Reform and Rural Development (hereafter NDALR).[1344] The same applies to each of the nine provincial governments because they also have their own departments with mandates that are concerned with the functional areas above, even though some of them differ in nomenclature.[1345] At local government every one of the current 257 municipalities are partially responsible for the governance of environmental health because all three categories of municipalities have some environmental health-related functions.

The *Constitution* contains detailed provisions on the operation of national and provincial government, so their institutions could begin to exercise their new powers and perform their new functions once the *Constitution* took effect, which was early in 1997.[1346] In other words they could begin to develop processes and mechanisms (through the enactment of legislation) that would enable them to perform their functions (to provide services), which include those related to environmental health.[1347] Local government, however, was not in a position to do the same. The *Constitution* only contains a simple framework for local government, so the legal framework for its operation still had to be developed. As a result, municipalities could not begin to exercise their powers and perform their functions at the same

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[1343] This suggests that environmental health governance was always going to be a disjointed affair from the outset - see para 4.4 below. Policing, which is a national government competence, is also relevant to environmental health, but this aspect will be discussed at a later stage in this research - ss 205-208, part A of schedule 4 of the *Constitution*; para 5.3.2 below.

[1344] As is the case the with NDFFE, the other national departments have also been altered in composition and nomenclature over time, with the latest changes taking place at the end of 2021. For present purposes their current names should be read to include all their previous iterations.

[1345] See para 2.4.1.7 above.

[1346] Chapters 4-7 of the *Constitution*; Bekink *Principles of South African Local Government Law* 1; paras 2.4.1.4-2.4.1.5 above.

[1347] See paras 2.4.1.7-2.4.2.2 above.

time as the other spheres.[1348]

The transition of local government was a cumbersome process and took place over the course of a number of years.[1349] Following the enactment of the *Constitution* government embarked on an intensive consultative process to develop a policy that would give effect to the new constitutional dispensation for local government, which culminated in the adoption of a framework for the transformation of local government, the *White Paper on Local Government* (1998).[1350] The premise of the White Paper was that local government had to be transformed to a developmental local government to fulfil its constitutional mandate, and it put forth several proposals for this transition.[1351] A host of laws were enacted to implement the proposals in the White Paper, such as the *Local Government: Municipal Systems Act* 32 of 2000 (hereafter *Municipal Systems Act*) and the *Municipal Structures Act* among others, and they make up the legislative framework for local government.[1352] By the end of 2000 the three categories of municipalities were finally established across the whole territory of South Africa and they could also begin to exercise and perform their new constitutional powers and functions.[1353]

The transition and restructuring of government created a new institutional landscape and it shifted the responsibility (allocation of functions) for the governance of environmental health to several governmental bodies from all three

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[1348] Municipalities still had to be established at that stage.

[1349] The transformation of local government took place in three phases - *Local Government Transition Act* 209 of 1993; ch A para 1 of the *White Paper on Local Government* (1998); Steytler and De Visser *Local Government Law of South Africa* ch 1 10-23; Bekink *Principles of South African Local Government Law* 27-40.

[1350] Foreword of the *White Paper on Local Government* (1998); Steytler and De Visser *Local Government Law of South Africa* ch 1 19.

[1351] Chapter B paras 1-4 of the *White Paper on Local Government* (1998); Bekink *Principles of South African Local Government Law* 68-78; Steytler and De Visser *Local Government Law of South Africa* ch 1 27-28.

[1352] The others are the *Local Government: Municipal Demarcation Act* 27 of 1998; *Local Government: Municipal Electoral Act* 27 of 2000; *Local Government: Municipal Finance Management Act* 56 of 2003; and the *Local Government: Municipal Property Rates Act* 6 of 2004.

[1353] Bekink *Principles of South African Local Government Law* 27-39; Steytler and De Visser *Local Government Law of South Africa* ch 1 11-23. The legislative framework for local government was not yet complete at that stage (the laws dealing with financial matters still had to be enacted), and many obstacles still had to be overcome before the municipalities could become *fully* operational - Bekink *Principles of South African Local Government Law* 2; Steytler and De Visser *Local Government Law of South Africa* ch 1 23.

spheres of government. At the same time all those governmental bodies were equipped with new powers that enabled them to take part in the development (and future execution) of the current legal framework that contains the processes and mechanisms giving rise to the practice of environmental health. This mostly happened during the transformation processes that were undertaken by government since 1994.

4.3.2 National transformation processes that gave rise to the current legal environmental health mandate

The consequences of apartheid post 1994 was "evident in almost all aspects of South African society",[1354] and the first democratically elected government undertook to address some of those with the Reconstruction and Development Programme (hereafter RDP). The RDP was a comprehensive, integrated, socio-economic policy framework laid out in the *White Paper on Reconstruction and Development* (1994).[1355] One of the goals that government sought to achieve with the implementation of the RDP was to meet the basic needs of everyone, which included that everyone should have access to adequate housing, sufficient water and sanitation services, sufficient food, a safe environment, and quality health care services.[1356] In keeping with these objectives the newly restructured government subsequently launched processes to a) transform the health system to improve the delivery of health services, b) develop an integrated environmental management system, c) improve the supply of water and sanitation services, and d) to provide adequate housing to those who need it – all of which are entitlements guaranteed

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1354 As noted by late former President Nelson Mandela - *White Paper on Reconstruction and Development* (1994) 4.

1355 *White Paper on Reconstruction and Development* (1994) 6-8.

1356 *White Paper on Reconstruction and Development* (1994) 9. The RDP focused on the development of strong and stable democratic institutions that would be able to reach the goals set out in the *White Paper on Reconstruction and Development* (1994). The RDP failed to live up to its promises, however, and was supplemented with a *Growth, Employment and Redistribution: A Macroeconomic Strategy* (1996) that prioritised economic growth and job creation instead - Moyo and Mamobolo 2014 *JPA* 948; Blumenfeld 2003 *DPR* 66-88; Corder 1997 *Soc Indic Res* 183-201; Streak 2004 *DSA* 272-286. This strategy was replaced by the *Accelerated and Shared Growth Initiative for South Africa* (2005), which in turn was replaced by the *NDP*. See Moyo and Mamobolo 2014 *JPA* 947-957 for a comparison of all these programmes and strategies.

by their corresponding constitutional rights as discussed above.[1357] The outcome of these processes led to the emergence of the legal environmental health mandate in its present form.

4.3.2.1 Transformation of the health system

The transformation of the health system was among others necessitated by the entrenchment of sections 24(a) and 27(1)(a) of the *Constitution*,[1358] and set in motion with the publication of the *White Paper for the Transformation of the Health System in South Africa* (1997) by the NDOH.[1359] This White Paper was modelled after the principles in the *Declaration of Alma-Ata* (1978) and the subsequent recommendations of the WHO, and it set out the mission, goals, and objectives that paved the way for government to unify the previous fragmented health system inherited from the past.[1360] This mainly entailed that government had to establish a new national health system based on the PHC approach and that the system had to be organised into decentralised health districts that could offer a comprehensive and integrated package of health care services to everyone, which include environmental health services.[1361] National and provincial government set up a health committee consisting of Ministers and Members of Executive Councils (hereafter MinMEC) to lead the process to implement the policy proposals of the

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[1357] These were not the only reform related processes that government launched post 1994, but they are the only ones relevant for present purposes. See paras 4.2.2-4.2.3 above for more on the corresponding legal entitlements of each of these processes.

[1358] Preamble to the *NHA*; para 4.2.2 above.

[1359] The *White Paper for the Transformation of the Health System in South Africa* (1997) was based on a national health plan developed by the African National Congress and the WHO - ANC, WHO and UNICEF *A National Health Plan for South Africa* 15-20; para 3.3.2.1 above.

[1360] For more on the PHC approach and the WHO's recommendations in this regard - see para 3.3.2.1-3.3.2.6 above. Government is morally and politically obligated to implement a health system based on the PHC approach because it has undertaken to comply with a number of international law instruments that expect as much, such as the *Declaration of Alma-Ata* (1978) - see also Kautzky and Tollman 2008 *SAHR* 23; *White Paper for the Transformation of the Health System in South Africa* (1997) para 1.1; para 3.3.2.1 above.

[1361] *White Paper for the Transformation of the Health System in South Africa* (1997) para 2.3.2, 2.6.2; para 3.3.2.1 above. Note with respect to environmental health in particular that although government had to take responsibility for the provision of environmental health services as a PHC service, the White Paper provided that a community development rather than a law enforced approach needed to be followed to create conditions conducive to good health because ultimately, "each individual must take responsibility for the maintenance of a healthy environment" - *White Paper for the Transformation of the Health System in South Africa* (1997) para 11.1.1.

White Paper because they are jointly responsible for the health function as per the *Constitution*.[1362]

The health MinMEC among others had to divide the entire territory of South Africa into health districts and had to determine what role the relevant governmental bodies of the respective spheres would have to play within the new system.[1363] They decided that the health districts should be established within the same boundaries as the then yet to be demarcated metropolitan and district municipal areas,[1364] but the assignment of functions among the relevant governmental bodies proved to be more difficult.[1365] There was never any doubt that the NDOH (national government) should take up the leadership role for all health matters.[1366] This entails that the NDOH has to ensure that health services are provided throughout the country and that it has to formulate policies to regulate the health sector for this purpose (issuing norms and standards, setting priorities and goals, and so forth).[1367] However, there was some uncertainty concerning the roles that provincial and local government would have to play in the health system, and in particular as to who should be providing the full PHC service package (promotive, preventative, curative, and rehabilitative services).[1368]

The WHO recommends that health services need to be delivered at community level to be universally accessible to everyone, which suggests that it would have been appropriate for the MinMEC to assign this function to municipalities.[1369] The *White*

1362 Part A of schedule 4 of the *Constitution*; para 4.3.1 above.

1363 DBSA *A Roadmap for the Reform of the South African Health System* 32-38; Schaay, Sanders and Kruger *Overview of Health Sector Reforms in SA* 9-18.

1364 Section 29(2) of the *NHA*; Kautzky and Tollman 2008 *SAHR* 23.

1365 Barron and Asia 2001 *SAHR* 18-21; McCoy and Engelbrecht 1999 *SAHR* 133; Hall, Haynes and McCoy *The Long Road to the District Health System* 111.

1366 The NDOH is the governmental body at the national sphere of government tasked with the duty to improve the health of all South Africans - DOH 2014 http://bit.ly/1603hqh. The assignment of this responsibility to national government conforms to the recommendations of the WHO - see para 3.3.2.6 above.

1367 Sections 3(1)(d), 21(1)-(2) of the *NHA*; *White Paper for the Transformation of the Health System in South Africa* (1997) para 2.1; para 3.3.2 above. The provincial health departments also have the duty to co-ordinate, monitor, and evaluate the delivery of all health services within their respective jurisdictions - ss 1, 25(2), 32(1) of the *NHA*.

1368 Pillay, McCoy and Asia *The District Health System in South Africa: Progress Made and Next Steps* 4-5; McCoy and Engelbrecht 1999 *SAHR* 134-135; *White Paper for the Transformation of the Health System in South Africa* (1997) paras 2.2-2.3.

1369 McCoy and Engelbrecht 1999 *SAHR* 132; para 3.3.2.2 above.

Paper on Local Government (1998) also acknowledges such, proposing that the responsibility for the delivery of PHC services had to be linked to local government's then still undefined 'municipal health services' function listed in the *Constitution*, which would have made this a local government responsibility.[1370] However, as the deliberations on this aspect progressed, doubts arose whether the newly formed municipalities would have the necessary capacity or experience to take on this responsibility.[1371] In the end the MinMEC decided that local government should only provide a limited set of health services in their respective health districts,[1372] and that provincial government (provincial health departments) has to provide the remaining PHC services, which accounts for the majority of services in the health care package.[1373] This came to be known as the devolution of environmental health (to local government), and the provincialisation of PHC (to provincial government).[1374]

The *NHA* was enacted in 2003 to give statutory recognition to the new decentralised health system and the decisions that the MinMEC took in this regard.[1375] The *NHA* accordingly provides that municipalities (specifically metropolitan and district municipalities) are responsible for the delivery of 'municipal health services',[1376] and it circumscribes local government's role by defining the 'municipal health services' function as a specific set of services as per the decision of the MinMEC. This set of

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[1370] Part B of schedule 4 of the *Constitution*; ch C para 2.1 of the *White Paper on Local Government* (1998).

[1371] Health Portfolio Committee *Local Government Capacity for Health Service Delivery: Briefing by Health Systems Trust: Meeting Report* (6 November 2001) 1-4; Pillay, McCoy and Asia *The District Health System in South Africa: Progress Made and Next Steps* 11; Hall, Haynes and McCoy *The Long Road to the District Health System* 3-5.

[1372] The MinMEC initially decided to task local government with the duty to render environmental, promotive, and preventative services, but this description was supposedly too vague and therefore changed to a narrow set of environmental health services - Barron and Asia 2001 *SAHR* 19-20; Hall, Haynes and McCoy *The Long Road to the District Health System* 7-8.

[1373] Provincial health departments may assign the delivery of PHC services to municipalities that have the capacity to deliver them - s 32(2) of the *NHA*.

[1374] Agenbag and Balfour-Kaipa 2008 *SAHR* 150-158; SALGA *Provincialisation of Personal PHC* 10-47; May and Agenbag "Environmental Health and Municipal Public Health Services" 39-44.

[1375] Some of the provisions of the *NHA* commenced in 2005, whereas the remainder entered into force in 2008, 2010, 2012 and 2014 (via an amendment). The health system envisaged in the *NHA* is modelled on the recommendations of the WHO and international law instruments that were developed in this regard - see para 3.3.2.6 above.

[1376] This assignment conforms to the division of functional areas among the spheres of government in the *Constitution* and among the three categories of municipalities in the *Municipal Structures Act* - s 32(1) of the *NHA*; para 4.3.1 above.

services includes the following according to the *NHA*: water quality monitoring, food control, waste management, health surveillance of premises, surveillance and prevention of communicable diseases, vector control, environmental pollution control, disposal of the dead, and chemical safety.[1377] These services clearly all relate to aspects of environmental health, which means that the 'municipal health services' function is now synonymous with an environmental health service function.[1378] So through the enactment of the *NHA* metropolitan and district municipalities became responsible for the provision of some environmental health services, and they have been obligated to do so since 2004.[1379]

It should be noted that the *NHA* lists all the functions and PHC services that provincial health departments must provide,[1380] and for some reason 'communicable disease' and 'environmental pollution control' also happen to be among those services, yet both are already included under the 'municipal health services' function.[1381] The *NHA* does not explain what the scope of these or any of the other

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[1377] Section 1 of the *NHA*. A trade union contested government's decision to define the 'municipal health services' function as a set of environmental health services in the High Court and argued that it disempowers municipalities from providing other PHC services. Makgoba J found, however, based on the fact that the definition begins with the word 'includes', that the 'municipal health services' function "is capable of a construction that incorporates such primary health care services as municipalities provided before the Act came into force". Municipalities are therefore at liberty to provide other PHC services as well (as long as they also provided them before the commencement of the *NHA*) - *Independent Municipal and Allied Workers Union v President of the RSA* 2008 JDR 0374 (T) (hereafter *IMATU*-case) para 2-3, 47, 51.

[1378] See para 2.3.5 above; para 5.2.1 below.

[1379] Local municipalities were initially authorised to perform those services that they were performing during and prior to the final transition of local government as a means to ensure that service delivery was not disrupted, and those services included some of the 'municipal health services'. This meant that district municipalities were not responsible for the delivery of some services at first. However, by 1 July 2004 the authorisations were revoked, which meant that they finally became responsible for the delivery of this function from this date onward - see for instance the *Revocation of Previous Authorisations in terms of Section 84(3) of the Local Government: Municipal Structures Act, 1998: KwaZulu-Natal* (2003); *Revocation of Previous Authorisations in terms of Section 84(3) of the Local Government: Municipal Structures Act, 1998: Eastern Cape* (2003); Provincial and Local Government Portfolio Committee *Division of Powers and Functions of District and Local Councils and Related Financial Issues: Briefing: Meeting Report* (2 April 2001) 1-3.

[1380] The 'malaria', 'hazardous substances', and 'port health control' functions are expressly *excluded* from the definition of 'municipal health services' in the *NHA*, and as such they fall under the purview of provincial health department's obligations. See ss 1, 25(2)(l) of the *NHA*; para 2.6.3 of the *White Paper for the Transformation of the Health System in South Africa* (1997) for all the PHC services that the provincial health departments must perform. The 'port health control' function (to *facilitate* and *promote*) has been transferred to the NDOH since 2013 - ss 1, 21(2)(f), 25(2) of the *NHA*.

[1381] Section 25(2)(u), (w) of the *NHA*.

environmental health services portrayed in the Act are.[1382] As such it would appear that local *and* provincial government may both have to provide these services in their entirety.[1383] It is more likely, however, that the provincial health departments' responsibility in this regard are limited to those aspects that fall outside of the competence of municipalities.

In 2009 the NDOH eventually clarified what the environmental health services listed in the *NHA* are supposed to entail by publishing the updated *Regulations Defining the Scope of the Profession of Environmental Health Practitioners* (2009) (hereafter *EHP Regulations*).[1384] The *EHP Regulations* describes what the duties of municipalities and provincial health departments are in this regard because it sets out all the acts that are deemed to fall under each of the environmental health services listed in the *NHA*.[1385] Environmental Health Practitioners (hereafter EHPs) are the personnel that have to perform these acts, that is, to provide environmental health services.[1386] According to the *EHP Regulations* EHPs mostly need to identify, assess, and monitor environmental health hazards to prevent harm from occurring, and it is only in some instances that they need to exercise control over specific hazards as well.[1387] This means that the *NHA* does not impose a duty on municipalities or provincial health departments to *provide* most of the public goods to create an environment conducive to good health towards realising the constitutional environmental health right, instead they only have to ensure that those governmental bodies that do have this responsibility actually see it through.[1388] In other words, municipalities and provincial health departments (via

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1382 None of the environmental health services are defined or described in the *NHA*.

1383 Section 1 of the *NHA*.

1384 For more on the *EHP Regulations* - see May and Agenbag "Environmental Health and Municipal Public Health Services" 76-77.

1385 The *EHP Regulations* does not specify or distinguish between the respective governmental bodies that have to perform these functions.

1386 This profession is regulated by the Professional Board for Environmental Health Practitioners, and EHPs have to be registered to perform their functions - s 83(5) of the *NHA*.

1387 Regulations 1-14 of annexure A of the *EHP Regulations*. The *EHP Regulations* added noise and radiation control to the environmental health service package that EHPs must perform, but they do not have to render these functions in terms of the *NHA* specifically - regs 10-11 of annexure A of the *EHP Regulations*. Noise control was initially included in the Bill that was to become the *NHA*, but it did not make it to the final iteration of the *NHA* because, apparently, it is not related to people's health.

1388 The *NHA* was among others enacted to realise the right that everyone has to a healthy environment - preamble to the *NHA*; ss 24(a), 27(1) of the *Constitution*; paras 4.2.2 above.

EHPs) are not, for example, responsible for the provision of 'water supply and sanitation services' or 'refuse removal and solid waste disposal' by virtue of their obligation to deliver environmental health services, they only have to make sure that these services are in fact provided.[1389] The environmental health service function as set out in the *NHA* is therefore primarily one of oversight because EHPs mainly have a supervisory role to play with respect to circumscribed environmental threats (identify, assess, monitor, control).

The NDOH published *National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners* (2015) (hereafter *EHP Norms and Standards*) in 2015 to strengthen the provision of environmental health services. The *EHP Norms and Standards* supplements the *EHP Regulations* by setting a benchmark of quality in respect of most of the environmental health service listed in the *NHA* in order to standardise the functions and activities of EHPs, and its content confirms that EHPs mainly play a supervisory role.[1390]

Health matters were regulated by the *Health Act* 63 of 1977 (hereafter *Health Act*) in the past and when the *NHA* commenced in 2005 it repealed most of the provisions of the older Act to establish the new health system.[1391] Government inherited other health-related laws that were enacted prior to 1994 as well, such as the *Foodstuffs, Cosmetics and Disinfectants Act* 54 of 1972 (hereafter *Foodstuffs Act*), the *Hazardous Substances Act* 15 of 1973 (hereafter *Haz Act*), the *Tobacco Act*, and the *International Health Regulations Act* 28 of 1974 (hereafter *IHR Act*).[1392] Government had the opportunity to consolidate these laws and to create a new

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[1389] Government, and local government in particular, is still responsible for the provision of many of these services, they just do not fall within the mandate of the health sector, and therefore the ambit of the *NHA* - see paras 4.3.2.2-4.3.2.6 below.

[1390] *EHP Norms and Standards* 10; May and Agenbag "Environmental Health and Municipal Public Health Services" 76-77.

[1391] Some of the remaining provisions of the *Health Act* that were not repealed and were still in force at that stage empowered the Minister of Health to publish regulations related to environmental health matters, and EHPs relied on those regulations to perform their functions. The remaining provisions of the *Health Act* were repealed in 2012, and potentially so too its regulations, which may have disempowered EHPs to perform some of their duties. See para 4.3.4.3 below for more on this issue.

[1392] All these laws are administered by the NDOH.

cohesive legal framework for all these health-related matters whilst the process to transform the health system was underway.[1393] However, the NDOH opted to replace *only* the *Health Act*. In consequence, the other older health-related laws are still in force and still regulate health specific matters alongside the *NHA*.

The *Foodstuffs Act* prohibits the sale of foodstuffs of a certain quality or foodstuffs that contain certain substances, which have been declared and identified in several regulations published under the Act.[1394] The regulations pertain, for instance, to additives, sodium, microbial content, milk products, and processed and perishable foodstuffs.[1395] The *Foodstuffs Act* provides that the Director-General of the NDOH has to designate inspectors that need to implement the Act, meaning that they have to conduct inspections and ensure that everyone complies with the food standards set by the Act.[1396] In addition, the *Foodstuffs Act* permits the Minister of Health to authorise municipalities, in which case they could authorise their own 'health inspectors' to implement the Act as well.[1397] The implication hereof is that inspectors (and 'health inspectors' in the case of municipalities) must conduct food control functions in terms of the *Foodstuffs Act*, whereas EHPs have to do so in terms of the *NHA*. Government amended the *Foodstuffs Act* in 2007 to resolve this discrepancy, and the Act now permits EHPs (not only 'health inspectors') to implement its provisions.[1398] However, the provision that requires that municipalities have to be authorised by the Minister of Health before they can authorise their own personnel to enforce the Act on their own accord, has not been repealed when the Act was amended.[1399] The significance hereof is a) that two laws now impose a food control function on government (duplication), which

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[1393] Initially government intended to produce a legal framework to support environmental health interventions by reviewing and consolidating all the different laws that have an impact on environmental health, but for some reason this objective was not included in the *White Paper for the Transformation of the Health System in South Africa* (1997) and never materialised - ANC, WHO and UNICEF *A National Health Plan for South Africa* 44.

[1394] Sections 2-3, 15 of the *Foodstuffs Act*. For more on government's international obligations concerning food safety - see para 3.3.3.3 above.

[1395] Regulations have been published in respect of many foodstuffs both before and after 1994 under the *Foodstuffs Act*, and they are also amended on a regular basis. Some of the regulations give effect to the standards in the *Codex Alimentarius* - see para 3.3.3.3 above.

[1396] Sections 10-14, 17-18 of the *Foodstuffs Act*.

[1397] See ss 10(3), 23 of the *Foodstuffs Act* prior to its amendment in 2007.

[1398] Section 10(3)(b) of the *Foodstuffs Act*.

[1399] Section 23 of the *Foodstuffs Act*.

complicates the legal framework, and b) that municipalities still need authorisation before they can implement the *Foodstuffs Act*, which is an unnecessary bureaucratic obstacle.

The *Haz Act* subjects the sale and use of certain declared hazardous substances to licensing requirements.[1400] The Director-General of the NDOH is responsible for the approval and issuing of such licences, and he or she may appoint any person as an inspector who in turn has to ensure that everyone complies with the provisions of the *Haz Act*. The inspector among others have to make sure that no one sells or uses any of the declared substances without a licence, and that the holders of licences comply with the requirements of their licences.[1401] The *Haz Act* also empowers municipalities to designate personnel in their employ as inspectors for purposes of the Act, but as is the case with the *Foodstuffs Act*, they first have to be authorised by the Minister of Health to be able to do so.[1402] The primary issue here is not that this requirement causes a bureaucratic obstacle, or that both the *NHA* and the *Haz Act* impose a hazardous substances control function on government, or even that the *Haz Act* has to be enforced by inspectors and not EHPs, it is that the *NHA* explicitly excludes the control of hazardous substances from the services that local government has to perform and leaves it up to provincial health departments to perform this function instead.[1403] The implication hereof is that municipalities cannot designate their EHPs to enforce the provisions of the *Haz Act* to streamline the control of hazardous substances, and provincial health departments cannot designate their EHPs to do so either because the *Haz Act* does not give provincial government the power to authorise anyone to implement the Act. The two laws will therefore have to be enforced and hazardous substances will

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[1400] Sections 2-4, 29 of the *Haz Act*. The Minister of Health is empowered to and has already declared (and amended) a number of substances as hazardous substances, listed within 4 distinct groups, each with their own requirements. See e.g. *Group I Hazardous Substances* (1977); *Declaration of Group II Hazardous Substances* (1994); *Group III Hazardous Substances* (1991); *Regulations Regarding Group I Hazardous Substances* (1977); *Regulations Relating to Group III Hazardous Substances* (1989); *Regulations Relating to Group IV Hazardous Substances* (1993). See para 3.3.3.6 above for government's international obligations in this regard.

[1401] Sections 4, 8-9 of the *Haz Act*.

[1402] Sections 8(3), 24 of the *Haz Act*.

[1403] Sections 1, 25(2)(l) of the *NHA*. Local government's 'chemical safety' function does not fall within the ambit of the *Haz Act*.

have to be controlled by *different* personnel that are employed at municipalities, provincial health departments, and the NDOH.[1404] So there is a clear disconnect between the regulatory provisions concerning hazardous substances in the *NHA* and the *Haz Act*, which causes institutional and operational complications for government to control hazardous substances.

The *Tobacco Act* prohibits smoking in public places and tasks local government with the duty to enforce its provisions, that is, to make sure that everyone complies with this prohibition.[1405] This has been the case since the commencement of the *Tobacco Act*, although at that time the Act referred simply to local authorities and did not specify whether any person in particular employed by the authorities need to take up this role.[1406] The *Tobacco Act* has since been amended to address this issue, which has been done through the incorporation of the provisions of the *NHA* that relate to the powers and functions of EHPs by reference.[1407] The effect hereof is that EHPs can now perform this function as part of their duty to provide 'municipal health services'.[1408] The *Draft Control of Tobacco Products and Electronic Delivery Systems Bill* (2018) may replace the *Tobacco Act* in future and it also permits EHPs to enforce its provisions by way of reference to the *NHA*.[1409]

The *IHR Act* was enacted to give effect to the previous *International Health Regulations* (1969), which has since been replaced by the *IHRs*. This means that the *IHR Act* is outdated.[1410] The *IHR Act* essentially makes provision for 'port health' services, and it tasks the NDOH (referred to as the health administration) with their delivery.[1411] Government drafted a new *International Health Regulations Bill* (2013) that provides for the domestication of the latest *IHRs*, but it has not been tabled in

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[1404] EHPs that are employed by provincial health departments will have to control hazardous substances in terms of the *NHA*, and inspectors that are employed by municipalities and the NDOH will have to do so in terms of the *Haz Act*.

[1405] Section 2 of the *Tobacco Act*. For more on government's international obligations in this regard - see para 3.3.3.5 above.

[1406] At that stage municipalities did not yet exist as they do in their current form, and they did not employ EHPs either - see ss 1-2 of the *Tobacco Act* prior to its amendment in 2007; para 4.3.1 above.

[1407] Sections 80-89 of the *NHA* are referenced in the *Tobacco Act*.

[1408] The amendment came into force in 2009 - s 2(7) of the *Tobacco Act*.

[1409] Section 12 of the *Draft Control of Tobacco Products and Electronic Delivery Systems Bill* (2018).

[1410] For more on the *IHRs* - see para 3.3.3.5 above.

[1411] See the schedule to the *IHR Act*, which is the *International Health Regulations* (1969).

Parliament or signed into law as of yet.[1412] The current iteration of the *International Health Regulations Bill* (2013) conforms to the provisions of the *NHA* as far as the 'port health' function is concerned, because it too tasks the Minister of Health with its implementation. It therefore appears as if the *IHR Act* and the *Tobacco Act* and their likely future replacements will be able to co-exist harmoniously with the *NHA*, whereas the same cannot be said of the *Haz Act* or the *Foodstuffs Act*.

While government established a new legal framework (the *NHA*, *EHP Regulations*, *EHP Norms and Standards*) for the provision of some environmental health services by transforming the health system,[1413] it simultaneously developed a new environmental management system that also had implications for the governance of environmental health going forward.

4.3.2.2 Development of the new environmental management system

The roots of the current environmental management system can be traced back to 1995 when government launched a process for the development of a new environmental management policy in compliance with its duty to give effect to section 24 of the *Constitution*.[1414] Many stakeholders were involved in the process and after three years and extensive public participation government was able to publish a *White Paper on Environmental Management Policy for South Africa* (1998).[1415] The White Paper endorsed the notion of sustainable development enunciated in the *Rio Declaration* and the *Agenda 21* and laid out government's vision of a society in harmony with the environment.[1416] This involved the development of a *new* integrated environmental management system that could unite all people in South Africa to build a society where everyone has sufficient food,

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[1412] By October 2022.

[1413] The legal environmental health framework consists of other laws and policies as well, and they are discussed in paras 4.3.2.2-4.3.2.6, 4.3.3-4.3.4 below.

[1414] *White Paper on Environmental Management Policy for South Africa* (1998) 17, 39; preamble to the *NEMA*; para 4.2.2 above. See para 3.3.3.1 above for more on government's international obligations with respect to the environment in general.

[1415] The process was headed by an environment and conservation MinMEC. See the *White Paper on Environmental Management Policy for South Africa* (1998) 10-12 for an overview of the process.

[1416] See Glazewski "The National Environmental Management Act" 3-7 for more on the *White Paper on Environmental Management Policy for South Africa* (1998). See paras 2.3.4, 3.3.3.1 above for more on sustainable development.

clean air and water, and decent homes.[1417] The *NEMA* was published later in that same year to implement this vision,[1418] and a host of other laws have since followed suit.[1419]

The *NEMA* was enacted in 1999 to serve as the legal framework for environmental management and is the primary law that regulates environmental matters in South Africa.[1420] The *NEMA* does not regulate environmental health specifically, nor does it refer to environmental health in any other direct way. However, once it became operational it introduced various new obligations, processes, and mechanisms pertaining to environmental management that do have a bearing on environmental health practice.

The *NEMA* is underpinned by a set of principles that guide the exercise of government's functions that may significantly affect the environment.[1421] This includes that development must be sustainable, that people and their needs should be placed at the forefront of environmental management, and that harmful environmental impacts have to be anticipated and prevented – notions that are

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[1417] *White Paper on Environmental Management Policy for South Africa* (1998) 13-61.

[1418] The NDFFE, then known as the Department of Environment Affairs and Tourism, was endorsed as lead agent for environmental management and drafted the *NEMA*. Environmental matters were regulated by the *ECA* prior to 1994 but the Act never reached its full potential. For more on the history of environmental regulation in South Africa - see Oosthuizen, Van der Linde and Basson "National Environmental Management Act 107 of 1998 (NEMA)" 125-126; Glazewski "The National Environmental Management Act" 3-5.

[1419] The NDFFE published a *White Paper on Integrated Pollution and Waste Management in South Africa* (2000) that served as precursor for the development of further environmental laws. The other laws that were drafted by the NDFFE and have subsequently been enacted include the *National Environmental Management: Protected Areas Act* 57 of 2003; the *National Environmental Management: Air Quality Act* 39 of 2004; the *National Environmental Management: Integrated Coastal Management Act* 24 of 2008; the *National Environmental Management: Waste Act* 59 of 2008; and the *National Environmental Management: Biodiversity Act* 10 of 2004.

[1420] Du Plessis and Nel explain that "[f]ramework legislation aims to define overarching and generic principles in terms of which sectoral-specific legislation is embedded, as well as to enhance co-operative environmental governance amongst fragmented line ministries" - Du Plessis and Nel 2001 *SAJELP* 1-2.

[1421] The principles incorporate several international environmental law principles into South Africa's legal system - Glazewski "The National Environmental Management Act" 7-14; para 3.3.3.1 above. See also *Fuel Retailers*-case para 67 for the Constitutional Court's interpretation on the role that the *NEMA* principles play in the governance of the environment.

analogous with the environmental health concept.[1422] The *NEMA* established an environmental authorisation system that is based upon environmental assessments as a way to integrate all its principles into government's decision-making that may significantly affect the environment.[1423] This entails that no one may undertake certain activities (that are listed in regulations published under the *NEMA*) without obtaining prior governmental authorisation,[1424] and if they do they may be directed to cease the activity, to remedy any adverse effects they may have caused, to pay an administrative fine, and they will also commit a criminal offence.[1425] Government may only grant authorisation once the potential consequences of a proposed activity have been duly considered, investigated, and assessed,[1426] and the power to do so lies with designated officials from national and provincial government,[1427] but not local government.[1428] The implication hereof is that government and society (prospective applicants) are compelled to follow a process that could protect the

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[1422] Section 2(1)-(4) of the *NEMA*. Note, as De Wet and Du Plessis point out, that these principles "seem to take due account of the positive environmental obligations that were distilled in international human rights jurisprudence" - De Wet and Du Plessis 2010 *AHRLJ* 366; paras 3.3.1, 3.3.3.1 above.

[1423] Section 23(2)(a) of the *NEMA*. For more on environmental assessments - see Kidd, Retief and Alberts "Integrated Environmental Assessment and Management" 1223-1264; Oosthuizen, Van der Linde and Basson "National Environmental Management Act 107 of 1998 (NEMA)" 156-174; Glazewski "The National Environmental Management Act" 15-20. The practice of environmental assessment was actually conceptualised with the promulgation of the *ECA* (predecessor of the *NEMA*), formalised with the publication of regulations in 1997 to this effect, and later refined by the *NEMA* - see Kidd, Retief and Alberts "Integrated Environmental Assessment and Management" 1215-1223.

[1424] The first environmental assessment regulations under the *NEMA* were published in 2006. They have since been amended in 2010, replaced in 2014, and again amended in 2017, 2018, and 2021 - Kidd, Retief, and Alberts "Integrated Environmental Assessment and Management" 1215-1223. For more on the listed activities and the authorisation process - see *Environmental Impact Assessment Regulations* (2014); *Environmental Impact Assessment Regulations Listing Notice 1* (2014); *Environmental Impact Assessment Regulations Listing Notice 2* (2014); *Environmental Impact Assessment Regulations Listing Notice 3* (2014).

[1425] Sections 24F, 24G, 49A(1) of the *NEMA*.

[1426] Section 24(1) of the *NEMA*.

[1427] The Minister of Forestry, Fisheries and the Environment is the designated authority at national government and the Member of the Executive Councils (hereafter MECs) entrusted with the environmental affairs of each province is the designated authority at provincial government. The procedure to identify the competent authority is set out in s 24C(1)-(10) of the *NEMA* and essentially depends on the nature of a proposed activity. The Minister of Mineral Resources and Energy and the National Department of Mineral Resources and Energy are the designated authorities as far as mining-related activities are concerned. The *NEMA* also regulates matters that pertain to mining, but a discussion hereof does not fall within the scope of this research.

[1428] The legal environmental management framework as per the *NEMA* therefore does not appear to extend to local government - Müller "Environmental Governance in South Africa" 81-83. Other specific environmental management acts on the other hand do foresee a role for local government, which is discussed in the paras to follow.

environment from future harmful activities and could prevent and mitigate detrimental environmental impacts or degradation,[1429] which in turn could also minimise the emergence of new environmental health hazards. So with the establishment of the environmental authorisation system the *NEMA* created a mechanism that is useful to environmental health practice.[1430]

The *NEMA* aims to influence how people interact with the environment by creating a general duty of care and remediation of environmental damage. In this respect it provides as follows:

> Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment.[1431]

The relevance of this provision lies in the fact that it *compels* everyone (including governmental bodies and officials) to take measures to prevent environmental harm from occurring,[1432] and it *empowers* officials from national and provincial government to direct those that did cause harm to minimise or remedy the effects

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[1429] The *NEMA* initially required that environmental, socio-economic, and cultural impacts had to be considered during environmental assessments, which accords with the notion of sustainable development and the *NEMA* in general. It has since been amended, however, and *only* environmental impacts must currently be considered at this stage, which is contradictory to the *NEMA* principles and the purpose of integrated environmental management - ss 23(2), 24(1) of the *NEMA*; Glazewski and Brownlie "Environmental Assessment" 22-24.

[1430] The authorisation system creates an opportunity for government to conduct health impact assessments as well, a requirement as far as the *Environmental Health: A Strategy for the African Region* 52/10, WHO Doc AFR/RC52/10 (2002) is concerned - see para 3.3.2.4 above. The NDOH developed a guide for EHPs in line with the *Environmental Impact Assessment Regulations* (2014) and listed activities as per the *NEMA* which includes a register that indicates when they have to conduct such assessments - see *Management of EIAs of Proposed Development Activities: A Guiding Handbook for EHPs* (2017).

[1431] Section 28(1) of the *NEMA*. See Oosthuizen, Van der Linde and Basson "National Environmental Management Act 107 of 1998 (NEMA)" 176-180; Glazewski "The National Environmental Management Act" 22-28; Kidd *Environmental Law* 149-153.

[1432] See s 28(3)(a)-(f) of the *NEMA* for a list of the reasonable measures that people need to take in this regard. For the interpretation of the 'duty of care and remediation' by the courts - see *Bareki*-case 439-442. For a discussion of the *Bareki*-case - see Du Plessis and Kotzé 2007 *Stell LR* 161-193.

of the environmental harm that they have caused.[1433] The *NEMA* further provides in this regard that if anyone unlawfully causes significant pollution, degradation, or detrimentally affects the environment, they will commit a criminal offence.[1434] With the introduction of this duty and the subsequent powers that flow from it the *NEMA* therefore created and thereby equipped government with a governance tool that could be used to repair past environmental damage, reduce and control present environmental hazards, and to prevent possible future environmental risks, all of which is applicable and even integral to environmental health.[1435]

The provisions of the *NEMA* have to be enforced by environmental management inspectors (hereafter EMIs).[1436] This means that EMIs have the duty to *ensure* that no one commences with a listed activity without obtaining the necessary authorisation and that no one causes significant environmental pollution.[1437] The *NEMA* empowers EMIs to monitor, inspect, question, investigate, issue compliance notices, and to undertake any action that a peace officer may in terms of the *Criminal Procedure Act* 51 of 1977 (hereafter *CPA*) to enforce the Act,[1438] but they have to be designated to do so.[1439] The Minister of Forestry, Fisheries and the Environment can designate EMIs at the national department and the MECs responsible for the environmental affairs of each province have the power to

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1433 The Director-General of the NDFFE and the MECs of each of the provinces responsible for environmental affairs may issues such directives, and non-compliance with a directive constitutes an offence - s 28(3)-(4), 49A(1)(g) of the *NEMA*. Note that the *National Environmental Management Laws Amendment Act* 2 of 2022 amends section 28 of the *NEMA* to give municipalities this power as well. However, the Act has not come into operation as of October 2022.

1434 Section 49A(1)(e)-(f) of the *NEMA*.

1435 See para 2.4.2.2 above for more on governance tools.

1436 See DEA *National Environmental Compliance and Enforcement Report 2018/2019* 3-5 for a summary of the most recent work done by EMIs.

1437 Without proper enforcement "the entire environmental governance exercise will be undermined" - Kotzé "Environmental Governance" 108-109.

1438 For more on the functions and powers of EMIs - see ss 31H-31L of the *NEMA*; chs 2, 5, 7, 8 of the *CPA*; *Regulations Relating to Qualification Criteria, Training and Identification of, and Forms to be used by, Environmental Management Inspectors and Environmental Mineral Resource Inspectors* (2017); para 5.3.1 below.

1439 EMIs can be designated to enforce specific provisions of the *NEMA*, the *NEMA* in its entirety, or other sector specific environmental laws - s 31D of the *NEMA*. The other environmental laws are discussed below.

designate them at their provincial departments.[1440] Local government may not designate its own EMIs for the time being, but the respective MECs are permitted to designate them to operate from municipalities as well.[1441] Municipalities are therefore *dependant* on provincial government to make use of EMIs to enforce the provisions (and make use of the tools) of the *NEMA* within their jurisdictions.[1442]

As framework legislation the *NEMA* aims to facilitate co-operation between all the governmental bodies that exercise functions that may affect the environment to secure the protection of the environment in the country as a whole. In this respect the *NEMA* requires that designated governmental bodies have to prepare environmental implementation or management plans that contain a description of their environmental-related policies, plans, and programmes, and that contain an explanation of how they will ensure that their functions are exercised to comply with the principles in the *NEMA*.[1443] Their plans must be submitted for approval to the Minister of Forestry, Fisheries and the Environment or the respective MECs of the provincial environmental departments, and they have to comply with them once approved.[1444] According to the *NEMA* this should enable all the governmental bodies to co-ordinate and harmonise their work that relate to the environment and in so doing any duplication of their environmental-related functions and services will be minimised.[1445] In theory these procedures could therefore aid those involved in the governance of environmental health to co-operate with one another and to co-

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[1440] Sections 31B, 31C of the *NEMA*; Glazewski "The National Environmental Management Act" 33-34; Oosthuizen, Van der Linde and Basson "National Environmental Management Act 107 of 1998 (NEMA)" 185-186. The Ministers of Mineral Resources and Energy and Water and Sanitation may also designate EMIs - ss 31BA-31BB of the *NEMA*.

[1441] Although only with the agreement of said municipalities - s 31C(1)(a)(iii) of the *NEMA*; Snijman and Petterson "Environmental Law Compliance and Enforcement" 3-11. As mentioned earlier, the situation will change once the *National Environmental Management Laws Amendment Act* 2 of 2022 comes into effect.

[1442] Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 39-42; *Draft National Guideline and Implementation Protocol for the Roll-Out of the Environmental Management Inspectorate to Local Authorities* (2011).

[1443] The plans must be prepared at intervals not more than five years apart - s 11 of the *NEMA*. For more on the plans and their content - see ss 13-14 of the *NEMA*; Oosthuizen, Van der Linde and Basson "National Environmental Management Act 107 of 1998 (NEMA)" 146-155; Glazewski "The National Environmental Management Act" 14-19; Kidd *Environmental Law* 40-42.

[1444] Sections 15-16 of the *NEMA*.

[1445] Section 12 of the *NEMA*.

ordinate their efforts.[1446] The governmental bodies that have to submit and comply with the environmental plans include the NDFFE, NDOH, NDWS, NDHS, NDALR, and the provincial environmental departments.[1447] Evidently municipalities do not have to submit their *own* environmental plans (and neither do provincial health departments),[1448] but they do have to comply with the provincial environmental plans of the provinces within whose area of jurisdiction they are located, which makes them subject to the authority of the provincial environmental departments in this regard.[1449] It would appear then that the *NEMA* failed to include *all* those governmental bodies that have environmental-related functions into its co-operative governance procedures, which in the least may merely be a missed opportunity, or by subjecting municipalities to their provincial governments' environmental plans may actually hamper them from performing their environmental health duties optimally.

The *NEMA* pioneered a new era of environmental management for South Africa from 1999 onwards and insofar it introduced these new obligations and mechanisms that governmental bodies and officials now have to perform and can use to protect the environment, it also makes up a part of the legal environmental health mandate.[1450] It deserves mention at this stage though that there is a disparity between the allocation of powers and functions among the three spheres of government in terms of the *NEMA* on the one hand, and the *NHA* on the other. Local government officials do not have the power to issue environmental authorisations, municipalities cannot appoint EMIs on their own accord yet, and they are not involved in the arrangements that facilitate co-operative governance as per the environmental management

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[1446] See paras 2.4.2.4-2.4.2.5 for more on intergovernmental co-operation and why it is necessary as far as environmental health governance is concerned.

[1447] There are other national departments that also have to comply with these procedures, but their work falls outside the scope of this research - s 11(1)-(2), schedules 1-2 of the *NEMA*.

[1448] Like municipalities, provincial health departments must also render some environmental health services, but they too are not included in the list of bodies that have to submit environmental plans to their respective MECs.

[1449] Section 16(1), (4)(a)-(b) of the *NEMA*. The argument could be made that the NDOH, which does have to submit an environmental management plan, could serve as an intermediary and co-ordinate municipalities' environmental-related functions in terms of the *NHA* on their behalf. See for instance the *Department of Health Environmental Management Plan* (2020-2025), which is their latest plan.

[1450] The *NEMA* replaced most of the provisions of its predecessor, the *ECA*.

system. The *NEMA* as such essentially appoints national and provincial government as environmental regulators,[1451] while the *NHA* assigns the environmental health function mostly to local government because metropolitan and district municipalities have to provide the majority of the defined set of environmental health services in their communities via EHPs.[1452] So in as much as both of these legal frameworks contain measures aimed at realising the constitutional environmental right and partly make up the legal mandate for environmental health, they clearly establish two distinct regulatory systems each with different institutions, officials, and personnel to operate them for this purpose.[1453]

The establishment of the integrated environmental management system did not end with the promulgation of the *NEMA*. The NDFFE developed other specific environmental management acts (hereafter SEMAs) in due course to supplement the *NEMA*.[1454] Some of the SEMAs also had an influence on the institutional structures and administrative landscape of environmental health once they became operational, such as the *National Environmental Management: Air Quality Act* 39 of 2004 (hereafter *NEMAQA*) and the *National Environmental Management: Waste Act* 59 of 2008 (hereafter *NEMWA*).

Air pollution used to be regulated under the *Atmospheric Pollution Prevention Act* 45 of 1965 (hereafter *APPA*) in the past, but was criticised because it was only concerned with point source emissions (not the resultant broader ambient air quality), it essentially centralised air pollution management, and it lacked proper enforcement provisions.[1455] The *APPA* was replaced by the current *NEMAQA* in 2005

[1451] This is not to say that local government cannot regulate environmental matters at all. The NDFFE has contended in the past that the *Constitution* fails to provide a clear role for local government concerning environmental matters, but as Du Plessis points out, it is a misconceived idea that has been corrected by the courts in recent years - Du Plessis "Local Government and the Pursuit of Urban Sustainability in South Africa" 267-268; also see DEAT *South Africa Environment Outlook* 75-77.

[1452] See para 4.3.2.1 above.

[1453] The distinction between the two systems will become evident as this discussion progresses. For example, the NDFFE is appointed at the helm for the environmental management system, whereas the NDOH is appointed at the helm of the national health system, and EMIs that are appointed by national and provincial government have the power to enforce environmental laws, whereas the EHPs that are appointed by municipalities have the power to enforce the environmental-related health laws.

[1454] There are currently 8 SEMAs listed in s 1 of the *NEMA*.

[1455] Rumble *et al* "Air Quality" 408; Glazewski and Du Toit "Atmospheric Pollution" 9-10.

and it became fully operational in 2010.[1456] The *NEMAQA* was enacted to conform to the constitutional imperatives relating to air quality, which was not only to enhance the quality of the air towards securing a healthy environment, but also to align its governance with the constitutional division of functions and powers.[1457] It did so by introducing new measures to address both point source emissions *and* broader ambient air quality, which among others entail that a) the Minister of Forestry, Fisheries and the Environment now have to list activities that may have a significant detrimental effect on the environment and people's health and have to set national ambient air quality standards,[1458] b) metropolitan and district municipalities have to implement an atmospheric emission licensing system as a way to regulate those listed activities and to ensure compliance with those standards,[1459] c) provincial environmental departments and municipalities have to monitor ambient air quality (point and non-point source emissions),[1460] and d) the NDFFE, provincial departments, and municipalities have to appoint air quality officers and prepare air quality management plans (to be included in their environmental management or integrated development plans) – none of which were the case under the *APPA*.[1461] In addition the *NEMAQA* criminalises non-compliance with some of its provisions, making it an offence to undertake a listed activity without obtaining the necessary licence, or to exceed emission limits relating to

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1456 Gwaze "The Management of Air Quality in South Africa" 5.

1457 Rumble *et al* "Air Quality" 408; Glazewski and Du Toit "Atmospheric Pollution" 9-10; s 2 of the *NEMAQA*; para 2.2.6 above.

1458 The NDFFE *must* publish national ambient air quality standards, whereas the provincial governments and municipalities *may* also do so (as long as their standards are stricter) - ss 9-11, 21 of the *NEMAQA*; see also *National Ambient Air Quality Standards* (2009); *List of Activities which Result in Atmospheric Emissions which have or may have a Significant Detrimental Effect on the Environment, Including Health, Social Conditions, Economic Conditions, Ecological Conditions or Cultural Heritage* (2013).

1459 Section 36 of the *NEMAQA*.

1460 Section 8(a)-(b) of the *NEMAQA*; *National Framework for Air Quality Management in the Republic of South Africa* (2017) para 4.2. Although the *Constitution* allocates the 'air pollution' function to local government, the *Municipal Structures Act* further provides that it is a local and not district municipality responsibility - see para 4.3.1 above. Save for compliance monitoring with respect to offensive odours and noise that may arise from activities constituting 'nuisance or disturbance matters', the *NEMAQA* and *National Framework for Air Quality Management in the Republic of South Africa* (2017) seem to have all but ignored this aspect.

1461 Air quality officers are responsible for the co-ordination of all air quality management-related matters in their respective areas. For more on the new functions introduced by the *NEMAQA* - see *National Framework for Air Quality Management in the Republic of South Africa* (2017) paras 3.2, 4.3; ss 7, 9(1), 14-15, 21, 36 of the *NEMAQA*; Glazewski and Du Toit "Atmospheric Pollution" 9-10; Rumble *et al* "Air Quality" 432-433.

specific pollutants as specified in a particular licence, and as a SEMA it is enforceable by EMIs.[1462] The effect hereof as far as the governance of environmental health is concerned is that governmental bodies from all three spheres of government are now tasked with duties aimed specifically at the management of air quality, which adds to the responsibilities that they already have in terms of the *NEMA* and the *NHA*.[1463] At the same time it also highlights how complex the fragmented administrative and operational landscape for environmental health is, not only between the separate health and environmental management legal frameworks, but also within the environmental management system itself. For instance, EHPs that are appointed by municipalities have to monitor whether those same municipalities have their air quality management plans in place and are implementing them,[1464] and even though municipalities are the regulators of the air quality licensing system and it is unlawful to conduct a listed activity without obtaining the necessary licence, EMIs who are empowered to enforce the provisions of the *NEMAQA* still have to be designated by the provincial environmental departments to do so.[1465] So municipalities have to monitor and report on *themselves* because of the interplay between the health and environmental management system, and different governmental bodies *must* co-operate with one another to be able to hold offenders liable for their unlawful conduct because the *NEMA* does not permit municipalities to appoint their own EMIs as of yet.

Some types of waste were partly regulated in terms of various laws prior to 1994, and while government adopted a range of waste management policies and

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1462 Section 51 of the *NEMAQA*; *List of Activities which Result in Atmospheric Emissions which have or may have a Significant Detrimental Effect on the Environment, Including Health, Social Conditions, Economic Conditions, Ecological Conditions or Cultural Heritage* (2013).

1463 The NDFFE also has to develop a binding national framework setting out the responsibilities for the implementation of the *NEMAQA* among the relevant governmental bodies of each sphere of government, and this framework has to be reviewed at least every 5 years - s 7(3)-7(6) of the *NEMAQA*; *National Framework for Air Quality Management in the Republic of South Africa* (2017). Note, however, that the *NEMAQA* is only concerned with the regulation of ambient air quality, and not indoor air quality. The NDFFE published a *Strategy to Address Air Pollution in Dense Low-income Settlements* (2018) wherein it takes note of research that indicates that exposure to air pollutants can be greater indoor than outdoors. This strategy places the responsibility for indoor air quality at the door of the NDOH though. See para 4.3.2.4 below for more in this regard.

1464 *EHP Norms and Standards* 18; para 4.3.2.1 above.

1465 Section 51 of the *NEMAQA*; ss 31C(1)(a)(iii), 31H-31L of the *NEMA*.

strategies since then, such as the *White Paper on Integrated Pollution and Waste Management in South Africa* (2000), it eventually promulgated the *NEMWA* in 2009 that is specifically dedicated to the regulation of waste management (including hazardous waste).[1466] The purpose of the *NEMWA* is to protect the environment and people's health and well-being as far as waste and land contamination is concerned,[1467] and to this end it introduced a number of new obligations and processes that entrench a hierarchical approach to integrated waste management in the country.[1468] Much like the *NEMAQA* it requires that waste management officers have to be designated at all three spheres of government and that all the governmental bodies from provincial and local government that are involved in waste management have to develop integrated waste management plans.[1469] It tasks the Minister of Forestry, Fisheries and the Environment with a duty to set national norms and standards relating to waste management (for the classification, storage, treatment, and disposal of waste for instance) and empowers the Minister to identify activities that are likely to have a detrimental effect on the environment, both which have since been done.[1470] Unlike the *NEMAQA* however, it appoints the Minister and relevant MECs of the provincial governments as the authorities that need to implement a waste management licensing system to regulate those activities, and not municipalities.[1471] Municipalities are responsible for the *provision* of waste management services (removal, storage, disposal), so the *NEMWA* does not appoint them as regulators, instead they are actually being regulated by the

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1466 See Bosman, Alberts and Roos "Integrated Waste Management" 1088-1089; Feris, Du Toit and Plit "Land Pollution and Waste Management" 4-7 for an overview of the previous laws and strategies. See para 3.3.3.6 above for more on government's international obligations with respect to hazardous substances, chemicals, and waste.

1467 Section 2 of the *NEMWA*; paras 2.2.3, 2.2.7 above.

1468 This approach entails that waste generation should as far as possible be avoided and reduced, and then re-used, recycled, and recovered before being treated and disposed - s 3 of the *NEMWA*; *National Waste Management Strategy* (2020) 26-30; Bosman, Alberts and Roos "Integrated Waste Management" 1074-1076.

1469 Waste management officers are responsible for the co-ordination of the waste management activities within their jurisdictions - ss 10-11 of the *NEMWA*.

1470 Sections 7, 19 of the *NEMWA*; *Listed Waste Management Activities* (2013); *National Norms and Standards for the Storage of Waste* (2013); *National Norms and Standards for Disposal of Waste to Landfill* (2013); Feris, Du Toit and Plit "Land Pollution and Waste Management" 16-19; Bosman, Alberts and Roos "Integrated Waste Management" 1092-1093.

1471 Section 43 of the *NEMWA*; Feris, Du Toit and Plit "Land Pollution and Waste Management" 24-28.

NEMWA.[1472] The *NEMWA* prescribes in what manner municipalities have to render waste management services, compels them to comply with the waste management licensing system, and it subjects them to the various national norms and standards that have been adopted in this respect.[1473] Non-compliance with some of the provisions of the *NEMWA* constitutes an offence, such as to dispose of waste without being authorised to do so, or to dispose of waste that is likely to cause pollution of the environment or cause harm to people's health and well-being, and EMIs are likewise empowered to enforce the Act.[1474] Once promulgated, the *NEMWA* therefore added a host of new obligations, processes, and mechanisms to the environmental health governance suite that pertain to waste and land contamination only.

4.3.2.3 Water and sanitation reforms

Government inherited a water regime primarily regulated by the *Water Act* 54 of 1956,[1475] which was based on principles rooted in Roman-Dutch and English law.[1476] The right to use water was in essence tied to landownership that guaranteed exclusive water use to owners in the case of private water (water on private land), or riparian use in the case of public water (owners of land next to public streams), while local authorities could access public water resources to provide water and sanitation services in their communities.[1477] Coupled with the racial segregation and dispossession of land during apartheid, this meant that a large majority of people did not have access to a sufficient supply of water, a basic human need.[1478] The

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[1472] Section 9 of the *NEMWA*; ss 83-84 of the *Municipal Structures Act*; schedules 4, 5 of the *Constitution*; *National Waste Management Strategy* (2020) 54; para 4.3.1 above.

[1473] Sections 3, 16-17, 21-26 of the *NEMWA*; *National Domestic Waste Collection Standards* (2011); Feris, Du Toit and Plit "Land Pollution and Waste Management" 21-30.

[1474] Section 67 of the *NEMWA*.

[1475] Water resources and their use were regulated by a large body of laws at that stage. More than 100 laws (mostly applicable to specific regions) were repealed once the current water-related laws were enacted - schedule 7 of the *National Water Act* 36 of 1998; schedule 2 of the *WSA*.

[1476] Water regulation has a long history influenced by Roman Dutch and English law - Pienaar and Van der Schyff 2007 *LEAD Journal* 181-183; Tewari 2009 *Water SA* 694-702; Thompson *Water Law* 33-59.

[1477] Sections 5, 7, 10, 13 of the *Water Act* 54 of 1956; Thompson *Water Law* 61-125; Pienaar and Van der Schyff 2007 *LEAD Journal* 182-183; Tewari 2009 *Water SA* 701-702.

[1478] Stein 2006 *SAJELP* 182-183; Bosman, Kidd and Alberts "Water Quality Management" 1008; para 2.2.1 above. See para 3.3.3.2 above for more on government's international obligations relating to water and sanitation.

water regime was therefore in urgent need of reform post 1994.

The reformation process was precipitated by the entrenchment of the constitutional right of access to sufficient water,[1479] and followed two separate tracks, both headed by the currently named NDWS.[1480] One pertained to water resources, and the other to water services. The former was launched with a public participation programme that manifested in the *White Paper on a National Water Policy of South Africa* (1997) and subsequent enactment of the *National Water Act* 36 of 1998 (hereafter *NWA*), and the latter with another public participation programme that culminated in the adoption of the *White Paper on Water Supply and Sanitation* (1994) and subsequent enactment of the *WSA*.[1481] These laws were introduced while the restructuring of local government was underway, and while government was in the process of transforming the previous health system and developing a new environmental management system, so the reformation of the water regime occurred simultaneously with these other processes.[1482]

The *NWA* and *WSA* repealed all the previous water laws and brought fundamental changes to the water regime.[1483] The *NWA* seeks to promote equitable access to water while also preventing pollution and degradation of the country's water resources.[1484] To this end the *NWA* effectively nationalised all water resources by placing it in the public trusteeship of government and charging the Minister of Water and Sanitation with the responsibility to ensure that water is used beneficially in the public interest and managed in a holistic and integrated manner.[1485] In practical terms this means that when the *NWA* became operational the NDWS took on a fiduciary responsibility for the protection and regulation of all the water resources

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1479 Section 27(1)(b) of the *Constitution*; para 4.2.2 above.

1480 At that stage the NDWS was known as the Department of Water Affairs and Forestry.

1481 For an overview of these processes - see Glazewski and Young "Water Law and the Environment" 7.

1482 See paras 4.3.1, 4.3.2.1-4.3.2.2 above.

1483 Schedule 7 of the *NWA*; schedule 2 of the *WSA*.

1484 Appendix 1 to the *White Paper on a National Water Policy of South Africa* (1997); s 2 of the *NWA*.

1485 Sections 2-3 of the *NWA*; Glazewski and Young "Water Law and the Environment" 17-18; Van der Schyff and Viljoen 2008 *J. TDSA* 339-354.

in the country.[1486] The *NWA* did, however, envisage a division of the territory of the state into separate catchment areas, of which nine areas have been demarcated in 2016,[1487] and that the NDWS could pass along its managerial role for each area to local catchment management agencies (hereafter CMAs) that may be established for this purpose.[1488] As for the protection of water resources, the *NWA* permits anyone to use water for typical domestic needs, but it restricts water use in all other cases by subjecting it to certain conditions through an authorisation or licensing system (managed by the NDWS or CMAs).[1489] It further provides, much like the *NEMA* does with respect to environmental damage (duty of care),[1490] that pollution of water resources has to be prevented, and failure to do so could lead to criminal prosecution.[1491] EMIs are empowered to enforce this duty because the *NWA* is also classified as a SEMA,[1492] and the *NEMA* empowers the Minister of Water and Sanitation to designate EMIs for this purpose, as opposed to the Minister of Forestry, Fisheries and the Environment.[1493]

The main purpose of the *WSA* is to ensure that everyone has access to at least basic water supply and sanitation services, which makes it a novel piece of legislation in the sense that no law meant to guarantee the same during the apartheid era.[1494]

1486 Pienaar and Van der Schyff 2007 *LEAD Journal* 184; Glazewski and Young "Water Law and the Environment" 22-23.

1487 There are currently nine water catchment management areas - *New Nine Water Management Areas of South Africa* (2016).

1488 The Minister of Water and Sanitation must appoint the governing boards of CMAs and must do so with the object of achieving a balance among the interests of water users, potential water users, local and provincial government, and environmental interest groups - ss 72-73, 77-80 of the *NWA*; Thompson *Water Law* 215-222, 615-648; Glazewski and Young "Water Law and the Environment" 19-21, 33-35. See also Stuart-Hill and Meissner *Catchment Management Agencies* 153-168 for commentary on the establishment and functioning of the CMAs.

1489 'Water use' is defined extensively in the *NWA* - schedule 1, ss 4, 21-22, 26, 29, 43 of the *NWA*; Bosman, Kidd and Alberts "Water Quality Management" 1020-1033; Glazewski and Young "Water Law and the Environment" 23-29; Thompson *Water Law* 296-302, 448-517. The NDWS currently operates an electronic authorisation and licensing system - see DWS 2022 https://bit.ly/3odA2Lt.

1490 See para 4.3.2.2 above.

1491 The relevant CMA may issue a directive to any person to cease an act that may cause water pollution and to remedy the effects of the pollution, and only if that person fails to comply with such a directive could he or she be held criminally liable. At the same time no one may unlawfully pollute a water resource, in which case such an offender can also be prosecuted - ss 19, 151(1)(d), (i) of the *NWA*; Bosman, Kidd and Alberts "Water Quality Management" 1009-1016; Thompson *Water Law* 303-307; para 4.3.2.2 above.

1492 Section 1 of the *NEMA*.

1493 Section 31BA of the *NEMA*; Thompson *Water Law* 257-279; para 4.3.2.2 above.

1494 Sections 2-3 of the *WSA*.

Towards this goal the *WSA* designated all municipalities (which at that stage was yet to be fully established) as water services authorities,[1495] and tasked them with the duty to provide access to water supply and sanitation services.[1496] This entails that municipalities initially had to a) make bylaws setting out the conditions for the provision of these services, b) prepare and adopt water services development plans,[1497] and c) appoint water services providers to treat and distribute potable water and to remove and dispose of wastewater and sewage (or perform this function themselves), while they now continuously have to a) report on the implementation of their development plans, b) reappoint water services providers if necessary, and c) monitor the performance of the those providers to ensure that the services are delivered.[1498] The *WSA* further provides that the Minister of Water and Sanitation may set compulsory minimum norms and standards concerning both the quality and quantity of water supply and sanitation services, which was initially published in 2001 but have been updated in 2017,[1499] and that the Minister and the MECs responsible for the local government affairs of their respective provinces have to monitor whether the water services authorities (municipalities) actually comply with said norms and standards and duties in this regard.[1500] The Minister is further empowered by the *WSA* to *request* relevant provincial MECs to intervene if

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1495 This should only apply to metropolitan and district municipalities as per the *Municipal Structures Act*, but in practice most local municipalities perform this function instead - ss 83-84 of the *Municipal Structures Act*; Thompson *Water Law* 723-735; s 1 of the *WSA*; paras 4.3.2.1 above, 4.3.4.3 below.

1496 This duty is subject to certain conditions and qualifications, such as the availability of resources and the duty of consumers to pay reasonable charges - Dugard "The Right to Sanitation in South Africa" 271; Thompson *Water Law* 712-720; ss 3(1)-3(3), 4, 11 of the *WSA*.

1497 Water services refer to both 'water supply *and* sanitation services' - s 1 of the *WSA*.

1498 Sections 1, 12-18, 20-22, 27 of the *WSA*. Some of these activities require authorisation or licensing in terms of the *NWA*, such as to dispose of wastewater into a water resource, because this may pollute the water.

1499 This for instance includes that water services authorities have to provide a minimum of 25 litres water per person per day, that the water quality has to comply with SANS 241, and that every household should have uninterrupted access to a sanitation facility (toilet) that is safe, reliable, and environmentally sound - ss 2-5 of the *Regulations Relating to Compulsory National Standards and Measures to Conserve Water* (2001); ss 4.1, 5.2.2, 7.2 of the *National Norms and Standards for Domestic Water and Sanitation Services* (2017); Thompson *Water Law* 695-698. The latest norms and standards were issued under the *NWA* by the Minister of Water and Sanitation, but was not done in terms of any authorising provision in particular. In addition it is also concerned with matters that fall outside of the scope of competence of the NDWS, such as solid waste regulated by the *NEMWA*. It is therefore unclear whether its content carries any legal force or whether it is merely a guideline.

1500 Section 62 of the *WSA*; Thompson *Water Law* 755.

municipalities do not perform their functions effectively, and if a MEC also fails to perform the function effectively, the Minister *may* assume responsibility to do so.[1501] No provision is made for the enforcement of the duties imposed by the *WSA*, which means that other than permitting the Minister and MECs to intervene if they so choose, no one is empowered by the Act to compel municipalities, the MECs, or the Minister to perform their 'water supply and sanitation' functions.[1502]

Government has published several other policies and strategies in this respect in the meantime. This includes the *National Sanitation Policy* (1996), the *White Paper on Basic Household Sanitation* (2001), the *Strategic Framework for Water Services* (2003), *A Drinking Water Quality Framework for South Africa* (2005), and the latest *National Sanitation Policy* (2016), where each supplemented, updated, or replaced the former.[1503] These policies and strategies essentially provide guidance to the governmental bodies concerning their respective roles, the co-ordination of their regulatory functions, the scope of the functions that they need to perform, and so

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[1501] The *WSA* subjects the Minister's decision to assume responsibility for the 'water services' function to the approval of the NCOP (within 30 days after the commencement of its first sitting), and it empowers the Minister to issue a directive to the relevant municipality to perform this function effectively - s 63 of the *WSA*; para 2.4.2.4 above.

[1502] *National Sanitation Policy* (2016) 56; *Strategic Framework for Water Services* (2003) 51-53. As a case in point, the Kgetlengrivier Local Municipality failed to provide adequate water services to the towns of Koster and Swartruggens, and polluted two rivers with untreated sewerage. The matter dragged on for years and the MEC or Minister did not resolve the matter. Concerned citizens felt they had no other option and eventually approached the court for appropriate relief, and the High Court temporarily authorised them to take over the water works to provide the service by themselves - see *Kgetlengrivier Concerned Citizens v Kgetlengrivier Local Municipality* (unreported) 2020 ZANWHC 95 (18 December 2020) (hereafter *Kgetlengrivier*-case). In another matter raw sewerage has been flowing into the Vaal River among other places from several wastewater works located within the Emfuleni Local Municipality. The MEC and Minister intervened in the matter, as well as the South African National Defence Force (on instruction of the Minister of Finance), but that did not yield the desired results. Following media reports on the case, the South African Human Rights Commission investigated the matter as well (for close to two and a half years), and published a report with their findings and recommendations to resolve the problem in 2021. This included, among others, that the river is polluted beyond acceptable levels and that further intervention is required by national and provincial government - see SAHRC *Final Report of the Gauteng Provincial Inquiry into the Sewage Problem of the Vaal River* 1-116. Note that this matter is ongoing at the time of writing and has still not been resolved.

[1503] There were also institutional changes during this time. The President transferred the 'sanitation' function to the department responsible for human settlements in 2009, but it has been shifted back to the department responsible for water and sanitation in 2014, and then in 2019 these departments were joined and became a single department, but they were separated again in 2021. See Dugard "The Right to Sanitation in South Africa" 273-277 for more in this regard.

on.[1504] Early in 2019 the NDWS also published the final of three volumes of a new National Water and Sanitation Master Plan to be implemented from 2020. The plan consists of numerous actions with associated targets and set time-frames spanning the entire water sector that the NDWS, CMAs, water services authorities, and other institutions have to complete to achieve the goals that government has set in this regard, which in turn are based on the *NDP* and government's other international commitments (such as the SDGs).[1505]

The *NWA*, *WSA*, and subsequent policies that have since been developed reformed the water regime and constitute the legal framework for its operation. In so doing they introduced new processes and mechanisms (and formed new institutions) that enable government to protect the country's water resources. At the same time they also impose an obligation on local government to provide access to sufficient water supply and sanitation services, and compel the NDWS and relevant MECs to monitor whether these services are in fact provided. Since water and sanitation are public goods that are essential to environmental health, all these provisions took up a place in the emerging environmental health governance toolbox moving forward.

4.3.2.4 Establishment of the housing development process

Many people were forced to live in overcrowded informal settlements because of the racially discriminatory laws and policies that were implemented during apartheid.[1506] This meant that the newly elected government had to attempt to provide access to housing to millions of people once it came into power in 1994, while at the same time having to ensure that those housing options are adequate as required by the *Constitution*.[1507] This process was initiated with the publication of a policy framework in 1994, the *White Paper on Housing* (1994), which in turn

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[1504] See e.g. *National Sanitation Policy* (2016) 12-35, 44-57; *White Paper on Basic Household Sanitation* (2001) 20-27; *Strategic Framework for Water Services* (2003) 8-24, 40-44, 48-61.

[1505] Some of these goals are also concerned with the improvement of environmental health in particular - *National Water and Sanitation Master Plan: Volume 1* (2018); *National Water and Sanitation Master Plan: Volume 2* (2018); *National Water and Sanitation Master Plan: Volume 3* (2018); *NDP* 178-183, 203-216; paras 2.3.4, 3.3.3.1, 3.3.3.7 above.

[1506] Dugard *et al* "The Right to Housing in South Africa" 155-156.

[1507] Section 26 of the *Constitution*; para 4.2.2 above. See para 3.3.3.4 above for more on government's international obligations concerning housing.

led to the adoption of the *Housing Act*.[1508]

The *Housing Act* was promulgated in 1997 and entered into force in the following year. It is the primary housing law in South Africa and its main purpose is to facilitate a sustainable housing development process to give effect to section 26 of the *Constitution*.[1509] The *Housing Act* charges all three spheres of government, represented by the Minister of Human Settlements, the MECs responsible for the housing affairs of their provinces, and all three categories of municipalities with specific duties that they need to perform.[1510] The Minister of Human Settlements have to establish a housing development process, which includes having to develop a housing policy, set norms, standards, and goals with respect to housing development, and to monitor the performance of provincial and local government against those goals.[1511] The provincial MECs have to do everything within their power to promote and facilitate the provision of adequate housing in their provinces, such as to administer housing programmes, support and strengthen municipalities, and to co-ordinate housing development in their provinces.[1512] Municipalities have to take all reasonable and necessary steps to ensure that the inhabitants within their jurisdictions have access to adequate housing (including services), and to do so they must initiate housing developments, provide bulk engineering services, plan and manage land use, and they may apply to their relevant MECs for accreditation to administer housing programmes by themselves.[1513]

By 2000 the Minister published the first housing policy as required by the *Housing*

[1508] Government adopted other housing-related laws as well, but they are not relevant for present purposes - Tissington *Resource Guide to Housing* 12-24; Dugard *et al* "The Right to Housing in South Africa" 161. For a chronological overview of the development of the housing policies - see Tissington *Resource Guide to Housing* 57-73.

[1509] Preamble to the *Housing Act*; para 4.2.2 above.

[1510] The *Housing Act* does not make a distinction between the different categories of municipalities, but if the division of functions in terms of the *Municipal Structures Act* is to be followed, then the provisions of the *Housing Act* would apply to metropolitan and district municipalities because they are responsible for development planning. In practice however, metropolitan and *local* municipalities are fulfilling this role - Tissington *Resource Guide to Housing* 77-78; Dugard *et al* "The Right to Housing in South Africa" 162-164, 174.

[1511] For a list of all the responsibilities of the Minister of Human Settlements - see s 3-4 of the *Housing Act*.

[1512] For a list of all the responsibilities of the provincial departments - see s 7 of the *Housing Act*.

[1513] For a list of all the responsibilities of local government - see ss 9-10 of the *Housing Act*.

Act, which has since been updated, known as the *National Housing Code* (2009).[1514] This policy lists all the housing programmes that have to be implemented by the provincial departments and municipalities (once accredited), it details what each of the programmes entails, it indicates what role the respective institutions have to play with respect to each programme, and it includes technical norms and standards for the construction of housing.[1515] There are currently sixteen housing programmes grouped into four distinct intervention categories that have to be implemented to improve access to housing, and they for example include that government has to acquire land, provide serviced stands, construct dwellings, and upgrade informal settlements.[1516] The role that the respective governmental bodies have to fulfil varies depending on the programme. In some cases municipalities have to assume the role of developer and the provincial government department the funder, whereas in others they have to do so in partnership with each other and the NDHS, or even with other national departments as well.[1517] The housing policy contains numerous specifications in the form of norms and standards that permanent residential dwellings need to comply with when constructed through one of the housing programmes. These among others touch on the quality of building materials, the size and layout of the dwellings, and the minimum services that each need to have (safety and habitability),[1518] and therefore serve as a benchmark to ensure that the newly constructed dwellings will be adequate.[1519]

In addition the housing policy confirms that the *National Building Regulations* (1990), which was published under the *National Building Regulations and Building*

[1514] After the publication of the first *National Housing Code* (2000), the NDHS adopted a comprehensive new plan entitled *Breaking New Ground* (2004) of which the recommendations were incorporated into the latest housing policy. The NDHS introduced a new vision and objectives to the housing development process through this plan, which included a shift towards a more demand-driven approach, greater local government involvement, less reliance on private developers, and a focus on building 'quality' as opposed to a higher 'quantity' of dwellings - *Breaking New Ground* (2004) 9-10, 12-23; Tissington *Resource Guide to Housing* 66-68.

[1515] Volume 1 part 1, vol 2 part 3 of the *National Housing Code* (2009)

[1516] Volume 1 part 1 of the *National Housing Code* (2009) 13-52.

[1517] Volume 1 part 1 of the *National Housing Code* (2009) 13-52; SAHRC *Access to Housing* 56. See also Tissington *Resource Guide to Housing* 76-77; SAHRC *Access to Housing* 61; Dugard *et al* "The Right to Housing in South Africa" 173-175 for more on the levels of accreditation and the associated roles that municipalities may assume.

[1518] Such as a single standpipe per stand (water) and a ventilated pit latrine or alternative system (sanitation) - vol 2 part 3 of the *National Housing Code* (2009) 26.

[1519] See vol 2 part 3 of the *National Housing Code* (2009) 21-47 for all the specifications.

Standards Act 103 of 1977 (hereafter *Buildings Act*) and updated in 2011, also apply to the dwellings provided through the housing programmes.[1520] The *National Building Regulations* (1990) contains many specifications that for instance relate to structural design, refuse and storm water disposal, air ventilation, and so forth,[1521] which among others have an effect on indoor air quality and exposure to sewage (aspects that could influence people's health).[1522] Municipalities are responsible for the administration of the *Buildings Act* and the *National Building Regulations* (1990) in that they have to consider and approve site plans before any construction within their jurisdictions may commence,[1523] and they have to appoint building control officers that have to conduct inspections when buildings are erected to ensure that they comply with the required specifications.[1524] A municipality may issue a compliance notice to any person that fails to comply with the *Buildings Act* and its

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[1520] Volume 2 part 3 of the *National Housing Code* (2009) 22-24. The *National Building Regulations* (1990) applies to all buildings, not only those constructed through a government housing programme - s 4 of the *Buildings Act*.

[1521] Parts B-X of the *National Building Regulations* (1990). In most cases the specifications in the *National Building Regulations* (1990) will be deemed-to-be-satisfied if they comply with the requirements listed in the SANS 10400 series issued by the South African Bureau of Standards, which also include the so-called *Green Building Standards* (SANS 10400-XA). Similar specifications that are listed in the *Environmental Regulations for Workplaces* (1987) apply to work premises. These regulations were originally published under a now repealed law, but currently resort under the *Occupational Health and Safety Act* 85 of 1993 (hereafter *OHSA*). The requirements set out in these regulations have to be monitored and enforced by inspectors appointed by the Minister of Employment and Labour as per ss 28-31 of the *OSHA*, while reg 7 of annexure A of the *EHP Regulations* expects that EHPs have to monitor compliance with the *OSHA* and its regulations too. The same applies to other regulations that have been published under the *OSHA* that for instance relate to the handling of and exposure to asbestos, lead, and hazardous chemical substances at workplaces. For more on the regulation of environmental hazards at workplaces - see Le Roux and Colyn *Occupational Health and Safety Law* chs 11-12, 16, 23, 28-29, 30, 32.

[1522] This is the only other manner in which government currently legally regulates indoor air quality, apart from placing a duty on EHPs to assess indoor air quality via the *EHP Regulations*. The NDOH published a *Guideline for the Management of Domestic Indoor Air Quality: A Guide for Environmental Health Practitioners in South Africa* (2019) in an attempt to assist EHPs when undertaking indoor air pollution assessments and to implement mitigation measures to ensure safe pollutant exposure levels by guiding them in this regard. In addition the NDFFE's *Strategy to Address Air Pollution in Dense Low-income Settlements* (2018) calls on government to ensure that low-income houses are energy efficient, which essentially means that government has to ensure that the specifications in the *National Building Regulations* (1990), and in particular the *Green Building Standards*, are followed (which has to be done in any event).

[1523] Sections 4, 7, 10 of the *Buildings Act*.

[1524] Sections 5-6 of the *Buildings Act*. While building control officers have to conduct inspections during the erection of buildings to ensure compliance with the specifications listed in the *Buildings Act* and its regulations, EHPs too have to conduct inspections of premises to ensure compliance with said specifications in accordance with the *EHP Regulations* and the *EHP Norms and Standards*, although they have to do so on an ongoing basis.

regulations, and non-compliance with such a notice constitutes an offence.[1525] The implication hereof is twofold. On the one hand the *Buildings Act* and the *National Building Regulations* (1990) task municipalities with the duty to ensure that all buildings within their jurisdictions comply with standards so that they do not pose a harm to people's health,[1526] which is integral to environmental health, but on the other hand it also means that municipalities may have to oversee other government institutions or even themselves in those cases where they are the developers of particular projects of a government housing programme.[1527]

The NDHS, relevant provincial departments, and municipalities clearly obtained a host of new functions once the housing development process was established. In as much as these functions enable and compel government to provide access to adequate housing to everyone, and to ensure that buildings are safe and well-ventilated, it has a direct bearing on environmental health,[1528] and the provisions of the *Housing Act* that direct government to do so therefore became part of the legal

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[1525] Sections 10, 12, 14, 20, 24 of the *Buildings Act*; part A25 of the *National Building Regulations* (1990). The commission of an offence under this Act can attract a maximum fine of only R4000-00.

[1526] Interestingly, the application of the *Buildings Act* in the area formerly known as Transkei was challenged in the High Court in 2019 on the grounds that the Act's application was not extended by the *Justice Laws Rationalisations Act* 18 of 1996 to apply in this municipal area as well. Coltman AJ accepted the argument and found in favour of the respondent, which means that the particular municipality does not have the power to enforce the provisions of the *Buildings Act* in its jurisdiction - see *Port St Johns Municipality v Fono* (unreported) 2020 ZAECMHC 5 (1 January 2020) para 1-4. The argument could be made that even though s 2 of the *Buildings Act* provides that the Act only applies within the area of jurisdiction of the previously defined 'local authorities', s 93(8) of the *Structures Act* provides that such references have to be read to refer to the current municipalities, and because the former Bantustan and self-governing territories all fall within the jurisdiction of the current municipalities, they would fall within the remit of 'local authorities' as defined in the *Buildings Act*, meaning that its application need not have been extended in any event. The applicant was granted leave to appeal the judgment, and the outcome of this case will provide more clarity in this regard. To date, however, the matter has not been heard.

[1527] Case studies indicate that RDP houses (housing provided by government's housing programmes) are notorious for their poor quality - see e.g. Manomano and Tanga 2018 *Social Work* 25-34; Moolla, Kotze and Block 2011 *Urbani Izziv* 138-143; Ogunfiditimi *Assessment of Structural Quality of Houses* 59-75. This is testament to the reality that developers do not comply with the building standards, and as the then Public Protector reported: "municipal inspectors abdicated their responsibilities to ensure that these [RDP] houses were built according to specifications" - Human Settlements Portfolio Committee *SA Human Rights Commission and Public Protector Briefings: Meeting Report* (20 February 2013).

[1528] *Grootboom*-case para 35; paras 2.2.1, 2.2.4, 3.3.3.4, 4.2.2 above.

environmental health mandate once enacted.[1529]

4.3.2.5 Food safety-related laws

The NDALR administers some old order and newer laws that have not been subject to a particular process of transformation, but nevertheless bear mention at this stage because they too have an influence on the governance of environmental health.

Pesticides are mainly regulated in terms of the *Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act* 36 of 1947 (hereafter *FFAS Act*), an outdated law.[1530] The *FFAS Act* provides that all pesticides have to be registered and that the Minister of Agriculture, Land Reform and Rural Development has to appoint a registrar to implement the registration system.[1531] This entails that the registrar has to consider applications for the registration of pesticides, and examine and analyse pesticides suspected to be manufactured, sold, or used in contravention of the Act.[1532] In the past the registrar had to base the decision to accept or reject applications for the registration of pesticides on whether it would be contrary to the public interest while having regard to their toxicity and the effects that they may have on the environment as shown by experimental data, and the standard of 'public interest' could mean anything really.[1533] The NDALR has adopted a *Pesticide Management Policy for South Africa* (2010) in the meantime to improve the legislative framework for pesticides, and the policy addresses this issue to an extent

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[1529] Although the *Buildings Act* and its *National Building Regulations* (1990) were inherited from the previous dispensation, they too make up a part of the legal environmental health mandate.

[1530] See para 3.3.3.6 above for more on government's international obligations regarding hazardous substances and chemicals.

[1531] Sections 2-3 of the *FFAS Act*. The Act also empowers the Minister to prohibit the acquisition, use, or disposal of certain substances - s 7 of the *FFAS Act*; Giliomee "Pesticides" 761-762.

[1532] A person that contravenes the provisions of the Act commits and offence and is liable upon conviction to a maximum fine of R1000-00, which is clearly insignificant in monetary terms - ss 3, 15, 18 of the *FFAS Act*. The registrar is also responsible for the enforcement of the *FFAS Act*, but such a registrar may delegate his or her powers to another officer, which theoretically could be an EHP - ss 2(2)(b), 15 of the *FFAS Act.*

[1533] Section 2 of the *Regulations Relating to the Registration of Fertilizers, Farm Feeds, Agricultural Remedies, Stock Remedies, Sterilising Plants and Pest Control Officers* (1983); s 3 of the *FFAS Act*. The regulations have since been updated and now requires that toxicity has to be determined not by *experimental data*, but on the oral or inhalation toxicity to a rat or the dermal toxicity to a rabbit or guinea pig - s 8 of the *Regulations Relating to Agricultural Remedies* (2006). For more in this regard - see Meyer *et al* "Soil, Land and Agriculture" 309-314, 347-349.

by stating that the NDALR will endeavour to base its decision-making on sound scientific criteria using a risk management approach to safeguard people's health and the environment as required by the *Constitution*.[1534] It further adds that the NDALR will develop strategies to comply with the principles of the *NEMA*,[1535] implement a programme to ensure that water pollution from pesticides will not contravene the provisions of the *NWA*,[1536] commit to comply with South Africa's international obligations in this regard,[1537] and that the NDALR will make sure that pesticides are properly labelled to ensure that compliance with the *Foodstuffs Act* with respect to pesticide use on foodstuffs can take place.[1538] The gist of the *Pesticide Management Policy for South Africa* (2010) though is that the NDALR needs to adopt a new law to comply with government's constitutional obligations and to integrate pesticide management with the other laws that regulate matters incidental thereto, but this has not been done as of yet.[1539] Pesticides are therefore still regulated through the *FFAS Act* and insofar it creates a mechanism that enables government to control pesticides so that they do not pose a harm to people's health, it makes up a part of the legal environmental health mandate.

The *Agricultural Product Standards Act* 119 of 1990 (hereafter *APSA*) was enacted shortly before the transition to the new democratic state and it empowers the Minister of Agriculture, Land Reform and Rural Development to prohibit the sale of specific commodities from vegetable or animal origin, unless they are of a certain quality.[1540] In other words the Minister may set standards that particular products need to comply with before they may be sold.[1541] The implication hereof is that government could prevent people from contracting food-borne disease through the

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1534 *Pesticide Management Policy for South Africa* (2010) 4; s 24(a) of the *Constitution*; para 4.2.2 above.
1535 *Pesticide Management Policy for South Africa* (2010) 4-5; para 4.3.2.2 above.
1536 *Pesticide Management Policy for South Africa* (2010) 5-6; para 4.3.2.3 above.
1537 *Pesticide Management Policy for South Africa* (2010) 4, 7-8, para 3.3.3.6 above.
1538 *Pesticide Management Policy for South Africa* (2010) 6; para 4.3.2.1 above.
1539 *Pesticide Management Policy for South Africa* (2010) 2-3, 11-12.
1540 See para 3.3.3.3 above for more on government's international obligations with respect to food safety. Note that the *Agricultural Product Standards Amendment Bill* (2021) is currently before parliament and it aims to address some deficiencies in the *APSA*, although none of those amendments relate to or have an impact on the application of the Act for the purpose of this research.
1541 Sections 3, 15 of the *APSA*.

consumption of potentially harmful foodstuffs by regulating the sale of those foodstuffs, and this contributes to government's effort to realise the constitutional right of access to sufficient food (the safety aspect thereof).[1542] Several standards have been published over the course of the last twenty years relating for instance to fresh fruits, processed meat products, wheat products, dairy products, and potatoes.[1543] The *APSA* provides that the Minister must designate an Executive Officer from within the NDALR to take responsibility for the implementation of the Act, and that the Minister may designate any person, body, or institution as an assignee to implement the provisions of the Act in relation to a particular product as well.[1544] The Executive Officer and assignee are empowered to conduct inspections and investigations to ensure that everyone complies with the standards published under the *APSA*, and non-compliance constitutes an offence.[1545] The *APSA* is therefore relevant to and forms part of the legal environmental health mandate to the extent that it creates a tool that enables government to protect people from potential food-borne disease.

Government repealed the *Abattoir Hygiene Act* 121 of 1992 and replaced it with the *Meat Safety Act* 40 of 2000 (hereafter *Meat Act*), which essentially serve the same purpose as the *ASPA*, although in this case it only pertains to meat, and by necessary implication slaughter facilities (abattoirs).[1546] The *Meat Act* prohibits the slaughter of animals at any place other than an abattoir and provides that meat may only be sold if slaughtered at an abattoir.[1547] It further permits the Minister to set safety standards in relation to the handling of particular products within or outside of an abattoir, which has since been published for red meat, poultry, and ostrich.[1548] All abattoirs have to be registered and they have to comply with these safety standards.[1549] The MECs that are responsible for the 'abattoirs' function in their

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[1542] See paras 2.2.2, 4.2.2.1.2 above.
[1543] See the regulations published under the *APSA*.
[1544] Section 2 of the *APSA*.
[1545] See the regulations and ss 3A, 7-8, 11 of the *APSA*.
[1546] As such it could also contribute to the realisation of the safety aspect of the constitutional right of access to sufficient food - see para 4.2.2.1.2 above.
[1547] This excludes slaughter for own consumption or religious purposes - s 7 of the *Meat Act*.
[1548] Sections 10, 22 of the *Meat Act*; *Red Meat Regulations* (2004); *Poultry Regulations* (2006).
[1549] Sections 8, 11 of the *Meat Act*.

respective provinces have to implement the *Meat Act* by designating Executive Officers whose duty it is to approve applications for the registration of abattoirs, inspect the abattoirs on a routine basis to monitor if they comply with the provisions of the Act, and to instruct the owners or operators of abattoirs to remedy their non-compliance if necessary.[1550] If a person does not comply with the provisions of the *Meat Act*, that is, if a person sells meat that was not slaughtered in an abattoir or ignores the instruction of an Executive Officer to otherwise comply with the Act or its regulations, that person will commit an offence and may be prosecuted.[1551] The *Meat Act* therefore establishes mechanisms that enable government to ensure that meat products that are sold are safe and do not constitute a health hazard,[1552] and as such constitutes a part of the legal environmental health mandate.

By 2014 the NDALR adopted a *National Policy on Food and Nutrition Security* (2014) in the form of a broad framework to serve as a guide for the fulfilment of government's obligation to realise everyone's right of access to sufficient food as enunciated in the *Constitution*.[1553] Other than to identify possible pillars that could contribute to food security,[1554] such as to improve nutrition education and to build food assistance networks, the policy contains no other concrete steps or obligations that any particular governmental body need to take towards ensuring that food is safe, and therefore have no bearing on the legal landscape for environmental health.

4.3.2.6 Climate change developments[1555]

Government is working on a potential future climate change law, currently in the form of the *Climate Change Bill* (2022), that will impose duties on a variety of

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[1550] Sections 5, 10, 15-16 of the *Meat Act*.
[1551] Section 19 of the *Meat Act*.
[1552] See para 2.2.2 above.
[1553] *National Policy on Food and Nutrition Security* (2014) 5; s 27(1)(b) of the *Constitution*; para 4.2.2 above. For more on government's international obligations concerning the safety of food - see para 3.3.3.3 above.
[1554] Food safety is just one aspect of food security, both of which determines its sufficiency - see para 4.2.2.1 above.
[1555] Note government established a National Greenhouse Gas Inventory as a way to inform the subsequent formulation of legislation and policy - see *National Greenhouse Gas Emission Reporting Regulations* (2017).

governmental bodies towards tackling climate change. For example, the Minister of Forestry, Fisheries and the Environment will be responsible for setting national adaptation objectives that has to be incorporated into all relevant planning instruments, and Ministers responsible for all the national departments mentioned above will have to determine and implement measures and mechanisms to manage and implement government's adaptation response in line with those objectives.[1556] Whereas the MECs responsible for environmental matters in their respective provinces and the mayors of metropolitan and district municipalities will have to develop and implement climate change response plans that must include measures relating to both adaptation and mitigation, and those plans will have to inform their future developmental processes.[1557]

All the laws that were produced from the various transformation processes discussed above, including the old order laws that were not repealed and are still in force, largely make up the legal mandate for environmental health as a collective. They are all national laws that apply in the entire geographic area of the country.[1558] The provincial governments may also enact laws with respect to specified functional areas that apply within their respective jurisdictions only.[1559] The specified functional areas include environmental health matters,[1560] which means that every provincial government may enact and administer its own environmental health-related legislation, and this adds to the already cumbersome body of environmental health laws.

4.3.3 The provincial governments' environmental health laws

When the provincial sphere of government obtained the power to pass its own laws

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[1556] All the relevant Ministers will have to develop a National Adaptation Strategy for this purpose - see ss 16-20 of the *Climate Change Bill* (2022).

[1557] Sections 7-9, 15 of the *Climate Change Bill* (2022). Note that the potential impact of this Bill will not be included in any further discussions in this research seeing that it has not been enacted yet. Note further that greenhouse gases have been declared as priority air pollutants, and emitters have to submit pollution prevention plans in this regard - see *Declaration of Greenhouse Gases as Priority Air Pollutants* (2017); *National Pollution Prevention Plans Regulations* (2017).

[1558] See paras 4.3.2.1-4.3.2.6 above.

[1559] See paras 2.4.1.4-2.4.1.6, 4.3.1 above.

[1560] The functional areas over which provincial government has legislative authority that relate to environmental health are 'environment', 'health services', 'housing', 'pollution control', and 'abattoirs' - see para 4.3.1 above.

in the new dispensation, the respective provinces initially adopted parts of existing old order laws of national government (via assignment) as a way to regulate their specified functional matters within their jurisdictions by themselves.[1561] The implication hereof was that every provincial government among others adopted the older *ECA* and the *Health Act*, and they entered into force in their provinces shortly after 1994.[1562]

The *ECA* has been mostly replaced with the *NEMA* by national government when the new environmental management system was developed, but this did not automatically happen in the provinces as well. When the national laws were assigned to them, they became provincial laws that applied in their geographical areas, so it was up to the provincial governments to amend or replace them as deemed fit for their respective jurisdictions.[1563] To date none of the provincial governments has amended or repealed the provisions of the *ECA* that were assigned to them, so those parts of the *ECA* are still in force in the provinces – even though they have been repealed nationally.[1564] Only two aspects in the *ECA* in its current provincial form really has a bearing on environmental health. Sections 19 and 19A of the *ECA* prohibits littering in any and all places to which the public has access, it places a duty on the persons and authorities who are in control of those places to make containers available for waste, and it compels them to remove such litter after a reasonable time. The *NEMWA* contains a similar provision that applies to the country as a whole, so this provision makes no difference as far as the governance of environmental health is concerned.[1565] Section 31A of the *ECA* empowers

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[1561] The *Constitution* empowered the then President to assign national laws to the newly established provincial governments for the sake of efficiency - schedule 6 of the *Constitution*; Malherbe and Brand *Sub-National Constitutional Law in South Africa* part 1 ch 2 paras 71-80; *Western Cape Provincial Government: in re DVB Behuising (Pty) Ltd v North West Provincial Government* 2001 1 SA 500 (CC) paras 18-19, 22-25; *Khohliso v S* 2015 2 BCLR 164 (CC) paras 13-51.

[1562] The provincial governments also had to integrate the laws and ordinances of the self-governing territories after 1994. Those laws and ordinances, however, are primarily concerned with nature conservation and not environmental health. See e.g. Du Plessis 1995 *SAJELP* 23-36 for more on this.

[1563] The *ECA* of national government has been amended since its assignment to the provinces, but since the assigned provisions of the *ECA* became a law of each province, those amendments do not apply to the *ECA's* of the provinces - Malherbe and Brand *Sub-National Constitutional Law in South Africa* part 1 ch 2 paras 72-75.

[1564] The provincial government of Limpopo adopted an additional *Limpopo Environmental Management Act* 7 of 2003, but it has no impact on the governance of environmental health.

[1565] Section 27(1), (2) of the *NEMWA*. See also para 4.3.2.2 above.

governmental authorities to issue directives to people who perform or fail to perform activities that may seriously damage, endanger, or detrimentally affect the environment, whereby they can instruct such persons to cease those activities or to rehabilitate any damage that they may have caused. The *NEMA* contains a similar provision as was explained above, although they differ in a potentially significant way.[1566] The *ECA* empowers national, provincial *and* local government to issue such directives, whereas the *NEMA* only empowers officials from national and provincial government to do so.[1567] Therefore, even though the *NEMA* does not currently empower municipalities to issue compliance notices for this purpose, they may still do so in terms of the *ECA*.[1568]

The *Health Act* has been replaced in its entirety with the *NHA* by national government when it transformed the health system, but as is the case with the *ECA*, that does not make it so for the provincial governments. Only selected parts of the *Health Act* were assigned to the provincial governments though, but some of those do relate to environmental health specifically. According to the *Health Act* in its current assigned provincial form, municipalities have a duty to take all necessary and reasonably practical measures to a) keep their areas in a clean and hygienic condition, b) prevent conditions that could be harmful or dangerous to any person, c) abate or remedy such conditions if they have already occurred, d) prevent the pollution of water intended for personal use and purify polluted water, and e) to prevent communicable diseases – the totality of which reads like a broad duty to provide a comprehensive set of environmental health services.[1569] The *Health Act* further provides that municipalities may appoint health inspectors (the same personnel now known as EHPs) to perform the duties listed above and empower them to issue written notices to that effect, while at the same time criminalising non-compliance with such a notice.[1570] The *Health Act* adds that the provincial governments may call upon municipalities to provide those services that are

[1566] Section 28(1)-(4) of the *NEMA*.
[1567] See para 4.3.2.2.
[1568] This situation will change once the *National Environmental Management Laws Amendment Act* 2 of 2022 comes into effect as mentioned above, which will render s 31A of the *ECA* redundant - see para 4.3.2.2 above.
[1569] Section 20(1) of the *Health Act*.
[1570] Sections 24, 27, 57 of the *Health Act*.

necessary so as to ensure that the health of their inhabitants are not endangered, and if a particular municipality refuses the provincial government concerned may do so on behalf of the municipality and recover any expenditure that it incurred for that purpose.[1571] These provisions differ from the ones in the *NHA* in some material respects. The *NHA* compels municipalities to provide only a defined set of 'municipal health services', and not to prevent and repair *all* conditions that may be harmful to their inhabitant's health (if reasonably practical), which seems to be of a wider scope. The *NHA* does provide that if an EHP has reason to believe that a condition exists that violates the constitutional environmental right, he or she must investigate that condition and direct the person responsible to minimise, remove, or rectify the condition, which seems equally as broad in scope to that of the *Health Act*.[1572] This duty is only imposed on personnel (EHPs – members of the public service) though, and not on municipalities as such. Municipalities are therefore legally obligated to provide a comprehensive set of environmental health services by virtue of the *Health Act*, notwithstanding the duties imposed by the *NHA* in this regard (which might not be as extensive). Moreover, unlike the *Health Act*, the *NHA* does not empower provincial health departments to direct municipalities to provide environmental health services if they fail to do so, or to provide them on their behalf, yet they may still do so by virtue of the *Health Act*.

The majority of the provincial governments adopted newer health-related laws in the meantime, which are mostly provincial iterations of the *NHA*,[1573] but none of those laws have a bearing on environmental health in particular, with the exception of the laws that were adopted in the Eastern Cape and Western Cape. The *Eastern Cape Provincial Health Act* 10 of 1999 entitles everyone in the province to a right of access to comprehensive provincial health care services that includes environmental

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[1571] Section 18(1)-(3) of the *Health Act*.

[1572] Section 83(1) of the *NHA*. The *Health Act* also grants this power to EHPs, so it appears that EHPs are able to choose in terms of which Act they should exercise their powers and perform their duties.

[1573] Even though they adopted newer health laws, they did not repeal or amend the older *Health Act* - see e.g. the *Gauteng District Health Services Act* 8 of 2000; the *Free State Provincial Health Act* 3 of 2009; the *KwaZulu-Natal Health Act* 1 of 2009; the *Limpopo Province Health Services Act* 5 of 1998.

health services,[1574] it provides that the provincial health department has to support and monitor the delivery of 'municipal health services',[1575] and it provides that the relevant MEC has to publish an environmental health policy and norms and standards for the province.[1576]

The provincial government of the Western Cape adopted an additional health-related law, the *Western Cape Health Care Waste Management Act* 7 of 2007.[1577] This Act is essentially an extension of the *NEMWA* regarding health care waste in particular, which only applies in the Western Cape. In this respect the Act restates most of the obligations that the generators, transporters, treaters, and disposers of health care waste have in terms of the *NEMWA*, but it adds that a person who spills health care risk waste, which is waste that is considered hazardous by the *NEMWA*, has to a) immediately notify the municipality within whose area of jurisdiction the spill occurred, b) immediately take steps to make the area safe for the public, c) rehabilitate the place where the spillage has occurred, and d) take measures to avoid a recurrence of a spill.[1578] The Act further provides that municipalities must enforce its provisions and may appoint health practitioners or environmental officers (which presumably refers to EHPs or EMIs) as inspectors to do so.[1579] It therefore empowers local government to appoint personnel to ensure that health care waste is managed in accordance with the law, whereas the *NEMWA* requires that provincial government has to designate said personnel to work at municipalities.[1580] It is

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1574 Section 13 of the *Eastern Cape Provincial Health Act* 10 of 1999.

1575 Provincial health departments currently have to promote and facilitate the provision of comprehensive PHC services in terms of the *NHA*, which may very well bear the same meaning as this provision - s 32 of the *Eastern Cape Provincial Health Act* 10 of 1999; s 25(2)(l) of the *NHA*.

1576 This has not been done to date and therefore makes no difference to the governance of environmental health in the Eastern Cape - s 38 of the *Eastern Cape Provincial Health Act* 10 of 1999. This Act repealed some provisions of the *Health Act* in the province, but none of the provisions that relate to environmental health as explained above have been repealed.

1577 This Act was adopted by the environmental department of the Western Cape, not their health department, and it commenced in 2013.

1578 Sections 1, 7(1) of the *Western Cape Health Care Waste Management Act* 7 of 2007. These duties are not entirely new since similar provisions can be found in some regulations published under the *NEMWA*, or they could be 'conditions' attached to a particular waste management licence - see for instance s 51 of the *NEMWA*; ss 14, 18 of the *National Norms and Standards for the Storage of Waste* (2013).

1579 See ss 9-12 of the *Western Cape Health Care Waste Management Act* 7 of 2007 and note it also criminalises non-compliance with its provisions.

1580 See para 4.3.2.2 above.

perhaps also worth pointing out that this Act compels municipalities to perform audits of generators, transporters, treaters, and disposers of health care waste within their areas of jurisdiction, whereas unless specifically required as a condition of a waste management licence, the *NEMWA* typically leaves this responsibility to those entities or persons themselves (albeit internal *or* independent external audits).[1581]

In addition to the health and environmental laws, numerous cemeteries, crematoria, and exhumation-related laws and ordinances are currently in force in the respective provinces and have a bearing environmental health.[1582] During the previous dispensation the provincial governmental authorities and self-governed territories adopted their own ordinances to regulate these matters, and after 1994 all those ordinances were assigned to the respective provinces within whose geographical areas they used to apply so that they could remain in force in those specific areas. The implication hereof was that all the provincial governments became responsible for the administration of a variety of ordinances that relate to cemeteries, crematoria, and exhumations that apply in parts of their jurisdictions. As it stands the provincial governments of Mpumalanga, KwaZulu-Natal, and Eastern Cape repealed all the ordinances applicable in their provinces and each adopted a new law to regulate some of these matters, the provincial government of Gauteng repealed all but one of its ordinances that was instead partially amended and it applies in its current form, the provinces of North West, Northern Cape, Free State, and Limpopo did not repeal the old ordinances so they are still in force in their respective jurisdictions,[1583] and the provincial government of the Western Cape repealed all the old ordinances in this regard but did not enact any new legislation

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[1581] Section 12(1)(c) of the *Western Cape Health Care Waste Management Act* 7 of 2007. For an example of auditing requirements - see s 16 of the *National Norms and Standards for the Storage of Waste* (2013).

[1582] They are relevant for present purposes because human remains can pose a threat to people's health and therefore need to be regulated to prevent potential harm from occurring. These matters also form part of the 'municipal health services' function (disposal of the dead) that municipalities have to provide, which entails that they have to manage, control, and monitor exhumations and the disposal of the dead, and this includes that they have to control and monitor the facilities that are used for the storage and disposal of dead bodies - reg 8 of annexure A of the *EHP Regulations*; para 4.3.2.1 above.

[1583] They are discussed below.

so it has no laws that regulate these matters.

The *Mpumalanga Cemeteries, Crematoria, and Exhumation of Bodies Act* 8 of 2005, which applies in the whole of Mpumalanga, among others provides that municipalities may establish cemeteries and crematoria and authorise others to do so, it prohibits the desecration of graves, it subjects the exhumation of bodies to provincial authorisation, it provides that non-compliance with any of its provisions constitutes and offence, and it compels municipalities to appoint inspectors to enforce its provisions.[1584] In other words, this Act designates municipalities as regulators of cemeteries and crematoria and it leaves the regulation of exhumations to provincial government. The *KwaZulu-Natal Cemeteries and Crematoria Act* 12 of 1996 in substance provides the same as is the case in Mpumalanga, however, it provides that the relevant MEC can appoint inspectors to enforce its provisions, and can authorise municipalities to do the same.[1585] This presumably means that municipalities are prohibited from appointing their own inspectors without obtaining authorisation from the relevant MEC.[1586] The *Eastern Cape Exhumations Act* 4 of 2004 is a concise law that simply prohibits the desecration of graves and provides that bodies may not be exhumed unless prior written approval has been obtained from the MEC that is responsible for health in this province.[1587] The Act criminalises non-compliance with these provisions but does not specify who is supposed to enforce it.[1588]

The ordinances that are still in force in the North West, Northern Cape, and Free State provinces essentially permit municipalities to establish crematoria but subjects them to provincial authorisation in this respect, they prohibit the desecration of graves, they require that any person who wants to exhume a body has to apply for a permit or written permission from the relevant MEC's from the respective

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[1584] Sections 2, 5, 8-9, 13, 16 of the *Mpumalanga Cemeteries, Crematoria, and Exhumation of Bodies Act* 8 of 2005.

[1585] Sections 1-2, 4, 7, 20, 28-29, 31 of the *KwaZulu-Natal Cemeteries and Crematoria Act* 12 of 1996.

[1586] If this is the case, the provision that requires as much will be invalid. This position is explained below.

[1587] Sections 2-3 of the *Eastern Cape Exhumations Act* 4 of 2004.

[1588] Section 4 of the *Eastern Cape Exhumations Act* 4 of 2004.

provinces to be able to do so, and they criminalise non-compliance with any of these provisions.[1589] However, none of the ordinances indicates who is supposed to enforce them. The *Crematorium Ordinance* 18 of 1965 applies in Limpopo and Gauteng and it likewise requires that their relevant MECs have to authorise the establishment of any crematoria and that said MECs have to appoint inspectors who need to make sure that all crematoria in their respective jurisdictions are managed in a decent and proper manner.[1590]

It is important to note at this juncture that 'cemeteries, funeral parlours, and crematoria' is a local government function as per the *Constitution* and that municipalities therefore have executive authority over these matters.[1591] This means municipalities do not need provincial authorisation before they may perform their functions in relation to these matters.[1592] The older provincial ordinances do, however, expect as much, which means that they are inconsistent with the constitutional scheme for the allocation of powers and functions among the three spheres of government.[1593] The administration of these ordinances were assigned to the provincial governments in accordance with transitional provisions that are laid down in the *Constitution*.[1594] In terms of those provisions, laws that were in force prior to the adoption of the *Constitution* remain in force, subject to consistency with the *Constitution*.[1595] Seeing that some provisions of the provincial ordinances are not consistent with the *Constitution* because they require that municipalities have to obtain provincial approval before they may establish cemeteries or crematoria, they could not remain in force and are therefore invalid, and this means that they

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1589 See the *Burial Place Ordinance* 4 of 1952 (it applies in the Free State); the *Exhumations Ordinance* 12 of 1980 (it applies in the Northern Cape and the North West); the *Cremation Ordinance* 6 of 1926 (it applies in the Northern Cape and the North West).

1590 Sections 2-3, 8-9 of the *Crematorium Ordinance* 18 of 1965. The Ordinance that applies in Gauteng was amended, but those amendments merely updated the definition of terms to refer to the relevant institutions as they are currently known - the *Gauteng Local Government Laws Amendment Act* 1 of 2006.

1591 This is in in terms of the constitutional scheme for the allocation of powers and functions among the three spheres of government- see paras 2.4.1.4-2.4.1.6, 4.3.1 above. Note 'exhumation' is not included in this functional area.

1592 In fact, the *Constitution* explicitly states that provincial government may not compromise or impede a municipality from performing its functions - s 151(4)d) of the *Constitution*.

1593 Section 156(1) of the *Constitution*; *Gauteng Tribunal*-case paras 44-47, 64-65.

1594 Schedule 6 of the *Constitution*.

1595 Item 2(1)(b) in schedule 6 of the *Constitution*.

have no impact on the governance of environmental health.[1596] The provisions that pertain to exhumations do remain valid and in force though, as do the newer laws,[1597] and are as such applicable in the respective provincial jurisdictions.[1598] Note further that the NDOH recently published a *Draft Regulations Relating to the Management of Human Remains* (2022) for public comment, whereby it aims to lay down uniform measures for the regulation of human remains nationally.[1599]

4.3.4 Local government's new functions and powers

While the transition to the democratic era and all the transformation processes that followed led to sector specific legislative reforms and the subsequent adoption of laws that moulded the legal environmental health mandate into its current form, the elevation of local authorities to an autonomous sphere of government too was, and remains to be, instrumental in this regard.

Service delivery can be described as the *raison d'être* of local government.[1600] This is reflected in the *Constitution* which mandates that local government must strive to "ensure the provision of services to communities".[1601] The *Constitution* endows local government with executive and legislative authority to govern over specific matters in line with this mandate, many of which are concerned with environmental

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[1596] *Gauteng Tribunal*-case paras 28-33; *Pieterse v Lephalale Local Municipality* 2017 2 BCLR 233 (CC) paras 5-18; Steytler and De Visser *Local Government Law of South Africa* ch 5 28; paras 2.4.1.4-2.4.1.6 above.

[1597] The *KwaZulu-Natal Cemeteries and Crematoria Act* 12 of 1996 is not consistent with the *Constitution* either, but its status will only be affected once declared invalid.

[1598] The NDOH published *Regulations Relating to the Management of Human Remains* (2013) under the *NHA* that sets out further requirements and standards pertaining to crematoria, funeral parlours, and exhumations that municipalities need to monitor and implement via EHPs - *EHP Norms and Standards* 26. A strict reading of the functional areas listed in the *Constitution* suggests that national government (the NDOH) may not promulgate legislation on these matters, but they presumably did so seeing that it concerns people's health, and national and provincial government have *concurrent* legislative authority over the functional area of 'health', which permits them to do so - *Ex Parte President of the Republic of South Africa: in re Constitutionality of the Liquor Bill* 2000 1 SA 732 (CC) paras 39-51; para 4.3.1 above.

[1599] At the time of writing these regulations have not been adopted yet, and whether this will in fact happen remains to be seen.

[1600] Steytler and De Visser "Local Government" 63-64. Skweyiya J for instance stated in the *Joseph*-case para 34 that the "provision of basic municipal services is a cardinal function, if not the most important function, of every municipal government", and further that the "central mandate of local government is to develop a service delivery capacity in order to meet the basic needs of all inhabitants of South Africa".

[1601] The *Constitution* also provides that local government must strive to "promote a safe and healthy environment" - s 152 of the *Constitution*.

health.[1602] What this essentially translates to is that municipalities are responsible for specific environmental health matters, and they have been empowered to administer those matters on their own initiative. As such they not only have to provide some environmental health services, they are able to tailor their services to the needs of their communities, that is, to regulate and provide them in a way they consider to be appropriate.

It bears mention that local government's powers are not absolute in this regard.[1603] Municipalities' obligations concerning some of their functional areas have been partially framed in numerous national and provincial laws as outlined above, such as 'air pollution' in the *NEMAQA*, 'refuse removal and solid waste disposal' in the *NEMWA*, 'water supply and sanitation services' in the *WSA*, 'municipal health services' in the *NHA*, and so forth.[1604] These laws articulate municipalities' responsibilities with respect to some of their listed functions, which means that they are statutorily compelled to perform those functions in the manner as prescribed by the applicable national or provincial law.

With the transition to the democratic era local government obtained the power to adopt, implement, and enforce bylaws concerning its functional areas (including the environmental health matters), which was not the case in the previous dispensation.[1605] This power extends to all local government's functions as listed in the *Constitution*, irrespective of whether national or provincial laws have been passed to regulate any one of them. In other words, municipalities may adopt bylaws for the administration of any and all of their environmental health functions.[1606] Most municipalities did adopt a variety of bylaws to regulate some of their environmental health matters, many only quite recently – all of which form part of the environmental health statute book. Every one of those laws cannot be

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[1602] See para 2.4.1.6 above for more on the powers of local government.

[1603] Steytler and De Visser "Local Government" 49-50.

[1604] See paras 4.3.2.1-4.3.2.6, 4.3.3 above. See Steytler and De Visser "Local Government" 51-58 for an explanation of the authority that national and provincial government have to regulate local government matters.

[1605] See para 4.3.1 above.

[1606] Bylaws that are inconsistent with national or provincial laws will be invalid. This is a discretionary power, which means that municipalities do not *have* to enact bylaws, but they *may* do so - s 156(2) of the *Constitution*; paras 2.4.1.6, 4.3.1 above.

discussed in this research as their sheer number makes it hopelessly impractical, but a few aspects in this regard do require further deliberation to illustrate how the establishment of the local sphere of government helped to shape the current legal mandate and influence the governance of environmental health.[1607]

4.3.4.1 Discretionary functions

The *Constitution* only gives municipalities the power to govern over their functions, it does not actually compel them to perform them. The only functions they *must* perform are those set out in various national and provincial laws towards complying with their duty to realise the environmental and socio-economic rights entrenched in the *Constitution*, or that have been otherwise assigned to them.[1608] The implication hereof is that if a national or provincial law does not compel municipalities to perform certain functions, they are under no legal obligation to do so, and those matters may never be regulated or tended to *unless* municipalities do so on their own initiative. The local government matters that are not explicitly regulated by any national or provincial laws that pertain to environmental health are 'noise control', 'control of public nuisances', 'animal burial facilities', and 'control of undertakings that sell food to the public'.[1609] Municipalities therefore have to adopt bylaws to regulate these matters in their jurisdictions, which means that they can impose rules on their communities with respect to these matters and empower their

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[1607] See para 4.3.4.2 for a list of some of these.

[1608] This includes having to provide 'basic municipal services', which has been defined as a service that is "necessary to ensure an acceptable and reasonable quality of life and, if not provided, would endanger public health or safety or the environment". Unfortunately the ambit of this duty is still unclear, but based on the Constitutional Court's interpretation it does seem to compel municipalities, notwithstanding all their other obligations that emanate from the respective environmental health-related national and provincial laws, to nevertheless provide services to prevent environmental health hazards from occurring (especially those related to the constitutional socio-economic rights) - ss 1, 73(1)(c) of the *Municipal Systems Act*; s 139(5) of the *Constitution*; *Joseph*-case para 40; Steytler and De Visser "Local Government" 66-72; Steytler and De Visser *Local Government Law of South Africa* ch 9 11, 14; paras 4.2.2-4.2.3, 43.2.1-4.3.2.6, 4.3.3 above.

[1609] A 'public nuisance' might be considered synonymous with an 'environmental health hazard', or at least overlap to some extent (especially when a nuisance poses harm to a persons' health), in which case it could be argued that this function is in fact partly regulated by the *NHA*. Similarly, 'noise pollution' may be considered to constitute 'air pollution', in which case it is partly regulated by the *NEMA* and *NEMAQA*. All these functions also resort under the ambit of the constitutional environmental right and as such the argument can be made that municipalities are in fact obligated to provide them, but they are not *explicitly* regulated by any national or provincial laws.

officials to implement and enforce those rules (to safeguard the health of the communities),[1610] failing which they will remain unregulated and may very well be neglected. Interestingly, in the latest report on the status of environmental health service delivery by local government that was published in 2018, the majority of municipalities indicated that they find a lack of (or inadequate) bylaws to be a key challenge to provide environmental health services, which confirms this position.[1611]

4.3.4.2 Dedicated environmental health bylaws

Municipalities may still adopt bylaws for those environmental health matters that are regulated by other national and provincial laws. They are not prohibited from doing so merely because a national or provincial law already prescribes what some of their obligations with respect to such matters are. Their bylaws may just not conflict with those laws.[1612] This means that municipalities may adopt function-specific or more comprehensive environmental health bylaws to regulate such matters locally.[1613] This affords them the opportunity to simplify their legal frameworks for the governance of environmental health by consolidating their various existing legal environmental health obligations as far as practicably or legally possible into dedicated bylaws, and they can adapt them to the specific needs of their communities.[1614]

As a case in point, two thirds of the municipalities that are responsible for the

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[1610] See para 2.4.2.2 above.

[1611] SALGA *Municipal Health Services: Status Quo Report 2017-2018* 16.

[1612] See para 2.4.1.6 above. Note in this regard as explained by Jafta J in the *Gauteng Tribunal*-case paras 59 that

> the national and provincial spheres cannot, by legislation, give themselves the power to exercise executive municipal powers or the right to administer municipal affairs. The mandate of these two spheres is ordinarily limited to regulating the exercise of executive municipal powers and the administration of municipal affairs by municipalities.

[1613] The adoption of dedicated environmental health bylaws has been identified as a critical component that could resolve some of the operational challenges that municipalities are confronted with - SALGA *Municipal Health Services: Status Quo Report 2017-2018* 16.

[1614] See May and Agenbag "Environmental Health and Municipal Public Health Services" 57 in which the authors explain that through the adoption of bylaws municipalities can

> synthesise the relevant aspects of national and provincial legislation in the local context, cater for local diversity and health nuisances unique to the local environment, and ensure that there is legal certainty in the municipal community about applicable municipal health standards at local level.

provision of 'municipal health services' as per the *NHA* adopted (or had pre-existing) bylaws for the regulation of this function in their jurisdictions.[1615] Some of the bylaws are very comprehensive and include provisions relating to a variety of hazards (not just those listed in the *NHA*), and they typically contain a blanket clause prohibiting anyone from causing public health hazards to cater for environmental health more generally, making those municipalities' regulatory systems for environmental health practice much simpler.[1616] Granted, the municipalities that provide other public goods such as 'refuse removal and solid waste disposal' or 'water supply and sanitation services' usually adopt distinct bylaws to regulate these functions – so it is not always possible for municipalities to enact one dedicated bylaw that caters for *all* their environmental health functions.[1617] That being said, some municipalities enacted separate bylaws to regulate specific components of the 'municipal health services' function only, and left other matters unregulated, while other municipalities still do not have bylaws to regulate any of their environmental health functions, in which case they have to rely solely on the national and provincial

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[1615] The bylaws differ in nomenclature, ranging from titles such as environmental or municipal health services, to public health (that for all intents and purposes regulate this function). Of the 52 metropolitan and district municipalities, 35 adopted or have dedicated environmental health bylaws, and about a third of those were only adopted in the last 5 years - see Annexure A for a list of all the bylaws published up to 2022 (including those from local municipalities). Municipalities could also adopt standard draft or model bylaws if they do not have the capacity to develop their own. For more on standard draft and model bylaws - see Nel, Du Plessis and Du Plessis "Instrumentation for Local Environmental Governance" 34-41; Steytler and De Visser *Local Government Law of South Africa* ch 5 15-16.

[1616] They usually provide that no person may create a public health hazard or health nuisance, where those terms are defined to include environmental health hazards - see e.g. ss 1, 3-5 of the *Central Karoo District Municipality Municipal Health Bylaw* (2019); ss 1, 5 of the *Zululand District Municipality Municipal Health Services Bylaw* (2020).

[1617] Some national and provincial laws require that municipalities have to adopt bylaws for the regulation of certain matters. For instance, municipalities that are designated water service authorities *must* make bylaws for the provision of water services, may set local air quality standards in a bylaw, and may set waste service standards in a bylaw, all of which requires the adoption of separate bylaws - see s 21 of the *WSA*; s 11 of the *NEMAQA*; s 9 of the *NEMWA*.

environmental health laws to regulate their functions locally.[1618]

Whatever their status, the fact is that all municipalities have a unique legal setup for the regulation of environmental health matters in their own jurisdictions, making the governance of environmental health a somewhat varied affair across the country if not accounting for their otherwise uniform obligations (as per the national and provincial laws) in this regard.[1619]

4.3.4.3 Division and transfer of local government's functions

According to the *Constitution* municipalities may make and administer bylaws for the matters which they have "the right to administer".[1620] Metropolitan municipalities have the right to administer all local government functions, so they can adopt bylaws for and govern over all of them. This is not the case for district and local municipalities seeing that the *Municipal Structures Act* divides the local government functions between them, making district municipalities responsible for some environmental health matters, and local municipalities responsible for the others.[1621] Based on this division it follows that legally each category of municipality may only adopt bylaws for the regulation of and only provide its own allocated

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[1618] Many regulations were published under the previous *Health Act* in terms of which EHPs could perform specific environmental health-related functions. Some contend, as would generally be the case, that when the current *NHA* repealed the older *Health Act*, those regulations were repealed as well, which left a legal vacuum in the sense that EHPs were not empowered to perform all their functions anymore - see for instance May and Agenbag "Environmental Health and Municipal Public Health Services" 45-51; SALGA *Municipal Health Services: Status Quo Report 2013* 10. The researcher, however, is of the view that all those regulations were saved and may still be applied by virtue of the savings clause in s 93(2) of the *NHA*. This is because anything done (like issuing regulations) before the commencement of the *NHA* under a provision of the repealed law (*Health Act*), and which could have been done under a provision of the *NHA*, "must be regarded as having been done under the corresponding provision of the [*NHA*]" - see ss 93(2) of the *NHA*. See for instance *Sayers v Minister of Local Government, Environmental Affairs & Development Planning* (unreported) 2011 ZAWCHC 301 (19 July 2011) para 13 in which the Court found the same with respect to the regulations published under the oldest *Public Health Act* 36 of 1919 that was repealed with the enactment of the previous *Health Act*. In any event, ss 83-87 of the *NHA* also empower EHPs so that they can perform all the tasks necessary to provide effective environmental health services, which renders this issue rather moot. See para 5.2.1 below for more in this regard.

[1619] The *EHP Norms and Standards* for example was published in an attempt to standardise activities relating to the provision of environmental health services across the country - *EHP Norms and Standards* 10; para 4.3.2.1 above.

[1620] Section 156(2) of the *Constitution*.

[1621] Section 84 of the *Municipal Structures Act*; paras 2.4.1.6, 4.3.1 above.

environmental health functions.[1622]

The current institutional and functional configuration of local government is markedly different from the pre-democratic era, especially considering that metropolitan, district, and local municipalities in their present form did not even exist during those times.[1623] While these municipalities were officially established at the end of 2000, the newly formed institutions did not immediately start to provide services in line with the default division set out in the *Municipal Structures Act* as described above.[1624] In order to "maintain the status quo" as it were, the decision was made to permit municipalities to continue to deliver the services that they were providing in the past until the transitional process could be completed, and this did not correspond with the default statutory division.[1625] In practical terms this meant that some local municipalities in the interim took responsibility for the delivery of certain services that were supposed to be provided by district municipalities, such as 'municipal health services', 'water supply and sanitation services', and other shared functions, while conversely, some district municipalities did not provide all their functions because they did not have the capacity to do so yet.[1626] This was supposed to be a temporary arrangement, the idea being that municipalities had to develop the necessary capacity and take over responsibility for their own functions in due course (incremental transformation). The transitional process has been fraught with difficulty, however, and to date has still not been

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[1622] For a list of services that each category of municipality needs to provide - see para 4.3.1 above.

[1623] As noted earlier, health services, including reactive environmental health services, were mostly provided by provincial and local authorities that had the capacity to do so, and it was only with the adoption of various national laws after 1994 that local government became responsible for the provision of some public goods, such as potable water - see paras 4.3.2.1, 4.3.2.4 above.

[1624] Section 84 of the *Municipal Structures Act*; Steytler and De Visser *Local Government Law of South Africa* ch 5 31-35; para 4.3.1 above.

[1625] Provincial and Local Government Portfolio Committee *Division of Powers and Functions of District and Local Councils and Related Financial Issues: Briefing: Meeting Report* (2 April 2001); SALGA *15 Years Review of Local Government* 13. The *NHA* also makes provision for these transitional arrangements with respect to the 'municipal health services' function in particular - s 32-34 of the *NHA*.

[1626] SALGA *15 Years Review of Local Government* 46-48. At this stage the content of the 'municipal health services' function was not yet clear either because it was only defined in the *NHA* that was published in 2003. The scope of this function was also challenged in court in 2008 on the grounds that it strips local government of its power to provide a wider scope of health services compared to environmental-related health services only - *IMATU*-case para 2-3, 47, 51; para 4.3.2.1 above.

completed.[1627]

All district municipalities were legally required to provide 'municipal health services' from 1 July 2004 onwards because the authorisation that some local municipalities had to do so was revoked with effect from this date.[1628] Ten years later, in 2014, the status on the process of devolution (taking over responsibility) was at 52.3%, meaning that of the 44 district municipalities that were supposed to provide 'municipal health services', only 23 were performing this function.[1629] The latest report that was issued in 2018 shows that the current status is at 82.7%.[1630] The present situation with respect to the 'water supply and sanitation services' function is somewhat different because all the authorisations were not revoked, some were actually extended in 2003 (seemingly indefinitely), and presently only 52.3% of district municipalities provide these services.[1631] As for local municipalities, only 57.6% perform their 'building regulations' function, 29.3% perform their 'air pollution' function, 37.6% perform their 'noise control' function, and 44.4% perform

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1627 For more on this process - see Agenbag and Balfour-Kaipa 2008 *SAHR* 151-153; Provincial and Local Government Portfolio Committee *Division of Powers and Functions of District and Local Councils and Related Financial Issues: Briefing: Meeting Report* (2 April 2001); DBSA *Delivery of Municipal Health Services* 8-9, 15-20, 22-25; May and Agenbag "Environmental Health and Municipal Public Health Services" 39-44; Agenbag *The Management and Control of Milk Hygiene in the Informal Sector by Environmental Health Services in South Africa* 4-13.

1628 See for instance the *Revocation of Previous Authorisations in terms of Section 84(3) of the Local Government: Municipal Structures Act, 1998: KwaZulu-Natal* (2003); *Revocation of Previous Authorisations in terms of Section 84(3) of the Local Government: Municipal Structures Act, 1998: Eastern Cape* (2003).

1629 SALGA *Municipal Health Services: Status Quo Report 2014* 13. A municipality may also enter into a service delivery agreement and perform services on another's behalf. Many district municipalities made such agreements with local municipalities to perform their 'municipal health services' function, and that would constitute successful devolution of the process. For more on service delivery agreements - see ss 80-81 of the *Municipal Systems Act*; Steytler and De Visser *Local Government Law of South Africa* ch 9 23-36.

1630 Only 72.7% of district municipalities actually perform the service, which suggests that the other 10% must have entered into service delivery agreements with local municipalities to provide this service on their behalf - SALGA *Municipal Health Services: Status Quo Report 2018* 10; MDB *Municipal Powers and Functions Capacity Assessment 2018* 83. Before a municipality may take on a new function it has to conduct a capacity assessment in accordance with s 78 of the *Municipal Structures Act* to ascertain if it will be able to provide such a service. By 2007 only 50% of the district municipalities that had to take on the new 'municipal health services' function have done so, and the figure currently stands at 70%, meaning that 13 of the 44 district municipalities have still not complied with this legal requirement - DBSA *Delivery of Municipal Health Services* 9, 17; SALGA *Municipal Health Services: Status Quo Report 2018* 21-42; Bekink *Principles of South African Local Government Law* 292-295.

1631 MDB *Municipal Powers and Functions Capacity Assessment 2018* 83.

their 'public nuisances' function.[1632] District and local municipalities perform their shared functions to varying degrees, where 18.2% of district municipalities and 94.6% of local municipalities currently provide 'refuse removal and solid waste disposal' services, 15.9% of district municipalities and 38.5% of local municipalities regulate 'fresh produce markets and abattoirs', and 27.3% of district municipalities and 56.6% of local municipalities regulate and provide 'cemeteries, funeral parlours, and crematoria' services.[1633] The point is that the division of local government functions between district and local municipalities as per the *Municipal Structures Act* does not reflect the real situation,[1634] which is to say that the institutions responsible for environmental health practice at the local sphere of government, relating to both service delivery and their law-making power, vary across the country.

The division of functions between district and local municipalities has far reaching implications for environmental health governance from a regulatory and operational perspective, more so because it is asymmetrical. Challenges basically arise from the fact that environmental health service delivery is split between district and local municipalities in the same geographic areas. This can cause uncertainty and confusion about who is responsible for what services, particularly when the division of functions varies from district to district and between different local municipalities *vis-à-vis* a single district municipality, and the unclear scope of most of the listed functional areas exacerbates the problem.[1635] For example, while local municipalities are among others responsible for 'air pollution', 'noise control', and 'public nuisances' as per the default functional division, the argument can be made

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[1632] Some functions were transferred to district municipalities according to a 2009 report, but it appears according to the latest 2018 report that district municipalities are not actually performing these functions of behalf of the local municipalities - SALGA *15 Years Review of Local Government* 48; MDB *Municipal Powers and Functions Capacity Assessment 2018* 89.

[1633] MDB *Municipal Powers and Functions Capacity Assessment 2018* 86.

[1634] Almost all municipalities "do not organise their service delivery in terms of an institutional framework" that corresponds precisely with their functions as listed in the *Constitution* or the *Municipal Structures Act* in any event - MDB *Municipal Powers and Functions Capacity Assessment 2018* 7.

[1635] Agenbag and Balfour-Kaipa 2008 *SAHR* 152-153; May and Agenbag "Environmental Health and Municipal Public Health Services" 34-36. See *Gauteng Tribunal*-case para 55 in which it was explained that even though the functional areas allocated to the various spheres of government are not contained in hermetically sealed compartments, they remain distinct from one another, and this applies here as well.

that all three of these functions also resort under the 'municipal health services' function as defined in the *NHA* that has to be provided by district municipalities, and the same applies to their shared functions.[1636] So either one of the categories of municipalities can claim that the other is responsible for these services, which on the one hand can lead to their duplication, or on the other to a deterioration in their delivery.[1637] In *Myburgh NO v Msukaligwa Local Municipality* the applicants joined both the district and local municipalities as respondents in a matter regarding the fixing and maintenance of a tar road for precisely for this reason, that is, to prevent them from blaming each other and escaping liability for not performing their duties.[1638]

The uncertainties and challenges that municipalities encounter in this regard spill over into their ability to plan for, regulate, and develop their environmental health services.[1639] The power that each of the institutions has to adopt bylaws to regulate their functions depends on which functions they are legally required to perform, but if they are unsure about this they might fail to adopt the relevant bylaws, they might adopt bylaws to regulate a particular function even if they are not legally responsible for that function, or both a district and local municipality in the same geographic area might adopt bylaws with respect to the same function that overlap with one

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1636 See paras 4.3.1, 4.3.2.1 above.

1637 May and Agenbag "Environmental Health and Municipal Public Health Services" 34-36.

1638 *Myburgh NO v Msukaligwa Local Municipality* (unreported) 2019 ZAGPPHC 300 (4 March 2019) paras 3-4. In some cases residents may even be authorised to perform a municipal service by themselves as happened in the *Kgetlengrivier*-case. In another matter, without first approaching the court, a group of citizens began to fix potholes on their own and invoiced the local municipality for their expenses. Here the municipality went to court objecting to their conduct, and the High Court found in their favour, ruling that the citizens have to follow proper processes and cannot simply do as they please, however good their intentions - see *Kamiesberg Local Municipality v Koingnaas Belasting Betalersvereniging* (unreported) 2021 ZANCHC 69 (31 December 2021) paras 5-16, 21, 23. See also Steytler and De Visser *Local Government Law of South Africa* ch 5 34.

1639 Agenbag and Balfour-Kaipa 2008 *SAHR* 152; May and Agenbag "Environmental Health and Municipal Public Health Services" 39-44. This does not relate only to the adoption of bylaws (which is the focus of this discussion), but also to staffing and finances. These aspects do not form part of this research, however. For more on these - see May and Agenbag "Environmental Health and Municipal Public Health Services" 57-67; Agenbag and Balfour-Kaipa 2008 *SAHR* 152-153; *Municipal Health Services: Status Quo Report 2018* 12-15.

another.[1640] This means that a district municipality might for example incorporate provisions with respect to 'noise control' or 'air pollution' in a comprehensive environmental health bylaw towards regulating its 'municipal health services' function, whereas a local municipality in the same district area might also adopt 'noise control' or 'air pollution' specific bylaws, or a more general 'public nuisance' bylaw, in which case similar environmental health matters will be dually regulated in the same jurisdiction.[1641] This complicates environmental health practice because there is no certainty as to which bylaw will prevail if there is more than one law that applies in the same jurisdiction that regulates the same matter (if they differ), and who should be responsible for its implementation and enforcement (to provide the service).

Moreover, district municipalities typically have to oversee local municipalities in that the former has to provide 'municipal health services' that consist of the supervision of various environmental conditions and activities related thereto,[1642] and the latter has to provide the public goods that are subject to said oversight, wherefore EHPs have to fulfil their functions in the context of tense relations between the institutions.[1643] The opposite poses its own challenges too though because in those cases where a district municipality has to perform both the service delivery and oversight functions, an EHP will essentially have to inspect and report on the work of his or her own colleagues within the same municipality (institutions policing themselves), and this raises conflict of interest issues. For these reasons among

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[1640] The power to make bylaws could shift when the functional division between particular municipalities has been adjusted via Ministerial or MEC authorisation, and the Minister or relevant MEC may decide whether existing bylaws need to continue to apply in such cases as well - ss 84(3)-(4), 85 of the *Municipal Structures Act*; s 156(2) of the *Constitution*; Steytler and De Visser *Local Government Law of South Africa* ch 5 35-40. Note that if institutions conclude service delivery agreements and thereby informally adjust the division of functions between them, the original municipality remains responsible for the delivery of the service and always retains the bylaw-making power - ss 76-81 of the *Municipal Systems Act*.

[1641] For instance, an EHP appointed by a district municipality will need to provide 'municipal health services' in the entire geographic area of the district, but if a local municipality within that area adopted a bylaw to regulate 'fresh produce markets and abattoirs', this could involve food control which falls within the ambit of the 'municipal health services' function, and it is not clear whether a district employed EHP will need to enforce the provisions of that particular local municipal bylaw as well.

[1642] See para 4.3.2.1 above.

[1643] May and Agenbag "Environmental Health and Municipal Public Health Services" 34-37.

others, as May and Agenbag point out,[1644] the current disjointed institutional arrangements may perpetuate many of the conditions that have hindered the development of environmental health practice at the local sphere of government.

It is therefore clear in consideration of the above that the establishment of local government and the allocation of new powers and environmental health-related functions to the respective municipalities, including in particular the power that they have to enact bylaws and the asymmetrical division of environmental health functions between district and local municipalities, have a significant influence and contributed to shape the practice of environmental health into its present state.

4.4 Stringing together the legal environmental health mandate – a policy dedicated specifically to environmental health

Evidently government instituted many parallel processes after 1994 that in some ways relate to environmental health. This led to the adoption of numerous laws and policies over the course of about fifteen to twenty years that impose a variety of obligations on different governmental bodies to perform specific environmental health-related functions, without even accounting for those that were inherited from the apartheid era and are still in force that add to those obligations and functions.[1645] In consequence government ended up with a highly fragmented legislative landscape involving many governmental bodies, officials, and personnel with differing and sometimes duplicate or unclear roles, powers, and competencies to govern over environmental health.

In recognition hereof the NDOH adopted the *NEHP* in 2013 to serve as a national framework for the provision of environmental health services.[1646] The *NEHP* reflects government's intent as far as the delivery of environmental health services are concerned and in this respect it asserts the following that deserves mention from the onset: a) 'environment' is considered to have the same meaning as defined in

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[1644] May and Agenbag "Environmental Health and Municipal Public Health Services" 36.

[1645] The same goes for government's international obligations - see paras 3.3-3.4, 4.3.2-4.3.4 above.

[1646] *NEHP* 11, 14. The focus of this policy is on environmental health services as defined in s 1 of the *NHA*.

the *NEMA*,[1647] b) 'health' is considered to have the same meaning as defined by the WHO,[1648] c) 'environmental health' is considered to have the same meaning as previously defined by the WHO,[1649] d) 'environmental health practice' is considered to include the anticipation, identification, assessment, monitoring, correction, control, and prevention of environmental hazards, and e) 'environmental health services' are described to refer to all those as defined in the *NHA* with the addition of air quality management and noise control.[1650]

The overall goal of the *NEHP* is to aid government in the realisation of section 24 of the *Constitution*, that is, to ensure that the environment is not harmful to anyone's health or well-being.[1651] For this purpose the policy laid down some principles that are identified as crucial and should guide government's approach to environmental health. They include: a) that prevention should be at the centre of all environmental health action, b) that environmental health interventions have to be implemented on a sustainable and equitable basis and have to be responsive to people's differing needs, c) that environmental health services have to be delivered locally (on a decentralised basis), and d) that intersectoral collaboration is vital and needs to be co-ordinated by the NDOH.[1652]

Through the inclusion of these principles the *NEHP* firstly recognises and accepts that environmental health is fundamentally concerned with the prevention of harm, and it thereby confirms that environmental health interventions should not be reactionary (as was the case in the past) but instead should be delivered as a

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[1647] The implication hereof is that the built environment supposedly does not fall within the ambit of environmental health. This appears to be inaccurate, however, considering that a 'surveillance of premises' function is included as a municipal health service - see paras 2.3.1.2, 4.3.2.1 above.

[1648] See para 2.3.1.1 above for why this is problematic.

[1649] This definition casts environmental health so wide that it includes factors that are not reasonably modifiable and factors that cannot be addressed through environmental health interventions, making it impractical - see paras 2.3.1.2, 2.3.5 above. It is also outdated considering that the WHO itself does not even refer to this definition anymore - Prüss-Üstün and Corvalán *Preventing Disease through Healthy Environments* 21-23.

[1650] The 'environmental pollution control' function easily accommodates and therefore already includes air quality-related concerns, so the addition of 'air quality management' was unnecessary. During the drafting of the *NHA* the NDOH decided to exclude 'noise control' as an environmental health service, only to refer to it again in this policy, which causes confusion.

[1651] *NEHP* 11; paras 4.2.2-4.2.3 above.

[1652] The *NEHP* lists other principles as well, but they are not relevant for present purposes.

proactive service.[1653] Secondly the policy clarifies that environmental health interventions have to be appropriate, in which case their appropriateness derives from whether they are sustainable, equitable (all for some, not some for all), and are suitable to address people's specific needs.[1654] This gives further meaning to the obligation that the *NHA* places on municipalities by providing that they have to "ensure that *appropriate* municipal health services are *effectively* and *equitably* provided in their respective areas".[1655] The implication hereof is that environmental health interventions *must* be rendered in this manner, which means that municipalities have to prioritise the provision of environmental health services based on these criteria.[1656] As for the third recommendation, the primary responsibility for environmental health was devolved to local government with the enactment of the *NHA*, so environmental health services are already delivered on a decentralised basis (or at least have to be, legally).[1657] The *NEHP* lastly points out that intersectoral collaboration is vital to environmental health governance, a necessity that stems from the involvement of various institutions from all three spheres of government that are each compelled and empowered, by numerous laws, to perform an assortment of tasks that often overlap.[1658] This fragmented legal mandate coupled with the disjointed institutional structure is confusing and causes

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[1653] This conforms to the environmental health concept as devised by the WHO and explained earlier in this research - *NEHP* 14, 19, 34; para 2.3.5 above. Even though the new health system is based on the PHC approach, curative health services (secondary level of PHC) still dominate the health scene, which is evident from a funding perspective. Funding for 'municipal health services' currently flows through the same channels as regular local government funding and is not financed through the same channels that deal with public health, such as the NDOH. Municipalities therefore have to make do with their equitable share and budget accordingly for the provision of 'municipal health services', and this tends to be inadequate. The *NEHP* calls for a redirect of the focus of PHC to be on prevention, and by implication also for funding to be redirected towards environmental health services instead of curative health services as is currently the case - *NEHP* 31; SALGA *Municipal Health Services: Status Quo Report 2017-2018* 12.

[1654] This means that environmental health hazards have to be assessed to determine what risks they may hold (risk analysis), whereafter appropriate interventions could be selected and launched to address them. Precautionary measures have to be taken in those cases where there is a lack of scientific data to prove that a particular hazard does in fact pose a risk - *NEHP* 12-13; para 3.4.1.8 above.

[1655] Section 32(1) of the *NHA*.

[1656] See para 2.4.2.5 above for more on what would constitute an appropriate intervention, and in particular Frieden's health impact intervention pyramid.

[1657] See paras 2.4.2.5, 3.3.2, 4.3.2.1, 4.3.4 above.

[1658] Various governmental bodies are involved in the governance of environmental in part because the legal mandate is fragmented, but also because of the very nature of environmental health itself - *NEHP* 14; para 2.3.5 above.

uncertainties among officials and personnel employed at the respective institutions, leading to the duplication or failure of service delivery, and this is why they all have to work together with one another and why their work has to be co-ordinated.[1659] Ideally the implementation of the legal mandate needs to be co-ordinated nationally by the NDOH because it also concerns other *national* line departments (NDFFE, NDWS, NDHS, NDALR), who in turn can consult with their provincial counterparts.[1660] This would mean that municipalities would not each have to consult with every other relevant national and provincial body for the purpose of delivering effective and appropriate environmental health services, but instead would only have to consult with the NDOH who can do so on their behalf to ensure that everyone works together toward the same goal. However, the *NHA* does not categorically state that the NDOH or anyone else must co-ordinate environmental health practice. According to the *NHA* the NDOH has to co-ordinate the provision of *all* health services, but only between itself and provincial health departments, so this obligation does not extend to the other national line departments, or to municipalities who are responsible for the delivery of the majority of environmental health services.[1661] The *NHA* further provides that the NDOH has to *ensure* that essential health services, which must at least include PHC services, have to be provided.[1662] This could be interpreted to mean that the NDOH may well have to co-ordinate the delivery of PHC services to ensure that they are provided, but it is not clear whether PHC services in this context include environmental health services.[1663] Considering the reference to 'essential' health services, it possibly refers only to the most basic of health services and not to the comprehensive package inclusive of environmental health.[1664] As such, the *NHA* does not compel

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[1659] Rogers J, having to consider the jurisdiction of EMIs appointed by various authorities as provided for in the *NEMA*, confirms this position by stating: "there is no doubt that efficient administration is generally better served by non-overlapping mandates" - *Mineral Sands Resources (Pty) Ltd v Magistrate for the District of Vredendal, Kroutz NO* 2017 2 All SA 599 (WCC) para 98.

[1660] See also paras 2.4.2.5, 3.3.2.2, 4.3.2.1 above for more reasons why the NDOH should co-ordinate the health system.

[1661] Section 21(2)(l) of the *NHA*. In turn provincial health departments have to co-ordinate, monitor, and evaluate the rendering of health services within their areas of jurisdiction, which will only include those municipalities situated within their areas, and not permit them to do so nationally - s 25(2)(f) of the *NHA*.

[1662] Section 3(1)(d) of the *NHA*.

[1663] 'PHC services' are not defined in the *NHA*.

[1664] 'Essential health care services' are not defined in the *NHA* either.

the NDOH to co-ordinate environmental health services nationally, which means that the NDOH is not legally obligated to facilitate intersectoral collaboration and will have to do so on its own initiative.[1665] All these principles in the *NEHP* correspond with some of the essential elements of environmental health governance as identified in chapter two and may therefore go a long way to improve the status of environmental health if applied.[1666]

Along with these principles the *NEHP* contains a number of objectives that it aims to achieve towards improving environmental health service delivery, such as to "promote a legal and regulatory framework that ensures mandatory but also support voluntary compliance and also facilitates policy implementation by various actors" and to "formulate an institutional framework that enables efficient co-ordination and collaboration of the various sectors", which by all accounts should contribute positively to environmental health practice considering the legal mandate's fragmented state.[1667]

With respect to the first objective the policy explains how environmental health has permeated the international legal agenda in various instruments such as the *Stockholm Declaration*, the *Agenda 21*, the *Libreville Declaration*, and the MDGs (now also the SDGs), it posits that government must develop the capacity to uphold the commitments that it made to implement them, and it lists eleven other international law instruments that "have a particular significance in terms of human health".[1668] However, only *four* of those are currently relevant to environmental

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[1665] The NDOH set out to do so by way of a newer strategy published in 2016, which is discussed below.

[1666] See para 2.4.2.5 above.

[1667] Another objective of the *NEHP* is to adopt a partnership approach with the purpose of facilitating integrated planning in environmental health, but this goes hand in hand with collaboration and co-ordination and need not be discussed separately. The other objectives do not pertain to the legal mandate and include aspects such as to ensure effective institutional capacity, to strengthen the capacity of EHPs, and to promote community participation - *NEHP* 14-15. The *NEHP* advocates for municipalities to deploy 1 EHP for every 10 000 people, a guideline set by the WHO, and also a norm as per the *EHP Norms and Standards,* yet in 2021 there were only 1.1 EHPs for every 100 000 (uninsured) people in the country, totalling 448, which is significantly fewer compared to 10 years ago (713), and too few by a factor of at least 10 - see *NEHP* 24; Ndlovu *et al* 2021 *SAHR* 356-357; Day *et al* 2020 *SAHR* 260-262. However, according to the HPCSA there are 5972 registered EHPs in the country as at 1 July 2022 - see Shikwambane 2022 *EHP News* 4.

[1668] For more on these commitments - see para 3.3.2 above.

health *and* have been ratified by government.[1669] It further recognises, accurately so, that environmental challenges can go beyond national borders and emphasises that government must make efforts to co-operate and collaborate with its neighbouring states in this regard.[1670] As for national legislation the *NEHP* gives recognition to the environmental right in the *Constitution*, briefly explains that the *Municipal Structures Act* and the *NHA* task metropolitan and district municipalities with the duty to provide environmental health services, mentions that the *EHP Regulations* outlines the functions of EHPs, it points out that the *NEMA* governs the management of the environment and makes provision for co-operative governance,[1671] and its lists other national laws that together constitute the framework for environmental health action.[1672] The policy refers to all the laws that have been discussed in this chapter,[1673] however, the list also includes the *Merchant Shipping Act* 57 of 1951 (it does not have a bearing on environmental health), the *Aviation Act* 72 of 1962 (it does not have a bearing on environmental health and has been repealed prior to the adoption of the *NEHP*), and the *Cemeteries and Crematoria Act* 80 of 2003 (it is an Australian law and is therefore irrelevant). The mere listing (promotion) of some international law instruments and domestic laws does not *facilitate* the implementation of the complex legal environmental health mandate as a whole, nor does it *ensure* compliance with their provisions, and the incorrect listing of supposedly relevant laws actually creates more confusion. The *NEHP* should in the least have compiled an accurate list of all the laws pertinent to

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1669 One of the instruments was mentioned twice (the *Stockholm Convention*), another relates to biodiversity and is irrelevant to environmental health, two others served their purpose and are not relevant to the governance landscape anymore (the *Vienna Convention for the Protection of the Ozone Layer* (1985) and the *Montreal Protocol on Substances that Deplete the Ozone Layer* (1987)), and government did not ratify the remaining three - *NEHP* 15-18. In addition the *NEHP* correctly states that government is a signatory to the *IHRs*, but at a later stage it refers to a section 35(1) of an "International Health Regulations Act of 2005", which does not exist. It therefore appears that the drafters of the *NEHP* did not have a clear understanding of the scope of environmental health or of the content of the instruments that they referred to when the list was compiled, nor did they understand that government must first ratify and then incorporate a particular instrument's provisions into domestic law before it will become binding in South Africa - see para 3.2.1 above.

1670 *NEHP* 18; para 3.4.1 above.

1671 It fails to note (or perhaps recognise) that municipalities are not involved in those co-operative governance procedures - see para 4.3.2.2 above.

1672 *NEHP* 18-19.

1673 Except for the *Housing Act* - see para 4.3.2.1-4.3.2.6 above. Note that the *OHSA* is included in this list too.

environmental health. It would perhaps also have been useful if instead of merely listing those laws, the *NEHP* described their substance to the extent that it clarifies what powers and duties the relevant governmental bodies, officials, and personnel have as far as the delivery of environmental health services are concerned, which in turn would appease their doubts and equip them with the knowledge to be able to ensure that the provisions of the laws are complied with, albeit through voluntary or mandatory mechanisms.[1674] As such the *NEHP* does not contribute in any meaningful manner to facilitate the implementation of the legal environmental health mandate or to ensure that everyone complies with it, and it therefore failed to achieve this objective.

With respect to the second objective the *NEHP* identifies the national departments involved in environmental health, briefly explains in what way each department's mandate relates to environmental health *vis-à-vis* the responsibilities of the NDOH, and it states that there is a "need for formulation of multi-facet co-operative governance structures that will focus on promoting synergies, alignment and harmonisation of plans, programmes and policies of these organs of state".[1675] It is unclear how "structures" can be "formulated", but it is presumed that the drafters either meant to convey that there is a need for the formulation of a framework or guideline that could resolve the uncertainties arising from the institutional and legislative fragmentation (align and harmonise) and provide clarity on each's role (circumscribe functions), or instead that such governance structures have to be formed (not formulated). If the former is correct it would mean that the *NEHP* merely repeats that an institutional framework has to be developed to enable governmental bodies to collaborate with one another, without actually providing such a framework. If the latter is correct it would mean that the *NEHP* recommends that organisational structures have to be formed within and across the various

[1674] The *NEHP* probably did not elaborate on the content of those laws because it is only concerned with the provision of environmental health services, which from the perspective of the NDOH would mean the implementation of the *NHA*. However, it is because the other laws *also* empower and compel specific governmental bodies and officials to render specific environmental health-related tasks that uncertainties and conflict arise and functions are duplicated (overlapping mandate).

[1675] *NEHP* 25.

institutions for the governance of environmental health.[1676] This appears to be a sensible suggestion, but unfortunately the *NEHP* does not explain how this should be done.[1677]

Admittedly the policy lists other actions that need to be taken in the hope to improve collaboration among the governmental bodies involved in the delivery of environmental health services, for instance that a national environmental health forum has to be established who could advise the Minister of Health on matters concerning environmental health,[1678] that an environmental health information system has to be established (accompanied by a set of national data indicators for environmental health specifically) for the collection of data on environmental health that will permit the flow of information between the respective governmental spheres and enable the NDOH to monitor and evaluate the performance of the health sector across the country,[1679] and that municipalities have to compile and submit quarterly and yearly reports on the status of the delivery of environmental health services within their jurisdictions to the provincial health districts who in turn have to submit them to the NDOH.[1680] Theoretically these practical arrangements may make it easier for the NDOH to co-ordinate the practice of environmental health and should promote collaboration among the institutions involved in the delivery of

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1676 The *NEHP* does state that structures must be formed across the board to respectively focus on the planning, delivery, monitoring, and evaluation of environmental health services. This is limited to environmental health as contemplated in the *NHA* though, and therefore does not include the involvement of other line departments - *NEHP* 23.

1677 For instance by utilising implementation protocols as provided for by the *IGRFA* - see para 2.4.2.4 above.

1678 The forum must be comprised of members of the NDOH, provincial health departments, municipalities, and other government departments whose work relate to environmental health. The NDOH also has to support the establishment of provincial and municipal environmental health forums, and establish task teams to address specific environmental health issues - *NEHP* 38.

1679 Provincial health departments must also monitor municipalities and provide feedback into the information system. This is a requirement in terms of ss 21, 25(2), 74-76 of the *NHA; District Health Management Information System Policy* (2011). Through this system the NDOH will be able to identify appropriate interventions for environmental health and advice municipalities accordingly - *NEHP* 29, 39-40. See e.g. Day *et al* 2020 *SAHR* 193-274 for the latest published national health indicators.

1680 The *NEHP* further points out that municipalities must draft and include municipal health plans into their integrated development plans as required by the *NHA*, and provincial health departments have to collate them into their own district health plans - ss 25(3), 33 of the *NHA*. By instituting these arrangements, according to the policy, the respective bodies will be able to participate in each other's planning processes, and this will make it easy for a "cross pollination of thoughts and plans" across the different sectors and spheres - *NEHP* 23, 28.

environmental health services.[1681] It remains doubtful however, in the absence of a guideline or instructions on how organisational structures among different line departments across all three spheres of government can be formed, whether these measures alone will ensure that all the governmental bodies involved in the delivery of environmental health services will be able to work together efficiently, and as such the policy fails to achieve this objective in its entirety as well.

In addition to the above the *NEHP* lists some constrains and opportunities concerning environmental health practice in general, and it sets out some actions that relevant governmental bodies need to take towards its improvement. Not all of those pertain to the legal mandate as such, or are therefore relevant to this research, but a few do deserve mention here. The policy asserts, as a way to harmonise and align the institutional framework and to eliminate uncertainties with respect to each institution's functions, that legislation pertaining to environmental health has to clearly define every institution's role and responsibilities, and that legislation should give recognition to the NDOH who needs to oversee all matters related to people's health – which is not currently the case.[1682] As such the *NEHP* indirectly calls for the amendment of several existing laws, but to date this has not taken place.[1683] As for the role of the NDOH, it is trite that many environmental factors can be harmful to people's health,[1684] and if the NDOH has to oversee all those matters it may very well need to usurp the authority of all the other national departments insofar their mandates involve aspects that can be harmful to people's health, which as shown above is a fairly significant portion,[1685] making it highly

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[1681] This mostly relates to the provincial health departments and the metropolitan and district municipalities, and not so much to the other national line departments.

[1682] *NEHP* 28.

[1683] The argument can be made that the *EHP Norms and Standards* that was subsequently published in a way clarifies what the roles of the respective institutions are seeing that it is "based to a large on extent existing legislation, policies, guidelines, and protocols with a bearing to environmental health", but its focus is on the work of EHPs, and not on all the governmental actions that pertain to environmental health - *EHP Norms and Standards* 11. For more on the *EHP Norms and Standards* and its shortcomings - see para 5.2.1 below. The NDOH also set out to develop a new Act for the regulation of environmental health that could serve this purpose, which is addressed in more detail below.

[1684] See paras 2.3.1-2.3.2 above.

[1685] See paras 4.3.2.1-4.3.2.6 above.

unlikely that such a proposal will ever come to fruition.[1686]

Another aspect highlighted by the *NEHP* concerns the type of measures that government should take to implement the legal mandate and to thereby ensure that the environment is not harmful to anyone. In the past environmental health practice focused on statutory responsibilities and the enforcement of laws (often as a response to complaints, meaning reactive), whereas government's intent post 1994 is to follow a community development rather than a law enforced approach to create conditions conducive to good health, as is articulated in the *White Paper for the Transformation of the Health System in South Africa* (1997).[1687] This view emanates from the *Declaration of Alma-Ata* (1978) which advocates for governments to follow a holistic approach to their peoples' health (the PHC approach).[1688] The emergence of all the newer environmental health-related laws administered by various line departments as discussed above also signals that there is a broader shift from the traditional law enforcement approach (which used to be prevalent in the now mostly repealed older laws) towards the comprehensive management of the environment that integrates environmental concerns into developmental processes with the aim to prevent harm from occurring.[1689] Following this new approach the *NEHP* points

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[1686] The transition to the current 'one environmental system' and conflict that arose from it illustrates why this is unlikely - Environmental Affairs Portfolio Committee *One Environmental System Colloquium*: *Meeting Report* (20 November 2018); *Minister of Mineral Resources v Stern, Treasure the Karoo Action Group v Department of Mineral Resources* 2019 3 All SA 684 (SCA) paras 21-24, 30-32, 39-48; *Global Environmental Trust v Tendele Coal Mining (Pty) Ltd* 2019 1 All SA 176 (KZP) paras 55-56, 70-71; *Maccsand*-case paras 24, 27.

[1687] *White Paper for the Transformation of the Health System in South Africa* (1997) para 11.1.1; para 4.3.2.1 above.

[1688] See para 3.3.2.1 above.

[1689] The *NEHP* for instance provides that environmental health impacts must be considered when conducting environmental assessments as required by the *NEMA* (as well as the newer handbook for EHPs that was published by the NDOH in this regard), and it advocates for the inclusion of health considerations into environmental management programmes that may need to accompany applications for environmental authorisations, especially where residential developments are concerned - *NEHP* 28-29, 34; s 24N of the *NEMA*; *Management of EIAs of Proposed Development Activities: A Guiding Handbook for EHPs* (2017); paras 4.3.2.1-4.3.2.6 above. Note also the parallels of this approach to the notion of sustainable development. The *NEHP* recognises as much by stating that environmental health services "must be based on the developmental approach within the principles of sustainable development" - *NEHP* 13, 19, 30; paras 2.3.4, 3.3.2.1 above. The *NEHP*, strangely, calls for the promulgation of further laws to "effectively correct the situation", meaning to shift the emphasis from a law enforcement to developmental approach. This is strange because most if not all the laws related to environmental health currently already promotes this view, and because the adoption of further laws may actually increase the enforcement burden - *NEHP* 34.

out that an appropriate balance needs to be maintained between education and health promotion activities on the one hand (creating awareness to prevent environmental harm), and the enforcement of environmental health legislation on the other (to ensure compliance with the law).[1690] This does not mean that law enforcement has to be avoided at all costs though. The policy emphasises that the enforcement of laws and prosecution of offenders should still be a viable option to achieve environmental health improvements if the use of voluntary compliance mechanisms do not achieve the desired result. For this purpose it lays down some criteria that EHPs need to consider in deciding what enforcement mechanism to use, such as the level of risk that a specific health hazard poses and the impact that a person's conduct has on the environment.[1691] In this way the policy urges and advises EHPs to prioritise the use of voluntary mechanisms and to rather escalate their responses to environmental threats gradually based on the seriousness of a particular situation and the outcome that their actions may achieve, much like the health impact intervention and enforcement pyramid approaches.[1692] Further to this point it should be noted that EHPs may not enforce the provisions of the *NHA* if they are not designated as health officers in terms of the Act.[1693] For this reason the *NEHP* also stresses that the Minister of Health, relevant MECs, and mayors of the municipalities *must* authorise the EHPs in their employ as health officers so that they can implement the *NHA*.[1694]

The *NEHP* purports to be "a piece of wire that will assist in capitulating environmental health status to great heights",[1695] and it declares that it applies to all governmental bodies and all activities that may have an impact on the

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1690 *NEHP* 13.

1691 The others are the prevailing external and internal conditions present at the time, and whether any human rights are infringed - *NEHP* 37.

1692 This conforms to an essential aspect of environmental health governance as identified in ch 2 above. For more on Frieden's health impact intervention pyramid and Ayres and Braithwaite's so-called enforcement pyramid - see paras 2.4.2.2, 2.4.2.5 above.

1693 Section 80(1) of the *NHA*; *NEHP* 37-38.

1694 *NEHP* 37. The *NHA* provides that health officers have the powers of 'peace officers' as contemplated in the *CPA*. However, a person may only exercise the powers of a 'peace officer' if designated as such in terms of s 334 of the *CPA*. This means that EHPs also need to be designated as 'peace officers' before they can enforce the provisions of the *NHA*, but this aspect will be addressed in more detail at a later stage - see para 5.2.2 below.

1695 This is according to the Minister of Health - *NEHP* 4.

environment.[1696] Herein lies a problem though. The *NEHP* primarily focuses on the environmental health services that municipalities and provincial health departments have to provide in terms of the *NHA* and the *EHP Regulations*.[1697] In other words it pertains to the circumscribed scope of functions of EHPs, which is mostly concerned with the supervision of certain demarcated environmental threats and not with all the other matters that fall outside the scope of the 'municipal health services' function, such as the *provision* of public goods that are essential to environmental health.[1698] These other matters, albeit the responsibility of governmental bodies from any of the three spheres of government, are also part and parcel to the state of environmental health and therefore need to be considered and addressed in a national framework for environmental health. The significance hereof cannot be understated. It is precisely because the activities of numerous governmental bodies from all three spheres of government have a bearing on environmental health (necessitated by the very nature of environmental health), and because each has its own environmental health-related powers and functions as showcased by the fragmented legal mandate, that uncertainties and conflicts arise which impede their performance.[1699] This needs to be resolved – yet the *NEHP* fails to do so.[1700] As a case in point, while the *NEHP* points out, usefully so, that EHPs need to be designated as health officers to be able to implement and enforce the *NHA*, the same applies to the other environmental health-related laws, but the

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[1696] *NEHP* 11.

[1697] This is because it was drafted by the NDOH only, and without the input of the other national departments involved in environmental health governance it seems.

[1698] This includes 'food safety', 'adequate housing', 'air quality', 'waste management', 'water and sanitation', and 'hazardous substances' - see paras 4.3.2.1-4.3.2.6 above.

[1699] This applies not only to all government's environmental health functions, but to the 'municipal health services' function in particular as well - see paras 4.3.1-4.3.4 above. In the *Maccsand*-case para 47 Jafta J found that

> sometimes the exercise of powers by two spheres may result in an overlap. When this happens, neither sphere is intruding into the functional area of another. Each sphere would be exercising power within its own competence. It is in this context that the *Constitution* obliges these spheres of government to co-operate with one another in mutual trust and good faith, and to co-ordinate actions taken with one another.

The *NEHP* has to enable and facilitate such co-operation and co-ordination.

[1700] Granted, the *NEHP* does mention what the environmental health functions of other national government departments are, but even so, it only *refers* to those functions and does not address any of the challenges that come along with them. The policy makes no mention of the other environmental health functions that the provinces or respective municipalities have - *NEHP* 25-28.

policy makes no mention of this.[1701] For instance, the Director-General of the NDOH has to designate officers (which may be EHPs) to enforce the provisions of the *Foodstuffs Act* and *Haz Act*, the Minister of Forestry, Fisheries and the Environment or the MECs responsible for the environmental affairs of their provinces have to designate EMIs (which may be EHPs) so that they can enforce the provisions of the *NEMA* and other SEMAs,[1702] the Minister of Agriculture, Land Reform and Rural Development has to designate a registrar to implement the *FFAS Act* and officers to enforce the provisions of the *APSA*, the relevant MECs of the provinces have to designate officers to implement the *Meat Act*, and so on.[1703] Put differently, these laws empower specific officials from various departments to designate personnel from different institutions to perform environmental health-related duties, and this complicates environmental health practice immensely from an operational perspective in that the institutions that need to provide environmental health services (municipalities) are dependent on others (officials from national or provincial government) to be able to do so.[1704] This does not even take account of the operational challenges that the division of responsibility for the many environmental health-related functions among national, provincial, and local government (and the different categories of municipalities) poses all by itself.[1705] The fact that provincial governments and municipalities may adopt their own laws with respect to specific environmental health matters complicate matters even further from a regulatory perspective seeing that they effectively expand the already fragmented legal mandate,[1706] but again the *NEHP* fails to address this in any meaningful way.

[1701] While the *NEHP* is completely silent on the implementation and enforcement of all the laws that pertain to environmental health, except for the *NHA*, it does provide that EHPs have to be conversant with the provisions of the *NEMA*. However, it fails to explain that EMIs have to be designated to enforce the *NEMA*, or that EHPs may be designated as EMIs - *NEHP* 36. Bridging courses have been developed in practice to train EHPs to become EMIs, and some have since been designated as such - SALGA *Municipal Health Services: Status Quo Report 2017-2018* 19.

[1702] Although the *NWA* is a SEMA, the Minister of Water and Sanitation has to designate EMIs to enforce its provisions (as opposed to the Minister of Forestry, Fisheries and the Environment) - see para 4.3.2.3 above.

[1703] See paras 4.3.2.1-4.3.2.6 above.

[1704] This refers only to the services that make up the 'municipal health services' function, but it also applies to the other environmental health services in some instances.

[1705] See paras 4.3.1, 4.3.4.3 above.

[1706] See paras 4.3.3-4.3.4 above.

In conclusion the *NEHP* provides that the NDOH is responsible for the implementation of the *NEHP*, and that the NDOH undertakes to develop a national strategy for the implementation of this policy.[1707] The NDOH did develop a *National Environmental Health Strategy* (2016-2020) (hereafter *NEHS*) that was published in 2016. The *NEHS* is said to provide a practical guide to strengthen the provision of environmental health services in the country by assisting to achieve the objectives of the *NEHP*.[1708] For this purpose it lists strategic goals, aligned with the objectives set out in the *NEHP*, that government has to implement in accordance with a detailed action plan.[1709] The action plan identifies the *actions* that has to be undertaken, specifies *who* is responsible for those actions, lists what they have to achieve as *outputs*, provides *indicators* against which the outputs can be measured, and subjects all the activities to set *time frames*. This among others include that a) the NDOH, provincial health departments, and the metropolitan and district municipalities have to review the existing legislative environmental health framework and identify any gaps, rectify said gaps with the development of an environmental health Act (nationally) and bylaws (locally), and that b) all the relevant stakeholders have to develop an intersectoral framework for the delivery of environmental health services by way of formal agreements, the creation of standard operating procedures, and joint action plans.[1710] The time frame for the completion of these actions were set for 2020, and while most (but not all) municipalities have adopted dedicated bylaws concerning environmental health as discussed above,[1711] the NDOH has not yet drafted a Bill or Act for the regulation of environmental health specifically, and no information is available in the public domain regarding the actions that to be taken to strengthen intersectoral collaboration among all the relevant stakeholders. The annual reports of the NDOH indicate that they have reviewed environmental health legislation during the 2018/2019 financial year;[1712] tried to continue to review the sections in the *NHA*

1707 *NEHP* 40.
1708 See the commentary by the Director-General of the NDOH - *NEHS* 3.
1709 *NEHS* 10-14.
1710 See *NEHS* 17-24 for the entire action plan.
1711 See para 4.3.4.2 above and Annexure A below.
1712 This gave rise to the publication of the *Regulations Relating to Lead in Paint or Coating Materials* (2021) - see DOH *Annual Report 2018/2019* 31.

related to environmental health and to draft a Bill for the regulation of environmental health during the 2019/2020 financial year, but did not succeed because they had to prioritise COVID 19 preparedness activities;[1713] and prepared *Draft Regulations Relating to Environmental Health* (2022) (hereafter *Draft EH Regs*) during the 2020/2021 financial year that was published during 2022.[1714]

Revealingly, the latest environmental health service compliance rate is a mere 62.3%, which is perhaps indicative of how little the *NEHP* really contributes to ameliorate the practical limitations of the legal environmental health mandate in its current state.[1715] The *NEHP* therefore, unfortunately, fails to string together the disjointed institutional structures and fragmented legal mandate of environmental health,[1716] and whether the strategies in the *NEHS* will contribute in this endeavour remains to be seen.

While the *NEHP* has not been reviewed or updated since its publication in 2013,[1717] government did enact a *National Public Health Institute of South Africa Act* 1 of 2020 (hereafter the *NPHISA Act*), although its commencement date has yet to be proclaimed. The *NPHISA Act* was drafted with the purpose to establish a National Public Health Institute that can "co-ordinate and where appropriate, conduct disease and injury surveillance and provide specialised public health services, public health interventions, training and research directed towards the major health challenges affecting the population".[1718] The Institute will be governed by a board whose

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[1713] Bear in mind that the first positive case of COVID 19 only arrived in South Africa during the last month of the financial year, suggesting that government dedicated resources for this purpose well in advance - see DOH *Annual Report 2019/2020* 9, 42.

[1714] DOH *Annual Report 2020/2021* 54. The *Draft EH Regs* are discussed in greater detail in the chapter that follows - see para 5.2.1 below.

[1715] This rate only reflects local government's 'municipal health services' delivery performance by EHPs measured against the *EHP Norms and Standards*, and it does not give an account of the actual national status of environmental health - Nkuna *et al* 2019 *DHB* 209-214; Day *et al* 2019 *SAHR* 262, 267; SALGA *Municipal Health Services: Status Quo Report 2017-2018* 21-42.

[1716] The *NEHP* is not the only government policy that fails to solve the issue of collaboration with respect to health matters. See e.g. Scott *et al* 2017 *SAHR* 82 who explain that the *NDP* gives little thought to how different sectors can work together to produce positive health outcomes, or how actions across different departments from different governmental spheres can be connected, and this lack of clarity on relationships and alignments among the respective institutions, according to the authors, "undermines the potential for co-ordinated action".

[1717] According to the *NEHP* it may be reviewed every 3-5 years - *NEHP* 40.

[1718] See the memorandum on the objects of the *NPHISA Bill*.

membership will be comprised of specialists, an official of the NDOH, and representatives of the provinces (but not municipalities), and the Institute will consist of six divisions that each deals with a specific subject, one being environmental health.[1719]

It would seem, based on the explanation of its purpose, and as would be expected from a National Public Health Institute,[1720] that the environmental health division of the Institute will be able to co-ordinate environmental health practice nationally, and even provide specialised services or interventions towards the improvement of the country's environmental health status. A reading of the functions of the Institute as per the *NPHISA Act* itself, however, shows that it will primarily be concerned with the co-ordination of surveillance and monitoring activities, and not so much with the co-ordination of public health services inclusive of environmental health as contemplated in this research. For instance, the *NPHISA Act* provides that the Institute will have to co-ordinate, develop and maintain surveillance systems to collect, analyse and interpret environmental health data in order to guide health interventions, use this information for monitoring and evaluation of policies and interventions, and produce and distribute reports on environmental health.[1721] The *NPHISA Act* further provides that the Institute will have to collaborate with relevant government departments and government agencies to implement communication strategies on environmental health issues, monitor trends in environmental health, and support the monitoring of communities that are at risk of exposure to environmental health hazards.[1722] It will therefore not be expected of the National Public Health Institute to co-ordinate the delivery of environmental health services, and it is not empowered to do so by the *NPHISA Act* in its current form either.[1723] The environmental health-related functions mentioned in the *NPHISA Act*, oddly, appear similar in scope to some of the duties that the *NHA* and the *NEHP* already

[1719] The other divisions are communicable diseases, non-communicable diseases, occupational health, cancer surveillance, and injury and violence prevention - ss 2, 4-5 of the *NPHISA Act*.
[1720] Environmental health is a branch of public health - see para 2.3 above.
[1721] Sections 3(1)(b), (d), (g), (n), (w) of the *NPHISA Act*.
[1722] Section 3(1)(m), (u), (y) of the *NPHISA Act*.
[1723] Section 3(3) of the *NPHISA Act*.

impose on the NDOH, provincial health departments, and municipalities.[1724] As such it is unclear whether the intent is to let the Institute perform these tasks on behalf of these governmental bodies, or if it will be duplicated.[1725]

Some background to the *NPHISA Act* may shed light on this. There are currently three institutions that operate under the National Health Laboratory Service that do not have proper mandates. Their work relates to communicable diseases, occupational health and safety, and cancer, respectively. The NDOH initially proposed to create a new National Public Health Institute with a view to consolidate these institutions so as to harness their capacity for other purposes, and it did so with the introduction of the *National Public Health Institute of South Africa Bill* (2017) (hereafter *NPHISA Bill*) in 2017. The idea was that the new Institute should consist of various divisions whose responsibility would be to integrate and co-ordinate disease and injury surveillance research, monitor and evaluate health services, and provide interventions directly toward public health.[1726] At that stage the intent was to keep the three original institutes as separate divisions, that is 'communicable diseases', 'occupational health', and 'cancer surveillance', and to add a 'non-communicable diseases' and an 'injury and violence prevention' division.[1727] So the original draft of the *NPHISA Bill* did not create a separate 'environmental health' division of the National Public Health Institute, and it actually did not contain any reference to environmental health whatsoever.

During the first public hearing that was held to discuss the *NPHISA Bill* stakeholders queried why environmental health was not included or referenced in the Bill, and they reasoned that it should be. The representatives of the NDOH claimed that

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[1724] The NDOH has to identify national health goals, monitor their implementation, and develop an environmental health information system, provincial health departments have to monitor the delivery of health services, and municipalities have to compile and submit reports on the status of environmental health service delivery within their respective jurisdictions - ss 21, 25(2), 74-76 of the *NHA*; *NEHP* 23, 28-29, 39-40.

[1725] The NDOH explains that the Institute will be concerned with high-level functions, i.e. to conduct surveillance, provide technical support, and to co-ordinate functions across both national and international levels, and not to deal with localised complaints - see the meeting on 23 May 2018, PMG 2020 https://bit.ly/3a2CN8S. Be that as it may, s 3(1)-(3) of the *NPHISA Act* nevertheless provides that the Institute will have to perform the functions as listed above, without specifying that it is limited to supposedly 'high-level functions'.

[1726] See the meeting on 21 Jun 2017, PMG 2020 https://bit.ly/3a2CN8S.

[1727] See first draft of the *NPHISA Bill*.

environmental health resorts under occupational health and safety, and that there was therefore "no value in including environmental health".[1728] The stakeholders counter-argued that the two are indeed different, and that the NDOH should take cognisance of everyone's right to a healthy environment as articulated in the *Constitution*. The response of the NDOH was that environmental matters, including having to give effect to section 24 of the *Constitution*, is the mandate of the NDFFE, and not the NDOH.[1729] Later, however, the NDOH conceded and agreed to add a distinct environmental health division by amending the then *NPHISA Bill*, and it also added concomitant environmental health specific functions that the Institute would need to perform. This did not, however, include a monitoring function for communities' exposure to environmental health hazards, yet the *NPHISA Bill* did impose such a function with respect to workplace hazards.[1730] In a follow-up meeting a stakeholder recommended that this be added in the *NPHISA Bill*, and the response of the NDOH at this instance was that the suggestion would have to be examined against the *Haz Act* since this Act "deals with hazards in the society".[1731] Keep in mind that these meetings took place over the course of 2017-2019.

The responses by the NDOH during these meetings are disconcerting as far as environmental health is concerned. Based on the exchanges between the stakeholders and the department and the treatment of environmental health in this Bill, it appears as if the NDOH, currently, does not grasp what environmental health entails, does not know that environmental threats extend far beyond hazardous substances, is reluctant to take responsibility for and to contribute towards the realisation of the constitutional environmental health right, does not understand that environmental health is a branch of public health, and may even have forgotten

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[1728] See the meeting on 22 Aug 2017, PMG 2020 https://bit.ly/3a2CN8S.

[1729] The NDFFE does not have an exclusive mandate to give effect to s 24 of the *Constitution*. This is the responsibility of government in its entirety. The *NHA* also recognises that the NDOH has this duty - see the meetings on 16-17, 22 Aug 2017, 6 Feb 2018, PMG 2020 https://bit.ly/3a2CN8S; preamble to the *NHA*; para 4.2.3 above.

[1730] This is reflected in the last version of the *NPHISA Bill* and also the *NPHISA Act* - see the meeting on 02 May 2018, PMG 2020 https://bit.ly/3a2CN8S.

[1731] The *Haz Act* is only concerned with hazardous substances, while environmental health hazards refer to all the factors in the environment that has the intrinsic potential or ability to cause harm - see the meeting on 19 Feb 2019, PMG 2020 https://bit.ly/3a2CN8S; *EHP Norms and Standards* 1, 9; *NEHP* 6; paras 2.3.2, 4.3.2.1 above.

about the existence and content of its own *NEHP*, *EHP Regulations*, and *EHP Norms and Standards* that confirm as much. This is also why the functions of the Institute that pertain to environmental health specifically have essentially been added to the Bill after the fact, and because those provisions were not drafted in consideration of the existing legal environmental health mandate, the commencement of the *NPHISA Act* may very well lead to further complications for environmental health in the near future. The National Public Health Institute that will be established by the *NPHISA Act* once it commences will as such not be able to co-ordinate the delivery of environmental health services and resolve the issues that plague environmental health practice, which seems like a missed opportunity.[1732]

4.5 Chapter summary

The primary purpose of this chapter was to identify the laws, regulations, and policies that give rise to environmental health practice in its current form, that is, to determine what constitutes the legal environmental health mandate. At the same time this afforded the researcher an opportunity to explain how the mandate came to be (developed into its fragmented state) and what implications this holds for environmental health service delivery. To this end the discussions in this chapter were essentially structured around two broad topics: the constitutional provisions that relate to environmental health, and the legal measures that government undertook to realise them in the new democratic dispensation.

The first discussion commenced with a brief overview of the application and interpretation of the fundamental rights in the *Constitution* so as to explain what obligations they impose on government, and how their substantive content (entitlements they guarantee) can be determined. This showed that government has to respect, protect, promote, and fulfil each one of the fundamental rights, and while there are different approaches that could be followed to interpret and thereby determine what each guarantees, the substantive content of each will depend on

[1732] The preamble to the *NPHISA Act* explains that the National Public Health Institute will be a "national public entity to provide public health services to the country that performs critical public health functions and that requires a high level of co-ordination across functions", but as is shown in this discussion, this does not mean that it will co-ordinate environmental health practice.

the context in which it is to be applied since the *Constitution* is an organic instrument and there is no single correct way to interpret every right.[1733]

Keeping this in mind, the researcher set out to analyse the domestic iteration of the human right to health as portrayed in the *Constitution* because the previous chapter revealed that this right might impose a duty on government to operationalise environmental health.[1734] This research found that features of the human right to health are scattered among a cluster of socio-economic rights, which include a right of access to adequate housing, a right of access to health care services, and a right of access to sufficient food and sufficient water, as well as an environment right. Each of these were examined, firstly to determine what entitlements they guarantee to society, and secondly to determine what obligations they impose on government to realise them, and judicial precedents and international law instruments were used as interpretative aids for this purpose.[1735] Based on this examination, the researcher argues that section 24(a) of the *Constitution* in the main constitutes a constitutional environmental health right as far as the entitlement to a non-harmful environment is concerned, and that section 24(b) and the other socio-economic rights in the *Constitution* impose associated obligations on government, which read together, justify the need for environmental health practice in the legal sense. This entails, as far as the guarantees inherent in this right are concerned, that everyone is entitled to an environment of a certain quality, where 'environment' should be viewed in the broadest sense to include all the environmental hazards that may be harmful to a person, and its 'quality' should be viewed to refer to conditions that could be harmful to a person's overall quality of life inclusive of their health and well-being. As such the entitlement guaranteed by this right affords everyone the benefits that ought to be attained from delivery of appropriate environmental health services as contemplated in chapter two of this research. The obligations that this right imposes on government are distilled from the environmental as well as the other socio-economic rights, and in particular because of the interrelated nature of human rights in general, the researcher found that government has to adopt laws

[1733] See para 4.2.1 above.
[1734] This applies to the constitutional environmental right as well - see paras 3.3.1, 3.3.3.1 above.
[1735] See para 4.2.2 above.

and other measures to make environmental health practice possible so as to preserve and improve those environmental conditions that fall foul of the required standard of quality guaranteed by the right (to take legislative measures),[1736] and government has to support its officials and personnel so that they can provide environmental health services effectively, which could be done through the adoption of policies and programmes for instance (to take other measures).[1737]

Once the above examination was completed the researcher set out to analyse the measures that government undertook to realise the constitutional environmental health right with the intent, on the one hand, to determine and reveal what the legal environmental health mandate consists of, and on the other to determine in what way the development and shaping of said mandate influences environmental health practice. The discussion commenced with an overview of the transition and restructuring of government, which was followed by an examination of the sector specific transformation processes that government launched to realise the new constitutional guarantees, and it concluded with an analysis of the policy that was drafted specifically for environmental health.

The transition and restructuring of government post 1994 created a new institutional landscape and had a bearing on the measures that the respective governmental bodies could take to realise the constitutional rights, and how they could go about it. This overview showed, firstly, that all three spheres of government derive their powers and functions directly from the *Constitution*. Unlike national and provincial government though, the *Constitution* does not detail how local government can operate, which was why a local government framework still had to be developed. The implication hereof was that national and provincial government could begin to exercise their powers and perform their functions once the *Constitution* took effect, but local government had to wait a while longer because the municipalities still had to be established. In the second place the overview showed that each governmental sphere has its own functions and concomitant powers to perform those functions, and this played a role in how each institution could contribute to develop the legal

[1736] Also known as the legal environmental health mandate.
[1737] See para 4.2.3 above.

environmental health mandate, while the allocation of functions also dictates which services each may provide.[1738]

Having regard to the newly obtained powers and functions of each of the spheres of government, and when they could begin to exercise them, an investigation into the development of the legal environmental health mandate was conducted along sphere-specific lines. Nationally, a variety of sector specific transformation processes were launched towards realising the new entitlements guaranteed in the *Constitution*, which included the health, environment, water and sanitation, and housing sectors.[1739] These processes were examined because many of the environmental health related laws that government adopted after 1994 were produced from them.[1740]

The examination revealed that government transformed and developed a new health system based on the PHC approach, and in the process they tasked provincial health departments with the duty to provide the majority of the PHC services and local government was tasked with the duty to provide 'municipal health services' framed as a set of environmental health services. This was effected via the adoption of the *NHA* (in conjunction with the *Municipal Structures Act*), and municipalities' duties in this regard, and in particular the functions of EHPs, were further delineated in subsequent *EHP Regulations* and *EHP Norms and Standards* that were published for this purpose, the trio of which constitutes a framework for the provision of mostly supervisory environmental health services as per the mandate of the NDOH.[1741] The NDOH still administers old order laws that apply to environmental health practice as well, namely the *Foodstuffs Act*, *Haz Act*, *Tobacco Act*, and the *IHR Act*, and they too impose environmental health-related functions on governmental bodies from all three spheres of government, the latter two of which can co-exist harmoniously

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1738 See para 4.3.1 above.

1739 Note food safety-related laws were also included in the discussion even though they were not subject to a process of transformation.

1740 Both national and provincial government participated in these processes by way of MinMEC committees.

1741 According to the *NHA* 'port health control', 'malaria control', and 'hazardous substances control' are excluded from the ambit of local government's environmental health services package, and the former has to be provided by the NDOH, and the latter two by the provincial health departments.

with the *NHA*, whereas the former two clash with the provisions of the *NHA* in some respects.[1742]

While the process to reform the health system was underway, government simultaneously set a process in motion to develop a new environmental management system, and this culminated in the adoption of the *NEMA* and various SEMAs that are administered by the NDFFE. The *NEMA* established an environmental authorisation system to regulate activities that may harm the environment and it is managed by national and provincial officials; it entrenched a general duty of environmental care and remediation which entails that no one may cause significant damage to the environment, and this duty has to be enforced by EMIs that are designated by the NDFFE and MECs responsible for environmental matters in their provinces; and it aims to facilitate governmental co-operation as far as environmental matters are concerned by laying down certain procedures to this effect, but it does not involve municipalities. The *NEMA* therefore created mechanisms whereby government can protect the environment, but it does not extend to local government who is responsible for the delivery of environmental health services as per the *NHA*. As such there is a disparity between the 'health system' and the 'environmental management system' as far as environmental health is concerned, and this complicates environmental health practice.

The *NEMAQA* and *NEMWA* are the two SEMAs that are concerned with environmental health matters. The former regulates air quality and for this purpose it imposed a duty on the Minister of Forestry, Fisheries and the Environment to set national ambient air quality standards, it imposes a duty on provincial and local officials to monitor air quality against said standards, and it established an atmospheric emission licensing system that has to be managed by municipalities, all of which have to be supervised and co-ordinated by air quality officers appointed at the NDFFE, provincial departments, and municipalities. The latter protects people from hazards arising out of waste and land contamination and for this purpose it tasked the Minister of Forestry, Fisheries and the Environment with a duty to set

[1742] See para 4.3.2.1 above.

national norms and standards relating to waste management, it established a waste management licensing system that has to be managed by national and provincial officials, and it prescribes in what manner municipalities have to provide waste management services (they among others have to comply with said norms and standards), all of which have to be regulated by waste management officers appointed at the NDFFE, provincial departments, and the respective municipalities. Both these laws therefore created further mechanisms that government can use to protect people from environmental threats.[1743]

The water regime too was reformed during this time, which occurred by way of the *NWA* and the *WSA*. The *NWA* nationalised all the country's water resources and charges the Minister of Water and Sanitation with the responsibility to ensure that they are protected and used in the public interest. To this end South Africa's territory has been divided into nine catchment areas that have to be managed by the NDWS or by CMAs that may be established for this purpose, and they have to control the use of water through a licensing system. In addition, much like the *NEMA*, the *NWA* also created a general duty of care by prohibiting anyone from polluting the country's water resources, and this duty can be enforced by EMIs. The *WSA* on the other hand tasks municipalities with a duty to provide water and sanitation services to everyone. This includes that they must treat and distribute potable water and remove and dispose of wastewater and sewage, which they can either do by themselves, or they can appoint water services authorities to do so on their behalf. The Minister set compulsory minimum norms and standards concerning both the quality and quantity of these services as is required by the *WSA*, and municipalities have to comply with said standards. The *WSA* tasks the NDWS and the provincial MECs responsible for water affairs to monitor if municipalities comply with their duties in this regard, and the Act empowers them to intervene if municipalities fail to provide sufficient water and sanitation services, but it does not empower them to actually compel municipalities to do so. The *NWA* therefore introduced mechanisms whereby government can protect South Africa's water resources, while the *WSA* tasks municipalities with the duty to provide water

[1743] See para 4.3.2.2 above.

and sanitation services, which is integral to environmental health.[1744]

On the housing front government adopted the *Housing Act* to facilitate a sustainable housing development process, that is, to provide access to adequate housing to everyone. This entails that the Minister of Human Settlements, MECs of the provinces, and all municipalities have specific functions to perform with respect to various housing programmes in accordance with the *National Housing Code* (2009), which is the policy that government adopted as required by the *Housing Act* whereby it aims to provide housing options to those in need. In addition hereto local government is also responsible for implementing the *Buildings Act* and the *National Building Regulations* (1990). This entails that municipalities have to consider and approve building plans before a proposed building may be erected to ensure, among other reasons, that the building in question will not pose a harm to people's health, and they have to appoint building control officers that need to ensure that developers comply with said regulations.[1745]

Government's food safety-related laws were not subject to a particular process of transformation but were nevertheless included in the discussion because they too have a bearing on environmental health practice and as such make up a part of the legal mandate. The examination revealed that the outdated *FFAS Act* regulates pesticide use by tasking the NDALR, via a registrar, to implement a registration system for this purpose. The NDALR, however, has adopted a *Pesticide Management Policy for South Africa* (2010) in recognition that this law is in need of an overhaul, but no progress has been made in this respect over the last decade. The NDALR also administers the *APSA* and the *Meat Act*, two laws concerned with the regulation of particular foodstuffs, where the former has to be implemented (conduct inspections, ensure compliance with quality standards) by the Minister of Agriculture, Land Reform and Rural Development and the latter by the MECs of the respective provinces, both of which aim to protect people from hazards arising out of the consumption of unsafe food.[1746]

[1744] See para 4.3.2.3 above.
[1745] See para 4.3.2.4 above.
[1746] See para 4.3.2.5 above.

In regard to the provincial sphere this research showed that the administration of the old order *ECA* and *Health Act* was assigned to the provincial governments, and even though they have now been mostly repealed, nationally, by the *NEMA* and the *NHA*, they are still operational in all the provinces. What this means for environmental health practice is that the *ECA* empowers local government officials to issue directives to people that cause environmental damage, while the *NEMA* still limits this power to officials from national and provincial government for the time being (only until the latest amendment Act becomes operational), and that the *Health Act* empowers and compels municipalities to provide a comprehensive set of environmental health services to ensure that their jurisdictions are hygienic and are not harmful or dangerous to people, while the *NHA* only imposes a duty on them to provide a defined set of 'municipal health services'.

The examination further revealed that the majority of the provincial governments adopted newer health-related laws in the interim, but save for two provinces, they have no bearing on environmental health. The Eastern-Cape enacted a law that places an obligation on its relevant MEC and provincial health departments to support municipalities in their duty to provide 'municipal health services' and to adopt an environmental health policy for this purpose. And the Western-Cape adopted a law that imposes an obligation on municipalities to perform health care waste related functions.

The only other laws that the provincial governments currently administer that are concerned with environmental health matters pertain to cemeteries, crematoria, and exhumations. Most of these are old order ordinances that are inconsistent with the *Constitution* and therefore invalid, except for their provisions that relate to exhumations in terms of which MECs in some provinces have to give their approval before bodies may be exhumed. The provincial governments in Mpumalanga and KwaZulu-Natal adopted new laws in terms of which municipalities have to regulate cemeteries and crematoria and the provincial MECs have to regulate exhumations, and the provincial government in the Eastern Cape adopted a new law that prohibits the destruction of graves and it too subjects exhumations to MEC approval. In the

Western Cape these matters are not regulated at all by any provincial law.[1747]

Moving on to local government the researcher explained that municipalities are empowered by the *Constitution* to adopt bylaws to regulate their own affairs, and many did adopt bylaws to regulate environmental health matters locally. While each of the laws and their content were not discussed in this research because of their sheer number, three issues pertinent to municipalities' law-making power and the allocation and division of functions between them were addressed.

Firstly, local government's constitutionally listed functions are discretionary, so they do not have to perform all those functions and do not have to adopt bylaws to regulate them. The only functions that they must perform as far as environmental health practice is concerned are those that relate to the socio-economic and environmental rights in the *Constitution* insofar they contribute to realise said rights, or if otherwise assigned by any other national or provincial law. This means that municipalities can choose whether they want to provide their 'noise control', 'control of public nuisances', 'animal burial facilities', and 'control of undertakings that sell food to the public' functions as these cannot be linked, directly so, to any of the entitlements guaranteed in the *Constitution*, and no other law compels them to provide them either.[1748]

Secondly, even though national government and/or any of the provincial governments may and have passed laws to regulate some environmental health matters, municipalities may still do so too even if a particular matter is already regulated nationally, as long as the aspect so regulated is a functional area of local government as listed in the *Constitution*. This means, seeing that municipalities are responsible for quite a number of functions related to environmental health, that they can adopt dedicated bylaws to consolidate all their legal obligations and powers and thereby simplify their legal frameworks for environmental health practice, which may lead to better service delivery. This is not necessary though and might sometimes even be legally impossible because municipalities that are responsible

[1747] See para 4.3.3 above.

[1748] They do not constitute a 'basic municipal service' as contemplated in the *Municipal Systems Act* either - see para 4.3.4.1 above.

for the provision of water and sanitation services, for instance, must adopt separate bylaws in this regard. On the other hand, by adopting various bylaws to regulate distinct aspects of environmental health locally, municipalities might complicate an already complicated legal landscape, that is, by adding to the cumbersome body of laws that already exist for this purpose, which could cause further conflicts especially if both a district and local municipality adopt bylaws to regulate the same matter in their shared jurisdiction.[1749]

Thirdly, and perhaps most pertinent as far as the delivery of environmental health services are concerned, is that local government's functions are divided between district and local municipalities. The researcher pointed out that although the functions are split by the *Municipal Structures Act*, the so-called default division, because of capacity constrains during the devolution process, not all district and local municipalities were able to and are actually providing services as per this division. Moreover, the relevant Minister may adjust the division of functions locally,[1750] and municipalities can also do so informally by concluding service delivery agreements to this effect. This asymmetrical institutional setup can cause uncertainties and confusion and hinder municipalities from planning, regulating, and eventually providing adequate environmental health services.[1751] Furthermore, some district municipalities are responsible for both service delivery and to supervise whether those services are in fact provided (self-supervision), whereas in other cases district municipalities have to supervise local municipalities (under potentially tense relations), and both these situations perpetuate the difficulties that local government needs to overcome to be able to deliver environmental health services effectively.[1752]

Evidenced from this summary, this research found that government passed numerous new laws and policies over the course of the last two decades in an effort to realise the entitlements guaranteed by the constitutional environmental health

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[1749] See para 4.3.4.2 above.
[1750] MECs also have this power, but only with respect to some of the listed functions.
[1751] A district and local municipality in the same geographic area could pass the buck between them, and in the end both might fail to take responsibility for the provision of a particular service.
[1752] See para 4.3.4.3 above.

right as constructed above. The collective of all these laws and policies, together with the old order laws that are still operational, constitute the legal mandate for environmental health because they all impose obligations on government that pertain to aspects of environmental health. These laws task many officials and personnel from specific governmental bodies across all three spheres of government with various duties, that is, to perform a range of environmental health-related functions, and this makes the practice of environmental health a disjointed and challenging affair.[1753] In light of the fragmented state of the legal mandate and the challenges that go along with it, the NDOH developed a policy, the *NEHP*, in an attempt to string together the mandate as it were and to thereby improve the delivery of environmental health services. In consideration hereof it was essential to scrutinise the content of the *NEHP* to determine how it benefits environmental health practice, if at all.

The analysis of the *NEHP* revealed that government's approach to environmental health, expressed as a set of principles, in essence corresponds with the features of environmental health governance as depicted in chapter two of this research.[1754] As for being a piece of wire that can catapult environmental practice to great heights, however, the *NEHP* comes up short in some material respects. The principle issue with the *NEHP* is that it focuses only on the provision of 'municipal health services' by EHPs employed at district municipalities as required by the *NHA*, while it fails to consider the issues that arise particularly because of the fragmented state of the complex and cumbersome legal mandate that involves many other role-players as well. This much is recognised in the *NEHP*, but strangely, it fails to address these challenges by providing an institutional framework that could enable and improve collaboration among all the governmental bodies involved in this endeavour, or by facilitating the implementation of the legal mandate as a whole to improve environmental health service delivery.

The NDOH also published a *NEHS* in 2016 containing a detailed action plan towards

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[1753] Officials and personnel from different institutions sometimes have duplicate or unclear roles, powers, and competencies to govern over environmental health.

[1754] Most of these principles can be inferred from provisions in the *NHA* as well, which means that government is legally compelled to follow this approach.

achieving the goals of the *NEHP* and to thereby make a meaningful contribution to the governance of environmental health practice, which includes the development of a dedicated national law to regulate environmental health specifically, but the implementation of the action plan has been delayed and has not been completed yet. In the interim the NDOH did develop a new *NPHISA Act* to establish a National Public Health Institute to co-ordinate public health matters, but environmental health was completely absent from the first iteration of this Act. It was only after stakeholder input that the NDOH incorporated environmental health into its scope, and even by doing so, it still appears that it will be of no benefit to environmental health practice. As such the researcher found that at this stage neither the *NEHP*, *NEHS*, nor the *NPHISA Act* contribute in any meaningful manner to address or resolve the challenges that the respective institutions involved in the delivery of environmental health services appear to face.[1755]

[1755] See para 4.4 above and note that the impact of the *NEHS* has to be re-evaluated upon the completion of its action plan as this may well have a significant influence on environmental health practice going forward, particularly if government adopts a law to regulate environmental health specifically.

Chapter 5: Legal mandate interpreted – some of the practicalities of environmental health governance

5.1 Introduction

The previous chapter revealed that the legal environmental health mandate is made up of a large body of laws that are administered by a variety of role-players involving all three spheres of government. These laws grant distinct powers to and impose distinct functions on the respective role-players (officials or personnel), the exercise of which (implementation and enforcement) manifests as the governance of environmental health.

In this chapter the researcher examines some of the cardinal processes and mechanisms (tools of governance) that are embedded in the legal environmental health mandate to determine if the mandate enables government to provide environmental health services as contemplated in chapter two above.[1756] For the sake of clarity the examination is conducted from a functionary perspective and mainly focuses on the duties and powers of EHPs as the primary role-players as set out in legislation and regulations this regard. The powers of EMIs and local Law Enforcement Officers are also evaluated because of the particular relation that they have to EHPs in the environmental health context, and the significant role they can play in this regard.[1757]

As such the chapter commences with an examination of the functions of EHPs on the one hand, which is followed by an examination of the tools that EHPs have at their disposal to provide said functions on the other. Thereafter the enforcement powers of both EMIs and local Law Enforcement Officers are evaluated as well, although only insofar as their powers relate to environmental health specifically.

[1756] See para 2.4.2.5 above. For further context as to the purpose of this chapter, note the remark by Collis J in the *Groundwork Trust*-case para 92:

> On the Rule of Law consideration - going to the trite requirement that certainty and clarity is an essential aspect of the Rule of Law: those who are required to comply with the law, and those charged with enforcing it, should have reasonable certainty about what it is.

[1757] See paras 4.3.2.2-4.3.2.6 above for more on all the other role-players.

5.2 Environmental Health Practitioners as government's primary environmental health service delivery personnel

EHPs are health practitioners whose profession is regulated by the *Health Professions Act* 56 of 1974 (hereafter *HPA*). This is not to say that they derive all their duties and powers from the *HPA* only though. Instead, their duties and powers are scattered among and can be found in various laws that make up the legal environmental health mandate as discussed in the previous chapter.[1758] The *NHA*, *EHP Regulations*, and *EHP Norms and Standards* constitute the primary source for EHP's general duties and powers,[1759] and potentially the *Draft EH Regs* in the near future as well.[1760] The *Foodstuffs Act*, *Haz Act*, *Tobacco Act* and their regulations, as well as municipal bylaws, also impose service specific duties on and give concomitant powers to EHPs. As such all these legal instruments devise the functions of and provide the tools that EHPs could use to enforce compliance with the legal environmental health mandate.

5.2.1 Duties of Environmental Health Practitioners

As a way to frame and contextualise the enforcement powers of EHPs, it may be useful to consider, even if only briefly, what the duties of EHPs are. This also ought to show to what extent their legally prescribed duties enable them to perform all the functions that may be required to deliver appropriate environmental health services as contemplated in chapter two above.[1761] Every single EHP function will not be reproduced here though, as the sheer volume will make it hopelessly impractical.[1762]

1758 See paras 4.3.2-4.3.4 above.

1759 This can be evidenced by their content and the text in the *NEHP* that states as much - see ss 1, 82-87 of the *NHA*, *NEHP* 18-19.

1760 At the time of writing the *Draft EH Regs* have not been promulgated yet.

1761 See para 2.4.2.5 above.

1762 See May and Agenbag "Environmental Health and Municipal Public Health Services" 76-97 for more on EHPs duties and services that they have to provide in relation to the respective environmental health hazard categories.

The duties of EHPs principally lie in the environmental health service package. The services in this package are listed in the *NHA*, broadly described in the *EHP Regulations*, and detailed in the *EHP Norms and Standards*.[1763]

According to the *NHA* the environmental health services package includes numerous services that in name only appear to cater for most of the categories of environmental health hazards as delineated in chapter two above.[1764] EHPs are compelled to provide all these services by virtue of their employment at and designation by metropolitan and district municipalities and provincial health departments because these institutions *must* ensure that the environmental health services are provided in their areas of jurisdiction, and because they may designate health officers (that are registered EHPs) to do so.[1765] In other words EHPs have a *duty* to provide these environmental health services. Apart from listing the services, the *NHA* does not elaborate on what each entail though, and this is where the *EHP Regulations* comes in.

The *EHP Regulations* was published under the *HPA* and clarifies what the scope of EHP's functions are.[1766] The *EHP Regulations* pre-dates the *NHA* but was later amended to conform to the list of environmental health services in the *NHA*.[1767] Following the amendment it now lists numerous acts underneath the banner of

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[1763] Note that some EHP duties also emanate from other service specific laws, but they are incorporated into the *EHP Norms and Standards* for the most part.

[1764] For the list - see s 1 of the *NHA*; para 4.3.2.1 above. The only category of hazard that is not included in this set of services is that of climate change.

[1765] Health officers do not have to be registered as EHPs. However, while the *NHA* empowers health officers to some extent, only EHPs obtain the full suite of enforcement tools set out in the *NHA* to provide all these services - see ss 1, 25(2)(u), 32(1), 80(1), 83(5) of the *NHA*.

[1766] Section 33(1) of the *HPA*.

[1767] The *EHP Regulations* initially provided (and still does) that the following acts fall within the scope of EHPs functions:

(*a*) The identification of all unhygienic conditions and the evaluation of all factors of hygiene regarding the interaction between man and his environment.

(*b*) The undertaking of acts supplementary to statutory duties to

(i) eliminate unhygienic conditions;

(ii) execute monitoring actions in order to give effect to acts for the safeguarding and maintenance of the health of the population;

(iii) give health education in order to make the population self-sufficient in respect of the creation and maintenance of an environment that is safe for health;

(iv) co-operate with a multidisciplinary team in accordance with the principles of interdependency for the establishment of an environment that is safe for health.

every environmental health service that should be considered to fall within the scope of practice of EHPs, and it thereby gives some substance to the environmental health services listed in the *NHA*. The acts, generally, revolve around compliance monitoring on the one hand, and enforcement on the other.[1768] Compliance monitoring activities include to anticipate, identify via inspections, and to assess and control environmental health hazards to prevent them from causing harm, whereas enforcement activities are concerned with reducing and repairing (to correct) environmental health hazards.[1769] As such the activities of EHPs seem to involve all those oversight actions that may be required to address the harm that environmental health hazards can pose to people's health.[1770] The provisions in the *EHP Regulations* are not legally binding however, they merely identify all the acts that fall within the scope of practice of EHPs, which means that EHPs are not legally obligated to perform all the functions as listed in the regulations.[1771]

The *EHP Norms and Standards* goes further and supplements the *EHP Regulations* by adding details to the activities that EHPs have to undertake. The "details" in the *EHP Norms and Standards* are based on laws, regulations, policies, and guidelines that regulate or pertain to environmental health matters (the legal environmental health mandate),[1772] and it aims to promote compliance with all of them.[1773] For this purpose it lists numerous monitoring standards in relation to health surveillance of premises, vector control, environmental pollution control, port health services, waste management, water quality, and hazardous substances and chemicals management; and it lists some standards that are concerned with compliance and

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1768 See regs 1-14 in annexure A of the *EHP Regulations* for all the activities.

1769 The definition of 'environmental health services' in the *NEHP* encapsulates much the same - see *NEHP* 7.

1770 Apart from providing the public goods, such as to e.g. provide access to water and sanitation services, these activities correspond with all the required activities identified in the environmental health governance model formulated in chapter 2 above - see para 2.4.2.5 above.

1771 The *EHP Regulations* does not compel EHPs to perform all the functions - see reg 2(1) and annexure A in the *EHP Regulations*; May and Agenbag "Environmental Health and Municipal Public Health Services" 76-77.

1772 For a list of all the laws - see *EHP Norms and Standards* 11-12.

1773 EHP Norms and Standards 10-12.

enforcement in particular as well.[1774] As such it lays down requirements that have to be met as far as the provision of environmental health services are concerned. Much like the *EHP Regulations* the listed standards in the *EHP Norms and Standards* are not legally binding either, and instead serve as an ideal or benchmark with the intent to standardise EHPs' conduct across the country. However, seeing that many of the standards are derived from other environmental health related laws and regulations, those that are already compulsory will remain as such.[1775]

In addition to these general duties imposed by the *NHA* and regulations published under the Act, EHPs could also be designated to ensure compliance with and enforce the provisions of the *Foodstuffs Act* and its regulations, and this essentially means that EHPs have to conduct inspections as per the *Regulations Relating to the Powers and Duties of Inspectors and Analysts Conducting Inspections and Analyses on Foodstuffs and at Food Premises* (2007) to ensure that everyone complies with set food standards.[1776] Similarly, EHPs could also be designated to ensure compliance with the *Haz Act* and the *Tobacco Act*, which in the case of the former means that if authorised, EHPs will among others have to ensure that no person produces, uses, sells, or disposes of certain declared hazardous substances without a licence,[1777] and in the case of the latter that no person smokes any tobacco products in a public place.[1778] EHPs do not have to perform any of these functions by default as part of the environmental health service package as defined in the *NHA*, but considering the scope of their practice, and that the *EHP Norms and Standards* states as much, they really *need* to be authorised to perform these functions as well.[1779]

[1774] See chaps 2-3 of the *EHP Norms and Standards* for all the standards. Note that the *EHP Norms and Standards* also sets technical specification standards that have to be met in relation to premises, water quality, waste management, and hazardous substances and chemicals - see annexures A-D of the *EHP Norms and Standards*. The standards regarding compliance and enforcement are discussed at a later stage - see para 5.2.2 below.

[1775] For more on the usefulness and impact of the *EHP Norms and Standards* - see May and Agenbag "Environmental Health and Municipal Public Health Services" 100-102.

[1776] See ss 11-14 of the *Foodstuffs* Act; para 4.3.2.1 above.

[1777] See ss 3, 3A, 8 of the *Haz Act*; para 4.3.2.1 above. See also para 4.3.2.1 above as far as the discrepancy is concerned as to who among the three spheres of government is responsible for the control of hazardous substances.

[1778] See s 2(1)(a), (7) of the *Tobacco Act*; para 1(7) in annexure A of the *EHP Norms and Standards*; para 4.3.2.1 above.

[1779] See regs 2, 7, 9, 11, 14 in annexure A of the *EHP Regulations*; paras 8(13)(a), 14(3)(1) of the *EHP Norms and Standards*; para 4.3.2.1 above.

It also bears reminding at this juncture that municipalities may and have adopted bylaws to regulate environmental health matters in their respective jurisdictions. EHPs are generally tasked to monitor compliance with and enforce those bylaws, which means that their duties are further expanded (or perhaps simplified if the bylaw provides specific processes and procedures that an EHP can follow) in this way.[1780]

While not a complete list, the table below gives an account of some of the duties of EHPs as derived from the above instruments to give a broad overview of their functions.[1781]

[1780] See Nel, Du Plessis and Du Plessis "Instrumentation for Local Environmental Governance" 34-41; May and Agenbag "Environmental Health and Municipal Public Health Services" 57; para 4.3.4.2 above, para 5.3.2 and Annexure A below. May and Agenbag explain that some of the bylaws have actually been modelled on the *EHP Regulations*, which essentially means that those activities have become obligatory insofar specific bylaws require as much - see May and Agenbag "Environmental Health and Municipal Public Health Services" 77.

[1781] Note that this table does not include any functions set out in municipal bylaws. It also does not include duties that EHPs may have to perform if designated as other functionaries, such as EMIs that must ensure compliance with and enforce the *NEMA* and the SEMAs. See paras 5.3.1-5.3.2 below for more in this regard.

Table 5-1: Summary of the primary EHP functions[1782]

Environmental health service	Activities	Standards	Applicable laws or regulations
Water quality monitoring (including sanitation):	• Monitoring water quality and availability. • Ensuring water safety and accessibility. • Promoting access to water for all communities. • Ensuring monitoring of effective wastewater treatment and water pollution control. • Advocating proper and safe water usage and wastewater disposal. • Sampling and testing water.[1783]	• Water quality monitoring and waterborne diseases monitoring plans have to be in place. • Surveillance of drinking water supplies have to be conducted at least monthly. • Wastewater systems have to be monitored at least once every quarter.[1784]	The provision of water and sanitation services are regulated by the *WSA*. The standards are derived from said Act, as well as the *Strategic Framework for Water Services* (2003), *A Drinking Water Quality Framework for South Africa* (2005), and the *National Sanitation Policy* (2016). The functions of EHPs are not concerned with the provisions of the *NWA* (enforcement of duty of care) as far as this service in particular is concerned.[1785]
Food control:	• Ensuring food safety. • Inspecting food production, distribution, and consumption areas at premises. • Monitoring informal food trading. • Enforcing food legislation and the Codex Alimentarius (inspecting food content and quality).	• A risk-based approach must be followed. • Risk assessments of premises have to be conducted to determine their risk profile.	Food control is principally regulated by the *Foodstuffs Act*, while EHPs must conduct themselves in accordance with the *Regulations Relating to the Powers and Duties of Inspectors and Analysts Conducting Inspections and Analyses on Foodstuffs and at Food Premises* (2007), as well as the *Regulations Governing General Hygiene Requirements for Food Premises, the Transport of Food and Related Matters* (2018).

1782 See also May and Agenbag "Environmental Health and Municipal Public Health Services" 77-95 for more on these functions.
1783 Regulation 1(a)-(f) in annexure A of the *EHP Regulations*.
1784 Paragraph 13(3)(1)-(12) of the *EHP Norms and Standards*.
1785 This is as per the *NHA*, *EHP Regulations*, and *EHP Norms and Standards*.

Environmental health service	Activities	Standards	Applicable laws or regulations
	• Promoting the safe handling of meat and meat products, as well as milk and milk products.[1786]	• Frequency of inspections have to be based on each premises' risk profile.[1787]	Certain foodstuffs are also regulated in accordance with specific regulations, such as the *Regulations Relating to Hygiene Requirements for Milking Sheds, the Transport of Milk and Related Matters* (2012); and EHPs must familiarise themselves with the content of those regulations. The standards set out in the *Codex Alimentarius* apply as far as the quality and content of foodstuffs is concerned. EHPs must take cognisance of the provisions of the *Meat Act* that prohibit the slaughter of animals on premises insofar the standards for the keeping of animals on premises are concerned.[1788] The provisions of the *APSA* do not seem to have a bearing on the scope of practice of EHPs.[1789]
Waste management:	• Ensuring proper refuse, liquid-, and hazardous waste management. • Sampling and analysing waste or waste products. • Investigating and inspecting activities relating to the waste stream.	• Waste management activities in a municipality have to be monitored to ensure that municipalities implement their integrated waste management plans.	The *NEMWA* regulates waste management, which has to be enforced by EMIs. However, EHPs also have to monitor compliance with some of its provisions as per the *EHP Norms and Standards*. Municipalities must develop and implement integrated waste management plans in accordance with the *National Waste Management Strategy* (2020).

[1786] Regulation 2(a)-(i) in annexure A of the *EHP Regulations*.
[1787] Paragraph 8(13)(a)-(j) of the *EHP Norms and Standards*.
[1788] Paragraph 19(18) in annexure A of the *EHP Norms and Standards*.
[1789] This is as per the *NHA*, *EHP Regulations*, and *EHP Norms and Standards*.

Environmental health service	Activities	Standards	Applicable laws or regulations
	• Controlling the handling and disposal of diseased animal tissue. • Ensuring adherence to the cradle-to-grave approach.[1790]	• Integrated waste management plans must make provision for regular cleaning of streets, sidewalks and clearing of littering and illegal dumping sites. • Spillages have to be investigated and stored and transported waste have to be monitored to ensure that all waste are managed in a way to prevent public health hazards. • General and hazardous landfill sites must be inspected at least twice per year. • Routine inspection programmes for closed landfill sites have to be established and implemented.[1791]	
Health surveillance of premises:	• Conducting environmental health impact assessments. • Assessing unsatisfactory health conditions in any occupied premises, such as indoor air quality. • Ensuring that land-use planning and practices are conducive to sustainable development.	• Premises have to be monitored and inspected to identify, assess, control, and manage health hazards and risks emanating from the use of such premises.	Building structures must comply with the provisions of the *Buildings Act* and the standards in the *National Building Regulations* (1990). Annexure A in the *EHP Norms and Standards* lists many standards that apply to different types of premises that EHPs have to monitor. EHPs should strive to ensure compliance with the principles of chapter 8 of *Agenda 21* (the so called "Local Agenda 21").

[1790] Regulation 3(a)-(i) in annexure A of the *EHP Regulations*.
[1791] Paragraph 12(4)(1)-(18) of the *EHP Norms and Standards*.

Environmental health service	Activities	Standards	Applicable laws or regulations
	• Ensuring that any condition on any premises that are likely to constitute a health hazard is prevented and abated. • Ensuring compliance with the principles of the Local Agenda 21.[1792]	• EHPs have to adopt a risk management approach and base the frequency of their inspections on the type and risk profile of the respective premises. • Building plans and environmental impact assessment of proposed new developments must be scrutinised to ensure that all health aspects are considered. • Health education should form an integral part of all health surveillance inspections.[1793]	
Surveillance and prevention of communicable diseases:	• Promoting health and hygiene. • Collecting, analysing and disseminating epidemiological data and information. • Conducting epidemiological surveillance of diseases. • Establishing an effective environmental health surveillance and information system.	(none)	The *Regulations Relating to the Surveillance and the Control of Notifiable Medical Conditions* (2017) (as amended up to 22 June 2022) apply in this regard, but the regulations do not involve EHPs in its application.

[1792] Regulation 4(a)-(h) in annexure A of the *EHP Regulations*.
[1793] Paragraph 8(2)(1)-(12) of the *EHP Norms and Standards*.

Environmental health service	Activities	Standards	Applicable laws or regulations
	• Developing environmental health measures, including protocols, with reference to epidemics, emergencies, diseases, and migrations of populations.[1794]		
Vector control (including malaria control):[1795]	• Identifying vectors, their habitats, and breeding places. • Conducting vector control in the interest of public health. • Removing or remedying conditions resulting in or favouring the prevalence of or increase in disease carriers. • Investigating zoonotic diseases and vector-borne diseases. • Implementing a malaria control programme for the country. • Ensuring a continued active and feasible malaria surveillance programme.	• A vector control monitoring plan should be in place to guide the interventions and control measures within a municipality. • Regular inspections must be conducted to determine the presence of pests and levels of infestation. • Where pest infestations are identified, appropriate actions have to be implemented to deal with the problem as soon as possible.[1797]	The *FFAS Act* regulates pesticides and personnel that administer agricultural remedies (pesticides) have to be registered as Pest Control Operators in terms of the Act.

[1794] Regulation 5(a)-(f) in annexure A of the *EHP Regulations*.
[1795] Note malaria control does not fall within the purview of local government's responsibility - see para 4.3.2.1 above.
[1797] Paragraph 9(3)(1)-(10) of the *EHP Norms and Standards*.

Environmental health service	Activities	Standards	Applicable laws or regulations
	• Undertaking vector control on an annual basis by applying residual insecticides on inner wall surfaces, roofs and eaves of dwellings in malaria areas. • Conducting continued health education and awareness programmes on malaria.[1796]		
Environmental pollution control:	• Ensuring that the working, living, and recreational environment is hygienic. • Identifying the polluting agents and sources of water, air, and soil pollution. • Ensuring clean and safe air externally through emission inventory monitoring and complaint investigations. • Taking the required preventative measures to ensure that the general environment is free from health risks. • Controlling and preventing vibration and noise pollution.[1798]	• An air quality monitoring plan, environmental management plan, water pollution control plan, land pollution control plan, and noise control pollution plan have to be in place. • Disease trends must be monitored. • Public complaints related to environmental health must be investigated.[1799]	All premises have to comply with, and EHPs therefore need to make sure that the requirements set out in the following instruments are met: • *NEMWA* as far as the storage, treatment, and disposal of waste is concerned; • *NEMAQA* and the *National Ambient Air Quality Standards* (2009) as far as the prevention and control of air pollutants are concerned; • *NWA* as far as the prevention of water pollution is concerned; • *WSA* as far as the release of effluent into water courses are concerned; and the • *Noise Control Regulations* (1991) published under the *ECA* (or the subsequent provincial iterations).

[1796] Regulations 6(a)-(g), 13(a)-(h) in annexure A of the *EHP Regulations*.

[1798] Regulation 7(a)-(o) in annexure A of the *EHP Regulations*. See paras 4.3.2.1, 4.3.4.3 above as far as the noise control function and its place in the environmental health service package is concerned.

[1799] Paragraph 10(2)(1)-(9) of the *EHP Norms and Standards*.

Environmental health service	Activities	Standards	Applicable laws or regulations
Disposal of the dead:	• Controlling, restricting, or prohibiting the business of an undertaker or embalmer, mortuaries, and other places or facilities for the storage of dead bodies. • Monitoring practices at cemeteries and crematoria. • Managing, controlling, and monitoring exhumations.[1800]	• EHPs must inspect funeral undertakers' premises, mortuaries, and crematoriums at least once every quarter.[1801]	EHPs have to ensure compliance with the *Regulations Relating to the Management of Human Remains* (2013) published under the *NHA*.
Chemical safety and hazardous substances control:[1802]	• Monitoring and regulating all operators, fumigation firms and formal and informal retailers that deal with the manufacture, application, transport and storage of chemicals. • Permitting, licensing and auditing the premises of chemical operators and retailers.	• Hazardous substances dealer's premises must be inspected at least twice yearly. • Premises must have valid licenses. • A monitoring system must be in place to manage and ensure that all pesticide and chemical poisonings are investigated. • Municipalities must have chemical safety plans in place.[1804]	EHPs have to be authorised as inspectors and ensure compliance with the *Haz Act* and its regulations, such as those regarding Group I, III, and IV hazardous substances.

[1800] Regulation 8(a)-(c) in annexure A of the *EHP Regulations*.
[1801] Paragraph 16 in annexure A of the *EHP Norms and Standards*.
[1802] Note while chemical safety falls within the purview of local government's responsibility, radiation and hazardous substances control do not, and there is a legal discrepancy as far as the authority to designate EHPs to enforce the provisions of the *Haz Act* is concerned - see para 4.3.2.1 above. This overview gives an account of EHPs functions in general though, and not only EHPs that are designated by municipalities, which is why all these functions are nevertheless included in this table.
[1804] Paragraph 14(3)(1)-(15) of the *EHP Norms and Standards*.

Environmental health service	Activities	Standards	Applicable laws or regulations
	• Ensuring ionising and non-ionizing radiation sources are registered with the NDOH. • Ensuring radioactive sources are licenced at the South African Nuclear Energy Corporation. • Ensuring that hazardous substances are correctly labelled. • Ensuring hazardous substances are controlled to prevent injury, ill-health, or death by reason of the toxic, corrosive, irritant, or flammable nature of such substances. • Ensuring premises are licenced and registered with the appropriate authorities. • Ensuring all labelling regulations are complied with.[1803]		
Port health:[1805]	• Monitoring, inspecting, sampling, and labelling all imported foodstuffs, cosmetics and disinfectants at all ports of entry.	• Points of entry premises must be inspected at least once per quarter.	Although not enacted into law as of yet, the *EHP Norms and Standards* nevertheless requires that inspections have to be conducted in accordance with the terms set out in the *IHRs*.

[1803] Regulations 9(a)-(c), 11(a)-(f), 14(a)-(m) in annexure A of the *EHP Regulations*.
[1805] Note port health is the responsibility of national government - see para 4.3.2.1 above.

Environmental health service	Activities	Standards	Applicable laws or regulations
	• Monitoring continuous rodent and vector control at airports and harbours. • Monitoring and inspecting all hazardous cargo entering the country. • Monitoring and preventing communicable diseases on a twenty-four-hour basis.[1806]	• There has to be adequate collaboration and co-operation with critical role-players with regard to environmental pollution matters. The role-players include the port authorities, infection control, health and safety committees, service providers, local authorities, and other departments. • Port Health Officials (specialised EHPs) must familiarise themselves with, and have access to all relevant legislation, policies, guidelines, standards, and code of practices that are applicable to port health services (essentially all those that pertain to environmental health).[1807]	

[1806] Regulation 12(a)-(k) in annexure A of the *EHP Regulations*.
[1807] Paragraph 11(3)(1)(a)-(k) of the *EHP Norms and Standards*.

A further aspect that deserves consideration, and perhaps also the most significant as far as EHP's duties are concerned, is that of environmental health inspections as articulated in the *NHA* itself. Section 83 of the *NHA* among others provides that:

> (1) If a health officer has reasonable grounds to believe that any condition exists which –
> (a) constitutes a violation of the right contained in section 24 (a) of the *Constitution*;
> (b) constitutes pollution detrimental to health;
> (c) is likely to cause a health nuisance; or
> (d) constitutes a health nuisance,
> the health officer *must* investigate such condition.
> …
> (3) The health officer *must* issue a compliance notice to the person determined to be responsible for any condition contemplated in subsection (1) to take appropriate corrective action in order to minimise, remove or rectify such condition.[1808]

This provision clearly places a duty on EHPs (as health officers) to undertake investigations in certain instances. But what is significant here is that the existence of any environmental health hazard will comfortably fall with within the ambit of those "instances" because section 24(a) of the *Constitution* guarantees an environment that is not harmful to people's health or well-being,[1809] and a 'health nuisance' refers to a situation or state of affairs that endangers the life or health or adversely affects the well-being of a person or community.[1810] This therefore means that EHPs must investigate all environmental conditions that could be harmful to people's health (environmental health hazards) whenever they have reasonable grounds to believe that such hazards exist, and take action to correct those hazards (by issuing compliance notices to that effect). This is a very broad and all-encompassing duty, and it essentially renders all the other EHP duties redundant, save for the fact that it is mostly reactive in nature as opposed to the preventative character that environmental health services are supposed to assume.[1811] There is one other potential caveat though, which is that the section in the *NHA* that imposes this duty on EHPs may not be operational yet.

[1808] Note that emphasis was added.
[1809] See para 4.2.3 above for more on the constitutional environmental health right and what the right guarantees.
[1810] A 'health nuisance' is defined in s 1 of the *NHA*.
[1811] See paras 2.4.2.5, 3.3.2.1, 4.4 above; *NEHP* 12.

Laws generally commence or become operational when they are published in the *Government Gazette* (promulgated), as this makes them known publicly, and those that will or may be affected by them are as such notified about their effects.[1812] However, not all laws or all the provisions within laws commence immediately upon publication. The commencement of an act could be delayed as per the *Interpretation Act* if a different date for the coming into operation thereof has been fixed under the law when it is published, or if the date has been postponed for an unspecified time (to be proclaimed later).[1813] This happened in the case of the *NHA*. The *NHA* was originally published in 2004, but the date for its coming into operation was only later proclaimed to be on 2 May 2005.[1814] Not all the sections of the *NHA* became operational at that stage though, the commencement of some of them still had to be proclaimed, and this took place in phases over the course of 2008-2012. Notably, sections 77, 78, 79, and 83 (that form part of chapter 10 of the Act) were among the provisions that did not commence at first. These sections dealt with the establishment of a new Office for Standards Compliance and Inspectorate for Health Establishments by the NDOH and provincial health departments respectively,[1815] and presumably some aspects still had to be clarified in this regard before the sections could be implemented.[1816] The date of coming into operation of these sections was not included in any of the proclamations up to 2012, meaning that as of 2012, section 83 of the *NHA* was not yet operational, and it has never specifically been put into operation by any proclamation up to date either.

In the following year, however, government published a *National Health Amendment Act* 12 of 2013 (hereafter *NHAA*) to amend the *NHA* with the purpose to finally establish a newly conceptualised Office of Health Standards Compliance to replace its previously envisioned iteration that never came to be. In order to do so

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1812 See s 13(1) of the *Interpretation Act*, s 81 of the *Constitution*, *National Police Service Union v Minister of Safety and Security* 2000 3 SA 371 (SCA) para 17; Du Plessis *Re-Interpretation of Statutes* 63-69; para 2.4.2.2 above.

1813 Section 13(1)-(3) of the *Interpretation Act*.

1814 *National Health Act (61/2003): Commencement (2005)*.

1815 See ss 77-79, 83 of the *NHA* (prior to its amendment in 2014).

1816 There seems to have been some uncertainty regarding the independence of the Inspectorate and Office, and the Minister of Health explained that further regulations had to be developed before s 83 of the *NHA* could be put into operation - see PMG 2012 https://bit.ly/3EI1YQ1; MOH 2004 https://bit.ly/3tHn7Un; Gray, Vawda and Jack 2013 *SAHR* 5.

an entirely new chapter 10 was drafted in the *NHAA* which had to replace the existing chapter 10 in the *NHA*.[1817] The *NHAA* came into operation by 2 September 2013 via proclamation,[1818] and when it did it had the effect of replacing the old chapter 10 in the *NHA* in its entirety with the new chapter 10. The argument could be made that this is where the buck stopped in that it merely replaced all the sections in chapter 10 once the *NHAA* came into effect, and that the replacement did not change the status that the concomitant sections had prior to their replacement. In other words if the old section 83 had not commenced, its new replacement would not be operational either. However, the researcher argues that because certain words were not merely inserted or omitted in the sections but instead the sections were replaced in their entirety, the replaced sections actually ceased to exist upon replacement, and their prior status therefore became irrelevant from that point onwards.[1819] Furthermore, the newly replaced sections have already been made public through publication,[1820] and they are not expressly subject to any other provisions that delayed their commencement – as such they fulfil the requirement as set out in section 81 of the *Constitution* and section 13 of the *Interpretation Act*. They should therefore be considered operational. The fact that the Office of Health Standards Compliance as conceptualised in the newly replaced section 77 of the *NHA* was also established (and is currently functional) after the commencement of the *NHAA*, substantiates this view.[1821] It follows, therefore, that section 77 of the *NHA* commenced together with the whole of chapter 10 when it was replaced, and so did section 83 of the Act. For this reason the researcher is of the opinion that EHPs are in fact compelled and may perform the broad and all-

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[1817] Section 5 of the *NHAA*. The *NHAA* draws a distinction between 'health officers' that perform the functions of EHPs, and 'health inspectors' whose functions only pertain to health establishments - see ss 1, 80(1)-(2), 82(1) of the *NHA*; May and Agenbag "Environmental Health and Municipal Public Health Services" 46-48.

[1818] See s 9 of the *NHAA*. Note ss 2-3 of the *NHAA* only commenced in 2014, but they are not relevant for present purposes.

[1819] If an amendment only inserts and/or omits particular words in existing sections, those sections will still exist, and so too will their status (whether operational or not).

[1820] The *NHAA* was published in Proclamation 37 in GG 36787 of 30 August 2013.

[1821] See e.g. OHSC *Annual Report 2015/2016* 4.

encompassing environmental health investigation function in accordance with section 83 of the *NHA* as mentioned above.[1822]

It would be remiss not to mention the *Draft EHP Regs* as well. The *Draft EHP Regs* were published for public comment in 2022 but have not been finalised or enacted as of yet, although it might be in the near future. As for its contents, on the one hand the *Draft EHP Regs* articulates the powers of EHPs with regard to inspections and investigations, and on the other hand it lays down numerous prohibitions (compliance requirements) with regard to the creation of conditions that could constitute environmental health hazards.

Interestingly, the *Draft EHP Regs* appears to partially re-enact the regulatory framework for environmental health as it existed in terms of the previous *Health Act* because its drafters clearly copied the contents of certain provisions in the *Health Act* and its regulations into the draft Regulations. For example, the provisions relating to inspections are the same as those that can be found in the old *Regulations Relating to Inspections and Investigations* (1991) published under the *Health Act*.[1823] EHPs already have those inspection powers by virtue of sections 82 and 82A of the *NHA* though, making those provisions in the *Draft EHP Regs* redundant, and perhaps even a source of confusion.[1824] Likewise, most of the prohibitions in the *Draft EHP Regs*, such as a general prohibition on causing an environmental health hazard, are also already embedded in existing laws and regulations, and particularly in bylaws.[1825] It may be useful to standardise these prohibitions nationally as this will give clarity to EHPs, however, in addition to duplicating existing legal provisions, the format in the *Draft EHP Regs* do not

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[1822] See also Stevenson *The National Health Act Guide* 33 in which the authors also interpret the current status of s 83 of the *NHA* in this way.

[1823] The *Draft EHP Regs* defines 'environmental health nuisance' for the purposes of the application of the Regulations as a 'nuisance' that was defined rather elaborately in s 1 of the *Health Act*, and not as a 'health nuisance' that is concisely defined in s 1 in the *NHA*, where the former could be considered rather outdated - see regs 1, 2(1)-(5) of the *Draft EHP Regs*.

[1824] Regulation 4 of the *Draft EHP Regs* places the same duty to investigate on EHPs as s 83(1) of the *NHA* does as well.

[1825] See regs 9-26 in the *Draft EHP Regs*. For similar provisions in bylaws - see e.g. ss 6-25 of the *Chris Hani District Municipality Municipal Health Services Bylaw* (2018); ss 3-40 of the *Overberg District Municipality Municipal Health Services Bylaw* (2019); ss 3-77 of the *Gert Sibande District Municipality Municipal Health Bylaw* (2014).

conform to the list of environmental health services to streamline and simplify the regulatory landscape either, so from a practical perspective the Regulations mostly just make the legal landscape even more complex and confusing.

It could be that the NDOH developed these *Draft EHP Regs* seeing that the department believes a supposed legal vacuum arose when the *Health Act* was repealed because the regulations that were published under the Act were therefore also repealed,[1826] and those regulations enabled EHPs to perform many of their functions.[1827] Although, not only can those regulations still be used because they may have been saved as explained above,[1828] some of those regulations have already been replaced,[1829] municipalities have already adopted bylaws to fill those regulatory gaps,[1830] and as Agenbag argues, the provisions of the *NHA* itself may also be sufficient for this purpose.[1831]

Admittedly, from a practical side the *Draft EHP Regs* does contain several forms that EHPs could use, for instance to issue compliance notices, or compliance certificates,

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[1826] The old *Health Act* was only repealed in its entirety in 2012 (when s 93(1) of the *NHA* commenced), so this issue did not arise when the *NHA* was originally published in 2004.

[1827] The old regulations include e.g. the *Regulations Governing General Hygiene Requirements for Food Premises and the Transport of Food* (1991); *the Regulations Relating to Milking Sheds and Transport of Milk* (1986); the *Regulations Relating to Funeral Undertakers' Premises* (1985); the *Regulations Relating to Inspections and Investigations* (1991); and the *Regulations Relating to Offensive Trades* (1978). For more in this regard - see May and Agenbag "Environmental Health and Municipal Public Health Services" 49-53.

[1828] For the argument on why the regulations may have been saved - see s 93(2) of the *NHA*; para 4.3.4.2 above. Note further, although the administration of certain sections of the *Health Act* were assigned to the provincial governments, which means that those provisions are still operational provincially, the sections that empowered the then Minister of Health to issue regulations under the Act were not assigned to the provinces as well. The implication hereof is that the administration of the old regulations was never assigned to the provinces and therefore cannot be brought back to life in this manner - see para 4.3.3 above.

[1829] The following regulations, among others, replaced older versions published under then Health Act: the *Regulations Governing General Hygiene Requirements for Food Premises, the Transport of Food and Related Matters* (2018); the *Regulations Relating to the Management of Human Remains* (2013); the *Regulations Relating to the Powers and Duties of Inspectors and Analysts Conducting Inspections and Analyses on Foodstuffs and at Food Premises* (2007); and the *Regulations Relating to Hygiene Requirements for Milking Sheds, the Transport of Milk and Related Matters* (2012).

[1830] See para 4.3.4.2 above and Annexure A below. For an example of a bylaw that regulates environmental health services comprehensively - see ss 5-147 of the *Mangaung Metropolitan Municipality Environmental Health Services Bylaw* (2019).

[1831] Agenbag, Lues and Lues *JPHP* 230-243; May and Agenbag "Environmental Health and Municipal Public Health Services" 52.

or to confiscate or seize items.[1832] However, apart from providing those forms, it remains unclear what the purpose of the *Draft EHP Regs* really is, and how much it will eventually contribute to the governance of environmental health in its present form.

5.2.2 Enforcement powers of Environmental Health Practitioners

While government's vision for environmental health is to promote voluntary compliance to the legal mandate through education and by creating awareness in this regard, it may still become necessary to enforce compliance sometimes.[1833] An EHP cannot simply enter any premises and demand that the owner or person in charge rectify a particular harmful condition without the legal authority to do so (power and tools) though. All governmental conduct must be authorised by law, and this includes the work of EHPs.[1834] For this reason it is necessary to briefly evaluate whether the legal environmental health mandate contains the tools that EHPs may need to enforce compliance with it.[1835]

The *NHA*, as the primary law that instructs EHPs to provide environmental health services, empowers EHPs to perform both inspections and investigations towards ensuring compliance with the Act.[1836] Inspections are generally conducted on a routine basis involving visits to premises as mentioned above, where EHPs may question the owners or persons in charge, require that they produce relevant documentation, take samples, remove items if necessary, and so on.[1837] Investigations are more serious and EHPs may need to obtain a warrant before they investigate potentially harmful conditions if so required, in which case they may

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1832 See annexures A-E of the *Draft EHP Regs*.

1833 See *NEHP* 13, 37; May and Agenbag "Environmental Health and Municipal Public Health Services" 73; paras 3.3.2.6, 4.3.2.1, 4.4 above.

1834 See para 2.4.2.2 above.

1835 See para 5.3.2 below for a discussion on the enforcement of bylaws.

1836 It has to be pointed out though that EHPs may only use the tools if they are designated as health officers, in which case they must be issued with a certificate of appointment and they must show said certificate to the relevant persons when they perform their functions - see s 80(1), (3), (4)(a)-(b) of the *NHA*; *NEHP* 37; para 15(1) in the *EHP Norms and Standards*. See also May and Agenbag "Environmental Health and Municipal Public Health Services" 71-72 for more in this regard.

1837 Section 82(1)-(7) of the *NHA*; para 5.2.1 above.

enter and search premises, question the relevant people, inspect, examine and seize items, and so forth.[1838]

If an inspection or investigation reveal that a person does not comply with a particular requirement as set out in the *NHA*, the EHP may issue a compliance notice to compel such a person to rectify the condition.[1839] This could be where a condition constitutes an environmental health hazard, or where a person does not comply with a particular standard as set out in the *EHP Norms and Standards* for example.[1840] The *NHA* therefore empowers EHPs by giving them a 'compliance notice'-tool that they can use to compel people to comply with the provisions of the Act, and to thereby correct (minimise, remove, or rectify) environmental health hazards.

The *NHA* goes further though and provides that it will constitute an offence if a person "fails to comply with a compliance notice issued to him or her by a health officer". In other words the *NHA* criminalises non-compliance with a compliance notice, which constitutes another albeit more serious tool that an EHP can use to enforce compliance with the *NHA*.[1841] So in those cases where a person refuses to remedy an environmental health hazard, he or she may and could be prosecuted in terms of the *NHA*.

Note that from a technical point of view EHPs will need documentation to use these tools (issue compliance notices, seize items, etc.), and this is where the forms as annexed to the *Draft EHP Regs* come in.[1842] Currently EHPs do not have such forms at their disposal as far as the tools in the NHA is concerned, whereas they used to rely on those published in various regulations under the *Health Act*.[1843]

1838 This is the broad investigative function of EHPs as discussed above - see s 83(1)-(5) of the *NHA*; para 5.2.1 above.

1839 Sections 82(3), 82A(1), 83(3) of the *NHA*.

1840 Section 82(3) of the *NHA* makes express provision for the issuing of a compliance notice in cases where norms and standards (as per the *EHP Norms and Standards*) have not been complied with, whereas s 83(3) of the *NHA* provides the same but relates to any environmental health hazard.

1841 See para 2.4.2.2 above for more on the different types of governance tools.

1842 See annexure A-E of the *Draft EHP Regs*; para 5.2.1 above.

1843 May and Agenbag "Environmental Health and Municipal Public Health Services" 49-50, 100-101.

In similar vein, the *NHA* further provides that EHPs have the powers of a 'peace officer' as defined in the *CPA*, "and may exercise any of the powers conferred on a peace officer by law".[1844] The *CPA* extends the powers of EHPs in that it empowers peace officers to search and arrest persons, and to issue fines,[1845] where the power to do so may well be useful mechanisms that EHPs can use in certain circumstances to prevent environmental health hazards from occurring or to cause harm. The *NHA* adds that a police official may accompany an EHP when conducting these types of investigations, so these powers will in all likelihood only be exercised by a police official, and as such run in parallel to those in the *NHA*. EHPs are, however, also at liberty to use them if they have received appropriate training in this regard.[1846]

These tools equip EHPs to enforce all the provisions of the *NHA* and its regulations, notably the *EHP Norms and Standards* as well as those that relate to specific environmental health services.[1847] EHPs are therefore sufficiently empowered to deliver environmental health services insofar their duties arise from the provisions of the *NHA* and its regulations. It follows though that an EHP can only enforce compliance with a law in terms of the provisions of that particular law,[1848] which means that they cannot use these tools to enforce compliance with the other laws that also task them with duties that pertain to the environmental health service delivery function, such as the *Foodstuffs Act*, *Haz Act*, and the *Tobacco Act*.

Since the *Foodstuffs Act* applies to the food control service it should be noted that the Act empowers inspectors (that could be EHPs) to enter, inspect and search premises, examine foodstuffs, demand information regarding foodstuffs, seize such

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[1844] Section 80(4)(c) of the *NHA*. Note EHPs must be designated to perform the functions set out in the *NHA*, and must be issued with a certificate to that effect - see s 80(1), (3), (4)(a)-(b) of the *NHA*. The certificate serves as proof that the EHP is authorised to perform his or her functions.

[1845] Peace officers can search people and issue fines by virtue of ss 23(1)(a) and 56 of the *CPA*, respectively. Note that while EHPs may have the powers of a 'peace officer' as defined in the *CPA*, a discussion on the *CPA* and its contents is beyond the scope of this research. For more in this regard - see ss 19-36, 39-57A of the *CPA*; Kruger *Hiemstra's Criminal Procedure* chs 2, 5; Du Toit *et al Commentary on the Criminal Procedure Act* chs 2, 5.

[1846] See s 84(1) of the *NHA*; Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 39-40.

[1847] See para 5.2.1 above.

[1848] This is because a person may only perform a function or exercise a power if conferred upon him or her by law, which is underpinned by the rule of law and the doctrine of legality - see para 2.4.2.2 above.

foodstuffs, and so on.[1849] In addition the *Regulations Relating to the Powers and Duties of Inspectors and Analysts Conducting Inspections and Analyses on Foodstuffs and at Food Premises* (2007) also gives EHPs these powers to inspect and seize foodstuffs,[1850] but further adds that if an EHP is of the opinion that "activities or conditions exist which are dangerous or harmful or likely to be dangerous or harmful to health or which are likely to favour the spread or impede the prevention of a food borne disease", the EHP must issue a written notice to the person in charge of the premises to rectify the condition.[1851] This written notice is essentially the same as a compliance notice that may be issued in terms of the *NHA*, although here it only relates to foodstuffs and can be used as a tool by EHPs for this purpose.[1852] However, unlike with the *NHA*, non-compliance with a written notice does not constitute an offence. The *Foodstuffs Act* itself criminalises the sale of food that is harmful to people's health though, so the threat of prosecution nevertheless serves as a deterrent in this regard and could also be used as a governance tool by EHPs.[1853]

Much like the *Foodstuffs Act*, the *Haz Act* also empowers inspectors (that could be EHPs) to enforce the provisions of the Act as far as hazardous substances is concerned by way of inspections, examining and seizing substances, and they may

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[1849] Section 11(1)(a)-(h) of the *Foodstuffs Act*. Note EHPs must also be authorised and issued with a letter of authorisation to be able to perform the functions and use the tools in this Act - see ss 10(2), (3)(b), 23 of the *Foodstuffs Act*; para 4.3.2.1 above.

[1850] Regulations 2-4 of the *Regulations Relating to the Powers and Duties of Inspectors and Analysts Conducting Inspections and Analyses on Foodstuffs and at Food Premises* (2007). Note that several forms are annexed to this Regulations that EHPs can use to utilise the tools in this regard.

[1851] Note this is only in in relation to food premises or foodstuffs as contemplated in the Foodstuffs Act - see reg 5(a)-(b) of the *Regulations Relating to the Powers and Duties of Inspectors and Analysts Conducting Inspections and Analyses on Foodstuffs and at Food Premises* (2007).

[1852] This includes the regulations that prescribe standards that must be met, e.g. the *Regulations Governing General Hygiene Requirements for Food Premises, the Transport of Food and Related Matters* (2018); and the *Regulations Governing Microbiological Standards for Foodstuffs and Related Matters* (1997).

[1853] See ss 2, 6, 24(1) of the *Foodstuffs Act*. Note that s 24(1) of the *Foodstuffs Act* gives local authorities the "right to prosecute" contraventions of the Act, but as mentioned in the previous chapter, they firstly have to be authorised to be able to administer the Act before they can undertake said "prosecution" - see para 4.3.2.1 above. Note further that it is unclear what "prosecution" means in this context, but it presumably refers to the institution of criminal proceedings as set out in the *CPA*. If this is the case, the particular inspector that is authorised to enforce the *Foodstuffs Act* will have to be authorised to exercise the powers in the *CPA* as well, and this will probably be a local Law Enforcement Officer and not an EHP, unless the EHP is also designated as a Law Enforcement Officer. For more in this regard - see para 5.3.2 below.

also place an embargo on the export, sale, and use of those substances, among others, which could be useful to prevent potential environmental health hazards.[1854] Non-compliance with the provisions of the *Haz Act* also constitutes an offence.[1855] As such the powers and tools in the *Haz Act* essentially mimic those as per the *Foodstuffs Act*, although only in relation to hazardous substances, and could be utilised by EHPs for those purposes.

The *Tobacco Act* on the other hand incorporates the powers and tools set out in the *NHA* by reference,[1856] which means that EHPs can use the tools in the *NHA* to enforce compliance with the *Tobacco Act* and its regulations (to prohibit the smoking of tobacco products in public places).

A final point to consider is the standards relating to EHPs' conduct as far as the enforcement of compliance is concerned as set out in the *EHP Norms and Standards*. The *EHP Norms and Standards* foremost provides that EHPs have to be designated as health officers in terms of the *NHA*, which is essential because otherwise they cannot use the tools provided by the Act.[1857] Interestingly it further provides that EHPs have to be trained on law enforcement and appointed as peace officers as well – which confirms that EHPs should not only rely on police officials but should also make use the enforcement mechanisms in the *CPA* directly to perform their functions.[1858] Most pertinent though is that the *EHP Norms and Standards* provide that the "severity of health risks should always be considered in compliance enforcement activities".[1859] This means that ideally, EHPs should use the least serious yet appropriate enforcement tool available to them and only escalate their

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[1854] Section s 9(1)(a)-(i), 9A(1)-(2), 9B(1)-(6) of the *Haz Act*. Local authorities also need to be authorised to administer the Act - see s 24 of the *Haz Act*.

[1855] This would be if a person sells or uses a declared hazardous substance without a licence for instance - see ss 3(3), 3A(6) of the *Haz Act*. Note the same applies as far as the "right to prosecute" by local authorities is concerned with respect to the *Haz Act* as is the case with the *Foodstuffs Act* - see s 25 of the *Haz Act*.

[1856] Section 2(7) of the *Tobacco Act*.

[1857] Paragraph 15(1) of the *EHP Norms and Standards*.

[1858] Paragraph 15(2) of the *EHP Norms and Standards*.

[1859] Paragraph 15(5) of the *EHP Norms and Standards*.

attempts if required by the seriousness of the hazard at hand, much like Ayres and Braithwaite's enforcement pyramid approach, and as also required by the *NEHP*.[1860]

The *EHP Norms and Standards* lastly provides that EHPs must co-operate and collaborate with other enforcement agencies.[1861] This is pertinent having regard to the variety of laws and role-players involved in the governance of environmental health. A discussion of some of the other personnel and their enforcement powers follows below.

5.3 Other personnel and their enforcement powers

As explained in the previous chapter and also highlighted in the *NEHP*, EHPs are not the only personnel whose work relate to, or who have to enforce laws that regulate aspects of environmental health.[1862] The suite of environmental management laws and municipality's bylaws are perhaps the most significant in this regard. This research will therefore not be complete without briefly evaluating the powers of the personnel that are responsible for and may enforce these laws insofar it relates to the governance of environmental health.[1863]

5.3.1 Environmental Management Inspectors

The *NEMA* and suite of SEMAs, and in particular the *NEMAQA*, *NEMWA*, and the *NWA*, all regulate aspects that are pertinent to a number of environmental health services, including water quality, waste management, and environmental pollution. As such they play a vital role in the governance of environmental health.[1864] For this reason the *EHP Norms and Standards* also expect and require compliance with

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[1860] See paragraph 15(5)-(9) of the *EHP Norms and Standards*; *NEHP* 12-13; paras 2.4.2.2, 4.4 above.

[1861] Paragraph 15(10) of the *EHP Norms and Standards*.

[1862] See *NEHP* 25-28, 30-33; paras 4.3.2-4.3.4 above.

[1863] Note that this discussion is not exhaustive and does not include the functions and enforcement powers of Air Quality Officers as per the *NEMAQA*, Building Control Officers as per the *Buildings Act* and *National Buildings Regulations* (1990), Executive Officers as per the *APSA*, and Executive Officers as per the *Meat Act*, among others. For more on these - see ss 14(1)-(5) of the *NEMAQA*; ss5-6, 15 of the *Buildings Act*; ss 2-3A, 7-8 of the *APSA*; ss 2-5, 15-16 of the *Meat Act*; and paras 4.3.2.2-4.3.2.6 above.

[1864] See e.g. DFFE *National Environmental Compliance and Enforcement Report 2020/2021* 3-20 for more on the work of EMIs. Also see May and Agenbag "Environmental Health and Municipal Public Health Services" 77, 85-87, 92-93; paras 4.3.2.2-4.3.2.3 and Table 5-1 above.

the relevant provisions in those laws.[1865] EHPs are not empowered to enforce the provisions of these laws however. This task falls to EMIs.

Much has already been written about EMIs elsewhere, and their functions and powers that relate to environmental health have already been discussed above as well.[1866] A few brief remarks about their powers and relationship to EHPs nevertheless seem warranted at this juncture.

Unlike EHPs that are health practitioners that also have to enforce laws, EMIs are first and foremost law enforcement officers.[1867] The Environmental Management Inspectorate was specifically created as the enforcement authority for environmental matters. EMIs derive their enforcement powers from the *NEMA*, and depending on their particular designation, may use them to ensure compliance with the *NEMA* or any of the SEMAs (or even only specific provisions of these laws).[1868] They too generally have to monitor compliance with the respective laws, conduct investigations where necessary, and enforce compliance,[1869] where the latter in particular is relevant for present purposes because of the environmental protection that the respective laws afford, and the benefit that their enforcement holds for environmental health.

The *NEMA* empowers EMIs among others to conduct inspections, question persons, inspect and seize items, issue written or compliance notices, issue admission of guilt fines, and also stipulate that they must be regarded as peace officers and may

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1865 See annexures A-C of the *EHP Norms and Standards*.

1866 See e.g. Snijman and Petterson "Environmental Law Compliance and Enforcement" 3-11; Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 39-42; Oosthuizen, Van der Linde and Basson "National Environmental Management Act 107 of 1998 (NEMA)" 185-190; Hall 2019 *SAJELP* 73-101; paras 4.3.2.2-4.3.3.3 above.

1867 For more on the Environmental Management Inspectorate - see Craigie, Snijman and Fourie "Environmental Compliance and Enforcement Institutions" 88-96.

1868 Section 31D(a)-(e) of the *NEMA*. This was not the case when the *NEMA* was promulgated at first. The Inspectorate was only established after the fact because of poor compliance with environmental legislation, which necessitated and amendment of the *NEMA* in 2003 to add these enforcement powers, and they were only put into operation by 2005 - see Craigie, Snijman and Fourie "Environmental Compliance and Enforcement Institutions" 88-89.

1869 Section 31G(1)(a)-(b) of the *NEMA*.

exercise all the powers that go with that designation as provided for in the *CPA*.[1870] As such the powers of EMIs and tools that they have at their disposal largely echo those of EHPs, including having the authority to use enforcement mechanisms provided by the *CPA*.[1871] In addition the Minister of Forestry, Fisheries and the Environment published *Regulations Relating to Qualification Criteria, Training and Identification of, and Forms to be used by, Environmental Management Inspectors and Environmental Mineral Resource Inspectors* (2017) to regulate certain aspects of EMIs, and as the title implies, it mostly relates to administrative matters. It furthermore establishes different grades of EMIs, where an EMI may only exercise certain powers depending on his or her grade.[1872] This Regulation also contains forms that EMIs may need and can use to exercise their enforcement powers, such as a pro forma compliance notice.[1873]

The tools that EMIs have at their disposal are useful in the environmental health context because they can enforce the duty of care and remediation of environmental damage as per the *NEMA*, which entails that they can direct anyone who has or may cause significant pollution via a compliance notice to cease their activities and remedy said pollution and/or institute criminal proceedings against those persons to deter them (issue fines for example).[1874] And in similar fashion EMIs can enforce the general duty of care and remediation in respect of water pollution as per the

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[1870] See ss 31H(1)-(5), 31I(1)-(5), 31J(1)-(7), 31K(1)-(7), 31L(1)-(5), 34G(1)-(4) of the *NEMA*. For more in this regard - see Glazewski, Snijman and Plit "Compliance with and Enforcement of Environmental Law" 39-42. See also Feris 2006 *PELJ* 52-70 for more on the issuing of compliance notices in the environmental context.

[1871] Interestingly the *NEMA* itself makes provision for the issuing of fines by EMIs, which is a power that vests in the *CPA*. Whereas the *NHA* does not contain a similar provision for EHPs and they have to resort to the *CPA* itself - see s 34G of the *NEMA*; s 56 of the *CPA*; para 5.2.2 above.

[1872] For example Grade 1 EMIs have all the powers available in the *NEMA*, whereas Grade 1 EMIs only have the powers afforded by ss 31H, 31I(3), and 31J of the *NEMA* - see reg 2, annexure 1 of the *Regulations Relating to Qualification Criteria, Training and Identification of, and Forms to be used by, Environmental Management Inspectors and Environmental Mineral Resource Inspectors* (2017).

[1873] Annexures 2 and 3 of the *Regulations Relating to Qualification Criteria, Training and Identification of, and Forms to be Used by, Environmental Management Inspectors and Environmental Mineral Resource Inspectors* (2017). This is in contrast to EHPs that do not have such forms at their disposal yet in respect of the *NHA* - see para 5.2.2 above.

[1874] Section 28(1)-(4) of the *NEMA*. See for instance *Khabisi v Aquarelle Investment 83 (Pty) Ltd* 2008 4 SA 195 (T) in which the Court found that a compliance notice cannot simply be ignored.

NWA,[1875] the general duty in respect of waste management as per the *NEMWA*,[1876] and enforce the air quality standards (prohibition on unlawful commencement of listed activities) set out in the *NEMAQA*.[1877]

It stands to reason though that because of the nature and scope of the functions of EMIs and EHPs, their work overlap, and EHPs may need to rely on EMIs to enforce the provisions of particular environmental laws in certain instances.[1878] In response to this issue the NDFFE led an initiative in 2012 to develop a bridging course to train EHPs as EMIs, which May and Agenbag describe as an "important milestone".[1879] This may even be an understatement because it means that after an EHP has received the required training, he or she could be appointed as an EMI. The implication hereof is that EHPs (that are also designated as EMIs) will have the legal authority to use all the tools as provided by both the *NHA* and the *NEMA* to perform their functions, and in the environmental health service delivery context this can be very useful.[1880]

5.3.2 Local Law Enforcement Officers

Bylaws can play an important part in the delivery of environmental health services,[1881] but by necessary implication they have to be enforced. EHPs and EMIs are not at liberty to enforce bylaws by virtue of the powers vested in them in accordance with the *NHA* or *NEMA* though. This is because bylaws (albeit ones that relate to environmental health matters) are not derived from the *NHA* or the *NEMA*, but instead, are adopted by virtue of local government's original legislative power as per the *Constitution*.[1882] This can be problematic from an environmental health

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1875 Section 19(1)-(2) of the *NWA*.
1876 Sections 16(1), 67(1)(a) of the *NEMWA*.
1877 Section 22A(1)-(10) of the *NEMAQA*.
1878 See para 15(10) of the *EHP Norms and Standards*; *NEHP* 36; paras 4.4-4.5 above.
1879 For more on the bridging course and its origins - see May and Agenbag "Environmental Health and Municipal Public Health Services" 46.
1880 Keep in mind though that different governmental institutions from different spheres of government have the power to designate and appoint the respective personnel, so this still requires co-operation from all the relevant stakeholders - see paras 4.3.2.1, 4.3.2.2, 4.4 above.
1881 See para 4.3.4.2 above.
1882 See s 156 of the *Constitution*; s 11(3)(m) of the *Municipal Systems Act*; paras 2.4.1.6, 2.4.2.2, 4.3.4.1-4.3.4.2 above.

governance perspective, but fortunately the *CPA* offers a solution.

Section 334 of the *CPA* permits the Minister of Justice to declare certain persons peace officers for specific purposes, and the Minister has on this authority declared Law Enforcement Officers that are appointed by municipalities as peace officers to among others enforce bylaws in their respective jurisdictions.[1883] The implication hereof is that municipalities will have to appoint their EHPs as Law Enforcement Officers, and in so doing said EHPs will be legally authorised to enforce municipalities' environmental health bylaws as well.[1884]

5.4 Chapter summary

The purpose of this chapter was to determine if the legal environmental health mandate enables government to provide environmental health services that are appropriate. For this reason the functions and powers of EHPs were examined, and to an extent also those of EMIs and Law Enforcement Officers.

The examination showed that EHPs are the main personnel that have to provide environmental health services, and that said services involve many functions that aim to address all the categories of environmental health hazards as listed in chapter two, apart from climate change. The functions, generally, revolve around monitoring and inspection activities, while it also extends to the correction and ultimately the prevention of environmental health hazards. In addition the *NHA* also tasks EHPs with a broad and all-encompassing duty to investigate all conditions that may constitute an environmental health hazards, and to take appropriate action to remedy such hazards – which all by itself gives EHPs enough legal authority to perform all the functions that may be required to deliver appropriate environmental

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[1883] *Declaration of Peace Officers in terms of Section 334 of the Act: Law Enforcement Officers Appointed by a Municipality* (2018). See Rauch, Shaw and Louw *Municipal Policing in South Africa: Development and Challenges* 1-30 for more on policing by municipalities.

[1884] It should be noted that EHPs powers are somewhat constrained in that they may only exercise certain powers as set out in the CPA, but they nevertheless appear sufficient for the purpose of enforcing bylaws in that they may issue written notices, seize articles, issue fines, and arrest persons as per ss 23, 56, 40(1), 41, and 341 of the *CPA* - see column 4 of the schedule in the *Declaration of Peace Officers in terms of Section 334 of the Act: Law Enforcement Officers Appointed by a Municipality* (2018).

health services.[1885]

The examination further showed that the *NHA* empowers EHPs by giving them a variety of enforcement tools to ensure compliance with the *NHA*, as well as other service specific laws, including the *Foodstuffs Act*, *Haz Act*, and *Tobacco Act*. This entails that they may issue compliance notices to direct persons to cease harmful activities and to remedy them, and to issue fines to said persons to deter them from causing further harm, and these are vital tools that enable EHPs to deliver environmental health services.[1886]

The environmental health service package also attracts aspects that are regulated by other laws, such as the *NEMA* and SEMAs, and municipal by laws. These laws can only be enforced by EMIs and Law Enforcement Officers, respectively. That is why their powers were also examined, although only briefly. The examination showed that EMIs also have various tools at their disposal to ensure compliance with the *NEMA* and SEMAs that for the most part are similar to those of EHPs, which is essential as these laws afford protection of the environment. More importantly though, the examination showed that that EHPs could be trained and designated as EMIs, and as such they can use all the mechanisms in these environmental laws as well. Lastly the examination revealed that if EHPs are appointed as Law Enforcement Officers by their respective municipalities, they will also be empowered to enforce compliance with all their environmental health services bylaws.[1887] EHPs are therefore sufficiently equipped to enforce the legal environmental health mandate.

[1885] See s 83 of the *NHA*; para 5.2.1 above.
[1886] See para 5.2.2 above.
[1887] See para 5.3.1-5.3.2 above.

Chapter 6: Conclusion and recommendations

6.1 Introduction

The human condition is inextricably linked to the state of the environment. In South Africa many people are exposed to and suffer from environmental health hazards. The situation has not improved meaningfully over the last two decades, and this is despite the fact that government adopted a multitude of laws during this time towards improving the state of the environment and people's health.[1888]

This research was undertaken to determine the legal environmental health mandate's implementation and enforcement in South Africa. For this purpose the researcher endeavoured to 1) develop a definition of environmental health and environmental health governance to set the scope of the study and to create a benchmark against which government's efforts in this regard can be measured, 2) record the influences that international law instruments have in this regard and determine what this holds for the governance of environmental health in South Africa, 3) compile and determine the content of the legal environmental health mandate, and 4) to examine said content to determine if the enforcement of the entire legal environmental health mandate is possible.[1889] A discussion on the outcome of this work follows below.[1890]

6.2 Setting the scope and benchmark of the study – definitions of environmental health and environmental health governance

To formulate a definition of environmental health and to thereby set the scope of this study, the researcher examined several aspects inherent to and that could influence its conceptualisation. The examination revealed that, in the main, environmental health is concerned with the harmful effects that the environment can have on the human condition, and the activities that must be undertaken to prevent such harm. However, its constituent parts, that is health and the environment, could be interpreted to refer to every conceivable factor external to a

[1888] See *NEHP* 14-15; paras 1.1.1-1.1.8 above.
[1889] See paras 1.2-1.5 above.
[1890] For a summary of every chapter - see paras 2.5, 3.5, 4.5, 5.4 above.

person that could have any type of influence on him or her, which is why MacArthur remarks that "environmental health is everything, and everything is environmental health".[1891] Such a view, while capturing the complexity of the concept, is wholly impractical for the purpose of this study. For this reason the researcher defined and thereby circumscribed the scope environmental health for the purpose of this study as follows:

> [Environmental health is a concept] that addresses those reasonably modifiable natural and built surroundings within which humans exist, which are made up of the physical, chemical, and biological factors, their interrelationships, and the influences that their conditions can have on related human behaviours and attitudes and *vice versa*, which can potentially adversely affect the health, quality of life, or well-being of the present or future generations, through the delivery of interventions that are appropriate in light of everyone's developmental needs.[1892]

For practicality's sake the hazards (the environment) have subsequently been categorised for the purpose of this research in much the same way as the NDOH did (to be able to measure government's interventions in a useful manner), namely water quality and sanitation, foodstuffs, waste and land contamination, housing, communicable diseases and vectors, air quality, chemicals and hazardous substances, and climate change.[1893]

In order to set the benchmark for this study the researcher examined (and also gave an explanation of) the machinery of government towards gaining an understanding of what the operationalisation of environmental health would need to entail.[1894] Flowing from that examination the following definition of environmental health governance was offered for the purpose of this research:

> The execution of the processes and mechanisms embedded in law, through the co-operation and co-ordination of the efforts of all the governmental bodies and officials mandated by law to do so, which are intended to protect the health, quality of life, and well-being of all people from every reasonably modifiable environmental hazard, in a manner that is sustainable and preferably to the benefit of the larger population.[1895]

This definition precipitates the existence of law, or a legal environmental health

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1891 MacArthur "Introduction to Environmental Health" 1.
1892 See para 2.3.5 above.
1893 See paras 2.3.1.2, 2.3.5 above.
1894 See paras 2.4.1-2.4.2 above.
1895 See para 2.4.2.5 above.

mandate for that matter, the implementation and enforcement of which culminates in the governance of environmental health. As such the researcher also indicated what the substantive content and procedural aspects are that the legal environmental health mandate will have to provide.[1896]

The following considerations can be distilled and serve as the benchmark in this study to measure the governance of environmental health:

a) the mandate primarily has to impose a *duty* on governmental bodies to *protect* people's health, quality of life, and well-being from environmental hazards;

b) it has to specify the *scope* of environmental health governance and limit it only to environmental hazards that are *reasonably modifiable*;

c) it has to *enable* government's bodies to prevent environmental hazards from causing harm and to prevent people from causing environmental hazards, therefore the mandate has to *empower* its bodies with the necessary authority that will allow them to utilise suitable governance tools to do so;

d) it has to *specify* which tasks (environmental health services) governmental bodies have to perform;

e) it has to *describe* and conceive of environmental health services that are *comprehensive* enough so that government can anticipate, identify, assess, reduce, repair, monitor, control, and prevent environmental hazards and their causes through their delivery;

f) it has to identify *which* governmental bodies, public officials, and personnel need to deliver environmental health services and confer the necessary powers and impose the concomitant functions on these bodies specifically;

g) it has to create an operational framework that facilitates *co-operation* among the multitude of governmental bodies involved in the delivery of

[1896] See para 2.4.2.5 above.

environmental health services so that all the role-players can co-ordinate their actions to deliver effective environmental health services; and

h) it has to permit the relevant personnel to exercise their discretion to the extent that they can *prioritise* the delivery of environmental health services to benefit more people at once (outer layers of influence) and to take cognisance of the developmental needs of each community.

6.3 Recording the influences of international law instruments on environmental health governance

International law instruments have an influence on the governance of environmental health in four distinct ways. Firstly they provide a model public health system through which environmental health services ought to be delivered. Secondly they impose human rights obligations on government in relation to environmental health. Thirdly they impose sector specific duties on government that have a bearing on the domestic plane. Lastly they create obligations for and provide tools to government with respect to causing and preventing environmental health hazards *vis-à-vis* other states.

According to the model health system people's health concerns must be addressed in a holistic manner and government has to provide a comprehensive range of health services that include environmental health services specifically. By necessary implication other government departments will be involved but according to the model the NDOH has to take the lead and direct them in this regard. The model further provides that health services have to be decentralised and delivered at local government level.[1897] Government did transform and develop a new health system that is based on the WHO's model. This entails that government aims to provide a comprehensive set of PHC health services, but the environmental health services component has been separated from this package institutionally and practically in the form of 'municipal health services'. The PHC services are the responsibility of provincial health departments but are delivered through a district health system

[1897] See para 3.3.2.6 above.

(locally), and the environmental health services, in the main, are the responsibility of municipalities and also have to be delivered by them. The NDOH has taken responsibility for the delivery of all health services, but it does not have authority over any other national departments and cannot direct or lead them as far as environmental health specifically is concerned.[1898] The implications hereof are addressed in further detail below.[1899]

Government has to progressively realise the international human right to health because it is committed to comply with the provisions of the *ICESCR* and the *ACHPR*. Flowing from this commitment government obtained a legal duty to prevent environmental conditions that could directly or indirectly affect the human condition. This means that government is *obligated* to operationalise and therefore provide environmental health services.[1900] This right also informs its domestic counterpart that has been entrenched in the *Constitution*, much of which constitutes an environmental health right that demands the same from government.[1901]

The following sector specific international law instruments affect the regulation of environmental health on the domestic plane:

- Government must implement sanitary and phytosanitary measures to comply with the *SPS Agreement* and the *Protocol on Trade in the Southern African Development Community (SADC) Region* (1996) towards keeping food safe – these have among others been incorporated into the *Foodstuffs Act*, *Meat Act*, *APSA*, and the *FFAS Act*;[1902]

- the *Codex Alimentarius* also sets out standards and guidelines concerning food that government may follow – the *EHP Regulations* require that EHPs must uphold the standards in the Codex and they have been incorporated

[1898] See para 4.3.1 above.
[1899] See para 6.5 below.
[1900] From a human rights-based perspective this will in the least have to include access to safe potable water and adequate sanitation, an adequate supply to safe food, nutrition and housing, safe and healthy working conditions, and a healthy environment - see para 3.3.1 above.
[1901] See para 4.2.3 above. The influence that the constitutional environmental health right has on the governance of environmental health is discussed in further detail below - see para 6.4 below.
[1902] This includes ss 7, 11, 13-14 of the *Meat Act*, ss 2-3, 6-11, 15 of the *Foodstuffs Act*, ss 3-6 of the *APSA*, and ss 7, 12, 16 of the *FFAS Act*. See paras 3.3.3, 4.3.2.1, 4.3.2.5 above.

into numerous regulations published under the *Foodstuffs Act*, *Meat Act*, and *APSA*;[1903]

- the *IHRs* (updated version) were developed to monitor and control the spread of communicable diseases and must be implemented – the *EHP Norms and Standards* also requires as much, but the new version of the *IHRs* have not been enacted into law as of yet;[1904]

- control measures have to be adopted to reduce tobacco use as per the *Framework Convention on Tobacco Control* (2003) – the *Tobacco Act* regulates tobacco use domestically, and government has also developed a *Draft Control of Tobacco Products and Electronic Delivery Systems Bill* (2018) that may the replace the Act in future;[1905]

- the *Basel Convention* criminalises trade of hazardous waste – government adopted the *Regulations Regarding the Control of the Import or Export of Waste* (2019) under the *NEMWA* to give effect to this Convention;[1906]

- the *Stockholm Convention* prohibits the production, use, import, or export of several chemicals – government adopted the *Regulations Phase-out the Use of Persistent Organic Pollutants* (2019) and the *Regulations Prohibiting the Production, Distribution, Import, Export, Sale and Use of Persistent Organic Pollutants that are listed by the Stockholm Convention on Persistent Organic Pollutants* (2021) under the *NEMA* to comply with this Convention;[1907]

- the purpose of the *Minamata Convention* is to protect people and the environment from mercury emissions and releases – government published the *Draft National Regulations for the Management of Mercury in South Africa* (2022) to implement the provisions of this Convention, but it will only

[1903] See FAO 2022 https://bit.ly/3OCQy3B; paras 3.3.3, 4.3.2.1, 4.3.2.5, 5.2.1 above for a list of these regulations.
[1904] The *International Health Regulations Act* 28 of 1974 that is based on the old *International Health Regulations* (1969) is still in effect - see para 3.3.3.5 above.
[1905] See paras 3.3.3.5, 4.3.2.1 above.
[1906] See para 3.3.3.6 above.
[1907] See para 3.3.3.6 above.

commence on 1 April 2023;[1908]

- the *Rotterdam Convention* was adopted to protect people from certain hazardous substances and pesticides – government adopted the *Regulations to Domesticate the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade* (2021) under the *NEMA* to give effect to its obligations under this Convention;[1909] and

- government must take steps to mitigate and adapt to climate change in accordance with the *Paris Agreement* (2016) – the *Climate Change Bill* (2022) is currently before Parliament and once promulgated into law will impose a variety of duties on governmental bodies to tackle climate change.[1910]

As for the regulation of environmental health among states, South Africa and all its bordering states have a duty to refrain from causing and to prevent environmental harm, and they have a duty to co-operate with one another where environmental matters are concerned, both of which stem from various international law instruments. The relevant implications hereof are that other states may not cause environmental health hazards that could harm people in South Africa (and government must enforce this responsibility), but *vice versa*, government must also prevent people from causing harm outside its borders.[1911] The latter is not specifically regulated by any law in particular, however, the application of the legal environmental health mandate generally, has much the same affect. Government can compel other states to abide by their duties in this regard by way of dispute settlement, invoking their responsibility to comply with their duties, or through the application of the *Transboundary Harm Articles*. The *Transboundary Harm Articles* may be the most useful though because in theory it could prevent any harm from occurring in the first place, as opposed to seeking recourse for harm that has already

[1908] See para 3.3.3.6 above.
[1909] See para 3.3.3.6 above.
[1910] See paras 3.3.3.7, 4.3.2.6 above.
[1911] See paras 3.4.1.1-3.4.1.8 above.

occurred.[1912]

6.4 Tracking the roots of and compiling the legal environmental health mandate, and identifying the role-players in environmental health governance

The current legal mandate for environmental health is the product or perhaps instead a victim of several distinct transformation processes, none of which were concerned with environmental health in particular. Through these processes government sought to develop a new health system, a new environmental management system, reform the water and sanitation sector, establish a housing development process, and create mechanisms to tackle climate change. All these processes gave rise to the adoption of numerous new laws, regulations, and policies, and all of them touch on aspects of environmental health. At the same time, and even though these processes were undertaken, government nevertheless inherited some laws from the pre-democratic era that were not replaced and still have a bearing on the governance of environmental health as well. Likewise, some old order laws are still operational at the provincial sphere of government that pertain to environmental health. In addition, municipalities are also at liberty to and have promulgated several bylaws to regulate environmental health matters. The outcome is a voluminous, convoluted, fragmented, and sometimes incompatible legal landscape.[1913]

Coupled with this new legal landscape, government was also restructured after 1994, which involved the creation of three independent but interrelated spheres of government. This gave way to a reconfiguration of the responsibility for environmental health among different governmental bodies, spread across all three spheres. The transition has not been without problems as far as environmental health is concerned though because the new division of responsibility for environmental health related matters is not entirely clear in every respect. The *Constitution* divided governmental responsibility into supposedly distinct functional

[1912] See para 3.4.2 above.
[1913] See paras 4.3.2-4.3.4, 4.4 above.

areas and allocated those to the different spheres of government, but unsurprisingly, environmental health practice straddle many of them. It was also during and after this new division of functional areas that the sector specific transformation processes took place and where institutional responsibilities were rearranged in an attempt to align them with the *Constitution*. In addition the *Municipal Structures Act* divides local government's functions between district and local municipalities as well. The implication hereof is that the *overall* responsibility for environmental health is currently shared among several national departments, provincial departments, and all three categories of municipalities, but the boundaries of responsibility for *specific* obligations are not always exact and sometimes overlap. Consequently, some governmental bodies may well be uncertain about what they may and what they should do, which causes confusion and a passing of the buck as far as their responsibilities are concerned.[1914] Moreover, not all municipalities had (or yet have) the capacity to take on all their new responsibilities either. All of this makes the institutional landscape disorganised, ill-equipped, and in some instances also impractical.[1915]

After investigating the transition of government and the division of functions among the respective governmental bodies, examining all the transformation processes, and perusing relevant legislation, the researcher was able to identify all the laws, regulations, and policies pertinent to and that constitute the legal environmental health mandate, and to determine who is responsible for their implementation. Before giving an account of the legal mandate it should be noted though that the mandate is informed by and has to be interpreted in light of the constitutional environmental health right.

The *Constitution* among others entrenched the rights of access to adequate housing, health care services, sufficient food and water (and sanitation), and to an environment that is not harmful to people's health and well-being. The researcher argued that the substantive content of these rights, and in particular section 24(a)

[1914] As can be evidenced from the matter brought before the court in e.g. *Myburgh NO v Msukaligwa Local Municipality* (unreported) 2019 ZAGPPHC 300 - see para 4.3.4.3 above.

[1915] See paras 4.3.1, 4.4 above.

of the *Constitution*, amount to a constitutional environmental right. As with all fundamental rights, this right guarantees entitlements to everyone and imposes obligations on government to realise them. The entitlements that this right guarantee can be attained from the provision of adequate environmental health services, which is to say that the services have to match the benchmark set in this study. The obligations that this right impose compel government to take legislative and other measures to make the practice of environmental health possible, which translates to a need for government to adopt laws to preserve and improve environmental conditions and to enable (empower) its officials and personnel so that they can implement and enforce those laws.[1916] The transformation processes and subsequent laws that were adopted after the *Constitution* came into force mostly aim to give effect to the entitlements inherent in this constitutional environmental right, and is such is pertinent to this research because it contextualises the establishment of the legal environmental health mandate.[1917]

The table below provides an account of the legal environmental health mandate in its entirety, with the exception of municipal bylaws, and it indicates which governmental bodies are responsible for the implementation of the respective laws, regulations, and policies. Note that the applicable provisions / sections of every law and regulation are not indicated here as they have already been discussed elsewhere in the research. Note further that the legal mandate is divided into two broad groups for practicality's sake: the provision and regulation of public goods, and oversight functions.

[1916] See paras 4.2.2-4.2.3 above.

[1917] Determining whether the legal environmental health mandate gives effect to the constitutional environmental health right falls beyond the scope of this research.

Table 6-1: The legal environmental health mandate[1918]

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
General:	Governance mandates →	• *NHA* - makes provision for the delivery of environmental health services. • *NEMA* - establishes a duty of environmental care and remediation; establishes an environmental authorisation system for listed activities; provides enforcement powers to EMIs. • *CPA* - provides enforcement powers to EHPs and EMIs. • *HPA* - regulates the profession of EHPs. • *Municipal Structures Act* - divides local government functions among municipalities. • *ECA* - empowers EMIs employed at municipalities to issue compliance notices to enforce the duty of care as articulated in the *ECA*. • *Health Act* (operational in provinces) - compels municipalities to provide comprehensive environmental health services. • *EHP Regulations* - sets the scope of practice of EHPs. • *EHP Norms and Standards* - sets norms and standards for the delivery of environmental health services, including compliance and	• NDFFE - designated authority in terms of the *NEMA* for certain listed activities; enforce duty of care via EMIs. • NDOH - provide limited environmental health services (port health, malaria control). • Provincial environmental departments - designated authority in terms of the *NEMA* for certain listed activities; enforce duty of care via EMIs. • Provincial health departments - provide limited environmental health services (hazardous substances control, malaria control). • Metropolitan municipalities - provide municipal health services via EHPs. • District municipalities - provide municipal health services via EHPs.

[1918] The content of this table is derived from chaps 4-5 above.

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
		enforcement. • *Regulations Relating to Qualification Criteria, Training and Identification of, and Forms to be used by, Environmental Management Inspectors and Environmental Mineral Resource Inspectors* (2017) - regulates the profession of EMIs. • *Declaration of Peace Officers in terms of Section 334 of the Act: Law Enforcement Officers Appointed by a Municipality* (2018) - permits municipalities to appoint EHPs to enforce bylaws. • *NEHP* - gives an account of government's intent as far as environmental health is concerned.	
Water quality and sanitation:	Oversight functions →	• *NHA* - regulates delivery of water quality monitoring and environmental pollution control as part of the environmental health service package; empowers EHPs to enforce its provisions. • *NWA* - establishes a general duty of care for water resources (pollution prevention). • *EHP Regulations* - sets the scope of practice of EHPs as far as water monitoring is concerned. • *EHP Norms and Standards* - sets standards for water quality monitoring and environmental pollution control monitoring on premises.	• Metropolitan and district municipalities - provide water quality and sanitation monitoring services via EHPs. • CMAs (could include personnel from provincial and/or local government, among others) - establish water use licensing systems; enforce compliance with licensing requirements. • Provincial environmental departments - enforce duty of care via EMIs. • Minister of Water Affairs and Sanitation and MECs responsible for local government affairs - ensure that WSAs comply with the *National Norms and Standards for Domestic Water and*

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
		• *National Norms and Standards for Domestic Water and Sanitation Services* (2017) - lays down standards for water and sanitation services.	*Sanitation Services* (2017).
	Provision of public goods / licensing system →	• *NWA* - establishes a water use licensing system. • *WSA* - aims to ensure that everyone has access to at least basic water and sanitation services. • *Regulations Relating to Compulsory National Standards and Measures to Conserve Water* (2001). • *National Sanitation Policy* (2016) - serves as guide for the provision of sanitation services. • *A Drinking Water Quality Framework for South Africa* (2005). • *Strategic Framework for Water Services* (2003). • *National Water and Sanitation Master Plan: Volume 1, 2, 3* (2018).	• CMAs - establish water use licensing systems. • WSAs (municipalities) - provide water services (as per the *Municipal Structures Act* this is a metropolitan and district municipality function, but in practice local municipalities provide these services as well).
Foodstuffs:	Oversight functions →	• *NHA* - regulates the delivery of food control as part of the environmental health service package; empowers EHPs to enforce its provisions. • *Foodstuffs Act* - regulates quality and safety of food; gives powers to EHPs to enforce provisions.	• NDOH - may implement the *Foodstuffs Act*; Minister of Health needs to authorise municipalities to do the same. • Metropolitan and district municipalities - provide food control service via EHPs in terms of the *NHA* and the *Foodstuffs Act* (including its regulations) (municipalities need to be

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
		• *Meat Act* - provides measures to promote meat safety (including the regulation of abattoirs); prohibits slaughter of any animal at any place other than an abattoir. • *APSA* - regulates the sale and control of agricultural products. • *EHP Regulations* - sets the scope of practice of EHPs as far as food control is concerned. • *EHP Norms and Standards* - sets monitoring standards for health surveillance of food handling premises. • *Regulations Relating to the Powers and Duties of Inspectors and Analysts Conducting Inspections and Analyses on Foodstuffs and at Food Premises* (2007) - prescribes measures that EHPs have to follow; articulates their powers to enforce the *Foodstuffs Act*. • *Regulations Governing General Hygiene Requirements for Food Premises, the Transport of Food and Related Matters* (2018) - regulates the food control service that EHPs have to provide as food inspectors. • Numerous regulations - foodstuffs-specific regulations published under the *Foodstuffs Act*, *Meat Act*, and *APSA*. • *Codex Alimentarius* - contains food standards, many have been enacted in domestic laws via regulations.	authorised by Minister of Health to be able to implement the *Foodstuffs Act*). • MECs responsible for agricultural affairs - designate Executive Officers who are veterinarians to enforce the provisions of the *Meat Act*; said Executive Officers may assign their functions over to anyone under their control, which presumably could only include personnel employed at provincial departments responsible for agricultural matters. • Minister responsible for agricultural affairs - designate Executive Officers to enforce the provisions of *APSA* (perform inspections, comply with food standards); said Executive Officers may assign their functions over to anyone under their control, which presumably could only include personnel employed at the NDALR.

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
	Provision of public goods →	• *National Policy on Food and Nutrition Security* (2014)	• NDALR, NDOH, and National Department of Trade, Industry and Competition - form a centralised food safety and quality control system to amalgamate the different entities responsible for implementing food safety regulations.
Waste and land contamination:	Oversight functions →	• *NHA* - regulates the delivery of waste management and disposal of the dead as part of the environmental health service package; empowers EHPs to enforce its provisions. • *NEMWA* - sets general duty in respect of waste management. • *Western Cape Health Care Waste Management Act* 7 of 2007 - regulates health care waste in the Western Cape. • Numerous provincial laws - regulates cemeteries, crematoria, and exhumations to certain degrees in the respective provinces. • *EHP Regulations* - sets the scope of practice of EHPs as far as waste management, general hygiene monitoring, and disposal of the dead are concerned. • *EHP Norms and Standards* - sets monitoring standards for waste management on premises and for environmental pollution control on premises. • *Regulations Relating to the Management of Human Remains* (2013) published under the	• NDOH - implement *Regulations Relating to the Management of Human Remains* (2013), could delegate responsibility to provincial health departments or municipalities. • NDFFE - establish national waste management system; designate waste management officer to co-ordinate matters relating to waste management. • Minister responsible for water affairs - may enforce *NEMWA* insofar waste management affects water sources. • Provincial environmental departments - designate waste management officers to co-ordinate matters relating to waste management; enforce the *NEMWA* via EMIs (general duty in respect of waste, abide by licence requirements). • Provincial health departments - regulate exhumations in Mpumalanga, Eastern Cape, North West, Northern Cape, Free State, and KwaZulu-Natal provinces; regulate cemeteries and crematoria in Limpopo, Gauteng, and KwaZulu-Natal provinces (this is not consistent

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
		NHA - regulates aspect concerning disposal of the dead via certification or permits (funeral undertakers' premises, crematoriums, exhumations, etc.). To be replaced by the *Draft Regulations Relating to the Management of Human Remains* (2022). • *Listed Waste Management Activities* (2013). • *List of Waste Management Activities that have, or are likely to have, a Detrimental Effect on the Environment* (2013). • *Waste Classification and Management Regulations* (2013). • *Regulations Regarding the Control of the Import or Export of Waste* (2019) to give effect to the Basel Convention. • Policies - *National Domestic Waste Collection* (2011); *National Waste Management Strategy* (2020), among others.	with the constitutional division of functions). • Metropolitan and district municipalities - provide waste management and disposal of the dead services via EHPs in terms of the *NHA* (can only implement regulations regarding human remains if authorised by the NDOH); designate waste management officers to co-ordinate matters relating to waste management; enforce provisions of the *Western Cape Health Care Waste Management Act* 7 of 2007 concerning spillages of health care waste in the Western Cape; as per further provincial laws enforce the provisions concerning cemeteries and crematoria in Mpumalanga, and KwaZulu-Natal provinces.
	Provision of public goods / licensing system →	• *NEMWA* - established a waste management licensing system; regulates provision of waste management services (removal, storage, disposal); sets national standards for waste management (classification, disposal, storage). • Numerous regulations published under the *NEMWA* - pertains to the provision of waste management services, including but not limited to the *National Norms and Standards for Disposal of Waste to Landfill* (2013); *National Norms and Standards for the Storage of Waste*	• Provincial environmental departments - establish waste management licensing system. • All municipalities - provide waste management services (division between district and local municipalities depends on the type of activity); comply with general duty in respect of waste management; obtain necessary licences.

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
		(2013).	
Housing:	Oversight functions →	• *NHA* - regulates the delivery of health surveillance of premises as part of the environmental health service package; empowers EHPs to enforce its provisions. • *EHP Regulations* - sets the scope of practice of EHPs as far as the health surveillance of premises is concerned. • *EHP Norms and Standards* - sets monitoring standards for health surveillance on premises. • *National Building Regulations* (1990) - sets specifications regarding housing and services in relation thereto.	• Metropolitan and district municipalities - provide health surveillance of premises service via EHPs. • Metropolitan and local municipalities - appoint Building Control Officers to ensure compliance with the *Buildings Act* and its regulations (make recommendations, perform inspections, enforce provisions relating to building specifications).
	Provision of public goods / housing development process / approval system →	• *Housing Act* - aims to facilitate a sustainable housing development process. • *Buildings Act* - prohibits the erection of buildings without approval. • *National Housing Code* (2009) - lists and details all housing programmes.	• Minister of Human Settlements - establish a housing development process. • MECs responsible for housing - administer housing programmes; support and strengthen municipalities; co-ordinate housing development. • All municipalities - take all reasonable and necessary steps to ensure that inhabitants have access to adequate housing. • Metropolitan and local municipalities - consider / approve applications for the erection of buildings.

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
Communicable diseases and vectors:	Oversight functions →	• *NHA* - regulates the delivery of surveillance and prevention of communicable diseases, vector control, malaria control, and port health services as part of the environmental health service package; empowers EHPs to enforce its provisions. • *IHR Act* - gives effect to old *International Health Regulations* (1969) and thereby regulates the port health services function as far as the spread of communicable diseases are concerned. • *EHP Regulations* - sets the scope of practice of EHPs as far as the surveillance and prevention of communicable diseases, vector control, malaria control, and port health services are concerned. • *EHP Norms and Standards* - sets monitoring standards for pest control monitoring on premises and for port health services. • *Regulations Relating to the Surveillance and the Control of Notifiable Medical Conditions* (2017). • *Malaria Elimination Strategic Plan* (2019-2023).	• NDOH - provides port health services in terms of the *NHA* and the *IHR Act*, and also the new IHRs (according to the *EHP Norms and Standards*, but the IHRs have not been adopted into law yet); implement malaria control plan in conjunction with provincial health departments. • Provincial health departments - implement malaria control plan in conjunction with NDOH. • Metropolitan and district municipalities - provide surveillance and prevention of communicable diseases and vector control services via EHPs.
Air quality and noise control:	Oversight functions →	• *NHA* - makes provision for the delivery of environmental pollution control as part of the environmental health service package; empowers EHPs to enforce its provisions. • *NEMAQA* - sets national ambient air quality	• NDEFF - appoint air quality officer to co-ordinate air quality management. • Provincial environmental departments - monitor ambient air quality; appoint air quality officers to co-ordinate air quality management,

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
		standards. • *Tobacco Act* - prohibits the use of tobacco products in public places. • *ECA* - empowers municipalities to enforce the *Noise Control Regulations* (1991). • *EHP Regulations* - sets the scope of practice of EHPs as far as environmental pollution control and noise control are concerned. • *EHP Norms and Standards* - sets norms and standards for environmental pollution control on premises. • *National Framework for Air Quality Management in the Republic of South Africa* (2017) - clarifies roles for air quality management. • *National Ambient Air Quality Standards* (2009). • *Noise Control Regulations* (1991) published under the ECA.	enforce *NEMAQA* via EMIs. • Metropolitan and district municipalities - provide air quality control via EHPs; enforce provisions of the *Tobacco Act*; enforce *NEMAQA* via EMIs to ensure compliance with licence requirements (need to be designated by provincial environmental departments) (inconsistent with the *Municipal Structures Act* as far as air pollution is concerned). • All municipalities - monitor ambient air quality as per the *NEMAQA*, appoint air quality officers to co-ordinate air quality management (inconsistent with the *Municipal Structures Act* as far as air pollution is concerned). • Metropolitan and local municipalities - ensure compliance with the *Noise Control Regulations* (1991).
	Provision of public goods / licensing system →	• *NEMAQA* - regulates air quality by way of a licensing system. • *List of Activities which Result in Atmospheric Emissions which have or may have a Significant Detrimental Effect on the Environment, Including Health, Social Conditions, Economic Conditions, Ecological Conditions or Cultural Heritage* (2010) and (2013).	• Metropolitan and district municipalities - implement and manage an atmospheric emission licencing system.

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
Chemicals and hazardous substances:	Oversight functions →	• *NHA* - makes provision for the delivery of chemical safety and control of hazardous substances services as part of the environmental health service package; empowers EHPs to enforce its provisions. • *Haz Act* - prohibits the production, acquisition, use, operation, disposal, and importation of certain hazardous substances. • *FFAS Act* - prohibits the acquisition, disposal, sale, use, or importation of certain fertilizers, farm feeds, agricultural remedies, or stock remedies (via numerous regulations). • *EHP Regulations* - sets the scope of practice of EHPs as far as chemical safety, radiation monitoring and control, and control and monitoring of hazardous substances are concerned. • *EHP Norms and Standards* - sets monitoring standards for hazardous substances control and chemicals management. • *Regulations Relating to the Registration of Fertilizers, Farm Feeds, Agricultural Remedies, Stock Remedies, Sterilising Plants and Pest Control Officers* (1983). • *Regulations to Domesticate the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade* (2021) - gives effect to the *Rotterdam Convention*.	• Minister responsible for agricultural affairs - presumably has to enforce the provisions of the *FFAS Act* (metropolitan and district municipalities seem to have this function in accordance with the *NHA*, but they are not empowered to enforce the *FFAS Act*). • Provincial health departments - must perform hazardous substances control service as per the *NHA*. • Municipalities - may employ inspectors to ensure compliance with the *Haz Act* if authorised (none have been authorised post 1994) (the hazardous substances control function is specifically excluded from the municipal health services function by *NHA*). • Metropolitan and district municipalities - provide chemical safety service via EHPs.

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
		• *Regulations to Phase-out the Use of Persistent Organic Pollutants* (2019), and the *Regulations Prohibiting the Production, Distribution, Import, Export, Sale and Use of Persistent Organic Pollutants that are listed by the Stockholm Convention on Persistent Organic Pollutants* (2021) - gives effect to the *Stockholm Convention*. • *Draft National Regulations for the Management of Mercury in South Africa* (2022) - gives effect to the *Minamata Convention*.	
	Provision of public goods / licensing system / registration system →	• *Haz Act* - establishes a licencing system for the sale and use of certain hazardous substances. • *FFAS Act* - establishes a registration system for pesticides. • *Regulations Relating to the Registration of Fertilizers, Farm Feeds, Agricultural Remedies, Stock Remedies, Sterilising Plants and Pest Control Officers* (1983). • Numerous regulations - categorise various hazardous substances into distinct groups; regulate matters with respect to those groups (I, II, III, IV). • *Pest Control Operator Regulations* (2011).	• NDOH - implement a licensing system in terms of the *Haz Act*. • Minister responsible for agricultural affairs - appoint a registrar to implement a pesticide registration system. • EHPs - those applying agricultural remedies must be registered as Pest Control Operators.
Climate change:	Oversight functions →	• *Declaration of Greenhouse Gases as Priority Air Pollutants* (2017) - greenhouse gases declared as pollutants under the *NEMAQA*. • *National Pollution Prevention Plans Regulations*	• NDFFE or provincial environmental departments - designate EMIs to ensure compliance with the *NEMAQA*, including the regulations concerning greenhouse gases.

Environmental health hazards	Grouping	Applicable laws, regulations, and/or policies	Responsible institutions
		(2017) - sets requirements for pollution prevention plans of greenhouse gases. • *National Greenhouse Gas Emission Reporting Regulations* (2017) - sets reporting requirements; establishes a National Greenhouse Gas Inventory.	
	Provision of public goods / climate change response →	• *National Climate Change Adaptation Strategy* (2019).	• NDFFE - co-ordinate and implement a national climate change adaptation strategy. • Provincial environmental departments - lead their climate change responses.

6.5 An evaluation of the content of the legal mandate to identify its shortcomings

Having regard to the benchmark set above, a few cursory remarks can be made.[1919] The legal environmental health mandate does place a *duty* on government to protect people's health, quality of life, and well-being from environmental health hazards, none more so than the broad and all-encompassing environmental health inspection function as articulated in article 83 in the *NHA*, while all the other duties imposed on specified governmental bodies (and their officials and personnel) also contribute towards this purpose, as can be evidenced from Table 6-1 above.[1920] These duties are generally concerned with the provision and regulation of public goods as a way to prevent environmental hazards from causing harm, and with oversight functions as a way to prevent people from causing environmental health hazards. Together all these duties ought to *enable* government to anticipate, identify, assess, reduce, repair, monitor, control, and prevent environmental hazards. For the most part the mandate provides governance tools to governmental bodies to perform these duties, in particular by empowering personnel such as EHPs and EMIs to enforce and thereby ensure compliance with the provisions of the applicable laws. The mandate also endeavours to *specify* what governmental bodies and their personnel must do as far as the provision of those public goods that are essential to people's health and the delivery of the supervisory environmental health services are concerned.

Apart from the above, the legal environmental health mandate does have some shortcomings. These mostly arise out of the mandate's fragmented character, and the disorganised institutional landscape. They include that the practice of environmental health is not co-ordinated, that the functions and powers of governmental bodies and personnel overlap in some instances, that role-clarification is not always clear or appropriate, that the provisions of some laws conflict with one another, that bureaucratic obstacles can hamper personnel from performing their functions by causing a lack of essential governance tools, and that governmental

[1919] See para 6.2 above.
[1920] See para 6.4 above.

bodies have to police themselves in some instances.

6.5.1 Lack of co-ordination

The role-players involved in the governance of environmental health consist of different national line departments, provincial departments, and municipalities, making it impossible for all these institutions to put in a concerted effort to provide environmental health services without co-operating with one another and without co-ordinating the exercise of their functions. The NDOH claimed responsibility for environmental health in the country as per the *NEHP*, and thereby committed to take the responsibility to lead efforts in this regard, but they do not have authority over all the governmental bodies involved in this endeavour. As such the practice of environmental health can only be co-ordinated on a voluntary basis. Admittedly the NDOH did develop the *EHP Norms and Standards* to standardise the provision of environmental health services across the country, but an audit on the implementation of the *EHP Norms and Standards* showed that municipalities are failing dismally in this regard.[1921]

6.5.2 Overlapping mandates

The mandates of the NDOH and NDFFE overlap in a material respect – the environment. EMIs are concerned with the protection of the environment, whereas EHPs are concerned with the status of the environment insofar it affects people's health. The overlap is particularly prevalent where the environmental pollution control function as part of the environmental health service package is concerned. This can become problematic because it can lead to a situation where neither render a service to remedy a particular environmental health hazard, allowing the hazard to continue unabatedly.

A similar situation arises as far as food control is concerned because both the *NHA* and *Foodstuffs Act* create food control duties (such as the need to conduct inspections of food handling premises), but seeing that EHPs employed by municipalities can perform the functions set out in both laws, it does not create

[1921] NDOH *EHP Norms and Standards: Audit Findings* 9-15.

problems on a practical level.

6.5.3 Incompatible legal landscape causing practical challenges with implementation

Some laws contain conflicting provisions causing uncertainties with respect to role-clarification, which make their implementation rather challenging. Metropolitan and local municipalities are responsible for the air pollution and noise control functions in accordance with the *Municipal Structures Act*. Yet, in as much as these functions form part of the environmental health service package, they have to be performed by district and not local municipalities in accordance with the *NHA*. The *NEMAQA* also imposes air quality control functions on district municipalities. As such these laws are inconsistent with the division of powers and functions between the categories of municipalities.

Metropolitan and local municipalities have to appoint Building Control Officers that can inspect buildings and ensure that they are built up to standard in accordance with the *Buildings Act*, whereas EHPs at metropolitan and district municipalities have to conduct health surveillance of premises that also include that they have to make sure that buildings comply with the *National Building Standards* in accordance with the *NHA*. So there is a clear disconnect in this regard where different personnel have to perform the same or similar functions, and also from different institutions.

Likewise, Executive Officers designated by the Minister responsible for agricultural matters have to enforce the provisions of the *APSA*, and Executive Officers designated by the respective MECs responsible for agricultural matters have to implement the *Meat Act*, yet EHPs also need to enforce the standards published in terms of both of these laws, but are not permitted to do so by the laws themselves. The implication being that there is also a clear disconnect in this regard as far as the environmental health service function is concerned.

The *Haz Act* has to be implemented by the NDOH and could be implemented by municipalities as well as per the Act. However, the *NHA* specifically excludes hazardous substances control from the municipal health services function and

makes it the responsibility of provincial health departments. The *Haz Act* does not empower provincial government to implement it though. This means that EHPs employed by provincial health departments cannot implement the *Haz Act*, and neither can EHPs employed by municipalities.

The provincial laws concerning the regulation of cemeteries and crematoriums often require approval before a municipality may establish or manage either of them, yet this is a local government function as per the *Constitution*, meaning that they do not have to obtain provincial authorisation.

6.5.4 Bureaucratic obstacles

Some administrative hurdles prohibit personnel from performing their functions. EHPs have to be designated as health officers in terms of the *NHA* to provide environmental health services, but they also have to be authorised by the Minister of Health to be able to implement the *Foodstuffs Act* and the *Haz Act* (or whichever personnel will perform this function), they have to be designated as peace officers in terms of the *CPA*, as EMIs to make use of the governance tools in the *NEMA* and to enforce the provisions in the *NEMAQA* and *NEMWA*, and they have to be designated as law enforcement officers to be able to enforce local bylaws. Furthermore, most of these appointments require certification (proof of designation), which means that personnel may have to present several identification cards to perform their functions, and naturally the legal complexities (having to exercise powers in respect of numerous laws) could become rather confusing. Another implication hereof is that municipalities have to rely on provincial or national departments to enable them to perform their functions, which mean that they must voluntarily co-operate with one another to secure all these authorisations. A municipality is not at liberty or empowered to *compel* the NDOH, NDFFE, or the provincial health and environmental departments to provide them with the required authorisations.

6.5.5 Municipalities policing themselves

Municipalities have to provide waste management services, but EHPs employed by

municipalities also have to monitor waste management activities in accordance with the *NHA*. This creates a situation where municipalities have to police themselves, which is not ideal. WSAs (municipalities) have to provide water and sanitation services and have to comply with the *National Norms and Standards for Domestic Water and Sanitation Services* (2017) in this regard. The NDWS and provincial government have the power to ensure that they do, but the *WSA* does not compel them to do so. EHPs have to monitor the quality of water and sanitation services, but they are also employed by the very municipalities whose services they have to monitor (except in those cases where local municipalities provide water services, which is in conflict with the division of functions by the *Municipal Structures Act* in any event). Municipalities therefore also have to police themselves in this regard.

6.6 Recommendations

In light of the findings above, the following recommendations can be made:

a) Government had an opportunity to establish a body that could co-ordinate environmental health matters when they created the National Public Health Institute via the *NPHISA Act*, but failed to incorporate environmental health into the mandate of the Institute in a meaningful manner. By amending the *NPHISA Act* they can revise the mandate of the Institute and enable them to co-ordinate environmental health matters, which after all is to be expected from an institute concerned with public health. This may well also ameliorate some of the other issues in the legal mandate, such as to assist in role-clarification where mandates overlap, and to assist municipalities to obtain all the relevant authorisations. In the same vein the NDOH can also initiate and deploy the mechanisms in the *IGFRA* to create an intergovernmental forum where all the role-players can exchange information and adopt protocols towards improving the implementation of the legal mandate.

b) The only way to resolve the overlapping mandates is to specify in very exact terms what EMIs and EHPs have to do so as to avoid conflicts in this regard. One solution could be to specifically exclude the monitoring of standards as

far as the SEMAs are concerned from the scope of practice of EHPs, which is to remove the 'environmental pollution control' function from their mandates. However, that seems counterintuitive considering their overall purpose. Seeing that environmental health practice ought to focus on the prevention of environmental health hazards and move away from a law enforcement type approach, another way to draw the line between the mandates could be to limit EMIs' role to complaints, whereas EHPs could only perform routine inspections and not handle any complaints in this regard. This also means that EHPs would not need to be trained and designated as EMIs either.

c) Insofar the laws conflict with one another and create an incompatible legal landscape, some laws clearly need to be updated to conform to the new constitutional dispensation, such as the *Haz Act*. It will also be useful to amend the *Buildings Act*, *APSA*, and *Meat Act* to permit EHPs to ensure compliance with those laws insofar it pertains to their environmental health service delivery function. On the other hand, the *IHRs* also need to be promulgated into law because currently, the NDOH must rely on the *IHRs Act* (which is based on the old *International Health Regulations* (1969)) to perform port health services. A further solution could lie in the adoption of bylaws in certain instances. Municipalities may regulate their own affairs and have original legislative powers in this regard, and in as much as national laws create conflicting situations, local bylaws will prevail if it concerns local government matters as set out in part B of schedules 4 and 5 of the *Constitution*.

d) One way to resolve some of the bureaucratic obstacles would be to incorporate the relevant provisions of all the other laws into the *NHA* by reference, whereby EHPs can exercise their functions without having to secure certifications and designations as per all the other laws. In other words, EHPs would be able to perform all their functions by virtue of the *NHA*. The relevant Ministers should also ensure that all municipalities are authorised to implement the respective laws. This is mostly the case as far

as the *Foodstuffs Act* is concerned, as well as the *CPA* in terms of which all municipalities are authorised to employ local Law Enforcement Officers. But municipalities are not authorised to implement the provisions of the *Haz Act* as required by said Act. Municipalities could also empower EHPs to perform most of these functions via bylaws, and as such an EHP would only need to be designated as a Law Enforcement Officer.

e) In those cases where municipalities have to police themselves, it would be better to task provincial health departments with the duty to ensure compliance with the respective laws. This is mainly the case as far as EMIs are concerned that are designated by provincial environmental departments. If the scope of functions of EHPs are limited only to routine inspections, and EMIs have to deal with complaints as recommended above, this issue would also be resolved in that EMIs from provincial government would be responsible for issuing compliance notices to municipalities to ensure that they comply with the requirements concerning their waste management and water service delivery functions.

6.7 Need for future research

It may be that some municipalities successfully utilise bylaws to regulate environmental health matters in their jurisdictions, or that district and local municipalities entered into service legal agreements to improve their delivery of municipal health services. In addition, some of the challenges in the implementation of the legal environmental health mandate may well reside outside the scope of a literature review of legal resources (such as capacity and resource constraints, and a lack of training) as well. For this reason it could be useful to undertake empirical research in the form of case studies to examine the practical application of local environmental health bylaws of and the intergovernmental arrangements between *particular* municipalities to learn from their successes. This could also involve interviewing personnel to determine what legal and practical limitations they experience on ground level to perform their duties and to fulfil their mandates.

ANNEXURE A

Metropolitan Municipalities

Buffalo City Metropolitan Municipality Environmental Health Bylaw (2010) (LAN 123 in PGE 2459 of 22 October 2010)

City of Cape Town Metropolitan Municipality Environmental Health Bylaw (2003) (LAN unknown in PGE 6041 of 30 June 2003)

City of Johannesburg Metropolitan Municipality Public Health Bylaw (2004) (LAN 830 in PGE 179 of 21 May 2004)

Ekurhuleni Metropolitan Municipality Public Health By-Laws (2009) (LAN 1908 in PGE 256 of 27 November 2009)

eThekwini Metropolitan Municipality Public Health Bylaw (1911) (PN 225 in PG 93 of 28 December 1911)

Mangaung Metropolitan Municipality Environmental Health Services Bylaw (2019) (PN 47 in PG 38 of 19 July 2019)

Nelson Mandela Bay Metropolitan Municipality Municipal Health Bylaw (2010) (LAN 36 in PGE 2322 of 24 March 2010)

District Municipalities (by province)

Eastern Cape

Alfred Nzo District Municipality Municipal Health Bylaw (2009) (LAN 37 in PGE 2045 of 23 January 2009)

Amathole District Municipality Municipal Health Bylaw (2010) (LAN 66 in PGE 2378 of 9 June 2010)

Chris Hani District Municipality Municipal Health Services Bylaw (2018) (PN 244 in PG 4151 of 19 November 2018)

Joe Qgabi District Municipality Municipal Health Services Bylaw (2019) (LAN 51 in PG 4204 of 11 March 2019)

Sarah Baartman District Municipality Municipal Health Bylaw (2006) (LAN 217 in PGE 1629 of 27 November 2006)

Thabo Mofutsanyane District Municipality Municipal Health Bylaw (2013) (LAN in PG 28 of 28 June 2013)

Free State

Fezile Dabi District Municipality Municipal Health Services Bylaw (2009) (LAN in PG 19 of 27 March 2009)

Xhariep District Municipality Environmental Health Bylaw (2011) (PN 187 in PG 81 of 9 December 2011)

Gauteng

West Rand District Municipality Municipal Health Services Bylaw (2010) (LAN 1051 in PGE 154 of 13 August 2010)

KwaZulu-Natal

Harry Gwala District Municipality Municipal Health Services Bylaw (2021) (MN 7 in PG 2166 of 1 April 2021)

King Cetshwayo District Municipality Environmental Health Bylaw (2013) (MN 10 in PGE 899 of 18 February 2013)

Umgungundlovu District Municipality Environmental Health Bylaw (2017) (MN 126 in PG 1903 of 23 November 2017)

Zululand District Municipality Municipal Health Services Bylaw (2020) (PN 25 in PG 2166 of 20 February 2020)

Limpopo

Capricorn District Municipality Municipal Health Services Bylaw (2018) (LAN 62 in PG 2905 of 18 May 2018)

Greater Sekhukhune District Municipality Public and Environmental Health Bylaw (2015) (Gen Not 332 in PGE 2612 of 6 October 2015)

Vhembe District Municipality Municipal Health Services Bylaw (2010) (LAN 30 in PGE 2055 of 16 March 2012)

Mpumalanga

Ehlanzeni District Municipality Municipal Health Bylaw (2018) (PN 3 in PG 2887 of 5 January 2018)

Gert Sibande District Municipality Municipal Health Bylaw (2014) (LAN 86 in PGE 2300 of 21 May 2014)

Nkangala District Municipality Municipal Health Bylaw (2016) (LAN 46 in PG 2701 of 10 June 2016)

North-West

Bojanala Platinum District Municipality Public Health Bylaws for Municipal Health (2022) (LAN 261 in PG 8416 of 20 September 2022)

Dr Kenneth Kaunda District Municipality Municipal Health Bylaw (2012) (LAN 92 in PGE 7011 of 29 June 2012)

Ngaka Modiri Molema District Municipality Municipal Health Bylaw (2012) (LAN 345 in PGE 7060 of 10 December 2012)

Northern Cape

Frances Baard District Municipality Municipal Health Bylaw (2013) (LAN 47 in PGE 1702 of 21 June 2013)

Pixley ka Seme District Municipality Municipal Health Services Bylaw (2018) (MN 39 in PG 2232 of 24 December 2018)

Western Cape

Cape Winelands District Municipality Municipal Health Bylaw (2010) (LAN unknown in PGE 6696 of 15 February 2010)

Central Karoo District Municipality Municipal Health Bylaw (2019) (LAN unknown in PG 6631 of 29 May 2009)

Garden Route District Municipality Health Services Bylaw (2018) (LAN unknown in PGE 8018 of 10 December 2018)

Overberg District Municipality Municipal Health Services Bylaw (2019) (LAN unknown in PGE 8126 of 15 July 2019)

West Coast District Municipality Municipal Health Bylaw (2008) (LAN unknown in PG 6543 of 9 September 2008)

Local Municipalities (by province)

Eastern Cape

Koukamma Local Municipality Municipal Health Services Bylaw (2018) (PN 136 in PG 4098 of 6 August 2018)

Matatiele Local Municipality Public Health Bylaw (2005) (LAN 47 in PG 6438 of 20 October 2005)

Ntabankulu Local Municipality Public Health Bylaw (2006) (LAN 126 in PGE 1596 of 29 September 2006)

Nyandeni Local Municipality Public Health Bylaw (2010) (LAN 52 in PGE 2351 of 19 May 2010)

Umzimvubu Local Municipality Public Health Hazard and Nuisances Bylaw (2008) (LAN 43 in PGE 1900 of 30 May 2008)

Free State

Masilonyana Local Municipality Environmental Health Bylaw (2011) (PN 187 in PG 81 of 9 December 2011)

Phumelela Local Municipality Environmental Health Bylaw (2011) (MN 187 in PG 81 of 9 December 2011)

Gauteng

Lesedi Local Municipality Public Health Bylaw (2015) (LAN 1606 in PGE 408 of 15 September 2015)

KwaZulu-Natal

Abaqulusi Local Municipality Environmental Bylaw (2016) (PN 87 in PGE 3666 of 10 May 2016)

Msunduzi Local Municipality Public Health Bylaw (2015) MN 100 in (PGE 1394 of 25 June 2015)

Mthonjaneni Local Municipality Environmental Health Bylaw (2005) (MN 69 in PG 6449 of 15 December 2005)

Okhahlamba Local Municipality Public Health Bylaw (2008) (MN 11 in PGE 79 of 29 February 2008)

Richmond Local Municipality Public Health Bylaw (2010) (MN 123 in PGE 516 of 1 November 2010)

Ulundi Local Municipality Environmental Health Bylaw (2006) (MN 111 PG 870 of 11 December 2012)

uMhlathuze Local Municipality Environmental Health Bylaw (2006) (MN 16 in PG 6508 of 14 September 2006)

uMlalazi Local Municipality Environmental Health Bylaw (2010) (MN 20 PGE 389 of 11 March 2010)

Umzimkhulu Local Municipality Public Health Bylaw (2011) (MN 133 in PG 648 of 10 November 2011)

Limpopo

Greater Tzaneen Local Municipality Environmental Health Bylaw (2019) (LAN 157 in PG 3036 of 27 September 2019)

Mpumalanga

Bushbuckridge Local Municipality Public Health Bylaw (2005) (LAN 188 in PGE 1170 of 12 August 2005)

Dr JS Moroka Local Municipality Public Health Bylaw (2021) (Gen Not 22 in PG 3252 of 9 April 2021)

Emalaheni Local Municipality Public Health Bylaw (2008) (LAN 65 in PGE 1510 of 27 February 2008)

Msukaligwa Local Municipality Public Health Bylaw Gen Not 178 in PGE 1430 of 11 May 2007)

Pixley ka Seme Local Municipality Public Health Bylaw LAN 188 in PGE 1348 of 30 June 2006)

Victor Khanye Local Municipality Public Health Bylaw LAN 114 in PGE 2307 of 29 May 2014)

North-West

City of Matlosana Local Municipality Public Health Bylaw (2003) (Gen Not 402 in PGE 5957 of 5 December 2003)

Rustenburg Local Municipality Public Health Hazards and Nuisances Bylaw (2005) (LAN 238 in PGE 6205 of 6 September 2005)

Northern Cape

Dawid Kruiper Local Municipality Health Nuisances Bylaw (2017) (Gen Not 128 in PG 2131 of 4 September 2017)

Western Cape

(none)

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