Addressing the conflict between property development and the environment when such conflict occurs within the urban edge: Legal considerations

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I dedicate this thesis to my beautiful and smart grandchildren:

Khush Govindjee Jay Govindjee

Bhakti Govindjee Maya Govindjee

with the message that education is something that no one can take away from you.

This thesis is also dedicated to the memory of my loving parents, Dayaljee Soni and Kumar Soni, who instilled in our family the importance of education and to the memory of my parents-in-law Pundit Brijlal Govindjee and Kanta Govindjee.

The inspiration for this research was the acquisition of a large property, Erf 8 Parsonsvlei, Port Elizabeth for a substantial amount. In hindsight, a thesis could also be written on the actual acquisition and purchase of this property and the purchase of the interests of all other parties involved. The process took a period of about five years from beginning to end. It entailed the drafting of legal and commercial contracts, funding the acquisition through a linked and simultaneous sale of a portion of the property and negotiating with Executors and Trustees. As a result our family became the owner of a 320 hectare property, in close proximity to Bay West Shopping Centre in Port Elizabeth. By all accounts it was a miracle of sorts. Located on the periphery of Port Elizabeth, within the urban edge and with suburban development on one end and a nature reserve on the other, Erf 8 Parsonsvlei came with its own challenges. It was with a view to resolving these challenges, that I decided to study again rather than engage planning and environmental specialists. The journey has been rewarding.

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ABSTRACT

The main aim of this study was to analyse how South Africa should address the conflict between property development and the environment when the conflict occurs within the urban edge, taking into consideration existing laws and policies, learning points from the foreign jurisdictions of Singapore and Rwanda, as well as the international context.

As a result of the legacy of the *apartheid* regime the boundaries of cities expanded exponentially and the urban edge was introduced as a planning tool to prevent sprawl and to address the situation. The Constitution, and section 24 in particular, suggests that there is a need to resolve the potential conflict that exists between the protection of the environment and the promotion of social and economic interests through property development. Guided by the Constitution, planning legislation, including SPLUMA, and environmental legislation such as NEMA, have played a role in transforming and re-shaping the political and legal history of South Africa. However, it is acknowledged that there are challenges to sustainability and that South Africa faces difficulties in attaining Sustainable Development Goal (SDG) 11 which relates to making cities inclusive, safe, resilient and sustainable by the year 2030. There are conflicts that must be addressed. These relate, eg to human settlements that are unsuitable and insufficient, informal settlements on the periphery of large cities, a failing economy, transport shortcomings and infrastructure upgrades.

Foreign jurisdictions were examined to determine whether they can provide insights to address the conflict. Singapore promotes policies of intensification and densification in its urban development, independent of outward expansion and has made great strides with regard to property development. Simultaneously, it enhances the environment. Rwanda, described as a promising showcase of African sustainable development, received valuable advice from the United Nations. It provides lessons with regard to urbanisation, eradicating sprawl and improving the quality of life of its people.

Against that background, it was found that while South Africa does not have dedicated legislation for the sustainable development of cities, the array of existing planning and

environmental legislation, plans and policies do have the capacity to resolve the problems that confront it. Nevertheless, difficulties remain. Included are the absence of a standard definition of the urban edge; failure to consolidate or correlate legislation relating to sustainable development in urban areas; a lack of intergovernmental relations coupled with a lack of municipal capacity and fragmented developments in the peripheral areas of cities. The thesis proposes a new definition of the urban edge, for inclusion in SPLUMA, that will guide the implementation and amendment of the urban edge. It also recommends the compilation of consolidated and comprehensive guidelines that give directions on sustainable development in urban areas. The formation of an intergovernmental committee is proposed to resolve the lack of cooperation between the different spheres and departments involved in sustainable development in cities. Lastly, the creation of satellite cities, similar to those in Singapore and the secondary cities of Rwanda, is recommended to replace the present landscape.

Keywords: Urban edge, conflict, section 24 of the Constitution, SDG 11, environment, sustainable development, SPLUMA, National and Municipal SDFs, SPLUMA principles, IDPs, urban and rural linkages, NDP, IUDF, NEMA, NEMA principles, EIAs, EMFs, SEAs, role of municipalities, international soft laws, VNR, cooperative governance, satellite cities

TABLE OF CONTENTS

ACKNOWLEDGEMENTS ..... **i**

ABSTRACT ..... **iii**

LIST OF ABBREVIATIONS ..... **xiii**

Chapter 1 ..... **1**

Introduction **1**

1.1 Cities and the urban edge 1

1.2 Concept of the urban edge 2

1.2.1 Background 2

1.2.2 Conflicts relating to the urban edge 5

1.3 South African legal context 7

1.3.1 The Constitution 7

1.3.2 Planning and environmental legislation 11

1.4 International context 15

1.5 Singapore and Rwanda 18

1.6 Research question 26

1.7 Aim of the study 27

1.8 Research methodology 27

Chapter 2 ..... **31**

The urban edge and sustainable development in cities **31**

2.1 Historical background of the urban edge 32

2.2 The urban edge in South Africa..... 41

2.2.1 The urban edge of the City of Cape Town 42

2.2.2 The urban edge of the City of Johannesburg as guided by Gauteng province45

2.3 Advantages and disadvantages of the urban edge..... 49

2.4 Descriptions and comments relating to the urban edge 52

2.4.1 Various descriptions and definitions of the urban edge..... 52

2.4.2 The urban edge in court decisions 55

2.4.3 Implementing the urban edge successfully 56

2.5 Proposing an ideal urban edge definition 59

2.6 International soft law paradigms relating to cities and the urban edge 62

2.7 Conclusion..... 68

Chapter 3..... 70

South African planning legislation and sustainable development within the urban edge 70

3.1 Introduction..... 70

3.2 The Constitution 73

3.3 Integrated Development Plans..... 79

3.4 SPLUMA and the urban edge 81

3.5 The role of the SPLUMA principles..... 86

3.6 Spatial Development Frameworks in SPLUMA..... 90

3.6.1 National Spatial Development Framework..... 90

3.6.2 Municipal Spatial Development Frameworks 91

3.7 Land use schemes in SPLUMA..... 96

3.8 Property development procedures in terms of SPLUMA..... 99

3.9 National Development Plan and Integrated Urban Development Framework.....102

3.10 Agricultural land and urban-rural linkages.....104

3.11 Addressing spatial planning challenges in cities.....106

3.12 Conclusion.....110

Chapter 4.....113

Sustainable development and the urban edge in environmental legislation.....113

4.1 Introduction.....113

4.2 The Constitution and the environment.....115

4.2.1 Section 24 of the Constitution.....115

4.2.2 Environment and spheres of government 119

4.2.3 Sustainable development.....122

4.2.4 Need and desirability of a development.....126

4.2.5 Issues considered in addressing conflicts.....127

4.3 National Environmental Management Act.....129

4.3.1 NEMA principles 130

4.3.2 Environmental implementation and management plans 133

4.3.3 Integrated environmental management and the NEMA tools 135

4.3.4 Environmental management frameworks 135

4.3.5 Environmental Impact Assessment 139

4.3.6 Strategic Environmental Assessment 144

4.4 Other environmental legislation 146

4.4.1 National Environmental Management: Biodiversity Act 146

4.4.2 National Environmental Management: Protected Areas Act 147

4.4.3 National Environmental Management: Integrated Coastal Management Act 148

4.5 Environmental considerations in SPLUMA 150

4.6 Cooperative environmental governance 153

4.7 Road to SDG 11 154

4.8 Conclusion 158

Chapter 5 161

Singapore, a well-run sustainable garden city 161

5.1 Introduction 161

5.2 Background 166

5.3 Planning laws, policies and plans 169

5.3.1 Planning Act 170

5.3.2 Concept Plan 174

5.3.3 Master Plan 182

5.3.4 The URA and the MND's role in promoting sustainable development 189

5.4 Environmental laws, plans and policies 192

5.4.1 Phases of environmental protection 193

5.4.2 The Environmental Protection and Management Act 195

5.4.3 EIAs in Singapore 199

5.5 Addressing conflicts between property development and the environment in practice 204

5.6 Satellite cities 210

5.7 Conclusion 212

Chapter 6 216

Rwanda: a promising showcase of African sustainable development 216

6.1 Introduction 216

6.1.1 Background and history of planning 219

6.2 Urbanisation strategies 222

6.3 General policies 225

6.3.1 Institutional planning 225

6.3.2 Vision 2020 and Vision 2050 225

6.3.3 National Decentralisation Policy 230
6.4 Planning laws, policies and instruments 230
6.4.1 Urban planning and building 231
6.4.2 The National Urbanization Policy 232
6.4.3 Urban Master Plans 234
6.4.4 Economic Development and Poverty Reduction Strategies 236
6.4.5 National Land Policy 238
6.4.6 Miscellaneous policies and plans for sustainable development 238
6.5 Protecting the environment 240
6.5.1 Background 240
6.5.2 Environmental policies and laws 242
6.5.3 Rwanda Environmental Management Authority 244
6.5.4 National Environmental and Climate Change Policy 245
6.5.5 EIAs in Rwanda 247
6.5.6 UNEP recommendations 248
6.6 The City of Kigali and its secondary or satellite cities 251
6.6.1 The City of Kigali 251
6.6.2 The KMP and the newly created urban growth boundary 255
6.6.3 Satellite or secondary cities 259
6.7 National Land Use Planning Guidelines 262

6.8 Drawbacks and criticism 263

6.9 Lessons and conclusion 266

Chapter 7 271

Findings and recommendations 271

7.1 Introduction 271

7.2 The urban edge 272

7.2.1 South Africa 272

7.2.2 Singapore and Rwanda 273

7.3 The Constitution 276

7.4 International context 277

7.5 Planning and environmental legislation, plans and policies 278

7.5.1 South Africa 278

7.5.2 Singapore and Rwanda 280

7.6 Challenges 284

7.7 Recommendations 286

7.7.1 The urban edge and addressing the conflict between property development and the environment 286

7.7.2 Guidelines to address the conflict between property development and the environment 291

7.7.3 Cooperation between different departments and spheres 295

7.7.4 Satellite cities as alternative 296

BIBLIOGRAPHY 301

LIST OF ABBREVIATIONS

Afr Aff	*African Affairs*
Archit Des	*Architectural Design*
BCSD Singapore	Business Council for Sustainable Development Singapore
BPMIS	Building Permits Management Information System
BSHF	Building and Social Housing Foundation
Can J Dev Stud	*Canadian Journal of Development Studies*
CBD	Central business district
CCR	*Constitutional Court Review*
CIL	Cross Island Line
CILSA	*Comparative and International Law Journal of Southern Africa*
Civ Eng Arch	*Civil Engineering and Architecture*
CJEL	*Chinese Journal of Environmental Law*
CSIR	Council for Scientific and Industrial Research
DCLD	Development Control and Licensing Department
DFA	*Development Facilitation Act 67 of 1995*
EA	Environmental audit
ECA	*Environment Conservation Act 73 of 1989*
Ecol Econ	*Ecological Economics*
EDPRS	Economic Development and Poverty Reduction Strategy
EIA	Environmental impact assessment
EIS	Environmental information system
ELQ	*Ecology LQ*
EMF	Environmental Management Framework
EMP	Environmental management plan

EPMA	*Environmental Management Planning Act 9 of 1999*
Eur Spat Res Policy	*European Spatial Research and Policy*
Food Energy Secur	*Food and Energy Security*
GJPLR	*Global Journal of Politics and Law Research*
HDB	Housing Development Board
LDD	*Law, Democracy and Development*
ICL Journal	*Vienna Journal on International Constitutional Law*
IDP	Integrated Development Plan
IGRFA	*Intergovernmental Relations Framework Act 13 of 2005*
IJHSS	*International Journal of Humanities and Social Sciences*
Impact Assess Proj Apprais	*Impact Assessment and Project Appraisal*
Int Plan Stud	*International Planning Studies*
Int Reg Sci Rev	*International Regional Science Review*
ITDP	Institute for Transportation and Development Policy
IUCN	International Union for Conservation of Nature
IUCNAEL eJournal	*International Union for Conservation of Nature Academy of Environmental Law eJournal*
IUDF	Integrated Urban Development Framework
J Clean Prod	*Journal of Cleaner Production*
J Coast Conserv	*Journal of Coastal Conservation*
J Court Innov	*Journal of Court Innovation*
J Intellect Cap	*Journal of Intellectual Capital*
J South Afr Inst Min Metall	*Journal of the Southern African Institute of Mining and Metallurgy*
JALTA	*Journal of the Australasian Law Teachers Association*
JAPA	*Journal of the American Planning Association*

JCULP	*Journal of Comparative Urban Law and Policy*
JEAS	*Journal of East African Studies*
JED	*Journal of Environment and Development*
JMS	*Journal of Management and Sustainability*
JPER	*Journal of Planning Education and Research*
JSAH	*Journal of the Society of Architectural Historians*
JSAL	*Journal of South African Law*
JSSJ	*justice spatiale / spatial justice*
KMP	Kigali Master Plan
LAIS	Land Administration Information System
LTA	Land Transport Authority
LUPO	*Land Use Planning Ordinance*
Manag Environ Qual	*Management of Environmental Quality*
MDG	Millennium Development Goal
MEC	Member of the Executive Council
MEWR	Ministry of the Environment and Water Resources
MFMA	*Local Government: Municipal Finance Management Act 56 of 2003*
MINECOFIN	Republic of Rwanda Ministry of Finance and Economic Planning
MININFRA	Republic of Rwanda Ministry of Infrastructure
MINIRENA	Republic of Rwanda Ministry of Natural Resources
MND	Republic of Rwanda Ministry of National Development
MNP	Republic of Rwanda Ministry of National Planning
MSA	Local Government: Municipal Systems Act 32 of 2000
MSE	Singapore Ministry of Sustainability and the Environment
NDP	National Development Plan

NDPR	National Development Planning and Research Directorate
NEA	National Environment Agency
NEMA	*National Environmental Management Act 107 of 1998*
NEMAQA	*National Environmental Management: Air Quality Act 38 of 2004*
NEMBA	*National Environmental Management: Biodiversity Act 10 of 2004*
NEMICMA	*National Environment Management: Integrated Coastal Management Act 24 of 2008*
NEMPAA	*National Environmental Management: Protected Areas Act 57 of 2003*
NEMWA	*National Environmental Management: Waste Act 59 of 2008*
NGO	Non-governmental organisation
NHRA	*National Heritage Resources Act 25 of 1999*
NLUPG	National Land Use Planning Guidelines
NPC	National Planning Commission
NSDF	National Spatial Development Framework
NWA	*National Water Act 36 of 1998*
NWU	North West University
OECD	Organisation for Economic Co-operation and Development
OSC	One Stop Centre
Plan Perspect	*Planning Perspectives*
PAIA	*Promotion of Access to Information Act 2 of 2000*
PAJA	*Promotion of Administrative Justice Act 3 of 2000*
Peace Confl	*Peace and Conflict: Journal of Peace Psychology*
PELJ	*Potchefstroom Electronic Law Journal*

PPR	*Planning Practice and Research*
Procedia Eng	*Procedia Engineering*
Public Work Manag Policy	*Public Works Management and Policy*
RAPIJ	*Royal Australian Planning Institute Journal*
RDP	Reconstruction and Development Programme
REMA	Rwanda Environmental Management Authority
RJRS	*Romanian Journal of Regional Science*
RSA	Republic of South Africa
S Afr Geogr J	*South African Geographical Journal*
SAJAH	*South African Journal of Art History*
SAJELP	*South African Journal of Environmental Law and Policy*
SALA	*Subdivision of Agricultural Land Act 70 of 1970*
SALJ	*South African Law Journal*
SAPL	*Southern African Public Law*
SDCP	Special Detailed Control Plan
SDF	Spatial Development Framework
SEA	Strategic Environmental Assessment
SDG	Sustainable Development Goal
SDGF	Sustainable Development Goals Fund
SGP	Singapore Green Plan
SHLC	Centre for Sustainable, Healthy and Learning Cities and Neighbourhoods
SIDA	Swedish International Development Cooperation Agency
Sing JLS	*Singapore Journal of Legal Studies*
SIP	Strategic Integrated Project
SIT	Singapore Improvement Trust
SOER	State of the environment report
SPLUMA	*Spatial Planning and Land Use Management Act 16*

	of 2013
SSC	Singapore Standards Council
Stell LR	*Stellenbosch Law Review*
Third World Q	*Third World Quarterly*
Town Plan Rev	*Town Planning Review*
Town Reg Plan	*Town and Regional Planning*
TWT	*Third World Thematics*
UN	United Nations
UNEP	United Nations Environment Programme
UPC	Urban Planning Code
URA	Urban Redevelopment Authority
Urban Aff Rev	*Urban Affairs Review*
VNR	Voluntary National Review
WCPSDF	Western Cape Provincial Spatial Development Framework
WIT Trans Ecol Environ	WIT Transactions on Ecology and the Environment
Wm & Mary Envtl L & Pol'y Rev	*William and Mary Environmental Law and Policy Review*

Chapter 1

Introduction

1.1 Cities and the urban edge

Universally, there is a school of thought that strongly believes that the future of the planet depends on what happens in and to cities[1] and that cities should not be viewed as "places where nature stops".[2] The slow destruction of the environment is said to be caused by cities.[3] However, there is also the view that cities have a dual role because they can be "drivers of change" and, while they are cited as the source of pressing problems, they can also be the answer.[4]

The urban population of the world has grown from 2 percent to nearly 50 percent in the last two centuries, thereby moving the focus to cities all over the world.[5] However, it is predicted that much of the future growth will not be in these huge agglomerations; but in the small to medium-size cities around the world and in particular cities in Africa and other developing countries.[6] Such growth stretches the boundaries of these cities resulting in urban sprawl.[7]

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1 Cities, urban areas and areas within the urban edge are used as synonyms except where indicated to the contrary. These include smaller towns and medium sized cities as well.

2 Du Plessis 2017 *LDD* 240.

3 Andersen 2019 https://www.unenvironment.org/news-and-stories/speech/our-planet-our-future. Cities are major drivers of environmental challenges.

4 Du Plessis 2017 *LDD* 244. The notion that cities are the answer is because they provide basic services, "accessible and sustainable transport systems, human settlement planning, the reduction of the risk of disaster, climate change mitigation and adaptation etc". These aspects are important considerations in resolving conflict between property development and the environment.

5 Megacities (having in excess of 10 million people), illustrate how urbanised the world has become. Whilst in 1975 only four megacities existed, in 2000 there were 18 and by 2019 this number had grown to 33.

6 Torrey 2004 https://www.prb.org/urbanization-an-environmental-force-to-be-reckoned-with. The UN Department of Economic and Social Affairs projects that the world's 10 fastest growing cities, between 2018 and 2035, will all be in Africa.

7 Britz and Meyer 2006 *Town Plan Rev* 206. "Urban sprawl" is a term used to indicate "development patterns such as low residential densities, separation of land uses, the creation of single use environments, leapfrog development directing development away from city centres, automobile-

The issue of sprawl was at the forefront of concerns that arose with the rapid surge in urbanisation[8] after the end of *apartheid* in South Africa in 1994.[9] The need for more housing resulted in developments on the periphery of cities where land is cheaper, resulting in an increase rather than a reduction of sprawl.[10] Further, many small towns were merged to make larger units thereby extending the demarcation of municipal boundaries.[11] This gave rise to the use of the concept of the urban edge in South Africa.

1.2 Concept of the urban edge

1.2.1 Background

Right from the start of colonial occupation the use of land in South Africa had a racial connotation, meaning that the use of land was racially discriminatory[12] and where planning for black people was "on an entirely different footing from that for whites".[13] As the *apartheid* system unfolded,[14] this "rigid planning system" became the tool for "enforcing and promoting separate and fragmented development in urban areas" in

dependent development, environments not conducive to public transport, as well as development at the periphery of an urban area at the expense of its core". See also Chapter 2.1.

8 Bolund and Hunhammar 1999 *Ecol Econ*. "Urbanisation" is defined as the spatial expansion of the built environment that is densely packed by people and their socio-economic activities. It is often blamed for major environmental problems such as climate change, biodiversity loss, landscape fragmentation and ecosystem degradation.

9 Horn *Analysis of an Urban Edge*.

10 Nelson and Peterman 2000 *JPER*; see also Jansen van Rensburg and Campbell 2012 *Urban Forum*.

11 McConnachie and Shackleton 2010 *Habitat Int*.

12 *Apartheid* laws caused this segregated system relating to the ownership of land. Some of the Acts that applied were the *Black Land Act* 27 of 1913 and the *Development Trust and Land Act* 18 of 1936, which extended the application of the *Black Land Act* 27 of 1913 by providing for the acquisition of additional scheduled areas or rural reserves for settlement by black people; the *Representation between the Republic of South Africa and Self-governing Territories Act* 46 of 1959, in terms of which areas were set aside for the so-called "independent homelands" and the *Group Areas Act* 41 of 1950 that designated areas for the various race groups such that a member of a particular race group could not reside in an area designated for another race group. The *Group Areas Act* 36 of 1966 was responsible for regulating the acquisition, alienation and occupation of land for white people, Coloureds and Indians in separate areas. (As a result millions of black people had to move to a black reserve or "Bantustan"). Self-governing territories followed in terms of the *National States Constitution Act* 21 of 1971. Chapter 2.1 deals with the history and background.

13 Van Wyk *Planning Law* 3rd ed 25.

14 During the mid-to late 1900s.

accordance with the South African government's *apartheid* policies[15] and in terms of specific legislation that applied to promote *apartheid*.[16] Creating compact cities went against the legislation of the times and the main aim was "social control".[17] While many white people moved to large suburban properties, black people were forced to live in small, confined and congested spaces in specially designated "locations" on the peripheries of cities.[18] Post-1994, South Africa, as may be expected, underwent fundamental provincial and local-government reform and new laws, policies, and strategies resulted in "a complete paradigm shift in government".[19] It entailed transforming the "inefficient and fragmented landscape inherited from separate spatial development" and replacing it with "a compact integrated city and urban growth management".[20] This led to the introduction of urban edges as components of South African municipal spatial planning frameworks since the early 2000s.[21]

The urban edge[22] may be regarded as a line or boundary beyond which property development and densification should be curtailed in order to diminish urban sprawl and preserve the natural environment. Its aim is said to be to contain property development within certain boundaries, to curb unstructured, unsustainable development and to promote intensification and densification in an area that has existing infrastructure. [23] The terms "urban edge" or "development edge" are referred

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15 Coetzee 2012 *Town Reg Plan* 11. Areas for black people were separated and placed at the periphery of towns and cities and they were excluded from urban areas occupied by white people in predominantly "white" city centres.

16 In terms of the *Black Land Act* 27 of 1913 spaces were demarcated within which black people could legally settle. This Act controlled the spatial settlement patterns and limited the livelihood opportunities of black people in urban areas, where they were only accommodated as members of a temporary workforce. This was done by deliberately restricting areas where they could lawfully purchase, hire, or occupy land to scheduled reserves in rural areas. The Act excluded black people from accessing vast portions of land in South Africa. In terms of s 10, a "scheduled black area" was any area in a province or homeland listed in the Schedule to the Act. These scheduled areas were the forerunners for the establishment of the so-called or independent and self-governing homelands during *apartheid*: See also Strauss *Right to the City* and Van Wyk *Planning Law* 3rd ed 45, 48.

17 Turok 1994 *Town Plan Rev*.

18 See Chapter 2 Introduction and Chapter 2.1 relating to the history of the *apartheid* era.

19 Abrahams and Berrisford *Addressing the Crisis of Planning Law Reform* 9.

20 Horn 2018 *Plan Perspect* 2-6.

21 This concept also includes notions such as nodes, transportation corridors and urban edges.

22 This concept has strong similarities to the concept of a "compact city" in international terminology.

23 Western Cape *Provincial Urban Edge Guideline.* See also Britz and Meyer 2006 *Town Plan Rev* 207 and Chapters 2.2 to 2.4.

to in South African policy, legislation (national, provincial and local) and case law. In national legislation the urban edge is mentioned in the Environmental Impact Assessment (EIA) Regulations published in terms of the *National Environmental Management Act* (NEMA),[24] legislation on local government (the *Local Government: Municipal Systems Act* (MSA),[25] the biodiversity sector legislation (*National Environmental Management: Biodiversity Act* (NEMBA)[26] and the coastal sector (*National Environmental Management: Integrated Coastal Management Act* (NEMICMA).[27] Some of the South African provincial and local governments use the concept and terminology of the urban edge (as opposed to urban growth boundary or urban development boundary) to give effect to the municipality's spatial planning function to determine land use.[28] The term is defined in the 2018 draft *National Spatial Development Framework* (NSDF).[29] However, the urban edge is not defined in any legislation and there appears to be no standard definition of the term "urban edge".[30] Explanations and definitions of the urban edge do not correlate and this gives rise to different interpretations, which in turn gives rise to conflicts regarding the demarcation of the urban edge and regarding developments within and outside of the urban edge. Defining the urban edge and understanding its roles may help address any conflict that may arise between property development and the environment.

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24 *National Environmental Management Act* 107 of 1998. See also Chapter 4.3.5 and reference to GN R982 in GG 38282 of 4 December 2014.

25 *Local Government: Municipal Systems Act* 32 of 2000. See Chapters 3.3 and 3.6.2.

26 *National Environmental Management: Biodiversity Act* 10 of 2004. See Chapter 4.3 for a discussion on the various aspects of NEMA.

27 *National Environmental Management: Integrated Coastal Management Act* 24 of 2008. See Chapter 4.4.3.

28 See Chapter 2.1 to 2.5 for a discussion on various aspects of the urban edge.

29 See Chapter 2.4.

30 In *MEC for Environmental Affairs and Development Planning v Clairisons CC* 2013 6 SA 235 (SCA) the urban edge was described as "a planning tool" that serves as a guide in "restricting the outward growth of urban settlements." In *Blue Crane Country Estate (Pty) Ltd v National Minister of Agriculture, Forestry and Fisheries* 2015 ZAGPPHC 149 (23 March 2015) para 35 the urban edge was viewed as a zoning category with the municipality having the prerogative to make a determination with regard to it; in the 2012 Cape Town Spatial Development Framework (SDF) (City of Cape Town *Spatial Development Framework*) it is a medium to long-term line demarcated to phase urban growth appropriately. See Chapter 2 for a full discussion on the urban edge.

1.2.2 Conflicts relating to the urban edge

Conflicts in relation to new developments around the urban edge (which may encroach on agricultural land on the periphery) that relate to the extension of the urban edge occur on a regular basis.[31] In the *Clairisons* case[32] the court did not permit a property development although the development was deemed to be within the urban edge.[33] In *Durbanville Community Forum v Minister of Environmental Affairs and Development Planning Provincial Government Western Cape* (*Durbanville Community Forum* case)[34] approval of a property development outside the urban edge was challenged on the grounds that various planning documents did not encourage urban development of property outside the urban edge. The court held that other factors and unique circumstances that were considered in the evaluation of the proposed development justified the decision to permit development.[35] Resolving a conflict may entail the consideration of a definition of the "urban edge" in relation to development and the protection of the environment.[36]

A pertinent example of conflict that can occur between the pursuance of property development and environmental rights is evident from the approval of the

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31 *Philippi Horticultural Area Food and Farming Campaign v MEC for Local Government, Environmental Affairs and Development Planning: Western Cape* 2020 3 SA 486 (WCC). This is a recent 2020 judgment that attracted much interest in relation to the extension of the urban edge of Cape Town.

32 *MEC for Environmental Affairs and Development Planning v Clairisons CC* 2013 6 SA 235 (SCA) (the *Clairisons* case).

33 The court accepted the argument that it was the policy of the department that new, large residential developments not be permitted to the north of Plettenberg Bay as it was policy based on legitimate planning and environmental considerations, which in part is derived from the Western Cape Provincial Spatial Development Framework (WCPSDF). The aims of the WCPSDF include the restructuring of urban settlements to address *apartheid* spatial patterns and urban functional inefficiencies, and the protection of biodiversity and agricultural resources. The means by which the WCPSDF is said to achieve these aims includes restricting the outward growth of urban settlements until specified urban densities are achieved.

34 *Durbanville Community Forum v Minister for Environmental Affairs and Development Planning Provincial Government Western Cape* 2015 2 All SA 187 (WCC).

35 See *Durbanville Community Forum v Minister for Environmental Affairs and Development Planning Provincial Government Western Cape* 2015 2 All SA 187 (WCC) para 25. Notwithstanding that the property fell outside the urban edge, the court accepted the Minister's explanation that was in keeping with the Records of Decision, which justify the conclusion "that the proposed development is socially, environmentally and economically sustainable". This was the paramount consideration that the Minister took into account and it was accepted by the court as being a sound decision.

36 See *Durbanville Community Forum v Minister for Environmental Affairs and Development Planning Provincial Government Western Cape* 2015 2 All SA 187 (WCC) para 5.

controversial amendment to extend Cape Town's urban edge in 2017. The urban edge was extended to accommodate and permit a mega-residential development "Wescape",[37] about 20 kilometres from the Cape Town central business district (CBD).[38] According to a media statement by the then MEC, the decision to amend the urban edge justifiably raised various concerns that must be addressed during the rezoning, environmental authorisation and subdivision applications.[39] The potential conflict between property development and the environment will need more investigation before the development is authorised.

Although there has been progress, there have been more challenges than were anticipated and this has resulted in the process being complex and drawn out.[40] It is unfortunate but widely acknowledged that the South African urban form still has many "inefficiencies" that point to conflict between property development and the environment that must be addressed.[41] Issues such as "unequal access to economic and social opportunities" poorly located and insufficient infrastructure and settlements for lower income families, unsuitable public transport and "spatial structural elements resulting from *apartheid*-era policies and legislation" are all issues that must still be resolved.[42] Resolving this entails taking into account factors such as spatial

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37 Bredell 2014 http://gctca.org.za/minister-approves-wescape-development/. According to Gita Goven of ARG Design, the company planning the development (contacted by the writer on 25 June 2019), the project is still going ahead and development is set to commence in 2022.

38 Also see the Draft Municipal Spatial Development Framework (Cape Town) (City of Cape Town 2017 http://futurecapetown.com/wp-content/uploads/2017/10/HYS_Draft_Municpal_Spatial_Development_Framework-2017-2022.pdf) 22 para 1, 53 paras 4 and 6. This will be a city within a city planned to incorporate 200 000 homes and accommodate about 800 000 people. The development of Wescape must still be approved and requires re-zoning, environmental authorisation and subdivision applications, as well as much needed finance.

39 Including questions regarding the justification for the extension of the urban edge and in particular, against the encroachment of urban development onto agricultural land, the need to enable a city to densify, the protection of the environment and the considerations of the high costs of infrastructure. Some of the other key objections the MEC referred to relate to transport planning and traffic impacts, ability to implement the Koeberg Nuclear Emergency Plan, loss of critically endangered ecosystems in terms of the City of Cape Town's biodiversity network, social impacts and impact on the Blaauwberg cultural landscape.

40 Berrisford 2011 *Urban Forum*.

41 *Adonisi v Minister for Transport and Public Works Western Cape; Minister of Human Settlements v Premier of the Western Cape Province* 2020 ZAWCHC 87 (31 August 2020).

42 Du Plessis 2014 *Urban Forum* (Abstract); See also Final Report of the Presidential Advisory Panel on Land Reform and Agriculture 2019 www.gov.za. An important component identified is land inequality and insecurity of tenure that results in economic exclusion of the majority of South Africans, particularly women and youth in rural and urban areas.

sustainability,[43] economic sustainability,[44] and social sustainability[45].

It seems, therefore, that sustainable development, especially within the urban edge is critical. It requires the balancing of environmental, social and economic interests[46] through the use of instrumentation provided for in environmental and planning law.[47] The functionality of and between the different planning, management and decision-making instruments in the body of environmental and planning law must be investigated so that they may be used to address such conflict.

1.3 South African legal context

The *Constitution of the Republic of South Africa*, 1996 (the Constitution) as well as various other statutes, plans and policies relating mostly to planning and the environment must be considered.

1.3.1 The Constitution

The Constitution plays a pivotal role in respect of both development and the environment and contains various sections that have a direct or indirect impact on conflict between property development and the environment. As the Constitution is the yardstick by which all other laws are judged in South Africa, it is appropriate to

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43 Van Wyk *Planning Law* 3rd ed 106. Spatial sustainability implies that "spatial planning and land use management systems" should promote land development that is in keeping with the fiscal and administrative means of the country. Prime and unique agricultural land requires special care and there must be consistency of land use measures in accordance with environmental instruments. Effective and equitable functioning of land markets must be promoted and stimulated and future costs for land development of all parties must be considered.

44 Simply put, economic sustainability refers to the use, safeguard and sustained resources, both human and material, so that long-term sustainable values are created on account of optimal use, recovery and recycling.

45 Social sustainability refers to formal and informal processes, systems, structures and relationships that support the capacity of both current and future generations to create healthy and livable communities and provide a good quality of life. Sustainability of these aspects is based on the United Nation's (UN) Brundtland Report, which defines economic, social and environmental factors. These help ensure long-term economic viability while maintaining an environmental balance and at the same time shows commitment to socially desirable practices.

46 Section 24 of the Constitution.

47 See Chapters 3 and 4 regarding the use of various decision-making instruments in Planning and Environmental Law such as zoning, land use schemes and environmental impact assessments (EIAs).

first consider how it impacts on planning and the environment.

The Preamble sets out the values on which the Constitution is based.[48] The Bill of Rights[49] applies to all law, the state[50] and also to the actions of private persons in certain instances.[51] Some of these values and rights such as human dignity,[52] equality,[53] freedom and security of the person,[54] the right to a healthy environment,[55] housing rights,[56] the right to property,[57] just administrative action[58] and the right of access to information[59] are all closely linked to the conflict between property development and the environment that must be addressed.

Against this background and the challenges that post-*apartheid* South Africa faces, coupled with the urgent need to redress the grievances of the past by facilitating development,[60] it is necessary to consider legislation, policies and plans relating to development and determine the impact that property development has on the

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48 Preamble to the *Constitution of the Republic of South Africa*, 1996 (the Constitution). These values include the following: democracy, constitutionalism, the rule of law, separation of powers, transformation, checks and balances, openness, human dignity, the achievement of equality, the advancement of human rights and freedom, non-racism and non-sexism as well as the supremacy of the Constitution.

49 Chapter 2 of the Constitution. See also Currie and De Waal *Bill of Rights Handbook* 29-71 for a detailed discussion regarding the Bill of Rights.

50 Section 8(1) of the Constitution. S 8(2) provides that the state, including national, provincial and local government must respect, protect, promote and fulfil the rights in the Bill of Rights. See Van Wyk *Planning Law* 3rd ed 76. In most planning law situations, the relationship is between an individual and an organ of state, i.e. a vertical relationship.

51 Section 8(2) of the Constitution states that the provisions in the Bill of Rights apply horizontally, i.e. it binds natural and juristic persons, to the extent that it is applicable, taking into account the nature of the right and the nature of the duty that is imposed by the right. See Glazewski *Environmental Law* 74. From an environmental perspective, it could, eg entail a private dispute between a private person and a mining company because of the impact of mining activities on the private person's health or well-being.

52 Section 10 of the Constitution. See also Fessha "Right to Human Dignity" 69-72.

53 Section 9 of the Constitution. See also Kruger "Equality" 75-84.

54 Section 12 of the Constitution. See also Crouse L's adaptation of Killander and Vrancken "Freedom and Security of the Person" 91-100.

55 Section 24 of the constitution. See Chapter 4 for a full discussion of s 24 of the Constitution and the environmental right.

56 Section 26 of the Constitution.

57 Section 25 of the Constitution. See also Holness "Right not to be Deprived of Property" 243-260.

58 Section 33 of the Constitution and the Promotion of Administrative Justice Act 3 of 2000. See also Holness "Right to Just Administrative Action" 219-223. All urban edge, planning and environmental decisions must comply with the provisions of this right. See Chapters 2.4.2, 3.2 and 4.2.

59 Section 32 of the Constitution and the *Promotion of Access to Information Act* 2 of 2000 (PAIA).

60 Considering how a successful city/state, Singapore, overcame a similar situation, will reveal lessons that will be beneficial.

environment so that any conflict in that regard may be addressed. Kotzé[61] proposes that development, in the context of section 24 of the Constitution, describes a process aimed at the reconstruction of a society that was plagued by landlessness, had inadequate access to life-sustaining infrastructure and poor socio-economic conditions.[62] Section 24 is significant as it promotes development that is sustainable but also requires protecting the environment "for the benefit of present and future generations".[63] Importantly, it includes the environmental right and ensures that environmental considerations have been given "rightful prominence" by being included in the Constitution.[64]

Section 24 has two parts, the first part being a fundamental human right and the second part which requires the state to take positive steps towards the attainment of the right. The wording of section 24 suggests that there is a "potential relationship of conflict" between development and the environment that must be resolved[65] as the harmonious co-existence of property development and the environment is not only

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61 Kotzé 2003 *PELJ* 85.

62 Other legislation that is relevant and that contains definitions of "development" are the *National Heritage Resources Act* 25 of 1999 (NHRA) and the *National Environment Management: Integrated Coastal Management Act* 24 of 2008 (NEMICMA). The former Act aims to introduce an integrated and interactive system for the management of national heritage resources and to enable and encourage communities to nurture and conserve their legacy so that it may be bequeathed to future generations. The latter Act establishes a system of integrated coastal and estuarine management in South Africa and promotes the ecologically sustainable development of the coastal zone and ensures that the development of natural resources are used to promote social, economic and justifiable sustainable development. The definitions of "development" are similar, emphasising "development" as a process to change the use, physical nature or appearance of that place, and includes:
"(a) the construction, erection, alteration, demolition or removal of a structure or building;
(b) a process to rezone, subdivide or consolidate land;
(c) changes to the existing or natural topography of the coastal zone; and
(d) the destruction or removal of indigenous or protected vegetation."
These laws regulate aspects of development or where development can take place, eg the NHRA deals with the management and protection of national heritage resources and the NEMICMA deals with the protection and conservation of the coastal environment as opposed to development in this area. The definitions have in common that development in terms of these Acts is restricted for the various reasons set out in the sector-specific Acts and development needs to comply with these and any other legislation. The *Spatial Planning and Land Use Management Act* 16 of 2013 (SPLUMA) contains a definition of "land development" and deals with zoning of land. Any conflicts will have to be resolved and all permissions and consents must be granted before a development will be authorised. See the procedure in Singapore in Chapter 5.

63 Streicher J in *S v Mumbe* 1997 1 SA 854 (W) 858I.

64 In a ruling by Claasen J in *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* 2004 5 SA 124 (W) 142C.

65 Kotzé 2003 *PELJ* 81.

desirable but is also necessary in terms of the Constitution.[66] The guide to resolve this potential conflict is the balancing of environmental, social and economic interests as also set out in section 24(b)(iii).[67] The environmental right, as in the case of all the rights in Chapter 2 of the Constitution, is also subject to the limitations clause (section 36) of the Constitution[68] which may have the effect of justifying certain actions that could be said to be "detrimental to the environment" on the basis that such action constitutes "reasonable and justifiable" limitations of the right in terms of section 24.[69]

The Constitution changed the role of local government and municipalities by giving them autonomy and a much more "powerful" place in the government system than in the past.[70] It lays down developmental duties for local governments[71] and grants them legislative authority that permits them to make and administer by-laws for the effective administration of all matters that they have the right to administer.[72] At the same time local government must function in a system of co-operative governance with the other two spheres in government, the provincial and national spheres.[73] How these spheres cooperate with regard to development and the environment could also be relevant to the issue of conflict[74]

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66 Section 24(b)(iii) of the Constitution.

67 See Kotzé 2003 *PELJ*. See also Chapter 4 that refers to court decisions dealing with the balancing of interests in terms of s 24 of the Constitution.

68 Section 36 of the Constitution. The rights in the Bill of Rights may only be limited in terms of s 36, the general limitation clause. Rights may be limited by a law of general application that is "reasonable and justifiable in an open and democratic society based on dignity, freedom, and equality", taking into account the nature of the right, the importance of the purpose of the limitation, the nature and extent of the limitation and the relation between the limitation and the purpose and less restrictive means to achieve the purpose.

69 Kidd *Environmental Law* 30. Kidd quotes the example of the siting of an industrial-type factory in an ecological area as it is not feasible to locate it elsewhere and it creates many large-scale employment opportunities.

70 Sections 152-154 of the Constitution. See also Pieterse 2019 *ICL Journal* and Du Plessis 2017 *LDD* 241.

71 Bekink *Principles of South African Constitutional Law* 455.

72 Section 156(2) of the Constitution. See also *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC) para 16; *Maccsand (Pty) Ltd v City of Cape Town* 2011 6 SA 633 (SCA) para 12.

73 Chapter 3 of the Constitution. There must be a clear understanding of each sphere of government's powers as well as the functions of the cooperative relationship as it is necessary to ensure that one sphere of government or organ of state does not encroach on another sphere; s 40(1).

74 The *Intergovernmental Relations Framework Act* 13 of 2005 was designed in terms of s 40(2) of the Constitution to deal with disputes that could arise between the three spheres due to the lack of such cooperation.

Municipal planning (and the question of which sphere of government can carry out certain functions) is pertinent and has caused disputes that the courts have had to resolve.[75] What is clear though, is that all spheres (and especially municipalities that are closest to the people) are required to provide a "safe and healthy environment"[76] and section 24 may be invoked when decisions are taken or fail to be taken regarding this aspect.[77]

1.3.2 Planning and environmental legislation

The urban edge and sustainable development within the urban edge must be considered against the background of the Constitution, *Spatial Planning and Land Use Management Act* (SPLUMA), NEMA, other legislation and policies that promote development. It is important to consider the impact of legislation that relates to municipal and national matters as well as the role that municipalities can play in avoiding conflict between property development and the environment within the urban edge.

SPLUMA defines "land development" as the "erection of buildings or structures on land" or the change of use of land, including township establishment, the subdivision or consolidation of land or any deviation from the land use or uses permitted in terms of an applicable land use scheme.[78] SPLUMA, its provisions on Spatial Development

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75 Van Wyk *Planning Law* 3rd ed 151-171; Kidd *Environmental Law* 239. See, eg *Lagoon Bay Lifestyle Estate (Pty) Ltd vs Minister of Local Government, Environmental Affairs and Development Planning (Western Cape)* 2011 4 All SA 270 (WCC); *Lagoonbay Lifestyle Estate (Pty) Ltd v Minister for Local Government, Environmental Affairs and Development Planning of the Western Cape* 2013 ZASCA 13 (15 March 2013); *Shelfplett 47 (Pty) Ltd v MEC for Environmental Affairs and Development Planning* 2012 3 SA 441 (WCC); and *Clairison's CC v MEC for Local Government, Environmental Affairs and Development Planning* 2012 ZAWCHC 44 (16 May 2012).

76 Sections 152-154 of the Constitution.

77 Feris "Environmental Rights Protected in the Constitution" 224-225. This raises the issue of environmental justice as the action taken or omitted to be taken by the municipality may result in a violation of rights to equality and dignity as well as unfair discrimination. Environmental justice demands equal dignity through the "equitable distribution of environmental costs and benefits".

78 Section 1 of SPLUMA.

Frameworks (SDFs)[79] and land use schemes[80] as well as development-application procedures, address development, but it does not specifically refer to the urban edge or the densification of cities.[81] However, the principle of spatial justice[82] in terms of SPLUMA refers to past spatial and other development imbalances that must be redressed through improved access to and use of land.[83] Likewise, the principle of spatial sustainability refers to land development that must be promoted in locations that are sustainable and by implication urban sprawl must be limited.[84] SPLUMA directs municipalities to use these principles in its SDFs, land use schemes and, most importantly, in decision-making on development applications.[85] While the Constitution and SPLUMA itself require that there must not be interference with or usurpation of the powers of one sphere by another, the overlapping of duties can and has caused tension between the spheres that must be resolved.[86]

From a planning perspective, municipal SDFs[87] and the Integrated Development Plans (IDPs)[88] drafted in terms of the requirements of the MSA[89] play an important role in all development decisions that municipalities make. The SDF is a policy document that does not confer any rights,[90] but is a visual representation of the "desired spatial form"

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79 Chapter 4 of SPLUMA. See also Van Wyk *Planning Law* 3rd ed 248-260. There are four categories of SDFs, namely, national, provincial, regional and municipal. Regional SDFs fall outside the scheme and will not be dealt with in this study. The national, provincial and municipal spheres must each prepare an SDF. With regard to the municipal SDF, the MSA first introduced the concept of the municipal SDF as a component of the mandatory IDP that every municipality must adopt. The provisions of the MSA must be read with Part E of SPLUMA. The MSA establishes the core features of the municipal SDF and detailed provisions are added by SPLUMA.

80 Chapter 5 of SPLUMA.

81 This aspect is inferred in the SPLUMA principles.

82 See discussion on SPLUMA principles in Chapter 3.5.

83 See s 7(a) of SPLUMA.

84 Du Plessis 2017 *LDD* 251. See footnotes.

85 Van Wyk 2017 *SAPL* 26 (Abstract).

86 The provisions that are concerned with this aspect are Chapter 3 of Constitution, s 12(2)(a) of SPLUMA and the *Intergovernmental Relations Framework Act* 13 of 2005 (IGFRA). See also Van Wyk *Planning Law* 3rd ed 249.

87 CityScope 2012 http://cityscope.co.za/town-planning-terminology-explained. See Chapter 3.6.2.

88 See Chapter 3.3.

89 Section 35 of the *Local Government: Municipal Systems Act* 32 of 2000 (MSA). The MSA first introduced the concept of the municipal SDF as a component of the mandatory Integrated Development Plan (IDP) that every municipality has to adopt. The provisions of the MSA in relation to the SDFs have to be read with the relevant provisions, especially Part E, of SPLUMA. Therefore, while the MSA establishes the core features of the SDF, SPLUMA adds detailed provisions.

90 Section 17 of SPLUMA; Mosdell Date unknown http://law.nwu.ac.za/sites/law.nwu.ac.za/files/files/Law/KAS/CITYSCAPE-Susan-Mosdell.pdf;

of the municipality[91] and forms the physical or spatial component of the IDP.[92] It represents a preferred land use pattern and may depict an urban edge.[93] Being a development and management planning instrument, the IDP links, integrates and co-ordinates plans taking into account proposals for the development of the municipality.[94] The MSA provides the legal framework for the development, adoption, revision and implementation of the municipality's IDP, which in turn guides the preparation of any action plans for the implementation of strategies identified by the municipality.[95] The municipality must give effect to the IDP and is compelled to "conduct its affairs in a manner that is consistent with the IDP".[96]

In May 2019, the Department of Environment, Forestry and Fisheries published *Proposed Minimum Standards for the Consideration of Environmental Aspects in the Preparation and Review of Municipal SDFs* for comment.[97] These standards, once finalised, may assist in some way to address conflict between property development and the environment within the urban edge, an integral part of the municipal SDF.

The NEMA, the environmental framework law, is aimed at achieving sustainable development.[98] It provides a framework in which development projects are established in a sustainable manner taking into account their possible negative impact

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contrast this to land use schemes which have the force of law in terms of SPLUMA; see Chapter 3.2.3 below for a discussion on land use schemes.

91 In terms of reg 2(4)(i)(iii) of the Local Government: Municipal Planning and Performance Management Regulations (GN R796 in GG 22605 of 24 August 2001).

92 CityScope 2012 http://cityscope.co.za/town-planning-terminology-explained. The IDP indicates the development vision of the Municipality in terms of "physical, financial, institutional, social, political and operational criteria" and "serves as a budgeting tool that the municipality uses for capital spending".

93 CityScope 2012 http://cityscope.co.za/town-planning-terminology-explained.

94 Section 25(1) of the MSA. Every municipality must adopt an IDP and conduct its affairs in accordance with the IDP which is binding on all of the cities' decision-making. It guides the preparation of any action plan for the city and the implementation of the strategies identified by the city.

95 The IDP is legally binding on all of the cities' decision-making and also on decisions and actions of others within its jurisdiction, eg local businesses, developers and the local community provided that the commitments made in, and the duties created by, the IDP are discharged by means of additional instruments, such as, the cities' policies, by-laws, action plans etc.

96 Van Wyk *Planning Law* 3rd ed 247.

97 In terms of NEMA – GN 647 in GG 42451 of 10 May 2019. Municipalities act in terms of Schedule 4B and 5B of the Constitution and must also prepare SDFs and IDPs in terms of the MSA.

98 Section 2 of the *National Environmental Management Act* 107 of 1998 (NEMA).

on the environment.[99] NEMA focuses on promoting the use of appropriate environmental tools or instruments, such as EIAs and social impact assessment procedures, amongst others.[100] These instruments and procedures in terms of EIA Regulations[101] are objective and are meant to integrate and facilitate environmental impact management with development activities or processes, in line with sustainable development objectives.[102] Environmental Management Frameworks (EMFs)[103] provide guidelines in terms of which the evaluation and measurement of sustainability can be undertaken and the potential consequences or impacts on the environment of listed activities or specified activities must be considered, investigated, assessed and reported on to the competent authority. EMFs may indicate an urban edge but they are not regarded as the determination of the urban edge or where development may take place within it.[104]

The *National Development Plan: A Vision for 2030* (NDP),[105] the draft NSDF[106] and the *Integrated Urban Development Framework* (IUDF),[107] designed for sustainable development and to fit in with the Sustainable Development Goals (SDGs), also

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99 Bray 1998 *SAJELP* 1-9.

100 Chapter 5 of NEMA deals with these tools.

101 The EIA Regulations are set out in GN R982 in GG 38282 of 4 December 2014, as amended.

102 The purpose of the EIA Regulations is therefore to ensure that the impacts of activities for which environmental authorisations are necessary are properly assessed; so that the positive environmental impacts are enhanced; the activities which may have an unacceptable, negative effect on the environment are not authorised, and those which are suitable for authorisation are approved, with conditions to avoid or mitigate possible detrimental effects or conflicts with the environment.

103 In terms of s 24(J) of NEMA the guidelines are published in the *Government Gazette*. New *Environmental Management Framework Guidelines* were introduced for Gauteng in GN 575 in GG 43820 of 23 October 2020. See Chapter 4.3.3.

104 Retief and Cilliers "Municipal Integrated Development Planning" 579. In essence an EMF indicates the extent of environmental authorisation requirements in defined geographic areas. It is too broad a policy to determine an urban edge.

105 The NPC *National Development Plan 2030* (NDP) is a national initiative and as such is a roadmap for the UN's 2030 Agenda for Sustainable Development (*Transforming our World: The 2030 Agenda for Sustainable Development* GA Res 70/1, UN Doc A/RES/70/1 (2015), although it preceded it and was amended accordingly. See Chapter 3.6.

106 Department of Rural Development and Land Reform 2019 https://pmg.org.za/policy-document/1193/ (the Draft NSDF). See Chapter 2.4.1 and 3.6.1.

107 RSA 2019 https://sustainabledevelopment.un.org/content/documents/23402RSA_Voluntary_National_Review_Report__9_July_2019.pdf 99. The IUDF is regarded as a policy framework on "how the South African system can be reorganised" so that cities and towns may become "more inclusive, resource efficient" and become "better places to live and work" in accordance with the vision outlined in the NDP. See Chapter 3.9.

necessitate consideration.

South Africa functions within an international context. In the next paragraph the international context of the SDGs[108] and cities are referred to.

1.4 International context

Internationally, sustainable development[109] in relation to cities is becoming more important. It was the report of the World Commission on Environment and Development that first used the term "sustainable development"[110] and the *Brundtland Report* defined the term as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".[111]

The implementation of the ideals of sustainable development is now given effect to in the United Nations' SDGs. The objective is to produce a set of universal goals that meet the urgent environmental, political and economic challenges facing the whole world.[112]

SDG 11 is intent on making cities inclusive, safe, resilient and sustainable[113] and the target is set for the year 2030. It includes ensuring access to safe and affordable housing, upgrading slum settlements,[114] investing in public transport, creating green public spaces, and of particular interest to this study, improving urban planning and

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108 UN Date Unknown http://www.un.org/sustainabledevelopment/sustainable-development-goals/ (UN SDGs). The Sustainable Development Goals (SDGs) replace the Millennium Development Goals (MDGs), which started a global effort in 2000 to tackle the indignity of poverty in the world. The MDGs established measurable, universally agreed objectives for tackling extreme poverty and hunger, preventing deadly diseases, and expanding primary education to all children, among other development priorities.

109 Cordonier Segger and Weeramantry *Sustainable Justice* 561. At the World Summit on Sustainable Development that was held in Johannesburg in 2002, 180 countries, including South Africa, re-affirmed that sustainable development is a world priority.

110 Tladi 2008 *CCR* disagrees with this and states that already in 1980, IUCN (International Union for Conservation of Nature) referred to the term.

111 World Commission on Environment and Development *Our Common Future* (Oxford University Press Oxford 1987) (Brundtland Report) ch 1 para 42.

112 The United Nations' Sustainable Development Agenda was adopted in 2015, to be achieved by 2030.

113 UN SDG 11.

114 Extreme poverty is often concentrated in urban spaces, and national and city governments struggle to accommodate the rising population in these areas.

management in a way that is both participatory and inclusive.[115] The pursuit is for social and economic goals together with a move towards environmental sustainability and resilient communities.[116] Sustainable development in cities and SDG11 are closely linked to addressing or avoiding conflict between property development and the environment, within the urban edge.

South Africa has committed to the SDGs and specifically to SDG 11[117] and it is imperative that it takes into account all legal considerations necessary to achieve SDG 11. At Habitat III[118] world leaders adopted a *New Urban Agenda*.[119] It sets global standards of achievement in sustainable urban development, rethinking the way we build, manage, and live in cities through drawing together cooperation with committed partners, relevant stakeholders, and urban actors at all levels of government as well as the civil society and private sector.[120] The "smart city agenda"[121] is a concept in

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115 UN SDGs. It further ensures the participation of cities to global climate change and the growing need for improved environmental service delivery in both metropolitan areas and medium-sized cities in a way that the environmental risks such as climate change and all natural resources are optimally managed.

116 NWU 2018 https://pressoffice.mg.co.za/northwestuniversity/content/mQwkoM6PNd4v3r9A.

117 At the landmark Sustainable Development Summit held at UN Headquarters in New York, countries officially adopted the historic new agenda, entitled "Transforming Our World: The 2030 Agenda for Sustainable Development", which was agreed upon by the 193 Member States (including SA) of the UN, and includes 17 SDGs.

118 Robin 2016 https://theconversation.com/what-is-habitat-iii-and-why-does-it-matter-a-beginners-guide-to-the-new-urban-agenda-65500. The Habitat process was launched by the UN in 1976, when governments began to recognise the risks of rapid urbanisation, in particular, rising inequality, falling quality of life and unsustainable development. The first conference in Vancouver encouraged governments to adopt a territorial approach to their national development strategies, and to involve civil society organisations focusing on urban issues. It also established the first UN agency to be based in Africa: the United Nations Centre is operated from Nairobi, Kenya. The much larger second conference, in Istanbul in 1996, involved representatives from civil society in UN working groups, and produced a 229-page document which states that the Habitat II process endorsed the "the universal goals of ensuring adequate shelter for all and making human settlements safer, healthier and more liveable, equitable, sustainable and productive". The city of Quito, Ecuador, was host to the third United Nations conference on housing and sustainable urban development – also known as Habitat III.

119 In 2016, Member States of the UN adopted the *New Urban Agenda*, the outcome document agreed upon at the Third UN Conference on Housing and Sustainable Urbanisation (Habitat III) in Quito Ecuador. South Africa is also a signatory.

120 UN 2016 https://www.un.org/sustainabledevelopment/habitat3/. The *New Urban Agenda* was adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador, on 20 October 2016. It was endorsed by the United Nations General Assembly at its sixty-eighth plenary meeting of the seventy-first session on 23 December 2016. The *New Urban Agenda* represents a shared vision for a better and more sustainable future.

121 Eremia, Toma and Sanduleac 2017 *Procedia Eng*. This concept is used in the European and British systems. The British Standards Institute defines the "smart city" term as "the effective integration

progress that entails improving the quality of life of citizens and strengthening and diversifying the economy while prioritising environmental sustainability through adoption of smart solutions.[122] The concept of a smart city was mentioned by the President of South Africa in his 2020 State of the Nation address where he indicated a desire for such cities in South Africa.[123]

The study would not be complete if it did not determine how the new international soft law paradigm in relation to cities may influence the interpretation of the concept of property development within the urban edge and the possible conflict with environment. It must be noted that in the international context, reference is not always made to the urban edge or urban boundary *per se*. Densification, more focused developments and a compact city are terms that are promoted and signify the idea of sustainable property development within the urban edge, as referred to in South Africa.[124]

It is necessary to consider if the new trajectory in South Africa is in keeping with global principles relative to urban growth and development. In that regard, Du Plessis[125] refers to SDG 11 as a "global torch" casting light on the path that the country wished to embark on after 1994. SDG 11 has the effect of highlighting aspects of the South African legislation, plans and policies that promote sustainable development and address conflict between property development and the environment within the urban edge, or in an urban setting. It plays an important role in doing so.

South Africa can also learn from experiences in other countries. In this study Singapore

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of physical, digital and human systems in the built environment to deliver sustainable, prosperous and inclusive future for its citizens" (Centre for Cities 2014 https://www.centreforcities.org/reader/smart-cities/what-is-a-smart-city/).

122 Sikora-Fernandez and Stawasz 2016 *RJRS*.

123 Makhafola 2019 https://www.iol.co.za/news/politics/sona2019-ramaphosa-dreams-of-building-a-new-smart-city-26879831. The President of South Africa mentioned the creation of a brand new city in his State of the Nation Address during June 2019. This received mixed reaction in South Africa.

124 UN 2019 https://sustainabledevelopment.un.org/content/documents/24797GSDR_report_2019.pdf. The 2030 agenda city will be compact. This indicates that the focus worldwide is on compact cities. Not every country uses the urban edge or urban boundary as a criterion to facilitate a compact city.

125 Du Plessis 2017 *LDD* 241.

and Rwanda will be referred to.[126]

1.5 Singapore and Rwanda

Some cities in developed countries, such as Singapore, are being lauded for their planning and environmental efforts. When Singapore gained autonomy in 1959,[127] it was an under-developed poor city-state and, like South Africa, there was segregation of various racial and ethnic groups. It was compelled by its town plans to have "designated residential enclaves".[128] Wealthy people, as in the case of South Africa, re-located to bigger homes and properties in the outlying urban fringes[129] causing sprawled developments, while residential over-crowding, congestion and poor sanitation in certain areas was rampant.[130]

Although Singapore has no urban edge, the sea is its natural boundary. It serves as a clear and definite urban edge with both lateral expansion and sprawl being prevented.[131] For that reason, all development that takes place in Singapore may be deemed to be development that takes place within the urban edge. What makes Singapore relevant to this study about conflict between property development and the environment within the urban edge, is that despite Singapore being a small city-state with very limited land for expansion and sprawl, it has placed a significant emphasis on sustainability and protecting the environment.[132] Laws and policies that foster

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126 See Chapter 5 that deals with Singapore and Chapter 6 that deals with Rwanda.

127 The previous colonial government realised the urgent need for an overall plan to guide the physical growth of Singapore resulting in the 1958 statutory Master Plan being formulated to regulate land use through zoning, density and plot ratio controls, and reserving lands for various amenities.

128 Choe "Early Years of Nation-building" 3. These ethnic enclaves created social and spatial divisions identical to the *apartheid* laws in South Africa.

129 Choe "Early Years of Nation-building" 6. Many European settlers began relocating from the Central Area to the outlying urban fringe, where larger estate homes could be built in more open space settings. This transition led to the gradual blurring of boundaries and overlapping of functional zones within the Central Area as earlier settlement patterns conformed less and less to 1822 town plans.

130 Choe "Early Years of Nation-building" 3.

131 Khoo and Remy "Making Singapore a Liveable and Sustainable City" 81. The lessons learnt from the Singapore approach to urbanisation will be useful to many other cities, especially given the need to reduce urban sprawl and dependence on the car as the major mode of transport.

132 Ministry of the Environment *Singapore Green Plan*. Singapore's Green Plan's Vision was for Singapore to become a model Green City by the year 2000 with high standards of public health and a quality environment with clean air, clean land and clean water to promote a gracious life and a quiet environment. See Chapter 5.4.1.

sustainable development and a compact city were implemented and must be investigated. Singapore invited the United Nations (UN) to propose a long-term framework for urban renewal and solutions relating to housing and urban decay.[133] Unlike many other countries Singapore has expanded rapidly but at the same time it has enhanced the environmental quality for its citizens as a result of a variety of good practices[134] that have been employed in both environmental planning and management.[135]

Urban planning in Singapore is a highly centralised government function and the Urban Redevelopment Authority (URA) is the designated land use planning authority of Singapore.[136] Land use controls take place with the assistance of the Ministry of Sustainability and the Environment, which advises the URA on specific environmental measures that are necessary[137] during the planning and construction phases of new developments. One Stop Centres[138] are used to ensure that all environmental requirements are complied with speedily and efficiently prior to approval.[139]

All the coordination and planning in Singapore is carefully laid out in two key

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133 The result was the Concept Plan 1971 and the formation of the Urban Renewal Unit, which eventually became the Urban Redevelopment Authority (URA).

134 See Chapter 5.4.2. Singapore currently uses four sets of instruments to manage environmental problem-regulatory measures, planning controls, economic incentives; and encouragement of public awareness and participation.

135 Leitmann *Integrating the Environment in Urban Development* 5. Environmental planning in Singapore can be divided into phases. See full discussion on this aspect in Chapter 5.4.1.

136 URA 2019 http://www.ura.gov.sg/uol/about-us/our-organisation/ura-history.aspx; Mah 2003 http://www.ura.gov.sg/uol/media-room/speeches/2003/nov/pr03-64.aspx. The URA is the primary agency responsible for administering the *Planning Act*. It does so together with its subsidiary legislation. General rules are laid down to govern urban planning and the development control system.

137 They advise the URA regarding issues such as watersheds, waste collection and its treatment and disposal. They further oversee new developments to ensure that they are properly located. They also ensure that developments are compatible with their surroundings. It is necessary to obtain occupation permits from the Sewerage, Drainage, Environmental Health, and Pollution Control Departments.

138 The Unit is a "one-stop" service. Private and public sector agencies consult with it with their development proposals. These include housing estates or industrial developments and information regarding alterations and additions to existing sites.

139 This is an integrated system as opposed to the complicated and lengthy process employed in South Africa. See Leitman *Sustaining Cities* 15. Environmental features are incorporated into land use planning. Residential and industrial areas are separated. Environmental infrastructure with is encouraged with directives given for industries to use "cleaner technologies, and effective protection".

documents: the Concept Plan[140] and the Master Plan prepared by the URA, in consultation with various other government agencies.[141] The Concept Plan is reviewed every 10 years and is a long-term strategic land use and transportation plan that provides the broad directions to guide Singapore's physical development over the next 40-50 years.[142] More concrete plans guide Singapore's infrastructure development over the shorter period of 10 to 15 years and are included in and form a Master Plan.[143] The *Planning Ordinance* (now known as the *Planning Act*)[144] was implemented to lay down the basic legal framework controlling the use and development of land as set out by the Master Plan. The 2013 Concept (or Land Use Plan), being the latest long-term plan, outlines the strategies to provide the physical capacity to sustain a high quality living environment.[145]

As part of Singapore's focus on sustainability, a "Green Plan" was introduced that focused on improving environmental planning and management until 2000 and beyond.[146] It has been superseded by *Our Home Our Environment Our Future: Sustainable Singapore Blueprint 2015* (*Sustainable Singapore Blueprint*).[147] One of the main features of Singapore's landscape and planning is the satellite cities that were created in terms of the Concept Plans at an early stage so that all development that was undertaken was done in a sustainable manner and conflict with the environment

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140 URA Date unknown http://www.ura.gov.sg/uol/concept-plan.aspx?p1=View-Concept-Plan. The first Concept Plan was formulated in 1971. It laid the foundation for Singapore's growth for a better quality of life with new towns, transport infrastructure and access to recreation.

141 URA Date unknown http://www.ura.gov.sg/uol/master-plan.aspx?p1=View-Master-Plan. Introduced in 1958, the Master Plan has evolved from being a plan that reflected preceding land use amendments to one that focuses on planning ahead for future developments.

142 See Chapter 5.3.2 for a full discussion on the Concept Plan.

143 Anon 2016 https://www.population.sg/articles/singapores-urban-planning-in-five-points. This is in sharp contrast to the public participation process of EIAs in South Africa.

144 *Planning Act* 3 of 1998.

145 The strategies in that regard include: providing affordable homes with all recommended amenities, more greenery everywhere, greater mobility, improved transport connectivity, a better economy with more jobs and ensuring room for growth, and "a good living environment in the future".

146 Ministry of the Environment *Singapore Green Plan.* The Green Plan's Vision is discussed in Chapter 5.4.1: "The vision set and achieved was for Singapore to become a model Green City by the year 2000". This Green Plan was devised for the year 2000 and beyond, that is, until the time, after 2020, when the city achieved a steady-state population of four million.

147 MEWR and MND *Sustainable Singapore Blueprint 2015.* See further Chapter 5.4.1.

is avoided.[148]

As space is limited, compact and integrated development is a serious consideration in property development in Singapore. The plans, policies and legislation implemented in Singapore may provide lessons on using satellite cities to address urban sprawl and conflict between property development and the environment within the urban edge.

Kigali in Rwanda,[149] with an urban growth rate estimated to be one of the highest in sub-Saharan Africa, is a city in a developing country in Africa experiencing similar challenges to rapid urbanisation and transformation as many cities in South Africa.[150] The sustainable development of the urban areas in Rwanda, through various initiatives, environmental policies and laws is regarded as one of the continent's most ambitious urban planning projects related to urbanisation.[151]

A study of its planning and environmental laws relating to development within the urban edge may give pointers to resolving conflicts between property development and the environment in South Africa. Article 49 of the *Constitution of the Republic of Rwanda*[152] states as follows:

> Every citizen is entitled to a healthy and satisfying environment. Every person has

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148 Leitmann *Sustaining Cities* 16. The Housing and Development Board in Singapore were guided by an earlier Concept Plan. 20 new satellite cities were built in the central city to channel new developments. Infrastructure planning was improved and congestion was reduced. The new satellite towns were to be designed to "encourage transportation other than by automobile".

149 SHLC 2018 http://www.centreforsustainablecities.ac.uk/research/rwanda-national-urban-policies-city-profiles-kigali-huye (Executive summary) xi. Rwanda was a German protectorate from 1896 to 1916 and a Belgian colony from 1916 to 1962. After 1962, Rwanda launched "a series of policies and legal frameworks to promote urbanisation and guarantee everyone a safe living environment". This was to be mainly in the cities in terms of arts 22 and 53 of the *Constitution of the Republic of Rwanda*, 2003.

150 MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 9.

151 Topping 2014 https://www.theguardian.com/world/2014/apr/04/kigali-plan-rwandan-city-afford-new-homes-offices. Property development and town planning is being implemented and master plans are being reviewed in Kigali city and the secondary cities. New urban centres are being built and "development of district industrial parks in secondary cities and other districts" is promoted. Infrastructural services in urban areas are being improved; audits are being implemented on master plans, "capacity development at all government levels" are being undertaken "to improve the implementation of urban development". See also MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 16. It will help decision-makers to "visualise the distribution of functions in the national territory, mainly concentrated in cities, and to identify development corridors, nodal towns and priority areas to better distribute investments geographically".

152 With its amendments of 2 December 2003 and 8 December 2005.

> the duty to protect, safeguard and promote the environment. The state shall protect the environment. The law determines the modalities for protecting, safeguarding and promoting the environment.[153]

The environmental right in the Constitution of Rwanda does not refer to development specifically, as is the case with section 24 of the South African Constitution.[154] However, after the 1994 genocide, Rwanda implemented its *Vision 2020*,[155] a long-term national sustainable development plan, that prioritised rapid economic growth[156] and poverty alleviation in accordance with the then, broadly aligned, Millennium Development Goals (MDGs).[157] The National Land Use and Development Master Plan (2011) provides general directives for sustainable land use development and presents guiding principles for future development with regard to socio-economic issues, infrastructure, environment and land administration. The main legislation regulating urbanisation[158] in Rwanda is the *Law Governing Urban Planning and Building in Rwanda*,[159] with its implementing orders of 2015.[160] Its relevance to this study is that it regulates land management and urban planning, and focuses on improving the

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153 This environmental clause is different from s 24 of the South African Constitution as it does not place the same emphasis on or link the environmental clause to property development. There are various other policies that do so in Rwanda, as discussed.

154 In July 2020 Rwanda implemented a new National Land Use and Development Master Plan (2020-2050) that provides the general directives for land use development and presents guiding principles for the future development of the country in regard to socio-economics, infrastructure, environment and land administration (Republic of Rwanda 2020 https://rlma.rw/fileadmin/user_upload/National_Land-Use_and_Development_Master_Plan_2020-2050.pdf).

155 MININFRA 2015 https://uploads.habitat3.org/hb3/RWANDA-HABITAT-III-REPORT_17.12.15.pdf. The *Vision 2020* "emphasises the positive side of urbanisation and its contribution to economic growth as well as planned and efficiently laid out and serviced rural settlement". See also UNEP Date unknown https://www.unenvironment.org/resources/report/rwanda-post-conflict-environmentally-sustainable-development-summary-report 4.

156 UNEP Date unknown https://www.unenvironment.org/resources/report/rwanda-post-conflict-environmentally-sustainable-development-summary-report. Overriding aspiration is to catapult Rwanda within one generation from a least developed into a middle-income country by 2020. Having embraced urbanisation as a key priority area in the national development strategies including *Vision 2020*, the country highly considers the urban development agenda as a possible resource to unlock the transformative economic opportunities for growth and poverty reduction.

157 As indicated above the MDGs were replaced with the SDGs and Rwanda has signed the SDGs. See Chapter 2.6 regarding MDGs and SDGs.

158 Article 9 of the *Law No 43/2013 Governing Land in Rwanda* states that urban land is land that is confined within boundaries of towns or cities established by a Presidential Order and all remaining land shall be considered as rural land.

159 *Law No 10/2012 Governing Urban Planning and Building in Rwanda.*

160 The *Ministerial Order No 04/Cab.M/015 Determining Urban Planning and Building Regulations* is binding for all categories of land within urban areas for any development and investment project, public institutions, tourist, public spaces, urban renewal and infrastructure servicing. It provides a basis for forward planning, development management and plan implementation.

urban land use management with a view to avoiding uncontrolled urban expansion or sprawl.[161]

The *National Urbanization Policy* (of Rwanda) was adopted in December 2015. It sets the framework for "governmental, non-governmental and private interaction in the country's urbanisation process".[162] It supports sustainable development, "providing quality of life and conditions for economic growth".[163] *Vision 2020*[164] also makes reference to "modern infrastructure and livelihoods, including green and eco-friendly cities and neighbourhoods".[165]

The challenge of urban sprawl "especially in the peri-urban areas" and cities of Rwanda is acknowledged.[166] Therefore, achieving "adequate density to optimise the use of urban land, reduce the cost of infrastructure and promote a more compact city" are priorities.[167] The Kigali Master Plan (KMP) of 2013-2043 includes a recently introduced urban growth boundary or urban edge.[168] It will be important to ascertain how the

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161 MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 15, 16. Cities Master Plans are quoted in art 13 of *Law No 10/2012 Governing Urban Planning and Building in Rwanda*, indicating that land leases and land transactions shall respect land use plans of the concerned area. These master plans are guided by the National Land Use and Development Master Plan (201 which provides the general directives and principles for land use development, including densification, mixed land use, mixed housing, green design and participation.

162 MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 9. This was in response to the challenge to achieve adequate density to optimise the use of urban land, reduce the cost of infrastructure and promote a more compact city.

163 SHLC 2018 http://www.centreforsustainablecities.ac.uk/research/rwanda-national-urban-policies-city-profiles-kigali-huye 7. The Seven Years Government Program (2011-2017) "guided the principal activities" and emphasised "infrastructure and utility provision and maintenance". It stressed the importance of infrastructure "for people in order to lead a dignified life". It also emphasises "affordable housing in rural and urban areas, friendly environment, and effective collaboration with the private sector". The Second Economic Development and Poverty Reduction Strategy (2013-2018) (EDPRS 2) and the Urbanisation and Rural Settlement Sector Strategic Plan (2013-2018) were also implemented.

164 MININFRA 2020 https://www.mininfra.gov.rw/index.php?id=183; Gatete 2016 http://www.minecofin.gov.rw/fileadmin/user_upload/Hon_Gatete_Umushyikirano_Presentation_2016.pdf.

165 An emphasis is also placed on renewable energy and recycling.

166 MININFRA 2015 https://uploads.habitat3.org/hb3/RWANDA-HABITAT-III-REPORT_17.12.15.pdf 32. The aspect of sprawl is particularly important for Rwanda, a country with one of the highest population densities. See also MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 22. Sprawl is evident in these areas on account of people migrating from "rural to urban areas".

167 MININFRA 2015 https://uploads.habitat3.org/hb3/RWANDA-HABITAT-III-REPORT_17.12.15.pdf 21.

168 Njuguna *et al Effectiveness of Planning Law*.

KMP addresses the issue of the urban edge.[169] Interestingly, in a survey conducted by United Nations Habitat, it was found that of all the cities that were surveyed in Africa, only two cities outside South Africa had urban development boundaries in place and Kigali[170] is one of these.[171]

169 See Chapter 6.6.2.

170 Njuguna *et al Effectiveness of Planning Law*. The only other city in Africa surveyed that had an urban growth was Gombe in Nigeria.

171 In this survey, an urban growth boundary is regarded as a growth management tool designed with the aim of limiting urban expansion "but not necessarily with the intent of densifying the entire urbanised area". It provides an "indicator of whether the law reflects a policy of compactness, even if not as a direct proxy".

Rwanda has many laws and policies that promote sustainability and mitigate sprawl to create compact and integrated urban development.[172] The Ministry of Natural Resources (MINIRENA) in Rwanda "found it necessary to consolidate existing land use" legislation, policies and plans by issuing *National Land Use Planning Guidelines* (NLUPG).[173] These *Guidelines* include provisions from various sectors (including the environmental sector) "into one document for ease of implementation and enforcement".[174] These laws and policies include amongst others, a densification policy,[175] neighbourhood layout plans,[176] decentralization policies[177] and building satellite cities[178] that may be classified as "smart cities".[179] Satellite cities[180] or secondary cities,[181] also prevalent and becoming popular in various other cities in

172 MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 21.

173 MINIRENA 2017 http://www.rlma.rw/uploads/media/LUP_*Guidelines*_Final_Published.pdf 68.

174 South Africa, by comparison has different departments and spheres for environmental and planning and also separate municipal laws. See Du Plessis 2017 *LDD* 259. "The urban law and policy framework of South Africa is a regulatory and visionary patchwork, a framework that comprises miscellaneous and incongruous parts".

175 The National Roadmap for green secondary cities development also promotes densification and an integrated development approach. A model village known as *Imidugudu* was established to increase density in rural settlements as well.

176 MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 22 and 29. The Rwandan urban population grows by 4.5% per year.

177 Ndereba 2017 https://communityleddev.org/2017/06/27/lessons-from-decentralization-in-rwanda/ 119. A study was made by the "government and development partners". It showed that decentralisation had "improved economic growth averaging 10% since early 2000s, reduced region inequalities, increased community participation, improved service delivery and made local government more responsive to citizen needs". (UNDP Rwanda Date Unknown http://www.undp.org.rw/).

178 These are referred to as secondary cities in Rwanda. See Chapter 6.6.3.

179 Elgazzar and El-Gazzar "Smart Cities, Sustainable Cities, or Both?" 250. The term "smart cities" relates to the use of information and communication technology (ICT) to improve the "quality of life and city services". "Smart cities" also aim to be sustainable cities. They are said to "develop with respect to the economic, social and environmental needs of the present and the future".

180 Fakir 2018 https://www.polity.org.za/article/africas-infrastructure-and-the-recent-climate-report-2018-11-30. Satellite cities "aim to become an inclusive, vibrant economy; promote environmentally responsible development" that is "resilient in the face of continued population growth and natural disaster". They have the potential of "meeting the goals of all growing cities, but they could also address the malaise of urbanisation woes" that exist in some East African cities.

181 MININFRA 2015 https://uploads.habitat3.org/hb3/RWANDA-HABITAT-III-REPORT_17.12.15.pdf. Earlier "unplanned urban settlement, uncontrolled urban expansion" and inefficient use of land were issues in Rwanda. The *Law Governing Urban Planning and Building in Rwanda,* 2012 and its implementing orders from 2015 ensured that development is regulated with "clear procedures to support sustainable, integral and inclusive development". Six secondary cities were identified for the specific purpose of avoiding pressure on the urban edge areas in Kigali to assist avoid urban sprawl.

Africa,[182] are initiatives specifically promoted in Kigali. Their further relevance to this study is that they are sometimes developed at the edges of cities or in transition zones. Satellite cities close to the urban edge or within the urban edge are seen as a possible solution to environmental conflict[183] in developing countries experiencing similar challenges to rapid urbanisation, as in South Africa.

1.6 Research question

The above discussion signifies that there is conflict relating to development, the environment and the urban edge. The harmonious co-existence of property development and the environment is not only desirable but is also necessary in terms of the Constitution.[184] While the Constitution encourages property development (for socio-economic reasons) it also protects the environment and this means that the situation is delicate and needs special care. Property development is encouraged and is thus prominent within the urban edge but is restricted outside the urban edge so as to protect the environment. It is necessary to determine how the conflict between property development and the environment within the urban edge may be addressed in the light of South African law and policy. This cannot be done without addressing the international context as well as how other countries address these issues.

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182 Kachipande 2013 https://www.polity.org.za/article/a-new-african-dream-the-benefits-of-satellite-cities-for-east-africa-2013-05-29. Over the past few years, an increase in urbanisation has led to the growth of poverty and high unemployment levels in many parts of Africa. East African governments in Kenya, Tanzania and Congo have high population growth in their main cities and are planning or developing satellite cities "adjacent to their main urban areas". These will become the nation's new urban spaces.

183 The International Association for Impact Assessment, SA Conference held in South Africa in August 2019 included the topic: "Should the urban edge be protected ecologically for the benefit of urban dwellers or does it present an area where the poor can access the benefits of urbanisation without necessarily incurring the costs of doing so?". It goes on to question if *apartheid* planning forced on South Africa a meaningless urban edge, and questions if the urban edge should rather be used as an ecologically robust transition (area) between the city and the adjoining rural areas. Satellite cities are relatively new in Africa. Satellite cities are large usually planned integrated and developments that are purpose built near large cities or on the outskirts of cities. They are designed to curb urban sprawl and are "well-organised urban spaces that are self-contained". They are targeted towards the emerging new middle-class in African cities and expatriates. Negative sentiments regarding the concept are that developments on the periphery may widen the gap between rich and poor by creating "Western-looking designs in spaces in the Global South" and these spaces may be exploited by real estate development companies.

184 In terms of s 24 of the Constitution.

The research question that this study addresses is therefore: How should the South African law address the conflict between property development and the environment when such conflict occurs within the urban edge.

1.7 Aim of the study

The main aim of this study is to analyse how South Africa should address the conflict between development and the environment when such conflict occurs within the urban edge, taking into consideration existing laws and policies and the international context as well as learning points from foreign jurisdictions.

To support the main aim, the following sub-aims are formulated, namely to:

1. provide a theoretical framework regarding the urban edge and addressing conflicts between development and the environment, where such conflict occurs within the urban edge;

2. analyse international soft law instruments such as SDG 11, the *New Urban Agenda*, and international concepts addressing compact and smart cities to supplement the theoretical framework;

3. critically analyse the role of property development and the urban edge in South African planning legislation drawing lessons from Singapore and Rwanda;

4. critically analyse property development within the urban edge in South African environmental legislation, drawing lessons Singapore and Rwanda; and

5. make recommendations to address the conflict between development and the environment, when such conflict occurs within the urban edge.

1.8 Research methodology

The research methodology comprises a literature review. Various sources in the form of international and regional treaties, customary international law, domestic constitutions, legislation, court cases (both reported and unreported as well as national, international and foreign), scholarly journal articles and academic writings,

conference proceedings, books and theses will be analysed and interpreted to address the aim of the thesis.[185]

The study includes a comparative study of policies and legislation pertaining to the urban edge in Singapore and Rwanda. The planning and environmental laws of these two foreign jurisdictions are analysed to determine how they address conflict between property development and the environment. The lessons learnt will be used to inform the recommendations.[186] Wiener[187] states that in the case of new legal developments, countries tend to borrow legislation from other jurisdictions in order to inform their own legal drafting. The legislation that is borrowed must then be adjusted to the particular circumstances of the country. As environmental law is a new concept and South Africa's planning laws had to change substantially to reflect the new democracy, Weiner's statement applies to this study. South Africa may be able to borrow concepts, policies and legal measures that have proved successful in other countries, such as Singapore and Rwanda.

South Africa has a hybrid system of land holding that is informed by its *apartheid* and colonial history. It inherited the system of ownership of land from the Dutch, but the indigenous population has always subscribed to a system of customary land holding.[188] Similarly Singapore has a hybrid system, where the land tenure type was originally freehold title but changed with the government's need for land for developmental projects. Two categories of land holding exist, namely freehold and leasehold but most land is held by the state.[189] In Rwanda the situation is the opposite to that in Singapore and is more like that of South Africa. Initially, the land tenure system was mainly one of collective ownership of land but with the land tenure regularisation programme, individual ownership of land, alongside the more traditional forms was adopted.[190]

South Africa's particular *apartheid*-law measures gave cities in South Africa

185 On the research methodology, see Venter *Legal Research*, Philippopoulos-Mihalopoulos and Brooks *Research Methods in Environmental Law*; Fisher *Legal Reasoning in Environmental Law.*
186 On the legal comparative method, see Van Hoecke 2015 *Law and Method*.
187 Wiener 2001 *Ecology LQ*.
188 Van Wyk *Planning Law* 3rd ed 51.
189 Stanley 2018 https://stackedhomes.com/editorial/land-ownership-in-singapore/#gs.vy8nqj.
190 Goodfellow 2014 *JEAS*.

characteristics that are also common in the developed world. Singapore has a similar history and was also occupied by England. As an island and city-state it is compelled to have a compact urban form. This city-state is regarded as a role model for good environmental outcomes despite its limited size and growing population. Its town planning and environmental laws may provide lessons on reducing sprawl and eliminating conflict between property development and the environment particularly as it pertains to the urban edge in South Africa. The two countries share an English administrative law background, making it a suitable choice.

Rwanda, similar to South Africa, is a developing country in Africa that has made substantial progress with regard to sustainable development in a relatively short space of time. Rwanda and South Africa have similar challenges in relation to rapid urbanisation and share a history of conflict. They also have a similar civil law (French, German and Belgium) and Roman Dutch law (the Netherlands)) background.[191] It will therefore be apt to consider how conflict between property development and the environment within the urban edge or urban growth boundary is addressed in the capital city, Kigali.

A drawback in the study of Rwanda has been the lack of accessible Rwandan judgments in English in this field of study. The current civil law in Rwanda is based on the German/French and Belgian legal systems and customary law. Court judgments play an interpretive role but are not used in the same way as they are in the context of *stare decisis.*[192] Court judgments on this subject are in Kinyarwanda or French and English translations are still being developed.[193]

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191 South Africa is regarded as a mixed legal jurisdiction with influences from both Roman Dutch law (civil law tradition) as well as English law. See in this regard Van Wyk *Planning Law* 3rd ed 26-33.

192 Mutabazi Date unknown https://www.academia.edu/35781569/APPLICABILITY_OF_STARE_DECISIS_UNDER_RWANDAN_LEGAL_SYSTEM_Precedent_as_a_Binding_Source_of_Law_under_Rwandan_Legal_System. In English law *stare decisis* is firmly entrenched, meaning that court decisions as precedents are a binding source of law. Rwanda has a civil law system and civil law legislation is the primary source of law and not court judgments. There are some elements of common law precedents but these are restricted to Supreme Court decisions.

193 International Business Publications *Rwanda Business Law Handbook* 43. See also Musiime and Kabasinga 2013 https://www.nyulawglobal.org/globalex/Rwanda1.html. According to Minister for Education in Rwanda, Dr Mutimura, the level of competence in English at university level is low. See also Musoni 2014 https://www.newtimes.co.rw/section/read/183014. The Chief Justice, Prof

Rwanda is attracting much attention because of its progress[194] and will be discussed as a developing country. The town planning in the capital city Kigali, will be explored. However, there has been "little attention from scholars working in the domain of cities or urbanisation" and little has been written about Kigali's planning and environmental laws or about the internal dynamics of Kigali city.[195] For that reason, there is little secondary literature on this important aspect and this study therefore relies on the primary sources, such as laws, policies and plans.

In this study Chapter 2 provides a theoretical background, exploring the concept of the urban edge, SDG11 and related international instruments regarding sustainable cities. This will be done to develop a framework to address conflicts between development and the environment, where they occur within the urban edge. Chapter 3 focuses on planning law while Chapter 4 focuses on environmental law within the context of addressing the conflicts between development and the environment within the urban edge. Chapters 5 and 6 are discussions on Singapore and Rwanda respectively specifically in relation to lessons that they may provide to South Africa to address conflict between property development and the environment within the urban edge. Chapter 7 concludes the study and makes recommendations against the background of all the aspects dealt with in the previous chapters.

Sam Rugege, has said foreign lawyers and judges may be able to start referring to Rwandan court judgments because there has been an initiative to have major decisions translated from Kinyarwanda to English, as English is replacing French as a major language. These have been slow and despite a search for English translated cases in environmental and planning law by the writer, they could not be found.

194 Rwanda's extremely clean cities are a further source of interest as it is in the heart of Africa but is so different in that regard.

195 Baffoe *et al* 2020 *Sustainability*.

Chapter 2

The urban edge and sustainable development in cities

Boundaries in general are places that "mark the transition between different regimes or different systems, and this is nowhere more so than between the rural and urban worlds at the edge of a city".[196] When defining and describing the physical form and extent of a city, its edge or boundary is the "most obvious visual" of its extent and shape.[197] The definitions of cities rely upon how their boundaries are defined.[198] These boundaries can be referred to as the urban edge, urban development boundary or urban growth boundary and by a variety of other designations.

So what exactly is an urban edge or urban growth boundary? What is its background and history and why was it introduced into the realm of South African planning? Is it just a line, a boundary, a transition zone or a more complicated concept? How can it be defined, what is its purpose, does it have legal status and is it enforceable at all bearing in mind that it is not specifically dealt with in legislation but only in policy documents and guidelines? What is the role of the different spheres of government with regard to the urban edge and finally, how important is its management?

Answering these questions will assist in providing some clarity and a better understanding of a term that has now become a part of spatial planning in South African law and that has been the subject of High Court and even Constitutional Court litigation in South Africa.[199]

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196 Batty and Longley *Fractal Cities* 164.
197 Batty and Longley *Fractal Cities* 164.
198 Batty and Longley *Fractal Cities* 164.
199 See *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC). See also *Shelfplett 47 (Pty) Ltd v MEC for Environmental Affairs and Development Planning* 2012 3 SA 441 (WCC) (hereinafter the *Shelfplett* case) and the *Clairisons* case. See also case law discussed in Chapters 3 and 4.

2.1 Historical background of the urban edge

Planning law has its origins in the Greek and Roman eras. In South Africa, the Dutch and the English "played a major role in planning" law during the 17th and 18th centuries.[200] The combined impact of Dutch and English law resulted in the use of planning devices such as zoning schemes, subdivisions and title deed restrictions.[201]

The origins of the urban edge can be attributed to Ebenezer Howard, who produced research and models for what became known as a "garden city".[202] Howard's work, retitled in 1902 as *Garden Cities of Tomorrow* describes his vision of a city with "30,000 people located in the centre of a 6,000 acre tract of agricultural land" where population growth would be limited to about 32,000 people.[203] Each city would be encircled by an agricultural "green belt". The purpose of the green belt was two-fold: it would act as a barrier to continued urban growth and become the agricultural zone for the city.[204] Importantly, the plan included transport links to regional towns and larger cities.[205]

Howard's ideas sought to deal with the many problems of the 19th century cities that he listed, which included encroachment of cities on neighbouring rural areas; migration of the agricultural population to larger urban cities; decline in rural life; overcrowding in the centres of large cities and increase in land values in the city areas.[206] Subsequent to World War I, many cities became slums due to overcrowding

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200 Van Wyk *Planning Law* 2nd ed 24.

201 Wiley *Urban Edge* Foreword.

202 Coetzer 2009 *SAJAH* 2.

203 At that very early stage the vision was to restrict the number of inhabitants. It points to a realisation that overcrowded cities will be unable to be in harmony with the environment. South Africa, Rwanda and Singapore face challenges with regard to this issue. South Africa and Rwanda have implemented an urban edge or urban boundary while Singapore has limited space to expand and needs to be compact. Rwanda has reverted to strict controls regarding extensions of urban edges in proportion to the number of people it has. See Chapters 5 and 6.

204 The agricultural green belt concept is a system that considers the agricultural green belt as a boundary, very much like an urban edge. It is still considered in planning today both from the view of an urban edge and to improve rural and urban linkages. This is a concept that is advanced with the creation of satellite cities in Rwanda and must be reinforced in South African cities. Both the NDP and the *Integrated Urban Development Framework* (IUDF) promote these linkages. See Chapter 3.10.

205 Batchelor 1969 *JSAH* 186. See also Howard *Garden Cities of Tomorrow*.

206 Batchelor 1969 *JSAH* 186. Many of these are still problems today in the cities of countries such as South Africa and Rwanda. Kigali's expansion and sprawl is attributed, among other things, to

and inner city degradation. Environmentally unsustainable practices[207] forced planners to focus on addressing this immediate and pressing problem. The 1920s were, therefore, the time when "urban sprawl"[208] first emerged. Cities began to "lose favour" to the "romance offered by the American Dream".[209]

After World War II, urban sprawl also became evident in major cities throughout the western world including London, Birmingham and Manchester in the United Kingdom and in "virtually all of North America's larger cities" including Boston, Los Angeles, Washington and New York.[210] Rising incomes, home ownership and affordable transport resulted in people moving to and preferring suburban areas and cities began to embrace expansion.[211] By the "1960s and 1970s suburban residents became reluctant" to travel into the centre of town for daily purchases of their needs, resulting in business markets being established in suburbs rather than in the centre of the city.[212] This development enhanced urban sprawl.[213]

In delving into the history of spatial development in South Africa, Horn[214] states that the planning and cities is a "direct consequence of the context in which it took place". The planning profession was mainly concerned with "rectifying physical problems" due to the recovery of the nation after severe warfare during the 19th century and first half of the 20th century.[215] As such, this period is also characterised by the fact that it was felt that a growing city needed to be curtailed. The main objectives were "containment, conservation and control" but concern was mainly for survival, existing

thousands of people travelling from the peri-urban and peripheral areas into Kigali for work. See Chapter 6.6.1 relating to Kigali.

207 Horn 2010 *Eur Spat Res Policy* 43.

208 The issue of urban sprawl is dealt with in more detail in 2.3 below.

209 Clawson and Hall, 1973 cited in Horn 2010 *Eur Spat Res Policy* 42.

210 Fertner *et al* 2016 *Future Cities and Environment* 10; Horn 2010 *Eur Spat Res Policy* 43.

211 Horn 2010 *Eur Spat Res Policy* 43.

212 Britz and Meyer 2006 *Town Plan Rev* 206. Suburbs were presumed to be "safer, more desirable and cheaper" than the inner cities which were "congested, heterogeneous and diverse, high-density" alternatives. The cost of living and of using a private motorcar in the suburbs, including pollution and other costs, were not considered.

213 Mabin 2005 *Transformation* 56.

214 Horn 2010 *Eur Spat Res Policy* 43.

215 See Chapter 6.1 on Rwanda. Rwanda had experienced a civil war and genocide and looked to urbanisation to uplift its people and the country.

needs and solutions to immediate problems.[216] In South Africa, inner cities began to deteriorate and became decentralised.[217] In contrast suburban development began to flourish and urban sprawl thrived.[218] The major urban areas of South Africa faced the same situation as the North American, British and even Australian urban areas, namely that urban growth is characterised by "dispersed residential" development in the areas near the edges of the cities.[219] The South African situation, which, to a large extent, was due to the enforcement of the *apartheid* policy[220] was similar to the situation in Singapore.[221] However, it is different from that of America and the western world although they too are scarred by their history.[222]

The advent of colonial occupation in South Africa resulted in the use of land having a racial context.[223] Planning was done on a different basis for black and white people.[224] As the *apartheid* system became more entrenched,[225] the strict planning system became the "tool to enforce and promote separate and fragmented development in urban areas" in terms of the South African government's *apartheid* policies.[226] Areas for black people were separated and placed at the periphery of towns and cities and

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216 Horn 2010 *Eur Spat Res Policy* 44. Exactly the same situation was witnessed in Singapore (see Chapter 5.1) and Rwanda (see Chapter 6.1). All initial focus was on the physical needs of the community and less attention was paid to the environment.

217 This was not planned decentralisation, but more haphazard decentralisation that created sprawl. Planned decentralisation is widely used in Singapore and Rwanda to create new poles of growth and other advantages. See the discussion on satellite cities which form part of the decentralisation policy in Chapters 5.6 and 6.6 in Singapore and Rwanda respectively.

218 Horn 2010 *Eur Spat Res Policy* 44; Britz and Meyer 2006 *Town Plan Rev* 206.

219 Coetzee 2012 *Town Reg Plan* 11. This planning system is, to a large extent, associated with the concepts of land-use control, zoning and structure planning that developed in the early 1900s in the USA, UK and Western Europe. See also Horn 2010 *Eur Spat Res Policy* 44.

220 Specific areas were set aside for black people and while planning for white people was being maintained, a separate system of land use was introduced for black people. See discussion to follow.

221 See Chapter 5.1 relating to Singapore.

222 Van Wyk *Planning Law* 2nd ed 16.

223 It was the *apartheid* laws that caused this segregated system relating to the ownership of land. One of the Acts that applied was the *Black Land Act* 27 of 1913.

224 Van Wyk *Planning Law* 2nd ed 25. For a history of the land legislation measures in South Africa, see Pienaar *Land Reform* ch 3.

225 During the mid- to late 1900s.

226 Coetzee 2012 *Town Reg Plan* 11.

they were excluded from urban areas.[227] In rural areas, Bantustans[228] called "independent homelands" and "self-governing states" were created and where different laws applied.[229] Apart from the Cape Province, black people could not acquire or purchase land outside those areas that were specifically established for them and by 1936 white people owned 87% of all land.[230] By 1948, the Nationalist Party came to power with its ideology of total segregation of white and black people was cemented.[231]

The inequalities described above, especially with regard to land, its ownership and development are "visible reminders" of the effects of colonialism and *apartheid* .[232] This system forced black people[233] to live in "unsustainable human settlements" located far from where they worked and further created unhealthy and unsuitable

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227 See Chapter 1.2.1 relating to legislation that applied; See also Strauss *Right to the City;* Van Wyk *Planning Law* 2nd ed 45, 48.

228 Britz and Meyer 2006 *Town Plan Rev* 207. The black population was divided into artificial ethnic "nations", each with its own homeland and self-governing with the prospect of independence. These former homelands were incorporated into the Republic of South Africa on 26 April 1994.

229 The *Development Trust and Land Act* 18 of 1936 extended the application of the *Black Land Act* 27 of 1913 "by providing for the acquisition of additional scheduled areas or rural reserves for black" settlement. This Act "integrated land identified by the *Black Land Act* into reserves". It enforced "racial segregation of rural areas through the mechanism of the South African Native Trust". In terms of ss 4-9 of the Act, all land that was set aside for the use and occupation of black people vested in the South African Development Trust. Such land was administered by tribal authorities. S 48(1)(g) of the *Development Trust and Land Act* authorised the South African Development Trust to "grant, sell, lease or otherwise dispose of land" to blacks "on certain conditions". In addition, they were empowered to "issue regulations prescribing the conditions under which black people could purchase, hire or occupy land held by the Trust". Black people lost all rights to purchase land and they were forced to use land that was administered by tribal authorities.

230 Van Wyk *Planning Law* 2nd ed 45 (the remaining 13% was made up of black reserves).

231 Some of the other Acts that were passed included the *Representation between the Republic of South Africa and Self-governing Territories Act* 46 of 1959 in terms of which areas were set aside for the so called "independent homelands"; the *Group Areas Act* 41 of 1950 that designated areas for the various race groups such that a member of a particular race group could not reside in an area designated for another race group; and the *Group Areas Act* 36 of 1966 that was responsible for regulating the "acquisition, alienation and occupation of land" for white, Coloured and Indian people in separate areas. As a result millions of black people had to move to a black reserve or "Bantustans". Self-governing territories followed in terms of the *National States Constitution Act* 21 of 1971 and these areas were empowered to take over the ownership and administration of the land there. There was also separate legislation for the independent homelands of Transkei, Ciskei, Bophuthatswana and Venda: See also Van Wyk *Planning Law* 2nd ed 44.

232 Van Wyk *Planning Law* 2nd ed 25.

233 Just prior to the democratic South Africa in 1994, in the historically African or black areas, a rudimentary planning system applied mainly under the *Black Communities Development Act* 4 of 1984.

environments for Indians and Coloureds in which to live.[234] A "fragmented spatial pattern" based on race resulted. It negatively impacted on socio-economic conditions and resulted in land-use segregation.[235] This lack of economic and social opportunity has been cited as being "one of the main reasons for the high levels of poverty in rural and peri-urban areas in South Africa".[236]

These boundaries of a different sort, were sadly not created with a concern for "green areas" and their advantages, nor a concern about agriculture and its benefits to the community. Boundaries in South Africa were created mainly to enforce *apartheid* and racial segregation. The division or boundaries between different race groups was achieved by means of clearly defined industrial or environmental "buffer zones".[237] The result was urban sprawl. According to Meyer and Britz[238] "urban sprawl" is a term used to indicate development patterns such as "low residential densities; separation of land uses; the creation of single-use environments; leapfrog development directing development away from city centres; automobile-dependent development; environments not conducive to public transport" as well as "development at the periphery of an urban area at the expense of its core". The economic implications of sprawl include increased costs that relate to infrastructure, fuel and time taken for travelling. South African cities display many of these symptoms.[239] Because of its specific racial context there was relatively low density in dominant white suburbia[240] with black people being housed in crowded housing of an inferior quality in rural areas far from city centres or at the periphery or edges of cities.[241] In addition, air pollution

234 Coetzee 2012 *Town Reg Plan* 12.

235 Coetzee 2012 *Town Reg Plan* 11. Separate areas were created in towns and cities for exclusive use of Indians and Coloureds respectively.

236 Horn 2010 *Eur Spat Res Policy* 43.

237 Britz and Meyer 2006 *Town Plan Rev* 207. As a result of these boundaries that were created, South Africa is "characterised by severe income disparities" and "spatially distorted patterns". They relate to unemployment, "residential and other social opportunities". Black communities have to travel far to their work areas "with few transportation alternatives due to the ineffective public transport system". See also Horn 2010 *Eur Spat Res Policy* 43.

238 Britz and Meyer 2006 *Town Plan Rev* 206.

239 Jansen van Rensburg and Campbell 2012 *Urban Forum* 61.

240 Van Wyk *Planning Law* 2nd ed 25.

241 Western Cape 2005 https://www.environment.gov.za/sites/default/files/docs/provincialurbanedgeguideline.pdf Foreword.

and traffic congestion[242] caused a "lack of social and economic" opportunity resulting in high levels of poverty in South Africa.[243]

In South Africa the foundation of the urban edge is attributed to the *Subdivision of Agricultural Land Act* (SALA)[244] and the various town planning ordinances[245] that governed land use in urban areas and applied in South Africa prior to, and to a large extent, after 1994. SALA was applied in rural areas while the ordinances were used in urban areas. According to Cilliers and Schoeman[246] the urban edge was "created to establish the exact point between urban and rural areas and to establish limits beyond which urban development should, as a rule, not occur in order to promote urban and environmental efficiency".[247] These approaches "regulated development, but created confusion".[248] In addition, unique South African planning tools such as guide plans,[249] regional plans[250] and urban structure plans[251] were used in terms of the *Physical Planning Act.*[252]

With the coming into power of South Africa's first democratic government and as a

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242 As it was automobile centred (Horn 2010 *Eur Spat Res Policy* 41).

243 Van Wyk *Planning Law* 2nd ed 17.

244 Section 3 of the *Subdivision of Agricultural Land Act* 70 of 1970 prohibits the subdivision of agricultural land. To do so, a necessary consent is required from the Minister of Agriculture.

245 The *Town-planning and Townships Ordinance* 15 of 1986 (Transvaal); the *Land Use Planning Ordinance* 15 of 1985 (Cape); the *Townships Ordinance* 9 of 1969 (Orange Free State); and the *Town Planning Ordinance* 27 of 1949 (Natal). Most provinces continued to utilise ordinances that were promulgated before our democracy. See also Van Wyk 2010 *PELJ* 214; Cilliers and Schoeman 2008 *WIT Trans Ecol Environ; City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC).

246 Cilliers and Schoeman 2008 *WIT Trans Ecol Environ* 85.

247 Regulation 20 of the Local Government: Municipal Planning and Performance Management Regulations (GN R796 in GG 22605 of 24 August 2001).

248 Two provinces (Northern Cape and KwaZulu-Natal) used post-1994 legislation and the other provinces carried on utilising ordinances pre-democracy.

249 Guide plans, which were initiated by the Department of Planning and the Environment, were broad-scale organisational frameworks used to coordinate future projections and forward planning. See also Van Wyk *Planning Law* 2nd ed 41.

250 The idea of regions and provisions for the creation and preparation of regional development plans and regional structure plans was introduced through the *Physical Planning Act* 125 of 1991; Van Wyk *Planning Law* 2nd ed 39.

251 These are old-order plans or town planning and urban development "tools" drawn up in terms of the *Land Use Planning Ordinance* 15 of 1985 (Cape) and by GN R1888 in GG 12691 of 10 August 1990 (Land Use and Planning Regulations); Van Wyk *Planning Law* 2nd ed 277.

252 *Town-planning and Townships Ordinance* 15 of 1986 (Transvaal); the *Land Use Planning Ordinance* 15 of 1985 (Cape); the *Townships Ordinance* 9 of 1969 (Orange Free State); and the *Town Planning Ordinance* 27 of 1949 (Natal).

direct consequence of the Constitution,[253] South Africa witnessed a change in the law[254] and attempts were made to bridge the gap between "marginalised communities and wealthier areas".[255] The post-*apartheid* government's first priority was the transformation strategy through the Reconstruction and Development Programme (RDP).[256] Unfortunately, after 1994, despite the need and vision to alter the *status quo* and despite attempts being made to introduce counter-*apartheid* measures,[257] the level of urban sprawl actually increased.[258] This occurred because the South African government arranged large-scale lower income development in terms of the RDP on the periphery of cities where land prices are usually much cheaper.[259] The abolition of influx control[260] in 1984 also contributed to the "spontaneous and often unauthorised settlement" by previously disadvantaged people "seeking proximity to urban labour markets".[261]

When the negotiations to end *apartheid* began there was no legislated urban edge or urban growth boundary.[262] The rights created in the Constitution and the

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253 The new government elected in 1994 had to consider changes to the planning system. This resulted in the promulgation of the *Development Facilitation Act* 67 of 1995 (DFA) and the *Local Government Transition Act* 209 of 1993 being enacted.

254 Van Wyk *Planning Law* 2nd ed 75. This transformation unfortunately did not translate into an equivalent change in practice in "values and principles" from those based on racial differences to those based on equality.

255 Britz and Meyer 2006 *Town Plan Rev* 208.

256 Van Wyk *Planning Law* 2nd ed 17.

257 Policies such as the *Rural Development Framework* (1996) (Rural Development Task Team *Rural Development Framework), Urban Development Framework* (1997) (Department of Housing *Urban Development Framework*), and later the *White Paper on Spatial Planning and Land Use Management* (2001) (Department of Land Affairs *White Paper on Spatial Planning and Land Use Management*) and the *National Spatial Development Perspective* (2003) (RSA *National Spatial Development Perspective*) were put in place to try to rectify the situation with better opportunities for poor black communities.

258 Coetzee 2012 *Town Reg Plan* 10-20. Although it is almost two decades since transformation, the planning system in South Africa has still not changed and transformation is required in the South African urban, regional and rural spaces. "Low-density urban sprawl, fragmented communities and spaces, and scattered impoverished informal settlements" that were established away from working areas need to be resolved. It seems as if the *apartheid* legacy is still existing. The new "integrated planning system" did facilitate some growth and development but the desired changes, that apply to restructuring and growth did not happen "at the pace and in the spaces" as expected. See also Horn 2010 *Eur Spat Res Policy* 43.

259 Van Niekerk 2018 *Town Reg Plan* 71. This has unfortunately not improved the *apartheid* style of human settlements.

260 In terms of the *Abolition of Influx Control Act* 68 of 1986.

261 Horn 2010 *Eur Spat Res Policy* 43.

262 Jansen van Rensburg and Campbell 2012 *Urban Forum* 61.

implementation of policies such as the *Urban Development Framework* (1996)[263] and the *Rural Development Framework* (1997)[264] were aimed at correcting the "distorted spatial patterns" and providing some relief to mostly black poor communities.[265] Legislation in the form of the (now repealed) *Development Facilitation Act* (DFA)[266] introduced general principles for land development[267] providing that all administrative practices and laws relating to land development in South Africa should "discourage the phenomenon of urban sprawl" in urban areas. There was a need to promote the development of more integrated and compact towns and cities.[268] The urban edge gained popularity again as a tool to address these principles.

At the start of South Africa's democracy, serious attempts were made to resolve the planning issues created by the *apartheid* regime. It is unfortunate that the RDP was tainted by corruption in housing allocation. The now repealed DFA,[269] became the centre of a Constitutional Court dispute that resulted in Chapters V and VI of the Act being declared invalid, which eventually led to the Act's demise.[270] It took an effective four years thereafter, for SPLUMA[271] to be put into operation.[272]

Post-1994 various new planning tools were implemented such as Land Development

263 Department of Housing *Urban Development Framework*.
264 Rural Development Task Team *Rural Development Framework*.
265 Horn 2010 *Eur Spat Res Policy* 46.
266 Act 67 of 1995. The DFA's objective was to "facilitate and speed up the implementation of reconstruction and development programmes and projects in relation to land." It had to also govern land development throughout the country and ensure "integrated and sustainable land development".
267 Section 3(1)(c) of the DFA.
268 Section 3(1)(c)(vi) of the DFA. An explanatory document to the Act explains that to combat urban sprawl, new developments must take place in existing developed areas, on vacant land in these areas or through extending and further developing existing properties. Further mention is made of associated issues such as proximity of places of residence to places of employment; shorter travelling distances; urban decay in inner cities; protection of the environment and improving existing transport systems used by the public; engineering infrastructure and community facilities. The issue of growth management, and specifically the containment of urban sprawl, was therefore a priority item on the post-1994 planning agenda and even taken up in legislation.
269 The DFA is now defunct. See Oranje and Van Wyk 2019 *Town Reg Plan* 119. The success of legislation, plans and policies in Rwanda were compared to the South African situation regarding planning.
270 See Chapter 3's introduction and also the discussion on Rwanda in Chapter 6.1.
271 *Spatial Planning and Land Use Management Act* 16 of 2013 (SPLUMA).
272 Van Wyk *Planning Law* 3rd ed 2.

Objectives,[273] EIAs,[274] IDPs,[275] SDFs,[276] the designation of different types of protected areas, urban edge lines and marine set back delineations.[277] To this one can add other newly introduced principles and policies[278] such as the Goal 11 of *Sustainable Development Goals 2015-2030*,[279] the *New Urban Agenda*,[280] the NDP,[281] the NSDF[282] and the IUDF.[283] SPLUMA is also significant as it was introduced to address the negative consequences of fragmented *apartheid* planning system.[284]

As the previous dispensation in South Africa was an extraordinarily and complex legal system for land use management that provided different and segregated areas, the process of repealing and replacing the "plethora[285] of segregation based legislation" has taken much longer than anticipated.[286] This past history is relevant to a discussion on the urban edge and to a discussion on conflict within the urban edge and related sustainability. In fact, the segregation policy in *apartheid* South Africa resulted in one

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273 The DFA set out a new planning environment through the Land Development Objectives that authorities had to prepare and were intended to determine the nature, scale and financing of development of the local authority that is sustainable.

274 Section 24 of NEMA. See the discussion on EIAs in Chapter 4.3.5.

275 In terms of s 25 of the MSA IDPs must be prepared by every municipality in the country on a five-year basis and be annually reviewed. The IDP is the written plan that results from the integrated development planning process. It is the principal strategic planning instrument guiding and informing all planning, management, investment, development, and implementation decisions and actions in the local area and supersedes all other plans that guide local development. See Chapter 3.6.2.

276 Section 12 of SPLUMA. See Chapter 3.6.

277 Legislation relating set back lines and the environment will be discussed in more detail in Chapter 4.4.

278 It is made clear that these planning tools are intended to bridge the gap between marginalised communities and persons living in wealthier areas.

279 These are a universal call in terms of the United Nations Development Programme to action and end poverty, to protect the planet and to ensure that all people enjoy peace and prosperity (UN Date Unknown http://www.un.org/sustainabledevelopment/sustainable-development-goals/).

280 UN 2016 https://habitat3.org/the-new-urban-agenda/.

281 NPC *National Development Plan 2030*. The NDP is a long-term South African development plan, initiated by the National Planning Commission that aims to eliminate poverty and reduce inequality by 2030. See the discussion regarding the NDP in Chapter 3.9.

282 See Chapter 3.6.1.

283 Department of Cooperative Governance *Integrated Urban Development Framework*. See Chapter 3.9.

284 See Chapter 3.5 in respect of SPLUMA.

285 See the comprehensive table of legislation in Retief and Cilliers "Land-use Management and Planning" 567-569 and the legislation set out in categories referred to by Van Wyk *Planning Law* 2nd ed 128-140. Note also the "spatial complexity" of land use management as illustrated by the case study in Retief and Cilliers "Land-use Management and Planning" 573-575.

286 Retief and Cilliers "Land-use Management and Planning" 563; Laubscher *et al SPLUMA* 6.

of the crudest forms of "spatial injustice".[287] People were discriminated against because of their race and disadvantaged as regards housing, mobility, economic opportunity, and education.[288] The effects of this still linger, making the necessity to address conflict between property development and the environment more challenging. It was clear that "urban sprawl" had to be curtailed and it was hoped that the solution would be the urban edge. International case studies were undertaken and the result was the choice of the urban edge[289] as a growth management tool to achieve a compact form for cities in South Africa.

2.2 The urban edge in South Africa

After 1994, it became necessary to consider the principles of compaction and urban growth management as part of the post-*apartheid* planning so that transformation of the "inefficient and fragmented landscape" that had been inherited from separate spatial development based on colour could take place.[290] However, explicit reference to the "urban edge" and to the use of urban edges or growth boundaries as growth management instruments in South African planning and environmental legislation, policy documents, guidelines and regulations are sparse.[291]

Usually different developments are prescribed inside the urban edge and outside the urban edge. The inside of the urban edge generally includes higher densities, residential developments, industrial and commerce sectors with high traffic circulation and a need for substantial infrastructure whereas on the outside of the urban edge

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287 Soja 2009 https://www.jssj.org/wp-content/uploads/2012/12/JSSJ1-1en4.pdf 1 defines "Spatial justice (as) … an intentional and focused emphasis on the spatial or geographical aspects of justice and injustice. As a starting point, this involves the fair and equitable distribution in space of socially valued resources and the opportunities to use them". See also Van Wyk *Planning Law* 2nd ed 382. Van Wyk is of the opinion that as SPLUMA has components of social justice, it will assist by "redressing past spatial imbalances and exclusions"; it will include "people and areas previously excluded"; and will also motivate "upgrading informal areas and settlements". This aspect is dealt with further in Chapter 3 on SPLUMA.

288 Van Wyk 2015 *CILSA* 382.

289 The issue of growth management and specifically the containment of urban sprawl was researched by the Gauteng Provincial Government that came to this conclusion; Britz and Meyer 2006 *Town Plan Rev* 211.

290 Horn 2018 *Plan Perspect* 1, Abstract.

291 Horn 2018 *Plan Perspect* 3. A discussion on the urban edge and its connection with planning and environmental legislation is discussed in relation to planning legislation in Chapter 3 and environmental legislation in Chapter 4.

only rural-type developments are usually permitted.[292] For this reason it is important to get a clear picture of how development norms in spatial planning should be applied, where they should be applied and in terms of which legislation and policies.[293] There is an option to indicate an urban edge in a municipal SDF,[294] drawn up as part of an IDP.[295] SPLUMA now regulates the drawing up of a municipal SDF and, as a result of it being a component of the IDP, the inclusion of a planned urban boundary or urban edge.[296] Municipalities were directed to indicate the urban edge in their IDPs. As the urban edge was indicated in the respective municipal SDFs, it gained "legal standing" on a local government level.[297]

2.2.1 The urban edge of the City of Cape Town

The concept of the urban edge was first utilised as a planning tool after studies of it[298] were made by the City of Cape Town in 1996[299] and submitted to the Provincial Government of the Western Cape for approval.[300] As a result of the initial studies in Cape Town and further studies that were commissioned, the Provincial Department of Environmental Affairs and Development Planning[301] drafted the *Western Cape Urban*

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292 Pekelharing *Phenomenon of the Urban Edge* 124.

293 See Chapter 3 which deals with planning law.

294 See Chapter 3.6.2.

295 See Chapter 3.6.2. Previously this was done in terms of the MSA and Regulation 2(4)(i)(ii) of the Municipal Planning and Performance Regulations (GN R796 in GG 22605 of 24 August 2001) which are much older regulations and are deemed to have been replaced by SPLUMA.

296 Horn 2010 *Eur Spat Res Policy* 48. See Chapter 3.6 for the SDF and Chapter 3.3 for the IDP.

297 See Chapter 3.6.2. The IDP (that incorporates the SDF that in turn depicts the urban edge) is, in terms of the MSA, a written plan for an "integrated development planning" process. It is the main plan to guide all "planning, management, investment, development, and implementation decisions and actions in the local area" and supersedes all other plans that guide local development. Britz and Meyer 2006 *Town Plan Rev* 214.

298 Wylie *Urban Edge* 88. The urban edge or urban growth boundaries were found to have also been implemented in the United States (the most recognised being the city of Portland in Oregon to direct urban growth and restrict development outside of the margins); Sinclair-Smith 2014 *Urban Forum* 315. Planned restrictions have been associated with new towns in other parts of the world such as in China and areas have been set aside for future development, directing growth rather than allowing unplanned sprawl.

299 Britz and Meyer 2006 *Town Plan Rev* 209. Cape Town introduced the urban edge in 1998 to "counter urban sprawl, encourage densification and protect the natural resources and unique character of different areas within the City".

300 Britz and Meyer 2006 *Town Plan Rev* 209. See also Horn 2018 *Plan Perspect*.

301 This department was assigned the responsibility of drafting a Western Cape SDF as one of the lead strategies of the Cape Province. See the foreword to the *Western Cape Urban Edge Guideline* of 2005 by the Provincial Minister of Environment, Planning and Economic Development (Western

Edge Guideline (aligned with the *National Spatial Development Perspective* and other national policy frameworks).[302] This was finalised in 2005 and the object was to establish and implement a better method to deal with the issues of "urban growth, infill and consolidation" along the urban edge of all municipalities in the Western Cape.[303]

In 2001 Cape Town introduced an official *Development Edges Policy* that formed part of the SDF review and set out how it should be used to both delineate and manage any amendments to the edge.[304] The objective was to maintain low densities and a more rural character outside the edge and to increase densities within the urban edge.[305] The urban edge vision was initially conceptual in nature and promoted more as "design elements for spatially structuring cities" in a way that it addressed the negative impact on South African cities caused by *apartheid.* It was seen as a modern way of town planning that emphasised "compaction and integration".[306] The *Western Cape Urban Edge Guideline*[307] was adopted by the City of Cape Town to address the broad issues of combatting urban sprawl, encouraging densification and protecting natural resources.[308] It included the following inter-related issues:[309]

- unsustainability of rapid urbanisation and growth taking place without due regard for the environment;

Cape 2005 https://www.environment.gov.za/sites/default/files/docs/provincialurbanedgeguideline.pdf) (hereinafter the *Western Cape Urban Edge Guideline* (2005)).

302 Britz and Meyer 2006 *Town Plan Rev* 209.

303 Britz and Meyer 2006 *Town Plan Rev* 209. See also Horn 2018 *Plan Perspect* 6-7. Concepts such as nodes and transportation corridors were incorporated together with urban edges.

304 City of Cape Town, *Development Edges Policy* (2011) as cited in Horn 2018 *Plan Perspect* 12. The edge or growth management line would be amended when and if there was no availability of land within the edge for development and when infrastructure capacity was available.

305 The policy consisted of three delineated lines. These related to protecting the environment (that line could not be amended), to manage growth of the city and a coastal protection line.

306 Sinclair-Smith 2014 *Urban Forum* 316. Not much thought was given to the amount of land that was being reserved for future use and expansion or for mechanisms for future expansions.

307 This was finalised in 2005. The Provincial Department of Environmental Affairs and Development Planning (Western Cape) embarked on drafting this document in order to establish and implement a consistent approach to deal with urban growth, infill development and consolidation along the urban edge of all municipalities in the Western Cape. Britz and Meyer 2006 *Town Plan Rev* 209.

308 *Western Cape Urban Edge Guideline* (2005) 6.

309 *Western Cape Urban Edge Guideline* (2005) 6.

- rural character of small towns being adversely affected by development;
- valuable agricultural land being replaced by low-income large settlements on the urban fringe;
- demands for servicing becoming unattainable;
- undesirable developments resulting in job losses in agriculture;
- unnecessary additional infra-structure spends;
- the cost of traffic solutions; and
- the cost of the loss of biodiversity and conservation resources which would never be re-couped.

The City of Cape Town used the guideline to delineate its own urban edge for incorporation in the municipality's SDF.[310] The intention was to have a low density semi-rural character outside the edge and restrict the outward growth of urban areas until the need arose. It was necessary to increase building densities within the urban edge and extend the urban edge when infrastructure facilities were available.[311] The re-structuring of urban areas post-*apartheid* had to focus on promoting integration of race and class; create opportunities for economic and social development; promote the use of under-utilised and vacant land within the urban edge; establish and conserve biodiversity corridors and conserve aesthetic and sensitive environmental features.[312] The main consideration in implementing the urban edge was to achieve the "triple bottom line" goals of social, economic and ecological integration and sustainability.[313] The urban edge policy in Cape Town comprised three categories: the urban edge line that could not be amended or extended as its purpose was to protect valuable environmental areas and assets; an urban edge line to manage growth into

310 Cape Town adopted its urban edge policy on 29 August 2001; Britz and Meyer 2006 *Town Plan Rev* 209.
311 Horn 2018 *Plan Perspect* 12.
312 These factors are all referred to in the *Western Cape Urban Edge Guideline* (2005). See also Horn 2018 *Plan Perspect* 12-13.
313 Foreword in the *Western Cape Urban Edge Guideline* (2005).

new areas and a coastal urban edge line to protect the coastal area from property development.[314]

The Cape Town SDF of 2017 no longer makes use of an urban edge line or policy in relation to curbing outward growth. Instead, it focuses on promoting development that is transit-oriented development in the urban core.[315] The study of the Cape Town urban edge policy that existed until 2017 has been worthy of consideration as it was specifically evaluated as a "growth management instrument" in South Africa.[316] The City of Cape Town has made it clear that its intention is not to extend services beyond the urban periphery in the short term and development outside the previous urban edge guidelines is still prohibited as if the urban edge is still in existence.[317] This means that the compact city is still encouraged and relevant. The change to encouraging transit-oriented development has taken place purely to avoid the continual extension of the urban edge on a case by case basis.[318] The reason for the change in policy was not based on the lack of effectiveness of the urban edge but rather on "consistent poorly motivated political decisions".[319]

2.2.2 The urban edge of the City of Johannesburg as guided by Gauteng province

The Gauteng SDF[320] was published in 2000, also with the intention of addressing past

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314 Horn 2018 *Plan Perspect* 12.

315 Horn 2018 *Plan Perspect* 12. Various politically endorsed extensions have reportedly been made to the Cape Town urban edge that are deemed to be against the City's urban edge policy. The Mayor of Cape Town was of the opinion that the urban edge could be moved or amended as needs arise.

316 Horn 2018 *Plan Perspect* (Summary) iii.

317 Horn 2018 *Plan Perspect* (Summary) iii. An urban sprawl index was used by the city and it was found that the urban edge policy had succeeded in limiting urban growth.

318 Horn 2018 *Plan Perspect* (Summary) iii. All suggestions point to a "neoliberal capture of the decision-making authority" which has caused the turnaround regarding this policy and not the lack of its effectiveness. Investigating political motives regarding urban edge decisions falls outside the scope of this study and it is not intended to go into that aspect. Horn evaluated the situation by using an urban sprawl index and found that during the time of its use in Cape Town it was successful as an urban growth management instrument.

319 Horn 2018 *Plan Perspect* 12.

320 Gauteng Province 2007. See also Revision of the Gauteng urban edge policy 2007. Third Draft Report. Gauteng Provincial Department of Economic Development. See also Cilliers and Schoeman 2008 *WIT Trans Ecol Environ* 87.

spatial imbalances in Gauteng[321] and simultaneously guiding development towards a "sustainable, equitable and economically viable future settlement pattern" that was unprecedented by any other province in South Africa.[322] Gauteng took the lead in introducing a guiding policy on the urban edge for the province, the aim being to govern all spatial development in the province according to the vision and objectives set out by it.[323] The intention of the urban edge was to "integrate land uses and transport routes and encourage densification" as well as the acquisition of better located land for development of housing and businesses within the urban edge.[324] The idea of an urban edge was proposed to be the most popular growth management tool towards the achievement of a compact city form.[325] The process for the refinement of this "line" was to be conducted in association with all the municipalities.

In its SDF the City of Johannesburg[326] had been promoting "sustainable urban environments, urban efficiency and accessibility of opportunities" for all citizens since

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321 Britz and Meyer 2006 *Town Plan Rev* 213. The Johannesburg Metropolitan Municipality structured its entire SDF around a growth management approach. The idea behind this was to provide developers with alternatives and possible investment incentives. Johannesburg argued that the urban edge should not stand alone in its growth management strategy but that it should be strategic and comprehensive and geared towards providing opportunities to potential developers, thereby promoting a focus on spatial instruments and mechanisms such as nodal development, densification and an efficient transportation network to support the urban edge concept.

322 Horn 2010 *Eur Spat Res Policy* 46-47.

323 Horn *Life and Death of Urban Growth Management* 2. The Gauteng Provincial Government sought to achieve a "more equitable urban environment to all its citizens". One of the initiatives proposed was the containment of urban growth inside the province. This held the promise of "increased accessibility to urban opportunities, greater viability of public transport, as well as environmental advantages". Gauteng province, with 3 metropolitan municipalities, proved to be the pioneer in initiating and implementing an "Urban Growth Management" approach.

324 Horn *Life and Death of Urban Growth Management* 101. This was said to be in accordance with new international norms that were emerging.

325 The urban edge policy was approved on 15 May 2001 by the Gauteng Provincial Government and became binding on all provincial departments whilst the local municipalities were advised to incorporate the urban edge into their first round of IDPs. After the first round of municipal IDPs the Gauteng Department of Development, Planning and Local Government reported in a finding that the urban edge was not dealt with satisfactorily within the SDFs. For this reason, it was felt that provincial support and guidance was necessary. The report therefore called for engagement between the Gauteng province and the municipalities regarding the way in which the urban edge was addressed in the SDF so as to promote co-ordination and integration between neighbouring municipalities; Britz and Meyer 2006 *Town Plan Rev* 211.

326 Johannesburg is the largest city, experiencing the largest population growth in SA. It had already experienced decentralisation since the 1970's and businesses and offices had moved to the north (Rosebank, Sandton and Midrand). Employment growth took place in suburbs and new nodes giving rise to a polycentric city. Johannesburg has experienced the largest population growth in the country.

its inception in 2000.[327] The approach to delineating the urban edge was based on a combination of various factors.[328] It had to provide the existing border of urban activity (eg residential towns and other urban features) and agricultural holdings (large plots of peri-urban land for mixed agricultural and residential use) that were, in principle, excluded from the urban areas.[329] Existing approved development rights were to be included within the urban edge,[330] and note had to be taken to use natural features such as rivers and mountains (that formed natural boundaries) and other conservation areas. Local authority boundaries, functional boundaries (such as major roads) together with the availability/lack of bulk infrastructure also had to be considered.[331] It became the responsibility of local municipalities and developers to motivate any development outside of the proposed edge.[332] An applicant would have to follow a comprehensive administrative procedure to motivate development if it were outside the edge and such development would have to comply with certain specific criteria[333] *inter alia*, conservation areas/nature reserves, tourism, farm stalls, rural residential uses or agricultural holdings. The Johannesburg urban edge was created to manage the city's growth, limit infrastructure costs related to sprawl and protect the city's natural and ecological areas.[334]

The introduction of the Gautrain Rapid Rail Link and development along the City's highways brought about substantial change and resulted in rapid nodal growth with a spatial pattern focused on a "car-oriented society". As a result of decentralisation of

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327 City of Joburg Metropolitan Municipality. Spatial Development Framework 2040; Johannesburg: Department of Development Planning, 2016. Department. Strategy and Planning Directorate, 2011. See also Horn 2018 *Plan Perspect* 8.

328 Horn 2010 *Eur Spat Res Policy* 47.

329 Britz and Meyer 2006 *Town Plan Rev* 212.Applications that did not comply with criteria for development outside the urban edge had to be sent for comment to the Gauteng Provincial Department of Housing and adjacent municipalities, after which the applications were approved or rejected with motivation for why this decision had been made. The aim was to ensure consistency in decisions relating to development outside the edge. It became the responsibility of local municipalities and developers to motivate applications for development outside the urban edge bearing in mind that it was not strictly prohibited to develop outside the Gauteng urban edge.

330 Areas located far from the existing centres with relatively high densities such as Diepsloot or with distinct urban functions such as Lanseria were charted as satellite areas outside the urban edge.

331 Horn 2010 *Eur Spat Res Policy* 47.

332 Horn 2010 *Eur Spat Res Policy* 44.

333 Britz and Meyer 2006 *Town Plan Rev* 207.

334 Horn *Life and Death of Urban Growth Management* 2.

businesses, shopping centres and residential development into the suburbs and close to the city's highways and arterial roads, a polycentric city emerged indicating substantial growth in the city.[335] Due to the emergence of the polycentric city, there was substantial pressure for private led developments in the nodes of adjacent municipal nodes and economic centres within the Gauteng region. As a result the urban edge was substantially expanded in 2008.[336] With rapid expansion, the linking of growth to the infrastructure and the availability of bulk services was crucial.[337] Despite the city changing and urban edges expanding, housing growth for the urban poor remained static and was still taking place near the existing old townships of the *apartheid* era.[338]

In 2008, a strategy was formulated to manage infrastructure in accordance "with the desired spatial patterns of growth". This strategy is included in the Johannesburg SDF and incorporates the urban development boundary.[339] The advantage of this approach is that it enhances "the economic perspective" (through the economic sector by not having only one urban core), "the environmental perspective" (through open green areas in between developments), as well as the social perspective (through reducing travelling times and having better social structures in urban areas).[340] This development style fulfils sustainable development objectives.[341] This format of the urban development boundary initiates applicable development patterns of polycentric development and urban node containment[342] and is also seen as a means to incorporate urban farming areas with towns and cities and enjoy the benefits of urban-

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335 Sandton is a close second node to the central business district (CBD). Suburbs have developed in the north and western extremes of the city in the form of more upmarket developments.

336 Horn 2018 *Plan Perspect* 8. In all other aspects the City's urban edge remained intact. The City of Johannesburg has been promoting the objectives that are associated with sustainable development in cities by enhancing accessibility to city opportunities.

337 Britz and Meyer 2006 *Town Plan Rev* 212. Sinclair-Smith 2014 *Urban Forum* 316. In Durban urban edges were closely tied to infrastructure planning especially, costly wastewater infrastructure.

338 Johannesburg: Department of Development Planning, 2016. Department. Strategy and Planning Directorate, 2011. See also Horn 2018 *Plan Perspect* 8. Most housing in that category still takes place in Soweto, an *apartheid* location.

339 Johannesburg: Department of Development Planning, 2016. Department. Strategy and Planning Directorate, 2011. See Horn 2018 *Plan Perspect* 8.

340 Cilliers and Schoeman 2008 *WIT Trans Ecol Environ* 87. See also Horn *Life and Death of Urban Growth Management* 2.

341 In accordance with s 24 of the Constitution.

342 Cilliers and Schoeman 2008 *WIT Trans Ecol Environ* 93.

rural linkages. According to Horn, the urban development boundary has assisted as it has promoted "densification" and limited the "expansion of the urban footprint".[343]

The original implementation of the urban edge in general in South Africa and in particular by Johannesburg and Cape Town indicate the multi-faceted objectives that the urban edge is expected to address in relation to spatial planning. For a proper assessment and critical evaluation of the urban edge it is important to consider the advantages and disadvantages of its implementation as well as the various definitions of this term. Once this has been done a definition of this concept will be proposed together with the writer's vision of what an "ideal urban edge" concept should entail.

2.3 Advantages and disadvantages of the urban edge

The implementation of an urban edge has advantages and disadvantages.[344] Research has, however, proved that cities that have urban management structures and have implemented an urban edge strategy are "better off than cities without any urban management policies".[345]

The advantage of the urban edge is that it enables the containment of physical development and sprawl so that growth may be "more integrated, compact" and have an "efficient urban form".[346] The urban edge ensures the development of quality, well-maintained urban environments and promotes an ideal compact city.[347] It must contain "outward growth of urban areas, *inter alia,* to facilitate the restructuring of urban areas" and reverse the segregated spatial patterns of the *apartheid* era (with its resultant urban functional inefficiencies).[348] The intention of the urban edge is:

- to establish a limit beyond which, as a rule, urban development should not be

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343 Horn 2018 *Plan Perspect* 9. There has been some instances where political clout has been interfering as in the case of the amendment of the urban edge in Ruimsig/Poortview, following substantial pressure for market driven developments.

344 Gospodini *Sustainable City v Urban Regeneration* 1-3.

345 Jansen van Rensburg and Campbell 2012 *Urban Forum* 61. See also Blair 2001 *Public Work Manag Policy*; and Nelson and Peterman 2000 *JPER*; Njuguna *et al Effectiveness of Planning Law*.

346 Horn 2010 *Eur Spat Res Policy* 45-46.

347 The ideal urban edge concept and implementation is discussed in 2.4 below.

348 *Western Cape Urban Edge Guideline* (2005).

permitted;

- promote the advantage of "urban and environmental efficiency, effectiveness and economy" in the interest of all who live there;[349]
- promote in-fill development;
- encourage densification;
- protect agricultural areas;
- reduce travel distances and promote the use of public transport; and
- encourage the efficient use of bulk infrastructure.[350]

Together with all of the above, the urban edge's main purpose is to discourage development of an urban nature from occurring outside a determined limit (the urban edge), and to inform more rigid planning decisions such as zoning and subdivision approvals to enforce this.[351] Its advantage is that it promotes density targets and physical development patterns within "specific time horizons" and "protects agricultural, rural and environmental assets".[352]

The disadvantages or shortcomings are related to the following:

- conflict and differences of opinion between local and provincial levels of the actual demarcation of the urban edge;
- limited participation by relevant municipalities during the process of delineation of the original urban edge;
- lack of support and assistance in supporting growth management mechanisms;

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349 *Western Cape Urban Edge Guideline* (2005).

350 Sinclair-Smith 2014 *Urban Forum* 319.

351 City of Cape Town *Spatial Development Framework* (Cape Town SDF 2012).

352 eThekwini Municipality 2009 http://www.durban.gov.za/Documents/City_Government/Development_Planning_Management/Draft%20Central%20Spatial%20Development%20Plan.%20June%202009.pdf 16. See also the discussion in Chapter 6.6.2 regarding the new Kigali Master Plan 2020 where this concept is promoted and strict controls are kept in that regard to prevent sprawl.

and

- the shortcomings that pertain specifically to the political and administrative nature of urban planning.[353] Furthermore,
- the urban edge is said to be easy to implement but easily misused;[354]
- it limits the size of the city or town thereby restricting land availability for new housing within the urban edge;
- it causes an increase in the price of land and the cost of development in the areas within the urban edge;[355] and
- the current delineations of the urban edge do not seem to be appropriate for combined or integrated housing and agricultural uses.[356]

It is not surprising that some writers believe that the focus of the urban edge "needs to be wider and the approach more integrated and holistic".[357] It is clear that implementing an urban edge policy that promotes all these aspects must be carefully considered.[358] The needs of poor people through effective urban-rural linkages, have been found to be lacking.[359] The latter aspect is important and attention has been drawn to it in the NDP.[360] There is a suggestion that the possibility of combining housing and agriculture in a way that disadvantaged people may work in agricultural areas and be permitted to live and own properties near their jobs could provide some relief.[361] However it is important to note that subdivision of agricultural land is not

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353 Horn 2010 *Eur Spat Res Policy* 53.
354 Breuckner 2000 *Int Reg Sci Rev* 161-171.
355 Pekelharing *Phenomenon of the Urban Edge* 137; see also Sinclair-Smith 2014 *Urban Forum* 317.
356 Berrisford *et al In Search of Land and Housing* 7.
357 Cilliers and Schoeman 2008 *WIT Trans Ecol Environ* 87. See also Geyer *et al* 2011 *Town Reg Plan* 52. An example of this is that the urban edge concept does not integrate urban and rural areas, but divides them. Pekelharing *Phenomenon of the Urban Edge* 139; Cilliers and Schoeman 2008 *WIT Trans Ecol Environ* 93.
358 See Chapter 6.6.2 regarding the importance of urban-rural linkages in Rwanda. The NDP also promotes these linkages and they need to get more priority in South Africa. See Chapter 3.9 relating to the NDP.
359 Geyer *et al* 2011 *Town Reg Plan* 52.
360 See Chapter 3.9.
361 Geyer *et al* 2011 *Town Reg Plan* 52. A solution to this problem may be declaring potential agricultural property to be deemed to be outside the urban edge as was done with the Phillipi area

permitted in terms of SALA, unless specific consents are obtained in terms of the Act.

It is submitted that the biggest disadvantage is that there is no uniform notion of the "urban edge" nor of its nature and implementation. While the purpose of an urban edge is to promote a more compact form or intensification and densification, it is important that it should not prevent urban growth totally and should be "demarcated so as to include sufficient reserves of developable land".[362]

2.4 Descriptions and comments relating to the urban edge

There is no single, uniform definition of the urban edge and the definition varies from writer to writer.

2.4.1 Various descriptions and definitions of the urban edge

The urban edge, urban development boundary or urban growth boundary[363] has been defined and described in many different ways. Most descriptions seem to focus on it being a line drawn on a map that leaves no room for the transition from urban uses to the more rural uses.[364] Rural has always been referred to as "remote farming areas" and urban has been referred to as urban areas and the economic activities associated with them. These two areas are usually viewed as separate and exclusive.[365]

The definitions include notions that the urban edge must act as a growth boundary; a conservation tool; a tool to enforce density targets and development patterns within a certain period; a planning tool; a zoning tool; and a tool to protect and preserve the agricultural, rural and natural assets, to mention a few.[366] It is said that the urban

in Cape Town and permitting lower density housing in those areas, thereby protecting both the agricultural aspect and providing accommodation for the people that work there.

362 Sinclair-Smith 2014 *Urban Forum* 319. In terms of s 24 of the Constitution development is encouraged, as long as it is sustainable.

363 See Chapter 6.6.2 regarding the Urban Growth Boundary, as it is called in Kigali, Rwanda.

364 However, this term is used in the *Shelfplett* case quoted in 2.4 above. This concept is included in the writer's definition in 2.5 below. It is also a concept that is included in the Cape Metropolitan Council *Metropolitan Spatial Development Framework* 37. This SDF combines urban edge lines and transition zones in its approach to urban edge protection, farm uses, social and demographic characteristics.

365 Department of Cooperative Governance *Integrated Urban Development Framework* 25.

366 See the definitions discussed in this paragraph.

edge must not be merely a guideline that moves increasingly closer to becoming "just-a-line-on-a-map".[367] There is also the opinion that the urban edge concept was not "meant to be a strict management tool" but a "broad guideline for future development proposals and short-term control measures that would ultimately fall away" as more detailed growth management approaches and practices are developed and refined.[368] The urban edge could also be important when it comes to distinguishing provincial from local issues and serves as a "boundary" beyond which municipal control ceases and provincial control commences.[369] The differing views and definitions by various authors are referred to below and may be attributed to the multi-dimensional objectives and nature of the urban edge.

In a simple glossary definition explaining the concept, Van Wyk[370] accepts that the "urban edge" is a zoning category and defines it as a boundary that has been identified, which includes "all existing and proposed future areas for urban development" within which a local authority is/will be able to provide services. The Cape Town SDF[371] defines the urban edge as a "policy tool" to be "used by provincial and local planning authorities in South Africa, to contain urban sprawl and promote densification of towns and cities'. Horn[372] defines the "edge" as an institutional boundary for the "purpose of containing physical development and sprawl and re-directing growth towards a more integrated, compact and efficient urban form". In her view the urban edge resembles the green belt areas of Howard's Garden Cities.[373] Cilliers[374] refers to the urban development boundary or urban edge as a zoning tool[375]

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367 Horn 2010 *Eur Spat Res Policy* 49.

368 Horn 2010 *Eur Spat Res Policy* 50. A more scientific way of considering when an extension is necessary will probably be a better way to manage the urban edge rather than through political whims and fancies.

369 Provinces and municipalities play different roles in planning law and environmental law and these together with overlaps that occur are discussed in more detail in Chapters 3 and 4.

370 Van Wyk *Planning Law* 2nd ed 137.

371 City of Cape Town *Spatial Development Framework*.

372 Horn 2010 *Eur Spat Res Policy* 45-46.

373 Horn *Analysis of an Urban Edge* 6-7.

374 Cilliers 2009 *IJHSS* 942.

375 Van Wyk *Planning Law* 3rd ed 239 agrees with the view taken in *Blue Crane Country Estate (Pty) Ltd v National Minister of Agriculture, Forestry and Fisheries* 2015 ZAGPPHC 149 (23 March 2015) para 35 where the court said that it was a constitutional prerogative of a municipality to make such a decision.

used to direct urban growth towards a more sustainable form while Tonkin[376] defines it as a "polygon drawn around a city" that bans developments outside it and manages and controls the "outer limits of urban expansion of a town".[377] However, her view is that it slows urban growth by banning development on the urban fringe. Marin[378] defines the urban edge as a legally enforceable line that separates developable land from rural land around cities and thereby allows local governments to direct the type and timing of development projects. When referring to the urban edge, Britz and Meyer[379] describe it as an "urban growth boundary" or as a long-term boundary serving as a proactive growth management tool that seeks to contain, control, direct or phase growth in order to promote more compact, contiguous urban development. The *Central Spatial Development Plan* of the eThekwini Municipality also regards the urban edge as a line or boundary beyond which development and densification should be curtailed so as to ensure that there is an area of rural periphery or hinterland which is different in character to the urban areas and also has different servicing needs and different lifestyles.[380]

These viewpoints are further expanded in the draft NSDF that describes the urban edge as a "line that is used as a border" that distinguishes between an area/region that is regarded as "part of a city or town" and its "surrounding natural or rural area" with its primary purpose being to "contain the urban".[381] This means that urban development is not permitted and municipal services are not provided outside/beyond the line. What is clear in the NSDF is that "sprawl be prevented by using urban edges".[382]

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376 Tonkin *Sustainable Medium-density Housing*; and also Jansen van Rensburg and Campbell 2012 *Urban Forum* 68.

377 Tonkin *Sustainable Medium-density Housing.*

378 Marin 2007 *Urban Aff Rev*.

379 Britz and Meyer 2006 *Town Plan Rev* 207.

380 eThekwini Municipality 2009 http://www.durban.gov.za/Documents/City_Government/Development_Planning_Management/Draft%20Central%20Spatial%20Development%20Plan.%20June%202009.pdf para 4 16.

381 Department of Rural Development and Land Reform 2019 https://pmg.org.za/policy-document/1193/ (the Draft NSDF).

382 Draft NSDF 147.

2.4.2 The urban edge in court decisions

Apart from the urban edge being referred to in policies and plans, the courts have also had to make decisions regarding the urban edge. The concept of the urban edge was discussed in the *Clairison's* case[383] and was referred to as a "planning tool that serves as a guide in restricting the outward growth of urban settlements". In *Shelfplett 47 (Pty) Ltd v MEC for Environmental Affairs and Development Planning*[384] (hereinafter the *Shelfplett case*) the court referred to the *Western Cape Urban Edge Guideline* and its definition of an urban edge as "a line drawn around an urban area as a growth boundary" that marks the transition between rural and urban land uses. The urban edge was central to the decision in the *Shelfplett* case. According to the decision, while the concept was not defined in the Knysna Municipality SDF, it did confirm that the objective of the urban edge or edge demarcation was to provide a clear direction on where growth should be discouraged and where it should be encouraged.[385]

In the *Durbanville Community Forum* case[386] approval of a property development outside the urban edge was challenged on the grounds that various planning documents did not encourage urban development on property outside the urban edge. The court held that other factors and unique circumstances that were considered in the evaluation of the proposed development justified the decision to permit the development. However, the courts have made it clear that making a decision relating to the urban edge is an administrative action that may not be interfered with if it is indicative of just administrative action,[387] and is a *bona fide* and rational decision.[388]

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383 The *Clairisons* case para 12.

384 The *Shelfplett* case paras 24-28.

385 Knysna Municipality 2017 https://vdocuments.mx/document/draft-knysna-spatial-development-framework-figure-16-knysna-spatial-vision.html. In this case the policy decision was not to encourage commercial development in that area of the city.

386 *Durbanville Community Forum v Minister for Environmental Affairs and Development Planning Provincial Government Western Cape* 2015 2 All SA 187 (WCC).

387 Section 33 of the Constitution. See also Holness "Right to Just Administrative Action" 219-223. All urban edge, planning and environmental decisions must comply with this principle. See Chapters 2.4.2, 3.2 and 4.2.

388 *Shelfplett* case. See also *Philippi Horticultural Area Food and Farming Campaign v MEC for Local Government, Environmental Affairs and Development Planning: Western Cape* 2020 3 SA 486 (WCC).

2.4.3 Implementing the urban edge successfully

The UN conducted a survey to assess the effectiveness of planning law in Sub-Saharan Africa and one of the criteria chosen to assess this was the existence of an urban growth boundary or urban edge that separates urban or built-up areas from non-urban land such as agrarian, forested, and environmentally protected land.[389] It served as an indicator of that country's policy of compactness.[390]

However, various factors impact on the success or failure of the urban edge. For the successful implementation of the urban edge concept, local authorities must carefully reconsider their growth management strategies, and focus on promoting concepts that were previously ignored including infill development; redevelopment; densification and mixed-use development. Moreover, they should streamline their planning administration procedures.[391] It has been suggested globally that to resolve the related problems of urban sprawl something more than the mere declaration of an urban edge or development boundary is required.[392] A growth management strategy may need a range of tools as opposed to merely the delineation of an urban edge. Mechanisms that support the urban edge concept to ensure containment and direction of urban growth should be promoted.[393] If the urban edge becomes part of a "comprehensive, multi-disciplinary" framework that "integrates all development disciplines"[394] this will assist in making it successful.[395] In addition, local authorities

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389 Njuguna *et al Effectiveness of Planning Law*.

390 In the UN survey a distinction is made between an "explicit boundary line" (set by either a spatial plan or regulatory instrument) and an "implicit boundary line" that is established by the accumulated boundaries of land use zones in spatial plans and the two South African cities surveyed were found to have an explicit boundary in the form of an urban edge.

391 Horn 2010 *Eur Spat Res Policy* 46.

392 Sinclair-Smith 2014 *Urban Forum*. It is advisable that the urban edge or urban growth boundary should not be implemented in isolation but form a part of other growth management tools aimed at improving the "quality and environmental sustainability of urban areas". See also Horn 2010 *Eur Spat Res Policy* 46 and Pekelharing *Phenomenon of the Urban Edge* 126.

393 Horn 2010 *Eur Spat Res Policy* 46.

394 Horn 2010 *Eur Spat Res Policy* 48.

395 Cilliers and Schoeman 2008 *WIT Trans Ecol Environ* 85. Integrated development planning was used as a "distinct approach to planning". The objectives were entrenched in the "core policy and legal documents" including the *Growth, Employment and Redistribution Programme* (1994), the Constitution, *White Paper on Local Government* (1998) and *Green Paper on Development Planning* (1999). See Chapter 6.6.2 - in Rwanda these linkages enhance and support the urban edge and makes it more successful.

must be mindful of the fact that conservation of nature and the environment represent one dimension of sustainability and that they should strive to achieve a balance of social, environmental, economic and even cultural considerations.[396]

A sound urban edge concept needs to promote the effective use of infrastructure, make a town or city more compact by increasing density and reducing urban sprawl and also protect the environment. In addition the urban edge should direct urban growth with a view to limiting urban expansion and ensuring compact urban environments even close to the urban edge.[397] The urban development boundary or urban edge should, as stated, ensure planned urban areas, in contrast to unplanned areas that are characterised by urban sprawl and insufficient infrastructure.[398]

It is now becoming clearer to planners that there could be interdependencies between urban and rural areas that should be enhanced as the one is dependent on the other.[399] Agricultural land outside the urban edge is reserved for agricultural purposes and protected. Permitting planned development around this area on the urban side may be considered so as to create meaningful integration and strengthen linkages.[400] The suggestion is that the development areas, within the urban edge but close to the periphery, may need to become integrated with better transport, communications and migration.[401] Such strong linkages will enhance growth as the flow of resources will be improved to where they will have the largest economic and social benefits.[402] This adaptation would mean that in certain unique circumstances a qualitative zoning

396 Du Plessis and Van der Bergh 2014 *Stell LR*. This aspect will be discussed in more detail under the aspect of a resolution of the conflict between property development and the environment. See Chapters 3 and 4.

397 Pekelharing *Phenomenon of the Urban Edge* 126. See also Nelson and Peterman 2000 *JPER* and Jansen van Rensburg and Campbell 2012 *Urban Forum*.

398 Cilliers 2009 *IJHSS* 942.

399 Department of Cooperative Governance *Integrated Urban Development Framework* 25.

400 Geyer *et al* 2011 *Town Reg Plan* 52. Cape Town's Phillipi Horticultural Area is a successful agricultural area in the heart of Cape Town but is deemed to be outside the urban edge so as to protect it. See the 2020 Kigali Master Plan (City of Kigali 2020 https://bpmis.gov.rw/asset_uplds/kigali_master_plan/1_Kigali%20Master%20Plan_Analysis%20&%20VisionLowRes.pdf) regarding the importance of these linkages in Chapter 6.6.2.

401 The IDP, a five-year plan, focuses on linkages (not separateness) and it can help guide and reframe how development occurs in rural and urban areas.

402 Department of Cooperative Governance *Integrated Urban Development Framework* 29.

approach will be considered rather than a focus on separation.[403]

Landman[404] regards sustainable development in a city as the process of maintaining a dynamic balance between the demands of the people and that which is ecologically possible.[405] Factors such as spatial, environmental and transportation factors must integrate with the built-up areas and open spaces to ensure a balance between consumption and resources.[406] A well-managed city or town is said to be one that "finds a balance between the restraint of development (for the compactness of the city) and sprawl (which is often driven by cost of land and results in the spreading out of the city or town)".[407]

What is often overlooked is that managing urban edges is a challenge for local authorities. It is a challenge to know how much land must be included within the edge.[408] An urban edge demarcation must have "land reserves to accommodate urban growth" and if the boundary is drawn "too tightly", it reduces economic growth (and as a result land prices increase). On the other hand, the inclusion of too much land within the urban growth boundary or urban edge, may result in "unchecked urban sprawl and its associated environmental, social and financial costs".[409] Not much has been written on how the urban edge is determined. In other words, is it just an estimate by planners, or is there a more scientific method that is or should be employed that makes it dependent on some statistic or research?[410]

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403 Geyer *et al* 2011 *Town Reg Plan* 52.

404 Landman *Sustainable Urban Village Concept*.

405 The concept of sustainable development is specifically included in the suggested definition of the urban edge by the writer.

406 Jansen van Rensburg and Campbell 2012 *Urban Forum* 61; Wiley *Urban Edge* 37.

407 Jansen van Rensburg and Campbell 2012 *Urban Forum* 68. See also Du Plessis and Van der Bergh 2014 *Stell LR* who are of the opinion that in *Le Sueur v Ethekwini Municipality* 2013 ZAKZPHC 6 (30 January 2013) (the *Le Sueur* case), the court did not explain the legal nature and meaning of "open space" which would have helped with the creation of a sustainable network of "developed and undeveloped land that will support the interaction between ecological, social and economic activities".

408 Sinclair-Smith 2014 *Urban Forum* 313.

409 Sinclair-Smith 2014 *Urban Forum* 313.

410 Sinclair-Smith 2014 *Urban Forum* 313. Not much has been written about the way that an urban edge is demarcated and the methods used to do this. This is an important aspect. Cape Town's method was investigated. See Chapter 6.6.2 regarding the seriousness with which this aspect is handled in Kigali.

In South Africa, approvals are granted to extend the urban edge in certain cases despite it being clearly against the city's urban edge guidelines or policy. It makes no sense from a planning or environmental perspective for permissions to be granted against urban edge policies either for public developments such as low-cost housing or even higher-end peripheral developments because these reinforce sprawl, initiate costly infrastructure, promote the use of private vehicles and even promote segregation by excluding poor and black people.[411] Economic and political processes become open to negotiation and networks with the state ending up "circumventing control and regulation".[412]

Resolving the conflict and shortcomings of the urban edge will mean adopting an acceptable definition of the urban edge that will include the relevant aspects referred to in section 24 of the Constitution and is indicative of a compact urban environment that protects the environment.

2.5 Proposing an ideal urban edge definition

The demarcation and periodic review of the urban edge or urban growth boundary is an important and complex exercise. Against this background, an apt definition of a rather complex concept[413] is offered that incorporates the various recommended aspects of the urban edge and adds some missing links.[414]

> The urban edge (urban boundary or urban growth boundary) is a reviewable[415] tool[416]

411 Horn 2018 *Plan Perspect* 15.
412 Horn 2018 *Plan Perspect* 3.
413 Writer's own definition.
414 It will be noted that not one of the various definitions put forward covers all aspects that the writer feels should be included.
415 The urban edge is not a once-off decision but is reviewed either periodically, when the SDF is updated every 5 years or when an application is made for its extension. The use of the word "reviewable" also indicates that applications may be made to the local authority to review or make changes to it.
416 The suggestion of the urban edge being a "tool" is mooted by various writers including Cilliers 2009 *IJHSS*, Tonkin *Sustainable Medium-density Housing*, and Britz and Meyer 2006 *Town Plan Rev* (see 2.4 above).

implemented by local government[417] in planning law[418] to carefully[419] demarcate an area where a transition[420] occurs from urban development to environmental and agricultural purposes[421] in order to promote a compact[422] and efficient[423] town or city in accordance with justifiable economic, social,[424] and sustainable development norms[425] as required in the Constitution[426] and in terms of spatial development principles.

The definition consolidates elements of various definitions proposed by different authors[427] but also incorporates certain missing links.[428] With this definition in mind, planning authorities must ensure that the ideal urban edge will reflect the following aspects:

1. The urban edge, its implementation and its management is carefully

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417 Local government, as opposed to provincial government, demarcates the urban edge. The different roles of local and provincial government in planning law in terms of the Constitution and in terms of SPLUMA are outlined in Chapter 3 and 4 below.

418 See the discussion on the "home" of the urban edge being in planning law in Chapter 3.

419 Its correct implementation requires careful planning, proper training and ample support so that there is a clear understanding of the policies and legislation that accompany it. One of the necessities is public participation. According to Cilliers and Schoeman 2008 *WIT Trans Ecol Environ* 93, another is that the urban edge should be approached holistically before delineating it. See also Sinclair-Smith 2014 *Urban Forum* 313. The dangers of demarcating it too tightly or too loosely have to be carefully considered.

420 This means that it should move away from the idea of being a line on a map. See the discussion in 2.4 above. Pekelharing *Phenomenon of the Urban Edge* 156 also recommends this concept. According to her, a transition zone increases development possibilities. It is also an integration initiative. This zone will ensure more effective and efficient planning for the future and optimising the ground use and development in and outside the urban edge, as it is known today.

421 In the *Western Cape Urban Edge Guideline* (2005) (see 2.2.1 and 2.3) the urban edge is seen as a transition between rural and urban land uses.

422 The City of Cape Town *Spatial Development Framework* and Horn *Analysis of an Urban Edge* 80 also refers to the purpose of the urban edge as being to contain sprawl and promote densification (see 2.4).

423 The concept is promoted by Britz and Meyer 2006 *Town Plan Rev* (see 2.4 above). Efficiency is important in a city and includes both planning and environmental efficiency ranging from the efficient use of infrastructure to ensuring that a correct mix or integration of development, environmental areas and agricultural areas is considered where suitable. The overall effect of this efficiency will be a prosperous and well-planned city. There is also the aspect of efficiency of governing the urban edge and ensuring that development is implanted in accordance with it.

424 An important aspect to consider in South Africa is affordable housing for the masses and how the implementation of the urban edge impacts on the land price for this purpose.

425 The concept of sustainable development is also suggested by Cilliers as discussed in the descriptions of the urban edge in 2.4 . This will re-enforce the environmental considerations when making a decision regarding this concept and could include cultural factors.

426 Apart from being in keeping with the terms of the Constitution, the concept should re-enforce the general ethos of the Constitution.

427 Such as the urban edge being a "tool".

428 Such as the concept of sustainable development in accordance with s 24 of the Constitution and the idea that rather than considering it as a "line on a map" it should be regarded as a transition zone.

considered.[429]

2. It must demarcate recommended environmental[430] areas for conservation as opposed to recommended areas for development.[431]

3. The implementation and management of the urban edge must promote a compact and efficient town or city and avoid sprawl.[432]

4. The norms of economic, social and sustainable development must be considered in the demarcation, implementation and management of the urban edge.[433]

5. The urban edge must be implemented and managed in accordance with the principles of the Constitution,[434] the IDP,[435] the SDF[436] as well as any urban edge

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429 A criticism of the urban edge has been that "careful consideration" has not been given to the implementation and management of the urban edge in certain areas. Lack of public participation and not adopting a holistic view when considering its implementation are other areas where care has not been applied. Britz and Meyer 2006 *Town Plan Rev* 216 refer to the delineation of the Gauteng urban edge failing due to a lack of public participation and the fact that no formal or/and representative public participation took place. The only participation related to the IDP process and not the urban edge in particular. It was felt that the concept should have been presented to the public so that the public could understand and support it even before it was approved. There is also the argument that the proposed Gautrain project witnessed more public participation although the urban edge concept would arguably have more far-reaching consequences. Rose, James and Patel 2015 *S Afr Geogr J*. The concept of public participation means a deliberation between the "public and decision-makers". According to the authors, as the "decision to move the urban edge does not statutorily require formal public participation processes, no such process was followed" in the Wescape development.

430 A main objective of the urban edge is to protect environmental rights and areas and to ensure that development is limited as well as restricted in environmentally sensitive areas on the outskirts of towns and cities.

431 Land development in terms of SPLUMA means "the erection of buildings or structures on land or the change of use of land, including township establishment, the subdivision or consolidation of land or any deviation from the land use or uses permitted in terms of an applicable land scheme".

432 The major purposes of the urban edge are the prevention of sprawl, the containment of unstructured and unsustainable development, the promotion of sustainable development, and the intensification of development with higher densities within the urban edge so as to promote efficient utilisation of services and infrastructure.

433 This is in keeping with s 24(b) of the Constitution. This should also assist in reversing the impacts of *apartheid* as discussed in the history. By introducing the concept of sustainable development in the definition, it further enhances the environmental aspect. It is important that the demarcation reflects a rural periphery or hinterland which is different in character and has different servicing needs that is reviewed in accordance with growth and development pressures.

434 See Chapter 3.2 regarding the Constitution as it applies to Planning Law and Chapter 4.2 as it refers to Environmental Law. In particular, the requirements of ss 24(a) and (b) of the Constitution.

435 See Chapter 3.3.

436 See Chapter 3.6. In particular the consideration of the SPLUMA principles.

guidelines, frameworks and planning legislation such as SPLUMA.[437]

6. The implementation of the urban edge must be conducive to creating strong urban-rural linkages.[438]

Any discussion regarding cities, whether it is about the urban edge or sustainable development in cities, must take into account international soft law paradigms being considered by other cities around the world.

2.6 International soft law paradigms relating to cities and the urban edge

The urban population in cities throughout the world is rapidly expanding and cities are united in the quest for safety and sustainability in cities. It is important to consider how international soft law[439] relates to both the concept of an urban edge and with regard to avoiding conflict between property development and the environment. Apart from this, section 24 of the Constitution (which relates to both development and the environment) is subject to interpretation that must be in line with international law.[440] International soft laws have a special significance in addressing the conflict between property development and the environment in urban areas and within the urban edge. In the international context, although urban growth boundaries are popular in some countries, reference is not always made to the urban edge or urban boundary *per se*. Densification, more focused developments and a compact city are promoted and signify the idea of sustainable property development within the urban edge, as we

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437 In particular, the requirements of ss 24(a) and (b) of the Constitution and the consideration of the SPLUMA principles.

438 Urban-rural linkages are promoted in the NDP and there is special significance attached to these linkages in Rwanda. See Chapter 3.9 regarding NDPs and Chapter 6.6.2 regarding these linkages in Kigali, Rwanda.

439 Ahmed and Mustofa 2016 *GJPLR* 1. "Hard international law" refers to enforceable principles of a national or international body. "Soft international law" refers to agreements or principles that "influence individual nations to respect certain norms or incorporate them into national law". The *New Urban Agenda* provides guidance and is not binding. According to s 231 of the Constitution the signing of international agreements is delegated to the national executive. South Africa is bound by international agreements which were binding as at 1994; s 232 of the Constitution states that "customary international law is law in the Republic unless it is inconsistent with the Constitution or an Act of Parliament" while s 233 states that "when interpreting any legislation, every court must prefer any reasonable interpretation of the legislation that is consistent with international law over any alternative interpretation that is inconsistent with international law".

440 Strydom "Essentialia of International Environmental Law" 57. Customary International Law has the force of law in the Republic unless it is inconsistent with the Constitution or an Act of Parliament.

know it.

Sustainable development is recognised as an evolving concept in international law and can be traced back to the 1973 *Stockholm Declaration* that alerted the world "to the imperative of finding a balance" between development and the protection of the environment.[441] The principles agreed to at that conference provided the setting for the development of the concept of sustainable development.[442] It was the report of the World Commission on Environment and Development in 1987 that first used the term "sustainable development" and the *Brundtland Report* defined the term as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".[443] Established by the UN, this commission comprised Member States of both the more developed and less developed countries and the main objective was to identify the long-term environmental strategies that should be used by the international community.

In 1992, at the UN Conference on Environment and Development held in Rio de Janeiro, the conference made the concept of sustainable development a central feature of its *Declaration on Environment and Development*.[444] This "declaration is important because it reflects a real consensus in the international community" (including South Africa) "on some core principles of environmental protection and sustainable development".[445]

After the Rio + 5 Conference in 1997, a meeting was scheduled to review progress made and the results were disappointing. Therefore, the 2000 Millennium Assembly of the UN was used to renew efforts to achieve the sustainable development objectives

441 Strydom "Essentialia of International Environmental Law" 57-59.

442 *Fuel Retailers Association of Southern Africa v Director-General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province* 2007 6 SA 4 (CC) 26.

443 World Commission on Environment and Development *Our Common Future* (Brundtland Report) ch 1 para 42; Elliott "Sustainable Development".

444 *Rio Declaration on Environment and Development* GA, UN Doc A/CONF.151/26 (Vol I) (1992). See also Strydom "Essentialia of International Environmental Law" 59-62.

445 Boyle and Freestone *International Law and Sustainable Development* 4.

of the Rio Conference.[446] In September 2000, countries, including South Africa, signed the historic *Millennium Declaration*, in which they committed to achieving a set of eight measurable goals that range from halving extreme poverty and hunger to promoting gender equality and reducing child mortality, the target date being 2015.[447]

The SDGs replaced the MDGs and the implementation of the ideals of sustainable development is now given effect in the UN's SDGs.[448] At an epic World Summit on Sustainable Development that was held in Johannesburg in 2002, 180 countries, including South Africa, re-affirmed that sustainable development is a world priority.[449] The objective of the SDGs was to produce a set of universal goals that meet the urgent environmental, political and economic challenges facing our world. The differences between the SDGs and MDGs are that the former are said to be more transformative, more comprehensive in scope, seek a more integrative approach to development and will operate on a universal scale.[450]

The SDGs and in particular SDG 11 is dedicated to cities (as a metaphor for urban centres or areas within the urban edge of cities) and the objective is to make them "inclusive, safe, resilient and sustainable".[451] SDG 11 is specific with regard to its ten supplementary targets which are set for the year 2030 and relate to housing; mobility; resilience; service delivery; resource efficiency; "cultural and natural resource protection"; disaster risk reduction and development planning.[452] In terms of SDG 11

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446 UN Date Unknown https://www.un.org/millenniumgoals/. See also Strydom "Essentialia of International Environmental Law" 62-64.

447 The Millennium Development Goals (MDGs) focused primarily on how the developed world could finance improvements in developing nations and have been subjected to extensive and often critical analysis as they focus and were implemented as a predominantly top-down exercise and sometimes skewed national policies towards the availability of funding or debt relief.

448 See in this regard UN Date unknown http://www.un.org/sustainabledevelopment/sustainable-development-goals/. On 1 January 2016, the 17 SDGs of the 2030 Agenda for Sustainable Development — adopted by world leaders in September 2015 at an historic UN Summit — officially came into force. South Africa also signed this soft law agreement.

449 UN 2002 http://www.dhs.gov.za/sites/default/files/legislation/The_Johannesburg_Declaration.pdf. See also Cordonier Segger and Weeramantry *Sustainable Justice* 561. See also Strydom "Essentialia of International Environmental Law" 64-69.

450 SDGF Date unknown https://www.sdgfund.org/mdgs-sdgs.

451 Du Plessis 2017 *LDD* 240.

452 SDG 11. See also Du Plessis 2017 *LDD* 240.

all cities should be "safe, inclusive, resilient and sustainable" by 2030.[453] As most of the world's population will live in urban areas or cities, they have become central to the quest for sustainable development.[454] The consensus is that while cities contribute to unsustainable development they can also be drivers of change with respect to issues such as transport systems, housing, climate change and other aspects that they are involved with. In summary, SDG 11 promotes bioregionalism;[455] urban form;[456] land use; identity; transportation or mobility; green infrastructure and open space biodiversity networks. It includes ensuring access to safe and affordable housing; upgrading slum settlements;[457] investing in public transport; creating green public spaces and, of particular interest to this study, "improving urban planning and management in a way that is both participatory and inclusive".[458]

Well-planned and well-managed, urbanisation can be a powerful tool for sustainable development.[459] Cities planned in such a way provide an effective means of addressing conflict between property development and the environment. The general consensus is that cities must be compact with a high-density mixed-use and intensified urban form[460] - all the fundamentals that a city must try to achieve when it implements an urban edge. This also indicates that the advantages of implementing an urban edge assist cities in their quest for sustainable development. Human-scale factors are important to achieve a better quality of life and making a city liveable and therefore taking into account the effects of the local environment is very important in planning.

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453 SDG 11. See also Du Plessis "Local Government and the Pursuit of Urban Sustainability" 262-282. It remains to be seen if this will be feasible and what progress will be made by countries towards attaining this goal.

454 See Chapter 9 of the *Brundtland Report*. It refers to the "urban challenge".

455 Cities must take advantage of local food production and support local economies. This is a very important element.

456 Cities must improve their urban form, which refers to their physicality as an interconnected system of buildings and open spaces that are associated with energy consumption, and what may be referred to as a "sense of space".

457 Extreme poverty is often concentrated in urban spaces, and national and city governments struggle to accommodate the rising population in these areas.

458 UN Date unknown http://www.un.org/sustainabledevelopment/sustainable-development-goals/. It further ensures the participation of cities to global climate change and the growing need for improved environmental service delivery in both metropolitan areas and medium sized cities in a way that the environmental risks such as climate change and all natural resources are optimally managed.

459 UN 2016 https://habitat3.org/the-new-urban-agenda/. See also Du Plessis 2017 *LDD* 244.

460 UN 2016 https://habitat3.org/the-new-urban-agenda/.

These are important considerations for local authorities considering an expansion of the urban edge or expanding a city laterally.

SDG 11 that relates to sustainable development is "ambitious" and "broadly framed" for cities to become the "pathways to social, economic and environmentally sustainable development".[461] Implementing interventions and actions necessary for development in cities to be sustainable is synonymous with addressing the issues of conflict that arises between property development and the environment within the urban edge. There is, however, some criticism levelled against the SDGs. These are that since they are mere guidelines, they are challenging and difficult to achieve, are not clearly defined, apply equally to developed and developing countries, compliance is not compulsory and not all goals and sub-goals may be attained simultaneously.[462] There is a need for globally-identified and comparable indicators that all cities may use for monitoring progress.[463] Many cities in developing countries of necessity appear to prefer economic goals over and above environmental goals despite the need to include sustainability considerations to ensure that sustainable growth is achieved in cities. The pursuit of SDG 11 is, nevertheless, clear in that social and economic goals must be coupled with a move towards environmental sustainability and resilient communities.[464]

The *New Urban Agenda* adopted at the UN Conference on Housing and Sustainable Urban Development (Habitat III)[465] in Quito, Ecuador, on 20 October 2016 represents

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461 Du Plessis 2017 *LDD* 244.

462 Swain "Critical Analysis of the Sustainable Development Goals". A further criticism is that SDG 11 goals should be more integrated and are unattainable because they presume that economic growth, environmental protection and social justice go hand in hand.

463 Von Schirnding *Health in Sustainable Development Planning*.

464 UN Date unknown http://www.un.org/sustainabledevelopment/sustainable-development-goals/.

465 Robin 2016 https://theconversation.com/what-is-habitat-iii-and-why-does-it-matter-a-beginners-guide-to-the-new-urban-agenda-65500. The Habitat process was launched in 1976 by the UN. Governments recognised the problems presented by rapid urbanisation such as: "rising inequality, falling quality of life and unsustainable development". The first conference in Vancouver, Habitat I, "encouraged governments to adopt a territorial approach to their national development strategies, and to involve civil society organisations focusing on urban issues". A second conference was held in Istanbul in 1996, where a 229-page document was produced on human settlements. Nation States endorsed "the universal goals of ensuring adequate shelter for all and making human settlements safer, healthier and more liveable, equitable, sustainable and productive". See *Istanbul Declaration on Human Settlements and the Habitat Agenda* GA, UN Doc A/CONF.165/14 (1996).

a shared vision for a better and more sustainable future.[466] This set global standards of achievement in sustainable urban development, rethinking the way we build, manage, and live in cities or urban areas. Cooperation is necessary with committed partners, relevant stakeholders, and urban actors at all levels of government as well as civil society and the private sector.[467] Further, it has been found that cities benefit when they implement a "smart city agenda"[468] that entails improving the quality of life of citizens and strengthening and diversifying the economy together with prioritising environmental sustainability through adoption of smart solutions.

The importance of sustainable development is highlighted in the *National Framework for Sustainable Development* (NFSD) in South Africa of 2008.[469] In this document "sustainable development is about enhancing human well-being and quality of life", in particular for those "most affected by poverty and inequality". It refers to factors such as "resource use, efficiency and intergenerational equity". It also stresses the interdependence between people, the planet and prosperity.

Important issues have been raised with regard to South Africa's *Implementation of the 2030 Agenda for Sustainable Development* in its *Voluntary National Review* (South Africa VNR Report) that relates to SDG 11.[470] This report draws attention to the challenges and difficulties that South Africa faces in relation to the attainment of SDG 11.[471] Difficulties relate to human settlements that are unsuitable and insufficient;

The city of Quito, Ecuador, was host to the third UN Conference on Housing and Sustainable Urban Development – also known as Habitat III.

466 UN 2016 https://habitat3.org/the-new-urban-agenda/. The *New Urban Agenda* was endorsed by the UN General Assembly at its sixty-eighth plenary meeting of the seventy-first session on 23 December 2016, agreed by Member States including South Africa, at the Habitat III Conference in Quito in October 2016.

467 UN 2016 https://www.un.org/sustainabledevelopment/habitat3/.

50 Bolund and Hunhammar 1999 *Ecol Econ* 293-301. Yet, despite this, urban ecosystems may provide valuable ecosystem goods and services. Urbanisation is defined as the spatial expansion of the built environment that is densely packed by people and their socio-economic activities. It is often blamed for the major environmental problems such as climate change, biodiversity loss, landscape fragmentation and ecosystem degradation.

468 Sikora-Fernandez and Stawasz 2016 *RJRS*.

469 Issued in 2008. Department of Environmental Affairs and Tourism *National Framework for Sustainable Development*.

470 UN Date unknown https://sustainabledevelopment.un.org/vnrs/. The Voluntary National Review (VNR) is a process through which countries assess and present progress made in achieving the global SDG goals "and the pledge to leave no one behind".

471 UN Date unknown https://sustainabledevelopment.un.org/vnrs/.

informal settlements on the periphery of large cities;[472] unsustainable economies; transport shortcomings; necessity for infrastructure upgrades and waste disposal.[473] Haphazardly built areas on the peripheries of cities are disconnected in terms of transport, dysfunctional in relation to human settlements, do not have water and electricity[474] and residents have little access to work, making affordability for homes difficult. All this is indicative of conflict between property development and the environment within the urban edge.[475]

Within the context of SDG 11, sustainable development entails the balancing of environmental, economic, and social factors in a way that enhances human well-being and quality of life so that societies are able to meet their needs without compromising the ability of future generations to meet their own needs and includes cooperation and involvement of all sectors.

2.7 Conclusion

The historical background makes it clear that the previous dispensation in South Africa had an extraordinarily complex[476] legal framework for land use management that enforced different segregated areas based on *apartheid* principles. The impact of the segregation policy over so many years in South Africa has not changed, as was intended, and still has visible consequences today.

The introduction and implementation of the urban edge was discussed with specific reference to the cities of Cape Town and Johannesburg that took the lead in the

472 See Chapter 2.1 relating to the historical background in relation to the urban edge.
473 Du Plessis 2017 *LDD* 247.
474 Many are still dependent on coal.
475 Du Plessis 2017 *LDD* 246. These aspects are dealt with and are discussed in more detail in Chapters 4.7 and 7.
476 Bekink *Principles of South African Constitutional Law* 42. Although many legislative changes have taken place relating to local government, this is complicated by the fact that many old-order laws and regulations are still in force and of effect. This is further complicated as the old legislation was applied differently in different jurisdictions. According to Bekink, there is a great need for legislative uniformity so that the new systems may become totally successful. Retief and Cilliers "Land-use Management and Planning" 563: the process of repealing and replacing the "plethora of segregation based legislation" has taken much longer than anticipated. Although it is more than two decades since transformation and the planning system in South Africa appears to be very good on paper, it seems that the *apartheid* legacy is living on.

implementation of the urban edge in South Africa. Both cities have had to make changes to their urban edge policies for reasons not linked to the effectiveness of the urban edge as a growth management instrument, despite research indicating the usefulness and success of the urban edge in that regard.[477] Many of the disadvantages relate to decisions being made on a "case by case" basis that ignores the purpose and aim of the urban edge. It is suggested that these issues are capable of being addressed by careful and proper implementation. Different descriptions of the urban edge in the South African context were discussed and a definition of this rather complicated concept was proposed by the writer (in line with the focus and requirements of new planning legislation).

Sustainable cities in terms of SDG 11 are required to address issues such as bioregionalism;[478] an urban form;[479] land use; identity; transportation or mobility; green infrastructure and open space biodiversity networks. Cities in South Africa are exploring how planning and land use may exist side by side.[480] However, when it comes to having an acceptable urban form, *apartheid* features of planning still dominate the skyline of cities in South Africa and need to be resolved.

The next Chapter will, within the context of the Constitution, consider the provisions of newer planning legislation and policies, highlighting the "connection" between the urban edge and such legislation,[481] as well as how these may be used to address conflict between property development and the environment within the urban edge.

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477 See Horn *Analysis of an Urban Edge* Summary iii where this aspect is referred to.

478 Cities must take advantage of local food production and support local economies. This is a very important element.

479 Cities must improve their urban form, their physicality as connected systems of buildings and open spaces that are associated with energy consumption, and what may be referred to as a "sense of space".

480 Abrahams and Berrisford *Addressing the Crisis of Planning Law Reform* 189. Reference here is made to the city of Durban.

481 The issue is also whether or not this newer legislation facilitates growth and development that incorporate the changes and vital transformation so necessary in the South African urban, regional and rural spaces.

Chapter 3

South African planning legislation and sustainable development within the urban edge

3.1 Introduction

The Constitution has played a role not only in transforming and re-shaping the political and legal history of South Africa but has also had a profound impact on our planning laws, particularly with regard to the role of local government, which is the ultimate home of planning.

Prior to 1994 municipal planning (also referred to as "town planning") was regulated by the provincial laws or ordinances[482] of the then four provinces that was implemented primarily at local government level.[483] There was also a plethora of statutes that applied to the black homelands[484] After 1994, strategic changes were made to government structures, but existing land use planning laws and mechanisms remained largely unchanged[485] resulting in various court decisions.[486]

The DFA[487] was the only post-1994 statute that dealt with "spatial development

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482 Van Wyk 2010 *PELJ* 214 Township establishment, eg took place in terms of provincial ordinances but was overseen by municipalities.

483 Kidd 2014 *IUCNAEL eJournal* 239.

484 The history of planning law, including the black homelands is referred to extensively in Chapter 2.

485 Van Wyk and Oranje 2014 *Planning Theory* 356. In some cases, it was necessary to administer 17 pieces of legislation, "each with different application procedures, terminologies and submission and approval mechanisms".

486 Van Wyk *Planning Law* 3rd ed 151-171; Van Wyk 2012 *PELJ*. Several important decisions emerged during this time. They related first, to the exercise of decision-making functions, namely the granting of rezoning and development approvals - held to be a municipal planning function, even when integrated within a provincial SDF; secondly, the approval of the provincial Regional Spatial Plan (WC SDF) by the MEC that constituted the performance of a provincial planning function; and thirdly, although the Constitution determines the areas on which the various levels of government exercise legislative and executive functions; it does not specify the reasons and considerations the different levels of government may take into account (policy).

487 The DFA has now been repealed. See Chapter 2.1 relating to the historical background of planning. Kidd *Environmental Law* 217. When the Act was promulgated, it was seen as an instrument for reconstruction and development but its procedure was embraced by developers of upmarket developments that the drafters of the legislation could not have conceived and resulted in various

principles".[488] It was applied in place of existing provincial and "homeland" planning legislation and mechanisms,[489] and municipal town planning schemes.[490] The main purpose of the DFA was to address homelessness by containing provisions for the speedy provision of land for housing. Although innovations (such as development principles and strategic municipal planning in the form of land development objectives)[491] were introduced, it did not have a major impact on the planning landscape in South Africa.[492]

The *White Paper on Local Government*[493] set a "new paradigm in the form of developmental local government" and its focus was "integrated development planning".[494]

South African planning legislation, plans and policies will be the focus of this Chapter. The link between these planning laws, plans and policies will be investigated against the background of both the urban edge and sustainable development. Ascertaining if and how our planning laws promote sustainable development within the urban edge is crucial to addressing conflict between property development and the environment. South Africa's new leadership has confirmed a "serious intent on improving the situation" and promoting sustainable development in cities "by fostering accelerated economic growth and land reform".[495] However, these intentions can only be realised if planning laws, plans and policies are geared towards sustainability and addressing

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residential developments being approved (even on agricultural land). The apparent lack of capacity of several small municipalities resulted in developers utilising the DFA procedure rather than the longer drawn procedure that was utilised prior to the enactment of the Act.

488 Padarth 2015 http://sacitiesnetwork.co.za/wp-content/uploads/2015/05/SPLUMA-as-a-tool-for-spatial-transformation_final-_April2015.pdf 4.

489 The history of property legislation and planning laws relating to the four provinces and the black homelands is referred to in the historical aspect in Chapter 2.

490 Padarth 2015 http://sacitiesnetwork.co.za/wp-content/uploads/2015/05/SPLUMA-as-a-tool-for-spatial-transformation_final-_April2015.pdf 4.

491 Section 3(1)(c) of the DFA's "general principles for land development" included numerous ideas such as: the integration of all aspects of land development, discouraging urban sprawl and encouraging environmentally sustainable land development.

492 Nel 2016 *Land Use Policy*.

493 This document described planning as complex and inefficient with planning officials in all spheres having to deal with varied systems.

494 Padarth 2015 http://sacitiesnetwork.co.za/wp-content/uploads/2015/05/SPLUMA-as-a-tool-for-spatial-transformation_final-_April2015.pdf 16.

495 Oranje and Van Wyk 2019 *Town Reg Plan* 112-124.

the situation. Local government law and policy framework are also pertinent as they deal with the "system, structures, financial management, demarcation" and other issues relating to cities and municipalities. Du Plessis[496] questions the extent to which the domestic framework is aligned to the priorities and subsidiary global objectives of SDG 11[497] that relate to "sustainable urbanism"[498] as there are no sustainable urbanism principles in law that also serve to direct how cities are to be administered or operated.[499]

That having been said, it is fortunate that certain governance functions such as an "effective, efficient and transparent system of risk management" in terms of the *Local Government: Municipal Financial Management Act* (MFMA)[500] need focus not only on financial matters but are able to "ideally identify and address all risks" which could include environmental risks.[501] Policy instruments such as the NDP[502] and the IUDF,[503] although not statutory, were specifically amended to be more or less in accordance with SDG 11 and the issues of sustainability within the urban edge.[504] The draft NSDF,[505] with its focus on "poverty, unemployment and inequality", is mandated by SPLUMA and is a long-term national spatial planning instrument (aligned with the NDP). It is adopted for implementation throughout the country and provides development directives for all three spheres and sectors of government.[506]

The Constitution,[507] however, must be the starting point in any discussion relating to

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496 Du Plessis 2017 *LDD* 249.

497 See Chapter 2.6 on SDG 11.

498 See Chapter 4.3 for a full discussion on NEMA.

499 Du Plessis 2017 *LDD* 251. Du Plessis concludes that the range of local government Acts do not deal coherently with sustainability or have statutory principles of urban sustainability that are so evident in the principles of SPLUMA.

500 *Local Government: Municipal Finance Management Act* 56 of 2003 (MFMA).

501 Du Plessis 2017 *LDD* 251. These are risks such as water scarcity, droughts and floods which threaten the ecosystem, or even delays in identifying open spaces, or inefficient spatial planning or transportation and infrastructure reform.

502 See Chapter 3.9.

503 See Chapter 3.9.

504 See Chapter 2 regarding the urban edge.

505 Department of Rural Development and Land Reform 2019 https://pmg.org.za/policy-document/1193/ (the draft NSDF).

506 The NSDF refers to a "set of strategic spatial areas of national importance from an ecological, social, economic infrastructure perspective, to be targeted by both government and the private sector in the pursuit of strategic national development objectives, or to avert national crises".

507 See Chapters 3.2 and 4.2.

development within the urban edge or in municipalities.

3.2 The Constitution

In view of the country's past history, it is not surprising that the objectives of the Constitution were directed at being able to address the dire need for the provision of infrastructure and services; the need to create "liveable, integrated cities, towns and rural areas"; economic development locally and "community empowerment and redistribution".[508] These considerations have similarities to what is envisaged in SDG 11[509] and must be addressed.

It is necessary to first investigate the Constitution and its role in planning law that has "two distinct yet interrelated subdivisions".[510] These are section 25(1)[511] that permits the deprivation or limitation of property[512] and section 33(1) that deals with just administrative action.[513] Deprivations of property can occur where property rights are limited by the provisions of a plan or scheme (such as an urban edge policy as reflected in a SDF) while decision-making processes such as that of a municipality (administrative action) are necessary to change land use and must be lawful, reasonable and procedurally fair.[514] The actions of natural and legal persons alike[515]

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508 Du Plessis 2017 *LDD* 252.

509 See Chapter 2.6.

510 Van Wyk "Law on Planning and the Environment" 1131.

511 Van der Walt *Constitutional Property Law*. The property clause in the Constitution is dealt with in terms of ss 25(1) in detail.

512 Bekink *Principles of South African Constitutional Law* 130. This must, however, include the threshold requirement that deprivation cannot be arbitrary. Compare this to Singapore's *Land Acquisition Act* 152 of 1966 in terms of which the Singapore government used this Act extensively to re-settle squatters and paid fair amounts to them for the properties they purchased. This resulted in satisfied rather than disgruntled citizens. See Chapter 5 on Singapore which discusses this aspect. Any further discussion regarding s 25 of the Constitution and expropriations is outside the scope of this study.

513 Hoexter *Administrative Law* 2. Administrative law is that part of law, which regulates the activities of bodies that exercise public powers and perform public functions, irrespective of whether such bodies are public authorities in the strict sense. At 5-6 she points out that administrative and constitutional law overlap in many respects but they differ in that administrative law's emphasis is on one branch of the state, the executive branch; Van Wyk "Law on Planning and the Environment" 1131.

514 Van Wyk "Law on Planning and the Environment" 1131. See also the *Clairisons* case paras 2 and 7.

515 These include, among others, private property owners, mining companies and commercial developers.

are regulated by municipalities by means of land-use planning instruments,[516] which, while affording certain rights, also have the effect of restricting behaviour. As a result, municipalities have succeeded in preventing developments that do not fit in with their land-use management plans[517] as is well illustrated by case law.[518]

The South African Constitution provides that the legislative and executive powers regarding "regional planning and development", "urban and rural development," "provincial planning" and "municipal planning" are divided powers.[519] It stipulates that government in South Africa comprises three "distinctive, interdependent and interrelated" spheres of government in the place of the more conventional format where the lower tier is governed and controlled by the higher.[520] Litigation[521] regarding which sphere has the power to make final determinations regarding planning (including a determination of the urban edge) indicates that this area of law is blurred.

Schedules 4 and 5 of the Constitution determine which legislative authority of the different spheres of government has competence in relation to the listed categories[522] and also determines which of the different spheres of government has executive authority.[523] The Constitution regards local government as a party to the country's

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516 Such as zoning, urban edge policies and other planning instruments.

517 Du Plessis *Environmental Law* 48. This indicates that certain instruments or policies like the urban edge may be employed to restrict development when so required.

518 See *Minister of Local Government, Environmental Affairs and Development Planning of the Western Cape v Lagoonbay Lifestyle Estate (Pty) Ltd* 2014 1 SA 521 (CC). See also *Minister of Local Government, Environmental Affairs and Development Planning, Western Cape v The Habitat Council; Minister of Local Government, Environmental Affairs and Development Planning, Western Cape v City of Cape Town* 2014 4 SA 437 (CC); *Pieterse v Lephalale Local Municipality* 2017 2 BCLR 233 (CC); *Swartland Municipality v Louw* 2010 5 SA 314 (WCC); *City of Cape Town v Maccsand (Pty) Ltd* 2010 6 SA 63 (WCC); *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC).

519 Van Wyk 2012 *PELJ* 318.

520 Bekink *Principles of South African Constitutional Law* 449. Local government is now entrenched as a distinctive sphere of government. Although local government is usually the smallest government institution, it is now often regarded as the most important level of government, with specific powers and functions: Van Wyk *Planning Law* 2nd ed 34, 288. Also see s 40 of the Constitution.

521 *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC); *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC); *Lagoonbay Lifestyle Estate (Pty) Ltd v Minister for Local Government, Environmental Affairs and Development Planning of the Western Cape* 2013 ZASCA 13 (15 March 2013).

522 Van Wyk "Law on Planning and the Environment" 1131.

523 Van Wyk "Law on Planning and the Environment" 1131.

"pursuit of sustainable development".[524] Chapter 7 provides that the "objectives, duties and status of municipalities" relate to development, with municipalities being the "co-dependent local sphere of government".[525] As such, the Constitution lays down developmental duties for local governments[526] and gives them legislative authority to "make and administer by-laws for the effective administration" of all matters that they have the "right to administer".[527] These include ensuring that services to the community must be provided in "a sustainable manner", promoting a safe and healthy environment and encouraging the "involvement of communities in matters of local government".[528] The main developmental duty of municipalities is to "structure and manage" in a way that they prioritise the basic needs and rights of the community "while also promoting their social and economic development".[529] These include the constitutional rights in sections 24 (environment), 25 (property), 26 (housing) and 27(1)(b) water.

A municipality has to administer the matters listed in Part B of Schedules 4 and 5 and any other matter delegated to the municipality by legislation of the other two spheres, namely, provincial and national.[530]

Local government, previously regarded as a mere functionary of the central state, is now crucial with regard to municipal planning. Section 153(a) of the Constitution states that every municipality must organise, plan and manage its administration, budgeting and planning processes to give priority to the basic needs of the community and to promote the social and economic development of the community. Municipalities have

524 Du Plessis 2017 *LDD* 249.
525 Du Plessis 2017 *LDD* 249.
526 Bekink *Principles of South African Constitutional Law* 455.
527 Section 156(2) of the Constitution. See also *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC) para 16; *Maccsand (Pty) Ltd v City of Cape Town* 2011 6 SA 633 (SCA) para 12.
528 In terms of ss 152(1)(b) and (e) of the Constitution.
529 Du Plessis 2017 *LDD* 250; see also s 153(e) of the Constitution.
530 Section 156(1) of the Constitution. See also *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC) para 16; *Reflect-All 1025 CC v MEC for Public Transport, Roads and Works, Gauteng Provincial Government* 2009 6 SA 391 (CC) para 73; *Swartland Municipality v Louw* 2010 5 SA 314 (WCC) para 27; *City of Cape Town v Maccsand (Pty) Ltd* 2010 6 SA 63 (WCC) 69J; *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC) paras 45-46; *Maccsand (Pty) Ltd v City of Cape Town* 2011 6 SA 633 (SCA) para 12; *Louw v Swartland Municipality* 2011 ZASCA 142 (23 September 2011).

legislative and executive authority over matters such as "electricity, local transportation, air quality management, noise control and waste management".[531] The Constitution directs all municipalities to provide services in a sustainable and equitable manner to all residents[532] including "social and economic development", service delivery at community level and particularly municipal planning and building regulation (including integrated development).[533] Municipalities are also expected to address issues such as poverty reduction; sustained economic growth; sustainable resource use; environmental conservation and spatial integration of diverse social and class groups[534] with the tools that they have at their disposal.[535]

The urban edge policy of a municipality is one of such important tools.[536] Local government must take into account its role in furthering "socio-economic rights, sustainable development and participatory democracy" when implementing and managing its urban edge policies or when exercising its planning powers. To determine the extent to which a municipality may exercise its planning powers in accordance with the Constitution is tricky, particularly because the planning paradigm has changed dramatically since 1994 and municipalities have been granted far wider powers than before. The courts have been tasked with determining the precise content of the role of municipalities in planning. In the first Constitutional Court case of *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd*,[537] Yacoob J, in his minority judgment gave an often quoted synopsis on the content and importance of "municipal planning".[538] This was taken a step further in *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal*,[539] a case initiated by the Johannesburg Metropolitan Municipality against a provincial development tribunal (created by the DFA) on the

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531 Du Plessis 2017 *LDD* 250.
532 S2 Constitution; See also Bekink *Principles of South African Constitutional Law* 456.
533 Section 153 Constitution: See also Horn 2010 *Eur Spat Res Policy* 48.
534 Pekelharing *Phenomenon of the Urban Edge* 126.
535 Du Plessis 2017 *LDD* 251.
536 As these provisions indicate local government's role as a key factor in the quest for "socio-economic rights, sustainable development and participatory democracy". These are the considerations that local government should also consider in its implementation of the urban edge.
537 *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC).
538 *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC) 127-136.
539 *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC).

issue of where the authority should lie to determine the development boundaries of the Johannesburg urban area. The offending sections of the DFA had allowed the (provincial) Gauteng Development Tribunal to approve plans outside the urban edge in contravention of the town planning scheme and other policy documents of the municipality (namely the IDP and the SDF, which in turn incorporates the urban edge). This landmark judgment of the Constitutional Court held that certain sections of the DFA were unconstitutional[540] and ruled that land use management decisions could only be taken by municipalities.[541] The municipality was successful in its opposition to the applications for development on the grounds that the proposed developments were contrary to the town planning scheme, were inconsistent with a number of the policy documents[542] and were located outside the demarcated urban edge.[543] A central aspect of this study, namely the connection between the urban edge and the SDF, was also referred to[544] and it was confirmed that the SDF was one of the core components of an IDP and that the urban edge (or urban development boundary) was incorporated as a component of the said SDF.[545] The Judge drew attention to the fact

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540 Kidd *Environmental Law* 239. Instead of an order of immediate invalidity, the Constitutional Court ordered that the invalidity be suspended for 24 months to allow legislation to be amended as in many parts of the country land-use planning decisions were made by development tribunals in terms of the DFA (due to lack of appropriate procedures and human capacity in many municipalities).

541 Van Wyk 2010 *PELJ* 215 The crux of the matter was the observation by Nugent JA that the parallel planning authorities by two bodies on the same subject matter is "disruptive to orderly planning and development"; *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC) paras 54-55 and paras 46-47. Jafta J reiterated that "the Constitution confers planning on all spheres of government by allocating regional planning and development concurrently to the national and provincial spheres, provincial planning exclusively to the provincial sphere and municipal planning to the local sphere". While these functional areas are not contained "in hermetically sealed compartments, they remain distinct from one another".

542 Namely the IDP and the SDF.

543 *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC) para 73. Jafta J stated that "a restrictive meaning should be ascribed to development in order to enable each sphere of government to exercise its powers without interference from the other spheres" (para 62). The court in this matter concluded that "urban and rural development" is not broad enough to include the powers forming part of "municipal planning" and that the province had no authority to deal with the field of municipal planning.

544 *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC). The Constitutional Court acknowledged that the lower court decision provided insight as to how the urban edge was reflected in the SDF and how it should be integrated with other planning instruments.

545 *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 2 SA 554 (SCA). Reference was made specifically in that instance to the City of Johannesburg SDF in paras 10 and 20.

that in planning decisions authorities have to consider and make decisions in alignment with plans, by-laws, legislation as well as municipal policies and concepts (such as the urban edge).[546] The Constitutional Court has thus clarified that the functional area of "municipal planning" is a municipal legislative and executive competence.

The constitutional requirements in so far as they relate to planning and administrative law as well as the consideration of the nature and form of the urban edge as a planning tool were both considered in the *Shelfplett* case where it was held that the exercise of decision-making functions (such as the granting of rezoning and development approvals) is a "municipal planning" function.[547] Furthermore, that the Knysna Wilderness Provincial Regional Spatial Plan imposed real restrictions and was a type of subordinate legislation[548] equivalent to "law" as defined by section 172(1)(a) of the Constitution.[549] Although the Constitution determines the areas in which the various spheres of government exercise legislative and executive functions, it does not specify the reasons and considerations that the different spheres of government may take into account (this being policy).[550] Importantly, it was held that the discharge of functions prescribed by law is an administrative act that may be challenged in terms of the *Promotion of Administrative Justice Act* (PAJA),[551] whereas the implementation of policy is at the discretion of decision-makers.[552]

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546 *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC) para 95. The municipality was successful on the grounds that the proposed developments would be contrary to the town planning scheme and would also be inconsistent with a number of its policy documents such as the IDP, the SDF and the urban edge. Reference was also made in that matter to Harmse AJ's comments in *Akani Garden Route (Pty) Ltd v Pinnacle Point Casino (Pty) Ltd* 2001 4 SA 501 (SCA) paras 6 and 7 that "policy determinations cannot override, amend or be in conflict with laws" including any subordinate legislation which in effect would include an urban edge. This case is referred to below; Wiley *Urban Edge* 39. This decision is relevant in the light of the uncertain status of considerations that affect planning law and the issue of whether the implementation of the IDP and SDF are part of administrative law equivalent to subordinate legislation or just simple policy and also whether the urban edge is necessary or just a "nice to have".

547 Although it was integrated within a provincial SDF.

548 As opposed to a mere policy.

549 *Shelfplett* case para 61, Rogers AJ.

550 Van Wyk 2012 *PELJ* 318.

551 Promotion of Administrative Justice Act 3 of 2000.

552 *President of the Republic of South Africa v South African Rugby Football Union* 2000 1 SA 1 (CC). The legal status of the urban edge was indirectly boosted in the *Le Sueur* case when spatial plans (such as town planning schemes) and SDFs (which depict an urban edge) were held to have the

In the case of *SLC Property Group (Pty) Ltd v Minister of Environmental Affairs and Economic Development (Western Cape)*[553] the stipulations of the 2005 Western Cape Provincial SDF[554] were the reason for the refusal of an application for the development of an agricultural property situated outside the urban edge of Stellenbosch.[555] The judgment referred to Harms JA's comments in *Akani Garden Route (Pty) Ltd v Pinnacle Point Casino (Pty) Ltd*[556] regarding the separation of powers of the three spheres in terms of section 104 of the Constitution. He differentiated between the implementation of legislation and the enforcement of policy: "Policy determinations cannot override, amend or be in conflict with laws" (including subordinate city legislation). This decision highlights the considerations that affect planning law and, in particular, the implementation of the IDP and SDF as part of administrative law equivalents and not subordinate legislation or simply policy.[557]

Both the Constitution and SPLUMA, have a close connection with the urban edge, promote sustainable development and provide guidelines to address potential conflict with the environment. The urban edge is not a mandatory requirement in terms of SPLUMA but it is an intrinsic part of SPLUMA. SDFs, the SPLUMA principles as well as land use schemes in terms of SPLUMA, all have a close connection with the urban edge.

3.3 Integrated Development Plans

An IDP is an overarching "development and management planning instrument",

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power of law and create legally binding rules to the same extent that a national or provincial law or municipal by-law would do; Nel, Du Plessis and Retief "Key Elements for Municipal Action" 49. In response to the enforcement challenges faced by the municipality, it passed a resolution to integrate the D-MOSS into its town planning scheme. This case is discussed further in Chapter 4 dealing with the environment.

553 *SLC Property Group (Pty) Ltd v Minister of Environmental Affairs and Economic Development (Western Cape)* 2008 1 All SA 627 (C).

554 SDFs are discussed in more detail in 3.2 below and are required in terms of SPLUMA.

555 Nel, Du Plessis and Retief "Key Elements for Municipal Action" 49. Town planning schemes "bind all users of land within the area and are regarded as legislative in character"; Van Wyk *Planning Law* 2nd ed 282. Town planning schemes are "legislative administrative acts or legislative administrative action" or "subordinate or delegated legislation".

556 *Akani Garden Route (Pty) Ltd v Pinnacle Point Casino (Pty) Ltd* 2001 4 SA 501 (SCA) paras 6 and 7.

557 Wiley *Urban Edge* 38-39.

created in terms of the MSA that "links, integrates and co-ordinates plans", taking into account "proposals for the development of the municipality".[558] Section 25(1) of the MSA requires municipalities to adopt an IDP while section 35 describes an IDP as the principal strategic planning instrument that must guide and inform all planning and development.[559] The MSA governs the implementation of the municipality's IDP and controls its development, adoption and revision. It directs all municipalities to prepare IDPs on a five-year basis and review annually. The importance of an IDP lies in the fact that it serves as the basis for all the city's decision-making and guides the preparation of any action plan for the city as well as the implementation of strategies identified by the city. It is also legally binding on decisions and actions of others within its jurisdiction, such as local businesses, developers and the local community. The commitments made in, and the duties created by IDPs are discharged by means of additional instruments, such as the municipality's policies, by-laws, action plans etc. It is necessary to align the IDP with the plans of other municipalities as well as with relevant provincial and national plans. The IDP must reflect the "municipality's vision for long-term development" and have "an assessment of the level of development" in the city or town,[560] any investment and development initiatives of the city or town and include "sector plans".[561]

An SDF is a core component of an IDP. It must include "basic guidelines for a land use management system for the municipality".[562] The Local Government: Municipal Planning and Performance Management Regulations[563] were put in place in 2001 to further regulate the contents of an SDF. However, since the coming into operation of SPLUMA with its detailed provisions for SDFs these 2001 regulations have taken a back seat.

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558 Section 25(1) of the MSA.

559 As also all decisions with regard to planning, management and development in the municipality.

560 This must include the identification of communities within its jurisdiction which do not have access to basic municipal services such as water and sanitation.

561 Some of the sector plans of a city to be included in the IDP include: the Disaster Management Plan; the Financial Plan; the SDF; the local Air Quality Management Plan; the local Waste Management Plan; the Water Services Development Plan; an Integrated Human Settlements Plan; an Integrated Transport Plan; and the Built Environment Performance Plan.

562 Section 26(2)(e) of the MSA.

563 GN R796 in GG 22605 of 24 August 2001.

On account of its own objectives, its intended outcomes, and as a result of "the role players in society and government that they involve", the IDP is designed to enable municipalities to govern in a way that is related to the objectives set by SDG 11.[564] In fact, because of this the IDP, with its sector plans, is a powerful tool that may be used to address conflict between property development and the environment.

However, the requirement that IDPs must (through the SDF) reflect the spatial form of the city[565] leads to a more certain status for the urban edge when depicted on the SDF, comparable to so-called "subordinate legislation" status as proposed by Rogers A J in the *Shelfplett* case. An urban edge when indicated in the SDF compels decision-makers to have regard to it.[566]

Despite the fact that an IDP is a powerful tool that municipalities must use with regard to issues of sustainability, its use is not being maximised. IDPs do not, as intended in legislation, focus on contributing to the long term vision of municipalities and rarely act as integrating instruments; the sectoral department involvement is poor and municipalities are either not aware of or do not necessarily integrate the IDP with national sectoral plans. The usual disjuncture between SDFs and IDPs is not helping with the result that the IDP's full potential is not being used as intended.[567]

3.4 SPLUMA and the urban edge

SPLUMA was promulgated two years after the Constitutional Court held, in *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal*,[568] that new planning legislation was imperative. The underlying idea of SPLUMA was to repeal the

564 Du Plessis 2017 *LDD* 252.

565 Regulation 2(4) of the Local Government: Municipal Planning and Performance Management Regulations which deals with the status of IDPs. These regulations are much older regulations and were created before SPLUMA and are therefore no longer as relevant.

566 From a municipal legislative perspective, this is perhaps a reason why urban edges need to be depicted on an SDF.

567 Du Plessis 2017 *LDD* 259.

568 *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC); Van Wyk 2010 *PELJ* 214. Developers found a loophole in the DFA and applied to the provincial development tribunals rather than the municipality for permission to establish land development areas in terms of the "less cumbersome" chs V and VI of the DFA.

DFA[569] so that the "fragmented approach" to land use planning and management could be replaced by "a single, uniform management system"[570] and the former approach of separating urban and rural and dealing with each separately as per the DFA was discarded.[571] There was unfortunately another delay of two years in actually implementing SPLUMA. Promoting sustainable development within the urban edge in South Africa has been negatively impacted by this delay and this has been exacerbated as contradictory older Acts and policies have still not been repealed, causing confusion.

SPLUMA plays a key role in planning law and property development and the "connection" between it and the urban edge and the role, if any, that it plays in protecting the environment must be investigated.

The advantage of implementing SPLUMA is that it has established an "inclusive"[572] framework system that addresses numerous planning issues relating to policy, integration and consistency in South African law.[573] The new components are based on "government's objectives of redress, transformation and inclusivity as well as prevailing international ideas about spatial planning".[574] The point of departure was to "address the spatial divisions of the past" and to create a "single, integrated spatial planning system"[575] with "more coherent, inclusive approaches to land and land

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569 Section 33(1) of SPLUMA. In addition to the DFA other Acts such as the *Removal of Restrictions Act* 84 of 1967 and the *Physical Planning Act* 88 of 1967 have been repealed. Legislation that has not been repealed by SPLUMA cannot be an "alternative or parallel mechanism, measure, institution or system for spatial planning, land use, land use management and land development in a manner which is inconsistent with the provisions of SPLUMA".

570 Laubscher *et al SPLUMA* 6. SPLUMA intends to provide, by means of a single national Act, supported by provincial legislation, a uniform and simplified system of land use management for South Africa; Van Wyk and Oranje 2014 *Planning Theory* 356. While the "introduction of a single system for all was a key driver for the new government, there were other aspects it deemed necessary for a novel planning system".

571 Du Plessis, Pienaar and Oliver 2014 *SAPL* 237.

572 Nel 2016 *Land Use Policy*. The concept "inclusive" refers "not only to all the land in the country (from rural to urban), but also the range of spatial development aspects included in the Act, namely: policy, provincial legislation, spatial frameworks, land development applications and development regulations in the form of zoning schemes applicable to all land within a municipality".

573 *Wiley Urban Edge* 50.

574 Van Wyk and Oranje 2014 *Planning Theory* 356. These include concepts such as "sustainability, resilience, land-use transport integration and the mixing of land uses". See Chapters 5 and 6 for discussions relating to Singapore's and Rwanda's planning laws and the incorporation of the environment in planning.

575 Laubscher *et al SPLUMA* 14. The necessity of a "uniform and comprehensive system of spatial planning and land use management" is recognised in the Preamble to SPLUMA.

development in municipalities".[576] It was essential that SPLUMA, the new planning system,[577] incorporated the following: "meaningful participation in all aspects of the spatial planning system; an open, inclusive and just decision-making process (where information is readily available); recognition of religion and culture; equal treatment in application and decision-making; an awareness of environmental" issues[578] and the "significance of property and housing".[579]

SPLUMA provides a framework for spatial planning in line with the above considerations[580] and the Bill of Rights.[581] Each sphere of government[582] is required to "respect, protect, promote and fulfil" all the rights in the Bill of Rights and take "reasonable legislative and other measures, within its available resources, to achieve the progressive realisation" of socio-economic rights. In fact, the Preamble to SPLUMA stresses that for sustainable development[583] of land an "integration of social, economic

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576 Van Wyk and Oranje 2014 *Planning Theory* 356. This is reiterated in the NDP. As a result of *apartheid* most South Africans were consigned to live far from their work locations. This makes it difficult to access any benefits from urban living.

577 Van Wyk and Oranje 2014 *Planning Theory* 358. SPLUMA was promulgated against a background of "discrimination and inequality" in relation to "land and property, its multi-cultural and linguistic population, homelessness and a fragile and vulnerable environment".

578 The protection of the environment is an important consideration in the implementation of the urban edge too. See Chapter 2 for a full discussion on the urban edge.

579 Nel 2016 *Land Use Policy*. According to Nel the purposes of a land use management system include: "social sustainability including justice, equity and inclusion; economic development through creating and maintaining investor confidence, supporting property markets and jobs and livelihoods; possessing financial and administrative viability, including human resource capacity, administrative justice (transparency, participation and legitimacy) and flexibility to accommodate changes, as well as a range of settlement patterns and forms of tenure". Van Wyk and Oranje 2014 *Planning Theory* 358.

580 Laubscher *et al SPLUMA* 6; Van Wyk and Oranje 2014 *Planning Theory* 356. It was envisaged that alongside SPLUMA, there would be nine provincial spatial planning acts.

581 Van Wyk and Oranje 2014 *Planning Theory* 356. According to the authors, it is not clear if it was developed totally within the "spirit of the Bill of Rights" and that a "valuable opportunity to advance the cause and objectives of the Bill of Rights through the spatial planning system may have been lost" in the process.

582 Laubscher *et al SPLUMA* 14. One of the objects of SPLUMA is to provide a "cooperative government and inter-governmental relations" among the three spheres; s 3(e) of SPLUMA.

583 Nel 2016 *Land Use Policy.* The Preamble to SPLUMA refers to the "realisation of constitutional obligations in respect of, and the need for land use management in relation to, sustainable development, rights in relation to access to housing and basic services, the right to property, and the inclusion of all types of settlement within the spatial planning and land use management system". Ss 7(2), 26(2) and 27(2) of the Constitution; Laubscher *et al SPLUMA* 11. One of the objects of SPLUMA is to provide for the sustainable and efficient use of land premised on the meaning of "sustainable development".

and environmental considerations"[584] is required in planning for the future and also for ongoing land use management so as to ensure that development of land protects present and future generations.[585] Development approved in terms of SPLUMA should therefore not be in conflict with the environment.

The objectives of SPLUMA[586] are totally in line with the essence of the Constitution and are reiterated here:[587]

- to redress the imbalances of the past[588] and to ensure that there is equity in the application of spatial development planning and land use management systems;
- to provide for a uniform, effective and comprehensive system of spatial planning and land use management;[589]
- to ensure that the system of spatial planning and land use management promotes social and economic inclusion;[590]
- to provide for development principles and norms and standards;[591]
- to provide for the sustainable and efficient use of land;[592]

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584 This in effect means that SPLUMA advocates adherence to s 24 of the Constitution.

585 Van Wyk *Planning Law* 3rd ed 16; s 5 of SPLUMA. Municipal planning refers to the compiling, approving and reviewing of municipal IDPs and the "control and regulation of land within the municipal area". Provincial planning refers to the compiling, approving and reviewing of a provincial SDF, monitoring compliance by municipalities, planning "for the efficient and sustainable execution of provincial legislative and executive powers in respect of land as well as making and reviewing policies and laws to implement provincial planning". National planning includes the compiling, approving and reviewing of a national SDF (with related plans and policies), the planning of efficient and sustainable execution of national legislative and executive powers in relation to land and "the making and review of policies and laws to implement national planning". These categories are not necessarily identical to the functional areas as listed in Schedules 4 and 5 of the Constitution.

586 As set out in the Act itself. The proposed definition of the urban edge, as formulated by the writer, ties in with the objectives of SPLUMA, especially in regard to the "social and economic inclusion and the sustainable and efficient use of land".

587 Section 3 of SPLUMA. See also Du Plessis, Pienaar and Oliver 2014 *SAPL* 237.

588 This highlights the very ethos of the Constitution.

589 Section 4 of SPLUMA. Wiley *Urban Edge* 50. Wiley believes that this is relevant as tools, such as the urban edge, provide certainty in planning and are necessary to facilitate decision-making.

590 In keeping with s 24 of the Constitution.

591 Sections 6-8 of SPLUMA.

592 Van Wyk and Oranje 2014 *Planning Theory* 364. The "sustainable and efficient use of land" objective in SPLUMA reinforces the key provision in the Bill of Rights, which states that the state

- to provide for cooperative government and intergovernmental relations amongst the national, provincial and local spheres of government.[593]

SPLUMA applies throughout the country[594] and other legislation may not prescribe any other alternative or parallel mechanism or system on spatial planning, land use, land use management and land development in a manner that is inconsistent with its provisions.[595] The effect of this provision is that legislation such as the provincial ordinances still on the statute book cannot be applied where they are inconsistent with SPLUMA.[596]

In terms of section 4 of SPLUMA the spatial planning system in South Africa consists of four components:[597]

- SDFs (for all spheres of government);[598]
- development principles, norms and standards;[599]
- the management and facilitation of land use through the mechanism of land use schemes;[600] and

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must respect, protect, promote and fulfil the social, economic and environmental rights of everyone.

593 Sections 9-11 of SPLUMA that is similar in many respects to the provisions of s 152(1) of the Constitution.

594 Murray 2016 *De Rebus*. Although SPLUMA now applies nationally, a criticism is that "pre-existing provincial legislation has not been repealed and remains in force. A more coordinated approach would have been to enact SPLUMA only when the provinces were in a position to repeal their planning legislation". SPLUMA is, therefore, not a replacement but "an overlay of existing provincial acts and ordinances and it is not clear how long it will take to phase out the existing provincial legislation".

595 Section 2(2) of SPLUMA; Kidd *Environmental Law* 24; Van Wyk 2016 *PELJ*. This clearly envisages that there may be other planning measures or mechanisms (such as Land Use Planning Ordinances) that are not repealed but must be consistent with SPLUMA. SPLUMA has "in essence nullified them because it prohibits an alternative or parallel mechanism, measure, institution or system on spatial planning, land use, land use management and land development in a manner inconsistent" with the provisions of SPLUMA.

596 Laubscher *et al SPLUMA* 15. The manner in which SPLUMA provides for land use management procedures but leaves other aspects to provincial legislation and municipal by-laws. This complicates and frustrates day to day implementation of SPLUMA.

597 Kidd *Environmental Law* 241. These are discussed in more detail in this Chapter.

598 National, provincial and municipal spheres of government in accordance with the vision of that sphere.

599 These must guide spatial planning, land use management and land development.

600 Chapter 5 of SPLUMA. They may be referred to as land use systems.

- procedures and processes for the preparation, submission and consideration of land development applications and related processes.[601]

Given the overarching nature of the development principles it is important to place these at the forefront of any discussion on SPLUMA.

3.5 The role of the SPLUMA principles

SPLUMA devotes an entire chapter to development principles and compulsory norms and standards. The principles of SPLUMA are regarded as essential ingredients in all frameworks, schemes and procedures and should be effective guidelines that help resolve issues of sustainability within the urban edge. The five main principles include the following:[602]

- "Spatial justice" that addresses the redress of past spatial and other development imbalances.[603] This issue is especially pertinent to the land reform process as it broadens access to land in urban and rural areas.[604] It is necessary for SDFs of all spheres to include disadvantaged areas such as those on the urban peripheries developed in the days of *apartheid* and informal settlements.[605] These areas must be included and integrated with "spatial, social, economic and environmental objectives of the relevant sphere".[606] Spatial justice includes the principle that a

601 The requirements set out in Chapter 6 and provincial legislation and the process that takes place when an existing land use right must be changed is based on the interaction between the applicant and the vision of the municipality.

602 Section 7(a) of SPLUMA: Van Wyk *Planning Law* 2nd ed 16-17.

603 Van Wyk 2017 *SAPL* 26. This is to be done "through improved access to and use of land as well as the inclusion of persons and areas that were previously excluded". Van Wyk agrees that as SPLUMA has components of social justice: it will assist by "redressing past spatial imbalances and exclusions"; it will include "people and areas previously excluded"; and will also motivate "upgrading informal areas and settlements". SPLUMA has a solid principle of spatial justice. "It echoes aspects of both the South African land reform programme and global principles of spatial justice" and "directs municipalities to apply the principle" in its SDFs, land use schemes in "decision-making on development applications".

604 Du Plessis, Pienaar and Oliver 2014 *SAPL* 238. There is an emphasis on "informal settlement, former homeland areas" and areas where "poverty and deprivation" is obviously prevalent and spatial planning mechanisms "must incorporate provisions that enable redress in access to land by disadvantaged communities and persons"; s 7(i)(a)(iii) of SPLUMA.

605 Oranje and Van Wyk 2019 *Town Reg Plan* 119.

606 Oranje and Van Wyk 2019 *Town Reg Plan* 119. The NSDF leads the way and the municipal SDF must identify areas where the issue can be resolved.

decision-maker may not be impeded or restricted in the exercise of its discretion "solely on the ground that the value of land or property is affected by the outcome" of the relevant decision-making process.[607]

- "Spatial sustainability"[608] stresses the importance of environmental issues, the "protection of prime and unique agricultural land",[609] "the environment and protected lands", "the safe utilisation of land" and promotes land development that must take place in areas "that are sustainable, limit urban sprawl and result in communities that are viable".[610] This principle refers to economic, environmental and social considerations[611] and highlights that spatial planning does not apply only in built-up areas. Meaningful spatial planning is also necessary in rural and agricultural areas of the country.[612] This principle would make it compulsory for municipalities to carefully implement an urban edge strategy and consider the transition area as this has an impact on adjoining rural and agricultural land.[613] The writer's own definition of the urban edge also embraces the principles of sustainable development and incorporates the economic, environmental and social considerations alluded to in this principle, while referring

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607 Laubscher *et al SPLUMA* 70-76 discuss the implication of this principle as it could amount to a deprivation in terms of s 25 of the Constitution and state that this is a spatial justice problem as it restricts the right of an owner from the right to object to a land development solely on the basis that the value of the land or property will be affected by the land development envisaged by the application. The question posed is whether it can be said that the value of the land, being a component of the property itself, constitutes property for the purposes of s 25 of the Constitution, in which case the effect of this principle is that it may result in a deprivation and the question must then be "is the deprivation arbitrary?" This issue will then have been dealt with in line with case law on this aspect. Kidd *Environmental Law* 243; s 7(a)(vi) of SPLUMA.

608 The connection between spatial sustainability and the urban edge is discussed later in this section.

609 Laubscher *et al SPLUMA* 77. Land which is used for agricultural purposes should "only be reallocated to other types of use where a real need exists and prime agricultural land should remain in production".

610 Section 7(b)(ii) of SPLUMA and note the close connection to the urban edge. See also Van Wyk *Planning Law* 2nd ed 17 The effect is that planning systems "must uphold consistency of land use measures in accordance with environmental management instruments". Du Plessis, Pienaar and Oliver 2014 *SAPL* 238. The "effective and equitable" function of land markets is promoted in terms of s 7(1)(b)(iv).

611 Kidd *Environmental Law* 243.

612 Laubscher *et al SPLUMA* 77.

613 See Chapter 2 regarding the urban edge.

to the benefits of improving urban-rural linkages.[614] The health and well-being of the population depends on rural goods and services and rural areas have a role to play a role in urbanisation.[615]

- "Efficiency" in terms of which land development must optimise the use of existing resources and infrastructure[616] as well as decision-making procedures must be designed to minimise any negative financial, social, economic or environmental impacts.[617] Here too will this principle be further enhanced by the implementation of an urban edge as it encourages a compact development that makes maximum use of existing infrastructure.[618]

- "Spatial resilience" entails that flexibility "is accommodated to ensure sustainable livelihoods in communities" most likely to feel the impact of "economic and environmental shocks".[619] The fact that the urban edge is reviewable means that the urban edge is well in line with this SPLUMA principle.

- "Good administration"[620] requires that the spheres of government should "ensure

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614 See writer's own definition of urban edge in Chapter 2.5. See also Chapter 3.10. The NDP promotes urban-rural linkages and stresses its importance. See also Chapters 6.2, 6.4 and 6.6.2 regarding promotion of urban-rural linkage in the Kigali Master Plan.

615 NPC *National Development Plan 2030*. See Chapter 3.10 which deals with these linkages. Urban areas provide markets for rural products and likewise rural areas need urban goods. Security and services in rural areas and the support pf agriculture is important. "As urbanisation grows, rural areas continue to provide the goods, services and markets essential for the national economy, but they also start to provide space for economic activities that cannot survive in expensive urban environments".

616 This is a further connection to the concept of the urban edge as s 59(3)(b)(v) of SPLUMA provides that cities and towns must be developed such that "the phenomenon of urban sprawl is discouraged and the development of more compact towns and cities with denser habitation is promoted".

617 Section 7(d) of SPLUMA.

618 See the advantages of the implementation of the urban edge in Chapter 2.

619 Section 7(c) of SPLUMA refers to flexibility in spatial plans, policies and land use management systems.

620 Kidd *Environmental Law* 243. This includes Intergovernmental support and encompasses primarily national support and monitoring of provinces and municipalities and provincial support and monitoring. It means support in terms of ss 125(3) and 154(1) of the Constitution and monitoring by the Minister of aspects relating to implementation of the Act, including monitoring the capacity of provinces and municipalities to implement the Act. As municipal capacity is often lacking (as recognised in *City of Johannesburg Metropolitan Municipality v Gauteng Development* Tribunal 2010 6 SA 182 (CC)) provincial and national government have important responsibilities in regard to enhancing municipal capacity.

an integrated approach to land use and land development",[621] as well as ensure timely decision-making and public participation.[622]

The role of the SPLUMA principles is similar to the NEMA principles[623] in that they promote sustainable development and play a crucial role with regard to any conflict that occurs when development is unsustainable or when it is not undertaken in a timely manner. They apply to all "organs of state and all authorities responsible for implementing legislation" relating to the "use and development of land".[624] These principles[625] are far-reaching because they must guide the preparation, adoption and implementation of any SDF, land use scheme, "policy or by-law concerning spatial planning"; "the development of land" as well as any "consideration by a competent authority of any use and development of land".[626]

There are views that challenges exist with the SPLUMA principles[627] because they are not defined and the regulations do not expand on them.[628] Not all principles are dealt with to the same level of detail and there is no order of preference as to which principles should be prioritised. The principles, are, however not new and are aligned to current policies.[629] Despite any shortcomings, the SPLUMA principles have the

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621 Section 7(e) of SPLUMA. Van Wyk "Law on Planning and the Environment" 1147. Integration should also be reflected in the preparation of plans and the application procedures and indicate transparent processes of public participation which must allow all parties the opportunity to provide inputs on matters affecting them; Kidd *Environmental Law* 243. Reports and an analysis of existing land use patterns, a framework for desired land use patterns, existing and future land use plans, programmes and projects relative to key sectors of the economy, and mechanisms for identifying strategically located vacant or under-utilised land and for providing access to and the use of such land as prescribed.

622 Kidd *Environmental Law* 243.

623 Kidd *Environmental Law* 243.

624 Van Wyk "Law on Planning and the Environment" 1147. It provides for the mandatory participation and social considerations.

625 Murray 2016 *De Rebus*. A criticism of these principles made by some practitioners is that there are no definitions. It could lead to different viewpoints regarding what is meant.

626 Van Wyk *Planning Law* 2nd ed 17; Pekelharing *Phenomenon of the Urban Edge* 37. It is no wonder that the urban edge is noted at least several times in the 2014 WCPSDF and contains five guiding principles namely: spatial justice, sustainability, spatial efficiency, accessibility and quality and livability (all somewhat in line with the developmental principles in s 7 of SPLUMA).

627 Hoole 2016 https://www.kzncogta.gov.za/wp-content/uploads/2018/02/SPLUMA-Principles.pdf.

628 Hoole 2016 https://www.kzncogta.gov.za/wp-content/uploads/2018/02/SPLUMA-Principles.pdf. An example is the spatial resilience principle. It is difficult to assess "if this principle has been adhered to". Further the SPLUMA principles deal with process and content.

629 The NDP is an example of this alignment.

capacity to bring about meaningful changes and harmony. Where justified, SPLUMA even allows for development procedures to be shortened. Used to proper effect, the SPLUMA principles can be and should be used to bring about desired changes relating to sustainable development in accordance with SDG 11 and section 24 of the Constitution.

Having considered the usefulness of the SPLUMA principles to address issues such as spatial justice and spatial sustainability, SDFs, land use schemes, the processing of development applications and how they relate to the urban edge must be investigated.

3.6 Spatial Development Frameworks in SPLUMA

Chapter 4 of SPLUMA provides for a hierarchical network of SDFs[630] and the preparation by all three spheres of government of SDFs,[631] in terms of the objectives[632] (set out in Chapter 3.4 above) and the development principles[633] (set out in Chapter 3.5). The role of the NSDF, the provincial SDF and the municipal SDF is crucial in facilitating change.

3.6.1 National Spatial Development Framework

A draft NSDF[634] in accordance with SPLUMA has been published. It highlights the "persistence of colonial and *apartheid* spatial patterns that impacts on government's ability to meet its national development objectives of "poverty, inequality and unemployment".[635] It acknowledges the challenges in "planning, budgeting and implementation" to bring about the many changes that are necessary, but also stresses how important it is to correct the existing situation and the conflicts that

630 Kidd *Environmental Law* 244.

631 These are municipal, regional, provincial and national SDFs. A regional SDF is established for a region or geographic area declared as such by a Minister in terms of s 18 of SPLUMA.

632 Chapter 4 of SPLUMA.

633 Section 7(a) of SPLUMA.

634 See Chapter 3.9. The NDP called for the preparation of a NSDF guided by SPLUMA with regard to addressing issues of conflict such as "densifying cities, improving transport, locating jobs where people live, upgrading informal settlements, and fixing housing market gaps".

635 Draft NSDF 208. Some of these aspects are discussed in Chapter 3.11.

persist.[636] While the SDFs of all spheres are relevant, the NSDF has a major role to play in addressing the imbalances of the past. It is required to "provide strategic direction and guidance to address any historical imbalances".[637] The draft NSDF recognises that while transformation is needed in various sectors and spheres such as in cities, it is at a national scale that interventions must take place and must be managed to be successful.[638] The draft NSDF outlines the role of the SPLUMA principles to address sustainability issues.[639] One of the aspects mentioned is the principle of spatial sustainability that promotes "the development of viable settlements and sustainable economies" and the need for decent transport.[640] Likewise spatial justice as an example is an important tool to counter issues of inequality and ensure compliance with SDG 11.

3.6.2 Municipal Spatial Development Frameworks

While the NSDF takes the lead, a municipal SDF[641] is also pertinent. The SDF drafted in terms of the requirements of SPLUMA does not confer any rights[642] and is a "visual representation of the desired spatial form of the municipality" (that may depict an urban edge).[643] There is a duty on municipalities to identify and designate areas in their municipalities through the municipal SDF where the issues raised in the NSDF may be addressed. Detailed local plans must be drawn up for these areas for the purposes of development. In that regard, a city's IDP, governed by the MSA is strategic. The municipal SDF is the physical or spatial component of the IDP[644] and

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636 Draft NSDF 22. Some of these issues are referred to in the draft NSDF and are discussed in Chapter 3.11 below.

637 Oranje and Van Wyk 2019 *Town Reg Plan* 119.

638 Draft NSDF 29.

639 Draft NSDF 86.

640 Draft NSDF 86.

641 CityScope 2012 http://cityscope.co.za/town-planning-terminology-explained.

642 Section 17 of SPLUMA; Mosdell Date unknown http://law.nwu.ac.za/sites/law.nwu.ac.za/files/files/Law/KAS/CITYSCAPE-Susan-Mosdell.pdf. Contrast this to land use schemes which have the force of law in terms of SPLUMA. See 3.2.3 below for a discussion on land use schemes.

643 In terms of reg 2(4)(i)(iii) of the Local Government: Municipal Planning and Performance Management Regulations.

644 CityScope 2012 http://cityscope.co.za/town-planning-terminology-explained. The IDP indicates the "development vision of the municipality" in terms of "physical, financial, institutional, social, political and operational criteria" and "serves as a budgeting tool that the municipality uses for capital spending".

presents a preferred land use pattern.[645]

The Local Government: Municipal Planning and Performance Management Regulations[646] previously provided that an SDF must give effect to the chapter 1 principles of the (now repealed) DFA and achieve various outcomes and requirements.[647] These are now subject to SPLUMA.[648] Section 20 of SPLUMA recognises that the SDF forms an integral part of the IDP, but SPLUMA has a varied yet preferable set of criteria of what a SDF should entail.[649] There is also a relationship with "other aspects of municipal development planning" (eg infrastructure and capital planning and investment and budget alignment) "that should be considered when developing a SDF in a municipality".[650] A municipal SDF must:

- correlate with regional SDFs, provincial SDFs and precinct plans;
- be aligned with land use schemes or regulations including the urban edge and incentives offered (these two relate to local planning);
- demonstrate investment maps, programmes, budget alignment and prioritisation of the municipality in accordance with the IDP;
- reflect nodal development, densification, environment and corridor development; (the latter two provide an investment framework); and
- be in compliance with legislation such as the MSA,[651] the *Local Government:*

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645 CityScope 2012 http://cityscope.co.za/town-planning-terminology-explained.

646 GN R796 in GG 22605 of 24 August 2001.

647 Van Wyk "Law on Planning and the Environment" 1150.

648 Kidd *Environmental Law* 241.

649 Padarth 2015 http://sacitiesnetwork.co.za/wp-content/uploads/2015/05/SPLUMA-as-a-tool-for-spatial-transformation_final-_April2015.pdf 5.

650 Padarth 2015 http://sacitiesnetwork.co.za/wp-content/uploads/2015/05/SPLUMA-as-a-tool-for-spatial-transformation_final-_April2015.pdf 5. Adapted by the writer from a diagram in the Ekurhuleni Urban Edge Policy of 2003 (Ekurhuleni Metropolitan Municipality 2003 https://www.ekurhuleni.gov.za/council/by-laws-policies/policies/320-pol-242/file.html).

651 Glazewski *Environmental Law* 213.The main purpose of this Act is to "provide core principles, mechanisms and processes" needed to "enable municipalities to move progressively towards social and economic" upliftment of local communities in harmony with their local natural environment. It includes reference to being "environmentally sustainable" and also defines the term "development" as "sustainable development" and includes "integrated social, economic, spatial", and social upliftment to improve the "quality of life of its members", especially disadvantaged communities.

Municipal Structures Act,[652] SPLUMA and provincial legislation.

This also highlights why coordination is so important in planning, between the three spheres of government. A municipal SDF must assist in integrating, coordinating, aligning and expressing development policies and plans emanating from the various sectors and the spheres of government as they apply within the municipal area, while a national SDF must *inter alia*, "coordinate and integrate" provincial and municipal SDFs.[653] There are similar provisions for the preparation and content of provincial SDFs[654] and their legal effect envisages all provincial development.[655] Development proposals must be adjudicated in accordance with such use patterns. Land development decisions by any authority or official contrary to SDFs are forbidden and unlawful, unless a deviation is warranted on account of site-specific circumstances.[656]

Apart from the connection between the urban edge and the SDF as discussed in *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal*,[657] the provisions of section 22(d) of SPLUMA make it compulsory for municipalities to delineate possible expansion areas through the SDF. This has the effect of ensuring planned enlargement of urban areas "in a pattern, zone or direction" that is approved in terms of five year projections.[658] These requirements intrinsically connect the urban edge with the SDF and lead to the assumption that SDFs must include an urban edge boundary that indicates areas where growth is desirable and where it is not desirable

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652 *Local Government: Municipal Structures Act* 117 of 1998. Glazewski *Environmental Law* 212-213. This Act sets out the objectives of local government which include promoting a safe and healthy environment.

653 Sections 13 and 14 of SPLUMA relate to the national SDF.

654 Sections 15 and 16 of SPLUMA; Kidd *Environmental Law* 245. All provincial plans, projects and programmes must be aligned to the provincial SDF. A provincial SDF cannot confer on any person the right to use or develop any land except as may be approved in terms of the Act, provincial legislation or a municipal land use scheme.

655 Kidd *Environmental Law* 244.

656 Section 21 of SPLUMA; Kidd *Environmental Law* 245.

657 *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal* 2010 6 SA 182 (CC). Also see discussion in Chapter 3.2 above.

658 Wiley *Urban Edge* 51. Specific plans that indicate future growth direction in a SDF will assist municipalities to make decisions regarding where development may occur in terms of the said plans.

so as to comply with section 22.[659] It is no wonder then that Harrison and Todes[660] state that notions of compaction-integration; densification; infill; corridors; nodes and the demarcation of urban edges have become ubiquitous in SDFs.[661] This is relevant and may be useful as it relates to the advantages of implementing an urban edge when considering problems that need to be resolved in an urban setting.[662]

SPLUMA sets out the hierarchy of planning decision-making authorities within the three spheres of government in alignment with the provisions of the Constitution.[663] However, section 12(2) of SPLUMA stipulates that national government, provincial government and a municipality "must participate together in the spatial planning and land use management processes". All spheres must "ensure that the plans and programmes are coordinated, consistent and in harmony with one another".[664] Against that background the question arises as to how to resolve a situation where a provincial SDF[665] depicting an urban edge is inconsistent with the urban edge depicted in a municipal SDF.[666] In terms of the Constitution, municipal planning is the exclusive responsibility of a municipality and provinces[667] must not interfere or usurp the powers

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659 Wiley *Urban Edge* 51.

660 Harrison and Todes 2016 https://www.cogta.gov.za/cgta_2016/wp-content/uploads/2016/05/IUDF-BACKGROUND-REPORT-ON-SPATIAL-TRANSFORMATION.pdf. Terms of reference for the panel of experts constituted to guide the preparation of IUDF.

661 See full discussion regarding the urban edge in Chapter 2. The revitalisation of townships and the inner city are often a part of government programmes with a view to redevelop these areas.

662 See Chapter 2.3 relating to the advantages of implementing an urban edge.

663 Du Plessis, Pienaar and Oliver 2014 *SAPL* 237.

664 The main objective being that an application should be an integrated application with national, provincial and municipal spheres collaborating with each other, thereby preventing applying to the municipality (for permission for land use development) as well as obtain consent from provincial departments.

665 A provincial or national SDF must focus on environmental, housing and agriculture in terms of Schedule 5 Part A of the Constitution, signifying that they are areas of concurrent national and provincial legislative competence over which municipalities have, strictly speaking, no competence.

666 A municipal SDF focuses on municipal planning in terms of Schedule 4 Part B of the Constitution and is an area where provincial and national government strictly have no competence.

667 Sections 44(2), 100 and 139 of the Constitution. See also Van Wyk 2012 *PELJ* 288-289. Provincial government in South Africa is the intermediate sphere of government. This layer of government is supported by national government in its task of directing and supporting local authorities. Its powers and functions relate specifically to provincial legislation and governing in general, and in overseeing the coordination between local municipalities. In the same way that national government may intervene where provincial government is concerned, so may the province intervene where a municipality fails to fulfil an executive obligation. Provincial government is also required to monitor and support municipalities.

of a municipality[668] especially with regard to determination of the urban edge.[669] A review of the integration process between the Gauteng province and its municipalities in that regard has indicated that the normative regulation and principles in the MSA were not sufficient to ensure cooperation between the different spheres of government. It is widely accepted that disagreement with regard to planning and environmental issues causes conflict and impedes sustainable development.[670] Moreover, cooperation between the three spheres of government is not negotiable in terms of section 40(1) of the Constitution.[671] If municipal and provincial SDFs are not in step it is necessary to consider which one has precedence. Is the situation that municipalities must regulate the municipal SDF in line with national and provincial laws? Or must the *Intergovernmental Relations Framework Act* (IGRFA)[672] be applied by the Premier to support the revision of one of the SDFs to ensure consistency? The need for cooperative government and intergovernmental relations is referred to in the Preamble to SPLUMA. Du Plessis and Van der Berg[673] refer to this situation in a discussion on the *Le Sueur* case. They are of the opinion that while the court emphasised the importance of cooperation between the three spheres of government, it failed to fully develop and explain exactly how organs of state should deal with overlapping areas of, eg environmental governance[674] or if applied to this thesis, even on an issue such as an urban edge determination.

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668 Bekink *Principles of South African Constitutional Law* 455. The legitimate supervision of provincial and national governments cannot erode the new autonomy of local government as defined by the Constitution.

669 *Maccsand (Pty) Ltd v City of Cape Town* 2011 6 SA 633 (SCA) has relevance as it was held that the process for each authorisation is governed by different and specific pieces of legislation which serve different purposes and are "allocated to the different spheres of government" depending on their competencies to administer each law.

670 Horn 2010 *Eur Spat Res Policy* 51.

671 Bekink *Principles of South African Constitutional Law* 455. This is necessary to ensure effective local governance and proper "co-ordination and co-operation" between the three spheres of government. However, local autonomy is often compromised when local authorities do not have sufficient expertise, infrastructure and financial capacity.

672 *Intergovernmental Relations Framework Act* 13 of 2005 (IGRFA); Kotzé 2006 *PELJ*. The aim of the Act is to "establish a framework for the national, provincial and local spheres of government to promote and facilitate inter-governmental relations" and to "provide mechanisms and procedures to facilitate settlement of inter-governmental disputes".

673 *Le Sueur v Ethekwini Municipality* 2013 ZAKZPHC 6 (30 January 2013).

674 Du Plessis and Van der Bergh 2014 *Stell LR*. See further discussions on this case in Chapter 4 of this study.

Kidd[675] appears to have a workable solution when he raises the issue that SPLUMA does not make it clear if the NSDF needs to precede the others or if the process of co-ordination and integration would take place (when formulating the national SDF) after the SDFs of other spheres are already in existence. However, he goes on to say that where a provincial SDF is inconsistent with a municipal SDF, the Premier is obliged (in terms of section 22(3) of SPLUMA) to take the necessary steps to support the revision of the SDFs to ensure consistency with the municipal SDF.[676] This conclusion is in keeping with constitutional provisions of the municipality having autonomy in its area of jurisdiction.

3.7 Land use schemes in SPLUMA

Certain definitions as contained in SPLUMA are relevant to this study on the urban edge and assist in determining the "connection" between the urban edge, land use and land development and, for this reason, are repeated here.

"Land use" means "the purpose for which land is or may be used lawfully in terms of a land use scheme, existing scheme or in terms of any other authorisation, permit or consent issued by a competent authority, and includes any conditions related to such land use" purpose.

A "land use scheme" is referred to in Chapter 5 of SPLUMA that deals with land use management. It is the same as the "old" town planning scheme; a comprehensive system of land use management that is governed by legislation.[677] Unlike an SDF, it allocates legal rights to land in that it has "the force of law"[678] within its area for development and permits the erection and use of buildings in accordance with specific

675 Kidd *Environmental Law* 244.

676 Kidd *Environmental Law* 245.

677 Mosdell Date unknown http://law.nwu.ac.za/sites/law.nwu.ac.za/files/files/Law/KAS/CITYSCAPE-Susan-Mosdell.pdf. In terms of s 24 there are mandatory components of land use schemes and some non-mandatory components that are optional such as a requirement for no development without the consent of the municipality; special zones for development priorities and provision for variable conditions.

678 SPLUMA s 26(1). Laubscher *et al SPLUMA* 150. Having the "force of law" renders the scheme a by-law of the municipality and as such ss 12 and 13 of MSA must be observed in dealing with the adoption of a land use scheme.

conditions and control measures. A land use scheme consists of "scheme regulations setting out the procedures and conditions relating to the use and development of land in any zone", down to an individual stand level.[679] Land use schemes must be created in new areas of development identified by the municipal SDF. They must aim "at improving the quality of life" of the inhabitants of the area and must operate for the common good. They may be used in instances where there is a need to do so according to section 24 of the Constitution.[680]

A municipality is compelled by SPLUMA to "approve a single land use scheme for its entire area within five years from 1 July 2015".[681] A land use scheme must include maps indicating land use zones;[682] substantial additional information such as all amendments to it;[683] the inclusion of areas not previously subject to a land use scheme;[684] consider and comply with any applicable environmental management instrument or legislation;[685] include provisions to promote the inclusion of different types of housing including affordable housing;[686] include land use and development incentives[687] as well as "provisions for the effective implementation of national, provincial policies and municipal" SDFs and IDPs.[688]

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679 SPLUMA s 25(2)(a). Zonings are indicated in colour codes. See also CityScope 2012 http://cityscope.co.za/town-planning-terminology-explained.

680 See Chapter 3.2.3. See also Chapter 4.5 regarding the usefulness of using land use schemes in relation to the environmental right in terms of s 24 of the Constitution, the *New Urban Agenda* and SDG 11.

681 SPLUMA s 27(1). Nel 2016 *Land Use Policy*. While the SPLUMA states that local authorities develop their own land use schemes, it does include a provision to the effect that the land use zones included in Schedule B are to be applied in the absence of a zoning scheme (s 26(3)). Schedule B comprises a list of fifteen use zones such as "agricultural purposes", "business purposes" and "residential purposes", each with a definition of the use zone.

682 Section 25(2)(b) of SPLUMA. These relate to the use and development of land in any zone.

683 Section 25(2)(c) of SPLUMA.

684 Section 24(2)(c) of SPLUMA. This refers to areas such as those under traditional leadership, rural areas, informal settlements, and slums.

685 Section 24(2)(b) of SPLUMA. Mosdell Date unknown http://law.nwu.ac.za/sites/law.nwu.ac.za/files/files/Law/KAS/CITYSCAPE-Susan-Mosdell.pdf. The coastal planning scheme of a municipality may form and be enforced as part of any land use scheme adopted by the municipality in terms of s 57(1)-(2) of NEMICMA.

686 Section 24(2)(d) of SPLUMA.

687 Section 24(2)(e) of SPLUMA. So as to promote the effective implementation of the SDF and other development policies.

688 Section 24(2)(g) of SPLUMA.

Important for this study is that a land use scheme[689] "must give effect to and be consistent with the municipal SDF". It must "determine the use and development of land" in order to "promote economic growth, social inclusion,[690] efficient land development" as well as have "minimal impact on public health, the environment and natural resources".[691]

A criticism levelled against SPLUMA is that while it promotes "integration, inclusion and justice", municipalities are required to have land use schemes but in the absence of a scheme, "standard land use zones" (in terms of Schedule B of the Act) are applied. The latter have been known to cause "zoning conflicts with the SPLUMA principles" of spatial resilience, spatial justice and spatial sustainability as they are not in keeping with them.[692]

Further, judging by the requirements with which land use schemes need to comply, it appears reasonable to assume that when implementing or amending a land use scheme (which must be compatible with the SDF) a municipality must carefully consider its urban edge concept. It should also differentiate its zoning policies in accordance with its urban edge policies by permitting denser development within the urban edge as opposed to outside the urban edge. It cannot, eg indicate areas outside the urban edge as being preferred areas of development and offer incentives for development outside the urban edge in contravention of its urban edge concept. A land use scheme may be said to be the "home" of the urban edge in municipal planning in that it ensures that development is efficient, prevents sprawl and has a minimal impact on the environment, all in accordance with the SDF and the requirement that conflict between property development and the environment must be avoided. Section

689 Sections 26(4) and (5) of SPLUMA; ss 27(1) and 28 refer to procedures for change amendment and review of schemes which is mandatory every five years.

690 Section 25(1)(a)-(b) of SPLUMA. *Educated Risk Investments 165 (Pty) Ltd v Ekurhuleni Metropolitan Municipality* 2016 6 SA 434 (SCA) was a judgment where social issues and the formal development of the urban environment clashed. In its findings the court stated that a rigid interpretation of a town planning scheme, viewed through a prism of a developed society where these problems are absent is unsuited to "our circumstances". The court concluded that land use schemes must address and manage the interplay between addressing social issues and formal development.

691 Section 25(1)(c)-(d) of SPLUMA; Kidd *Environmental Law* 246.

692 Nel 2016 *Land Use Policy*.

42 of SPLUMA supports this idea and goes further in stipulating that when applications for changes to land use schemes or zonings are submitted, the Municipal Planning Tribunal (or official making the decision) must make a decision that is consistent with *inter alia* "national and provincial government policies and the municipal spatial development framework".[693]

3.8 Property development procedures in terms of SPLUMA

SPLUMA does not provide all the procedures that must be followed in land development and land use applications.[694] Section 33 provides that all development applications[695] must be submitted to a municipality, which in turn is required to establish Municipal Planning Tribunals[696] "in order to determine land use and development" applications.[697] However, certain applications may be considered by an official employed by the municipality.[698] Provision is also made for participation in the process by an "interested person".[699] Public participation is understood internationally as an effective way of avoiding conflict between property development and the

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693 Section 42(1)(b) of SPLUMA. Change to zoning or a departure may be granted if it is in the public interest, furthers the goals of SPLUMA or is in line with the goals of the municipality; Wiley *Urban Edge* 57.

694 SPLUMA, the regulations and the individual municipal by-laws set out the procedures to submit development applications to the municipality for consideration and the actual and step-by-step procedures to follow in land development and land use applications is set out in the by-laws issued by municipalities. However, in certain cases such as for mining, different procedures may be necessary; Van Wyk "Law on Planning and the Environment" 1167.

695 These could be any of the following: change/s to the use, form or function of the land, removal or amendment or suspension of a restrictive condition, township establishment, subdivision of land and consolidation of pieces of land; and the amendment of a land use or town-planning scheme (except any change affecting the scheme regulation). In terms of s 52 of SPLUMA, development applications that affect the national interest must be referred to the Minister.

696 Van Wyk "Law on Planning and the Environment" 1168. The municipality has to determine which "category of land development and land use application must be considered and determined by the authorised official and which category must be considered and determined by the Municipal Planning Tribunal". S 36 of SPLUMA deals with the composition and terms of office of these tribunals and excludes municipal councillors.

697 Conditional approvals lapse if the condition is not complied with within a period of 5 years from the date of approval.

698 Section 35(2) of SPLUMA. In *Zimmerman v Ndlambe Municipality* 2017 4 All SA 584 (ECG) paras 96-98 Mageza AJ stated that functions properly belonging to municipal tribunals ought not to be placed in the hands of individual authorised municipal officials as this may more easily lead to maladministration and that municipal officials must heed s 195(1) of the Constitution which invokes the principle that public administration must be accountable.

699 Section 45(2) of SPLUMA. The onus resting on such person to establish his/her status as an interested person.

environment.

It is necessary to briefly discuss the application process for approval of developments. This process is divided into three phases[700] which have prescribed contents and timeframes.[701] During the application or administration phase,[702] a process of public participation takes place whereby objections and comments on the application may be lodged. Public participation is pertinent to the attainment of sustainable development.[703] During the consideration phase an application is referred to the Municipal Planning Tribunal (or authorised official) during which the application must be considered and any investigations undertaken. The decision phase is important as a decision "must be guided by the development principles in SPLUMA",[704] which include "any norms and standards or measures designed to protect and promote the sustainable use" and development of land. It also includes national and provincial government policies and the municipal SDF, which therefore includes the aspect of the urban edge.[705] Tribunals must consider types, scale and nature, potential impact and level of participation for land development or land use applications and ensure that these are in line with the municipality's SDF and other relevant policies[706] such as the urban edge concept of such municipality.

A much larger emphasis on planning decisions being made at municipal level is evident in SPLUMA than was previously the case. A question that has not yet been completely resolved is how to define "municipal planning" as opposed to other planning functional areas of provinces[707] in terms of the Constitution. The courts have grappled with

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700 Van Wyk "Law on Planning and the Environment" 1168.

701 Regulation 16 of the Spatial Planning and Land Use Management Regulations (GN R239 in GG 38594 of 23 March 2015).

702 It commences once a complete land development application is submitted to the municipality.

703 See Chapter 4.3.5 re public participation regarding environmental authorisations.

704 Chapter 2 of SPLUMA.

705 Van Wyk "Law on Planning and the Environment" 1168. In terms of s 42(1) of SPLUMA the Tribunal or authorised person must also take into account the public interest; the constitutional transformation imperatives and the related duties of the state; the facts and circumstances relevant to the application; the respective rights and obligations of all those affected; the state and impact of engineering services, social infrastructure and open space requirements and any factors that may be prescribed, including timeframes for making decisions.

706 Regulation 15(2) of the Spatial Planning and Land Use Management Regulations.

707 A discussion of this issue can be found in Chapter 3.2. See also Kidd *Environmental Law* 242. "Provincial planning" (as per Schedule 5 of the Constitution) is distinguished from "municipal

resolving this[708] and their basic finding[709] is that municipalities have exclusive, executive and total competence in respect of municipal planning and individual land use planning decisions may only be made by municipalities.[710] This includes the responsibility of implementing and managing the urban edge in accordance with the objectives of SPLUMA. Kidd believes that SPLUMA now provides some clarity as to where the planning functions of the different spheres of government "begin and end".[711] However, Pieterse[712] believes that while a greater acknowledgement of the role played by local government is necessary, a careful look must also be taken at the division of power and resources[713] between the three spheres of government and the interaction between local government and the other spheres of government. SPLUMA's requirements of co-operative governance and intergovernmental relations are crucial if the objectives of SPLUMA are to be achieved.[714] SPLUMA has been described as "one piece of a larger transformative jigsaw puzzle", meaning that it has to work not only with other spheres in government but with other legislation, priorities, programmes, principles and projects.[715] Despite the wider responsibilities and powers

planning" and will benefit from legislative meaning since it has not received explicit interpretation like municipal planning has in the case law.

708 Various cases are discussed in Chapter 3.2.

709 Kidd *Environmental Law* 239. See, eg *Lagoon Bay Lifestyle Estate (Pty) Ltd vs Minister of Local Government, Environmental Affairs and Development Planning (Western Cape)* 2011 4 All SA 270 (WCC); *Lagoonbay Lifestyle Estate (Pty) Ltd v Minister for Local Government, Environmental Affairs and Development Planning of the Western Cape* 2013 ZASCA 13 (15 March 2013); the *Shelfplett* case; and *Clairison's CC v MEC for Local Government, Environmental Affairs and Development Planning* 2012 ZAWCHC 44 (16 May 2012).

710 Kidd *Environmental Law* 239.

711 Kidd *Environmental Law* 242.

Section 5 of SPLUMA sets out the differentiation of the three categories of planning, namely, municipal planning, provincial planning and national planning.

712 Pieterse 2014 *SALJ* 176.

713 Kidd *Environmental Law* 239 questions the role of provincial governments and believes that this sphere of government should help to absorb capacity for delivery at municipal level where service delivery may be challenged but is very crucial.

714 Laubscher *et al SPLUMA* 14. One of the objectives of SPLUMA is that "all spheres of government must participate in spatial planning and land use management processes that impact on each other to ensure that the plans and programmes are coordinated, consistent and in harmony" with each other.

715 Padarth 2015 http://sacitiesnetwork.co.za/wp-content/uploads/2015/05/SPLUMA-as-a-tool-for-spatial-transformation_final-_April2015.pdf 60. Ovens and Kitchin 2013 https://www.sacities.net/wp-content/uploads/2020/03/new_provincial_planning_legislation_for_south_african_cities-_understanding_and_learning_from_the_reform_process.pdf. The key is to understand the extent to which SPLUMA can aid transformation and to acknowledge SPLUMA's role in relation to the other pieces of the puzzle (one of which is the urban edge).

of local authorities, there is also a strong feeling that in reality, many local government bodies "lack the human, technical and financial capacity to deliver in terms of this considerable mandate".[716]

There is some urgency now to ensure the successful implementation of sustainable development in terms of section 24 of the Constitution in an urban setting as required by SDG 11. For this reason, certain policies have been implemented to drive the country toward a path of sustainable development in cities.

3.9 National Development Plan and Integrated Urban Development Framework

Cities that unfold haphazardly lead to problems.[717] To combat this it was deemed necessary to implement policies such as the NDP[718] and the IUDF,[719] which create a foundation to attain SDG 11. The NDP (*Vision 2030 - Our Future, Make it Work*) is a national initiative and as such is a roadmap for the UN's 2030 Agenda for Sustainable Development although it preceded it and was amended accordingly.[720] There is a synergy between the indicators of SDG 11 and the NDP. The NDP[721] called for the preparation of an NSDF guided by SPLUMA[722] with regard to addressing issues of conflict such as "densifying cities; improving transport; locating jobs where people

716 Pieterse 2014 *SALJ* 161. See also the draft NSDF 73-74 where this is acknowledged.

717 Scruggs 1995 *Cityscape* 44. Problems faced include residents lacking basic services like water and sanitation, choking on pollution and struggling to escape the poverty and insecurity of informal settlements.

718 Foreword to the NPC *National Development Plan 2030*. The NDP is a plan for South Africa to eliminate poverty and reduce inequality by 2030 "through uniting South Africans, unleashing the energies of its citizens, growing an inclusive economy, building capabilities, enhancing the capability of the state and leaders working together to solve complex problems".

719 The IUDF is a policy initiative of the Government of South Africa, coordinated by the Department of Cooperative Governance and Traditional Affairs (CoGTA). Its aim is to foster a shared understanding across government and society to manage urbanisation and achieve the goals of economic development, job creation and improved living conditions.

720 RSA 2019 https://sustainabledevelopment.un.org/content/documents/23402RSA_Voluntary_National_Review_Report__9_July_2019.pdf (South Africa VNR Report) 7. The NDP was adopted in 2012 while the UN Agenda for Sustainable Development was issued in 2015. The NDP also prioritises job creation, the elimination of poverty, the reduction of inequality and growing an inclusive economy by 2030.

721 This is done in Chapter 8 of the NDP.

722 This will be in accordance with ss 5(3), 13(1) and (2) of SPLUMA, the enabling legislation for creation of the NSDF. It must be reviewed every 5 years.

live; upgrading informal settlements and fixing housing market gaps".[723] South Africa has a well-established framework to guide socio-economic development on a "national, regional and local scale or in urban areas of South Africa".[724] The country endorses the *New Urban Agenda* adopted in 2016 as it provides guidance on the "spatial dimension of sustainable development".[725] The NDP accordingly also addresses spatial reform[726] as a particular concern but has slightly different goals and procedures to SPLUMA.[727] By contrast the NSDP is totally aligned with SPLUMA.

The importance of agriculture in the economy is referred to both in the NDP and the NSDF[728] and urban-rural interdependencies and linkages are now encouraged whereas previously they were totally separate.[729]

The IUDF is regarded as a policy framework on "how the South African system can be reorganised" so that cities and towns may become "more inclusive, resource efficient" and "better places to live and work" in accordance with the vision outlined in the NDP.[730]

The IUDF is guided by the NDP and its aim is to exchange existing city footprints with "compact, coordinated and connected cities" using urban planning strategies to produce desirable social, economic and environmental outcomes.[731] It is important

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723 Du Plessis 2017 *LDD* 255. The synergy between these policies and SDG 11 with regard to all aspects addressed is clearly set out by Du Plessis in this article.

724 South Africa VNR Report 97.

725 South Africa VNR Report 97.

726 Van Wyk 2017 *SAPL* 26. All spatial development should conform to "certain normative principles and should explicitly indicate how the requirements of these should be met".

727 The National Planning Commission's spatial aims are to develop a national spatial framework, strengthen the spatial planning system, start a national conversation about cities, towns and villages, introduce bolder measures to make sustainable human settlements, support rural spatial development, build an active citizenry to rebuild local place and community.

728 This aspect is discussed in 3.10 below.

729 Draft NSDF 95; NPC *National Development Plan 2030* s 3.1.5.2. This is a departure from the previous situation where rural and urban spaces were viewed as being different to each other. Urban-rural linkages highlight the need for strategies that take into account the needs and interests of both rural and urban places. Some rural areas have experienced "significant economic growth" near large city markets or along "transportation corridors". There is potential if policy shifts are implemented and these successes are built on. The starting point is recognition of the extreme differentiation of different typologies within rural South Africa that have developed and need different planning responses in relation to the varying settlement types.

730 South Africa VNR Report 99.

731 Department of Cooperative Governance *Integrated Urban Development Framework* Foreword.

that the IUDF represents a singular vision shared across all spheres of government,[732] all sectors and civil society at large to achieve a united and innovative response to the building of inclusive, resilient, safe and liveable urban settlements. It may be said that the NDP and the IUDF have a positive impact on top-down urbanisation policies of the past which are now yielding a more balanced approach.

The IUDF is in line with SDG 11 and the *New Urban Agenda* as it guides the "transformation of urban space" or areas within the urban edges of cities, in a manner that "promotes social and economic development" while at the same time promoting urban resilience and ensuring the protection of the urban environment.[733] In South Africa, there is an attempt to actively integrate infrastructure investment, public transport and human settlements,[734] with the aim of creating well-planned, sustainable and prosperous cities, all of which are areas that are still recovering from the impact of the *apartheid* regime and still need attention.[735] Although the overall objective of the IUDF is to ensure spatial integration, improve access to services and promote social and economic inclusion, this policy needs to be used and put into practice to initiate meaningful change.

All these factors echo the desired outcomes of the implementation of the urban edge and also section 24 of the Constitution and are pointers to addressing possible conflict between property development and the environment.

3.10 Agricultural land and urban-rural linkages

Although one of the procedures governed by SPLUMA is the subdivision of land, note must be taken of SALA*,* which is an Act that has not been repealed (by SPLUMA or by any other Act). The rationale behind SALA is to prevent the subdivision of agricultural land without the consent of the Minister of Agriculture, Land Reform and Rural

732 In that regard, it is similar to SPLUMA.
733 South Africa VNR Report 97.
734 South Africa VNR Report 98. One of South Africa's priorities is the upgrading of informal settlements in order to support community development, better management and improve people's lives.
735 Scruggs 1995 *Cityscape* 44.

Development.[736] In *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd*[737] the majority judgment set aside an agreement of sale which contained a suspensive condition that required the subdivision of land that the court decided was agricultural land.[738] It was held that all land that was agricultural land prior to the establishment of transitional councils remained classified as agricultural land.[739]

Accordingly, such land remains the responsibility of the Minister of Agriculture, Land Reform and Rural Development despite the fact that it is situated in the area of jurisdiction of a municipality.[740] Therefore, the Act will apply whether or not the land is within the urban edge or outside the urban edge. This is in accordance with section 29 of SPLUMA which directs that a municipality must consult any organ of state (such as the Minister of Agriculture, Land Reform and Rural Development) whose permission may be necessary when dealing with protected agricultural land. This is a mandatory obligation and the Minister must make its own decision in accordance with its own enabling criteria. Such decision must meet the criteria of "lawful, reasonable and procedurally fair" administrative action.[741] In effect this means that permission from the Minister of Agriculture, Land Reform and Rural Development is necessary for such sub-division.[742] In this way there is also a safeguard to unrestricted property development being permitted on such agricultural land.

The *apartheid* ideology caused a "fundamentally unbalanced relationship" and "glaring

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736 Kidd *Environmental Law* 213.

737 *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC).

738 Kidd *Environmental Law* 214.

739 This is similar to the situation in Rwanda. See Chapter 6.4.2.

740 Van Wyk "Law on Planning and the Environment" 1165-1166. Note should be taken that the Act was promulgated before the introduction of wall-to-wall municipalities in South Africa.

741 In *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC) the Constitutional Court stated that "there is no reason why two spheres of control cannot co-exist even if they overlap". In respect of the approval of a subdivision of 'agricultural land, the one may in effect veto the decision of the other". One sphere operates from a "municipal perspective and the other from a national perspective", with "each having its own constitutional and policy considerations"; in *Maccsand (Pty) Ltd v City of Cape Town* 2011 6 SA 633 (SCA) para 34 dual authorisations by different administrators serving different purposes are not unknown. Laubscher *et al SPLUMA* 162. This is in keeping with the principles enshrined in the Constitution and given effect to in terms of the *Promotion of Administrative Justice Act* 3 of 2000 (PAJA).

742 There is also the possibility that the two departments could reach a written agreement to avoid duplication of information being submitted for permissions to be granted and that they take their decisions jointly.by issuing a joint declaration. However, the different authorities may not abdicate their respective statutory duties and obligations.

inequalities" between urban and rural areas and there is now a need to understand and deal with urban and rural areas collectively and integrate them for mutual benefit.[743] The draft NSDF refers to a Regional-Rural Development Model.[744] Regions identified in the regional-rural areas must be identified in the IDPs and SDFs.[745] These linkages are promoted;[746] create jobs and opportunities for people from rural areas; provide agricultural products needed by cities; help with poverty reduction for both sectors and address inequality and environmental challenges at the periphery of cities.[747] Small towns and rural areas integrate rural economies and create national markets or trade networks, with tourism also being a spin off.[748] Appropriate infrastructure is critically important as a catalyst to enhance and improve these linkages as they are usually located on the periphery of large cities in close proximity to the rural area.[749]

The delineation of the urban edge (in the SDF) is offered as a tool "to protect unique and high potential agricultural land" and also to protect the ecosystem and biodiversity.[750] The value of cultural and scenic assets is also highlighted[751] and it is proposed that an urban edge could also protect these resources.

3.11 Addressing spatial planning challenges in cities

Although environmental concerns were not directly addressed by land use planning

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743 Draft NSDF 94. Historically, with *apartheid* it was impossible to develop strategies to integrate rural and urban development as rural spaces functioned for government as labour reserves only and had very little other use.

744 Draft NSDF 94-95.

745 Draft NSDF 94-95. There is also a recommendation that rural edges be used to protect the rural regions from intrusion or destruction.

746 There are different areas of focus and linkage with the urban core is also referred to.

747 Ndabeni 2015 http://www.cogta.gov.za/cgta_2016/wp-content/uploads/2016/05/ANALYSIS-OF-RURAL-URBAN-LINKAGES-AND-THEIR-IMPLICATIONS.pdf 40. Urban areas are in fact interlinked to the rural sector for issues such as the supply of raw materials, affordable supply of food, and migration whilst rural areas look to the urban areas for markets, non-agricultural jobs, and the use of urban universities and hospitals as an example.

748 Ndabeni 2015 http://www.cogta.gov.za/cgta_2016/wp-content/uploads/2016/05/ANALYSIS-OF-RURAL-URBAN-LINKAGES-AND-THEIR-IMPLICATIONS.pdf 42.

749 Ndabeni 2015 http://www.cogta.gov.za/cgta_2016/wp-content/uploads/2016/05/ANALYSIS-OF-RURAL-URBAN-LINKAGES-AND-THEIR-IMPLICATIONS.pdf 49. These linkages improve both urban and rural environments as well as livelihoods.

750 Section 3.1.3 of the NDP refers to the protection of biodiversity and ecosystem services.

751 Section 3.1.7.2 of the NDP.

legislation or the common law in the *apartheid* era, this has all changed and now environmental considerations must play a role in terms of factors to be taken into account when considering land-use applications.[752] SPLUMA, NEMA and environmental legislation are far better aligned than before.

The urban edge must be totally allied with SPLUMA, enabling authorities to use it as a component of the SDF. Plans that comply with section 22 of SPLUMA should depict an urban edge or boundary and show where development is desirable and where it is not. SPLUMA was designed to change the *apartheid* city boundaries and provide opportunities for land reform though principles such as "spatial justice, spatial sustainability, efficiency, spatial resilience and good administration". [753] Urban edges and transition zones also help protect the environment whilst creating compact and efficient cities. Taking their specific relationship into account and in compliance with the SPLUMA principles both SDFs and land use schemes should accommodate the urban edge in municipal planning.[754]

Oranje and Van Wyk[755] are of the opinion that the opportunities to address sustainability and conflict through SPLUMA may have been missed. However, the draft NSDF[756] refers to the difficulties government has in relation to the objectives of reducing poverty, inequality and unemployment. It promises robust changes by giving direction in that regard to resolve the situation by 2050.

It is necessary to consider SPLUMA's role in relation to both SDG 11 and global challenges relating to sustainability. South Africa's VNR Report 2019[757] drew attention to these challenges faced by South Africa with regard to the timely attainment of SDG

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752 Kidd *Environmental Law* 209; Van Wyk *Planning Law* 3rd ed 46. The recognition in SPLUMA of environmental issues means that it is imperative that environmental considerations are taken into account in the plan, preparation and decision-making processes.

753 See the introduction to Chapter 2 and the reference there to boundaries created to separate people of different races.

754 It ensures that development is efficient, prevents sprawl and has a minimal impact on the environment, all in keeping with the SDF. The proposed definition of the urban edge formulated by the writer echoes the objectives of SPLUMA, especially with regard to compact and efficient towns with social and economic inclusion incorporating sustainable development norms.

755 Oranje and Van Wyk 2019 *Town Reg Plan* 119.

756 See Chapter 3.6.1.

757 See Chapters 3.11 and 4.7.

11.[758] These challenges highlight issues relating to human settlements that are unsuitable and insufficient; informal settlements on the periphery of large cities; a failing economy; transport shortcomings and infrastructure upgrades. Cities are disconnected in relation to transport; dysfunctional in relation to human settlements and provide residents with little access to work, making affordability for homes difficult. This is indicative of development within the urban edge not being sustainable.[759] Apart from South Africa's commitment to SDG 11, there is an obligation in terms of section 24 of the Constitution to resolve this situation.

When considering the role of municipalities in attaining SDG 11, mention must also be made of certain existing sector-specific laws. These impact on sustainable development in urban areas and apply to all spheres of government. As an example, to develop property there is a need for proper infrastructure. The *Infrastructure Development Act*[760] is regarded as legislation that could play an important role in enabling sustainable development in urban areas. The objective of this Act is to "facilitate and co-ordinate public infrastructure development" through the use of Strategic Integrated Projects (SIPs).[761] It is unfortunate that effective use has not been made of this legislation to bring about much needed change with regard to development projects.[762]

Although the focus is not on cities in all the instances listed below, some of the duties and onus that fall on government in relation to the sustainability of cities are the following:[763]

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758 See Chapter 3.4.

759 Du Plessis 2017 *LDD* 246. See Chapter 4.7.

760 *Infrastructure Development Act* 23 of 2014.

761 Oranje and Van Wyk 2019 *Town Reg Plan* 119. Issues such as human settlements and related infrastructure and facilities is listed as one of the Strategic Integrated Projects (SIPs) in Schedule 1 to the Act. In principle, urban land reform, and the development of sustainable settlements would fit neatly into this SIP.

762 Oranje and Van Wyk 2019 *Town Reg Plan* 119. The Act clearly targets other issues and it is unclear how it fits into the constitutional scheme of the allocation of specified legislative and executive powers to different spheres of government.

763 Du Plessis 2017 *LDD* 254. It includes issues such as the construction of landfill sites or their upgrades must be authorised by municipalities in terms of the *National Environmental Management: Waste Act* 59 of 2008. The mandate regarding biodiversity extends to far more than

- Housing and human settlements in quality urban spaces. The housing programmes provided must be of medium to high density and must be responsive to citizens' needs, especially for low to medium income communities and housing must, where possible, be provided close to jobs.[764]

- The need to pursue denser, smaller and a polycentric system of settlements that span urban and rural areas.[765] These are probably areas in close proximity to the urban edges of cities and towns.

- Entrepreneurs are encouraged to create much needed jobs in cities and cities are viewed as "engines of growth" and democratic spaces where economic activities take place.[766]

- Land transport, transport planning, housing, infrastructure and its maintenance must be arranged through a land transport strategy based on provincial and national guidelines and incorporate policies such as infilling, densification and development corridors.[767]

- Developing and managing a strategy to prevent, minimise or reduce any adverse impacts on the environment and promote safety and security.[768] The careful implementation of the urban edge will assist in that regard.

- There is a need to develop "a new kind of city" in which public spaces become a key driver for a new economy, and where citizens take a leading role.[769]

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simply overseeing municipal parks and beaches as it must manage local nature reserves within their boundaries.

764 The *Social Housing Act* 16 of 2008 demands that municipalities give priority to the needs of low- and medium-income housing in respect of social housing, and give priority to the needs of women and children etc.

765 Draft NSDF 86.

766 Draft NSDF 86.

767 In terms of the *National Land Transport Act* 5 of 2009.

768 See s 11(1)(c) of the *National Land Transport Act* 5 of 2009.

769 Draft NSDF 86.

3.12 Conclusion

Various planning documents such as the Constitution, SPLUMA, the draft NSDF, the IDP, the NDP, the IUDF as well as the *Infrastructure Development Act* were considered against the background of the urban edge and in relation to the roles they play regarding the interplay between property development and the environment and in the light of SDG 11.

The SPLUMA principles, the SDFs and land use schemes are directed to address the challenges that South Africa faces. The urban edge is totally aligned with SPLUMA, enabling authorities to use it as a component of the SDF. Plans that comply with section 22 of SPLUMA depict an urban edge or boundary and show where development is desirable and where it is not. By including the urban edge, development is made more compact, efficient and sustainable.

The "inside" and "outside" of an urban edge do not exist separately from one another. They are interlinked. Therefore, the need to strengthen urban and rural linkages is critical. In this regard it is important to take cognisance of and employ the urban-rural linkages referred to in the draft NSDF and the NDP because of their many advantages.[770] The urban edge is accepted in the draft NSDF as a tool to "protect unique and high potential agricultural land", to protect the ecosystem and biodiversity and to encourage urban-rural linkages.

The NDP and the IUDF are more or less in line with SDG 11 and the *New Urban Agenda*. These instruments, together with the draft NSDF, provide guidance to all three spheres regarding issues such as inclusive, resilient, safe and liveable urban settlements; compact and sustainable cities as well as reducing poverty, inequality and unemployment.

The Constitution provides for three distinctive interdependent and interrelated spheres

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[770] Ndabeni 2015 http://www.cogta.gov.za/cgta_2016/wp-content/uploads/2016/05/ANALYSIS-OF-RURAL-URBAN-LINKAGES-AND-THEIR-IMPLICATIONS.pdf 40. Urban areas are in fact interlinked to the rural sector for issues such as the supply of raw materials, affordable supply of food, and migration whilst rural areas look to the urban areas for markets, non-agricultural jobs, and the use of urban universities and hospitals as an example.

of government that must cooperate. The interaction between the local and the other spheres of government is referred to in SPLUMA's requirements of co-operative governance and intergovernmental relations.[771] Unfortunately, the lack of cooperation between the spheres must be addressed.

In terms of section 153(a) of the Constitution the municipality has an obligation to make decisions that promote social and economic development of the community. The developmental duties of local governments[772] as confirmed in the draft NSDF, include the need to address issues such as poverty reduction and sustained economic growth. It also includes sustainable resource use, protection of the environment and spatial integration of diverse social and class groups.[773]

One of the challenges in post-*apartheid* South Africa is the urgent need to redress the persistent grievances of the past and to facilitate its development.[774] Both the draft NSDF and the VNR Report 2019[775] provide insights into the areas that need attention in South Africa from a sustainability perspective and are indicative of conflict with the environment that need to be resolved through careful planning.

Section 24(a) of the Constitution entrenches an environmental right as a fundamental right enjoying protection and section 24(b) contains the rider that such "protection should promote justifiable economic and social development".[776] Therefore, sustainable development in terms of the Constitution is not only desirable but necessary. What follows in the next Chapter is a general discussion on environmental considerations in planning law and the connection (if any) that environmental considerations have with the urban edge and how they contribute towards sustainable development and address conflicts that occur when property development is

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771 See discussion on this aspect in Chapter 3.2.

772 Bekink *Principles of South African Constitutional Law* 455.

773 Pekelharing *Phenomenon of the Urban Edge* 126. See also s 156(2) of the Constitution, *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC) para 16; *Maccsand (Pty) Ltd v City of Cape Town* 2011 6 SA 633 (SCA) para 12.

774 How Singapore overcame a similar situation will reveal lessons that will be beneficial. See Chapter 5 that discusses Singapore's progress in that regard.

775 The South Africa VNR Report is discussed more fully in Chapter 4.5.

776 Church 2009 *JALTA* 65.

undertaken.

Chapter 4

Sustainable development and the urban edge in environmental legislation

4.1 Introduction

As was made clear in the historical background,[777] democratic South Africa inherited "a legacy of inequity in the use of natural resources, environmental pollution and degradation".[778] For the first time, an enforceable environmental right was included in the Constitution.[779] It imposes on the state the responsibility to ensure "environmental justice" and "environmental sustainability".[780] The relationship between environmental degradation and poverty is now clearly articulated "around the importance of sustainable development".[781] there must be balance between, "securing economic growth and stability" and "providing for the socio-economic needs and social welfare of all people in South Africa" and protecting valuable but "vulnerable ecosystems and natural resources".[782] At the same time there is a need to respect the cultural values of all communities. The serious challenges currently faced by South Africa and other countries in the world, to achieve environmental and spatial sustainability is evident from the progress made towards attaining SDG 11 timeously.

Section 24 of the Constitution has special significance regarding sustainable

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777 See Chapter 2.1.

778 RSA Date unknown https://www.dpme.gov.za/publications/20%20Years%20Review/20%20Year%20Review%20Documents/20YR%20Environment%20and%20Sustainable%20Development.pdf 3-4.

779 The *Constitution of the Republic of South Africa* 200 of 1993 included an environmental right namely "Every person shall have the right to an environment which is not detrimental to his or her health or well-being". This was then further elaborated upon in s 24 of the Constitution.

780 RSA Date unknown https://www.dpme.gov.za/publications/20%20Years%20Review/20%20Year%20Review%20Documents/20YR%20Environment%20and%20Sustainable%20Development.pdf 3-4.

781 RSA Date unknown https://www.dpme.gov.za/publications/20%20Years%20Review/20%20Year%20Review%20Documents/20YR%20Environment%20and%20Sustainable%20Development.pdf 3-4.

782 Du Plessis and Du Plessis "Striking the Sustainability Balance" 416.

development when considered in relation to areas within the urban edge as development is generally promoted there.[783] The impact of property development on the environment is at the forefront of factors that need to be taken into account in land use decisions.[784] A few court decisions deal with controversial proposed land developments that were prohibited on environmental grounds.[785] Besides these other related court decisions deal with various issues,[786] ranging from the authority of municipalities to legislate on environmental issues,[787] to differences between factors to be taken into account in environmental decisions (by provinces) and planning decisions (by municipalities).[788] Although such decisions generally fall under the "rubric of planning law" they also raise administrative law questions that concern conflicts between the exercise of property interests and the public environmental right.[789]

This Chapter will focus on the environmental right that is entrenched in the Constitution, and consider how it is protected and enjoyed within the urban edge through the use of environmental tools[790] and legislation that temper planning laws.[791]

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783 See the full discussion on the urban edge in Chapter 2.

784 Kidd *Environmental Law* 209. The manner in which land is used has an impact on the environment and at the heart of many environmental issues are court decisions concerning controversial proposed land developments prohibited on environmental grounds. Historically environmental concerns were not directly addressed by land-use planning legislation or by common law.

785 Glazewski *Environmental Law* 193; *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* 2004 5 SA 124 (W); *MEC for Agriculture, Conservation, Environment and Land Affairs v Sasol Oil (Pty) Ltd* 2006 5 SA 483 (SCA); *Fuel Retailers Association of Southern Africa v Director-General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province* 2007 6 SA 4 (CC) (the *Fuel Retailers* case).

786 Van Wyk *Planning Law* 3rd ed 66. Several important decisions have emerged firstly on the exercise of decision-making functions (namely the granting of rezoning and development approvals) and on environmental approvals.

787 The *Le Sueur* case.

788 *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* 2004 5 SA 124 (W) 151E; socio-economic factors are part of an environmental responsibility; *MEC for Agriculture, Conservation, Environment and Land Affairs v Sasol Oil (Pty) Ltd* 2006 5 SA 483 (SCA). The s 2 NEMA principles justify considering socio-economic conditions in environmental decisions. In the *Fuel Retailers* case a failure to consider socio-economic impacts in an environmental decision despite the need and desirability requirement considered in the re-zoning application was not sufficient in environmental decisions according to the Constitutional Court.

789 Glazewski *Environmental Law* 193; *Diepsloot Residents' Landowners Association v Administrator Transvaal* 1993 3 SA 49 (T).

790 The tools implemented in terms of the EIA Regulations are discussed in 4.3.5 below.

791 This is a debatable issue as social and economic issues which are at the heart of planning law are also regarded as being an integral part of the environment.

Framework legislation such as NEMA addresses details of environmental governance and environmental management issues and also makes reference to the urban edge.[792] Environmental tools and environmental legislation must assist local authorities in formulating their planning policies and decisions to ensure that development is sustainable and does not impact negatively on the environment.

4.2 The Constitution and the environment

As environmental concerns are relatively recent in South Africa and indeed in many parts of the world, the common law[793] is not directly concerned with the environment and the greater aspect of this law consists of legislation.[794] The Constitution is a framework within which all environmental legislation operates[795] and the inclusion of the environmental clause, section 24,[796] has laid the foundation for the "development of an environmental-law jurisprudence in South Africa".[797]

4.2.1 Section 24 of the Constitution

Section 24 of the Constitution reads as follows:

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792 NEMA does not refer to an urban edge specifically, but there is a reference to it in the definition of "urban areas" referred to in the EIA Regulations published in terms of NEMA. See GN R982 in GG 38282 of 4 December 2014. The urban edge is also referred to as in other environmentally linked legislation, such as in the coastal sector discussed below in Chapter 4.4.3. See Chapter 2 for a full discussion regarding the urban edge.

793 Although there are a number of common-law principles that are relevant in environmental law in South Africa.

794 Kidd *Environmental Law* 20. Usually it is issue-specific and relates to pollution or conservation.

795 Kidd *Environmental Law* 20; s 24 and Schedule 4A of the Constitution.

796 In *Director: Mineral Development, Gauteng Region and Sasol Mining (Pty) Ltd v Save the Vaal Environment* 1999 2 SA 709 (SCA) 719 the court held that the environmental right in terms of the Constitution is a "fundamental justiciable right". Accordingly, environmental considerations must be accorded appropriate recognition in administrative and thus municipal law.

797 Glazewski *Environmental Law* 67-68. The Bill of Rights includes a number of other clauses relating to environmental rights, namely ss 25 and 33 of the Constitution. Other relevant rights include s 32 (access to information clause), s 10 (the right to dignity), s 11 (the right to life) and ss 27 and 38 (socio economic rights such as the right to healthcare food, water and social security). See also the discussion in Chapter 3.

Everyone[798] has the right[799]

(a) to an environment[800] that is not harmful[801] to their health[802] or well-being;[803] and

(b) to have the environment protected,[804] for the benefit of present and future

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798 Glazewski *Environmental Law* 72-73. The issue has been raised as to whether the constitutional right also extends to animals. It also impacts on *locus standi* which could have been a serious obstacle. S 38 of the Constitution has clarified and given wide powers to parties such as members of "interest groups" and persons acting in the public interest or as a representative of an association. This wording implies vertical and also horizontal effect of this environmental right, meaning that it may be invoked in private disputes as well as disputes in the "public realm".

799 Glazewski *Environmental Law* 75. The environmental right read as a whole has characteristics of both fundamentals rights (in s 24(a) of the Constitution) and socio-economic rights (in s 24(b)) which imposes a constitutional imperative on the state to secure the right of individuals to the items listed under (i), (ii) and (iii) of the said clause.

800 Kidd *Environmental Law* 22. There are two aspects to this right; namely the right to an environment that is relative to one's health and the right to an environment that is relative to one's well-being. Both relate to the meaning of the word "environment". Glazewski *Environmental Law* 76 agrees with Kidd that although the word "environment" is not elaborated in the Constitution its meaning is "wide" in that context and should include "cultural heritage" and the "urban environment".

801 Feris "Environmental Rights Protected in the Constitution" 249. The effect of this is that the environment would only be infringed where environmental harm is caused by, eg pollution which affects human health or well-being, and it can be proved that pollution also negatively affects human health or well-being.

802 The reference to health (differentiated from the right to health care services) is covered in the common law, but the reference to "well-being" is more novel; *HTF Developers (Pty) Ltd v The Minister of Environmental Affairs and Tourism* 2006 5 SA 512 (T) para 18.

803 In *Hichange Investments v Cape Produce Co (Pty) Ltd t/a Pelts Products* 2004 2 SA 393 (E), an exposure to a "stench" was regarded as being adverse to one's health and well-being; Kidd *Environmental Law* 23. The definition of well-being is more open ended and is not capable of a precise definition and appears to be "limitless". However, both encompass the essence of environmental concerns; Glazewski *Environmental Law* 77. This right goes beyond the provision of health care services. What constitutes well-being is therefore a very "subjective" issue. It also means that the word encompasses the essence of environmental concern and environmental integrity. People must utilise the environment in a "morally responsible", considered and ethical manner; Kidd "Environment" 521 The notion of well-being is a critical component of the social science study of poverty and poverty alleviation. This helps cast some light on the interpretation of the term "well-being" as the Constitution is aimed at improving the quality of life of all its people.

804 Kidd "Environment" 518-523. The word "protected' is used rather than the usually acceptable terminology "conserved". "Environment" is defined in NEMA (see full definition in NEMA below), but that definition is too narrow as it confines itself to the "physical environment". A wider meaning must be ascribed to it when considering the environmental right in terms of the Constitution.

generations[805], through reasonable legislative[806] and other measures[807] that

(i) prevent pollution and ecological degradation;[808]

(ii) promote conservation;[809] and

(iii) secure ecologically sustainable development and use of natural resources while promoting, justifiable economic and social development.[810]

Section 24(a) guarantees the rights of everyone in the country to an environment that is not harmful to health or well-being. At the same time, it also entrenches the protection of the country's natural resources for the enjoyment by both the present and future generations.[811] Section 24(b) contains the rider that such "protection

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805 Feris "Environmental Rights Protected in the Constitution" 249. The obligation to protect the environment stretches to future generations which are able to enjoy an environment similar to the one that the present generation enjoys. According to Feris this ties in totally with the ideal of achieving sustainability. See also Kidd "Environment" 523. The clause incorporates the notion of intergenerational equity which is internationally recognised as the idea that "we hold the earth in trust for future generations".

806 In *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* 2004 5 SA 124 (W) para 24 the court said this clause places an obligation on the state to take reasonable legislative and other measures to protect the environment. See further *Government of the Republic of South Africa v Grootboom* 2001 1 SA 46 (CC) for a discussion on this aspect. Other measures would incorporate "policies and programmes", but importantly the effective implementation of the "legislative" measures; Glazewski *Environmental Law* 80. This could refer to executive measures (other than legislative measures which may also include the funding of initiatives, education and so on. See also Kidd *Environmental Law* 24. The responsibility appears to be directed at the state on account of the reference to "legislative". However, it could also apply to a natural or a juristic person who should not do anything to undermine the protection of the environment, i.e. it would entail compliance with the provision in a negative sense.

807 Glazewski *Environmental Law* 28. "S 24(b) of the Constitution is a socio-economic right" that imposes "a positive duty on the state to secure environmental quality"; Feris "Environmental Rights Protected in the Constitution" 250. "Other measures" implies a broader range of reasonable environmental governance mechanisms to fulfil this environmental right. These include also voluntary initiatives and a range of other hybrid local environmental governance instruments. The duty in terms of this clause would also mean that local government would also be bound by the provisions of all other substantive fundamental rights that are related to the environmental right, such as the rights to equality, human dignity and life.

808 Glazewski *Environmental Law* 80. This constitutional imperative raises a lot of complex issues such as the degree to which industrial pollution should be permitted. See *Hichange Investments v Cape Produce Co (Pty) Ltd t/a Pelts Products* 2004 2 SA 393 (E) where reference is made to a subjective standard.

809 These relate to various aspects such as bio-diversity, water, heritage and others.

810 This implies sustainable development; Glazewski *Environmental Law* 75. The qualification in (iii) is pertinent to the socio-economic aspect of the environmental right especially "on account of the disparities between rich and poor in South Africa".

811 Du Plessis and Nel "Introduction" 5.

should promote justifiable economic and social development"[812] as well as promote "ecologically sustainable development" to be enjoyed by everyone.[813]

This provision directs government to take reasonable legislative and other measures by introducing national laws, provincial ordinances and local by-laws as well as policies, plans, programmes and various regulatory tools and measures to realise the constitutional environmental right. Section 24(b) makes it compulsory for sustainability to be included in these legislative measures to "protect and promote strictly environmental, social or economic interests".[814]

The meaning and implications of section 24 have had limited exposure in the South African courts. Despite this, it is clear that this provision "enshrines the notion" that while environmental degradation and pollution are unavoidable at times, each person's health and well-being must be protected. Consequently, a specific duty is placed on the state to not only take into account economic and social issues, but also provide environmental protection to all.[815]

In *Director: Mineral Development, Gauteng Region and Sasol Mining (Pty) Ltd v Save the Vaal Environment*[816] the court held that by including the environmental right in the Constitution as "one of the fundamental justiciable human rights", the implication is that environmental considerations need recognition, protection and respect in

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812 Church 2009 *JALTA* 65; Kidd *Environmental Law* 22. There are two parts to this right. While the first part is a fundamental real right, the second part is more in the nature of a "directive principle" that requires the state to take positive steps towards the attainment of this right.

813 Kidd *Environmental Law* 21. Human rights are categorised into three categories: first generation or blue rights (i.e. civil and political rights of individuals) such as the right to life and the right to freedom are rights that are enforced in a negative way and the state is prohibited from infringing on these rights; second generation or red rights are social, economic and cultural rights that generally require positive action by the state but are generally difficult for the courts to enforce; and third generation rights or green rights that include environmental rights; the right to development are regarded as "public rights" rather than rights of specific individuals. In *Hichange Investments v Cape Produce Co (Pty) Ltd t/a Pelts Products* 2004 2 SA 393 (E) 393 exposure to a "stench" was regarded as being adverse to one's health and well-being. See also Kidd 2008 *SAJELP*; Couzens 2009 *SAJELP*; Glazewski *Environmental Law* 7.

814 Du Plessis and Du Plessis "Striking the Sustainability Balance" 430.

815 Feris "Environmental Rights Protected in the Constitution" 223. Both Kidd *Environmental Law* and Glazewski *Environmental Law* have full chapters on s 24 of the Constitution.

816 *Director: Mineral Development, Gauteng Region and Sasol Mining (Pty) Ltd v Save the Vaal Environment* 1999 2 SA 709 (SCA) 719.

administrative law. In *Kaunda v President of the Republic of South Africa*[817] the Constitutional Court stated that the commitment to the "promotion and protection of fundamental rights" binds and defines us as a nation and must inform the duty which our government "owes to its nationals" and this commitment "must be demonstrated by the State in everything that it does".

4.2.2 Environment and spheres of government

The "environment" *per se* is listed as one of the legislative competences of national and provincial government in terms of Schedule 4A of the Constitution.[818] These spheres must conform, in their actions and decision-making, to section 24 of the Constitution and protect the environmental right contained therein.

Local government is required, in the execution of its planning duties, to ensure that planned development is ecologically sustainable development and that it promotes justifiable economic and social development that does not harm the environment. This is so, even though municipal planning is a local government competence and not a provincial or national competence. What is clear is that all spheres of government are regarded as organs of state and must adhere to fundamental principles relating to section 24.[819]

Section 24 may be invoked against government at any level when it takes decisions or fails to take decisions that respect, protect, promote or fulfil its functions including that of promoting a "safe and healthy environment".[820] Our courts have established that the right to just administrative action plays an important and fundamental role

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817 *Kaunda v President of the Republic of South Africa* 2005 4 SA 235 (CC) para 159.

818 However, in terms of Part B of Schedules 4 and 5 of the Constitution, local government both directly and indirectly regulates a range of issues that may be called "environmental" matters. Also see the discussion on the *Le Sueur* matter below at the end of sub-section 4.2.5.

819 Feris "Environmental Rights Protected in the Constitution" 219-220. Local government represents the sphere of government that is in many respects the closest to the people and according to Feris, it makes sense that "localised environmental issues" such as pollution and water quality, fall within the scope of local government, but at the same time these provisions require human capacity, finances and political will, all of which are a challenge to government.

820 Feris "Environmental Rights Protected in the Constitution" 224-225. This raises the issue of environmental justice as the action taken or omitted to be taken by the municipality may result in a violation of rights to equality and dignity as well as unfair discrimination. Environmental justice demands equal dignity through the "equitable distribution of environmental costs and benefits".

when officials, such as local government officials and provincial government officials use their discretionary power to make planning and environmental decisions.[821] Procedural fairness, although a "flexible concept"[822] of administrative action, involves the making of decisions that are informed, rational and legitimate.[823] A decision to grant or refuse an environmental authorisation or a planning authorisation, permit or licence qualifies as administrative action.[824] Accordingly, such decisions may be reviewed and set aside on the grounds of judicial review set out in PAJA and all spheres of government are bound.

While it is clear that provincial and national governments legislate on environmental issues, local government has been transformed into a more "autonomous sphere of government" with greater responsibilities[825] to promote a safe and healthy environment.[826] This responsibility[827] is included because local government must

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821 Feris "Environmental Rights Protected in the Constitution" 235. PAJA was enacted in terms of s 33(3) of the Constitution to implement the right to just administrative action and purports to create a culture of transparency, openness and accountability in public administration and provides all spheres of government with guidance on just administrative action. This, however, excludes executive powers, including that exercised by local government.

822 In *Minister of Public Works v Kyalami Ridge Environmental Association* 2001 3 SA 1151 (CC) Chaskalson P stated that "conflicting interests have to be reconciled and choices made" in each case by balancing various factors. This is a controversial decision relating to the application of NEMA and its principles relating to activities that "may significantly" impact on the environment as opposed to "will significantly" impact on the environment. See Kidd 2001 *SAJELP* 119.

823 Section 3 of PAJA. Procedural fairness, including sufficient notice being given of the nature and purpose of action, reasonable opportunity to make representations etc, must be given.

824 See Van Wyk *Planning Law* 3rd ed 293 for a large range of examples of decisions that amount to administrative action such as the removal of restrictive conditions, rezoning of property, approval of building plans. See also *Makhanya v Goede Wellington Boerdery (Pty) Ltd* 2013 1 All SA 526 (SCA) para 27. In *Earthlife Africa (Cape Town) v Director General Department of Environmental Affairs and Tourism* 2005 3 SA 156 (C) the court found that the decision of the Director-General affected the rights of individual persons as well as the rights of the public in general.

825 The Constitution, the MSA and the *White Paper on Local Government* (1998) are examples of legislation that have this impact.

826 Section 152(1)(d) of the Constitution. See *Tergniet and Toekoms Action Group v Outeniqua Kreosootpale (Pty) Ltd* 2009 ZAWCHC 6 (23 January 2009) para 39 where the court agreed that, where permission was not obtained to carry out a process where noxious gases were emitted, this impacted on the right to an environment that is not harmful to health or well-being. See also a full discussion below in this Chapter of the *Le Sueur* case.

827 Glazewski *Environmental Law* 68; Feris "Environmental Rights Protected in the Constitution" 222. The decision in *Maccsand (Pty) Ltd v City of Cape Town* 2011 6 SA 633 (SCA) endorses the constitutional authority of local government to exercise influence within its own sphere and to prevent development in potential contravention of s 24, even in instances where such development is sanctioned by national legislation. See further Kidd *Environmental Law* 31-32 who elaborates the role of municipalities in environmental matters.

contribute with national and provincial spheres to the progressive realisation of amongst other things the "constitutional environmental right".[828] In that regard, it can be said that local government is not only a regulator but is also regulated[829] by environmental legislation.[830]

Good administrative governance and justice by all authorities alike are required to protect and ensure this substantive right to the environment and if processes and procedures such as transparency,[831] accountability and civic participation[832] are not adhered to, environmental standards will not be maintained or improved.[833] South African courts have supported local government's authority to implement planning (which plays a role in environmental governance) as well as reiterated that these powers include environmental services, resulting in municipalities playing a crucial role in protecting and fulfilling the environmental and related rights in the Bill of Rights especially in areas within the urban edges of cities.[834] Local government must comply with environmental laws and regulations and a failure to do would entail non-compliance with its duties in terms of the Bill of Rights and would affect service delivery and its duty at grass roots level as a "protector and custodian of the

828 Feris "Environmental Rights Protected in the Constitution" 224 remarks that local government is "better positioned than more remote levels of government to detect local environmental calamities such as water and air pollution, soil degradation" or illegal disposition of waste.

829 See explanation on this aspect below under NEMA principles in 4.3.1.

830 As an example, the provision of infrastructure may require environmental authorisation in terms of s 24 of NEMA and a failure could also be a violation of s 24; Feris "Environmental Rights Protected in the Constitution" 236. See also *Verstappen v Port Edward Town Board* 1994 3 SA 569 (D*)* where the municipality operated a landfill site without the necessary authorisation.

831 The Bill of Rights guarantees access to information by the state (including municipalities) as well as access to information held by private persons that is required for the exercise or protection of rights.

832 Du Plessis and Nel "Introduction" 9. Public participation is also necessary as it has the effect of ensuring better decision-making and citizen deliberation that may contribute to better problem solving; Feris "Environmental Rights Protected in the Constitution" 233. These are the key elements of the environmental governance process. Full public participation demands that information be given to the public. This is deemed as a prerequisite for sustainable development and is recognised as such, even in terms of Principle 10 of the Rio Declaration.

833 Du Plessis and Nel "Introduction" 9; Feris "Environmental Rights Protected in the Constitution" 233. These are the key elements of the environmental governance process.

834 Du Plessis and Nel "Introduction" 9; Feris "Environmental Rights Protected in the Constitution" 238. Residents have a corresponding right to demand these services.

environment".[835]

The MSA provides that "a municipality must ensure that local government objectives and developmental duties in terms of the Constitution are achieved".[836] The latter refers to promoting social and economic development of the community as well as ensuring that fundamental rights such as environmental rights are protected. The rationale for ensuring that environmental rights are protected is that the "present generation is the custodian or trustee of the environment for future generations" and has to ensure a duty of care.[837] The fulfilment of this obligation must be apparent in all decisions made by local authorities, be it when establishing a new township or in implementing the urban edge.

4.2.3 Sustainable development

According to Du Plessis, the environmental right in South Africa goes beyond the normal "green environmental agenda".[838] It includes the "brown environmental agenda", including economic and social issues[839] (in accordance with the MSA and section 24 of the Constitution), and results in important implications for municipalities in terms of their environmental obligations. The green and brown agenda symbolises the environment-versus-development[840] discourse (the subject of this study) and is significant. The obvious priority for urban Africa with its deprived communities is the

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835 Du Plessis and Nel "Introduction" 9; Feris "Environmental Rights Protected in the Constitution" 239.

836 Section 23(1) of the MSA. The duty lies on municipalities to provide basic municipal services, including water and sanitation (both linked to the right to housing), and municipalities must take all steps to ensure that services in connection with these rights are provided, although litigation in regard to these responsibilities are not all governed by s 24 of the Constitution specifically.

837 *HTF Developers (Pty) Ltd v Minister of Environmental Affairs and Tourism* 2006 ZAGPHC 132 (28 March 2006) para 18.

838 Du Plessis 2016 *PELJ* 1850. This normally includes issues such as "ecosystem protection, mitigation of loss or deterioration of natural life-support systems", water, forests, soil and biodiversity and the protection of the environments for future generations, the protection of certain species, vulnerable habitats and bio-diversity. See also the discussion in Nel and Alberts "Environmental Management and Environmental Law" 54.

839 Du Plessis 2016 *PELJ* 1850-1852. Here the focus is on "the understanding that social issues (brown capital) cannot be separated from the environment as human beings are an integral part" of the environment. These issues relate to matters such as "unequal access to opportunities, resources and services", unemployment, crime, environmental injustices, the fulfilment of basic human needs such as food, housing, sanitation, infrastructure and even the quality of life.

840 Du Plessis and Nel "Introduction" 6.

"brown agenda".[841] This also reiterates that "environmental" issues transcend matters that are "purely ecological or green".[842] Aspects relating more to the brown agenda continue to impact on progress that must be made by South Africa to enable it to attain SDG 11.

Several of the issues and aspects referred to are also included in NEMA's list of environmental management principles.[843] In particular, NEMA reflects the principles of sustainable development, in keeping with section 24 of the Constitution, by providing that "development must be socially, environmentally and economically sustainable"[844] and this must be taken into account at each stage in planning.[845] It also requires consideration in relation to all planning decisions including decisions relating to the urban edge.[846]

The interrelationship or co-existence between the environment and development or, broadly speaking, the issue of sustainable development is recognised by the Constitution specifically in section 24(b). In *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation and Land Affairs*[847] the court held that the "balancing of environmental interests with justifiable social and economic development is to be conceptualised well beyond" the present living generation.

In the *Fuel Retailers* case[848] the Constitutional Court, when discussing sustainable

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841 Du Plessis and Nel "Introduction" 6.

842 Du Plessis and Nel "Introduction" 7.

843 Du Plessis and Nel "Introduction" 14; s 2 of NEMA. The NEMA principles are discussed in more detail in 4.3.1 below.

844 Sustainability of these aspects is based on the United Nation's (UN) Brundtland Report, which defines economic, social and environmental factors. These help ensure long-term economic viability while maintaining an environmental balance and at the same time shows commitment to socially desirable practices.

844 Section 24 of the Constitution.

845 Kidd *Environmental Law* 18. These principles are also included and form a part of the writer's own definition of the urban edge (for that reason). See Chapter 2.5 for the writer's definition of the urban edge.

846 See writer's definition of urban edge in Chapter 2.5.

847 *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* 2004 5 SA 124 (W).

848 *Fuel Retailers* case para 25. For a discussion of the *Fuel Retailers* case, see the 2008 (2) *South African Journal of Environmental Law and Policy* that was dedicated to a discussion of this case.

development, agreed that the environment and development are "inexorably linked" and that "environmental stresses and patterns of economic development are linked".[849] The court stated further that decision-making should consider economic and ecology considerations and that it must not only be concerned with protecting the environment, but also protecting and promoting development:

> The … [e]conomy is not just about the production of wealth, and ecology (it) is not just about the protection of nature; they are both equally relevant for improving the lot of humankind.[850]

It is important to consider how the balancing of interests is adjudicated by the courts when it comes to the practical application of section 24. If the correct balance is not achieved, then it is not sustainable development. In the *Fuel Retailers* case the Constitutional Court stated that the principle of sustainable development is recognised worldwide as a means by which environmental authorities may balance developmental needs.[851] It is an important principle to resolve conflict between protecting the environment and socio-economic development. According to Ngcobo J "… the principle of integration of environmental protection and socio–economic development" are fundamental to the concept of sustainable development.[852] Economic development, social development and the protection of the environment are regarded as pillars of sustainable development and the practical significance is that "environmental considerations will increasingly be a feature of economic and development policy".[853]

Sachs J, in his dissenting judgment, states that, in his view, it is only when "economic development potentially threatens the environment" that it becomes a material ingredient "to be put in the scales of a NEMA evaluation"[854] and that "commercial sustainability" is only a relevant factor when "it touches on actual or potential threats

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See also the discussion in Nel and Alberts "Environmental Management and Environmental Law" 1.

849 *Fuel Retailers* case paras 25 and 44.

850 *Fuel Retailers* case para 44, Ngcobo J quoting from World Commission on Environment and Development *Our Common Future* Chapter 1, para 42.

851 *Fuel Retailers* case paras 32 and 57.

852 *Fuel Retailers* case paras 30 and 65.

853 *Fuel Retailers* case para 31.

854 *Fuel Retailers* case para 67.

to the environment".

According to Feris[855] this judgment starts a debate on "how exactly we should apply sustainable development"[856] but agrees with Paterson[857] that the case "ignored the core element of integration as part of sustainable development".[858] The judgment does not address the notion that the integration principle could be used effectively by diverse groups, such as environmentalists versus those pursuing economic development aims.[859] Feris and Tladi[860] are in agreement that Sachs J's dissent provides the most "conceptually sound analysis of sustainable development". Tladi is of the opinion that in the judgment "socio-economic rights", "development" and "economic development" are incorrectly used interchangeably as these concepts most often oppose the environmental right.[861] The court did not ask whether these factors are social or economic factors. The court's judgment "implies - incorrectly - that economic considerations are the same as social considerations".[862] Accordingly, Feris and Tladi suggest a more "nuanced approach"[863] in the application of sustainable development - one that provides three variations of integration based on the value that is the preferred one in cases of conflict. According to Feris, a decision-maker's decision to choose a preferred value should be "grounded in law".[864] This may be a "legal or policy instrument" that provides an indication of the "preferred variation of sustainable development. It appears to be justifiable that a differentiation should be made when considering decisions regarding development inside and outside the urban edge, that is, the preferred value being social and economic factors within the urban edge whilst environment being a preferred value outside the urban edge. According to Du Plessis and Britz[865] (who distinguish four considerations in the case of sustainable development) the environmental, economic, social and cultural

855 Feris 2008 *CCR* 235.
856 Feris 2008 *CCR* 236.
857 Paterson 2006 *SALJ* 53.
858 Feris 2008 *CCR* 245.
859 Feris 2008 *CCR* 245.
860 Tladi 2008 *CCR* 257.
861 Tladi 2008 *CCR* 257.
862 Tladi 2008 *CCR* 257.
863 Feris 2008 *CCR* 251.
864 Feris 2008 *CCR* 253.
865 Du Plessis and Britz 2007 *JSAL* 263, 275.

considerations should not be regarded as separate issues, but are inter-related and interdependent.

Despite the need for the co-existence of development and environmental protection, certain circumstances demand that the one may be upheld at the expense of another.[866] These factors should be regarded in a balanced manner and always in relation to environmental issues. Purely social or purely economic issues should not be the most important factor and neither should environmental factors. Sustainability rests on all four pillars and if one of the pillars is ignored, sustainability may not be achieved. "If governance and decision-making are skewed, sustainability will never be achieved".[867] Sustainable development does not require "the cessation of socio-economic development" but sustainable development regulates how it takes place.[868]

4.2.4 Need and desirability of a development

Another important consideration when decisions are made is the requirement of "need and desirability". The *Fuel Retailers* case[869] confirmed that local government considers the need and desirability of a development application. As such, when an amendment to a land use scheme is made, it has to be amended in relation to the SDF in terms of SPLUMA. However, a development that satisfies the requirements in terms of planning law may not meet the relevant authority's approval for need and desirability from an environmental-law (or NEMA) perspective, implying that the standard in environmental legislation for "need and desirability" is a different standard.[870] According to the judgment, a municipality does not identify the actual and potential impact of a proposed development on socio-economic grounds as the latter is the responsibility of environmental authorities in terms of NEMA.[871] An important finding in this matter is that where there is an overlap with other spheres of government,

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866 Bindu *Environmental and Developmental Rights*.

867 Du Plessis and Britz 2007 *JSAL* 263, 275.

868 *Fuel Retaillers* case 33.

869 See discussion in Chapter 4.2.3. Also see *Guideline on Need and Desirability* (Guideline 9) - Gen N 891 in GG 38108 of 20 October 2014.

870 Further discussions on "need and desirability" in Chapters 4.2.4. and 4.3.4 dealing with EIAs and EMFs.

871 Van Wyk "Law on Planning and the Environment" 1171; *Fuel Retailers* case para 52. It is also referred to in the discussion on EIAs below.

decision-making for environmental authorisations remains separate. The impact of this is that different considerations apply to planning consents for development as opposed to environmental consents for development.

4.2.5 Issues considered in addressing conflicts

Addressing the conflict between property development and the environment is not a simple matter but entails the consideration of various issues and is dependent on the facts of each and every case. This is clear when one examines relevant case law. The dispute in the *Clairisons* case concerned a property situated outside the urban edge in Knysna. The MEC approved proposed changes to the Western Cape Spatial Development Plan although the Provincial Department of Environmental Affairs and Development Planning stated that it was contrary to its policy.[872] The application for environmental authorisation, in terms of the *Environment Conservation Act* (ECA),[873] for a proposed development was rejected by the provincial department.[874] In setting aside the decision of the court *a quo* the Supreme Court of Appeal held that the government functionary was correct in refusing the application as it was contrary to environmental regulations.[875]

The court in *Le Sueur v eThekwini Municipality*[876] had to consider whether a municipality has constitutional authority to legislate on environmental grounds[877] and found that it is impossible to divorce environmental and conservation concerns from municipal planning decisions and practices. It was held that municipalities are

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872 Wiley *Urban Edge* 41. The aims of WCPSDF included the restructuring of urban settlements to tackle *apartheid* spatial patterns and urban functional inefficiencies, the protection of biodiversity and agricultural resources. The WCPSDF proposed restricting the outward growth of urban settlements until specified urban densities are achieved in the area; no new, large residential developments were to be allowed to the north of Plettenberg Bay.

873 *Environment Conservation Act* 73 of 1989 (ECA).

874 *Clairison's CC v MEC for Local Government, Environmental Affairs and Development Planning* 2012 ZAWCHC 44 (16 May 2012) 44. The reasons were that an area of Fynbos of a critical biodiversity species required protection; the development would amount to leap-frog development and thus urban sprawl; the difficulty that the municipality would experience to provide services such as water and sewage removal outside of the urban edge and that it was important to ensure that the area retained its rural setting (as it was outside the urban edge).

875 *Clairisons* case paras 31-32.

876 *Le Sueur* case para 29.

877 Du Plessis and Van der Bergh 2014 *Stell LR*; *Le Sueur* case. See also Humby 2014 *PELJ*.

authorised "to legislate in respect of environmental matters to protect the environment at the local level". Further, the Constitution obliges all spheres to adhere to the principles of cooperative government[878] as the "environment" resides in all three spheres of government.[879] The court stated further that historically, municipalities exercise legislative authority over environmental affairs within a municipality anyway, through its planning powers.[880] This decision also confirms that the division of legislative and executive powers amongst the three spheres is not cast in "hermetically sealed, distinct and watertight compartments".[881] In an interesting exposé of this case, Humby[882] states that the precedent in the *Le Sueur* matter is essentially that municipalities have authority to legislate upon environmental matters as an incident of municipal planning.[883]

Protection of the environment also entails setting aside of land for specific purposes such as: environmental purposes;[884] coastal areas;[885] protection of heritage

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878 Section 40(1) of the Constitution sets out principles of cooperative governance. They include obligations for organs of state to "respect the constitutional status, institutions, powers and functions of other organs of state"; they may not "assume any power or function" except in terms of the Constitution; they must "exercise their powers and perform their functions" so that they does not encroach on the "integrity of other organs of state"; they must "cooperate with one another in mutual trust and good faith".

879 Du Plessis and Van der Bergh 2014 *Stell LR* 408. It is argued that for this reason the environment has not and presumably need not be included in Schedules 4B and 5B of the Constitution. Where the exercise of power of two spheres of government overlap, each one must exercise its powers within the confines of its own competencies and there is no reason why both spheres cannot co-exist as it is obliged to do in terms of the Constitution.

880 *Clairisons* case para 32.

881 Du Plessis and Van der Bergh 2014 *Stell LR* 408.

882 Humby 2014 *PELJ* 1684.

883 Humby 2014 *PELJ* 1684. Disagreeing with the judgment, Humby states that the source of such legislative authority is not based on legislative assignment, but in s 156(5) of the Constitution, which is the provision that allows a municipality to exercise any power "reasonably necessary for or incidental to the effective performance of its functions". This argument is based on the understanding of the distinction between original and assigned powers, and the nature of the control that the national and provincial spheres exercise over Schedule 4B powers. Humby disagrees with the reasons for the judgment, but is of the opinion that the precedent is a welcome one that can be justified; the decision may be justified not only on the basis of the principle of subsidiarity, but also in terms of the emerging and increasingly important theory of social-ecological resilience.

884 *National Environmental Management: Protected Areas Act* 57 of 2003 (NEMPAA), which designates certain areas as protected areas to protect ecologically viable, vulnerable and sensitive areas with biological diversity such as natural landscapes and seascapes so as to conserve their biodiversity. They include areas such as parks, nature reserves and world heritage sites.

885 In terms of NEMICMA.

resources; [886] declaration of agricultural holdings and transport areas which could also include soil conservation;[887] health promotion and pollution control;[888] road reserves[889] and nature conservation.[890] To this one can add the urban edge as a transition zone.[891]

Legislation such as NEMA is a "pivotal aspect of land use law" and environmental considerations[892] and warrants a more detailed discussion in so far as it relates to environmental and planning law within the urban edge.

4.3 National Environmental Management Act

The Preamble of NEMA[893] refers to the environmental right in section 24 of the Constitution and makes it clear that NEMA is aimed at giving effect to this right at a framework[894] level.[895] In terms of the Preamble, development must be socially, environmentally[896] and economically sustainable[897] and integrated environmental

886 In terms of the NHRA ss 27-29 in terms of which no person may develop any part of a protected heritage area.

887 Van Wyk "Law on Planning and the Environment" 1159. This could be in terms of the *Conservation of Agricultural Resources Act* 43 of 1983 or the *Agricultural Pests Act* 36 of 1983.

888 Van Wyk "Law on Planning and the Environment" 1159. In terms of s 21 of the *National Health Act* 61 of 2003 and the *National Environmental Management: Air Quality Act* 38 of 2004 (NEMAQA).

889 *Advertising on Roads and Ribbon Development Act* 21 of 1940.

890 Nature conservation ordinances exist in each of the various provinces, eg *Nature Conservation Ordinance* 12 of 1983 which applies in Gauteng, Limpopo, North West and Mpumalanga.

891 As discussed in Chapter 2.5.

892 Kidd *Environmental Law* 218.

893 *National Environmental Management Act* 107 of 1998 (NEMA). Guideline 6 in GN 805 in GG 35769 of 10 October 2012. The promulgation of NEMA was the first time in South Africa's environmental legislative history that provision was made for environments and specifically sensitive environments in framework legislation.

894 Kidd *Environmental Law* 35. Framework legislation such as NEMA defines overarching and generic principles for sectoral type legislation so as to enhance cooperative environmental governance.

895 *MEC: Department of Agriculture, Conservation and Environment v HTF Developers (Pty) Limited* 2008 2 SA 319 (CC) para 24. According to Kidd "Environment" 529 much of the environmental legislation in South Africa is innovative and meets the requirements of s 24 of the Constitution. However, there is cause for concern regarding the reasonable implementation of such legislation as identified in *Government of the Republic of South Africa v Grootboom* 2001 1 SA 46 (CC).

896 NEMA defines environment 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 relationships "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".

897 Sections 2 and 23(2) of NEMA; Bray 1998 *SAJELP* 1-9.

management[898] is the means "whereby the effects of activities on the environment receive adequate consideration before actions are taken" to ensure that development "serves present and future generations".[899] Consideration is also given to their possible negative impact on the environment.[900] The Preamble also refers to the need to have certainty with regard to decision-making,[901] the need for cooperative government and intergovernmental relations,[902] as well as the need to promote public participation[903] in environmental governance, all of which NEMA addresses.

While local government law sets out generic duties of local government,[904] NEMA provides a comprehensive and wide range of obligations and restrictions on all spheres of government. These obligations and restrictions must be taken into account at all times.[905] In terms of SPLUMA a tribunal, when considering a planning application affecting the environment, must ensure compliance with environmental legislation. This has the effect of ensuring that when pursued, property development must ensure that the environment is protected.[906]

4.3.1 NEMA principles

The Act contains an extensive list of principles[907] called the "national environmental management principles" that are, in essence, tools for environmental governance.[908]

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898 See section 4.3.3 below regarding this concept.
899 Preamble to NEMA.
900 Bray 1998 *SAJELP* 1-9.
901 NEMA principles and procedures are established in NEMA for this purpose.
902 The Preamble to NEMA records that "the environment is a functional area of concurrent national and provincial legislative competence", but confirms that it applies to all organs of state (and thus includes local authorities) who must cooperate, consult and support one another.
903 Public participation is necessary as it has the effect of ensuring better decision-making and citizen deliberation that may contribute to better problem solving. Du Plessis and Nel "Introduction" 9; Feris "Environmental Rights Protected in the Constitution" 233. These are the "key elements of the environmental governance process". Full public participation demands that information be given to the public. This is deemed as a pre-requisite for sustainable development and is recognised as such even in terms of Principle 10 of the Rio Declaration.
904 Kotzé "Regulation of Environmental Pollution" 259. These apply to the municipality as a regulated entity, i.e. as an entity that may itself be liable for issues such as pollution.
905 Kotzé "Regulation of Environmental Pollution" 259.
906 Section 43(2) of SPLUMA.
907 Kidd *Environmental Law* 38. These principles are not a wish list and their application to actions of all organs of state is compulsory.
908 Kotzé "Regulation of Environmental Pollution" 259.

These principles apply to the actions of "all organs of state"[909] in relation to decisions that may significantly impact on the environment.[910] They guide local government in the interpretation, administration and implementation of NEMA[911] or any other law relating to the protection or management of the environment.[912] Acting as a "roadmap" they must steer municipalities so that they are able to fulfil their development role and environmental governance obligations.[913]

The better-known principles in NEMA relate to the precautionary principle; the preventative principle; the polluter pays principle and the principle of participative governance.[914] The NEMA principles are meant to be a guiding light to local authorities when making decisions that relate to approval of developments within the urban edge. Some principles are referred to in the writer's own definition of the urban edge and have special applicability as guidelines or tools in implementing and managing the urban edge.[915] The principle that development must be "socially, environmentally and economically sustainable" is one that goes to the heart of environmental management.[916] The preventative principle also has applicability in urban edge decisions as care must be taken to avoid errors and it is more beneficial to prevent environmental harm than to minimise and remedy damages at a later stage.[917]

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909 Glazewski *Environmental Law* 141. Although the principles are said not to apply to private legal persons because they refer to duties which can only be carried out by organs of state, it is suggested that the principles apply "horizontally" to all entities. Organ of state is defined in s 1(xii) of NEMA.

910 Section 2(1) of NEMA.

911 *MEC for Agriculture, Conservation, Environment and Land Affairs v Sasol Oil (Pty) Ltd* 2006 5 SA 483 (SCA). Kidd *Environmental Law* 39-40 regards this as a welcome finding in comparison to *Minister of Public Works v Kyalami Ridge Environmental Association* 2001 3 SA 1151 (CC). According to Kidd, the *Fuel Retailers* case has clarified and endorsed the principles of NEMA, although it "incorrectly" raised the issue that municipalities need not concern themselves with environmental considerations when considering a rezoning application.

912 Sections 2(1)(c) and (e) of NEMA; Glazewski *Environmental Law* 138. The NEMA principles serve as a general framework within which environmental management and implementation plans must be formulated.

913 Kotzé "Regulation of Environmental Pollution" 263.

914 Kotzé "Regulation of Environmental Pollution" 259. Other well-known principles are also the "cradle to grave" principle, the life-cycle principle and the carrying capacity principle. See Kidd *Environmental Law* 36-40 for a summary.

915 See Chapter 2.5 for the writer's definition of the urban edge.

916 Glazewski *Environmental* 141.

917 Section 2(4)(a)(viii) of NEMA which states that the negative impacts on the environment and on people's environmental rights must be anticipated and prevented, and where they cannot altogether be prevented, must be minimised and remedied. The notion that the urban edge must

Municipalities must consider the principle that "environmental justice"[918] must be pursued so that "adverse environmental impacts are not distributed in a manner that discriminates against" certain sectors of the community.[919] "Participatory governance"[920] (also enforced by section 195 of the Constitution)[921] is promoted as a NEMA principle. Public participation should also be a necessary requirement in SPLUMA when considering the SDF (which incorporates an urban edge).[922]

As environmental governance is primarily concerned with and directed at development, the overall implication is that local government must ensure that development, in its broadest term, entails development that is "socially, environmentally and economically sustainable"[923] in accordance with the NEMA principles.[924] In *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation and Land Affairs*[925] the court reviewed various aspects of NEMA, including its principles, and held that regard must be had to considerations such as the "environment, socio-economic conditions and even cultural heritage".

The principles have many features in common with internationally accepted principles

be carefully considered was deemed to be a part of the urban edge definition in Chapter 2 and ties in with this NEMA principle.

918 Section 2(4)(c) of NEMA.

919 This is also an important consideration discussed in Chapter 2. When implementing an urban edge, a municipality must ensure that its decisions do not unjustly and disproportionately impact on one sector of society whilst benefitting another and everyone must share equally in environmental benefits and costs; Kotzé "Regulation of Environmental Pollution" 261.

920 Section 2(4)(f) of NEMA. A municipality must recognise the importance of participatory democracy and allow the community in the broadest sense of the word to actively take part in all decisions that have an environmental impact and affect their health and well-being.

921 In terms of this clause a municipality must, at all times, adhere and give effect to this standard.

922 See Chapters 3.6 on SDFs and 3.8 on planning procedure.

923 Glazewski *Environmental Law* 158. Not only ecological but also social and economic considerations must guide decision-making; *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* 2004 5 SA 124 (W) 146I-147I.

924 Kotzé "Regulation of Environmental Pollution" 265.

925 *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* 2004 5 SA 124 (W) 146I-147I.

of environmental management.[926] According to Glazewski,[927] they are detailed and complex, providing "limitless potential" on a "laudable and sound footing" to develop "a cohesive body of generally acceptable environmental management practices".

4.3.2 Environmental implementation and management plans

Environmental implementation and management plans[928] regulate different aspects of the environment,[929] must give effect to the principles of cooperative government in terms of the Constitution[930] and have detailed provisions to regulate the methods of compliance.[931] The importance and purpose of these plans[932] are that national and provincial departments must prepare them[933] in keeping with NEMA principles. Local authorities must ensure the protection of the environment[934] substantially in accordance with these plans.[935]

Not only is compliance with these plans compulsory in terms of NEMA[936] but the

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926 Kidd *Environmental Law* 38. These principles are comparable to the Rio Principles; Glazewski *Environmental Law* 145. Although the principles "reflect international trends, they are not exclusively of foreign". In fact, some principles are peculiarly South African and reflect the need to address *apartheid* issues; eg in terms of s 2(4)(d) of NEMA special care is to be given to persons disadvantaged by unfair discrimination with regard to access to environmental resources and benefits.

927 Glazewski *Environmental Law* 141.

928 Every province and every national department which is listed in Schedule 1 that exercises functions that may affect the environment must prepare an environmental implementation plan every 4 years after the initial plan. These plans may be consolidated as one; Kidd *Environmental Law* 40. Municipalities have not been complying with the time limits and extensions which are in fact *ultra* vires being granted.

929 Sections 11-16 of NEMA.

930 Van Wyk "Law on Planning and the Environment" 1155; s 12 of NEMA. This secures the "protection of the environment across the country as a whole".

931 Section 16 of NEMA.

932 These plans must be approved by the Minister or MEC. If they are inconsistent with environmental legislation, they are referred back for resubmission in terms of s 12 of NEMA.

933 This must be done by coordinating and harmonising all environmental plans and policies so that they are in sync.

934 Section 12(d) of NEMA stipulates that unreasonable actions that are prejudicial to the economic or health interests are prohibited.

935 Kidd *Environmental Law* 41. These plans have to be published in the *Government Gazette*. It must be borne in mind in mind that the plans are aimed at achieving the protection of a sustainable environment.

936 Section 16 of NEMA. All discrepancies that could cause non-compliance must be reported to the Director-General who manages compliance of these plans in terms of s 16(2) and takes steps to ensure compliance if the plans are not being complied with, to remedy the failure of compliance and failing that refer the matter to conciliation and thereafter arbitration in accordance with ch 4.

provincial sphere has an obligation to ensure that its environmental implementation plan is complied with by each municipality within its province.[937] Municipalities are directed to adhere to the plans and the principles of NEMA in the preparation of any policy.[938] This is important as it is an attempt to ensure that when development is planned, requirements of sustainable development should be adhered to and there is integrated decision-making between the different spheres of government.

The environmental implementation plans in terms of NEMA must include a description of any other policies and plans that may significantly affect the environment.[939] It is submitted that an urban edge policy, although used in planning law by local authorities, is a policy that should fall into this category.[940] If an urban edge policy is indeed a policy that forms a part of these plans then, by implication, it must also adhere to the NEMA principles.[941] In this regard it is important that, in terms of NEMA, there is cooperation between the local and provincial spheres of government.[942] In instances where there is a conflict and the provincial policies are not aligned with local government policy, the inconsistencies must be resolved in terms of SPLUMA and failing this in terms of the IGRFA.[943]

A consolidated environmental implementation and management plan for 2015-2020 for South Africa was published in 2016.[944] Sustainable development is the crux of this plan and development in terms thereof refers to development that permits "appropriate and justifiable social and economic goals" that must be achieved with no compromise of the natural system.[945] The plans do not refer to the urban or rural edge as they serve as overarching plans.

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937 Section 16(4)(a) of NEMA.
938 Section 16(4)(b) of NEMA.
939 Section 13(a) of NEMA.
940 See Chapter 2 for a full discussion on the urban edge.
941 The writer's own definition of the urban edge incorporates the NEMA principles that are applicable.
942 Section 14(f) of NEMA refers to arrangements that need to be made to ensure cooperation with other national departments, including conciliation in terms of s 16(1)(3)(c). The Act further provides that conflicts that still persist must be dealt with as set out in Chapter 3 of this study.
943 See discussion on this in Chapter 3.2.1 that deals with SDFs and inconsistencies between different spheres and the need to ensure cooperation between the different spheres.
944 GN 530 in GG39998 of 19 May 2016.
945 Van Wyk "Law on Planning and the Environment" 1155.

4.3.3 Integrated environmental management and the NEMA tools

NEMA promotes the application of "appropriate environmental management tools"[946] to ensure integrated development management of activities[947] by identifying, evaluating and carefully considering, with the assistance of public participation, the "actual and potential impact of activities" on the environment.[948] There are tools with a legal mandate that are prescribed by law, with which municipalities must comply to varying extents,[949] tools without an explicit mandate[950] that could be applicable and are voluntarily used[951] and a new breed of tools called new generation tools.[952] Some of these tools, namely the EMF, strategic environmental assessment (SEA) and EIAs will be discussed and their links with the urban edge explored.

4.3.4 Environmental management frameworks

An EMF is a spatial tool indicating broadly where development may take place and where the environment must be protected. Effective decision-support tools such as EMFs[953] are extremely important for preserving the environment as directed by the Constitution.[954] An EMF, although referred to as a spatial tool, may in fact be described as an environmentally focused spatial development tool, used to make "informed decisions regarding the management of impacts on the environment" that arise as a

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946 Kidd *Environmental Law* 238. Environmental management tools are identified according to their main purpose such as assessment, management, information, implementation and other purposes.

947 The IDP Guide pack explains that integrated development planning demands that planning be done in a holistic way in which sectoral municipal issues (such as roads, water, health and community welfare) are integrated and dealt with through on-going public participation that involve communities; Retief and Cilliers "Municipal Integrated Development Planning" 173.

948 Sections 23(1) and (2) of NEMA. In terms of s 23(3) the Director-General must coordinate all activities and assist organs of state through training, manuals and guidelines. For a detailed discussion of environmental impact assessment, see Kidd, Retief and Alberts "Integrated Environmental Assessment and Management".

949 Legal mandate tools are EMFs, EIAs, strategic management assessments (SEAs) and state of the environment reporting (SOERs).

950 Examples of these are conservation planning, cost benefit analysis, environmental risk assessment, integrated environmental programme and social impact assessment.

951 Retief and Cilliers "Municipal Integrated Development Planning" 178.

952 Sections 23(1) and (2) of NEMA. These are new emerging tools in terms of the new integrated development planning toolkit which include ecological footprint and environmental management systems.

953 EMFs were officially proclaimed under the NEMA EIA Regulations of 2006, which have since been amended as the NEMA EMF Regulations in 2010.

954 Mtolo *Effectiveness of Environmental Management Frameworks*.

result of "human activity and development".[955] This means that they have information that can be used by decision-makers to determine the best approach to deal with environmental challenges.[956] The aim of the EMF is to promote sustainability, secure environmental protection and cooperative environmental governance[957] with meaningful public participation.[958] The EMF obtains its legal mandate from NEMA[959] as opposed to SPLUMA. However, it is an environmental tool that is used by municipalities to assist with planning. It identifies geographic areas where specified activities may not commence without authorisation as well as certain areas where specified activities may be "excluded from authorisation".[960] When EMFs and the urban edge are not aligned, decisions by planning authorities are difficult and this can cause conflict.

According to the EMF Regulations, an EMF[961] reveals "where specific land uses may best be practiced". It offers performance standards that may be used to maintain "appropriate use of such land".[962] They must be "implemented and monitored" on a regularly to ensure that "their purpose and goals are achieved".[963] EMFs are being employed as policy documents[964] by municipalities to inform their SDFs and their contents also guide policy decisions such as an urban edge and land use decisions.[965]

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955 GN 805 in GG 35769 of 10 October 2012. The EMF is defined in the *Environmental Management Fframework Guideline for Implementation* as the "study of biophysical and socio-cultural systems of a geographic area to reveal where specific land-uses may best be practiced and to offer performance standard for maintaining appropriate use of such land".

956 Snyman 2017 *J South Afr Inst Min Metall*.

957 Regulation 2(3) of the Environmental Management Framework Regulations (GN R547 in GG 33306 of 18 June 2010).

958 Van Wyk *Planning Law* 3rd ed 26.

959 Sections 24(2)(b) and (c) of NEMA.

960 Retief and Cilliers "Municipal Integrated Development Planning" 579. In essence an EMF indicates the extent of environmental authorisation requirements in defined geographic areas.

961 Described as a study of the biophysical and sociocultural systems of a geographically defined area.

962 GN R547 in GG 33306 of 18 June 2010; Van Wyk "Law on Planning and the Environment" 1156; GN R796 in GG 22605 of 24 August 2001.

963 Regulation 5 of the EMF Regulations (GN R547 in GG 33306 of 18 June 2010); Snyman 2017 *J South Afr Inst Min Metall*. EMFs embody the principle of participatory democracy as they utilise the input of affected communities and government to craft options for a specified area, guided by the assessed ecological limits; Retief and Cilliers "Municipal Integrated Development Planning" 579. EMFs serve to strengthen the screening mechanism of an EIA beyond the mere reliance on listed activities as they consider location sensitivity as well.

964 Rather than being implemented and formally approved in terms of NEMA.

965 Retief and Cilliers "Municipal Integrated Development Planning" 580.

An urban edge similarly, demarcates areas where development should be promoted and where it should be avoided.[966] However, although an urban edge serves to protect the environment at the periphery of cities, it is regarded more as a planning tool than an environmental tool. It is submitted that municipalities should demarcate the urban edge in accordance with the recommendations of an EMF. The EMF must indicate the urban edge demarcated by the municipality. In this way the urban edge demarcation in the EMF indicates exactly that development may take place within the urban edge and that the environment must be protected outside the urban edge. This will cement the urban edge as a tool, used not only for its usefulness in planning and development but also to protect the environment. The protection of the environment and critical biodiversity is in any event recognised as one of its attributes. There are definitely synergies between these two aspects. By confirming the demarcation of an urban edge in the EMF cooperation between the two spheres, municipal that deals with planning and provincial that deals with the environment will be ensured.

NEMA[967] provides that an EMF[968] must be taken into account in environmental decision-making[969] as it indicates the policy in terms of which the evaluation and measurement of sustainability can be undertaken and the potential consequences or impacts on the environment of listed activities or specified activities must be considered, investigated, assessed and reported on by the competent authority. It is also a SPLUMA requirement that when drafting the SDF is undertaken that all environmental management instruments adopted by the relevant environmental management authority must be taken into account.[970]

The EMF may have an impact on the "need and desirability" of a development when

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966 See the Chapter 2 discussion on the urban edge.

967 Section 42 of SPLUMA states that all decisions must be consistent with national and provincial policies and therefore to comply with s 42 the EMF must be adhered to by local authorities.

968 Section 24(3) of NEMA.

969 Snyman 2017 *J South Afr Inst Min Metall.* Environmental planning tools must be able to guide development "in areas of heightened sensitivity". EMFs can achieve a "desired developmental and ecological balance" by identifying and "mapping of sensitive ecosystems and information and resources" and provide "meaningful resource information" (relating to any opportunities or risks) in sensitive areas. They provide a "platform to drive the developmental priorities".

970 Sections 12-22 of SPLUMA. See also Van Wyk "Law on Planning and the Environment" 1150.

considered in terms of the EIA.[971] "Need and desirability" for an EIA must be measured against the contents of the SDF and EMF for the area as well as the sustainability development goals and objectives as set out in the IDP and the SDF[972] (which usually indicate the urban edge).[973] When the need and desirability of development on environmental grounds are determined, an EMF, together with planning instruments such as IDPs and SDFs are necessary considerations and play a part in obtaining an environmental nod for development.

EMFs are valuable tools that municipalities can use together with an urban edge, to improve the effectiveness of the urban edge and to integrate the environmental and planning functions.[974] Sensitive areas demarcated on the EMF should not be included inside the urban edge by municipalities thereby ensuring additional environmental protection for such areas. Where an EMF indicates an urban edge, it may be argued that the said demarcation is binding on environmental authorities that need to take the EMF into account when making a decision. Likewise, it will be binding on local authorities who need to heed the stipulations of an EMF when making planning decisions in terms of SPLUMA.[975] The issue regarding the demarcation of an urban edge in an EMF to make it binding is an important consideration. It appears to be uncertain[976] although according to Snyman,[977] the status of EMFs has been significantly enhanced. EMFs were considered in *Magaliesberg Protection Association v MEC: Department of Agriculture, Conservation, Environment and Rural Development, North West Provincial Government*[978] where the Supreme Court of

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971 See Gen N 891 in GG 38108 of 20 October 2014.

972 Western Cape 2009 https://www.westerncape.gov.za/other/2009/9/transitional_arrangements.pdf. See also the EIA Regulations in GN R982-R985 in GG 38282 of 4 December 2014 that states there should be compliance.

973 See discussion of SDF and IDP in Chapter 3.

974 See Chapter 2.4.3 regarding the use of a suite of tools to ensure the effective implementation of the urban edge.

975 The resolution should there be a difference in an urban edge demarcation of a municipality and a provincial demarcation has been discussed in Chapter 3.2.1.

976 Snyman 2017 *J South Afr Inst Min Metall*. The tool looks at social and economic considerations through an "environmental lens" and attempts to guide development in a specific geographic area.

977 Snyman 2017 *J South Afr Inst Min Metall*. The status of EMFs is enhanced by the promulgation of the 2010 EMF Regulations and is now seen as a crucial part of the suite of integrated environmental management tools in accordance with the *EMF Guideline*, 2010.

978 *Magaliesberg Protection Association v MEC: Department of Agriculture, Conservation, Environment and Rural Development, North West Provincial Government* 2013 3 All SA 416 (SCA). In this case

Appeal stated that "this case is about the crossroads between development and the preservation of the environment".[979] It concluded that the EMF is a "policy document and not legislation".[980] Therefore, the assertions are not absolute and the conclusions reached in an EMF, whilst forming part of the decision-making process, would not have the effect of declaring the area a no-go zone.[981] The failure to consider an EMF in a planning or environmental decision does, therefore, not negate a decision that has to be made by the "appropriate decision-maker and not by the authors of the EMF".[982]

4.3.5 Environmental Impact Assessment

The EIA process[983] first emerged internationally at the 1972 Stockholm Conference and is now entrenched in law and is designed to protect the environment.[984] It has become an "accepted environmental law norm"[985] and a useful, effective and key tool (in terms of NEMA) for effective environmental management, towards achieving sustainability.[986] To ensure that the environment is not harmful to health and well-

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the EMF had been finalised a year previously, but it had not been published in the Government Gazette. It was published by the time of the appeal and was used as part of the representations of the Appellant.

979 *Magaliesberg Protection Association v MEC: Department of Agriculture, Conservation, Environment and Rural Development, North West Provincial Government* 2013 3 All SA 416 (SCA) para 40.

980 *Magaliesberg Protection Association v MEC: Department of Agriculture, Conservation, Environment and Rural Development, North West Provincial Government* 2013 3 All SA 416 (SCA) para 42. The EMF refers to environmental sensitivities and recommended restrictions.

981 Eg listed activities in terms of s 24(2) of NEMA. The same conclusion was reached in a decision that relates to the urban edge in *Durbanville Community Forum v Minister for Environmental Affairs and Development Planning Provincial Government Western Cape* 2015 2 All SA 187 (WCC).

982 Snyman 2017 *J South Afr Inst Min Metall*. The EMF is branded as a policy consideration and is not a legally binding prohibition on certain land use activities.

983 The EIA process comprises activities that include determining whether an environmental authorisation is required, determining who the competent authority is, whether the basic assessment or scoping or EIA process must be undertaken, completing an assessment including public participation and submitting it for consideration and issuing of a decision by the competent authority.

984 See Kidd *Environmental Law* 235-265 for a full discussion on EIAs. The statutory required EIA regime was introduced by the ECA and is now replaced by ch 5 of NEMA.

985 Kidd *Environmental Law* 235. This is in terms of Principle 17 of the Rio Declaration which states that EIAs "must be undertaken for proposed activities that are likely to have significant adverse impact on the environment and are subject to a decision of a competent national authority"; Gen N 654 in GG 33333 of 29 June 2010. Project-specific environmental assessment is referred to as the "first generation EIA" and evolved with SEA becoming prominent in the 1990's.

986 Section 23 of NEMA states that the "s 2 principles should be integrated into decision-making and that in the case of EIAs the impact on the environment, socio-economic conditions and cultural heritage, amongst others, should be investigated". These are principles enshrined in s 2 of NEMA

being, as required by section 24 of the Constitution, an understanding of the impact of human activities on the environment and on the health and well-being of its inhabitants must be considered.[987]

An EIA is a system of analysing and reporting on the impact of certain activities to enable decision-makers to decide which activities must be permitted and which should be prohibited, as well as to determine what measures should be taken to "mitigate and manage the impacts" of such activities.[988] As stated earlier, in terms of Chapter 5 of NEMA, EIAs are tools, used to analyse and predict the nature and consequences of activities or development on the environment, so as to ensure integrated environmental management of activities.[989] EIAs must predict and evaluate the impact not only on the environment but also on socio-economic conditions[990] and even on cultural heritage.[991]

In accordance with this, the precautionary principle mandating a risk-averse and cautious approach in terms of NEMA[992] is necessary. The potential impacts on the environment of listed activities (or specified activities) must be carefully considered

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and contribute towards sustainable development. See also Van Wyk "Law on Planning and the Environment" 1147. The principles of sustainable and equitable use of natural resources and the environment must be assessed. This is part and parcel of the planning of land use. See also Du Plessis and Du Plessis "Striking the Sustainability Balance" 439.

987 Kidd *Environmental Law* 258. When NEMA was originally promulgated, it included a reference that EIAs are also concerned with socio-economic conditions and the cultural heritage, but this was excluded in the Amendment Act on account of the definition of the "environment" in NEMA, which includes these aspects.

988 An environmental management plan (EMP) has to be compiled within terms of the EIA Regulations and in terms of s 24 of NEMA. Once an EIA is approved, the EMP indicates how a developer will mitigate the effects; Townsend 2007 http://www.enviropaedia.com/topic/default.php?topic_id=92.

989 Townsend 2007 http://www.enviropaedia.com/topic/default.php?topic_id=92.

990 *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* 2004 5 SA 124 (W) 151E. Socio-economic factors are part of the environmental responsibility in the interpretation of s 24 of NEMA and the s 2 NEMA principles; *MEC for Agriculture, Conservation, Environment and Land Affairs v Sasol Oil (Pty) Ltd* 2006 5 SA 483 (SCA) also referred to the NEMA principles to justify including socio-economic conditions. In the *Fuel Retailers* case the ground of review that the respondent had failed to consider the socio-economic impacts in an environmental decision was successful as the respondent was obliged to do so. The argument that the local council had done so in terms of the need and desirability requirement when considering the rezoning application was not acceptable to the Constitutional Court.

991 See reference to cultural factors in Townsend 2007 http://www.enviropaedia.com/topic/default.php?topic_id=92.

992 Section 24(1) of NEMA*;* Van Wyk "Law on Planning and the Environment" 1147.

before the activity may commence.[993] Procedures include "investigation of potential consequences or alternatives to activity" as well as an "assessment of the significance" of the potential consequences or impacts of such activity, including the option of not implementing the activity at all and investigating "all mitigation measures (to keep adverse consequences or impacts to a minimum)" or manage consequences or impacts and the assessment of the effectiveness of such arrangements after they have been implemented.[994]

The EIA Regulations in terms of NEMA contain three lists of activities which may not commence without an environmental authorisation.[995] A listing notice[996] identifies activities that require environmental authorisation[997] prior to commencement and also identifies competent authorities that may review applications.[998] Activities listed in Listing Notice 1 are subject to a basic assessment process while Listing Notice 2 requires an Environmental Impact Report (EIR).[999] Listing Notice 3 identifies prohibited activities in specified geographical areas such as protected areas, sensitive areas, open spaces and estuaries.[1000]

The regulations also set out the procedures for compiling, submitting, processing and considering an application for an environmental authorisation. They stipulate "who may conduct EIAs"; "what EIAs must consist of"; "the decision-making criteria and timelines"; "public participation" requirements[1001] and the procedure for lodging

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993 GN R982-R985 in GG 38282 of 4 December 2014 as amended.

994 Van Wyk "Law on Planning and the Environment" 1172. In addition, provision must be made for compliance of prescribed requirements in terms of s 24(4)(b) of NEMA.

995 GN R983, R984 and R985 in GG 38282 of 4 December 2014 as amended.

996 The listing notice is attached to NEMA.

997 These regulations contain the procedures to obtain an environmental authorisation for a "listed activity" in terms of ss 24(2) and 24D of NEMA.

998 See GN R982-R985 in GG 38282 of 4 December 2014. See also amendments published in GN 324 in GG 40772 of 7 April 2017. See further GN R546 in GG 33306 of 18 June 2010 and GN R983 in GG 38282 of 4 December 2014. These notices are under ss 24(2), 24(5), 24D and 44, read with s 47A(1)(b) of NEMA; Van Wyk "Law on Planning and the Environment" 1172.

999 The difference between Listing Notice 1 and 2 is the process that must be followed as Schedule 1 needs a basic assessment and Listing Notice 2 needs scoping and EIA. The results of a basic assessment may also mean that scoping and an EIA is necessary.

1000 GN R985 in GG38382 of 4 December 2014 is called Listing Notice 3. These notices are under ss 24(2), 24(5), 24D and 44, read with s 47A(1)(b) of NEMA. An example is mining activities which are governed by the *Mineral and Petroleum Resources Development Act* 28 of 2002.

1001 It obliges the participation of potentially affected persons in the decision-making process.

appeals against decisions that were taken.[1002] The purpose of the EIA Regulations is to ensure that the impacts of activities are properly assessed; so that the positive environmental impacts are enhanced; the activities which may have an unacceptable, negative effect on the environment are not authorised and those that are suitable for authorisation are approved, with conditions to avoid or mitigate possible detrimental effects.[1003] In terms of the environmental authorisation, the activity must be either authorised with or without conditions or rejected. Not all detrimental activities are included in the lists and certain types of activities are governed by separate legislation.[1004]

Glazewski argues that the success of an EIA is dependent on the requirements of public participation,[1005] inter-sectorial coordination[1006] and the alternatives to specific development proposals being satisfactorily carried out and considered.[1007]

In the *Fuel Retailers* case, the court considered local government's use of planning law considerations to judge the "need and desirability" in an application for a re-zoning of a property and compared this to the "need and desirability" in terms of EIA

1002 In terms of s 43 of NEMA the process is conducted by environmental assessment practitioners (EAPs) who are required to determine the level of assessment, conduct public participation procedure, and compile a list of all interested and affected persons, submit the application for environmental authorisation with the basic assessment or full scoping report and submit details of the public participation procedure to the competent authority who must decide whether to grant the authorisation or grant it subject to conditions or refuse such application. The decision has to be taken within certain timelines set out in the regulations. A decision that has been made may be amended, suspended and appealed.

1003 On receipt of a scoping report, the authority may require the information to be supplemented by an EIA. A plan of the study of the EIA must be carried out followed by the environmental impact report focussing on the particulars and extent of the impact of each activity and the mitigation thereof and the other components as listed in the scoping report regarding public participation as well as any media coverage given to the proposed activities.

1004 The *National Environmental Management: Waste Act* 59 of 2008 (NEMWA), NEMAQA, and the *National Water Act* 36 of 1998 (NWA) to name a few. Ss 26-27 of NEMWA relate to a prohibition of unauthorised disposal and of littering, and in terms of the NWA permission is required to use water for irrigation in terms of a permit or through a Water Court.

1005 Kidd *Environmental Law* 235. This raises the idea that EIAs may be used for projects but also to evaluate programmes and policies. The public participation process is intended to ensure that all interested and affected parties are made aware of a proposed activity, have access to information about the activity and its potential impact and are given an opportunity to voice their opinions and concerns about the activity.

1006 It is becoming more and more evident that there must be more co-ordination between planning and environmental departments in coordinating approvals.

1007 Glazewski *Environmental Law* 142.

requirements of NEMA. The court pronounced that the obligation of environmental authorities was different to the local authority's obligations as the socio-economic impact was deemed to be an "integral part of the environmental considerations" in terms of NEMA and the ECA.[1008] The court considered the relevant provisions in the Constitution, NEMA and the ECA and concluded that the environmental authority could not rely on the local authority's need and desirability decision in planning law to satisfy "the consideration of the socio-economic impact"[1009] of the proposed development to satisfy environmental requirements.[1010] Kidd is of the opinion that despite other comments about this case[1011] the essential principle upon which the judgment is based is correct and seen in the light of section 24 of the Constitution and the NEMA principles, the environmental authorisation process in an EIA justifiably includes "environmental, socio-economic and cultural considerations".[1012]

Different spheres of government have different mandates when decisions on developments are made and while the local sphere is vested with the spatial planning authorisations, the provincial and national sphere is vested with the environmental authorisations pertaining to such development mandates.[1013] The integration of the concept of sustainability with decision-making by all these different departments is encouraged.[1014] The EIA Regulations,[1015] made under section 24 of NEMA, are

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1008 *Fuel Retailers* case para 31 of the judgment.

1009 See the matter of *SLC Property Group (Pty) Ltd v Minister of Environmental Affairs and Economic Development (Western Cape)* 2008 1 All SA 627 (C); Kidd *Environmental Law* 259 refers to this case as an "interesting angle to the socio-economic considerations"; Kidd *Environmental Law* 260. The 2004 amendment to NEMA removed the provisions relating to cultural and socio-economic considerations as these were deemed to be redundant.

1010 *Fuel Retailers* case para 82; Kidd *Environmental Law* 259.

1011 See Kidd 2008 *SAJELP* relating to the three pillars of sustainable development in Environmental Law.

1012 Kidd *Environmental Law* 259.

1013 Retief and Cilliers "Municipal Integrated Development Planning" 583. Look at GN R982 in GG 38282 of 4 December 2014 which indicates when national and provincial government take decisions.

1014 See reg 12 of the EIA Regulations in GN R982 in GG 38282 of 4 December 2014.

1015 These set out the process to be followed by applicants or developers. An independent consultant is appointed to carry out the procedure which entails the submission of a plan of study for scoping indicating the description of the activity being undertaken, the tasks to be performed during scoping and the method by which environmental issues and alternatives will be identified, followed by a scoping report which must contain a brief description of the activity as well as the environmental issues and all alternatives identified and an appendix that contains a description of the public participation process followed, including a list of interested parties and their comments. GN R982 in GG 38282 of 4 December 2014.

intended to integrate and facilitate environmental impact management with development activities or processes, in line with sustainable development objectives. Decisions in terms of environmental and land use management in terms of SPLUMA (which include the consideration of a SDF as well as the urban edge determination) must consider both the principles of sustainability and the environmental inputs and tools such as EIAs. Such environmental tools are able to assist in better decision-making for land use planning and they provide invaluable assistance with regard to sustainable development. In that way they address conflict between property development and the environment.[1016]

NEMA does not refer to an urban edge specifically but there is a reference to it in the definition of "urban areas" in the EIA Regulations.[1017] The definition of "urban areas" states that an area is "urban" if it is within the urban edge, as defined or adopted by the competent authority (or in instances where no urban edge or boundary has been defined or adopted, it refers to areas situated within the edge of built-up areas).[1018] The listing notices have been updated numerous times since they first appeared in 2006 and the 2010 version was updated in December 2014 when revised listing notices were published and the definition of urban areas was not amended.[1019] As may be expected, more detailed scopes and EIAs are required for such areas. They are necessary to address any potential conflict between property development and the environment. Additional considerations may apply to a decision on development within the urban edge.[1020]

4.3.6 Strategic Environmental Assessment

[1016] Retief and Cilliers "Municipal Integrated Development Planning" 583.
[1017] GN R982 in GG 38282 of 4 December 2014. The urban edge is referred to as in other environmentally linked legislation such as in the coastal sector discussed below in Chapter 4.4.3.
[1018] Wiley *Urban Edge* 43; GN R545 in GG 33306 of 18 June 2010 (Listing Notice 2). The listing is relevant as it lists numerous "potentially significant activities".
[1019] The amendment took effect from 18 December 2014.
[1020] See Chapter 7.7.

SEAs[1021] (also in terms of NEMA)[1022] became prominent in the 1990s[1023] for the purpose of addressing environmental concerns in relation to policies, programmes or plans.[1024] There is, however, no legal obligation for undertaking a SEA.[1025] An SEA is aimed at ensuring that "environmental issues are addressed from an early stage" to help with "formulating policies, plans and programmes", but no particular body has the legal responsibility to undertake or approve it.[1026]

The full details of the SEA principles and procedures will not be examined here. Suffice to say that each specific SEA process will vary depending on the situation in which it is developed and the purpose for which it is undertaken. An SEA is however, a tool promoted by SPLUMA for use by local authorities[1027] for a "strategic assessment of pressures and opportunities within the municipal area including the spatial location of environmental sensitivities".[1028] SEA assists in the implementation of sustainability and is a move towards a true integration of economic, social and biophysical goals.[1029] The purpose of an SEA is therefore to complement the planning process as it provides information necessary to ensure that development maintains and enhances environmental resources and does not cause conflict with the environment.[1030] Its importance cannot be denied. In fact, the relationship between SEA and planning has been "the main topic of debate within the environmental assessment and planning fraternities" for the avoidance of environmental harm through development based on

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1021 Retief and Cilliers "Municipal Integrated Development Planning" 577. SEA in its simplest form is defined as the environmental assessment of strategic decisions at policy, planning and programme levels of decision-making.

1022 Section 24(5) of NEMA and the definition of "activities" in s 1 of NEMA.

1023 This has waned in recent years, though, but SEA is being promoted by planning legislation in terms of the *White Paper on Environmental Management and Policy*, 1997 (Department of Environment Affairs and Tourism 1997 https://www.environment.gov.za/sites/default/files/legislations/environemtal_management_0.pdf).

1024 Gen N 654 in GG 33333 of 29 June 2010. These are known as second generation of environmental assessments.

1025 Retief and Cilliers "Municipal Integrated Development Planning" 580.

1026 Department of Environmental Affairs and Tourism and CSIR *Strategic Environmental Assessment in South Africa*. An initiation of an SEA arises from the benefits that it provides to a decision-maker.

1027 Nel and Alberts "Environmental Management and Environmental Law" 51.

1028 Retief and Cilliers "Municipal Integrated Development Planning" 578.

1029 Department of Environmental Affairs and Tourism and CSIR *Strategic Environmental Assessment in South Africa*.

1030 Retief and Cilliers "Municipal Integrated Development Planning" 580.

information contained in an SEA.[1031]

Therefore, it may be concluded that SEA, like the urban edge with which it appears to have similarities, can also add value through the development of guidelines for sustainability. Sensitive areas identified by an SEA may assist in a better determination of the urban edge as those areas that are identified as having environmental sensitivities may be excluded from the urban edge to ensure additional protection of the environment.

4.4 Other environmental legislation

Various other Acts include provisions on the balancing of the requirements to ensure sustainability and will be discussed briefly.[1032]

4.4.1 National Environmental Management: Biodiversity Act

Legislation pertaining to biodiversity and conservation such as NEMBA[1033] sets out the mechanisms for managing and conserving biodiversity. It does so by protecting species and ecosystems, through the sustainable use of indigenous biological resources, by access to and sharing of the benefits arising from the use of biological resources, as well as bio-prospecting.[1034] The Act requires by-laws of municipalities to be consistent with the Act and local authorities are required to draft an environmental conservation or bio-regional plan.[1035] Local authorities are obliged to comply with the norms and standards set by the Minister and may draft a biodiversity management plan.[1036] A *Guideline regarding the Determination of Bio-regions and the Preparation of Bio-regional Plans* has been published.[1037] It specifies that the purpose of a bio-

1031 Wiseman "Environmental Assessment and Planning".
1032 In s 1 of the Acts; section 5 of NEMPAA; s 7 of *National Environmental Management: Biodiversity Act* 10 of 2004 (NEMBA); ss 5(2) and 40(2)(d) of NEMAQA.
1033 *National Environmental Management: Biodiversity Act* 10 of 2004. NEMPAA also pertains to biodiversity.
1034 Middleton *et al Environmental Management and Local Government* 10.
1035 This must make reference to the norms and standards imposed by the National Biodiversity Framework.
1036 Kidd *Environmental Law* 105. The bioregional plan is intended to set out measures for the effective management of biodiversity in the region and also monitoring of the plan.
1037 GN 291 in GG 32006 of 16 March 2009.

regional plan is "to provide a map of biodiversity priorities with accompanying land-use planning and decision-making guidelines" that assists with and inform land-use planning, environmental assessment and authorisations.[1038]

When undertaking the drafting of IDPs and SDF's,[1039] municipalities must take into account threatened ecosystems that are listed by the Minister or MEC.[1040] The term "urban edge" is specifically mentioned in the *Guidelines*[1041] referred to above with the option for the alignment and coordination of bioregional plans and IDPs with the delineation of an urban edge.[1042] In terms of Chapter 4 of the *Guidelines*[1043] municipalities must provide "a visual representation of the desired spatial form of the municipality" (indicating areas where public and private land development and infrastructure development should take place), indicate desired or undesired utilisation of space in a particular area, indicate the urban edge, and indicate areas where strategic intervention is required[1044] as well as areas where priority spending is required.[1045]

4.4.2 National Environmental Management: Protected Areas Act

The NEMPAA[1046] provides for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity by the establishment of a national register of all national, provincial and local protected areas so that those areas may be managed in accordance with national norms and standards for intergovernmental cooperation and public consultation. The urban edge in a municipal

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1038 These also impact on natural resource management by a range of sectors whose policies and decisions have an impact on biodiversity.

1039 See Chapter 3 2.1 for a discussion on the SDF and IDP.

1040 GN 1002 in GG 34809 of 9 December 2012. This was the first national list of ecosystems that are threatened and in need of protection that were published. It includes various ecosystems including the Atlantis sand fynbos and Cape Lowland Alluvial Vegetation.

1041 GN 291 in GG 32006 of 16 March 2009.

1042 Van Wyk "Law on Planning and the Environment" 1157. The Act includes information on the preparation, content, review and amendment of bio-regional plans which "inform land use planning, environmental assessment and authorisations".

1043 The *Guideline* is set out in GN 291 in GG 32006 of 16 March 2009.

1044 Many municipalities include this in the SDF including Nelson Mandela Bay Municipality, Knysna Municipality, Msundunzi Municipality and Tshwane Municipality.

1045 Wiley *Urban Edge* 46.

1046 *National Environmental Management: Protected Areas Act* 57 of 2003.

SDF is recognised as a solution for the protection of biodiversity and ecosystem services. It does this by diverting growth pressures away from critical biodiversity areas to ensure that these areas are protected. The coastal area is also an area that needs special protection from an environmental perspective.

4.4.3 National Environmental Management: Integrated Coastal Management Act

There are huge pressures on South Africa's coastal zone[1047] and it is generally accepted that this is an ecologically located sensitive zone that needs special attention with regard to land use controls. Municipalities on the coast have a strategic asset (the coastal and marine environment) and must support sustainable economic development from an economic, social and environmental perspective as a result of their location at the "interface between the terrestrial and marine environments".[1048] NEMICMA[1049] is the legislation that regulates coastal zone management in South Africa and local government[1050] has a large role to play in integrated coastal management[1051] within its jurisdiction. In terms of NEMICMA all three spheres of government have jurisdiction over the coastal zone[1052] meaning that local government has jurisdiction together with the other spheres over activities and the environment in the coastal zone. Cooperative environmental government is essential to ensure efficient coastal

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1047 *National Environmental Management: Integrated Coastal Management Act* 24 of 2008. The coastal zone is defined in terms of the Act as the area comprising the coastal public property, the coastal protection zone, the coastal access land, coastal protected areas, the seashore, coastal waters and any aspect of the environment on, in, under and above these areas. The area of the coastal zone that has the most protection is the coastal public property.

1048 Parramon-Gurney "Marine and Coastal Management" 781-782. This is where the marine environment meets the land environment and creates a complex, unique and valuable interlinked ecosystem, with strategic social and economic value.

1049 This Act acknowledges, in its Preamble, that the coastal zone is a unique space that requires a dedicated and integrated management approach.

1050 Local government's functions are outlined in s 1 of NEMICMA and include management, protection, regulation and management of use and development of the coastal zone and monitoring and enforcing compliance and planning in connection with all the mentioned activities.

1051 At the same time local government has limited jurisdiction and power with respect to the maritime zones in terms of the Act.

1052 Parramon-Gurney "Marine and Coastal Management" 782. Local government has an important role to play and is at the forefront of the sustainable management and development of the coastal zone, which is a critical and challenging position. However, it is national government that has been delegated the most power and is in charge of the seashore, the area between the low and high water marks. This is sometimes delegated to provincial or local government.

management. For municipalities the area of focus is "mainly landward of the high-water mark".[1053] The Act refers to national, provincial and municipal coastal management programmes[1054] as well as coastal planning schemes.[1055]

A municipality may, in terms of the Act, "prepare and adopt a coastal management programme" as part of an IDP and SDF[1056] and indicate "a description of specific areas within the coastal zone" that have a need for special management.[1057] The concept of "a buffer zone" where development is prohibited so that "coastal ecosystems are restored and protected", is in accordance with the "precautionary principle" that is prescribed in NEMA.[1058] An IDP and a provincial or municipal land development plan must be aligned to and be consistent with all coastal management programmes and any conflict in that regard must be dealt with in terms of a specific order of precedence.[1059] A municipality may not adopt a land use scheme "that is inconsistent with a coastal planning scheme" and where a conflict exists the coastal planning scheme prevails over the land use scheme is another way of ensuring that possible conflict is avoided when development is undertaken in a coastal area.

A "coastal set-back line"[1060] must be delineated by a municipality on a map or maps that form part of its land use scheme in order to enable the public to determine its position in relation to the existing cadastral boundaries of the local authority.[1061] This

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1053 Parramon-Gurney "Marine and Coastal Management" 782 and 787.

1054 Chapter 6 of NEMICMA. In terms of s 45(1) of NEMICMA coastal management programmes are policy directives on integrated coastal management and provide for an integrated, coordinated and uniform approach to coastal management by organs of State in all spheres of government, non-governmental organisations, the private sector and local communities.

1055 Sections 56-57 of NEMICMA. Van Wyk "Law on Planning and the Environment" 1159. In terms of s 45(1) of NEMICMA coastal management programmes are policy directives on integrated coastal management and provide for an integrated, coordinated and uniform approach to coastal management by organs of State in all spheres of government, non-governmental organisations, the private sector and local communities.

1056 Section 49(3) of NEMICMA; Van Wyk "Law on Planning and the Environment" 1159; Wiley *Urban Edge*. The City of Cape Town aligns the urban edge with the coastal edge (although this term is not defined in NEMICMA). The stated goal of the City's Environmental Resource Management Department is to consolidate the plans within this document to facilitate the EIA process.

1057 As well as management strategies for those areas as well as estuarine management plans.

1058 Section 2(4)(vii) of NEMA.

1059 Sections 52(2)-(5) of NEMICMA; Van Wyk "Law on Planning and the Environment" 1160.

1060 Means a line determined by an MEC in accordance with s 25 of NEMICMA.

1061 Parramon-Gurney "Marine and Coastal Management" 801. In terms of s 26(5) of NEMICMA a Minister or MEC may determine or adjust the coastal boundary or set back line and must inform

has the effect of demarcating an area within which development will be prohibited or controlled in order to achieve the objects of the Act or coastal management objectives. The "coastal set-back line" has definite similarities to an urban edge concept or demarcation[1062] as noted in the *Cape Town Development Edges and Coastal Edges Policy*.[1063] In terms of this policy, the two main purposes for the implementation of the urban edge is the prevention of urban sprawl and the protection of boundaries such as coastal zones.[1064] By indicating both the urban edge and the "coastal set back" as cadastral boundaries will municipalities be in a position to prevent sprawl because areas are demarcating where development will be prohibited or controlled.[1065]IDPs and provincial or municipal land development plans must fulfil the sustainability requirements of the Constitution and also be aligned to and be consistent with all coastal management programmes.[1066] It is argued that because section 24 of the Constitution and the development of framework environmental legislation such as the NEMA preceded the idea of local government development planning, the integrated development planning system has benefitted and sustainability objectives achieved through local planning.

4.5 Environmental considerations in SPLUMA

As was seen in Chapter 3, SPLUMA refers to environmental considerations and there

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the municipality of this immediately so that it is able to reflect that coastal boundary in its zoning maps.

1062 Wiley *Urban Edge* 49. The City of Cape Town combined the processes for assessment of both urban and coastal edges into a draft development edges policy in terms of the City of Cape Town Development Edges Policy: Urban and Coastal Edge (City of Cape Town 2009 https://carbonn.org/uploads/tx_carbonndata/Coastal%20Edge%20Policy.pdf).

1063 The urban edge policy is found in various policy documents of the city and the urban edge is usually depicted in the SDF. However, see the discussion regarding the urban edge policy of Cape Town in Chapter 2.2.1. See the City of Cape Town 2014 https://resource.capetown.gov.za/documentcentre/Documents/Bylaws%20and%20policies/CCT_Integrated_Coastal_Management_Policy_2014-09.pdf.

1064 Wiley *Urban Edge* 48. It notes too that coastal edge lines are necessary as coastal resources require protection, hazards should be identified and areas that are at risk of flooding must be delineated.

1065 City of Cape Town 2014 https://resource.capetown.gov.za/documentcentre/Documents/Bylaws%20and%20policies/CCT_Integrated_Coastal_Management_Policy_2014-09.pdf.

1066 Du Plessis and Du Plessis "Striking the Sustainability Balance" 450.

are many linkages to other legislation, policies and plans.[1067] As an example, land use schemes[1068] are required to take into account various requirements set out in SPLUMA including but not limited to compliance with environmental legislation. The idea that a land use scheme is aimed at improving the quality of life of its inhabitants and must operate for the common good[1069] fits in well with the environmental right in terms of section 24 of the Constitution. The same applies to the *New Urban Agenda* and SDG 11.[1070]

The EMF obtains its legal mandate from NEMA but it is an effective environmentally focused spatial development tool to help municipalities make informed decisions. Municipalities have been found to be the main users of EMFs "which is surprising since EMF is a provincial and national mandate".[1071] EMFs follow a public participation process and consideration should be given to integrating "the public participation components with IDP, SDF and land use management processes".[1072]

The "coastal set-back line", determined in terms of NEMICMA, has definite similarities to an urban edge concept or demarcation[1073] as noted in the *Cape Town Development Edges and Coastal Edges Policy*.[1074]

Recently comments were called for in terms of NEMA with regard to proposed minimum environmental standards for the preparation and review of municipal SDFs to ensure that environmental and development planning achieves "mutually

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1067 See Chapter 3 relating to SPLUMA requirements that require environmental considerations to be taken into account. Some examples may be seen in relation to SDFs (Chapter 3.2.1) and land use schemes in 3.2.3.

1068 See Chapter 3.2.3.

1069 See Chapter 3.2.3.

1070 See Chapter 5.4.2 in respect of how improving the "quality of life" is addressed in Singapore.

1071 Schoeman, Cilliers and Retief "Environmental Management and Land-use Management" 167.

1072 Schoeman, Cilliers and Retief "Environmental Management and Land-use Management" 168.

1073 Wiley *Urban Edge* 49. The City of Cape Town combined the processes for assessment of both urban and coastal edges into a draft development edges policy in terms of the City of Cape Town Development Edges Policy: Urban and Coastal Edge (City of Cape Town 2009 https://carbonn.org/uploads/tx_carbonndata/Coastal%20Edge%20Policy.pdf).

1074 Th urban edge policy is found in various policy documents of the city and the urban edge is usually depicted in the SDF. However, see the discussion regarding the urban edge policy of Cape Town in Chapter 2.2.1. See the Integrated Coastal Management Policy of Cape Town (City of Cape Town 2014 https://resource.capetown.gov.za/documentcentre/Documents/Bylaws%20and%20policies/CCT_Integrated_Coastal_Management_Policy_2014-09.pdf).

reinforcing outcomes in terms of sustainability".[1075] This will assist municipalities as different planning documents such as EMFs and SDFs will eventually use the same map or criteria that will assist with better decision-making and help close the gap between planning and environmental decisions.

In South Africa SEA has been viewed as "being more of a planning tool than an environmental tool".[1076] This has led to it being better aligned with environmental sensitivities and is promoted by SPLUMA for use by local authorities in planning decisions. It complements the planning purpose and ensures sustainability. Areas with environmental sensitivities should be outside the urban edge to ensure their additional protection. It has been recommended that SEA should be "aligned with nationally and locally defined sustainable development objectives" and become a part of the planning process so that duplication is avoided and effectiveness enhanced.[1077]

The incorporation of the concept of sustainability in both planning and environmental policies, plans and legislation means that they are designed to address issues that compromise the environment when property development is pursued. Spatial planning and environmental plans, policies and legislation are now better aligned to deal with issues of sustainability in terms of SDG 11 and to ensure that development is socially, environmentally and economically sustainable.

As can be derived from above, municipalities play a crucial role in protecting and fulfilling the environmental and related rights in the Bill of Rights as they must ensure the promotion of the social and economic development of the community together with ensuring that fundamental rights such as environmental rights are protected.[1078] Environmental considerations are important when municipalities make planning decisions that relate to the SDF (which includes the urban edge) and the IDP. In so far as they relate to the urban edge, documents such as an EMF and a SEA have an impact on the delineation as environmentally sensitive land that must be configured

[1075] GN 647 in GG 42451 of 10 May 2019. This notice was in terms of ss 23 and 24(3) of NEMA.
[1076] Schoeman, Cilliers and Retief "Environmental Management and Land-use Management" 167.
[1077] Schoeman, Cilliers and Retief "Environmental Management and Land-use Management" 167.
[1078] Section 24 of the Constitution.

to be outside the urban edge as far as possible. Both NEMA and SPLUMA highlight the principles of sustainable development in ensuring that "development must be socially, environmentally and economically sustainable".

4.6 Cooperative environmental governance

Local authorities have control over planning issues and provincial authorities have control over environmental issues.[1079] This means that decisions are made separately that is unsatisfactory. This clearly illustrates the need for cooperation between the spheres.

Chapter 3 of the Constitution is devoted to cooperative government and intergovernmental relations.[1080] Government comprises three spheres that are "distinctive, interdependent and interrelated" and each sphere has equivalent status, "is self-reliant and inviolable".[1081] These divisions are not hierarchical and each sphere must exercise its powers and functions within its own sphere. Even though these are distinctive spheres of government, they do not operate in "hermetically sealed compartments" and there are links between them. Both SPLUMA and NEMA provide for cooperative governance and certainty with regard to decision-making in their Preambles.[1082] NEMA records that principles and procedures must be established for this purpose.

In terms of the Constitution the environment is a functional area of concurrent national and provincial legislative competence that applies to all organs of state, including local authorities, who must cooperate, consult and support one another.[1083]

NEMA principles are key to intergovernmental relations, and reflect the underlying values of *ubuntu.*[1084] In the context of intergovernmental relations, there is a duty on organs of state "to respect each other and work together towards a shared goal".[1085]

1079 See Chapter 3 which deals with planning law and Chapter 4 which deals with environmental law.
1080 Section 41 of the Constitution.
1081 Van Wyk *Planning Law* 3rd ed 44.
1082 This is also a requirement in terms of SPLUMA.
1083 Preamble to NEMA.
1084 Currie and De Waal *Bill of Rights Handbook* 259, 590.
1085 Akintan and Christmas *Intergovernmental Dispute Resolution* 1.

IGRFA was enacted as a framework in accordance with section 41(2) of the Constitution for national, provincial and local government to provide "mechanisms and procedures" to facilitate settlement of any disputes of an intergovernmental nature. Specific objectives include facilitation of coordination in the implementation of policies and legislation and the realisation of national priorities.[1086] Organisations such as the President's Co-ordinating Council as well as inter-governmental forums may be used to resolve cooperation issues.[1087]

Although there are different approaches to the purpose of planning law and environmental law, this study shows that failure to cooperate on spatial planning and land use on the one hand and the environment on the other is causing conflict. Since there is a need for them to be interlinked this conflict must be addressed As IGRFA was implemented specifically due to the lack of cooperative governance, there is a need to implement it effectively to ensure that issues are resolved.

An inter-governmental committee could be created in terms of SPLUMA, NEMA or IGRFA appointed by the President who may establish such a committee. The establishment and the role of the committee must be clearly stipulated. Such as inter-governmental committee must foster cooperation so that all spheres work better and more efficiently.

4.7 Road to SDG 11

South Africa is fortunate in that, unlike many other countries, it has an "enforceable substantive environmental right" in the Constitution.[1088] The recognition of environmental issues in SPLUMA is significant because cognisance must be taken of environmental considerations in the planning and decision-making processes relating

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1086 Spheres of government and organs of state should consult other affected organs of state in terms of prescribed and formal procedures and in their absence consultation must still be held in the best way possible. Actions should be coordinated when implementing policy or legislation and unnecessary and wasteful duplication of jurisdictional contests, and all reasonable steps being taken to ensure sufficient institutional capacity and effective procedures and settling as far as possible such disputes.

1087 Kotzé 2006 *PELJ*. It appears that, although cooperative governance is provided for, fragmentation still exists.

1088 Du Plessis and Du Plessis "Striking the Sustainability Balance".

to development.[1089] NEMA goes further, containing provisions that relate to dispute resolution mechanisms such as conciliation, arbitration and investigation to resolve any conflicts that may arise.[1090]

In fact, SPLUMA and NEMA with its sectoral environmental legislation are far better aligned than before and together they can form a formidable force to ensure that conflict between property development and the environment, especially in urban areas, is avoided and sustainability is achieved.

The strength of the planning and environmental laws and policies is further enhanced in the Constitution by important procedural rights, such as the right of access to information[1091] and the right to just administrative action.[1092] These have an impact on decisions taken with regard to both development and the environment[1093] and support the substantive rights needed to satisfy the requirement of sustainability.

Climate change throughout the world is presently a major threat to sustainable development. Fortunately, in South Africa, government is aware that sustainable development is crucial in addressing the conflict caused by climate change and legislation and policies have been adopted to include a carbon tax, to address climate change and to adopt green economy strategies.[1094] Despite this, "climate change vulnerability of South Africa's urban settlements" still needs attention.[1095]

Despite the objectives of the Constitution and various policies, plans and legislation that contribute to sustainability within the urban edge, important issues are raised in

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1089 Section 42 of SPLUMA supports this and stipulates that all decisions must be consistent with national and provincial policies and also with the SDF; SPLUMA stipulates that all NEMA and environmental legislation must be complied with.

1090 Sections 17-20 of NEMA.

1091 As implemented through PAIA.

1092 As implemented through PAJA.

1093 See ss 32 and 33 of the Constitution and Chapter 2 with regard to PAJA. see also Du Plessis and Du Plessis "Striking the Sustainability Balance" 431-432. There is "constitutional and legislative protection" regarding accessing information to "protect and enforce the environmental right".

1094 South Africa VNR Report 6.

1095 South Africa VNR Report 6. Government agrees that it is necessary to enforce urban densification to improve urban infrastructure so that it copes with climate change, to strengthen "integrated planning, geographic information systems, and asset management components for public infrastructure". It is also the intention to ensure that land use planning includes factors in climate change in its zoning, planning and infrastructure building. See also Du Plessis 2017 *LDD*.

South Africa's Implementation of the 2030 Agenda for Sustainable Development VNR regarding the difficulties the country faces in relation to the attainment of SDG 11.[1096] The VNR is a "process through which countries assess and present progress" made by them in relation to achieving the global SDG goals "and the pledge to leave no one behind".[1097] The VNR has raised issues that relate to human settlements, acknowledged as being "fragmented without comprehensive integration" making them unviable, lacking sustainable economies and forcing the use of motorised transport.[1098] Likewise, green infrastructure upgrades and expansion is needed in South Africa and cities are not coping with volumes of waste generated.[1099] Transport and mobility systems of the *apartheid* era have not improved sufficiently and continue to cause concern as the urban poor live in state-subsidised housing and also "informal settlements on the periphery of large cities".[1100] The bulk of the population still relies on minibus taxis.

Most of the blame is still understandably laid at the door of the previous *apartheid* regime, and together with corruption (widely known and even acknowledged by government in the VNR and in the NSDF) it is becoming extremely difficult to achieve a balance between property development and the environment within the urban edge. It has also been found that some environmental decision-makers are still confusing the notion of sustainable development with environmental conservation and others that make decisions on issues such as the expansion of the urban edge that equate sustainable development solely with economic prosperity.[1101]

There is no doubt that one of the main reasons for conflicts between property

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1096 South Africa VNR Report. See also Chapter 2.2.

1097 Fukuda-Parr *et al* 2018 https://sustainabledevelopment.un.org/content/documents/20549CDPbp201846.pdf.

1098 South Africa VNR Report 98. See Chapters 5.3.2 and 5.6; Singapore has mastered this situation by using satellite cities in a ring system where transport is also ideal and extremely convenient through the metro rail system it has created. See Chapter 6.6.3 relating to Rwanda which, by comparison, is not that advanced and has not reached the status of Singapore. However, it also adopted the ring system to avoid sprawl and has also developed satellite cities. It has achieved success with its *imidugudu* system which has been formalised by government.

1099 Du Plessis 2017 *LDD* 247.

1100 See Chapter 2.1 relating to the historical background in relation to the urban edge.

1101 Du Plessis and Du Plessis "Striking the Sustainability Balance" 416.

development and the environment within the urban edge is attributed to the lack of coordination between the various spheres. Government departments ignore the inputs from other departments and decisions are sometimes justified to give effect to the drive for development and job creation without taking into account environmental considerations.[1102] Emphasising one or the other factor to a greater or lesser extent rather than ensuring the balancing of the requirements of sustainable development creates conflict when property development is undertaken. It is imperative that in terms of the section 2 principles of NEMA, "the sustainability criteria (or sustainable development principles as referred to in NEMA) should be in balance".[1103] This is in keeping with section 24 of the Constitution as well. Closely linked to this is the issue of cooperative government, a requirement of the Constitution,[1104] SPLUMA[1105] and NEMA.[1106]

There are also issues over which there is less control such as the "health" of the South African environment in cities deteriorating, as is the case in many other developing countries in the world. The right to water is contained in the Constitution.[1107] Yet, long periods of prolonged droughts and deteriorating infrastructure make water a scarce resource.[1108] Large cities such as Cape Town and the Nelson Mandela Bay Municipality have critical shortages of water supply, impacting on improving the quality of life as required by SDG 11. Another issue experienced by numerous cities is finance. It is logical that in terms of the MFMA sufficient financial resources are necessary to ensure that relevant steps be taken to ensure sustainability and the balancing of interests.

Having laws and policies properly formulated to protect the environment and avoid

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1102 Du Plessis and Du Plessis "Striking the Sustainability Balance" 419.
1103 Du Plessis and Du Plessis "Striking the Sustainability Balance" 438.
1104 Section 40(1) of the Constitution.
1105 See Chapters 3.4 and 4.8. There appears to be confusion regarding the functions of local and district municipalities, between provincial and national departments and between government departments themselves relating to property development and environmental matters as evidenced by case law discussed.
1106 See the Preamble and ss 2(4)(l) and 2(4)(m) of NEMA.
1107 Section 27(1)(b) of the Constitution provides for the right to sufficient water. Other issues include adequate housing (s 26(1)), a property right (s 25) and the right to freedom of trade, occupation and profession (s 22).
1108 Du Plessis and Du Plessis "Striking the Sustainability Balance" 414.

conflict when undertaking property development is one part of addressing conflict. It is necessary for this to be taken further and the proper implementation of laws, policies and plans promoted especially when it relates to issue of sustainability.

4.8 Conclusion

The environment - and sustainable development - is an important concept globally but it is also an imperative in South Africa, particularly at local government level. The Constitution[1109] recognises a fundamental environmental right in section 24 and simultaneously lays down developmental duties for local governments that incorporate ecologically sustainable development. The duty of local authorities includes the need to address issues such as poverty reduction; housing; transport; sustained economic growth; sustainable resource use; protection of the environment and spatial integration of diverse social and class groups.[1110]

NEMA highlights integrated environmental management and sustainable development to avoid conflict with the environment when development is pursued. For this reason, all planning decisions in terms of SPLUMA, including decisions relating to the urban edge, must comply with and be in accordance with NEMA and environmental priorities.[1111] NEMA addresses details of environmental governance and environmental management issues and also makes reference to the urban edge.[1112]

Various strategic environmental management tools in NEMA, including EMFs, EIAs and SEAs, give effect to section 24 of the Constitution and ensure a precautionary, risk-averse and cautious approach as recommended by the NEMA principles. The EMF obtains its legal mandate from NEMA and is an effective, environmentally spatial development tool that helps municipalities make informed decisions. Municipalities must consider an EMF when making decisions about the urban edge and the urban edge demarcated by municipalities should become a feature of an EMF. SEA shows

[1109] See Chapter 4.2.
[1110] See ss 24(a) and 24(b), 152(1)(b) and (e), 153(a), 154, ch 3, Schedules 4B and 5B of the Constitution. See also Du Plessis 2017 *LDD* 250.
[1111] See Chapter 3.2.
[1112] See Chapter 4.1.

the location of areas with environmental sensitivities and is promoted by SPLUMA for use by local authorities in planning decisions. It is recommended that areas with sensitivities are outside the urban edge to ensure these areas are protected from development.

The use of "tools" such as these goes a long way towards avoiding conflicts and in preventing and assisting with the management of tensions and clashes of interests.[1113]

There is a link between NEMA and the urban edge as environmental legislation linked to NEMA such as NEMICMA[1114] and NEMPAA[1115] have similarities with the urban edge in that they protect environmental areas. The actions of spheres of government and organs of state should be coordinated when implementing policy or legislation and all reasonable steps be taken to ensure sufficient institutional capacity and effective procedures and settling as far as possible such disputes. This is promoted by the Chapter 3 of the Constitution, by NEMA and by SPLUMA. It is recommended that legislation such as IGRFA is capable of providing solutions that may be used and implemented.

The planning and environmental legislation, plans and polices have features in common with internationally accepted environmental and sustainable development principles but despite the progress made, poverty and inequalities with regard to issues such as sustainable human settlements and transport persist as well as issues relating to poverty and scarcity of employment. Much of the duty to resolve issues is placed on local authorities although the need for national and provincial assistance is recognised in the draft NSDF.[1116]

The range of local government legislation does not deal coherently with sustainability and it is fragmented and uncoordinated. It is necessary to consider how sustainability in cities may be improved in view of the study of the foreign jurisdictions of Singapore

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[1113] *Malan v Ardconnel Investments (Pty) Ltd* 1988 2 SA 12 (A); Kotzé "Regulation of Environmental Pollution" 263.
[1114] See Chapter 4.4.3.
[1115] See Chapter 4.4.2.
[1116] Chapter 3.6.1.

and Rwanda.

Chapter 5

Singapore, a well-run sustainable garden city

> The Singapore government has a well-deserved reputation for its long-term, forward looking approach to land use planning, earned largely because of its success in transforming the island state from a chaotic 'third-world' country without adequate housing, basic sanitation and infrastructure in the 1960s, to the gleaming, efficient, well-run city it is today.[1117]

5.1 Introduction

As indicated in the above quote, Singapore is a city-state[1118] lauded for its planning and environmental efforts. In the short span of 50 years, on account of its urban development and infrastructure efficiency, Singapore transformed itself from a third world city-state[1119] to a modern global city-state that is cited as one of the top 10 most liveable cities in the world.[1120] This model of urbanisation is the envy of many countries and cities.[1121] Singapore agreed to share its urban planning strategies to assist African cities through UN programme "which shared Singapore's strategies in urban transformation contextualised to African cities' needs".[1122] Rwanda has already modelled its entire planning and environmental regime on Singapore, even though Singapore is an island state and Asian country while Rwanda is a landlocked African

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1117 Lee Kuan Yew School of Public Policy 2013 http://shinbint.com/writing/Landuse_Case.pdf 1.

1118 A city-state is a city which is also a sovereign state or country that has only one city and is not divided into several territories or provinces.

1119 Choe "Early Years of Nation-building" 3. Lack of modern sanitation in tandem with poor public health and safety standards were the norm at that time.

1120 Choe "Early Years of Nation-building" 3. Binder 2019 *JCULP*. "Urban planners marvel at Singapore; it is virtually a planning utopia" - Lee Kuan Yew School of Public Policy 2013 http://shinbint.com/writing/Landuse_Case.pdf 1.

1121 Binder 2019 *JCULP* 179. The country could easily have remained poor like many other countries, but Singapore took desperate measures to climb out of poverty into the economic powerhouse it is today.

1122 Ministry of Foreign Affairs 2018 https://sustainabledevelopment.un.org/content/documents/19439Singapores_Voluntary_National_Review_Report_v2.pdf (Singapore VNR Report 2018) 37, 40. Fourteen cities from twelve countries were a part of this workshop in 2017.

country.[1123] Other major cities worldwide[1124] are spread out over a large geographical area and given rapid urbanisation and the concern about sprawl throughout the world, it is estimated that Singapore, more than any other city, is an ideal model to reduce sprawl[1125] and promote a compact city and sustainable development.

Singapore's planning and environmental laws, plans and policies are geared at avoiding conflict between property development and the environment in a compact urban background. This is due to land being scarce and there being little room for expansion. Singapore's planning and environmental laws, plans and policies provide valuable perspectives on avoiding conflict within the urban edge.

As stated in Chapter 2,[1126] the urban edge is regarded as a tool to curb unstructured and unsustainable urban sprawl so that a city may have a compact urban form. The urban edge promotes intensification and densification, discouraging and preventing continued outward expansion of urban development.[1127] In the international context, reference is not always made to the urban edge or urban boundary per se. Densification; more focused developments; the need to prevent sprawl and create compact cities are the terms that are promoted. These concepts signify sustainable property development within the urban edge, as we know it. Although Singapore is a small island city-state that does not have an urban edge, it has developed as a compact city embracing intensification and densification as it has virtually no opportunity to expand its boundaries on account of its location.

This Chapter will consider the strategies that Singapore utilises to avoid conflict and attain sustainable development, in accordance with SDG 11. Singapore has been able to achieve a good balance between property development, economic growth and

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1123 See Chapter 6 for a full discussion on Rwanda's planning and environmental laws.

1124 Such as Sydney and Vancouver that could also be good examples.

1125 Khoo and Remy "Making Singapore a Liveable and Sustainable City" 81. The lessons learnt from the Singapore approach to urbanisation will be useful to many other cities, especially given the need to reduce urban sprawl and dependence on the car as the major mode of transport.

1126 See Chapter 2 for a detailed discussion on the urban edge.

1127 Reference was made to this in relation to the *Gauteng Urban Edge Policy* that was initiated as a tool in 2001 but was rescinded in 2011 with the intention being made clear that there was still the need to limit sprawl.

environmental protection.[1128] This city-state with unique circumstances of limited land and high urban density "demanded the prudent and strategic" use of land so that it could develop sustainably because of its "increasing population and economic growth".[1129] In addition corruption in Singapore is virtually non-existent.[1130] For these reasons, it is a fine example of how social and economic development may be achieved whilst simultaneously promoting environmental sustainability so as to avoid conflict.[1131]

Property development or urban development in the context of this study refers to all town development and includes housing, business, industrial development and infrastructure development.[1132] This Chapter will focus on these types of development in Singapore against the background of creating sustainable cities and communities in terms of SDG 11. Urbanisation in Singapore has progressed to such an extent that the entire island is classified as urban.[1133] As stated in Chapter 1,[1134] the creation of sustainable cities in terms of SDG 11 has particular relevance to this study as it includes an important aspect that relates to improving urban planning and management to achieve economic and social goals whilst striving for environmental sustainability.[1135] Singapore has consistently focused on two key principles, which are: "sound and dynamic urban governance coupled with integrated long term planning" to ensure sufficient land for sustainable growth coupled with a convenient and "high-quality living environment" for its people.[1136] SDG 11 is intent on making cities safe and sustainable. This also means ensuring that people have safe and affordable housing: upgrading slum settlements;[1137] ensuring public transport for people and

1128 Tan Yong Soon "Environmental Planning for Sustainable Development" 59.
1129 Singapore VNR Report 2018 37.
1130 Binder 2019 *JCULP* 182. No record exists of widespread public corruption in the independent Singapore. It is currently ranked fourth best on the list of corruption in countries, a marked difference in relation to corruption in South Africa.
1131 NWU 2018 https://pressoffice.mg.co.za/northwestuniversity/content/mQwkoM6PNd4v3r9A.
1132 Chapter 2 relating to the urban edge deals with this aspect.
1133 Yuen "Guiding Spatial Changes" Abstract.
1134 See Chapter 1.4 on International Content.
1135 NWU 2018 https://pressoffice.mg.co.za/northwestuniversity/content/mQwkoM6PNd4v3r9A.
1136 Singapore VNR Report 2018 37.
1137 Extreme poverty is often concentrated in urban spaces, and national and city governments struggle to accommodate the rising population in these areas.

creating public spaces that are green.[1138] To satisfy all these criteria, Singapore takes a long-term approach to urban planning. To understand Singapore's planning regime properly a study of its planning legislation and plans must be made.

A somewhat simple explanation is offered at the outset for readers to get a broad grasp of how the planning and environmental plans and legislation fit in. It is an attempt to simplify a complex and integrated planning and environmental system and indicates the main legislation; the various spatial and environmental plans; the authorities that deal with different aspects and how this is all integrated and connected to ensure that the resultant development is sustainable. The full details and discussions follow thereafter.

The *Planning Act*[1139] is the main legislation for planning. Singapore's spatial land use planning is based on two plans. The first is the long-term Concept or Land Use Plan.[1140] The Master Plan[1141] is the second plan and comprises Special Detailed Control Plans (SDCPs)[1142] which collectively form the Master Plan. The Master Plan translates the broad strokes of the Concept Plan to give effect to it and guides the development of land and property.[1143] In this study, Singapore's past and present Concept Plans are all discussed as they focus on different aspects of sustainable development and help trace Singapore's progress. An explanation is also given of the original Master Plan that is still Singapore's Master Plan as amended from time to time. The planning and management authority, the Urban Redevelopment Authority (URA)[1144] in the Ministry of National Planning (MNP) prepares both the Concept and the Master Plan and is

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1138 The one area where it needs improvement is in the area of EIAs and related public participation. See Chapter 5.4.3.

1139 *Planning Act* 3 of 1998 (the *Planning Act*). See discussion on the *Planning Act* in Chapter 5.3.1.

1140 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Concept-Plan/About-Concept-Plan. See discussion on various Concept Plans in Chapter 5.3.2 below.

1141 URA 2019 http://www.ura.gov.sg/uol/master-plan.aspx?p1=View-Master-Plan. See discussion on Master Plan in Chapter 5.3.3 below.

1142 URA 2020 https://www.ura.gov.sg/maps/?service=MP. These plans include amongst other things, plans of parks and waterbodies, public spaces, landed housing areas, conserved buildings and monuments, connectivity and underground plans.

1143 Singapore 2019 https://www.ura.gov.sg/-/media/Corporate/Planning/Master-Plan/MP19writtenstatement.pdf?la=en. This is similar to a land use scheme in terms of SPLUMA. See Chapter 3.2.1.

1144 See *Urban Redevelopment Authority Act* 32 of 1989. URA is discussed in more detail in Chapter 5.3.4.

simultaneously referred to as the "conservation" authority because conservation in Singapore falls into the realm of planning in Singapore.

The ministry that deals with the environment is now called the Ministry of Sustainability and Environment (MSE) and the main environmental legislation is the *Environmental Management Planning Act* (EPMA).[1145] The Green Plan[1146] is not a planning document but a national plan designed to make Singapore a model green city. It was amended thrice but is now superseded by the *Sustainable Singapore Blueprint*. Its main focus is pollution but it has consolidated various other separate policies and legislation relating to the environment as well.

The National Environment Agency (NEA)[1147] in the MSE assists the URA and provides advice and guidance regarding environmental issues through various stages of planning, starting with the Concept Plan. It further assists the URA to finalise the SDCPs, which make up the Master Plan. The NEA also manages the One Stop Centre (OSC) of the Development Control and Licensing Department (DCLD) that is responsible for environmentally related planning permissions in terms of the *Building Control Act*.[1148] This integrated but complex system ensures that development is sustainable and works effectively in Singapore.

The first part of this Chapter will focus on the *Planning Act*. It will trace the progress made by Singapore's various Concept Plans through the years and include a discussion of the present Concept or Land Use Plan. The Master Plan and its role in implementing the strategies of the Concept Plan will be followed by a discussion on the URA and its functions. The second part of this Chapter will discuss the different phases of Singapore's environmental progress leading to the formulation of Singapore's Green

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1145 *Environmental Protection and Management Act* 9 of 1999 (EPMA). The Act was previously called the *Environmental Pollution Control Act* as it deals with air pollution, water pollution, noise and toxic and hazardous substances.

1146 Ministry of the Environment *Singapore Green Plan*. The Singapore Green Plan issued by the National Environment Authority (NEA) is not a statutory law, but is a "soft law".

1147 Established in terms of the *National Environment Agency Act* 4 of 2002 (NEA Act). Discussed in more detail in Chapter 5.4.2.

1148 Section 5 of the *Building Control Act* 9 of 1989 (the *Building Control Act*).

Plan[1149] and the subsequent *Sustainable Singapore Blueprint*. Singapore's success in the field of property development, whilst protecting the environment, is well-known globally. The role played by the MSE through the NEA to ensure sustainable property developments will be discussed against the background of the EPMA. EIAs and the related public participation process or the lack of them, is a concern and any discussion on Singapore's environmental trajectory must include this aspect.[1150]

How decisions relating to conflict between property development and the environment are resolved is also relevant and will be set out, followed by a discussion on satellite cities,[1151] a major type of development in Singapore. Such cities are also being implemented in developing countries such as Rwanda[1152] and Kenya to avoid sprawl. Satellite cities will be investigated to ascertain the possibility of utilising this form of sustainable property development in South Africa.

This study should provide lessons to assist in addressing conflict between property development and the environment within the urban edge in the cities of South Africa.

5.2 Background

Singapore's success has been remarkable[1153] especially as it has no natural resources whatsoever[1154] and has very limited land for expansion.[1155] Having gained autonomy

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1149 The Singapore Green Plan issued by the NEA is not a statutory law but is a "soft law". It was presented at the World Summit on Sustainable Development in Johannesburg, South Africa, June 2002, and revised in 2006; Lin Heng 2010 *J Court Innov* 138. See discussion on the Green Plan in Chapter 5.4.1 below.

1150 Lin Heng 2010 *J Court Innov* 140. Comprehensive statutory laws such as the *Environmental Protection and Management Act* 9 of 1999 and *Prevention of Pollution of the Sea Act* 18 of 1990 have been passed to govern certain environmental issues to protect the natural environment as well as public health. The role of the URA in incorporating environmental issues in planning as well as NGOs and the public in protecting the environment are all factors.

1151 See Chapter 5.6 for a full discussion.

1152 See Chapter 6.6.3 relating to satellite cities in Rwanda.

1153 Liu "Planning and Urbanisation in Singapore" 31. As early as 1985 (which is 26 years after democracy in Singapore in 1959), squatters were cleared. Public Housing was used for 81% of the population. The unemployment rate lowered to about 4% and it seemed that the basic needs of the population had been met. South Africa celebrated 25 years of democracy in 2019 but sadly cannot claim similar successes. Hence there are lessons to be learnt from Singapore.

1154 Tan "Environmental Planning for Sustainable Development" 66.

1155 Ng Lang "Planning to Overcome the Constraints of Scarcity" 71. After independence in 1965 Singapore had 580 km^2 of land and only expanded it to the current modest 719 km^2 after many years of land reclamation efforts as this is the only way that Singapore is able to expand its extent.

in 1965, it emerged from being an under-developed poor city-state[1156] to become one of the wealthiest countries in the world.[1157] Despite major property developments, an improved economy as well as a substantial population increase since independence, Singapore has actually improved its urban environment.[1158]

As may be expected, initially planning for land use and urban development was mostly about overcoming the physical constraints as Singapore was a small island and city-state.[1159] One of the main objectives of urbanisation in Singapore has been to maximise the function of land in its city planning.[1160] Managing property development where space for expansion is limited is a challenge. According to Lang Ng[1161] this means that it has the ideal environment for urban innovation, in particular, with regard to the prevention of sprawl. Because of its location Singapore is a compact city with very limited space for lateral expansion of its development boundary. This could be relevant because both South Africa and Rwanda[1162] have implemented urban edges or boundaries as a strategy to contain sprawl and manage it in a way that makes their cities more compact.[1163] The urban edge is not a stand-alone concept and must be accompanied by other concepts or strategies to be effective and Singapore may provide these guidelines.

Post-independence, Singapore's priority was to provide decent jobs and good housing. A safe, clean and green environment with respect for the rule of law also formed a

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1156 Choe "Early Years of Nation-building" 19. That a small island nation emerged from near destitute urban conditions to become one of the world's wealthiest countries is indeed a remarkable feat involving cooperation, innovation, and courage. It is these three qualities that, time and time again, resonate in the story of Singapore's urban history.

1157 Choe "Early Years of Nation-building" 19.

1158 Liu "Planning and Urbanisation in Singapore" 31.

1159 In South Africa the DFA was the first Act that discouraged sprawl. See Chapter 2.1. See further discussion on DFA in 6.9 where a comparison was made regarding the counterpart legislation to the DFA, implemented in Rwanda, after the genocide and civil war.

1160 Liu "Planning and Urbanisation in Singapore" 27; Ng Lang "Planning to Overcome the Constraints of Scarcity" 71. Singapore is an ideal study considering successful sustainable development in accordance with the SDGs. Unlike most countries, Singapore has nowhere to sprawl beyond its island's boundary.

1161 Ng Lang "Planning to Overcome the Constraints of Scarcity" 76.

1162 See Chapter 2.1 on sprawl and the urban edge and Chapter 6.6.2 on Rwanda as its planning and environmental laws are modelled on Singapore and it too has made remarkable success in a short time.

1163 See the discussion on urban edge in Chapter 2 and the discussion on Kigali and the urban edge in Chapter 6.6.2.

part of its early vision.[1164] Because of its unique circumstances, with no natural resources and hinterland, taking good care of the environment was seen as a necessity and not a choice. At an early stage Singapore embraced meritocracy and racial diversity to support an open economy, welcome foreign trade and investment and build good schools and universities that would train a skilled workforce.[1165] At the same time it went to great lengths to avoid conflict between property development and the environment. A study of its legislation, plans and policies will give full insight into how this was done.

Singapore has to fit everything a country needs into a city-sized space,[1166] including a central business district, residential developments, schools, hospitals and parks by using available land optimally through long-term planning.[1167] Multi-storey buildings are designed specifically to avoid the overcrowded, built-up feel of a densely populated city and satellite cities were introduced. It was hoped to direct new economically and environmentally appropriate developments to these areas to help improve infrastructure planning and reduce congestion.[1168]

The land tenure system in Singapore was originally freehold title. The need for land for development to accommodate Singapore's changing needs and increased population, necessitated the government changing the freehold tenure system by adding a leasehold system.[1169] This enabled progress and enhanced development to take place. There are now two categories of land holding, namely freehold and

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[1164] By contrast the DFA promulgated in South Africa focused on expediting property development. Section 3(1)(c) of the DFA's "general principles for land development" did include numerous ideas such as: the integration of all aspects of land development, discouraging urban sprawl and encouraging environmentally sustainable land development. However, the same focus on the environment at that stage was lacking and was addressed in the promulgation of SPLUMA which took place much later. See Chapter 3.2.

[1165] Ng Lang "Planning to Overcome the Constraints of Scarcity" 71.

[1166] Kolczak 2017 https://www.nationalgeographic.com/environment/urban-expeditions/green-buildings/green-urban-landscape-cities-Singapore/. Singapore aims to be the World's Greenest City. It is hard to believe that the city of London is double the size of Singapore and that on this little island there are five airports, 17 reservoirs, several nature reserves, extensive land for military training, and one of the largest container ports in the world.

[1167] See the discussion on the Concept Plan in 5.3.2 below. This was facilitated by long-term planning since the inception.

[1168] NWU 2018 https://pressoffice.mg.co.za/northwestuniversity/content/mQwkoM6PNd4v3r9A. Leitmann *Integrating the Environment in Urban Development* 1.

[1169] Stanley 2018 https://stackedhomes.com/editorial/land-ownership-in-singapore/#gs.vy8nqj.

leasehold but the bulk of the land is owned by the state.[1170]

The Constitution of the Republic of Singapore,[1171] unlike the South African Constitution,[1172] does not contain any provision relating to the environment[1173] (nor the right to property).[1174]

However, the *modus operandi* of the authorities, the common law, various statutory laws and planning instruments all indicate that sustainable development and the requirements of SDG 11 are top priorities in Singapore. It is necessary to study Singapore's planning and environmental laws and their progress during Singapore's development together with related documents to analyse the concrete legal steps taken by Singapore to reach its enviable status.[1175]

5.3 Planning laws, policies and plans

There are three main documents to be considered in relation to Singapore's planning. The first is the main legislation, known as the *Planning Act*.[1176] The long-term vision for Singapore's development, land use and transportation is set out in the non-statutory Concept Plan (or Land Use Plan).[1177] The vision of the Concept Plan is implemented through the shorter term Master Plan,[1178] a statutory land use plan promulgated in terms of the *Planning Act*[1179] that is, in turn, supported by SDCPs,

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1170 Stanley 2018 https://stackedhomes.com/editorial/land-ownership-in-singapore/#gs.vy8nqj

1171 *Constitution of the Republic of Singapore Act* 1 of 1963 (the Singapore Constitution).

1172 See Chapter 4.2.

1173 Fowler 2020 *CJEL* 111-114. Although not explicitly included in the Singapore Constitution, the "right to life" clause in art 9(1) could in some countries include environmental protection. It was unlikely that the Singapore courts would give it such a wide interpretation.

1174 See also Binder 2019 *JCULP* 163. Art 13 of the *Federal Constitution of Malaysia*, 1957 provided a constitutional right to property. Singapore dropped that provision upon independence for various reasons, including the small size of the island and the extremely high value of property due to the enviable location of Singapore.

1175 Tan "Environmental Planning for Sustainable Development" 59.

1176 See discussion on the *Planning Act* in Chapter 5.3.1.

1177 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Concept-Plan/About-Concept-Plan. The first Concept Plan formulated in 1971 "laid the foundation for Singapore's growth for a better quality of life with new towns, transport infrastructure and access to recreation". See discussion on various Concept Plans in Chapter 5.3.2 below.

1178 See Chapter 5.3.3 for a discussion on the Master Plan.

1179 URA 2019 http://www.ura.gov.sg/uol/master-plan.aspx?p1=View-Master-Plan. The broad strategies and proposals of Land Use Plan are then considered in more detail in the Master Plan. See discussion on Master Plan in Chapter 5.3.3 below.

which together make up the Master Plan. The Master Plan, although linked to planning, incorporates conservation and this has had a profound impact on land use planning in Singapore.[1180] The Concept Plan and the Master Plan are compiled by the URA, a statutory board that has the dual title of being the "land use planning and conservation authority" in Singapore, and is a part of the Ministry of National Development (MND).

5.3.1 Planning Act

When Singapore was founded in 1819, forests covered almost the whole of the island.[1181] Singapore and South Africa both have a colonial past and the legislation of both countries in the field of planning law is based on English law.[1182] In fact, one of the earliest town plans of Singapore (the Jackson Plan), with its grid layout and "a clear segregation of residential communities" for ethnic groups, was prepared under the guidance of Sir Stanford Raffles who was appointed as the Governor of Singapore.[1183] The *Planning Ordinance*, now known as the *Planning Act*, in its long title refers to the planning and improvement of Singapore.[1184] All planning in terms of the Act is implemented through the Master Plan, which is designated in the Act as the statutory plan for planning and allocation of land for competing uses.[1185] The Master Plan is supported by the SDCPs, which are described as development control plans.[1186] Input and advice on these detailed plans from an environmental perspective is obtained from the NEA.[1187] Unlike the Master Plan, SDCPs are non-statutory plans. They provide "guidelines and controls for specific areas of development" as required

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1180 See discussion on Master Plan's Conservation Plan in Chapter 5.3.3 below.

1181 Kalyani *Sustainability of an Urban Forest*. Land clearance for development was done on a massive scale by the colonial government at that early stage.

1182 See Chapter 2.1.

1183 Chew 2009 https://eresources.nlb.gov.sg/infopedia/articles/SIP_1564_2009-09-08.html. The ethnic communities were European, Chinese, Malay, Arab and Indian; Van Wyk *Planning Law* 3rd ed 27. Until the mid-1900s South Africa followed the English example in planning issues and early town plans were very similar to English town plans. Ethnic communities were separated in South Africa just as they were in Singapore.

1184 The present Act repealed Singapore's *Planning Act* of 1990.

1185 Section 6-8 of the *Planning Act*. These are issues such as housing, commerce, industry, parks, transport etc.

1186 URA 2020 https://www.ura.gov.sg/maps/?service=MP. They include plans of parks and water bodies, public spaces, landed housing areas, conserved buildings and monuments, connectivity and underground plans.

1187 In terms of s 11(1)(b) of NEA Act, in terms of which assistance and advice must be provided to government regarding environmental issues.

for the processing of applications for development.[1188] Singapore's integrated system means that planning and the environment, though being in different ministries, are integrated for more efficiency and are thereby effective in avoiding conflict between property development and the environment. In fact, the procedure for obtaining approval for developments is dealt with under the environmental sector and the NEA controls the granting of plan approval through its OSCs.

The Minister appoints the "competent authority" responsible for the operation of the *Planning Act.* In 1989 the URA was designated to be the planning authority in terms of the new *Urban Redevelopment Authority Act*.[1189] In Singapore the planning function of the URA is combined with the function of the conservation authority. The integration of planning with aspects of the environment is evident in the *Planning Act,* which also deals extensively with areas termed "conservation areas".[1190] These areas are designated in sections 8 and 9 as protected areas. Development of property in conservation areas[1191] is strictly prohibited unless the necessary permissions are obtained and preservation of these areas is paramount.[1192] In terms of the South African SPLUMA it is also necessary for municipalities to consider environmental considerations[1193] when making decisions on land use applications.

The *Planning Act* was implemented to provide the basic legal framework to control the use and development of land.[1194] As such it lays down requirements and prohibitions

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1188 URA 2020 https://www.ura.gov.sg/maps/?service=MP; s 11(1)(b) of the NEA Act obliges the NEA to advise government on all environmental matters and to be involved with environmental licences for buildings and the Special Detailed Control Plans (SDCPs) are used to make decisions regarding licensing.

1189 *Urban Redevelopment Authority Act* 32 of 1989 (the URA Act). See also Kong and Yeoh 1994 *Urban Studies*.

1190 In terms of s 9 of the *Planning Act* a designated conservation area could be an area of "special architectural, historic, traditional or aesthetic interest". In terms of s 11 the competent authority may, issue *Guidelines* that relate to the "conservation of buildings or land within a conservation area and for the protection of their setting". The said authority shall also publish copies of these *Guidelines* for sale to the public.

1191 Section 12(2) of the *Planning Act*.

1192 Sections 8-9 of the *Planning Act*. See also below in this Chapter a discussion on the Development Control and Licensing Department (the DCLD), which deals with approval of building plans.

1193 SPLUMA and environmental considerations were discussed in Chapters 3.2.1, 3.2.3 and 4.5. It was noted that the recognition in SPLUMA of environmental issues was a major step in South African planning law.

1194 Section 6 of the *Planning Act* read with s 6(e) of the URA Act. The strategies and proposals in the Land Use Plan are considered in the Master Plan. For a high quality living environment it is

regarding property development.[1195] Development of property, being the main subject of the *Planning Act* is defined as:

> …the carrying out of any building, engineering, earthworks, or other operations in, on, over or under land, or the making of any material change in the use of any building or land… [1196]

One of the main reasons attributed to Singapore's success from an environmental perspective is that environmental controls form a part of land use planning to ensure that property developments are properly located[1197] and are also in keeping with surrounding land uses.[1198] In terms of section 14(1) of the *Planning Act* a planning authority must act in accordance with the Master Plan when approving a development. However, an exception in section 14(2)(e) relates to a development not being approved if the competent authority believes that that the proposed development is "incongruent with the developments on land adjoining the relevant land, or its locality".

Written planning permission must be obtained before commencement of any works for a development[1199] in terms of the *Building Control Act*.[1200] The Central Building Plan Department was renamed the DCLD to reflect the environmental licensing function undertaken by DCLD as an initiative of the NEA.[1201] The DCLD manages building control, with environmental issues being a priority and buildings are required

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necessary to include: the provision of good affordable housing with amenities; greenery in the living environment; more mobility and better transport connectivity; a vibrant economy with employment; and a good living environment in the future.

1195 Part III of the *Planning Act* deals with development and subdivisions and lays down rules in that regard, while Part VI deals with enforcement of these rules and Part V deals with development charges.

1196 Section 12(1) of the *Planning Act* states that to develop land means the carrying out of "building, engineering, mining or other operations" in respect of land, or making any "material change in the use of any building or land". The definition of development in SPLUMA is discussed in Chapter 1.3.2. It defines "land development" in SPLUMA as "the erection of buildings or structures on land, or the change of use of land, including township establishment, the subdivision or consolidation of land or any deviation from the land use or uses permitted in terms of an applicable land use scheme"..

1197 Tan "Environmental Planning for Sustainable Development" 59.

1198 Some of the others factors relate to protecting watersheds; proper waste collection with treatment and disposal; a programme for greening and conservation, and facilities for recreation, education and research.

1199 Sections 13 and 14(4) of the *Planning Act*.

1200 Section 5 of the *Building Control Act* 9 of 1989.

1201 In terms of s 11(1)b of the NEA Act. Also see discussion under Chapter 5.4.2.

to score a minimum score[1202] for environmental sustainability standards to be approved.[1203] Approval for plans in terms of the *Planning Act* must be made to the Commissioner of Building Control.[1204] It is necessary that all plans submitted for approval comply with the prescribed *Guidelines* of the DCLD. These relate to matters such as the permissible height of buildings. The DCLD also checks that environmental factors are incorporated into land use planning, the developmental control of new developments and that developments comply with "environmental, health and pollution control requirements".[1205] All this information is clear in guidelines that are distributed in a *Development Control Handbook* or *Guidelines*[1206] that must be strictly complied with when applications are made. In Singapore, preliminary approvals in principle under the *Planning Act* are given online and final written approval is granted once other requirements are provided after the online permission.[1207]

The *Planning Act* allows the consideration of proposals, where projects do not comply with all existing guidelines or may permit ad hoc alterations to the Master Plan.[1208] Appeals to planning decisions made in terms of the *Planning Act* and *Building Control Act* are permitted to the Minister, whose decision is final in that regard.[1209]

All the coordination and planning in Singapore is carefully laid out in two key planning

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1202 Referred to as a "Green Mark Score" under the definitions in the Act.

1203 See Definitions and Part IIIb of the *Planning Act*, which deals with "minimum environmental sustainability standards which also includes issues of energy efficiency", and s 22FJ, which deals with energy efficiency.

1204 Section 49 of the *Planning Act*. Regulations prescribe issues such as the actual application for plans to be approved, the establishment of objectives and performance standards for the designs and construction of buildings, as well as environmental sustainability and how it is to be measured.

1205 NEA 2020 https://www.nea.gov.sg/corporate-functions/Contact-Us/overview. The DCLD also operates as a One Stop Centre (OSC) for all NEA licence-related matters. See further regarding this in Chapter 5.4.2.

1206 Rwanda also has *Guidelines* that incorporate all aspects of plan policies and legislation relating to sustainable development and *Guidelines* are recommended for use in South Africa.

1207 Stein 2012 http://peoplebuildingbettercities.org/wp-content/uploads/2013/04/Stein-International-Best-Practice.pdf.

1208 Section 10 of the *Planning Act* prescribes Rules called the Planning (Master Plan) Rules (GN No S 245/1999 (2000 revised ed)).

1209 Section 22(7) of the *Planning Act*; ss 21(3), 22(5), 22(f)(4), 23(11) and 29(k (3) of the *Building Control Act.*

documents:[1210] the Concept Plan[1211] that focuses on strategic broad strokes rather than details[1212] and the Master Plan[1213] that focuses on the minute detail. These plans will be discussed in the following paragraphs.

5.3.2 Concept Plan

The Concept Plan, a non-statutory, strategic, long-term, land use and transportation plan that determines land use allocation and infrastructure development for the next 40- to 50 years, is prepared by the URA, and is presented for acceptance to the Singapore Parliament by the Ministry of National Development.[1214] Although it is not a statutory plan, it is important for forward planning in Singapore and most of the proposals made are implemented.[1215] The Concept Plan gives a broad direction for land allocation and indicates the transportation policy of government.[1216] While the MND, through the URA, prepares the Concept Plan, plans are drawn taking ideas and decisions collectively by government in Singapore.[1217]

Singapore has had four Concept Plans thus far: they are the 1971, 1991, 2001 and the latest 2013 Concept Plan. These will be discussed so that the course of long-term planning in Singapore may be tracked as it happened and its progress towards sustainability is more clearly seen. Each of these plans is focused on the issue of limited land for development and brings to the table an aspect of sustainability that is significant.

1210 Both the Master Plan and Concept Plan play an important role in helping to balance the many land use needs, such as housing, industry, commerce, parks and recreation, transport, defence and community facilities.

1211 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Concept-Plan/Past-Concept-Plans. The first Concept Plan was formulated in 1971. It laid the foundation for Singapore's growth for a better quality of life with new towns, transport infrastructure and access to recreation.

1212 The Concept Plan attempts to safeguard land for all the major land uses and key urban infrastructure (especially transport infrastructure) to support growth.

1213 URA 2019 http://www.ura.gov.sg/uol/master-plan.aspx?p1=View-Master-Plan. Introduced in 1958, the Master Plan has evolved from being a plan that reflected preceding land use amendments to one that focuses on planning ahead for future developments.

1214 MND 2013 https://www.singaporerealestate.online/admin/pdf/pdfs/f9e8e0188704fb747626dfae53113441.pdf. See also Singapore VNR Report 2018 37.

1215 Chew 2009 https://eresources.nlb.gov.sg/infopedia/articles/SIP_1564_2009-09-08.html.

1216 Singapore VNR Report 2018 37.

1217 Ng Lang "Planning to Overcome the Constraints of Scarcity" 73.

Singapore's first 1971 Concept Plan,[1218] was a "strategic, long-term, land use" planning framework that mapped the long-term, land use[1219] "vision for Singapore". It was put together with the assistance of the UN Development Programme in 1971.[1220] In 1963, an expert team of the UN had recommended "conservation, rehabilitation and rebuilding" and despite the pressing need for urban development and renewal, it also promoted the "conservation of Singapore's unique urban landscape" as a part of urban renewal.[1221] At that stage the Singapore government's focus was on the "social and economic" needs of development and not on conservation.[1222] The main idea in the 1971 Concept Plan related to a decision to "develop Singapore along a Ring Plan" that "addressed both land use and transport system planning" and allowed for staged development, with flexibility for changing priorities later on.[1223] Much of Singapore's urban structure and compact form today is the outcome of this long-term approach.[1224] Along the ring, high density satellite cities were planned[1225] and are now a characteristic feature in Singapore. These satellite cities were earmarked around the central water catchment area, to include future development, including the development of public housing with convenient linkages

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1218 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Concept-Plan/Past-Concept-Plans. Also see Tan "Environmental Planning for Sustainable Development" 59.

1219 Ng Lang "Planning to Overcome the Constraints of Scarcity" 72. The Land Use Plan determines where land would be set aside for future townships, industrial parks, the financial centre, the airport, the port etc., and this plan had defined the skeleton of Singapore's urban structure today.

1220 Liu "Planning and Urbanisation in Singapore" 28. A population of 3.4 million was estimated by 1992. Young nations such as Singapore and Rwanda have called for assistance and advice from the UN in the early days of their democracy. See Chapter 6.5.6 regarding the UN's audit of Rwanda's progress and advise going forward.

1221 Melic *Past, Present and Future* 13.

1222 Melic *Past, Present and Future* 13.

1223 Khoo and Remy "Making Singapore a Liveable and Sustainable City" 88. These included integrated plans for an efficient Mass Rapid Transit system and expressways.

1224 Khoo and Remy "Making Singapore a Liveable and Sustainable City" 88. This strategic Ring Plan focused on the creation of "four urban corridors, the inner two encircling the central catchment area and the outer two extending to the east and west along the southern coastline".

1225 Satellite towns are discussed in more detail in Chapter 5.6 below. Importantly, these satellite towns were planned at the inception and were not an afterthought, planned at a later stage. This is completely different from satellite towns in Africa or Wescape, planned near the city of Cape Town. Also see Leitmann *Integrating the Environment in Urban Development* 16. The centre of "each new town is also the terminal point for public transportation". Most residents live "within five minutes' walking distance from their neighborhood" centre. New satellite towns were designed to "encourage transportation other than by automobile".

to the Mass Rapid Transit lines.[1226] The VNR comments relating to the attainment of the SDG 11 goal specifically mention difficulties that are experienced in South Africa relating to transport and housing and Singapore's satellite cities may provide the inspiration for resolving these issues.

The foundation for Singapore's growth and city structure was designed in terms of this first Concept Plan to meet the basic infrastructure needs of a young nation.[1227] It also reflected an understanding that urban planning must be carried out within an overall framework of social and economic policies[1228] that are characteristic of Singapore's approach to integrated planning.[1229] What was missing in the Concept Plan, at that stage, was the environmental aspect.[1230]

It was in 1985, in between the phases of the 1971 and 1991 Concept Plans, that things changed. During this period the Central Area Structure Plan was being prepared by the URA[1231] and conservation in that area was seriously considered for the first time.[1232] This signalled changes in Singapore's "overall development urban planning priorities" and also the role of the URA, a planning entity, to include conservation and the environment in its planning.[1233] Prior to this, massive deforestation had taken place thereby ecologically transforming the city.[1234] The effect was that commencing with the 1991 Concept Plan, concrete environmental planning and guidelines were regularly introduced and a more systematic approach to planning emerged where both growth

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1226 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Concept-Plan/Past-Concept-Plans; Liu "Planning and Urbanisation in Singapore" 28. However, Singapore has grown faster and reached 2.9 million by 1982, thus making it necessary to update this Plan. Public housing with convenient public transport is much needed in South Africa. The ring system with satellite cities developed all along the ring is in contrast to the *apartheid* system of housing for the masses being located at the edges of cities.

1227 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Concept-Plan/Past-Concept-Plans.

1228 Similarly, both the South African Constitution in terms of s 153(a) and the MSA require that a municipality must ensure that it promotes "social and economic development" and ensure that fundamental rights such as environmental rights are protected. See discussion on this aspect in Chapter 4.2 relating to the Constitution and the environment.

1229 The focus on the environmental aspect began a decade later.

1230 As discussed in 4.2, South African municipalities are also required to take environmental factors into account.

1231 See discussion on the Structure Plan and Master Conservation Plan in Chapter 5.3.3.

1232 This Plan reflected the then new Mass Rapid Transit line for trains.

1233 Melic *Past, Present and Future* 22. See the implementation of the Conservation Master Plan in Chapter 5.3.3.

1234 Puay "Greening Singapore" 180.

(development) and the environment needed to prosper simultaneously.[1235] It is debatable whether the key reason for this was economic or whether it stemmed from an early belief that planting more greenery would encourage cloud formation and retain moisture, thereby making Singapore a more pleasant place in which to live.[1236]

The 1991 Concept Plan[1237] was formulated after an intense and rigorous review process that compelled planners to go down to the minutest details.[1238] The focus was on alleviating congestion in the city core through decentralisation in a way that ensured that both commercial and industrial developments were dispersed across the city with light industries located in close proximity to residences for easy commute to and from work.[1239] New priorities that included demographic changes, economic restructuring and the balancing of environmental considerations were introduced.[1240] The URA's vision evolved from meeting basic needs, on which they previously focused, to creating much more, with nature, waterbodies and urban development being woven "seamlessly together".[1241] A central business district that was vehicle-free,[1242] and mobility by "mass transit" and not through motor vehicles, was promoted.[1243] Many

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1235 Puay "Greening Singapore" 180.

1236 Puay "Greening Singapore" 180-181. If it is the latter, although these views were made known about 30-40 years earlier, it is the same as current scientifically based paradigms regarding the need for urban greenery and urban hydrology as a means of moderating the urban climate for inhabitants.

1237 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Concept-Plan/Past-Concept-Plans; Ng Lang "Planning to Overcome the Constraints of Scarcity" 73. The reviews involve many ministries and agencies and provide a platform to the whole of government to make strategic decisions on the long-term use and planning of land.

1238 Khoo and Remy "Making Singapore a Liveable and Sustainable City" 89.

1239 Liu "Planning and Urbanisation in Singapore" 28. These past Concept Plans were focused on creating a hierarchy of urban centres outside the central area with heavier chemical industries located a safe distance from heavily populated areas. See Khoo and Remy "Making Singapore a Liveable and Sustainable City" 91. One of the bold ideas articulated in the 1991 Concept Plan was to integrate land use and transport planning. The 1991 Concept Plan thus introduced a key policy direction to decentralise in order to ease traffic congestion in the city centre.

1240 Puay "Greening Singapore" 180-181; see also in this regard Khoo and Remy "Making Singapore a Liveable and Sustainable City" 88-89. The 1991 Concept Plan also catered to the rising aspirations of an increasingly affluent population (that had increased to 4.4 million by then), which needed more lifestyle choices.

1241 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Concept-Plan/Past-Concept-Plans.

1242 See Chapter 2 for the discussion on sprawl in South Africa and the need for an urban edge due to suburbs being created. Lack of public transport that is effective is also referred to. There was also a necessity for the designation of the urban edge to be in keeping with the transportation infrastructure. Transport is also dealt with in Chapter 1 in the discussion on the SDGs.

1243 Leitmann *Integrating the Environment in Urban Development* 16-17. These were planned with sidewalks and green pedestrian pathways linked to the satellite cities by mass transit. Commuters

rapidly growing cities around the world, including South Africa, have followed the "car oriented" development pattern resulting in sprawling urban landscapes,[1244] Singapore had to search deep to find a solution as there was no land available for sprawl or lateral expansion.[1245] For this reason Singapore adopts a transit-oriented approach and ensures that "transport capacity is able to support a variety of land uses and the limited land is utilised productively".[1246] It took foresight and tenacity in Singapore to follow a route that entailed a "car-lite" legacy that has resulted in much greater sustainability[1247] and is in keeping with SDG 11.[1248]

Satellite cities, amongst other things, were envisaged in both the 1971 and 1991 Concept Plans, to effectively solve the housing needs of the people through high-rise housing, despite the latter being a condemned type of housing, and not very popular as is indeed the case in South Africa.[1249] This prejudice and perceived stigma of high-rise buildings becoming the slums of the future had to be carefully considered and overcome by government and its planners. The way in which this was done in Singapore is an indication of how this can be done successfully.[1250] The outcome has

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can travel between trains, subways and buses using one pass. See Khoo and Remy "Making Singapore a Liveable and Sustainable City" 83. Owning a motor vehicle in Singapore attracts penalties and charges that are much higher than in any other country in the world.

1244 See Chapter 2.2 for the discussion on sprawl and the urban edge.

1245 See Chapter 2.2.

1246 Singapore VNR Report 2018 38. The Land Transport Master Plan is a special detailed plan that is reviewed every 5 years.

1247 Singh "Transportation" 150. The world class public transport infrastructure is a necessity but walking and cycling is now being encouraged with new cycling paths being introduced throughout Singapore.

1248 See Chapter 1.4 regarding SDG 11.

1249 Liu "Planning and Urbanisation in Singapore" 29, 37. High storey housing, "condemned all over the world" for of its "many associated social problems" (still not popular in South Africa) was chosen as the model on account of the limited land available for expansion. Urban planning and building design to counter the negative issues, supported by human-centric rules and regulations, were formulated. In 1964, public housing was built. Although basic urban building blocks, they were planned as "highly self-sufficient through the provision of a wide, highly comprehensive range of amenities". The result was high-rise and high-density housing but excluding the "associated urban ills".

1250 Liu "Planning and Urbanisation in Singapore" 37. They did this by nurturing "community spirit in the new high-rise" homes. New towns were being subdivided into neighbourhoods and precincts to give residents a sense of belonging. Further, after completion and occupation by residents, continuous efforts are made with regard to maintenance and improvements to ensure that their standards do not deteriorate. Greenery on these high-rise buildings and walk-ways between buildings on upper floors are all innovations that have helped to change the perceptions of this form of habitation.

been that even in the category of low-cost housing, Singaporeans live in clean, lush and in most instances beautiful housing estates supported by world class infrastructure. The Housing Development Board's (HDB) development of housing for the people ensures that there are nature reserves, "park connectors" and "tree-lined roads" with natural areas around the housing estates to ensure that these areas are pleasant. This is a far cry from the low-cost housing areas in South Africa, positioned away from city centres close to urban edges.[1251]

Decentralisation (through satellite cities)[1252] and the incorporation of the environment were the other innovations introduced through the 1991 Concept Plan. Similarly, South African planning incorporates environmental factors during planning so that sustainability in property development may be achieved.[1253] For the first time however, through the introduction of the 2001 Concept Plan, the URA invited public interest groups, members from business and academia and people at "grassroots" level to a discuss the best strategy for how land should be developed in Singapore.[1254] This exercise helped to integrate conservation into the Concept Plan. It also resulted in the request by the public to form an independent Heritage Trust that assisted in bridging the gap regarding public expectations in planning and at the same time helped the public see the point of considering environmental issues in planning.[1255] Increasing public participation was the innovation of this Concept Plan.

Despite the introduction of public participation when formulating the Concept Plan and

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1251 The other difference in relation to housing in South Africa is that in Singapore, government owns the bulk of the land and signs 99 year leases in respect of the houses that are built. In South Africa, government usually grants property ownership rather than leasing property to the masses. See Binder 2019 *JCULP* 167.

1252 See discussion on satellite cities in Singapore in 5.6 below and also in Chapter 6.6.3 in Rwanda.

1253 Decentralising and reducing traffic (including taxis) on roads in South Africa may now have to be considered to resolve issues such as air pollution and long distances travelled by the South African workforce.

1254 Melic *Past, Present and Future* 63. Two focus groups were formed, one that looked at "balancing scarce land resources among the competing land uses" and the other that focused on how Singapore should retain its identity in the context of "intensified land use".

1255 Melic *Past, Present and Future* 63. The two-fold role of the members of the Central Area Planning Team who had a keen interest in conservation was to "recommend buildings for conservation and to promote greater public education and understanding of gazetted built heritage".

Master Plans[1256] 2013 saw the latest Singapore Concept or Land Use Plan, entitled "*A High Quality Living Environment for all Singaporeans: Land Use Plan to Support Singapore's Future Population",*[1257] designed to take the country up to 2030 being presented by the MND to Parliament. This plan outlines the way that capacity must be built for a "high quality living environment" in accordance with SDG 11. It indicates the likely profile of Singapore and possible land use allocation up to 2030. It was preceded by the *Population White Paper: A Sustainable Population for a Dynamic Singapore*,[1258] which outlines Singapore's land use to support a larger population while "preserving a high quality living environment for all Singaporeans".[1259] Besides being a "blueprint to guide the physical development of Singapore", the Land Use Plan tries to assure the public that Singapore will still be "comfortable and liveable" despite the estimated increased population of 6,9 million by 2030.[1260]

In South Africa, an increase in population will translate to urban edges being extended so that more land is available for housing and related needs. Singapore's 2013 Land Use Plan however, proposes alternate solutions such as: reserve land being used; intensification of new developments; recycling land with lower intensity uses such as golf courses and old industrial areas; reclaiming land from the sea[1261] and lastly utilising underground space that has already been identified as usable space.[1262]

Other issues include more affordable and quality houses being built for the increased population[1263] and further improved public transport infrastructure necessary for

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1256 See a full discussion on EIAs and related public participation in Chapter 5.4.3. Singapore has unfortunately not implemented public participation and EIAs in its recommended form when undertaking development.

1257 MND 2013 https://www.singaporerealestate.online/admin/pdf/pdfs/f9e8e0188704fb747626dfae53113441.pdf (the Land Use Plan 2013).

1258 Land Use Plan 2013 Executive summary 3. The *Population White Paper* of 2013 is very controversial as many Singaporeans were upset that the Government of Singapore was in favour of encouraging immigration to Singapore. This resulted in demonstrations and civil protests, not usually a common site in Singapore.

1259 Land Use Plan 2013 Executive Summary 1.

1260 Lee Kuan Yew School of Public Policy 2013 http://shinbint.com/writing/Landuse_Case.pdf 2.

1261 This is costly and time-consuming and could have its own environmental implications. For that reason it is not a strategy that may easily be used.

1262 Land Use Plan 2013 Executive summary 3. Fortunately the need for reclamation of land in South Africa has not arisen.

1263 Section 3 of the Land Use Plan 2013.

greater mobility.[1264] One of Singapore's long-term goals is to "make public transport the choice mode of transport through increased connectivity and better services".[1265] Public transport has to be maximised as land scarcity does not permit building new roads for private transport.[1266] The 2013 plan includes promoting a vibrant economy with good jobs[1267] and facilities and amenities needed for a "good living environment".[1268] From an environmental perspective, the Land Use Plan promotes more parks, greenery and recreational areas in its limited space so that the proposed high density urban environment is more liveable. The strategy is in keeping with the image of Singapore being "a prime example" of a city that is "green despite urbanisation".[1269] The plan also refers to heritage or historic areas that must be preserved[1270] and is a tool to guide and coordinate development proposals while identifying patterns and areas for future comprehensive redevelopment, conservation and pedestrian circulation.[1271] It is indicative of effective planning as it additionally indicates future areas of development and directs where development should and should not take place.

The Land Use Plan acknowledges and records that land use and allocation in Singapore is governed by the Master Plan, which has to be revised and updated in accordance with the most recent 2013 Land Use Plan.[1272] More concrete plans are made from the long-term Concept Plan and the strategies of the Concept Plans are implemented into the "detailed land use plans" that form the Master Plan.[1273] The Concept Plan and the Master Plan map out growth of Singapore with "new and innovative approaches" to

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1264 Section 5 of the Land Use Plan 2013.
1265 Singapore VNR Report 2018 38.
1266 Section 5.2 of the Land Use Plan 2013.
1267 Section 6 of the Land Use Plan 2013.
1268 Section 7 of the Land Use Plan 2013.
1269 Sections 3 and 4 of the Land Use Plan 2013. More parks will be established for the additional housing that will be built. Singapore works on a ratio of 0,8 hectares of park for 1 000 residents.
1270 See discussion in Chapter 5.2 above. Heritage forms a part of the definition of environment in s 1 of NEMA and therefore the environmental right in the South African Constitution.
1271 Hup and Chye "Shaping Singapore's Cityscape" 213.
1272 Section 2.3 of the Land Use Plan 2013.
1273 Singapore 2019 https://www.ura.gov.sg/-/media/Corporate/Planning/Master-Plan/MP19writtenstatement.pdf?la=en. The legislated Master Plan provides transparency and certainty to the private sector to guide their development and business decisions.

planning and development.[1274]

5.3.3 Master Plan

The Master Plan sets out the plans for developments for the next ten to fifteen years.[1275] Singapore has had and still has only one Master Plan. The history of the Master Plan and the reference to the earlier Master Plan in the definition clarifies this. Section 6 of the *Planning Act* defines the Master Plan as:

> The Master Plan that was originally submitted to and approved by the Governor in Council on 5 August 1958 under the provisions of Part IV of the Singapore Improvement Ordinance (Cap259, 1955 Ed) as subsequently amended under the repealed Act or this Act, and includes the approved maps and written statement.[1276]

As early as 1951, the Singapore Improvement Trust (SIT),[1277] a colonial public housing and planning agency, undertook an island survey "to identify Singapore's main urban development challenges and opportunities".[1278] Singapore's first statutory land use document - the Master Plan - was completed in 1955 and adopted in 1958 under the British colonial administration.[1279] It was formulated in accordance with the *Singapore Improvement Ordinance* to guide Singapore's physical growth.[1280] The present Master Plan and the written statement in that regard were gazetted on 27 November 2019.[1281]

The original Master Plan of Singapore was based on the design of the Great London Plan of 1944, divided the city into an "inner city, a town centre and a rural ring". The

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1274 Singapore VNR Report 2018 37. Eg in Master Plan 2014, URA identified future growth areas to meet a wider range of economic needs such as business expansion and diversifying employment areas and identified the Jurong Lake District in the western part of Singapore as a new mixed-use business district.

1275 Singapore VNR Report 2018 37.

1276 Section 6 of the *Planning Act*. URA 2020 https://www.ura.gov.sg/maps/?service=MP. The Master Plan has undergone 10 reviews and various amendments thus far, the last of which was on 29 May 2020.

1277 Ho 2016 https://eresources.nlb.gov.sg/infopedia/articles/SIP_2016-03-14_142655.html. The Trust was initiated by the English colonial government to assist with urbanisation.

1278 Melic *Past, Present and Future* 12.

1279 Choe "Early Years of Nation-building" 7. The 1958 Master Plan provided a comprehensive island-wide development framework for a population that was estimated to be 2 million by 1972. It prescribed maximum permissible net residential densities (in persons per acre) for planning districts within the Central Area.

1280 Melic *Past, Present and Future* 12.

1281 Singapore 2019 https://www.ura.gov.sg/-/media/Corporate/Planning/Master-Plan/MP19writtenstatement.pdf?la=en.

"rural ring" had connotations for an urban edge during the early stage of Singapore's development and was probably based on Ebenezer Howard's idea of planning.[1282] Today, the "ring city concept" is still the dominant feature of Singapore's planning. It consists of self-contained but "connected settlements along the coast".[1283] At that early stage, the colonial administration required that the SIT prepare a list of historical buildings and monuments, including temples and other religious institutions for preservation.[1284]

In Singapore, this original Master Plan must be reviewed at least once every five years and amended from time to time so that its progress in that regard is better monitored.[1285] So far it has undergone ten reviews and various amendments.[1286]

The objective of the review of the Master Plan every five years, is to translate the broad, long-term strategies of the latest Concept Plan into detailed plans that guide the development of land and property,[1287] thereby enabling the vision of the Concept Plan to be realised through the Master Plan.

The first amendment to the Master Plan took place when a UN team of experts visited Singapore in 1967[1288] and found this plan to be in urgent need of revision.[1289] By that stage the population was growing faster than predicted and the city centre was overcrowded and even unsanitary. There was an urgent need to redevelop the city centre and plan better population expansion.[1290] This large-scale urban renewal

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1282 The garden city method of Ebenezer Howard is well-known as the earliest form of English town planning. Wikipedia 2020 https://en.wikipedia.org/wiki/Garden_city_movement.

1283 Melic *Past, Present and Future* 13.

1284 Melic *Past, Present and Future* 12. This was the first time that sites for "future preservation" by the state were listed.

1285 Section 8(1) of the *Planning Act*.

1286 Singapore 2019 https://www.ura.gov.sg/-/media/Corporate/Planning/Master-Plan/MP19writtenstatement.pdf?la=en.

1287 Singapore 2019 https://www.ura.gov.sg/-/media/Corporate/Planning/Master-Plan/MP19writtenstatement.pdf?la=en. This is similar to a land use scheme being in keeping with the SDF in terms of SPLUMA. See Chapter 3.2.1.

1288 Wardlaw 1971 *RAPIJ* 45-47. Australian consultants were awarded the contract by the UN to advise and assist the Singapore Government.

1289 Choe "Early Years of Nation-building" 7. The planners of the 1958 Master Plan did not anticipate that Singapore's rate of growth would quickly outgrow their predictions, nor did they envision the series of political developments that would pave Singapore's path towards full independence as a Republic.

1290 Melic *Past, Present and Future* 13.

entailed changes through a "project by project" action programme which was mooted.[1291] However, these individual project plans were to be "coordinated by the overall physical guide concept", the Master Plan, that would help the action programmes grow into a coherent system" to drive urban growth and development.[1292]

The *Planning Act* regulates the amendment of the Master Plan. Included are any addition, alteration, repeal or replacement of the Master Plan in whole or in part[1293] and the type of proposals that may be considered.[1294] It also sets out the formalities[1295] regarding proposals that merit special consideration for major departures, or permission to disobey certain provisions in the guidelines.[1296] The review procedure is seen as an opportunity for government to get support for difficult planning policies and decisions that are necessary.[1297]

Both the Master Plan and section 2 of the *Planning Act* refer to conservation as "the preservation, enhancement or restoration" of the appearance, character or interior or exterior of a building that is in a conservation area.[1298] In terms of section 5.6 of the Master Plan developments must be controlled to "preserve or promote the character of the area".[1299] The inclusion of conservation as a feature of the Master Plan was established by the URA in 1986 when it reflected the then new Mass Rapid Transit line in the Master Plan.[1300] This is regarded as a "seminal moment" when Singapore realised that there was enough political support to ensure that conservation "could

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1291 Khoo and Remy "Making Singapore a Liveable and Sustainable City" 86.
1292 Melic *Past, Present and Future* 13.
1293 Section 8(1) of the *Planning Act*.
1294 Section 8(3) of the *Planning Act*. These include rezoning, change in plot ratios, change in written statement, designation of conservation areas or any linked purpose.
1295 Section 10 of the *Planning Act*. The Minister makes rules in that regard.
1296 Sections 8-9 of the *Planning Act*. Also see Khoo and Remy "Making Singapore a Liveable and Sustainable City" 95. The key has been to strike a judicious balance between controls and flexibility which Singapore has also been achieving successfully.
1297 Ng Lang "Planning to Overcome the Constraints of Scarcity" 75.
1298 Sections 1.1.4 and 1.1.5 of the *Planning Act*.
1299 URA 2020 https://www.ura.gov.sg/maps/?service=MP. See also Chapter 5.3.4 where these plans were discussed. This must be done in accordance with notations in the Amendment Plan and any development control plans as may be published by the competent authority from time to time.
1300 Melic *Past, Present and Future* 72.

progress hand in hand with urban development".[1301] Conservation has now become an integral part of urban planning in Singapore.[1302] Although many ethnic areas and various civic buildings were timeously saved because of the inclusion of conservation in the Master Plan, there is still the realisation that in the rush to rebuild and redevelop Singapore during the early stages of its development, many heritage buildings were demolished that should have been saved.[1303]

Shortage of land means that Singapore needs to focus on the future and needs integrated and comprehensive planning to effectively use its scarce land to meet the needs of both "current and future generations" through sustainable development.[1304] The Master Plan strives for sustainable development through comprehensive planning coupled with an approach that is a longer term approach that holistically balances "social, economic and environmental" considerations with integrated urban planning.[1305] According to Teng Chye Khoo and Remy Guo,[1306] plans in Singapore are coordinated, implemented and executed through dedicated organisations[1307] that make representations to achieve their organisation's goals. Different sectors are forced to optimise or compromise on account of the scarcity of land in Singapore and all organisations must agree to take a long-term view and make meaningful trade-offs (including trade-offs between development and the protection of the environment).[1308]

Singapore's Master Plan 2019 is a web-based plan accessed on a futuristic and interactive application, indicating permissible land use and density for developments

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1301 Melic *Past, Present and Future* 9, 25.
1302 Melic *Past, Present and Future* 31.
1303 Melic *Past, Present and Future* 13.
1304 URA 2019 http://www.ura.gov.sg/uol/master-plan.aspx?p1=View-Master-Plan. See also the *Planning Act* discussed in 5.3.1 above.
1305 URA 2019 http://www.ura.gov.sg/uol/master-plan.aspx?p1=View-Master-Plan. See also Singapore VNR Report 2018 37. The new area in Pungol, in northeast Singapore, was a new concept with smaller estates sharing common green areas. Integrated facilities enhance "accessibility and encourage clean commuting".
1306 Khoo and Remy "Making Singapore a Liveable and Sustainable City" 84.
1307 These organisations include the Housing Development Board (HDB), the Public Utilities Board, Land Transport Authority and NEA.
1308 These "productive fights" are resolved often by all organisations taking a long-term view and trade-offs could include conditions that permit property development only if more environmental precaution is taken.

for each plot at a click of a button.[1309] Filters are used to view the current and the previous Master Plans.[1310] The 2019 Master Plan is discussed under various themes that are accessed through the futuristic interactive Master Plan. The themes are: liveable and inclusive communities;[1311] rejuvenating familiar places,[1312] local hubs and global gateways;[1313] creating a sustainable and resilient city of the future;[1314] and convenient and sustainable mobility, including creating more cycle pathways and use of scooters.[1315] Being a "sustainable and resilient city of the future" in accordance with SDG 11 is the main goal that Singapore wishes to achieve in view of the new and emerging challenges such as climate change.[1316] Creating spaces for growing needs will be alleviated by reclaiming land and creating underground space.[1317] For this purpose, a new underground special detailed and control 3D plan is introduced for the first time to enable better planning of this unconventional space.[1318] Much of the transport infrastructure and storage facilities are being moved underground. Systems include moving goods so that freight transport is reduced on roads, electrical sub-stations and "rock caverns for storm drainage" and storage that will increase water

1309 URA 2020 https://www.ura.gov.sg/maps/?service=MP.

1310 URA 2020 https://www.ura.gov.sg/maps/?service=MP.

1311 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Master-Plan/Themes. This section deals with more housing options, with more greenery.

1312 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Master-Plan/Themes. Retaining the identity but rejuvenating built heritage.

1313 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Master-Plan/Themes. Forging a stronger economy by planning and setting aside land for rejuvenating existing industries and new areas of growth. Jobs to be within easy reach.

1314 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Master-Plan/Themes. Adapting to climate change and creating space for the growing needs.

1315 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Master-Plan/Themes. Moving around Singapore in a convenient and pleasant manner with a wider range of commuting options and better connectivity and easier access to work and amenities.

1316 URA 2020 https://www.ura.gov.sg/maps/?service=MP. The impact of climate change on rising coastal waters on the island city-state of Singapore needs urgent attention to protect the coastline. For this reason, several measures are being implemented, such as creating flood walls, earth mounds, flood gates, revetments or retaining walls and pump stations. Flood risks are also mitigated by widening drains and protecting key infrastructure by building flood barriers.

1317 URA 2020 https://www.ura.gov.sg/maps/?service=MP. The Plan includes positioning or moving sites such as utility plants underground to free up precious land for multiple other uses. Caverns are created underground for massive storage use and are being investigated even further to ensure compatibility with suitability of geology and other above-ground uses.

1318 URA 2020 https://www.ura.gov.sg/maps/?service=MP. At this stage only three areas are covered, but this is hoped to expand with time.

resilience.[1319]

Singapore tries to maximixe the use of its limited land through redeveloping land or building underground trying at all times to keep up with demand. Space is being optimised by redeveloping existing areas as new districts.[1320] All spatial strategies are geared towards avoiding over-crowding by building economic centres away from the older districts that had these facilities.[1321] At the same time the residential component in the central business districts is being increased, enabling people to work closer to their homes. Engaging with the public is important in Singapore and the Master Plan review process has seen a large range of stakeholders becoming involved through various means including exhibitions, sessions of focus groups, workshops and meetings by stakeholders. Therefore it may be said that public participation during this stage of planning is excellent.[1322]

To retain and enhance local identity, there is also a focus on protecting heritage and heritage features. Other areas of focus are developing sustainable and green neighbourhoods and new housing concepts with more amenities and greenery.[1323] Plans for the remodel and revive familiar spaces to meet the future needs of Singapore are included.[1324] Newer introductions encourage active mobility through cycling,[1325] more walking areas and the use of personal mobility devices, geared toward better mobility that is not dependent on private transport.[1326] Car-sharing as well as self-driving vehicles help to ensure a greener and healthier "mobility option" and are encouraged. The "Walking and Cycling Plan" compels developers to ensure that their designs incorporate pedestrians and cyclists, instead of catering mainly for the needs

1319 Singapore VNR Report 2018 40.
1320 Singapore VNR Report 2018 40.
1321 Singapore VNR Report 2018 40.
1322 Singapore 2019 https://www.ura.gov.sg/-/media/Corporate/Planning/Master-Plan/MP19writtenstatement.pdf?la=en. However, public participation linked to EIAs is lacking. See discussion on EIAs in Chapter 5.4.3.
1323 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Master-Plan/Themes.
1324 URA 2020 https://www.ura.gov.sg/Corporate/Planning/Master-Plan/Themes.
1325 Singapore VNR Report 2018 38. A walking and cycling plan was introduced called "Walk Cycle Ride".
1326 Singapore VNR Report 2018 38.

of "vehicular traffic".[1327] Financial benefits are given to developers for doing this.[1328] Relatively easier adjustments such as creating cycling paths as alternative options to public transport are also becoming popular. Besides being a cheaper option it is a healthier option and is in keeping with a "car lite" alternative where emphasis is placed on mobility solutions rather than private car ownership.[1329] These newer aspects, as a means of a healthy recreation and transport mode, are introduced through the Master Plan.[1330]

The Master Plan 2019, with its written statement, uses the detailed and different land use plans of all areas, and aligns them with the Concept or Land Use Plan.[1331] The Master Plan is used to guide all development through the SDCPs, which are special development control plans.[1332] Unlike the Master Plan, SDCPs are non-statutory plans. They are useful as they guide and control development of specific areas and are used by URA in processing development applications.[1333] Application to develop must comply with "detailed development control, conservation and preservation requirements" prepared and monitored by NEA through the development control of OSC. All applications must be considered in terms of these guidelines, the Master Plan and its written statement.[1334]

The Master Plans allow for a significant degree of flexibility and detail to guide development and implementation, refined through regular review processes.[1335]

1327 Singapore VNR Report 2018 38.

1328 Singapore VNR Report 2018 38. The areas utilised for these purposes are excluded in calculations of gross floor area calculations for rates and other charges.

1329 Ng Lang "Planning to Overcome the Constraints of Scarcity" 79.

1330 Ng Lang "Planning to Overcome the Constraints of Scarcity" 77.

1331 Singapore 2019 https://www.ura.gov.sg/-/media/Corporate/Planning/Master-Plan/MP19writtenstatement.pdf?la=en Preface 2. After incorporating relevant feedback from the public through exhibitions, these amended plans were formalised as Master Plan 2019.

1332 Singapore 2019 https://www.ura.gov.sg/-/media/Corporate/Planning/Master-Plan/MP19writtenstatement.pdf?la=en Preface 2.

1333 URA 2020 https://www.ura.gov.sg/maps/?service=MP. See OSC in Chapter 5.4.2 below. These detailed plans are also subject to revision from time to time as deemed necessary by the competent authority who is appointed from time to time by the Minister in terms of s 5 of *Planning Act*, i.e. the URA.

1334 Singapore 2019 https://www.ura.gov.sg/-/media/Corporate/Planning/Master-Plan/MP19writtenstatement.pdf?la=en Preface 2. A development charge or levy is payable as set out in Part V and Part VA of the *Planning Act* and any other applicable subsidiary legislation.

1335 Khoo and Remy "Making Singapore a Liveable and Sustainable City" 99. This fosters the discipline of considering far-reaching implications of current development trends and allows areas of concern

Although Singapore's planning regime is extremely rigid, there is a necessity and need for some flexibility. As in the case of a land use scheme in South Africa, it may be adapted through a statutory process.[1336] The Master Plan is reviewed every 5 years[1337] and the *Planning Act* makes it mandatory to exhibit the reviews and open them to public views and comments.[1338]

Having traced the Master Plan and the Concept Plan and their effectiveness in the spatial planning of Singapore, it is necessary to consider the role of the URA, which is the entity that is instrumental in implementing and executing these plans in the MND.

5.3.4 The URA and the MND's role in promoting sustainable development

The URA was established as an Urban Renewal Department of the HDB. It became a statutory board in 1968 and was designated to redevelop the Central Area of Singapore. Today the URA is a department in the MND that was recreated in terms of the *Urban Redevelopment Authority Act*.[1339] This Act merged the then existing URA, MND's Planning Department and the Research and Statistics Unit under a single new URA[1340] to control both planning and development functions for better coordinated planning.[1341]

The URA has the task of planning for the physical development of Singapore.[1342] It

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to be identified upfront and addressed well ahead of time, helping to make the most of Singapore's scarce land resources.

1336 Section 10 of the *Planning Act* prescribes Rules called the Planning (Master Plan) Rules GN No S 245/1999 (2000 revised ed).

1337 Section 8 of the *Planning Act*. In terms of SPLUMA, municipalities also have to prepare a single land use scheme within 5 years i.e. by not later than 1 July 2020.

1338 Ng Lang "Planning to Overcome the Constraints of Scarcity" 75. See further discussion under *Planning Act*, Chapter 5.3.1.

1339 *Urban Redevelopment Authority Act* 32 of 1989. Preamble; Khoo and Remy "Making Singapore a Liveable and Sustainable City" 99.

1340 Khoo and Remy "Making Singapore a Liveable and Sustainable City" 99. The URA's expertise in planning and urban design and the Planning Department's expertise in strategic planning, would mean planning would be better coordinated.

1341 Preamble and long title read with s 3 of the URA Act; Khoo and Remy "Making Singapore a Liveable and Sustainable City" 99. This is a lesson that many cities or countries could easily adopt and one that will work well and assist with reducing sprawl.

1342 Section 6(a) of the URA Act. See also Christudason 2000 http://www.prres.net/Papers/Christudason_Optimisation_of_land_use_through_Inovative_le%E2%80%A6.pdf.

advises the government on planning and development of land.[1343] Therefore, it is involved with devising both the long-term strategic land use Concept Plan and the shorter-term Master Plan and controls development of land. It also submits and recommends proposals for the "preservation and protection" of a monument or land that impacts on "historic, traditional, archaeological, architectural or aesthetic interest".[1344]

The focus and goal of the MND, a planning and development entity, is to protect and enhance the green environment during the planning of development and infrastructure in Singapore.[1345] As part of the planning process, and through the MND, additional efforts to protect the environment are initiated.[1346] As an example, a committee comprising all Permanent Secretaries from all government departments, "endorsed a set of overarching, strategic policy directions" that relate to land use planning to guide land use development of industry, commerce, housing and transport in that context.[1347]

While the URA's responsibilities include long-range planning relating for housing, industry and infrastructure, it includes environmental considerations in the Concept Plan itself.[1348] A decision to have high quality open spaces and to improve existing open spaces, rather than increase the quantity of open space is mooted by them.[1349] Wherever possible, green spaces are set aside as conservation areas for "recreation, the protection of the environment" and biodiversity.[1350] Some nature areas (although scarce due to land shortage) are designed as parks or nature reserves.[1351] The URA ensures that growth from an economic perspective is balanced with a "quality

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1343 Section 6(g) of the URA Act.
1344 Section 6(e) of the URA Act.
1345 Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 212.
1346 Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 173, 212.The "greening of the Singapore" is important in its city planning.
1347 Khoo and Remy "Making Singapore a Liveable and Sustainable City" 91.
1348 See Chapter 5.3.2 regarding Concept Plans.
1349 Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 212.
1350 Sections 8-9 of the *Planning Act* provides for the designation of these areas and they are protected in terms of s 12. See also Tan "Environmental Planning for Sustainable Development" 60.
1351 Ng Lang "Planning to Overcome the Constraints of Scarcity" 73.

environment".[1352] Serious efforts to balance urban planning and development with the protection of the environment to avoid conflict, in terms of SDG 11, are evident in many decisions of the URA.[1353] This role by the planning authorities to simultaneously consider environmental factors or conservation[1354] is an important means of promoting sustainable development and the avoidance of conflict.[1355]

The URA also manages and controls the development of land in Singapore.[1356] This entails development control and evaluation and granting of approval for development of projects of both the public and private sector. Its stated goal in that regard is "to foster orderly development conforming to the planning guidelines" in accordance with the statutory Master Plan. It also attends to land sales by government for development of land and ensures that when land is sold for redevelopment[1357] based on the use that was proposed, the development fits in with the area. It also monitors the quality and design.[1358]

Over the years, Singapore used an effective system to deal with land use planning,[1359] while it also protected the environment especially relating to pollution and public health.[1360] Planning and environmental issues are integrated through a dynamic

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[1352] Sections 8, 9 and 12 of the *Planning Act*. The URA's tries to preserve the neighbourhoods, historic buildings and monuments. See also URA and Preservation of Monuments Board *Objectives, Principles and Standards for Preservation and Conservation*; Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 206.

[1353] Chung, Wong and Chan 2016 *Citygreen* 92-95. Also see Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 207.

[1354] Sections 8-9 of the *Planning Act* refers to areas designated for conservation and s 12 prohibits unauthorised development in these areas.

[1355] See the discussion in 5.4.2 regarding the coordination of planning and environmental sectors in Singapore.

[1356] Section 6(fa) of the URA Act.

[1357] Section 6(c) of the URA Act.

[1358] Section 6(d) of the URA Act.

[1359] See discussion on URA in Chapter 5.3.4.

[1360] The EPMA deals with environmental issues; also see Lin Heng 2008 *Sing JLS* 69. Accordingly, it has earned itself various accolades in a short space of time. Singapore has built up a strong industrial base related to chemical, petrochemical and pharmaceutical products and related transportation networks, with an efficient Light Rail System, as well as an excellent telecommunication facility with a national wide broadband network. In 2019, with a GDP per capita of US65.23, it was again declared the most competitive place in the world to conduct business. It is among the world's top 20 business environments for ease of doing business, it has one of the world's largest airports and busiest sea ports since 1986 and the country with the best labour force.

system of urban governance managed by the URA.[1361] This long-term and integrated land use planning policy involves a collaborative effort with both environmental and economic agencies making planning decisions to ensure that the environment is protected.[1362] Further, it has a strict process to control developments and building plan approvals and it is compulsory for a developer of a project to satisfy both planners and dedicated environmental agencies that the development is sustainable and compatible.[1363] Environmental agencies work hand-in-hand with the planning authorities and ensure that land use planning and critical environmental infrastructure development is coordinated for better decisions relating to sustainable development.[1364] Conflict between these two sectors has been observed in the South African context where different interpretations are given to concepts such as "need and desirability" in terms of planning and environmental law[1365] but in Singapore, fusing environmental factors into planning works and is regarded as the reason for Singapore's success.

Having seen how the environmental aspects are integrated from a planning perspective, it is necessary to also investigate Singapore's dedicated environmental laws, plans and policies.

5.4 Environmental laws, plans and policies

Environmental law in Singapore consists of statutory and common law. English "principles of tort" restrict the uses of land.[1366] The Ministry of the Environment and

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1361 See Khoo and Remy "Making Singapore a Liveable and Sustainable City" 81.

1362 The NEA Act obliges the NEA to advise government on all environmental matters in terms of s 11(1)(b) and to be involved with environmental licences for buildings. Also see Tan "Environmental Planning for Sustainable Development" 59.

1363 See the *Building Control Act*, OSC and SDCP in Chapter 5.4.2. See also Tan "Environmental Planning for Sustainable Development" 59. Pollution control for industries goes beyond the planning and development phase and even after approval, pollution levels are monitored very closely.

1364 Licensing must be approved by the URA and NEA through the OSC; Tan "Environmental Planning for Sustainable Development" 67.

1365 In the *Fuel Retailers* case discussed in Chapter 4.2.3, the courts made a distinction between the meaning of the "need and desirability" in terms of SPLUMA and NEMA, which indicates that our planning and environmental legislation is not in sync and this leads to conflict that should be avoided.

1366 Lin Heng 2010 *J Court Innov* 138.

Water Resources (MEWR) is, from 25 July 2020, known as the Ministry of Sustainability and the Environment (MSE).[1367] From an early stage, environmental management policies were included and became a part of economic policies and although Singapore pursued a policy of rapid industrialization it also "cleaned up and greened" its environment.[1368]

5.4.1 Phases of environmental protection

Leitmann[1369] aptly describes environmental planning in Singapore in three separate phases: the first is described as "the period before the Ministry of the Environment" was initiated. That was from colonial times until 1972 when the focus was concentrated on "land use, environmental health and infrastructure issues".[1370] The second phase was the "formative years" phase of the then Ministry of the Environment from 1972 to 1992. During this phase, "a top-down approach evolved, based on awareness campaigns", and included other aspects such as "land use planning, pollution monitoring, inspection, and strict enforcement".[1371]

The third phase is referred to as the Green Plan period from 1992. This period started a "strategic and participatory vision of environmental management" beyond the initial focus on "environmental health, infrastructure and pollution control".[1372] There was also increasing concern over global environmental issues (such as global warming and preservation of biodiversity). The growing population meant that a major policy review was necessary. In 1992 the Ministry of Environment (now known as the MSE) issued the initial Singapore Green Plan (SGP)[1373] in preparation for the June 1992[1374] UN

1367 Wikipedia 2020 https://en.wikipedia.org/wiki/Ministry_of_Sustainability_and_the_Environment.
1368 Lin Heng 2008 *Sing JLS*.
1369 Leitmann *Integrating the Environment in Urban Development* 1.
1370 Leitmann *Integrating the Environment in Urban Development* 4.
1371 Leitmann *Integrating the Environment in Urban Development* 5.
1372 Leitmann *Integrating the Environment in Urban Development* 6.
1373 Ministry of the Environment *Singapore Green Plan*. Also see Leitmann *Integrating the Environment in Urban Development* 6 for original vision of the document; Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 172. It had to have "high standards of public health and a quality environment".
1374 Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 173.

Conference on Environment and Development held in Rio. It is not a statutory plan[1375] but Cabinet approved it as a "national plan covering all agencies" and directed that its progress be "reviewed annually".[1376] The first Green Plan's Vision was that Singapore had to be a "model Green City" by 2000 with a quality environment that included clean air, clean land and clean water to promote a gracious life and a "quiet environment".[1377] This plan was designed to guide Singapore's planning and management from an environmental perspective.[1378]

In 1999, SGP was reviewed in keeping with new concerns and ideas.[1379] The plan was amended in 2012 to help Singapore attain environmental sustainability through the use of environmental targets.[1380] The 2012 SGP was presented to the World Summit on Sustainable Development in Johannesburg, in September 2002.[1381] With this review, it was intended that Singapore not only focus on being "clean and green" but also on the best way to attain "environmental sustainability".[1382] Further reviews of the SGP took place in 2005[1383] and 2006.[1384]

Singapore's commitment to achieving the SDG 11 has enhanced its attitude towards sustainable development and a fourth phase, the sustainable development phase may

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1375 Leitmann *Integrating the Environment in Urban Development* 6. The focus was on environmental education and technology, "resource conservation, clean technologies, nature conservation, and environmental noise".

1376 Leitmann *Integrating the Environment in Urban Development* 7.

1377 Ministry of the Environment *Singapore Green Plan*. Also see the Vision of the 1992 Plan in Leitmann *Integrating the Environment in Urban Development* 6.

1378 This plan is for the year 2000 and beyond, that is, until the time, after 2000, when the city achieves a steady-state population of four million.

1379 Ministry of the Environment *Singapore Green Plan*. Such as trans-boundary air pollution and climate change.

1380 Ministry of the Environment *Singapore Green Plan*.

1381 Ministry of the Environment *Singapore Green Plan*. See Chapter 2.6 regarding the Summit on Sustainable Development.

1382 This amendment dealt with concerns that had surfaced since 1992 relating mostly to air pollution and climate change.

1383 Issues dealt with in the 2005 amendment of the Singapore Green Plan (SGP) 2012 were that a zero landfill for waste be achieved with recycling target being 60%; indigenous plants and trees being documented and monitored; energy efficiencies in homes and businesses to be improved; health objectives relate to quicker responses to diseases and improving disease scanning; improving public education on environmental issues to create more environmental awareness and to make the nation a more responsible nation from an environmental perspective.

1384 The target for a reduction in the domestic per capita usage to 155 litres per day by 2012 and to increase awareness of the importance to conserve, value and enjoy water. The aim was to develop a sense of shared ownership of the country's water resources.

be added to Leitmann's three phases described above. In April 2009 the Inter-Ministerial Committee on sustainable development was formed and resulted in the *Sustainable Singapore Blueprint* being launched in April 2009.[1385] It outlines the national vision and plans for a more vibrant liveable and sustainable city of Singapore.[1386] In 2015 it was amended to focus on maintaining green spaces and reducing reliance on private car transport, creating a green economy and increasing recycling.[1387] It also called for decentralising commercial centres; providing more jobs nearer homes; reducing the need to travel and reducing peak hour traffic congestion.[1388] In terms of the *Sustainable Singapore Blueprint*, the people of Singapore must take a personal interest in and commit to the care and protection of the "global environment" and not only its area.[1389] The plan was for Singapore to become a regional centre for environmental technology.[1390] International efforts to protect the global environment are strongly supported by Singapore with a pledge that it will share their "skills and expertise in environmental management and protection".[1391]

Having considered the non-statutory Green Plan, it is necessary to consider Singapore's main environmental legislation, the *Environmental Protection and Management Act* (EPMA).

5.4.2 The Environmental Protection and Management Act

The EPMA[1392] is the key statute to protect the environment in Singapore and the

1385 MEWR and MND *Sustainable Singapore Blueprint 2015*.
1386 MEWR and MND *Sustainable Singapore Blueprint 2015*.
1387 MEWR and MND *Sustainable Singapore Blueprint 2015*.
1388 MEWR and MND *Sustainable Singapore Blueprint 2015*.
1389 MEWR and MND *Sustainable Singapore Blueprint 2015*. Singapore required all the support, from its "corporate sector, the media and non-governmental groups". It was necessary to develop a "culture of proactive environmental awareness".
1390 MEWR and MND *Sustainable Singapore Blueprint 2015*. One of the pledges was to make Singapore a regional centre for "environmental technology" for the Asia-Pacific region and even beyond that.
1391 MEWR and MND *Sustainable Singapore Blueprint 2015*. Singapore pledged to hold international conferences relating to the environment.
1392 *Environmental Protection and Management Act* 9 of 1999 (EPMA). The Act was previously called the *Environmental Pollution Control Act* 9 of 1999 as it deals with air and water pollution, noise and toxic substances.

capacity to "ensure compliance with its laws and standards".[1393] The laws relating to "environmental pollution" are consolidated and EPMA deals with the "protection and management of the environment" as well as "resource conservation" and all connected purposes.[1394] Prior to the passing of the Act, environmental controls were sectoral and regulated under separate, much older laws. These laws were criticised for lacking integration with industries complaining of the need to obtain different licences from different departments.[1395] This older system used in Singapore has similarities with the present system in South Africa where integration needs to be considered to make it more effective.

The EPMA deals with environmental issues although some areas of the environment such as conservation fall under the MND.[1396] While the URA takes conservation into account in the Concept Plan and the Master Plan, the EPMA fulfils other duties. It successfully formalised various administrative functions such as the control of noise at construction sites through its regulations;[1397] the engagement of independent inspectors to check completed developments,[1398] and introduced various other controls relating to environmental protection.[1399] Lin Lye Heng[1400] evaluated the EPMA and raised concerns that it did not consolidate various aspects relating to the environment and does not having an integrated approach.[1401]

1393 UN 1999 https://www.un.org/esa/agenda21/natlinfo/countr/singapor/inst.htm.

1394 Long title of the EPMA.

1395 Lin Heng 2000 *Sing JLS*. Examples are the *Prevention of Pollution of the Sea Act* 18 of 1990, the *Clean Air Act*, 1971, governing air emissions from industrial premises, and the *Water Pollution Control and Drainage Act* 10 of 1995. Special Acts were also passed for marine pollution and the indoor industrial environment and care of workers.

1396 Section 2 of the EPMA relates to the appointment of the Director-General of Environmental Protection by the Minister to administer the Act. Environmental pollution control in development is controlled through this Act.

1397 Environmental Pollution Control (Hazardous Substances) Regulations No S 159/99.

1398 In terms of s 33 of the EPMA.

1399 In terms of s 20 of the EPMA it issues controls for land pollution; in terms of ss 10-14 of the Act and the Clean Air Standards or regulations for the remedying of contaminated sites (NEA 2020 https://www.nea.gov.sg/our-services/pollution-control/air-pollution/air-pollution-regulations); in terms of s 35 for mandatory insurance for persons who deal with hazardous substances and liability being imposed on contractors of construction sites.

1400 Lin Heng 2000 *Sing JLS* 2.

1401 Her reasons are that it is geared to only protect four areas of pollution, and laws relating to toxic industrial waste continue to be governed by the *Environmental Public Health Act* 14 of 1987 and marine pollution laws are separate and distinct and are not dealt with in the Act.

The Ministry of the Environment has four main divisions that groups departments with similar concerns together to facilitate "monitoring for compliance with environmental laws".[1402] The NEA, a statutory board in terms of MSE,[1403] is the main agency that government appoints relating to environmental matters.[1404] It began in 1972 and was one of the "world's first environmental ministries".[1405] In addition, groups, such as the Singapore Environmental Council and the Nature Society of Singapore, work hard to ensure that the environment is protected. The national sustainable development coordination is undertaken by the Singapore Environment Council, established to be an "independently managed, non-profit, non-governmental organisation" that received UNEP accredited environmental NGO status.[1406] It educates, inspires and assists people, business and environmental groups to make the environment a priority. In Singapore, the Ministry of the Environment, through the NEA,[1407] assists in long-term planning and constantly innovates with the URA and with business.[1408]

It is clear that land use controls are used for environmental protection and management in Singapore. This is done through submission of plans to the DCLD, managed by NEA.[1409] The clearance from NEA is applied for either simultaneously or after application has been made for development approval to URA in terms of procedures stipulated in regulations, Codes of Practice and Singapore Standards.[1410] These are all set out in booklets or guidelines that are available with the latest information and forms. During the "planning and building phases" of projects, the MSE has to check the proposals and plans from an environmental perspective through its

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1402 Leitmann *Integrating the Environment in Urban Development* 44.

1403 It was established on 1 July 2002 as the *National Environment Agency Act* 4 of 2002 in terms of EPMA.

1404 Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 172.

1405 Han 2016 *JED* 6. The Ministry had a wide range of mandates encompassing sanitation and public health, waste disposal, and monitoring of pollution and hazardous chemicals.

1406 Singapore Environment Council 2020 http://sec.org.sg/about-us/overview/.

1407 It was started in 1972. became the Ministry of the Environment and Water Resources in 2004 and is now known as the Ministry of Sustainability and Environment July 2020.

1408 Sections 11(1)(q) and 11(1)(u) of the NEA Act.

1409 NEA 2020 https://www.nea.gov.sg/our-services/development-control/guidelines-for-building-plan-submission.

1410 Examples are the Code of Practice for Environmental Health (NEA 2017 https://www.nea.gov.sg/docs/default-source/resource/practices-/copeh---2017-(aug).pdf) and the Code of Practice for Pollution Control (SSC *Code of Practice for Pollution Control*) which sets out the requirements to be followed.

OSC. The DCLD[1411] ensures that all environmental requirements are complied with prior to approval of the development.[1412]

This ethos of considering environmental issues when making planning decisions is evident even in business organisations such as the Economic Development Forum. The result is that, despite rapid urbanisation, the incorporation of strict provisions[1413] is playing an instrumental role in uplifting both the environment as well as the spirit of the people. These goals have been also incorporated into the *Singapore Business Charter for Sustainable Development* (BCSD) which recognises that for economic growth to be successful, it must be considered with sustainable development through "identifiable corporate environmental" responsibility and policies.[1414] By ensuring that development is sustainable, conflict between economic and property development and the environment is avoided. The Singapore government's aim is that, high standards must be maintained and environmental management must continue to be upgraded, it is simultaneously important to instil in the people of Singapore, a commitment that they will be committed to caring for the environment locally and globally.[1415]

Singapore is a country that has progressed in leaps and bounds with regard to progress in environmental matters. However, it may be described as being in "its infancy" with regard to public participation in the context of EIAs.[1416]

[1411] The Unit is an OSC that is regularly consulted by private and public sector agencies with development proposals such as new housing estates and industrial facilities as well as alterations and additions to existing sites.

[1412] The DCLD's OSC deals with all licence related matters covering different aspects such as radiation, protection, pollution control, waste management public cleansing, vector control and fumigation. Chapter 5.4.2 deals with DCLD and the approval of plans. See also Leitmann *Integrating the Environment in Urban Development* 15. This integration of environmental features into land use planning has resulted in proper siting of industries with separation of residential and industrial areas, rational provision of environmental infrastructure, encouragement of industries to use cleaner technologies, and effective protection of watershed.

[1413] With regard to environmental issues, such as urban biodiversity, and ensuring quality green spaces between buildings, and greening buildings themselves.

[1414] BCSD Singapore 2020 http://www.bcsd.org.sg/. Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 211. The is an agreement by business and industry to comply with the Green Plan on day-by-day basis.

[1415] Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 201. All reports indicate that this has actually had a successful outcome in Singapore. The Environmental Minister is known to have stated that Singapore's top priority must be an ideal environment to "live, work and play" in. The next is for Singaporeans to be an environmentally responsible.

[1416] Lin Heng 2000 *Sing JLS* 30.

5.4.3 EIAs in Singapore

The situation regarding EIAs in Singapore is somewhat ambiguous. The reason is that EPMA has certain procedures for industrial developments that are regarded as being similar to EIAs, although in fact, they do not strictly fulfil the criteria of EIAs and the related public participation as envisaged by the Rio Declaration.[1417]

Only qualitative risk assessments, and not EIAs, are required by the MSE for industries that store, use and supply large quantities of hazardous substances. In terms of section 26 of EPMA the Minister is empowered to require the owner to carry out an impact analysis study that identifies all necessary preventive measures that must be taken to avoid and control the hazards. Section 36, on the other hand, empowers the Minister to call for pollution control studies when he/she deems fit.[1418] In terms of section 33 the Director-General must issue a Clearance Certificate before industrial plant works may commence their operation and after completion issue a Compliance Certificate. This is to ensure completion according to plans that were submitted and all the conditions that were imposed. Section 39 empowers the Minister to stop operations if he/she believes that they are likely to "cause environmental pollution" or are dangerous to public health or safety. Strict penalties are prescribed by the Act for offences under the Act. The measures referred to in section 26 and section 36 of EPMA are very different from EIAs and focus only on potential pollution issues of a project. By contrast, an EIA requires a "comprehensive integrated detailed study of all environmental impacts including ecological and social impacts".[1419] It is also unclear which projects warrant a section 26 pollution impact analysis and which warrant a section 36 study.[1420] Lye Lin Heng[1421] has come out strongly regarding the fact that

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1417 See Chapter 2.6.

1418 Sections 21-27 of the EPMA deals with the control of hazardous substances. This is done under the Environmental Pollution Control (Hazardous Substances) Regulations No S 159/99 for substances that carry a mass disaster potential are highly toxic or produce waste that is difficult to dispose of. Certain substances like adhesives are excluded in terms of Part 11 of the Second Schedule of the EPMA.

1419 Lin Heng 2000 *Sing JLS* 29.

1420 The EPMA is also unclear on whether an impact on marine ecology that is affected must be undertaken and this should be included as there are insufficient laws protecting the marine environment in Singapore.

1421 Lin Heng 2000 *Sing JLS* 2.

EIAs should be mandatory in all development projects that could negatively impact on the environment. It is critical that the EPMA, while consolidating environmental issues relating to planning in 1999, did not take into account the concerns related to EIAs in Singapore.[1422]

Although EPMA emphasises the ISO 14000 standards and environmental management systems, the other issue is that the environmental safeguards[1423] in the form of EIAs are not used.[1424] The lack of EIA legislation is regarded as being even more critical in view of Singapore's limited space because errors in planning could result in "disastrous consequences".[1425] Furthermore, planners need to know what the conflicts could be before they make decisions and there is a necessity to consult experts in the field in this regard. In addition, the public should be informed and be permitted to participate.[1426]

Both lawyers and planners concerned with the environment have been concerned the lack of proper EIA laws in Singapore.[1427] They agree that an EIA is an important tool that should be mandatory for development.[1428] In fact, despite Singapore's substantial success in protecting the environment, there have been numerous calls for a more rigorous environmental planning procedure, such as an EIA, to be introduced.[1429] This is justified as various multilateral environmental instruments and the Rio Declaration[1430] to which Singapore is a signatory, have called on states to implement EIAs with the related public participation.[1431] The lack of provision for "public

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1422 Lin Heng 2000 *Sing JLS* 28. Also see Chapter 4.3.5 which refers to EIAs in South Africa.
1423 Such as pollution control.
1424 Lin Heng 2000 *Sing JLS* 28.
1425 Briffett and Mackee 2002 *Impact Assess Proj Apprais* 116.
1426 Briffett and Mackee 2002 *Impact Assess Proj Apprais* 113.
1427 Fowler 2020 *CJEL* 111-114. The authors have correctly called for the further development of EIA legislation. See Chapter 4 relating to environmental law in SA.
1428 Lin Heng 2008 *Sing JLS* 110.
1429 A body must be established, EIA procedures must be established and EIAs must become a part of the planning process.
1430 These international "soft laws" are not enforceable. See Chapters 2.6 and 4.3.5 relating to EIAs. EIAs consider all "potential impacts on the environment" as well as "ecological and sociological impacts". They also require some measure of public participation, and the public participation methods used in Singapore would not fulfil the role of public participation for EIAs.
1431 Lin Heng 2008 *Sing JLS* 109.

participation"[1432] in environmental decision-making through the vehicle of EIA legislation to ensure sustainable development is a concern.[1433] Environmental assessments "on a legal footing" promote "transparency and accountability and ultimately public trust in decision-making" and it is necessary for Singapore to enhance this aspect of environmental governance and management.[1434]

Both South Africa and Rwanda have an EIA system that is geared towards public participation in keeping with the recommendations of the Rio Declaration.[1435] Although there is no public participation linked to EIAs, public participation in Singapore is evident and prevalent in other situations. As an example, the thrust of the 1991 Concept Plan was publicised through an exhibition that explained to the population that Singapore's planning processes "could affect them in the future".[1436] Public consultation is conducted to address any concerns regarding the Concept Plan and the Master Plan through public forums.[1437] When the Master Plan is reviewed, in accordance with the *Planning Act*, it is compulsory to exhibit the reviews and open them up for public views and comments.[1438] The draft 2019 Master Plan was exhibited and attracted as many as 25 000 walk-in visitors to the gallery and 110 000 visits on line, substantially more than the figures for the previous Master Plan.[1439] Although it is not possible to have planning solutions that suit all persons the public engagements are important to help make informed decisions and balance the many interests of society.[1440]

The lack of EIA legislation in a country as environmentally advanced as Singapore is

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[1432] See Chapter 5.3.2 regarding the process in implementation of Concept Plans.
[1433] Fowler 2020 *CJEL* regards the proposal and argument made with regard to the necessity for EIAs in Singapore as being thoroughly researched and well documented. This source was not available to the writer and was not read.
[1434] Fowler 2020 *CJEL*.
[1435] See Chapter 4.3.5 for South Africa and Chapter 6.5.5 for Rwanda.
[1436] Ng Lang "Planning to Overcome the Constraints of Scarcity" 75.
[1437] URA 2020 https://www.ura.gov.sg/maps/?service=MP.
[1438] Section 10(2) of the *Planning Act.*
[1439] URA 2020 https://www.ura.gov.sg/maps/?service=MP.
[1440] Lin Heng 2008 *Sing JLS* 111. See the discussion on the Concept Plan in 5.3.2 and the Master Plan in 5.3.3.

regrettable as it has no system in place for the proper facilitation of EIAs.[1441] That being said, it is however recognised, even in South Africa, that EIAs cannot be regarded as a panacea for environmental issues. They are "another tool" that assists with environmental management.[1442]

The avoidance of conflict between property development and the environment is paramount and Koh,[1443] states that young Singaporeans should, in the next phase of development, balance development and the conservation of nature (the environment). As Singapore's views with regard to EIAs seem unlikely to change, it is interesting to read a suggestion made by a young Singaporean on the subject.[1444] He recommends the SEA process as it counters the suggestion that EIAs cause delays through objections raised through public participation (at a late stage of development plans). This alternative process or SEA should be integrated when the Master Plan is being finalised as it indicates where development may take place and the type of development. At that stage it also considers the environmental impacts of development. SEAs would allow for more consensus in decision-making relating to land use planning in Singapore[1445] as SEA brings the public on board at a much earlier stage of development and permits various stakeholders in society to participate, ensuring that the precautionary principle is adhered to. SEAs with or without EIAs are indeed a valuable option for Singapore and are already being used effectively in South Africa.[1446]

1441 Lin Heng 2008 *Sing JLS* 111. There is no defined role for the various parties and the public are not kept fully informed or to participate. This is regarded as a "glaring inadequacy" in Singapore.

1442 See Chapter 4.3.5. Also see Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 242, 245; Briffett and Malone-Lee "Case for Environmental Impact Assessments". Singapore has a strong legal foundation and will be easily able to accommodate the legal aspects of EIA. Concerns have, however, been directed regarding, amongst other things, what projects should be subject to EIAs, who will bear the costs, establishing a workable mechanism and a concern about cumbersome requirements, large delays, litigation and the difficulty in implementing an EIA system. The main plus for an EIA system to be formalised in Singapore is that it may be a boost towards a "popular democracy".

1443 Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 169.

1444 Bea 2018 https://nuselsa.wordpress.com/2018/02/23/strategic-environmental-assessments-a-holistic-approach-to-urban-sustainability/.

1445 Bea 2018 https://nuselsa.wordpress.com/2018/02/23/strategic-environmental-assessments-a-holistic-approach-to-urban-sustainability/.

1446 See Chapter 4.3.6 in respect of a discussion on SEAs.

The lack of EIAs is, however, regarded by some scholars as being more deep rooted and reference is made to the fact that Singapore is a one party and one government state that makes decisions for its people in a "top down government open to capitalism".[1447]

Despite the above sentiments about the lack of statutory EIAs there is no doubt that Singapore has already taken huge strides in avoiding or controlling environmental conflict when undertaking development.[1448] Determining how Singapore avoids or addresses conflict between property development and the environment is interesting and will now be discussed.

[1447] Binder 2019 *JCULP* 160, 171. However, it cannot be described as a brutal dictatorship, although liberties are definitely restrictive. Most Singapore citizens are satisfied because of the economic prosperity and rise in the quality of life and elect to continue living there.

[1448] Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 218.

5.5 Addressing conflicts between property development and the environment in practice

Despite steps taken to avoid conflict between property development and the environment, there are instances where even Singapore is faced with situations where a choice has to be made between property development or the environment.[1449] The result, in most cases, is that one has to be upheld at the expense of another.[1450] Various instances of conflict are discussed below so that the final decisions, although not made in a court of law, may be scrutinised.[1451]

In 1991 the Singapore government, through the Public Utilities Board, announced the development of a golf course in a sensitive area used for water catchment. The area was protected under the *National Parks Board Act* as a nature reserve.[1452] An EIA was commissioned by the government "secretly" for its own purposes, despite it not being a legal requirement in terms of any legislation for a need to assess the impacts of the said development and the results were not made known to the public.[1453] The Singapore Nature Society, an NGO, carried out its own EIA, compiled by lawyers, architects, botanists and scientists and published the report. The report indicated all potential negative impacts and the conclusion that that would occur due to significant impacts. They made it clear why the construction of the golf course should not proceed. In this case, following a period of stand-off and articles and letters to the press the proposal to develop was withdrawn by the Singapore government[1454] mostly

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1449 Lin Heng 2010 *J Court Innov* 142.

1450 Church 2009 *JALTA* 72.

1451 There are no decisions by Singapore courts giving directions as to how conflict between property development and the environment should be addressed. Decisions relating to conflict in Singapore are determined by the Singapore government.

1452 National Parks Board Act 22 of 1996. See Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 223-224. The EIA was compiled by lawyers, architects, botanists and scientists and resulted in the golf course not being built mostly on account of endangered plants and animals referred to in the EIA. This incident has emphasised to critics the need for definite EIA legislation in Singapore; Lin Heng 2008 *Sing JLS* 110. Government conducted an EIA on a confidential basis. This prompted the private EIA and the development was stayed on account of the expected damage to the environment.

1453 Hemp 1995 *J Coast Conserv*. This was within the Lower Peirce Reservoir. See also the section under EIA's where this matter is referred to.

1454 Hemp 1995 *J Coast Conserv* 137.

on account of the expected damage to the environment.

In another instance, a decision was made to develop property for residential and industrial purposes in an ecologically five-star conservation and sensitive area, Senoko.[1455] Senoko had been reserved in the Master Plan for conservation as a nature park in October 1992 but this decision was reversed by government and the development was planned on the same site. Objections were made by the public through petitions. Government in turn raised the point that this property was needed for housing for a few thousand people and that housing was a priority.[1456] In that particular case Senoko was demolished for thousands of housing units and it seems that government's decision favoured a residential development over the environment. One can only speculate what the outcome would have been if an EIA had been conducted. This in an instance where the environment competes against the need for homes for people. Decisions to develop property, as in this case, have to be carefully considered. The South African Constitutional Court had to consider a similar issue[1457] and decided in favour of flood victims being granted the right to live in temporary structures in an environmentally sensitive area. The Senoko matter was considered and debated extensively. Government argued that there was no alternative site for this much-needed housing project. However, critics such as Hemp[1458] believe that the decision by the Singapore government to proceed with the development was incorrect as at that stage there were already fourteen golf courses in Singapore with fifteen more planned and the authorities should have protected this ecological area and built the required housing elsewhere or on one of the golf course sites instead.[1459]

1455 Tookey 1998 *Wm & Mary Envtl L & Pol'y Rev* 222-223. This site had over 180 bird types with two internationally and 19 local "endangered species". Government was of the view that if the land was reserved for a bird sanctuary, a few thousand people would have to find accommodation elsewhere and the shortage of space makes this difficult to find in Singapore.

1456 Han 2016 *JED* 12. The state has the ability to implement policies at their will despite public opposition.

1457 *Minister of Public Works v Kyalami Ridge Environmental Association* 2001 3 SA 1151 (CC). Flood victims needed urgent temporary accommodation in camps in an open area near an upmarket residential area. An objection was made by a nearby residential environmental group on the basis that the camp would adversely affect their property values and the environment.

1458 Hemp 1995 *J Coast Conserv*.

1459 Hemp 1995 *J Coast Conserv* 139.

Two further decisions made, where the environment did not win the day, have not gone down well. The first of these was the decision to turn three of Singapore's sixty three tiny islands into holiday resorts. By the time government announced these developments they had already started reclamation works. The public was upset and letters were written to newspapers regarding the decision to develop the islands without the public being aware of or having the chance to "participate in the decision-making process".[1460] In this instance, the property was not required for social reasons, the development was not an absolute necessity, but was undertaken for economic reasons as it was to be a holiday destination.

In another instance, to increase public transportation utilisation, building an underground railway line was necessary that would pass through "extensive patches of Singapore's primary and mature secondary forests".[1461] Despite objections, it was decided to proceed with development. The much needed underground infrastructure was deemed absolutely necessary for future development by the Singapore authorities who pointed to limited land being available for infrastructure development. This situation would never have arisen if EIA legislation and laws mandating EIAs were applicable.[1462] Need and desirability from an environmental perspective would have required consideration.

It must be pointed out that there have also been instances of innovative compromises being reached which serve as lessons to be considered to avoid or reduce conflict between property development and the environment. The Bukit Timah Expressway divides a "nature reserve into two sections".[1463] This nature reserve represents the "constant struggle and compromise" between urbanism pressures and development on the one hand and conservation and the environment on the other. This issue is

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1460 Lin Heng 2000 *Sing JLS* 31.

1461 Han 2016 *JED* 13. The public transportation plan and the goal of protecting the natural environment were not in sync. The Nature Society Singapore argued that it was likely to destroy a "pristine forests and rainforest stream systems" that served as habitat for various species..

1462 Lin Heng 2000 *Sing JLS* 31.

1463 Kalyani *Sustainability of an Urban Forest* 144. Legal protection was given to this area as far back as 1951 with the first forest reserves being set up in 1883. It was one of the five nature reserves in all and is protected in terms of *Parks and Trees Act* 4 of 2005 for the protection of the biodiversity.

currently faced not only by Singapore but by many countries in the world.[1464] As a compromise to development of the Expressway, in 2005 a wildlife bridle 500 metre overpass was built under the road for animals to pass underneath the Expressway.[1465] This "overhead ecological corridor" is the first in Southeast Asia and ensured uninterrupted traffic while at the same time it ensured the protection of the environment.[1466] If development cannot be avoided then at least development must take place with meaningful environmental compromises being made.

Another instance was the 2007 landfill that was developed in Palau Semaku. This landfill or dumping ground is clean and odourless and was "designed to protect flourishing natural ecosystems" and coral reefs with rich biodiversity.[1467] This waste site is no ordinary landfill because it has been transformed and doubles as a biodiversity feature, attracting both "rare species of plants and animals" and also guided tours for tourists. The conversion of a landfill dumping site has received international acclaim.[1468] This artificial island, which took eight years to make, gives an indication of conservation of the future in relation to urban planning[1469] and is more in keeping with innovative environmental ideas that the world has come to expect from Singapore.

Singapore's success with integrating the environment in urban planning was taken a step further when it signed a bilateral agreement with China to develop the "Sino-Singapore Tianjin Eco-city" on an area that previously had uninhabitable salt pans, empty saline land with water bodies that were polluted.[1470] This area now has "80 000

1464 Kalyani *Sustainability of an Urban Forest* 143.

1465 Chung, Wong and Chan 2016 *Citygreen* 92, 95. The eco-pass is known as Eco-Link@BKE. The pass has eased traffic congestion. It has divided a rainforest and the wildlife within. Collisions between vehicles and animals are reported regularly; also see Kalyani *Sustainability of an Urban Forest* 143. Despite the advantage of this path, conservationists believe that it is not sufficient and that visits by tourist and close-by residents have a negative impact on these natural habitats and areas.

1466 Chung, Wong and Chan 2016 *Citygreen* 95.

1467 Chua 2016 *Urban Solutions*.

1468 Bland 2007 https://www.newscientist.com/article/mg19425991-600-island-of-trash-or-the-garbage-of-eden/.

1469 Bland 2007 https://www.newscientist.com/article/mg19425991-600-island-of-trash-or-the-garbage-of-eden/. All the trash from Singapore's 4.4 million residents is being dumped here 24 hours a day, seven days a week and will be for the next 40 years.

1470 Singapore VNR Report 2018 40.

residents and 5 000 registered companies" and also has 26 "key performance" indicators in respect of "environmental, economic and social aspects" and which includes totally "green buildings and renewable energy".[1471]

Apart from compromises made as indicated in the above cases, the Singapore authorities mitigate environmental losses on pristine natural environment when decisions are taken to proceed with property development by building more gardens and parks.[1472] This continued promotion of green spaces in Singapore is seen by critics as an equitable way of addressing environmental losses and may be regarded as a form of trade off for damage to the environment because of property development.[1473] Singapore has achieved substantial success on account of a variety of good practices.[1474]

The top down approach of the Singapore government, while being "patently expeditious", justifies the concerns expressed by the public regarding the lack of EIAs.[1475]

In Singapore conflict issues are resolved without litigation.[1476] This may be regarded as a disadvantage as there are no legal precedents regarding how the conflict between property development and the environment in Singapore must be adjudicated.[1477] Lin Lye Heng[1478] examined the "role of the judiciary" with regard to "environmental governance" in Singapore and states that if the "environment is properly managed by the relevant authorities" there should be few cases before the courts.[1479] She attributes this to be the case in Singapore as it has not seen a single legal matter

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1471 Singapore VNR Report 2018 40.
1472 Han 2016 *JED* 14-15.
1473 Han 2016 *JED* 15. The aim behind the greening of the city is that biodiversity, parks, nature areas, streetscapes, and park connectors is for people to improve their lifestyles.
1474 Leitmann *Integrating the Environment in Urban Development* 5.
1475 Lin Heng 2000 *Sing JLS* 32.
1476 The lack of litigation is due to acceptance by the community of Government's decision or due to no reviews or appeals being made to courts on account of terms of s 22(7) of the *Planning Act* (discussed under the *Planning Act* in 5.3.1 above).
1477 Lin Heng 2010 *J Court Innov* 141.
1478 Lin Heng 2010 *J Court Innov* 137.
1479 Singapore is regarded as having a management system for the environment that works fairly effectively. See, however, the discussion on the *Senoko* case and other cases relating to conflict in 5.4 below relating to sustainable development in Singapore.

instituted by an individual or citizen in relation to the conflict between property development and the environment.[1480] Singapore's judiciary is relatively inactive in land use planning and environmental cases. However, others point to Singapore lacking in essential laws and policies which form the backbone of litigation in environmental and land use.[1481]

Environmental litigation is usually criminal action taken in Singapore and focuses mainly on issues such as "littering and illegal dumping" of waste; the "cleansing of public toilets"; "noise pollution"; "pollution of the marine environment and trade in endangered species".[1482] Complaints relating to the environment are speedily investigated by the NEA who are vested with very wide powers of enforcement.[1483]

Conflicts between property development and the environment in South Africa prompt litigation by NGOs or concerned citizens.[1484] The damage and loss of natural resources has an impact on "environmental and social" issues and as a result the courts have had "to examine the fundamental principles of environmental law".[1485] The advantage of litigation is that guidelines regarding the resolution of these disputes are addressed by the judiciary and these form precedents that must be given effect to.[1486] South African courts have taken serious note of environmental problems and applied some of the appropriate principles such as the "precautionary principle" and the "polluter

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1480 It appears that property development laws are under control in Singapore but there are some environmental laws and regulations that present challenges for Singapore, such as EIAs.

1481 See Binder 2019 *JCULP* 177. Such as an *Administration of Justice (Protection) Act* 2016, an *Endangered Species (Import and Export) Act* 5 of 2006 and the *Environmental Protection and Management Act* 9 of 1999.

1482 See *Public Prosecutor v Yong Heng Yew* 1996 3 SLR 566 where the respondent was prosecuted and fined for throwing a cigarette in a shopping centre; *Public Prosecutor v Lim Niah Liang* 1997 1 SLR 534 541 where a Corrective Work Order, a new form of punishment was introduced on people for littering in Singapore. Illegal dumping in public spaces or throwing articles from a moving or stationary vehicle in public spaces can lead to a fine of S$50 000 and in serious cases even the vehicle may be forfeited.

1483 Lin Heng 2010 *J Court Innov* 137.

1484 An example of such a dispute in South Africa is *Baleni v Minister of Mineral Resources* 2019 2 SA 453 (GP) where a traditional community raised the concern that they should give prior consent before a mining authorisation can be issued.

1485 Lin Heng 2010 *J Court Innov* 140. These principles include: "the polluter pays principle"; "the precautionary principle"; "Inter-generational and intra-generational equity"; sustainable development; public participation and EIAs. See Chapter 4 which discusses various aspects referred to.

1486 *Fuel Retailers* case 66. See also case law discussed in Chapters 2, 3 and 4.

pays" principle to send out a strong message.[1487] NGOs in South Africa are encouraged to raise environmental issues and are granted *locus standi* to bring applications with regard to the protection of the environment. Where appropriate, costs orders are not taken against such organisations whose only interest is the protection of the environment.[1488] These are aspects of South Africa's environmental laws that go a long way to avoiding environmental conflict and are worthy of implementation globally.

Having discussed the various planning and environmental laws, policies and plans the last aspect to be considered is the creation of satellite cities in Singapore. The advantages of this form of development need to be considered as a method of development in South Africa to address the problem of sprawl.

5.6 Satellite cities

Satellite cities[1489] are small or medium sized cities or municipalities that are adjacent to a major city with the major city being the core. This concept is being introduced in African countries to address the issue of sprawl and also because of its economic and social advantages. This planning concept was introduced into Singapore with its first new satellite city being Queenstown.[1490] Satellite cities differ from mere suburbs and especially residential areas (sometimes called bedroom areas) in that they have separate municipal governments that are distinct from the core metropolitan area and also have employment bases to support their residential populations.[1491] Conceived as a basic urban building block, satellite cities are planned to be self-sufficient with a full range of amenities.[1492] Conceptually, therefore, they are self-sufficient communities

[1487] See Chapter 4.3.1.

[1488] See *Biowatch Trust v Registrar Genetic Resources* 2009 6 SA 232 (CC).

[1489] Hayes 2017 https://www.worldatlas.com/articles/what-is-a-satellite-town.html. They are also referred to as satellite towns. A satellite town is referred to as such because of its similarity to the concept of a satellite. A satellite city or town is a smaller version of a city near a larger city but is unique from the metropolis or metropolitan area.

[1490] Queenstown was built (1952 to 1973) by the HDB. Most residential buildings are in the 23 satellite cities that have housing developments that are self-contained. Satellite cities have public housing, a town centre and other amenities such as commercial developments.

[1491] Zisheng *New Urban Area Development*.

[1492] Liu "Planning and Urbanisation in Singapore" 37.

outside of larger metropolitan areas. Although not necessary, there is usually some cross-commuting with residents commuting out of and into the satellite city from the major city.[1493] Satellite cities are "surrounded by greenbelt areas" and they are often connected to the "greater metropolitan area by an efficient" public transport system, a rail system in the case of Singapore.[1494] In addition, a satellite city will be a separate entity to a larger metropolis nearby.[1495] Singapore is now regarded as a "Garden City," and although it could easily have become a concrete jungle, it has a pervasive presence of greenery even in its satellite cities.[1496]

Satellite cities are said to have certain unique attributes. They are usually started before the suburban expansion of the metropolis.[1497] They are partially independent both economically and socially from that metropolis. Being physically separated from the metropolis, they have their own independent urbanised areas, residential areas, traditional downtown and traditional "inner city" neighbourhoods. Satellite cities may or may not be counted as part of the large metropolis' combined area.[1498]

According to Hayes,[1499] in an era where suburban sprawl has become a problem, satellite cities may be viewed as a solution because although they become a part of "larger metropolitan areas", they exist "independently" and are more self-contained than suburbs. With better urban planning, satellite cities may be adapted to play a role in reducing suburban sprawl. Singapore's expertise in successfully designing satellite cities was recognised all over the world when the "Building and Social Housing Foundation (BSHF)" of the UN awarded the "World Habitat Award" to Singapore's

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1493 Travel is reduced. Jobs can be found in the industrial sections of satellite cities. They also satisfy other needs such as schools, hospitals, parks, and sports complexes.

1494 Laursen 2012 http://www.citylab.com/work/2012/03/are-satellite-cities-cities-future/1468. Similar satellite cities are found in Stockholm and Tokyo - these satellite cities typically have a population "ranging from 30,000 to 250,000".

1495 Laursen 2012 http://www.citylab.com/work/2012/03/are-satellite-cities-cities-future/1468. Very often there a rural section in between the satellite city and the main city where it exists. Sometimes different barriers exist, such as a wide river.

1496 Binder 2019 *JCULP* 174. Rooftop and balcony gardens exist and foliage and vegetation is found on the sides of many buildings in Singapore..

1497 Their growth can also take place before the main city has fully developed or they exist as separate cities first and then become satellite cities.

1498 Hayes 2017 https://www.worldatlas.com/articles/what-is-a-satellite-town.html.

1499 Hayes 2017 https://www.worldatlas.com/articles/what-is-a-satellite-town.html. Satellite cities maintain their own economies but are interconnected with nearby larger cities.

satellite development, Tampines Town.[1500]

5.7 Conclusion

In this Chapter, the planning and environmental laws of Singapore were investigated with a view to guide planning and environmental issues within the urban edge of cities in South Africa. Singapore has achieved the balance it sought between property development, social and economic growth and environmental protection that require a clear vision, long-term planning and effective implementation. It has also achieved improved lifestyle changes for its people. Planning seems to be more successful in Singapore than in South Africa, where cities have spread out into the suburbs and sprawl is not being confined.[1501] Singapore emerged from widespread poverty and squalor to a metropolis that is world class "with a top down limited democracy" that is "regarded as a price that Singapore citizens have paid for their success".[1502] A dynamic leadership took whatever measures were necessary to help Singapore out of poverty and has made it the economically successful city-state that it is.[1503]

Singapore's VNR, undertaken in 2018, confirms that the country's long-term approach and development strategy based on integrating sustainability directly into all policies and processes has yielded good results and worked well.[1504] Special mention is made of its successes regarding public housing for its population;[1505] the quality of housing that is provided;[1506] the form and use of its public transport through improved connectivity, used by a wide majority of the population,[1507] and Singapore's role in

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1500 Ng Lang "Planning to Overcome the Constraints of Scarcity" 79. This was achieved on 5 October 1992. To further enhance mobility options in Singapore, a much publicised effort has been made to invest aggressively in additional public transport infrastructure to double the rail network by 2030 so that eight in ten households will reach a train station within a ten-minute walk.

1501 See Chapter 2.1.

1502 Binder 2019 *JCULP* 189.

1503 Binder 2019 *JCULP* 189.

1504 Singapore VNR Report 2018 37-40.

1505 80% of people in Singapore live in public housing and own their flats that are well subsidized by government for affordability.

1506 To make public housing pleasant and avoid the crowded feeling, green spaces and parks are included even in low-cost housing developments. In fact, despite serious land constraints, close to 10% of land in Singapore is set aside for parks and nature conservation.

1507 Cleaner vehicles with less carbon emissions are becoming compulsory.

assisting other countries with regard to building sustainable cities.[1508] More recently, progress is being made in transforming existing areas into new growth districts and applying spatial strategies to avoid overcrowding by moving infrastructure underground.[1509]

The challenges to sustainability and achieving SDG 11[1510] relate to the need to adapt to changing demographics and Singapore's ageing population; to address ageing infrastructure and plan buildings that need little maintenance. Singapore has certainly taken giant leaps with regard to sustainability in its urban areas, especially when compared to the situation in South Africa.

South Africa has acknowledged in its VNR Report 2019 the difficulty it has in relation to issues of conflict and in attaining SDG 11 timeously and that strategic interventions are required.[1511] The following are among other issues that have relevance in that regard:

1. Although Singapore has no urban edge as we know it, the sea is its natural boundary. It serves as a clear and definite urban edge that prevents outward expansion and sprawl. A policy of intensification and densification in its urban development, independent of outward expansion, due to its limited space is an important lesson. This has made it a compact city.

2. The *Planning Act* with its conditions relating to conservation and the protection of the environment was a step in the right direction. South African progress in that regard was slower but has recently been expedited with the implementation of SPLUMA.

3. The Concept Plans, introduced during different stages of development, provide valuable lessons regarding sustainable development. The innovations introduced were the "ring system," the incorporation of the environment into planning,

[1508] Rwanda has used Singapore's model of sustainable development extensively.
[1509] Singapore VNR Report 2018 40.
[1510] Singapore VNR Report 2018. 41-42.
[1511] See Chapter 3.11 and 4.7.

decentralisation in the form of satellite cities and the introduction of conservation together with public participation in planning. Sprawl is addressed by intensifying new developments, recycling land and further increasing the use of public transport and even cycling. A vibrant economy with good jobs, sufficient and well-designed affordable homes and the promotion of a "good living environment" are all addressed in the latest Concept (or land use) Plan together with the need for increased use of public transport. These are all issues that need to be considered in South Africa in terms of the VNR.

4. The Master Plan has the task of implementing the solutions and innovations of the Concept Plan and may be compared to the NSDF that lays down the plans and concepts that must be implemented by municipal SDFs. However, effective implementation and strict controls in Singapore ensure that development is sustainable. By comparison, South African municipalities lack capacity. This impacts on the effectiveness of the legal framework.

5. Singapore's planning and environmental success lie, to a large extent, on its MND and MSE being well integrated to make sound decisions regarding sustainable development. The MND is assisted every step of the way by the MSE with Concept Plans, the drawing SDCPs and manning the Licence Control OSC's for approval of plans. By contrast, South Africa's planning and environmental sections are dealt with by different spheres of government and conflicting decisions from these departments have resulted in litigation. Integrating this in some way with *Guidelines* may assist in that regard.

6. Singapore's progress and development of its Green Plan and "Blueprint" for sustainable development accelerated Singapore's progress regarding sustainability. Sustainable development has been taken to the next level with both the authorities and the people of Singapore embarking on a journey of sustainability together and making a pledge to be concerned with Singapore's sustainability and also global sustainability. South Africa's NDP, its IUDF and the

draft NSDF[1512] are policies that are geared to help South Africa attain the SDG 11 but they are more recent introductions. Although they deal with relative issues, their success is yet to be realised.

7. Satellite cities introduced at an early stage, were an efficient way of creating sustainable human settlement developments in Singapore. Satellite cities differ from the residential suburbs of South Africa, are planned to have amenities and job opportunities, are self-sufficient and may be adapted to play a role in reducing suburban sprawl and promoting harmony in urban areas in South Africa.

Singapore's progress has indeed made it the envy of many other nations. However, there is indeed a disappointment relating to the non-existence of EIAs and related public participation. Public participation is evident during the implementation stage of the Concept and Master Plans but the lack of EIAs is a concern. South Africa may be applauded for the progress it has made with regard to EIAs in comparison with Singapore. Fortunately, the "authoritarian top down" governance in Singapore has thus far substantially promoted sustainability. Specific instances of conflict between property development and the environment in Singapore indicate how the authorities address these situations. Innovative compromises are sometimes made regarding resolving and reducing conflict with the environment but court judgments are lacking.

[1512] These are discussed in Chapters 3.6.1 and 3.9.

Chapter 6

Rwanda: a promising showcase of African sustainable development

> It's a land of a thousand hills and even more contradictions. A place where some of the world's worst mass murderers are forgiven and walk free but being caught with a plastic bag can … end you up in jail. A place that was a byword for destruction, that now champions conservation and has some of the greenest government policies on the planet. A place where, a generation ago, up to a million people were butchered in just 100 days, that is now one of the most peaceful countries in Africa.[1513]

6.1 Introduction

The introductory quotation is but one of many that describe the Rwanda we know today as a country that has, over a relatively short period of less than 25 years, overcome many setbacks to make serious progress on many fronts, including planning, development and environmental protection.[1514]

As a result of the genocide and the atrocities of the 1990-1994 civil war, Rwanda had nothing of value: no infrastructure, no businesses, damaged buildings and even very few people. To start afresh, on a clean slate as it were, it formulated its vision and in 2000 it initiated a process of introducing policies and legislation to implement its vision with regard to land use, planning and management.[1515]

From 2003 onwards the country's focus moved to introducing policy and legislation to include environmental issues. This aspect became so important that in 2010 it requested the UN to conduct a post-conflict environmental assessment.[1516] The UNEP evaluated the state of Rwanda's environment from "a post-conflict perspective" and

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[1513] Buerk 2019 https://www.ft.com/content/3df83bc8-7d4e-11e9-8b5c-33d0560f039c. See also Graham 2016 *New African*.

[1514] Goodfellow 2014 *JEAS*. This aspect has captured attention both within and beyond Africa. Urban planners from other countries in Africa send teams to observe its developments and even the UK is impressed at the fast pace of Rwanda's urban programme.

[1515] Aubert 2018 *J Intellect Cap*. The Rwandan government saw proper land administration as a means to peace and security because it improves "social equity and prevents conflicts".

[1516] The UN was requested to conduct an audit of the country's sustainability.

agreed to help the country define an "environmentally sustainable path" for its development for the years ahead.[1517] This resulted in a full analysis of the situation, together with practical recommendations going forward.[1518] Rwanda's serious progress in land use and planning is admired by many countries due to its fast pace. Oranje and Van Wyk[1519] analysed its progress to obtain insights into how to address post-expropriation land reform in South Africa from a legal perspective. Their analysis is also useful for the purpose of this study. It confirms that, to a large extent, South Africa has focused on rural reform and neglected the urban context of land reform.[1520] The authors believe that Rwandan policy and legislative developments could be instrumental in guiding the process of improving South African legislation and policies relating to planning and spatial planning instruments for sustainable development. This study is directed at analysing the conflict between property development and the environment in Rwanda's urban space and the steps taken from a legal perspective to resolve them. Lessons learnt may provide pointers to South African cities when addressing similar conflicts, especially when such conflicts occur within the urban edge. The challenge of sprawl has always impacted the planning process in Rwanda as it is a country with one of the highest population densities and has limited availability of land for development.[1521] Since this is a major problem in South Africa (and in other cities in many parts of the world) it requires special attention.

Rwanda chose Singapore as its model for land use planning and development. This was not accidental as the "founding father of Singapore" was an adviser to Rwanda's

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1517 UNEP *Rwanda* 12. This report was an "integrated environmental assessment". It also analysed the specific challenges to long-term development. UNEP used the Rwanda Environment and Management Authority (REMA) and the overall leadership of the Ministry of Natural Resources (MINIRENA) to assist it locally.

1518 See Chapter 6.5.6. UNEP used 12 national experts to provide an overview of the status of the environment. They had to identify environmental problems and highlight gaps for priority areas., The final report is an independent evaluation and assessment by UNEP although local partners were also engaged.

1519 Oranje and Van Wyk 2019 *Town Reg Plan*.

1520 Huchzermeyer *et al* 2019 *Town Reg Plan* 91. The explicit notion of urban land reform is only receiving some attention recently in post-*apartheid* South Africa; Oranje and Van Wyk 2019 *Town Reg Plan* 112.

1521 MININFRA 2015 https://uploads.habitat3.org/hb3/RWANDA-HABITAT-III-REPORT_17.12.15.pdf 20.

President Kagame.[1522] Determining whether or not Singapore's strategy can work on the ground in an African country will be an interesting exercise, especially as Singapore's planning and environmental trajectory is also investigated in this research, with a view to lessons being provided to South Africa.

Rwanda's planning legislation and policies regarding property development will first be assessed from a planning law perspective. As Rwanda is mostly rural, urbanisation strategies were required. *Vision 2020* and *Vision 2050*, together with a decentralisation policy, were devised for this purpose. The *National Urbanization Policy* and the Urban Master Plan's progress were tracked and propelled by the Economic Development and Poverty Reduction Strategies (EDPRS), which were designed for this purpose. The 2004 *National Land Policy* directs that development be sustainable and the environment be protected so that future generations can also enjoy the benefits.

A discussion of Rwanda's progress from an environmental law perspective will form the second part of this study. Rwanda's various policies and laws that were designed to help it on its journey of sustainability will be investigated. An important aspect, from an environmental perspective, is the United Nations Environmental Programme (UNEP) audit with its recommendations regarding how Rwanda should progress. The *National Environmental and Climate Change Policy* of 2019 will also be discussed.

A study on property development and environmental conflict within the urban edge necessitates a discussion on Kigali, the capital of Rwanda, as it is one of a few cities in Africa that has an urban edge. The urban edge was established in terms of the Kigali City Master Plan 2013.[1523] The study of Kigali's laws and policies will assist in resolving how any negative impact of property development on the environment must be addressed in a city, from a legal perspective. Kigali's planning is designed to include satellite or secondary cities.[1524] Their purpose and effectiveness in avoiding conflict

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1522 Uwizeyimana 2019 *African Renaissance*. The founding father was Lee Kuan Yew.

1523 See discussion on Kigali and the Kigali Master Plan in terms of which an urban edge has been implemented with a view to avoiding sprawl.

1524 Satellite and secondary cities are regarded as similar concepts in this study and attention to minor differences between these concepts will not be discussed. They are both a form of development usually found at the periphery of cities and provide an option for developing human settlements coupled with other advantages as discussed in this study.

must also be assessed to ascertain their role with regard to sustainable development and the environment. Throughout the course of the discussion, Rwanda's progress in terms of international soft law instruments such as of the SDG 11, the *New Urban Agenda* and international concepts such as compact and smart cities will be touched on where relevant.

All in all, this study will analyse the legal considerations and steps taken by Rwanda that may be adapted to address and resolve conflict with the environment in relation to development within the urban edge in South Africa.

6.1.1 Background and history of planning

Rwanda, a small, landlocked country located in Central-East Africa is a very densely populated area of Africa. It covers an area of 26,338 km and has a common border with Burundi (south), Uganda (north), Tanzania (east) and the Democratic Republic of Congo (west).[1525] Rwanda is labelled "the land of a thousand hills" due to its hilly topography.[1526] Historically a German protectorate from 1896 to 1916, it became a Belgian colony from 1916 to 1962 until it gained its independence.[1527] By contrast, both South Africa and Singapore's planning was, to a large extent, based on colonial English law.[1528] Land is a prime resource in Rwanda and is "too steep or too wet" to build on and therefore the majority of the population engage in agriculture.[1529]

On 6 April 1994, while South Africa and the world focused on Nelson Mandela being President of South Africa, a plane carrying Rwanda's President was shot down over

[1525] See discussion on the urban edge in South African planning in Chapters 2 and 3, and Singapore's planning in Chapter 5.

[1526] University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf Executive Summary ix, 25.

[1527] Chandler 2014 https://face2faceafrica.com/article/rwanda-burundi-independence.

[1528] See the background discussion in Singapore in Chapter 5.1 and the South African discussion in Chapter 2.1 where it is indicated that English Law played a major role in both Singapore and in South African planning.

[1529] Harrison 2016 *Third World Q*. See also University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf Executive Summary ix.

Kigali.[1530] This triggered a state-sponsored genocide of up to one million of Rwanda's minority Tutsi population and moderate Hutus.[1531] Every sector in Rwanda was seriously affected by the 1990s civil war and genocide.[1532] The country continues to deal with the dire consequences of these atrocities.[1533]

After the genocide, the priority of the new Rwandan government, the Rwandan Patriotic Front, was to implement a set of integrated policies, legislation and plans specifically for the redevelopment of urban areas.[1534] The "ambitious and successful" legislation and policies issued, together with plans and procedures introduced are worthy of assessment[1535] as Rwanda, much like Singapore,[1536] has catapulted itself (in just one generation) to a middle income country. Rwanda's large population makes land in the country a "critical resource".[1537] Urbanisation began rapidly after the genocide, but initially, this was done in an uncoordinated manner.[1538] The

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1530 Howard 2014 https://www.theguardian.com/global-development/2014/apr/03/rwanda-20-years-on-how-a-country-is-rebuilding-itself. The passengers in the plane were Rwanda's president, Juvénal Habyarimana and the Hutu president of Burundi, Cyprien Ntaryamira.

1531 Goodfellow and Smith 2013 *Urban Studies.* See also CountryWatch *Rwanda Country Review 2016.* This mass slaughter was carried out by government-backed perpetrators in the army, police, militias and by thousands of Hutu civilians across the country, with the UN and the international community either not intervening or being unable to intervene in this conflict; see also BBC News 2019 https://www.bbc.com/news/world-africa-26875506; Marshall 2008 *ColoradoBiz*.

1532 Forbes Africa 2020 https://www.forbesafrica.com/brand-voice/2020/02/12/invest-in-rwanda-a-country-with-unconventional-vision-and-leadership/. Over one million people had been killed in less than 100 days while over 3 million had fled the country to refugee camps in Tanzania, Burundi and the DRC (then Zaire). Even the national treasury was looted and there were not even pens and paper in government departments.

1533 UNDP *Assessment of Development Results: Rwanda*. These atrocities still have a major effect on the recovery of the country.

1534 Goodfellow 2014 *JEAS*. The progress made by Rwanda has been "nothing short of extraordinary" in terms of the growth of its cities and urbanisation, the policies that government put in place and the rigorous manner in which they are implemented, especially in the City of Kigali; Aubert 2018 *J Intellect Cap*. The post-conflict Rwandan government envisaged proper land administration as a contributor to sustainable peace and security so that it may enhance social equity and prevent conflicts.

1535 Oranje and Van Wyk 2019 *Town Reg Plan* 112-124.

1536 See a full discussion on Singapore in Chapter 5.

1537 Ericson and Lindberg 2018 https://www.diva-portal.org/smash/get/diva2:1228067/FULLTEXT01.pdf 7.

1538 Uwimbabazi and Lawrence 2011 *Rwanda Journal*. After the genocide urbanisation increased due to refugees returning to Rwanda the exodus of people from rural areas to grouped settlements called *imidugudu.* Urban areas were thought to have more economic opportunities and potential to reduce poverty than rural areas. See University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 3.

infrastructure was unable to keep up with the fast pace of growth. Land scarcity led to environmental degradation, thereby "exacerbating the effects of land scarcity".[1539] The demands on a rapidly growing population include problems related to development, such as roads, infrastructure and congestion, and a change in land and building uses.[1540] It therefore became a priority for the authorities to proactively plan Rwanda's urbanisation rather than leave it to chance.[1541] Rwanda was therefore forced to change its land tenure arrangements on account of the need to plan and accelerate urbanisation. The land tenure system is now more similar to that in South Africa and is very different to that in Singapore.[1542]

The future outlook for "environmental governance" is improving as the country is intent on developing "one of the most effective environmental governance regimes in Africa".[1543] Exemplary strides have been consistently taken with regard to "urban governance, including land management and administration".[1544] Rwanda's swift progress has lessons that South Africa's planning and environmental law can benefit from.[1545] It is fortunate that hand-in-hand with its journey of development, Rwanda, embraced the environment, natural resources, climate change, sustainable development and proper management of development.[1546] Avoiding conflict between

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1539 UNEP *Rwanda*.

1540 Amanor 2013 https://www.polity.org.za/article/unearthing-the-key-drivers-of-economic-growth-in-rwandas-post-genocide-rebirth-2013-10-28. This article states that although African countries have the highest rate of urbanisation they have the lowest rate of urban economic growth. See also World Bank *Upgrading Urban Communities*.

1541 Due to the extreme land shortage in Rwanda, a land use plan was needed to ensure the best way for urban and rural development.

1542 See Chapter 1.8 which distinguishes the land tenure system of South Africa, Singapore and Rwanda.

1543 UNEP *Rwanda* 8.

1544 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf Executive Report ix.

1545 See Chapter 6.9. See also Ministry of Environment 2019 http://www.fonerwa.org/sites/default/files/Rwanda%20National%20Environment%20and%20Climate%20Change%20Policy%202019.pdf (hereafter Rwanda *National Environment and Climate Change Policy* 2019). In the last twenty odd years, Rwanda has made important socio-economic progress. Its speedy economic progress, poverty reduction and positive growth has been achieved despite a slow-down in the global economy; Rwanda exports tea and coffee; gets foreign aid (which constituted 20% of gross annual income in 2011); and has a useful tourism trade.

1546 Rwanda *National Environment and Climate Change Policy* 2019. 2003 saw the government adopt its first-ever environment policy followed by the following legislation: *Organic Law No 04/2005 Determining the Modalities of Protection, Conservation and Promotion of Environment*; *Law No*

property development and the environment within the urban edge has become an integral part of urbanisation in Rwanda.[1547] How this is achieved from a legal perspective necessitates a study of relevant planning and environmental laws, policies and plans that may be considered for use by both the South African planning and environmental sectors. This may assist in achieving sustainable development in the urban areas in South Africa.

The urbanisation strategies will be discussed first to see how they fit into the entire planning and development of Rwanda.

6.2 Urbanisation strategies

In deciding on the course to be followed to uplift the people and the country that had been war-torn, Rwanda heeded the advice of the World Bank, a pro-urban enthusiast. Its mantra is that no developed country has reached its current per capita income without the advantages of urbanisation and vibrant cities.[1548] In contrast to many African countries, Rwanda actively supports urbanisation and regards it as a means "to accelerate transformation from an impoverished rural society to a prosperous modern economy".[1549] As may be expected, many of the policies and laws place a strong emphasis on urbanisation. Sprawl, the enemy of sustainable development, was visibly prevalent in Rwanda and had to be dealt with by various means. These will be highlighted as the discussion of the policies' and laws' progress. The initiation of Kigali's urban growth boundary in the Master Plan has particular relevance to this discussion on conflict within the urban edge.[1550] To understand the entire process and

16/2006 Determining the Organisation, Functioning and Responsibilities of Rwanda Environment Management Authority; *Law No 54/2011 To Establish the Rwanda Meteorology Agency and Determine its Mission, Organisation and Functioning*; *Law No 16/2012 Determining the Organisation, Functioning and Mission of the National Fund for Environment*. See Chapter 5 for a discussion on this aspect in Singapore.

1547 MINIRENA 2017 http://www.rlma.rw/uploads/media/LUP_Guidelines_Final_Published.pdf 12 (hereafter *Rwanda National Land Use Planning Guidelines* 2017).

1548 World Bank *World Development Report 2011.*

1549 Van Leynseele and Bontje 2019 *Int Plan Stud*. This usually means substitution of low-productivity agriculture for higher-productivity activities; Turok 2019 *Local Economy* 224-225; Oranje and Van Wyk 2019 *Town Reg Plan* 125. With urbanisation it is hoped that social and education services can also be provided more readily, more affordably, and at scale.

1550 See discussion on the urban boundary under Kigali Master Plan below in Chapter 6.6.2.

see it in context, an analysis of the legal process is necessary.

Urbanisation was hastened in Rwanda, largely because of the influx of repatriated refugees to urban areas after 1994. This was coupled with "internal migration", the increase in the population and "administrative reforms that extended the city limits" to the surrounding areas,[1551] in other words, sprawl. A pattern began to emerge with the first waves of urbanisation called *imidugudu*[1552] or grouped settlements created by returning refugees. The *imidugudu* approach was accepted and endorsed by government and by 1997 it was recognised as a "grouped settlement programme" in terms of the *National Human Settlement Policy*.[1553] A process to govern urban planning and the restructuring of unplanned residential areas and regrouping of the rural population began so that the land could be managed to increase its productivity.[1554] The importance of planned urbanisation was realised and a sustainable human settlement policy that was "*imidugudu*-oriented" was devised.[1555] This was based on a participatory approach with land security and proper area allocations.

The *imidugudu* approach was favoured for its advantages in the context of what the Rwandans had gone through. These hubs of development would help free up agricultural land, enhance agricultural productivity and make basic services, such as "water, healthcare, education, communications and security" easier.[1556] However, negatives identified in the *imidugudu* policy caused concern. These related to unplanned urban settlements and uncontrolled urban expansions. Land was not being used efficiently and inappropriate site selection for groups or hubs resulted in chronic

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1551 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 3.

1552 *Rwanda National Land Use Planning Guidelines* 2017. This is an alternate type of housing where the population live closer together as a catalyst for reconciliation. Each household is given a plot for a house and another for agricultural uses outside *imidugudu*.

1553 UNEP *Rwanda* 17. *Imidugudu* has adopted as a "national strategy".

1554 MININFRA 2008 https://bpmis.gov.rw/asset_uplds/files/National%20Urban%20housing%20Policy.pdf Foreword.

1555 MININFRA 2008 https://bpmis.gov.rw/asset_uplds/files/National%20Urban%20housing%20Policy.pdf 2.

1556 UNEP *Rwanda* 15. It was thought that "clustered settlements would promote reconciliation" and to counter the shortage of land and population density.

under-production in the country.[1557]

Against this background, it was necessary to take the first steps to put sprawl in check and to take into consideration urban and rural linkages as well.[1558] Originally designed as a response to the emergency created by the genocide, *imidugudu* was crystallised into an acceptable policy in terms of *Vision 2020*[1559] that has now evolved into "integrated development approach model villages". These villages are established to increase the number of people living in rural settlements, help with provision of infrastructure and basic services and to mitigate urban sprawl[1560] rather than cause it. The *modus operandi* is better organised as local authorities now identify sites and supervise the implementation of resettlement plans.[1561] In addition, policies, strategic plans[1562] and legal frameworks were introduced to promote sustainable urbanisation and guarantee citizens a safe living environment.[1563]

1557 Palmer "Recent Experiences of Civil Society Participation".

1558 MININFRA 2008 https://bpmis.gov.rw/asset_uplds/files/National%20Urban%20housing%20Policy.pdf 39.

1559 See Chapter 6.3.2 below.

1560 MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf. Avoiding sprawl is also a consideration in the planning of secondary or satellite cities. See discussion on this aspect in Chapter 6.3.3 below.

1561 Private land and real estate development companies, human settlement and residential area associations construct the houses with materials from local firms supervised by the authorities.

1562 MINECOFIN *EDPRS 2* Priority 4. The Economic Development and Poverty Reduction Strategy 2013-18 (EDPRS 2) recognised that urbanisation assisted economic development, and the road map for Rwanda's development in *Vision 2020* expresses Government's plan for speedy urbanisation.

1563 Articles 22 and 53 of the *Constitution of the Republic of Rwanda*, 2003.

6.3 General policies

6.3.1 Institutional planning

Rwanda ensured that its re-building strategies and laws and policies implemented were all totally in line with global and international guidelines such as the SDGs and MDGs so that its cities could be "inclusive, safe, resilient and sustainable".[1564] Turok[1565] attributes Rwanda's remarkable progress over the last 25 years to its "socio-economic development", "community participation" and the national government's positive approach to urbanisation after 2010.

The reconstruction of this devastated country was not taken lightly and the National Development Planning and Research Directorate (NDPR) in the Ministry of Finance and Economic Planning was appointed to plan and supervise it.[1566] This mammoth task included coordinating national development and planning between central and local government; carefully monitoring progress on the realisation of development objectives; ensuring alignment between development plans and budgets and "building capacity in the areas of planning", monitoring and investment.[1567] The coordination between the various sectors is no mean feat. In South Africa, national, provincial and local spheres do not cooperate and coordinate with one another effectively at all times. This was identified as a weakness in South Africa and organisations such as the NDPR need to be considered for South Africa.[1568]

6.3.2 Vision 2020 and Vision 2050

1564 *Rwanda National Land Use Planning Guidelines* 2017 56.

1565 Turok 2019 *Local Economy* 221-227. Community projects build and maintain useful facilities and encourage social dialogue between citizens and officials. This has created more efficient and liveable cities with economic prosperity and human development.

1566 Versailles 2012 http://static1.1.sqspcdn.com/static/f/1349767/18085923/1336475378620/rwanda-budgeting-. Until 2000 Rwanda had a separate planning ministry. This was merged within the Ministry of Finance and Economic Planning.

1567 Republic of Rwanda 2012 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Vision_2020_.pdf. The Ministry of Finance and Economic Planning (MINECOFIN) was formed in 1997 for better co-ordination between "finance and planning". In February 1999, it was put in charge of "development cooperation". Its plan was to improve sustainable growth, promote economic opportunities and raise living standards; Oranje and Van Wyk 2019 *Town Reg Plan* 114.

1568 See discussion in Chapter 3 on planning law in South Africa regarding the problems when the different spheres of government have different policies and conflicting views.

Rebuilding a country necessitates identifying factors that negatively impact on it and impede its progress. In Rwanda, the major issue is the scarcity of land.[1569] Land has been the central issue of the political economy for centuries and political leaders continuously intervened in its distribution.[1570] Another issue, agriculture, had become uncertain and unreliable although previously considered to be the foundation of Rwanda's national economy.[1571] After the genocide, urban planning had not received much attention and land was badly managed until about 2004.[1572] Land in Rwanda was being utilised in a manner that was an neither efficient nor sustainable thereby cancelling any gains relating to land and infrastructure.[1573]

Against this background, the Government of National Unity considered it necessary to transform the Rwandan economy from an "agrarian subsistence economy into a sophisticated knowledge-based" and middle-income society by 2020 and for this reason introduced *Vision 2020*[1574] in 2000 and *Vision 2050*[1575] in 2016. *Vision 2020* is a guiding tool for Rwanda's development.[1576] It is not a statutory document but is used to prepare more sectoral detailed plans to attain the goals set out. To finalise *Vision 2020*, extensive consultations were held with the public, followed by the presentation of a draft policy to a large cross-section of Rwandan society.[1577] *Vision*

1569 See Chapter 5 on Singapore for a discussion on how the scarcity of land was dealt with in Singapore.

1570 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf Executive Report ix. After the genocide against the Tutsi, the Government of Rwanda has embraced urbanisation and now sees it as a way to reconstruct Rwanda.

1571 Republic of Rwanda 2012 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Vision_2020_.pdf.

1572 Rurangwa "Perspectives of Land Reform in Rwanda". Those problems were exaggerated by the genocide of 1994. For over 90% of the Rwandan population, agriculture was their means of subsistence. See also MININFRA 2018 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf 6.

1573 Rurangwa E 2002 *Perspectives of Land Reform in Rwanda*.

1574 Rurangwa "Perspectives of Land Reform in Rwanda"; Republic of Rwanda 2012 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Vision_2020_.pdf (hereafter Rwanda *Vision 2020* (2012 Revision). *Vision 2020* was introduced in 2000 and revised in 2012.

1575 Gatete 2016 http://www.minecofin.gov.rw/fileadmin/user_upload/Hon_Gatete_Umushyikirano_Presentation_2016.pdf.

1576 Rwanda *Vision 2020* (2012 Revision) Foreword 5 para3. See Chapter 5.3.2 for a discussion on Singapore's Concept Plan.

1577 Rwanda *Vision 2020* (2012 Revision) Foreword 5 para 2.

2020 aims at "more robust growth" and "more ambitious objectives".[1578]

Vision 2020[1579] has six pillars[1580] combined with three cross-cutting areas[1581] and forty eight performance indicators, all of which are to be "pursued in tandem".[1582] These impact on most aspects of society, and also "comprise socio-political, environmental and economic issues".[1583] Issues such as infrastructure development,[1584] land use management[1585] and urban development[1586] are regarded as crucial considerations together with the need to protect the environment.[1587] The private sector, together with the financial sector, was encouraged to become more involved in business and property development.[1588] Encouragement of private sector-led projects is practised in other countries, such as in the Netherlands and the United Kingdom[1589] to help relieve the financial burden on local governments. This was one of the ways that human resources and legal frameworks were harnessed so that Rwanda would have the best chance possible to achieve its main goals relating to urbanisation, the

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1578 Rwanda *Vision 2020* (2012 Revision); UNEP *Rwanda* 4. *Vision 2020* is inspired to a large extent by the South-East Asian experience. Rwanda's long-term policy framework for national development and poverty reduction is embodied in *Vision 2020* and the EDPRS; Versailles 2012 http://static1.1.sqspcdn.com/static/f/1349767/18085923/1336475378620/rwanda-budgeting.

1579 Rwanda *Vision 2020* (2012 Revision).

1580 Rwanda *Vision 2020* (2012 Revision). The first pillar good governance was crucial. The other pillars focus on economic development and include "human resource development" and a "knowledge-based economy"; a "private sector-led economy" with government pledging that it would not interfere with services of the private sector; infrastructure development and productive and market oriented agriculture.

1581 The "cross-cutting areas" include "gender equality, protection of the environment and sustainable management.

1582 Rwanda *Vision 2020* (2012 Revision).

1583 Rwanda *Vision 2020* (2012 Revision); Oranje and Van Wyk 2019 *Town Reg Plan* 113. Progress on implementation of the country's many plans and programmes are structured under Economic, Governance and Justice and is carefully monitored and managed centrally.

1584 *Rwanda National Land Use* Planning Guidelines 2017 18. Infrastructure is crucial in lowering the costs of doing business and will attract foreign investment.

1585 *Rwanda National Land Use Planning Guidelines* 2017 18. Land use management is a fundamental tool for development especially as Rwanda has a shortage of land and optimal utilisation is crucial.

1586 *Rwanda National Land Use Planning Guidelines* 2017 18. Rapid urbanisation in an uncoordinated manner resulted in a lack of sufficient social services and employment

1587 *Rwanda National Land Use Planning Guidelines* 2017 19. Massive deforestation was taking place, resulting in loss of biodiversity, and fragile ecosystems such as wetlands to mention a few.

1588 *Rwanda Vision 2020* (2012 Revision). The private sector was encouraged to become involved by the provision of industrial parks and infrastructure development, seen as important for facilitating business and drawing investments.

1589 See Heurkens and Hobma 2014 *PPR*.

stimulation of the economy and the growth of private investments.[1590]

The revised *Vision 2020* went a step further in recognising that social cohesion, economic empowerment and environmental intelligence go hand-in-hand.[1591] *Vision 2020* was designed to focus on the transformations needed for Rwanda to emerge from the deeply unsatisfactory social and economic situation it had found itself in.[1592] This brings to mind the situation in South Africa post-1994 when the South African Constitution promoted the reconstruction of the country along sustainable lines in terms of section 24. However, the RDP[1593] implemented to speed up delivery did not materialise as expected.[1594]

Urbanisation was promoted and the desire was to make the country's urban areas more functional and liveable. This was necessary to achieve the improved economy that Rwanda planned.[1595] Improved utilisation of land in rural and urban areas was a necessary criterion to achieve this.[1596] Although economic growth was necessary, on its own it was insufficient to raise "the standard of living". Rwanda needed to be a "modern, strong and united nation, proud of its fundamental values", with political

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1590 World Bank *Private Solutions for infrastructure in Rwanda*.

1591 *Rwanda National Environment and Climate Change* Policy 2019. These contribute to Rwanda becoming a "middle-income and knowledge-based economy" by 2020 and become "climate-resilient" with a "low-carbon economy" by 2050.

1592 *Rwanda Vision 2020* (2012 Revision). It was clear that Rwanda would have to turn around its agricultural sector and make it more productive and market-oriented. Infrastructural development was necessary for this.

1593 See Chapter 2.1 regarding the RDP. See also Oranje and Van Wyk 2019 *Town Reg Plan* 119. The RDP also focused on major socio-economic issues (such as poverty, unemployment, health, the provision of water and electricity, education and transport) and, especially, the construction of housing for the bulk of South Africans impacted by *apartheid*. The housing crisis in South Africa has still not been resolved. The history of RDP housing reveals worrying levels of corruption and mismanagement. The tendency is that housing projects continue to perpetuate *apartheid* spatial planning and little progress or improvement is seen. This is seen as a failure of development envisioned by the RDP. It is evident that, as in the case of Singapore, the colonial leadership had placed no emphasis on urban development. See Chapter 5 on Singapore and Chapter 2.1 on the RDP.

1594 See Chapter 2.1 on the RDP introduced in South Africa in 1994 to redress the imbalances of the past and included direct economic development towards building a new, free and fair country and society.

1595 Rwanda *Vision 2020* (2012 Revision).

1596 Oranje and Van Wyk 2019 *Town Reg Plan* 114.

stability and no discrimination among all its citizens.[1597]

The success of *Vision 2020* lies in the combined focus attributed to it from all sectors of government, from the budget required for its implementation, to monitoring and overseeing all aspects together with the necessary support of the people of Rwanda.[1598] The "zero-tolerance" of corruption and mismanagement of any form to ensure the success of *Vision 2020*, from an early stage of democracy, is a contributing factor.[1599] Rwanda's initial success achieved through the framework and guiding tool, *Vision 2020*, also helped make Rwanda appealing to investors and donors.[1600]

Vision 2050[1601] continues the aspirations of *Vision 2020* to take Rwanda "beyond high-income to high-living" standards[1602] by the 21st century.[1603] Critics believe that President Kagame realised that *Vision 2020* would not achieve its middle-income status by 2020 and for this reason extended it to *Vision 2050*.[1604] However, the Rwandan Government's view is that "much progress" had already been made towards *Vision 2020* by 2016 and it was time to pave the way for *Vision 2050.*[1605] It is hoped that *Vision 2050* will inculcate a "culture of excellence, integrity and a sense of urgency" with regard to fulfilling its objectives.[1606]

In accordance with *Vision 2050: The Rwanda We Want* the focus moved to key

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1597 Rwanda *Vision 2020* (2012 Revision). See also Goodfellow 2014 *JEAS* 313. A stable political outcome is important for economic development. Without that conflict will disrupt progress.

1598 Graham 2016 *New African*.

1599 Oranje and Van Wyk 2019 *Town Reg Plan* 114. These are contributory factors to Rwanda's *Vision 2020* success and are the very things that were lacking in South Africa's implementation of the RDP programme.

1600 Goodfellow and Smith 2013 *Urban Studies* 3195.

1601 Gatete 2016 http://www.minecofin.gov.rw/fileadmin/user_upload/Hon_Gatete_Umushyikirano_Presentation_2016.pdf.

1602 Tashobya 2016 https://www.newtimes.co.rw/section/read/206335. It refers to factors such as access to better standards of living, food security, protection, with "access to health, education, finance, housing, energy" and infrastructure.

1603 *Rwanda National Environment and Climate Change Policy* 2019. Rwanda is a nation with clean and healthy environment, resilient to climate change and it supports a "high quality of life" for its citizens.

1604 Himbara 2018 https://medium.com/@david.himbara_27884/kagames-vision-2050-is-as-fake-as-was-vision-2020-c02f4f8939fd.

1605 Tashobya 2016 https://www.newtimes.co.rw/section/read/206335.

1606 Timeous realisation of the goals set by Rwanda for itself are stressed so that the whole country works towards this.

priorities and a need to ensure long-term consistency with a uniform national mind. *Vision 2050* is a blueprint for "modern infrastructure and livelihoods", including "green/eco-friendly" cities and areas[1607] with renewable energy and recycling.[1608] This Vision is divided into two parts of fifteen years each as from 2020.[1609]

6.3.3 National Decentralisation Policy

To empower the community, the *National Decentralisation Policy* was adopted in 2000 to transfer authority, functions and responsibilities with resources from central government to local governments.[1610] This was a strategy for the implementation of "administrative and political reforms" to foster participatory and good governance and poverty reduction.[1611] Communities could now be an integral part of the development process. This resulted in planning and coordination being improved for environmental activities, especially at local levels.[1612] The formation of "environment committees" were seen as an important governance structure to facilitate stakeholder participation in natural resource management. The introduction of "bottom-up mechanisms of decision-making" are necessary to enhance "government responsiveness to evolving local needs and ensure stability in the long run".[1613]

Without proper planning of land use and development for urban areas, successful urbanisation cannot be achieved. Sustainable development that protects the environment is a key element to ensure success.

6.4 Planning laws, policies and instruments

1607 Dieye 2018 *Archit Des* Abstract.

1608 Gatete 2016 http://www.minecofin.gov.rw/fileadmin/user_upload/Hon_Gatete_Umushyikirano_Presentation_2016.pdf.

1609 Gatete 2016 http://www.minecofin.gov.rw/fileadmin/user_upload/Hon_Gatete_Umushyikirano_Presentation_2016.pdf.

1610 Ministry of Local Government 2012 http://197.243.22.137/minaloc/fileadmin/documents/Minaloc_Documents/Revised_Decentralisation_Policy_for_Cabinet_30_01_2013.pdf.The Decentralisation Policy grew local levels of government. They comprise districts which are below the provincial level and are made up of sectors which consist of cells.

1611 UNEP *Rwanda* 8, 13, 23, 36.

1612 Decentralisation has the advantage of creating wider environmental governance.

1613 Chemouni 2016 *TWT*.

6.4.1 Urban planning and building

Rwanda Law Relating to the Planning of Land Use and Development sets out the basic principles to ensure that the "planning of land use and development" protects the "natural resource base" and allows for "ecological balance" between the "footprint of land use and development" on the one hand and biodiversity on the other.[1614] The statute aims to determine, coordinate, monitor and enforce the planning of land use for sustainable and "equitable social, economic and environment development" for "current and future generations" in Rwanda.[1615] Put simply, it promotes sustainable development and is geared towards avoiding sprawl and the resultant conflict between development and the environment.

This statute is significant as it defines "urban sprawl" as:

> … inefficient and unsustainable urban development with unrestrained use of land and other natural resources, requiring costly infrastructure and social services, and resulting in long and costly physical distances.

This definition, in no uncertain terms, makes it clear that sprawl is not acceptable and must be avoided.[1616] Land use and development with higher density or compact development, residential settlements for extended families in urban or rural areas[1617] and mixed zoning with integrated land uses are promoted.[1618] Residential, commercial, civic and light industrial developments may exist side by side in newly developed areas so that people may live and work there, thereby minimising the distance between home and work.

Long travel distances on a daily basis causes fragmented and dispersed urban activity and the consequence is sprawl. It makes developing viable public transport systems in Rwanda difficult, it is unsustainable (as it causes conflict with the environment) and

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1614 *Law No 24/2012 Relating to the Planning of Land Use and Development in Rwanda* (hereafter Law No 24/2012); *Rwanda National Land Use Planning Guidelines* 2017. See 6.9 below on lessons from Rwanda.

1615 Law No 24/2012.

1616 See Chapter 2.1 in relation to sprawl and the need to implement the urban edge in South Africa.

1617 In accordance with Article 4.4 of Law No 24/2012.

1618 Article 4.5 of Law No 24/2012.

is unaffordable to the working class and is not recommended due to oil shortages.[1619] To resolve these issues, decentralisation of development to upcoming urban areas is recommended. The management of migration from rural areas must be well monitored so that cities are not congested.[1620] Despite such clear guidelines the eradication of sprawl in Rwanda has not been easy.

The *Law Governing Urban Planning and Building in Rwanda*[1621] as the name suggests, guides urban development and its governance. It is useful "stand alone" legislation to drive sustainability in an urban setting that is implemented to efficiently use and manage natural resources as well as to promote sustainable development.[1622] It promotes the eradication of sprawl[1623] and is specific legislation directed at addressing conflict in an urban setting. This Statute encourages linkages; densification; public investment that is cost effective; infrastructure delivery and the use and management of natural resources in an efficient manner. It also promotes economic development based on local potentialities, land being reserved for agricultural production and open spaces that promote environmental conservation.[1624] The statute refers to the Master Plan as the guiding urban planning tool.[1625]

In South Africa, the SPLUMA principle of sustainability may be interpreted to facilitate the eradication of sprawl.[1626]

6.4.2 The National Urbanization Policy

In the early days of its democracy, urban settlement in Rwanda predominantly

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1619 *Rwanda National Land Use Planning Guidelines* 2017 68.

1620 *Rwanda National Land Use Planning Guidelines* 2017 49.

1621 *Law No 10/2012 Governing Urban Planning and Building in Rwanda.*

1622 MININFRA 2015 https://www.mininfra.gov.rw/fileadmin/user_upload/Rwanda_National_Urbanization_Policy_2015.pdf (hereafter *Rwanda National Urbanization Policy* 2015) Executive summary, 6, 17, 19.

1623 MININFRA 2015 https://uploads.habitat3.org/hb3/RWANDA-HABITAT-III-REPORT_17.12.15.pdf. Urban growth meant that sprawl needed to be eradicated.

1624 *Rwanda National Urbanization Policy* 2015 17, 20, 39. It also addresses issues such as "transportation, housing, culture, recreation, utilities, waste management", telecommunication, commercial development.

1625 In terms of Article 11 of *Law No 10/2012 Governing Urban Planning and Building in Rwanda.*

1626 See the discussion on sprawl in Chapters 2.1-2.4 and the promotion of safe and sustainable cities internationally in Chapter 2.6. See also Chapter 3.9 relating to the NDP and IUDF which promote safe and sustainable cities in accordance with international principles.

developed informally at a fast pace and there was a need to mitigate the unfavourable environmental conditions that were evident.[1627] Sustainable development was key if Rwanda wished to develop in a way that future generations would also enjoy the benefits of this remarkable journey that the country was taking to rebuild itself. With this in mind, the Rwanda government implemented the *National Urbanization Policy* in 2015.[1628] This policy supports *Law Relating to Governing Urban Planning and Building* in Rwanda.

The *National Urbanization Policy* guides urbanisation, its vision being sustainable development in urban areas.[1629] Like SPLUMA, it impacts on "governmental, non-governmental and private interaction" in the urbanisation process and supports sustainable development.[1630] It goes further to promote a "better quality of life" for all.[1631] Therefore, it addresses all aspects of urban development and governance, regards urbanisation as an opportunity for "social and economic" growth and enhances "local and national economic" growth for everyone.[1632] The four pillars of the *National Urbanization Policy* are co-ordination;[1633] densification;[1634] conviviality[1635] and economic growth.[1636] The densification pillar promotes a "cross-sectoral approach" and provides "guidance regarding multi-level governance and coordination" in respect

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1627 *Rwanda National Urbanization Policy* 2015.

1628 *Rwanda National Urbanization Policy* 2015 6.

1629 *Rwanda National Urbanization Policy* 2015 119. Well planned urbanisation may achieve "the proper use of land, natural resources" and investment of infrastructure..

1630 *Rwanda National Urbanization Policy 2015.* This document sets out the "principles for coordinated strategies" supported by "urban planning documents", "development of urban areas at high density" and "inclusive urban areas providing quality of life and conditions for economic growth".

1631 *Rwanda National Urbanization Policy* 2015. Access to infrastructure utilities and a healthy environment with well-maintained green public spaces and upgrading informal settlements is emphasised.

1632 World Bank 2017 http://documents.worldbank.org/curated/en/875101513836698339/pdf/122174-WP-P157637-PUBLIC-Note-1-Rwanda-Urbanization-12-07-17-rev2.pdf. The object was to highlight urbanisation as one of government's main strategies to enhance development, create jobs, and reduce poverty.

1633 The enhancement of institutional capacity to manage coordinated urban development at all levels of governance.

1634 Densification is also recommended in Singapore due to shortage of land. See Chapter 5.1.

1635 Supporting the quality of life and equity in urban development.

1636 This pillar aims is the creation of employment and "off-farm productivity" that would develop local subsistence as well as regional competitiveness.

of urbanisation.[1637] It also signifies resource-efficient and compact growth, good governance, effective urban management and the use of appropriate tools for optimal decision-making.[1638] The core principles that guide the urbanisation policy include sustainability and resilience; integrated and participatory planning; sustainable land use, and appropriate tools for urban management.[1639] The policy specifically provides that with urbanisation, there is a need to mitigate the risk of urban sprawl through investment in infrastructure.[1640]

6.4.3 Urban Master Plans

The National Land Use and Development Master Plan, 2011 was an important medium that the country used to provide general directives for sustainable land use development. The newly finalised 2020 to 2050 National Land Use Development Master Plan ties in with *Vision 2020*.[1641] Urban areas now have a restricted size and boundary to limit urban sprawl and the country will enforce consolidation and agglomeration of cities.[1642] Although the plan is for 30 years, the urban boundaries are only put in place for 15 years to limit unnecessary early extensions to the urban boundary and sprawl.[1643] All urban boundaries were carefully reviewed and adjustments were made in accordance with the "size of the population" and area.[1644]

As referred to earlier the scarcity of developable land was foremost in the minds of the authorities and using land wisely was important.[1645] In order to optimise the little land that the densely populated country has, it aimed to ensure "optimal utilisation"

1637 Densification, spatial development for socio-economic growth, urban development with resilient urban livelihoods and low emissions are promoted by the National Roadmap for green secondary cities development for Kigali.

1638 *Rwanda National Urbanization Policy* 2015 127. See also Oranje and Van Wyk 2019 *Town Reg Plan* 22.

1639 *Rwanda National Urbanization Policy* 2015 127.

1640 *Rwanda National Urbanization Policy* 2015 3.

1641 Republic of Rwanda 2020 https://rlma.rw/fileadmin/user_upload/National_Land-Use_and_Development_Master_Plan_2020-2050.pdf (hereafter the Rwanda National Land Use and Development Master Plan 2020-2050).

1642 Rwanda National Land Use and Development Master Plan 2020-2050 Introduction x. Sizes were set for cities based on the number of people they can accommodate.

1643 Rwanda National Land Use and Development Master Plan 2020-2050 36.

1644 Rwanda National Land Use and Development Master Plan 2020-2050 37.

1645 Factors such as climate change, the green economy, environmental compliance and enforcement are some of the issues.

of land in urban as well as rural areas.[1646] The plan was to phase in higher density housing over the course of the next three decades.[1647] These plans are coordinated by central government but the actual work of city development and management is done by municipalities working together with local communities and investors.[1648] The cross-sectoral and integrated approach illustrates the envisioned future of land use distribution.[1649] This revised plan has set long-term guidance for any planning documents that follow.

Urban Master Plans are prepared and updated regularly with plans for each town and city in the country being coordinated at implementation.[1650] Kigali's Master Plan (KMP) was also formulated in this way and is discussed in more detail separately under the discussion on Kigali.[1651] Impressive efforts were made to lay a strong foundation for development in urban areas to progress swiftly since *Vision 2020*,[1652] ensuring that basic infrastructure[1653] was in place and that improved or better living conditions were planned for the urban population that was increasing.[1654] Off-farm job creation and urbanisation are still relied on as key drivers for economic growth and national development[1655] and the focus is still on becoming a middle-income country. As most of the population continue to live in rural areas, the development of basic infrastructure in agricultural zones and rural settlements is the strategy to turn these

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1646 Oranje and Van Wyk 2019 *Town Reg Plan* 114. The total population it estimated at 12.6 million.

1647 Oranje and Van Wyk 2019 *Town Reg Plan* 114.

1648 Turok 2019 *Local Economy* 225. This style of grassroots engagement is common in planning throughout the country, with communities extensively involved in such endeavours.

1649 MININFRA 2018 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf 13.

1650 Rwanda *Vision 2020* (2012 Revision).

1651 See 6.6.2 below.

1652 World Bank 2017 http://documents.worldbank.org/curated/en/176291513839631396/pdf/122178-WP-P157637-PUBLIC-Synthesis-Note-Rwanda-Urbanization-12-07-17-rev.pdf. As stated in the introduction this aspect was sadly neglected in South Africa and is one of the reasons why sufficient progress has not been made in developing sustainable urban development in South Africa.

1653 Rwanda *Vision 2020* (2012 Revision). The rehabilitation and development of infrastructure was regarded as the most important way to encourage investments.

1654 The size of the urban population was expected to increase from 10% in 2000 to 35% in 2020.

1655 World Bank 2017 http://documents.worldbank.org/curated/en/176291513839631396/pdf/122178-WP-P157637-PUBLIC-Synthesis-Note-Rwanda-Urbanization-12-07-17-rev.pdf. The transformation meant moving more than half of the population from farm to off-farm jobs. *Vision 2020* targets that 35% of people live in cities and 1.8 million new off-farm jobs be created by 2020.

areas into active development centres.[1656]

The simultaneous attention given to both rural and urban areas in Rwanda is proving to be useful.[1657] Detailed land use management plans are a necessity to ensure sustainable development and any development undertaken must in keeping with these plans. A significant part of Rwanda's journey of development planning is the creation of urban Master Plans as described.

6.4.4 Economic Development and Poverty Reduction Strategies

Vision 2020 still lacked a strategy and way to implement it in manageable portions with detailed targets. The vision should be reflected in all planning processes and especially in "medium-term instruments" such as EDPRS 1 and EDPRS 2.[1658] The impact was that these were the roadmap relied on to lay out how *Vision 2020* would be realised, with suitable yardsticks to measure progress.[1659]

International standards in the form of MDGs were incorporated into the planning process,[1660] and integrated as EDPRS 1 and 2.[1661] These documents are "an impressive demonstration of foresight and national commitment" to sustainable development.[1662] Rwanda kept its focus on environmental protection while it promoted development that would benefit its citizens for generations to come. The framework for the budget

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1656 Harrison 2016 *Third World Q*. The number of people living in urban areas to be increased from 12% to 30%, and the income difference between urban and rural areas should remain within "reasonable proportions", through the "decentralisation of economic activities".

1657 By comparison, South Africa's attention was focussed primarily on rural areas.

1658 Rwanda *Vision 2020* (2012 Revision). The EDPRS 1, became operational through the district development plans, implemented through the "Medium-term Expenditure Framework" and 3 year budgets; Oranje and Van Wyk 2019 *Town Reg Plan* 119.

1659 Rwanda *Vision 2020* (2012 Revision). Macroeconomic projections and assumptions indicated the requirements that needed to be complied with to realise the Vision.

1660 All UN Member States accepted he MDGs, eight goals to be achieved by the year 2015. See Chapters 1.4 and 2.6 regarding international soft laws.

1661 Republic of Rwanda 2017 http://www.minecofin.gov.rw/fileadmin/user_upload/NST1_7YGP_Final.pdf; UNEP *Rwanda* 35. The EDPRS emphasises economic development and poverty reduction.

1662 Global Green Growth Institute 2016 https://gggi.org/site/assets/uploads/2017/12/GGGI-Rwanda-Country-Planning-Framework-2016-09-09.pdf. While specific targets for green growth are not explicitly stated in the documents, the strategy insists that "green measures" must be integrated in all development policies and plans.

for activities to ensure that MDGs targets are met was overseen though the EDPRS.[1663]

The main goal of EDPRS 2 is to enhance "progress to middle-income status and better quality of life" for the people of Rwanda.[1664] In the long run it was hoped that an "entrepreneurial middle class" would take over the bulk of Rwanda's development both from the government and international donors.[1665] (Rwanda had attracted foreign funders as it had demonstrated that it is stable, well managed and disciplined).[1666]

One of the main themes of Rwanda's journey is urbanisation and it is no surprise that EDPRS 2 focused on the transformation of Rwanda by facilitating urbanisation.[1667] An "integrated approach to land use and human settlements"[1668] was taken "by favouring the development of sustainable cities and villages"[1669] in the form of secondary or satellite cities. These would be developed as poles of economic growth and centres of non-agricultural economic activities.[1670] It was also important that the risks of sprawl

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1663 The first EDPRS1 was from 2008 to 2012 and the second EDPRS2 from 2013 to 2018; Oranje and Van Wyk 2019 *Town Reg Plan* 114. See also UNEP *Rwanda* 35. While the first poverty reduction strategy cycle (2002-2007) was mainly based on post-conflict recovery and reconstruction, the EDPRS draws a roadmap for longer-term economic development. Its priorities are: (i) poverty reduction; (ii) infrastructure development; (iii) privatisation of government-owned assets; (iv) modernisation of the agricultural sector; and (v) public sector reform.

1664 MINECOFIN *EDPRS 2* Executive summary Point 1 xiii. It was hoped to do this through sustained average GDP growth of 11.5% and accelerated reduction of poverty to less than 30% of the population.

1665 Rwanda *Vision 2020* (2012 Revision). This was needed for economic growth and to ensure the "emergence of a vibrant middle class of entrepreneurs", to develop a democracy in Rwanda. Although foreign investments would still be encouraged, local encouragement of business was a key necessity.

1666 Oranje and Van Wyk 2019 *Town Reg Plan* 114.

1667 MINECOFIN *EDPRS 2* Priority 4 is transforming the economy of Rwanda through facilitating and managing urbanisation for increased growth countrywide.

1668 *Rwanda National Land Use Planning Guidelines* 2017 19.

1669 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf Executive Summary 8. See also Global Green Growth Institute 2016 https://gggi.org/site/assets/uploads/2017/12/GGGI-Rwanda-Country-Planning-Framework-2016-09-09.pdf.

1670 See full discussion on secondary cities in Chapter 6.6.3. See also University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf (Executive Summary) 8. In terms of items 4 and 5 of the economic transformation pillars, secondary cities are promoted for "non-agricultural economic activities" that pursue a "green economy"; Oranje and Van Wyk 2019 *Town Reg Plan* 114. Good governance, an efficient state; human resources development and a "knowledge-based economy"; infrastructure development; high value and "market-oriented agriculture", as well as "regional and international integration" were required; World Bank 2019 http://documents1.worldbank.org/curated/en/

were mitigated and natural resources were being utilised in a sustainable manner on all fronts.[1671] Climate change had been integrated in all development policies and plans[1672] and the pursuit of a "green economy" approach[1673] was necessary for economic transformation.

Bit by bit, Rwanda put many formidable laws, policies and plans together to achieve the vision it sought. Apart from focussing on plans for sustainability and executing them effectively it became necessary to ensure that security of land tenure was given to its citizens.

6.4.5 National Land Policy

The *National Land Policy* of 2004 (presently being updated) gives proper direction regarding land use management-related problems such as rapid urbanisation, "inadequate land use planning and poor environmental management".[1674] It aims to establish and guarantee security for all people in Rwanda and give guidelines on land reforms, "good management" and careful use of "national land resources". Various other policies and plans all geared toward sustainable development were introduced.

6.4.6 Miscellaneous policies and plans for sustainable development

The Ministry of Infrastructure highlighted various effective policies and frameworks to ensure that urbanisation was sustainable in Rwanda. Again, these different policies simultaneously take into consideration global/international priorities.[1675]

The preparation of seven-year Sector Strategic Plans and Development Strategies as well as a detailed range of programmes and plans based on a "solid theory of change"

219651563298568286/pdf/Rwanda-Systematic-Country-Diagnostic.pdf. See a more detailed discussion on satellite and secondary cities in Chapter 6.6.3.

1671 MINECOFIN *EDPRS 2* 13 Point 1.4.5.

1672 MINECOFIN *EDPRS 2* 35 Point 2.6.2.

1673 MINECOFIN *EDPRS 2* xvi Point 20.

1674 *Rwanda National Land Use Planning Guidelines* 2017 20.

1675 *Vision 2020*, Health Sector Strategic Plan, national health sector policies, *National Urbanization Policy* and EDPRS are in line with the MDGs.

provide the developmental guidelines for the country.[1676] The Sector Strategic Plan of the Urbanisation and Rural Settlement Sector focuses on the objectives of "good development management"[1677] and "encompasses social, economic and environmental activities" that reference urban and rural areas.[1678]

Management of the process of property development must be tracked effectively and for this reason Rwanda has a performance-based code, the Rwanda Building Code.[1679] It includes urban planning and building regulations for sustainable development of human settlements.[1680]

With appropriate laws and policies for land development to proceed in a way that the standard of living may be uplifted, delays in approvals being granted for property development frustrates the process. For this reason, Rwanda introduced the establishment of One Stop Centres (as was done in Singapore)[1681] and an online Building Permits Management Information System (BPMIS) that has features that make it easy to access information, follow-up applications and get notification on progress.[1682]

To expedite infrastructure and property development effectively, plans and actions

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[1676] MININFRA 2018 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf 5.

[1677] MININFRA 2018 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf 5. Although "good development management" is not defined reference is made to it. It includes public participation and the facilitation of economic activity. At the same time the environment must be cared for. The establishment of a "comprehensive planning system and principles" is advocated. Urbanisation and human settlement require a serious joint effort to ensure and enhance development and poverty eradication.

[1678] MININFRA 2018 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf 5.

[1679] Annex 2 of the *Ministerial Order No 04/Cab.M/015 Determining Urban Planning and Building Regulations*. It integrates technology and material to be used in construction and establishes requirements to safeguard "public health, safety and general welfare". The Building Code refers to "national, regional and/or international standards and/or code of practice". Housing, or the lack of it, for the masses in South Africa is still an area that is in need of dire attention. See Chapters 3.11 and 4.7.

[1680] It controls urban areas and promotes development, urban renewal and infrastructure servicing with forward planning.

[1681] See Chapter 5.4.2 regarding these One Stop Centres.

[1682] The One Stop Centres and online system was introduced in the City of Kigali and its secondary cities and was totally in nine of the 30 districts in Rwanda.

that work and take into account the environment are required. South Africa had *apartheid* laws and its ramifications still impact on the environment. Similarly Rwanda had the genocide. In addition, climate change, land degradation, and especially high urbanisation rates put additional pressure on the country's natural resource and environmental protection.[1683] These factors must be managed effectively as economic growth reduces environmental pressures and social tensions.[1684] Tracking the steps that Rwanda took to protect the environment gives an interesting perspective of Rwanda's progress in that regard.

6.5 Protecting the environment

6.5.1 Background

The 1990-1994 genocide and civil war caused many significant environmental impacts[1685] resulting in Rwanda being faced with underlying structural constraints as well as devastating social and economic consequences.[1686] This contributed to numerous difficulties such as vulnerability to natural disasters and issues such as increasing transit costs that had far-reaching consequences on the environment. Further, as Rwanda is landlocked and lacks a road and railway grid, access to more trade and a better economy with its neighbours is restricted.[1687] Other factors identified were the massive conflict-induced population movement;[1688] inappropriate selection of sites for *imidugudu*; population densities; land scarcity; poverty and unsustainable agricultural practices, all of which had created tremendous pressures on "scarce natural resources" and "fragile ecosystems".[1689] This was further

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1683 SIDA 2019 https://sidaenvironmenthelpdesk.se/digitalAssets/1748/1748556_environment-and-climate-change-analysis-rwanda-2019-06-05.pdf 15.

1684 SIDA 2019 https://sidaenvironmenthelpdesk.se/digitalAssets/1748/1748556_environment-and-climate-change-analysis-rwanda-2019-06-05.pdf 15.

1685 *Rwanda National Environment and Climate Change Policy* 2019. Rwanda had commenced tackling its past and the genocide and it was time to prepare for a new phase that related to development.

1686 UNEP *Rwanda* 9, 35.

1687 Oranje and Van Wyk 2019 *Town Reg Plan* 115. Although Rwanda transport network of feeder roads internally is sound, in terms of *Vision 2020*, this needed to be extended and improved. Being landlocked increases transport costs to the ports in Kenya and Tanzania and this needed to be reduced in some way.

1688 UNEP *Rwanda* 16.

1689 UNEP *Rwanda* 9-12. UNEP identified the main environmental issues in urban areas such as "inadequate and unsafe drinking water"; "poor sanitation conditions"; inadequate solid waste

exacerbated by "informal settlements" everywhere that caused "deforestation" and soil erosion, pollution from the industrial zones and a poor quality of air and water.[1690]

The reconstruction of Rwanda, as in the case of Singapore[1691] and South Africa,[1692] during its initial stages focussed more on the planning and development of infrastructure and not on environmental considerations.[1693] Prompted by the UN and the desire to meet global standards of development, the authorities began considering means of combatting environmental degradation.[1694] The need for development to be sustainable and for natural resources to be protected during it are crucial issues that avoid conflict with the environment during urbanisation.

While it was necessary to improve urban planning and development in Rwanda to address "burgeoning urban populations", it was simultaneously necessary to address key environmental issues in urban areas.[1695] There was a clear national mandate to incorporate the implementation of environmental considerations in planning and property development in Rwanda.[1696] The Constitution and various statutes and policies impact on the duty of government in Rwanda to ensure environmental protection and to avoid conflict between property development and the environment during the process of urbanisation. This was particularly important within the urban edge or urban growth boundary of cities such as the capital city Kigali. A study of the Rwandan policies, plans and legislation enables a better understanding of how Rwanda addresses conflict through legal processes.

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management; "construction in inappropriate and hazardous areas"; and "strengthening urban planning and development".

1690 Nyström and Lindgren *Sustainable Urban Development* 13-16. Resettlement sites were being built all over with no regard to their need or value from an environmental or agricultural perspective. while unsuitable land on steep slopes were being used for cultivation.

1691 See Chapter 5.2 for a full discussion on Singapore in that regard.

1692 See Chapter 4.1 with regard to the environmental protection needed in South Africa.

1693 UNEP *Rwanda* 8-9.

1694 Nyström and Lindgren *Sustainable Urban Development* 13-16. By May 2005 REMA was appointed to change the situation. Some of the activities identified were "remote sensing and information systems", "environmental economics" and "land administration".

1695 UNEP *Rwanda* 33, 39.

1696 Global Green Growth Institute 2016 https://gggi.org/site/assets/uploads/2017/12/GGGI-Rwanda-Country-Planning-Framework-2016-09-09.pdf.

6.5.2 Environmental policies and laws

The *Constitution of the Republic of Rwanda*, 2003 (revised 2015) refers to the environmental right in two sections. Article 22 states that everyone has a right to live "in a clean and healthy environment" and article 49 reads:

> Every citizen is entitled to a healthy and satisfying environment. Every person has the duty to protect, safeguard and promote the environment. The State shall protect the environment. The law determines the modalities for protecting, safeguarding and promoting the environment.

The definition puts the onus of protecting the environment squarely on government and the people of Rwanda. Unlike the South African Constitution[1697] and as with the Singapore Constitution,[1698] there is no link in the Constitution with sustainable development or promoting "justifiable economic and social development".[1699] However, as is the case with Singapore,[1700] whose model Rwanda emulated,[1701] various policies, plans and statutes were soon introduced, indicating that cognisance must be taken of the need for sustainable development. The MDGs,[1702] Goal 11 of the SDGs as well as the *New Urban Agenda* form the background development criteria. Rwanda stresses the need to move from developing property just for economic and social reasons to developing property in such a way that the protection of the environment is not compromised.

One of the "cross-cutting areas" of *Vision 2020* is safeguarding the environment and this indicates that the state also wished to focus on sustainability in relation with urban development.[1703] Rwanda's environmental progress was accelerated by the implementation of the country's *Vision 2020*. This helped strengthen control to

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1697 See discussion on the *Constitution of the Republic of South Africa*, 1996 in Chapter 4.2.
1698 See discussion on Singapore in Chapter 5.2.
1699 See detailed discussion of s 24 of the South African Constitution and the "environmental right" in Chapter 4.2.
1700 See Chapter 5.2.
1701 Uwizeyimana 2019 *African Renaissance*. See Chapter 5.2.
1702 Ilberg "Beyond Paper Policies". Rwanda accedes to international agreements such as the MDGs and has established pro-poor planning policies.
1703 MININFRA 2015 https://uploads.habitat3.org/hb3/RWANDA-HABITAT-III-REPORT_17.12.15.pdf.

manage the faster pace of development.[1704] This involved a "two-pronged strategy" that would "strengthen and enforce policies" and legislation to deal specifically with sustainable urban planning and to simultaneously improve capacity-building at national and local levels.[1705] By implementing *Vision 2020*, Rwanda had commenced its journey of formulating a sound and effective legal and institutional framework with key policies and legal instruments for environmental governance and management.[1706] National consciousness of the environment was being raised and the focus now moved to promoting sustainable development and avoiding conflict with the environment.[1707] The country enjoyed a high level of international goodwill which assisted with finance and in other ways for environmental projects.[1708] As just one example, Rwanda receives assistance from Canada on environmental and sustainable development issues through an agreement signed in 2017.[1709]

The *National Environment Policy* of 2003[1710] (now replaced by the *National Environmental and Climate Change Policy* of 2019) established the "framework for the sustainable management of natural resources in Rwanda".[1711] This policy gives directions for management of land use and natural resources and the incorporation of

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1704 Sustainable environmental and natural resource management were necessary to achieve national goals.

1705 Ministry of Local Government 2012 http://197.243.22.137/minaloc/fileadmin/documents/Minaloc_Documents/Revised_Decentralisation_Policy_for_Cabinet_30_01_2013.pdf. The *National Decentralisation Policy* promoted "equitable, political, economic and social development" together with increased public participation in development.

1706 The Rwanda Constitution, adopted in 2003, had added impetus and guaranteed fundamental human rights and political freedom. Other policies and legislation were established to conserve and manage the environment.

1707 MININFRA 2013 http://www.rha.gov.rw/fileadmin/user_upload/Documents/Final_Urbanization_Sector_Strategic_Plan_131210_.pdf (Executive Summary). The commitment towards environmentally sustainable national development with a view to reducing environmental degradation was becoming more evident.

1708 Goodfellow and Smith 2013 *Urban Studies* 11; Rwanda is fortunate in that it receives more international aid than its counterparts in Africa.

1709 SIDA 2019 https://sidaenvironmenthelpdesk.se/digitalAssets/1748/1748556_environment-and-climate-change-analysis-rwanda-2019-06-05.pdf 14.

1710 Ministry of Lands, Resettlement and Environment 2003 http://rema.gov.rw/fileadmin/templates/Documents/rema_doc/Policies/Rwanda%20Environmental%20Policy_English.pdf. Climate change was not reflected in the 2003 Environment Policy but was specifically incorporated in the Environmental and Climate Change Policy of 2019.

1711 Other policies relevant to environmental management adopted include: *National Land Policy* (2004); *National Forest Policy* (2004); *National Water and Sanitation Policy* (2004) and *National Energy Policy* (2004).

considerations relating to environmental, social and economic development for levels of government, It also promotes extensive participation in environmental matters at the local level.[1712] A milestone for sustainability was incorporating considerations relating to the environment in the development framework as per EDPRS 2 (2013-2018).[1713]

This was taken a step further and the *Organic Law* (or *Environment Law*) was enacted in 2005.[1714] A counterpart of NEMA in South Africa,[1715] it incorporates fundamental principles to protect, conserve and sustainably manage the environment. In accordance with the Rwanda Constitution the state has the duty of protecting, conserving and promoting the environment. Apart from the concern relating to protection of the environment when undertaking property development, there is the concern that disasters due to climate change must also be factored in. The *National Environment Policy* of 2019 includes issues such as climate change and make it more relevant to present day environmental challenges.

6.5.3 Rwanda Environmental Management Authority

To fulfil the duties set out in the Rwanda Constitution, the state created an entity, the Rwanda Environmental Management Authority (REMA),[1716] to deal exclusively with the management of the environment and environmental issues. REMA is the prime authority that monitors, regulates and enforces environmental regulations in Rwanda. Its responsibilities include:

[1712] Ministry of Lands, Resettlement and Environment 2003 http://rema.gov.rw/fileadmin/templates/Documents/rema_doc/Policies/Rwanda%20Environmental%20Policy_English.pdf. It stipulates the arrangements for policy implementation, including: (i) the National Environment Council that makes political decisions; (ii) REMA; (iii) the Rwanda National Environment Fund; (iv) the Environmental Tribunal, for conflict resolution; and (v) local environment committees.

[1713] MINECOFIN *EDPRS 2*. This helped with finance. A five-year Environment and Natural Resources Sector Strategic PlanE was launched (in 2009). Its priority was the environment and natural resources sector during 2009-2013 and it was introduced by the EDPRS.

[1714] *Organic Law No 04/2005 Determining the Modalities of Protection, Conservation and Promotion of Environment*.

[1715] See Chapter 4.3 for a full discussion on NEMA.

[1716] REMA 2020 https://www.rema.gov.rw/index.php?id=2. REMA was established in terms of Article 65(1) of *Organic Law No 04/2005 Determining the Modalities of Protection, Conservation and Promotion of Environment*.

- implementing policies, strategies and legislation related to the management of the environment;
- drafting of guidelines for EIAs;[1717]
- developing coherent strategies and drafting management plans for specific environmentally sensitive areas such as wetlands;[1718]
- providing written assessments of the environment and natural resources in Rwanda over two year periods;[1719]
- arranging the implementation of environment-related international conventions; and
- coordinating small, and short-term projects.

Government's responsibility to protect the environment and take charge of the environment as required by the Constitution is well taken care of by REMA. On account of its good work, REMA was credited by the UN for the "strong and high-level government support" it provides and that enables "environmentally sustainable development" in Rwanda.[1720]

6.5.4 National Environmental and Climate Change Policy

The *National Environment and Climate Change Policy* of 2019 was implemented to address gaps and challenges.[1721] Although the *National Environment Policy* of 2003 brought useful changes relating to environmental protection, especially in establishing the necessary institutions and legal and strategic frameworks, the 2019 Policy is specifically prepared to promote "national, regional and global development

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1717 *Law No 63/2013 Determining the Mission, Organisation and Functioning of Rwanda Environment Management Authority* (hereafter Law No 63/2013). See also UN 2019 https://sustainabledevelopment.un.org/content/documents/24797GSDR_report_2019.pdf.

1718 In terms of arts 3.6 and 3.7 of Law No 63/2013.

1719 Articles 3.1, 3.2 and 3.3 of Law No 63/2013.

1720 *Rwanda National Environment and Climate Change Policy* 2019.

1721 *Rwanda National Environment and Climate Change* Policy 2019. See also Global Green Growth Institute 2016 https://gggi.org/site/assets/uploads/2017/12/GGGI-Rwanda-Country-Planning-Framework-2016-09-09.pdf.

commitments" such as global soft laws and policies including the SDGs, and especially SDG 11.[1722] Further, as suggested by the name itself, it conforms to the *Paris Agreement on Climate Change*.[1723]

The implementation responsibility is very wide as it includes the Ministry of Environment and other government institutions together with "key stakeholders, development partners, the private sector" as well as "civil society organisations, media, academia and research institutions" with local communities.[1724] This policy provides direction in relation to "environment and climate change" in Rwanda because it is linked to development.[1725] The integration of environmental issues into all planning results in property development and environmental protection working jointly to avoid conflicts in that regard in Rwanda.[1726] This policy, a springboard for strengthening the economy and accelerating development, is expected to "enhance the well-being" of people and generate development gains that may be sustained for future generations.[1727]

Today Rwanda is proud that in its country "green" and "growth" are integrated. The development of comprehensive tools to support implementation and develop key infrastructure is deemed to be one of the ways that Rwanda is able to tap into more opportunities of international funding.[1728] The new policy is meant to "enable higher sustainable economic growth", raise standards of living and promote modern infrastructure by creating smart and green cities.[1729] The plan also includes "developing high-value and competitive off-farm" jobs and sectors, creating

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1722 *Rwanda National Environment and Climate Change Policy* 2019 (Executive Summary) 5.

1723 Rwanda National Environment and Climate Change Policy 2019 15, 19. A section in the Policy records its linkages with global policy considerations such as the SDGs.

1724 Rwanda National Environment and Climate Change Policy 2019. This is in keeping with *Law No 48/2018 Relating to the Environment* in terms of which every person is responsible for environmental sustainability in accordance with art 4 which says that every action must put "into consideration the needs of present and future generations".

1725 The strategy was developed for a climate-resilient and low-carbon economy by 2050.

1726 *Rwanda National Environment and Climate Change Policy* 2019.

1727 *Rwanda National Environment and Climate Change Policy* 2019.

1728 *Rwanda National Environment and Climate Change Policy* 2019.

1729 *Rwanda National Environment and Climate Change Policy* 2019.

environmentally friendly transport systems[1730] and reversing the limited enforcement of EIA and Environmental Audit (EA) related laws.[1731] The sensitive situation with regard to EIAs in Singapore was discussed in Chapter 5[1732] and South Africa's somewhat cumbersome EIA process was discussed in Chapter 4.[1733]

6.5.5 EIAs in Rwanda

Article 67 of the *Organic Law*[1734] requires that "projects, programmes and policies" that may have an impact on the environment must have an EIA conducted to obtain permission to proceed.[1735] EIAs are regarded in global policies as the yardstick for sustainable development and are recommended in various international conventions.[1736] As in South Africa, the EIA system in Rwanda prevents a developer obtaining authorisation for implementation of a project unless issued with a certificate of clearance or authorisation.[1737] In Rwanda, under the present legislation, EIAs are undertaken by government departments, private companies and parastatal organisations. A lack of knowledge of the concepts and principles of EIAs have been identified as negatives associated with EIAs.[1738] Training is being called for in EIAs and SEAs as well as improving public participation. Despite this, critics believe that the system is a good one, with a good policy and legal base that includes the screening process to determine the level of EIA required. The issue of monitoring, however,

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1730 The limited availability of such transport facilities is a glaring omission in South Africa and is another lesson from Rwanda. See Chapter 2.4.

1731 See Chapter 6.5.5.

1732 See Chapter 5.3.3.

1733 See Chapter 4.3.5.

1734 *Organic Law No 04/2005 Determining the Modalities of Protection, Conservation and Promotion of Environment.*

1735 The requirements and procedures in that regard are set out in *Ministerial Order No 003/2008 Relating to the Requirements and Procedure for Environmental Impact Assessment.*

1736 Such as the UN Conference on the Human Environment held at Stockholm in 1972, UN Conference on Environment and Development, the World Summit on Sustainable Development and the African Ministerial Meeting on Environment held in Durban South Africa. Rwanda is a signatory and party to all of the above.

1737 It is similar to the South African system – has 4 phases that are the initiation phase; the impact study phase, which identifies and analyses impacts and develops mitigation measures and preparation of the report; the decision-making phase and lastly the environmental management plan and follow up phase.

1738 Mashinga "EIAS in Rwanda".

needs to be strengthened.[1739]

Rwanda's journey in protecting the environment and how far it has come since the genocide and civil war is significant by any standards. Much of the success may be attributed to the post-conflict environmental audit or assessment[1740] that Rwanda requested the United Nations to conduct in 2010.[1741] The UNEP undertook this project and gave Rwanda direction on the way forward. This has assisted Rwanda on its journey and helped it secure development that addresses any environmental conflict that may occur.

6.5.6 UNEP recommendations

The work done in 2010 by UNEP in conducting this countrywide post-conflict environmental assessment provided valuable insights to enable Rwanda to define a sustainable path for the country's development going forward.[1742]

Rwanda was on a "solid development track" making up for lost time in the "conflict years and its aftermath". It had made a remarkable turnaround[1743] changing war-torn Rwanda into a "promising showcase of African development".[1744] However, UNEP realised that there were many challenges to "environmental governance" due to high populations, land scarcity, poverty as well as many capacity gaps .[1745] Sustaining long-term economic growth depended on proper and efficient management of the natural resources for which it recommended appropriate environmental control.[1746] The audit found that much had been done through policies and legislation to protect the

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1739 Sharma and Hategekimana 2018 *Manag Environ Qual*. See Chapter 4.3.5 regarding EIAs in SA.

1740 UNEP *Rwanda.* The UN was requested to conduct an audit of the country's sustainability.

1741 See Chapter 5.3.2 in Singapore where the UN helped Singapore draft its first Concept Plan and provided advice and assistance to put Singapore on the track of sustainable development.

1742 UNEP *Rwanda* 4. UNEP's key local help was from REMA, working under the overall leadership of MINIRENA.

1743 UNEP *Rwanda* 4. UNEP discovered that Rwanda was on a "solid development track with the ambitious goal of catapulting within one generation" to be a middle-income country. This urgency was to make up for "arrested development of the conflict years and its aftermath".

1744 *Rwanda National Environment and Climate Change Policy* 2019 4, 38-41. A sense of urgency and importance attached to strong government commitment for restoring and sustainably managing the environment was evident.

1745 UNEP *Rwanda* 6, 27. It is clear that the country's long-term goal is to transform Rwanda "from an agrarian-based to an industrial, service-oriented and knowledge-based economy".

1746 *Rwanda National Environment and Climate Change Policy* 2019 8, 12, 38-41.

environment[1747] but there was still room for improvement on three priority fronts. These related to ecosystem conservation, strengthening environmental governance through capacity building and enhancing and promoting regional environmental cooperation.[1748] This report was a "forward-looking integrated environmental assessment" with its main recommendation being the inclusion of environmental factors in planning decisions.[1749]

In that vein, UNEP made numerous recommendations for sustainable development which is of interest as they impact on possible conflict between property development and the environment. The recommendations of the UN[1750] are tabulated for ease of reference:

1. Municipalities must develop urban master and land use plans.[1751] These plans must be a blueprint for planning and infrastructure development in urban areas so that unplanned settlements, slums and sprawl is avoided.

2. Capacity-building, technical assistance and resource mobilisation for urban planning and human settlement development is required at all levels. It also supports environmental policies and laws being implemented in relation to planning and development in urban areas.[1752]

3. Integration of environmental safeguards in urban planning is deemed to be crucial but the UN did not provide guidance on how this should be done.[1753]

4. The decentralisation of environmental management is needed.[1754]

1747 UNEP *Rwanda* 4. Reference was made to the success of *Vision 2020* and its alignment with the MDGs.

1748 UNEP *Rwanda* 6. There were 89 recommendations made for these three priority areas to be attained within a period of five years at an estimated cost of $147 million dollars.

1749 UNEP *Rwanda* 6.

1750 UNEP *Rwanda* 12, 36, 38-41.

1751 UNEP *Rwanda* 36, 38-41. It included "assessing and mapping of urban areas" that were "vulnerable to disasters", "site identification", "cadastral mapping and strategic plans". This has been implemented in South Africa.

1752 UNEP *Rwanda* 38-39. South Africa has a similar need.

1753 The introduction of SPLUMA has helped achieve this in South Africa. See Chapter 3.4.

1754 UNEP *Rwanda* 12, 14, 35, 40. Decentralisation was needed for community-based environmental management locally and not only nationally. This is an aspect that needs attention in South Africa.

5. The role of municipalities in protecting the environment must be recognised and they must not to be excluded from the constitutional imperative of protecting the environment.[1755]

6. EIAs must become compulsory on all urban plans and urban land use plans. The UN also recommended that EIAs by private organisations be overseen by REMA.[1756]

7. Mechanisms such as public-private partnerships are recommended to assist with financing environmental and sustainability programmes and activities.[1757]

8. Identifying the main wetland functions and setting guidelines for urban and commercial development near wetlands.[1758]

9. Promoting biodiversity, conservation and sustainable natural resource management.[1759]

10. The general public awareness and understanding of environmental issues and their linkages with poverty and development needed to improve.[1760]

11. The formation of an environmental information system (EIS) to enable environment-related data to be collected, collated, stored and accessed by a wide range of users.[1761]

12. A concerted effort must be made *inter alia* to improve employment opportunities

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[1755] See Chapter 4.2. See also the *Le Sueur* case in Chapter 4.2 regarding the local authorities and environment in South Africa.

[1756] UNEP *Rwanda* 10, 17-18 and 41-44.

[1757] UNEP *Rwanda* 36. Financing was required for sustainable environmental management vision.

[1758] UNEP *Rwanda* 11, 17, 38-41. Controls should be integrated into laws. See Chapter 4.3.3 relating to environmental tools that apply in South Africa.

[1759] UNEP *Rwanda* 9, 11,26, 38. Lakes and wetlands are critical areas that support the socio-economic development. NEMA and its supporting acts play a role in South Africa to do this. See Chapter 4.7.

[1760] UNEP *Rwanda* 38-39. The scope of environmental education in Rwanda had to be widened through national programmes that deliver important messages. This aspect could be improved in South Africa.

[1761] South Africa must consider these recommendations are useful as they may be used to evaluate and improve the South African situation in that regard as well. The use of motorised transport was identified as a problem in South Africa. See Chapters 3.11 and 4.7.

while resolving emerging social and environmental challenges.[1762]

13. Attention must be paid to air pollution; increased vehicles on roads; the use of charcoal. Industrial pollution affected air quality in cities, such as Kigali.[1763]

In South Africa measures have been put in place regarding some of these issues but decentralisation of environmental management is definitely not one of them.[1764] Decisions by municipalities to implement rules to protect the environment and take action in that regard have been the subject of litigation in South African courts and legislation and management is perceived as being reserved exclusively for provincial and national government. This is not entirely correct. The perceived notion in South Africa must change and legislation and municipalities must become more robust to address conflict with the environment when property development is undertaken in the urban areas in South Africa.

The UN recommendations are being implemented in Rwanda and are useful pointers to countries, like South Africa, regarding the avoidance of conflict between property development and the environment especially within the urban edge. How these issues play out in an urban setting is done by examining the situation in the capital city of Rwanda, Kigali and its satellite cities.

6.6 The City of Kigali and its secondary or satellite cities

6.6.1 The City of Kigali

Kigali was socially dislocated, very poor and had no infrastructure, housing or employment after the genocide and civil war.[1765] Rwanda was wrecked and so was Kigali.[1766] Unlike other post-colonial cities in the region such as the cities of East Africa

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1762 UNEP *Rwanda* 35. A concerted efforts to improve job opportunities and reduce sprawl was needed to deal with both social and environmental issues. This is an area identified as a conflict area in South African urban areas. See Chapters 3.11 and 4.7.

1763 UNEP *Rwanda* 34.

1764 The increase of vehicles and related sprawl in South Africa was discussed in Chapter 2.1. Transport problems that need to be resolved are discussed in Chapters 3.11 and 4.7.

1765 Goodfellow and Smith 2013 *Urban Studies* 3202..

1766 See 6.1 above.

(Kenya), which inherited much infrastructure from their colonial masters, Kigali was different.[1767] The Germans and Belgians did not favour infrastructural investment and whatever there was had been destroyed. As a result, Kigali, like the rest of Rwanda, had to start from scratch after independence and the genocide.[1768] Unlike many other cities that become crime ridden and unstable after a massive crisis, Kigali is hailed as a "model, modern city". This turnaround from an "epicentre of conflict" to a "carefully planned showcase" for sustainable development took place in a remarkably short time.

As in many African countries, urbanisation in Rwanda was late and slow.[1769] Kigali was a small village when Rwanda gained independence on 1st July 1962. Thereafter, it "underwent several territorial expansions" in accordance with the "different city plans and administrative reforms".[1770] The city expanded substantially from 1900 and began growing haphazardly.[1771] Urban extensions were found in wetland areas and even on steep slopes.[1772] The steep and hilly topography, covered with marshlands and floodable zones have influenced the spatial occupation of Kigali. With no guidelines on

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1767 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 79.

1768 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 79.

1769 One of the reasons is that the catholic church was sceptical on urbanisation. The other is that migration to live in a city required authorisation from leaders and the issue of permits only to persons who employment.

1770 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 25.

1771 Nduwayezu, Sliuzas and Kuffer 2016 *Rwanda Journal*. In Kigali rapid urbanisation and urban growth are evident everywhere. University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 25, 35. The four stages of urban expansion in Kigali are: 1. In 1975, the *Commune Urbaine de Nyarugenge* was created due to the expansion of Kigali; 2. In 1990 this was replaced by the *Préfecture de la Ville de Kigali* (PVK), created to organise Kigali in terms of Law No 53/90 3. In 2000, Kigali's boundaries were redefined by creating *Mairie de la Ville de Kigali* a boundary of 314 km^{2t} in terms of Law No 47/2000 4. The recent administrative reform of 2005 has given the city a zone of 730 km^2, including additional urban and rural zones. Effectively this means that its urban boundary has been continually expanding.

1772 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 25. Presently, around 19% of Kigali's is on land that is not ideal for development; See also UNEP *Rwanda* 9 where UNEP refers to this issue.

the planning neighbourhoods, settlements in hilly areas of Kigali emerged.[1773]

The influx of people into Kigali, where workforce was required, started the process of industrialisation in Rwanda.[1774] Formal economic activity today remains largely located in Kigali and it continues its primary role as a result of the scale of economies, its access to markets, its role as the seat of national government and as an international connector.[1775] More than fifty per cent of the urban population lives in Kigali. At the current population growth rate, it was estimated in 2017 that it will take the city until 2166 to reach an average population density of 15 000 people per km^2 within the growth boundary.[1776] This statistic indicates that the city is spread out with low densities as agricultural land, wetlands and forests occupy a large portion of the city's area.

In terms of the *Law Determining the Administrative Entities of the Republic of Rwanda*[1777] only five provinces were created, including Kigali, which now has the duplicate status of a province.[1778] (Singapore by contrast is a city- state, a city and country in one.)[1779] *Organic Law* 4 of 2005 established the City of Kigali as a "local government with administrative, legal and financial autonomy".[1780] Kigali is grouped

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1773 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 44.

1774 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 3.

1775 Palmer "Recent Experiences of Civil Society Participation"; World Bank 2017 http://documents.worldbank.org/curated/en/875101513836698339/pdf/122174-WP-P157637-PUBLIC-Note-1-Rwanda-Urbanization-12-07-17-rev2.pdf.

1776 ITDP 2015 https://www.itdp.org/2017/03/06/africa-rising-in-kigali/.

1777 *Law No 29/2005 Determining the Administrative entities of the Republic of Rwanda* dated 31 December 2005.

1778 MININFRA 2018 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf 29. The City of Kigali and provinces are described as "decentralised government entities with a legal personality". The provinces were named North, South, East and West. Until 2013, 87.9% (642. 60 km^2) of the area was rural. Built-up areas have mixed-use developments.

1779 See Chapter 5.1, Introduction to Singapore.

1780 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 47. It is subdivided into three districts - Gasabo, Kicukiro and Nyarugenge - which in turn is divided into 161 cells and 1061 *imidugudu* villages.

into urban and rural clusters,[1781] characterised by three categories of planned, informal and mixed neighbourhoods.[1782] Article 9 of the *Law Governing Land in Rwanda*[1783] confines urban land within the boundaries of towns or cities "established by a Presidential Order" and the remainder of the land is "rural land".[1784]

Kigali's urbanisation, like that of Singapore,[1785] follows a "concentric urban land use model", with "low and medium-class residential areas" as well as better class modern housing in suburbs.[1786] Heeding the advice of UNEP, urbanisation in Kigali is tackled proactively with importance being placed on good governance and the need to coordinate planning and development management procedures so that they are effective.[1787] In recent years, many plans, policies and regulations have been implemented to direct its growth and make it a sustainable city.[1788] Service delivery and infrastructure development are acknowledged to be more efficient in Kigali than in smaller towns because of the "advantages of scale and proximity".[1789] Kigali is among the fastest growing cities in Africa[1790] with a developed commercial centre due

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1781 MININFRA 2015 https://uploads.habitat3.org/hb3/RWANDA-HABITAT-III-REPORT_17.12.15.pdf. Urban farming is encouraged in on unoccupied land; Harrison 2016 *Third World Q*.

1782 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 47. Planned neighbourhoods are equipped with basic infrastructure to a certain standard and inhabitants are generally from the higher economic class. Kigali's informal areas are less attractive referred to as *Akajagari*, where houses and roads are lacking. Mixed neighbourhoods are being planned and informal neighbourhoods are gradually being upgraded. When plots are bought old buildings are replaced in line with 2013 Kigali City Master Plan.

1783 *Law No 43/2013 Governing Land in Rwanda*.

1784 This Law determines the modalities of allocating, acquisition, transfer, use and management of land in Rwanda.

1785 Goodfellow 2014 *JEAS* 316. The choice of Singapore was not accidental. The advantages of a concentric layout were discussed in detail in Chapter 5.3.2 on Singapore.

1786 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 25. The first urban plan of Kigali was implemented in 1964 and updated in 1982 and 2001.

1787 MININFRA 2018 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf (Introduction) 5. The Urbanization and Rural Settlement Sector (established under EDPRS 2 in 2013) includes social, economic and environmental items for both urban and rural areas. See also Rwanda Today Date unknown http://rwandatoday.africa/news/Local-govt-restructure-for-better-service-delivery/4383214-5091788-aruwfhz/index.html.

1788 Nduwayezu, Sliuzas and Kuffer 2016 *Rwanda Journal*.

1789 MININFRA 2018 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf 6.

1790 Kachipande 2013 https://www.polity.org.za/article/a-new-african-dream-the-benefits-of-satellite-cities-for-east-africa-2013-05-29. Africa is estimated to become home to the second largest urban

to its ideal location for business.[1791] It is also regarded as the cleanest and safest city in Africa.[1792]

Despite this excellent progress, sprawl is still regarded as a concern. Urbanisation is growing rapidly in the peri-urban areas[1793] because the city authorities have no jurisdiction over the peripheral population. There is also a lack of cooperation between the city and rural area or authorities. Low-income earners were erecting many houses and informal settlements in the surrounding areas of Kigali because they could not afford the style and quality promoted by the Master Plan.[1794] It was necessary to consider ways to consider the impact of this fast growth and resolve the issue of sprawl.

6.6.2 The KMP and the newly created urban growth boundary

The rapid expansion in Kigali necessitated a compact and sustainable-development approach.[1795] Many policy interventions were made, aimed at improving spatial plans and land use management to implement growth in an effective way.[1796] Article 11 of the *Law Governing Urban Planning and Building* in Rwanda designates the Master Plan as the main tool for urban planning, supported by development and land subdivision

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population in the world by 2050. Africa cities will grow tremendously over the next few years. East Africa has many large cities such as "Kampala, Uganda (expected to grow by 99.5%); followed by Dar es Salaam, Tanzania (85.2%); Kigali, Rwanda (79.9%); Mombasa, Kenya (79%); and Nairobi, Kenya (77.3%)". Three cities that have among the world's "highest rate of urbanisation" are "East African capital cities of Kigali, Kampala, and Dar es Salaam".

1791 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 25.

1792 University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 25. Kigali is also referred to as the 3rd greenest destination in the world.

1793 MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 21. The challenge in these fast growing cities is to maximise density while costs and environmental impacts must be curtailed.

1794 MININFRA 2018 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf 17-21.

1795 City of Kigali 2020 https://bpmis.gov.rw/asset_uplds/kigali_master_plan/1_Kigali%20Master%20Plan_Analysis%20&%20VisionLowRes.pdf 13.

1796 Baffoe, Ahmad and Bhandari 2020 *Cities* Introduction. The authors also highlight negative sentiments regarding the fact that the Master Plan has caused displacement, increased rural and urban poverty and imposed restrictions on the urban poor through political silencing and intimidation.

plans.[1797] On account of *Vision 2020* and with the urban population increasing in Kigali, the KMP was substantially elaborated.[1798] Kigali had to consider issues of sustainability and the new KMP is designed with this in mind. It has similarities to a municipal SDF in South Africa, and the Master Plan in Singapore.[1799] The KMP has a 30 year vision from the date of its adoption[1800] and is being made more inclusive by bringing the people to the review process and engaging with participatory tools.[1801] It comprises planning and zoning regulations.[1802] The latest KMP contains detailed proposed land use and zoning maps for Kigali City up to 2050,[1803] as well as detailed plans, zoning maps and zoning regulations for each of the 30 districts.[1804] The City of Kigali has now adopted the KMP 2050.[1805] It provides that boundaries will only be extended when populations reach numbers that warrant this.[1806] This is regarded as a better strategy to prevent unplanned extensions to the urban growth boundary in Kigali and the secondary cities which are now planned for specific number of citizens.

The specific purpose of the urban growth boundary in the KMP and in local and specific land development plans is important for this study. As with other plans in Rwanda it deals with sprawl. However, it establishes an "explicit" urban growth boundary,[1807] regarded as a positive step for this purpose. Kigali is one of only three African cities

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1797 *Law No 10/2012 Governing Urban Planning and Building.*

1798 MININFRA 2013 http://www.rha.gov.rw/fileadmin/user_upload/Documents/Final_Urbanization_Sector_Strategic_Plan_131210_.pdf Executive Summary. These plans therefore place a strong emphasis on Kigali as it houses half of the country's population.

1799 See Chapter 5.3.3 for discussion on Singapore's Master Plan and Chapter 3.6 for a discussion on the SDF in South Africa.

1800 In terms of art 13 of *Law No 24/2012 Relating to the Planning of Land Use and Development in Rwanda.*

1801 City of Kigali 2020 https://bpmis.gov.rw/asset_uplds/kigali_master_plan/1_Kigali%20Master%20Plan_Analysis%20&%20VisionLowRes.pdf (hereafter KMP 2050) (Executive Summary) xi. This included meetings, focus groups and social media were some of the methods used.

1802 The initiation of KMP 2013 started in 2007 and includes detailed District Master Plans.

1803 KMP 2050 17. Kigali has a good location in the centre of the country and was an administrative and military post in 1907. It became the capital of Rwanda 1 July 1962 and today more than 50% of the urban population live in Kigali.

1804 KMP 2050. Zoning is based on the predominant land use in that area. Rural settlement layout plans are required for new planned rural settlements.

1805 KMP 2050 17.

1806 See discussion regarding this aspect in Chapter 6.6..2.

1807 Njuguna *et al Effectiveness of Planning Law* 81-87. In a survey of 18 cities by UN Habitat to assess if cities had a mechanism such as a growth boundary to separate urban (built-up or buildable) from non-urban land (such as agrarian, forested & environmentally protected).

surveyed by the UN to have an introduced an urban edge or urban growth boundary.[1808] KMP 2013 expands on the need for an urban growth boundary in Kigali.[1809] The reason are to prevent sprawl and low density development in the urban peripheral areas and the dire need to maximise the potential of limited developable land in hilly Kigali.[1810]

An overall land utilisation strategy is regarded as vital and includes defining and identifying the following: an urban boundary for the city centre; existing urban areas adjacent to the city centre as city fringe areas; future areas as new growth areas in the urban periphery as suburban areas and unbuildable areas in the outskirts as rural areas for various rural uses.[1811] In Kigali, the urban growth boundary enhances the densification policy reducing the cost of infrastructure and promoting compact development.[1812] An important use of the urban edge in Kigali is to preserve the many small scattered patches of forest lands and biodiversity.[1813]

According to the KMP the city centre must be strengthened with high density commercial and vibrant mixed-use developments. It must also include more residential homes to prevent long daily travel by residents.[1814] It recommends the introduction of regional level commercial areas in the fringe towns and the suburban areas.[1815] The other key suggestions that relate to sustainable development are developing medium-rise residential areas in the suburban areas and townships; planning light industrial development close to the suburban areas; the conservation of forests and wetlands[1816] and the need to develop walkable neighbourhoods with cycle paths, parks and open

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1808 The Kigali Master Plan 2013 was the first time the urban growth boundary was implemented (City of Kigali 2013 http://www.masterplan2013.kigalicity.gov.rw/downloads/Docs/RWF1101_03_Kigali%20City_Master%20Plan%20Report_03062013-s.pdf (hereafter the KMP 2013 Report)). See Chapter 2 for a full discussion on the urban edge in South Africa.

1809 KMP 2013 Report 2013.

1810 KMP 2013 Report 13; Imasiku and Ntagwirumugara 2020 *Food Energy Secur*.

1811 KMP 2013 Report 13. See also Harrison 2016 *Third World Q*. Development potential for this is recognised by the author.

1812 See Chapter 2 on the urban edge in South Africa and how it is being used to limit sprawl.

1813 KMP 2013 Report 46.

1814 KMP 2013 Report 16

1815 KMP 2013 Report 16.

1816 Graham 2016 *New African* 60-63. There is a drive towards protecting the forests in Rwanda and there is a focus on trees being planted.

spaces. It recommends more affordable housing in the form of medium-density developments and affordable housing close to the mass rapid transit as human settlements are the "backbone" of Kigali's urban expansion.[1817]

The commitment to the "authority vested in the Master Plan" is very visible and there are views that while other major African cities leave their plans on shelves with minimal action being taken, the picture is very different in Kigali.[1818] Land use and construction rules are strictly enforced and the city exudes a cleanliness that is descriptive of the "new Rwanda" where environmental sustainability is paramount. The KMP has been acknowledged as an excellent example of the country's city-planning abilities as it includes aspects of "sustainable development and green growth, in keeping with global standards".[1819] This philosophy is being implemented at each stage of municipal planning with substantial work already done to ensure that future projects and planning activities are implemented along similar lines.

Presidential Order No 46/01[1820] now determines all procedures relating to the Master Plan in Rwanda for all areas for which the Master Plan has been formulated. The KMP falls into the category of "an urban area Master Plan for Land Management and Urban Planning and is formulated in accordance with Article 3.1 of Presidential Order 46/01". It guides the use of land and provides a planning framework for Kigali. In terms of Article 3.2 there is also a District or Regional Master Plan for areas cross-cutting the boundaries of one of the districts of the City of Kigali. Article 3.3 provides for plans that specify the details of a particular subject matter such as transportation, housing, the environment and tourism amongst others.[1821] Sectoral Master Plans may include integrated rural development plans and green economic growth and development plans. Accordingly, Rwanda is classified by three areas, these being the city centre or commercial area, the semi-urban area and the suburban or rural areas. Outside the urban growth boundary area, the use of land must be restricted to agricultural

1817 KMP 2013 Report 17.
1818 Goodfellow 2014 *JEAS* 6. The emphasis is on "playing by the book".
1819 Global Green Growth Institute 2016 https://gggi.org/site/assets/uploads/2017/12/GGGI-Rwanda-Country-Planning-Framework-2016-09-09.pdf.
1820 Article 2 of *Presidential Order No 46/01 of 2015.*
1821 Articles 3.2 and 3.3 of *Presidential Order No 46/01 of 2015.*

activities, recreation areas and protection of the environment. The transformation of agricultural land for residential or commercial property development is prohibited. Conservation areas and environmentally significant areas must be "zoned out" so that they are not used for development and provision must be made for social amenities and recreational areas. There are also restrictions in respect of development and subdivision of agricultural lands for residential or other non- agricultural uses. Buffer zones or green spaces between zones are recommended.

The introduction of an urban edge or boundary in a city such as Kigali is encouraging. According to the UN[1822] an urban growth boundary indicates the existence of a legal "policy of compactness", a tool designed to limit urban expansion and promote sustainability. It is hoped that the KMP contains the informal urban expansion that the city is experiencing.[1823] Public participation was for the first time exercised when the KMP was formalised and is now mandatory.[1824] All indications are that as a result of the KMP and the added protection of linking the urban boundary to population densities and as a result of vertical growth, Kigali will be more compact with new urban developments situated close to the existing urban areas rather than sprawled. What is clear though, is that the KMP has succeeded in building Kigali as a "paragon of environmental conservation, public order and social harmony".[1825]

6.6.3 Satellite or secondary cities

Over the past few years, increased urbanisation in various countries in Africa has resulted in slums, poverty, informal housing, poor sanitation, and unemployment.[1826]

1822 Njuguna *et al Effectiveness of Planning Law* 9.

1823 Goodfellow 2014 *JEAS* 316. Singapore was used as a case study when designing this Plan. The importation of American and Singapore expertise is evident in this Plan; University of Rwanda 2018 http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf 25. See further discussion on the KMP in 6.6.2 below.

1824 MININFRA 2018 http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf 7. It is mandatory in terms of the legal framework adopted in 2015.

1825 Goodfellow and Smith 2013 *Urban Studies* 3200.

1826 Kachipande 2013 https://www.polity.org.za/article/a-new-african-dream-the-benefits-of-satellite-cities-for-east-africa-2013-05-29. Despite benefitting from expanding national economies, African countries have high rates of urbanisation but a low rates of economic growth in the urban areas.

Rwanda's population is one of the highest in the world and may be likened to cities in South or East Asia than sub-Saharan Africa.[1827] For a country with a conflicted past such as Rwanda, satellite cities are a viable option to create new urban areas.[1828] In accordance with SDG 11 sprawling developments had to be curtailed and compact cities had to be considered. Measures were put in place to promote a more balanced urbanisation through the initial development of six satellite or secondary cities[1829] near the city of Kigali.[1830] These were designated to be the centre for new business growth.[1831] These satellite or secondary cities were identified by the *National Urbanization Policy* in a bid to promote urbanisation and economic progress.[1832] To implement these secondary cities, a national SDF was developed. The objective is for local authorities to realise national visions in respect of urban development so that they may be adapted and implemented at the local level.[1833] The NSDF in South Africa is based on the same premise.[1834] This gives an indication of how these satellite or secondary cities may be promoted in South Africa.

The identification of six secondary or satellite cities was made because of developments increasing in the peri-urban areas in Kigali, to avoid urban sprawl into rural areas and to provide socio-economic opportunities.[1835] The satellite cities of

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1827 UNDP *Assessment of Development Results: Rwanda*. It has close to 350 people per square kilometre; Gubic and Baloi 2019 *Urban Planning.* Africa has become the world's most rapidly urbanising region, with 40.4% of its population now living in cities. Rwanda is among the fastest urbanising countries at 4.5%.

1828 Van Leynseele and Bontje 2019 *Int Plan Stud*. Satellite cities enhance the capital city and improve the potential benefits of urbanisation; Kachipande 2013 https://www.polity.org.za/article/a-new-african-dream-the-benefits-of-satellite-cities-for-east-africa-2013-05-29*.* Satellite cities have the potential of meeting the goals of all growing cities and address the negative impacts of urbanisation of many African cities.

1829 See discussion on secondary cities in 6.6.3.

1830 See discussion on the City of Kigali in 6.6.1 below.

1831 MININFRA 2015 https://www.mininfra.gov.rw/fileadmin/user_upload/Rwanda_National_Urbanization_Policy_2015.pdf OECD 2016 https://www.oecd.org/regional/african-economic-outlook-19991029.htm. Urbanisation rates in African countries are driven by urban growth mainly in small and intermediary towns and cities. This suggests that it is in these areas that strategies to enhance urbanisation trends and economic growth should focus.

1832 Mutuku, Boerboom and Madureira 2019 *Int Plan Stud* Abstract. These expanding urban areas bring together hopes and aspirations for enhanced urbanisation rates and therefore economic growth promotion.

1833 Mutuku, Boerboom and Madureira 2019 *Int Plan Stud* Abstract.

1834 See Chapter 3.6.1.

1835 MININFRA 2015 https://uploads.habitat3.org/hb3/RWANDA-HABITAT-III-REPORT_17.12.15.pdf 20.

Singapore and secondary cities of Rwanda help address the congestion of capital and metropolitan cities, provide new schools, hospitals, housing and create jobs.[1836] They allow cities to build infrastructure, become economically viable and meet the demands of the population.[1837] These cities are designed to become autonomous, decentralised sustainable cities with the potential to combat the woes of urbanisation by improving the quality of life for people living there.[1838]

The aim of priority areas 4 and 5 of Rwanda's EDPRS 2, (the economic transformation pillar) is to "transform the economic geography of Rwanda by facilitating urbanisation" through these six secondary or satellite cities.[1839] Developed as poles of growth, these secondary cities must become non-agricultural economic hubs with a "green economy" approach to improve the economy.[1840] The Global Green Growth Institute and MINIFRA developed a "National Roadmap for Green Secondary City Development" in 2015.[1841] This Roadmap is a tool to consolidate and provide guidance to government and stakeholders regarding satellite cities. The Roadmap fosters sustainable growth of secondary cities through preserving ecosystems and biodiversity; promoting density and mixed land use; integrating transport and land development; planning sufficient green spaces; investing in urban infrastructure and planning green jobs; creating a resilient city and improving the standard of living of these urban families.[1842]

These secondary cities are planned with active citizen participation and regulated through a well-coordinated and decentralised institutional system.[1843] They have

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1836 See Chapter 5.6 for a full discussion on Singapore's satellite cities and their advantages. Mixed results are achieved in Africa. In Angola, rent prices are too high and loans were unobtainable and in Uganda, the project used differential pricing to make it more affordable and home loans were easily available.

1837 Van Leynseele and Bontje 2019 *Int Plan Stud* 217. The re-imaging of African cities is taking place through satellite cities. Satellite cities adjacent to the main urban areas are "the new face of their nation's urban spaces". MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 16. This is the third component of "Developing Rwandan Secondary Cities as Model Green Cities".

1838 MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 16. This is the third component of "Developing Rwandan Secondary Cities as Model Green Cities".

1839 MINECOFIN *EDPRS 2*.

1840 MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 16.

1841 MININFRA 2019 https://gggi.org/site/assets/uploads/2019/03/FINAL-NUF_Rwanda_v06.pdf 16.

1842 KMP 2050 14.

1843 MININFRA 2015 https://www.mininfra.gov.rw/fileadmin/user_upload/Rwanda_National_Urbanization_Policy_2015.pdf The Rwanda Housing Agency is one of the government agencies in

support for infrastructure to enable job creation and economic development.[1844] The secondary cities of Rwanda require investment for both hard and soft infrastructure and require projects that will spark growth as well as improve linkages in accordance with the EDPRS 2 plan.[1845]

Some concerns have been that satellite cities further separate poor and rich and that planning of "western-looking" designs in the "global south" are inappropriate.[1846] Poor people have issues of accessibility to satellite cities due to the costs.[1847] These cities in Rwanda are conceptualised as decentralised units but there still appears to be strong upward accountability, supervision and control. Decision-making processes are also controlled by authorities.[1848] It is important that apart from supporting regional growth and ensuring planned urbanisation, these satellite cities focus on creating jobs to enhance rural-urban migration. They must be financially independent, include affordable houses that are accessible to a majority of the population and be sustainable.[1849] Developed correctly, these satellite or secondary cities are worthy of consideration in South Africa in areas close to the urban edges of cities and in areas that were "*apartheid* driven" areas for the black population.[1850]

6.7 National Land Use Planning Guidelines

As can be seen, Rwanda has numerous laws and policies that relate to planning and the environment. This flurry of legal documents can cause confusion and result in the

charge of implementing secondary cities. The *National Urbanization Policy* is set to guides the processes so that sustainable development may be achieved.

1844 MININFRA 2015 https://www.mininfra.gov.rw/fileadmin/user_upload/Rwanda_National_Urbanization_Policy_2015.pdf.

1845 Mutuku, Boerboom and Madureira 2019 *Int Plan Stud*. Affordable housing makes these cities attractive to citizens.

1846 To counter this criticism, African designs, colours, motifs and names must be used in Africa.

1847 Mutuku, Boerboom and Madureira 2019 *Int Plan Stud*. Some satellite cities in African cities are booming with benefits outweighing the negative aspects. Plans to implement these cities must be well structured and legal methods must be used to ensure correct procedures and protocols. It is important that exploitation by developers does not happen.

1848 Mutuku, Boerboom and Madureira 2019 *Int Plan Stud*. Development of satellite cities gathers pace in Rwanda. The authors believe that more expertise and resources are needed for effective satellite cities to be developed.

1849 The Nyagatare mayor, Fred Sabiiti, drew attention to outdated master plans and other problems relating to plans. James Musoni, Minister for Infrastructure, urged districts to develop proper master plans so that developing secondary cities all over in Rwanda becomes a reality.

1850 See Chapter 2.1.

full potential of these instruments not being realised. Consolidation of these various documents in an orderly and user friendly way has merit. The Rwandan Ministry of Natural Resources (MINIRENA) realised the need to consolidate land use legislation and guidelines for economic and social development from various sectors (including the environmental sector) into one document. The *National Land Use Planning Guidelines* (NLUPG)[1851] were accordingly created to help with implementation and enforcement. It is used as planning tool for preparation and planning and for development controls for land use. The main aim is to align national planning, processes and procedures with local government systems.[1852] It includes guidelines on various issues,[1853] such as land use, processes for planning and environmental factors to be considered; densification and mixed uses; zonings; urban renewal and upgrading of settlements; protection of areas such as wetlands, forests and areas with biodiversity; conservation; protection of historic and heritage or cultural sites; energy matters; transport and socio economic facilities. It also includes reference to the Urban Planning Code (UPC), which guides the development of physical plans. Importantly it also includes principles for sustainable developments and management of land in urban areas.

This document is complementary to the provisions of the legal framework on urban planning and building, and the use of land in Rwanda. This coordinated planning approach between municipal and other spheres is lacking in South Africa. It has also been found that the full potential of certain relevant plans, polices and legislation is not being realised.

6.8 Drawbacks and criticism

German and Belgian systems and customary law and case law impact on Rwanda's civil-law legal system. However, court judgments are in Kinyarwanda or French and English translations are still being developed.[1854] This could be a reason why there is

[1851] MINIRENA 2017 http://www.rlma.rw/uploads/media/LUP_Guidelines_Final_Published.pdf 68.
[1852] MINIRENA 2017 http://www.rlma.rw/uploads/media/LUP_Guidelines_Final_Published.pdf 68.
[1853] KMP 2050 17.
[1854] International Business Publications *Rwanda Business Law Handbook* 43. Court proceedings were previously only in French and Kinyarwanda; Musiime and Kabasinga 2013

little attention from an academic viewpoint regarding the progress of urbanisation in Rwanda or about Kigali as a city.[1855]

Major criticisms are politically motivated. President Kagame and his party are criticised for being driven by personal gain that is disadvantageous to the country's poor[1856] and the fact that the Rwanda Constitution was amended to allow him to run again for election in 2017 and remain in power, possibly until 2034 has not gone down well.[1857] Rwanda's ambitious plans are seen as a pursuit of "international trends and fads"[1858] with the mode of implementation being totally controlled and with little or no room for discussion or criticism.[1859] Authoritarian rule is present, a fact that finds similar application in Singapore.[1860]

There are also views that the progress made and the achievements realised are not sustainable.[1861] Issues that are mentioned are discussed in isolation and are narrower in scope than the SDGs. Existing studies do not permit an understanding of the issues despite the impressive statistics.[1862] The Singapore-based model, used by Rwanda,[1863] is deemed not suitable for Africa as it is heavily dependent upon foreign aid.[1864]

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https://www.nyulawglobal.org/globalex/Rwanda1.html. According to Minister for Education in Rwanda, Dr Eugene Mutimura, the level of competence in English at university level is low; Musoni 2014 https://www.newtimes.co.rw/section/read/183014. The Chief Justice, Prof Sam Rugege, has said foreign lawyers and judges may be able to start referring to Rwandan court judgments as jurisprudences as there was a new initiative to have major decisions translated from Kinyarwanda to English as English was replacing French as a major language.

1855 Baffoe *et al* 2020 *Sustainability*.

1856 Goodfellow 2014 *JEAS* 317. In particular, expropriation of urban land and the "political-economic interests embedded in the real estate sector" is criticised. Investors lobby government to approve projects as "public interest." Government finds land on their behalf and the "cost is cheaper if expropriated"; see also Bisoka and Ansoms 2019 *Can J Dev Stud.*

1857 Turok 2019 *Local Economy* 222-223. See also Oranje and Van Wyk 2019 *Town Reg Plan* 115; Kritz 2019 *Peace Confl* 152-154. It has been reported that President Kagame believes that rapid and sustained economic development is imperative and something he has to accomplish during his tenure.

1858 Such as "smart and eco-cities" glossy hotels and conference facilities.

1859 World Bank 2019 http://documents1.worldbank.org/curated/en/219651563298568286/pdf/Rwanda-Systematic-Country-Diagnostic.pdf.

1860 See Chapter 5.6 for the discussion on this aspect in Singapore.

1861 Ayittey 2017 *JMS* 88. Although, another civil war has been avoided it is believed that it is "a supreme irony" that Rwanda's President Paul Kagame is recreating the exact same conditions that led to the 1994 genocide.

1862 Baffoe, Ahmad and Bhandari 2020 *Cities* 3.

1863 Versi 2019 *African Business.*

1864 Price 2019 https://assets.publishing.service.gov.uk/media/5da5eb4fed915d17b5234463/660_Climate_Compatible_Development_and_Rapid_Urbanisation_in_Rwanda.pdf. Although much

Despite progress on many fronts Rwanda, and Kigali in particular, faces several developmental challenges. Included in particular is that promoting private development has become the prerogative of the elite and politically connected.[1865]

To improve the urbanisation process, it is important that national policies consider realities and alignment on the ground and promote "bottom-up" processes.[1866] The utilisation of solar energy in the rural areas for electricity has also been recommended to assist the country in its sustainable development drive.[1867]

Critics believe that success and reform in complementary fields is required to sustain progress.[1868] According to Oranje and Van Wyk,[1869] the country needs far more built-environment professionals and more investment in "developing the national infrastructure" rather than more plans and planning tools. It is disheartening that an assessment in the industrial sector revealed that compliance with environmental impact assessment outcomes was not fulfilled as there was a scarcity of steady EIA monitoring.[1870]

Very little mention is made of Rwanda's progress with regard to SDG 11 in its VNR Report. Rwanda hosts the SDG Centre for the whole of Africa and its mandate is to support the entire continent.[1871] The VNR Report refers to the need to accelerate compliance with SDGs in Rwanda. While SDG indicators are included in the strategies at both national and lower levels, problems faced relate to interlinkages, enhanced cooperation being necessary among stakeholders and better evaluation systems

attention has been paid to the alignment and sequencing of plans and strategies in Rwanda, there are still some structural limitations and insufficient financial sources, as with many countries in Africa.

1865 Booth and Golooba-Mutebi 2012 *Afr Aff*.

1866 Turok 2019 *Local Economy* 221-227. See also Hasselskog and Schierenbeck 2015 *Third World Q*. Uwizeyimana 2019 *African Renaissance* 190.

1867 Gloria, Oliver and Angela 2019 *Civ Eng Arch*.

1868 Ayittey 2017 *JMS*. The focus is only on economic outcomes while other reforms are missing. This is not enough to ensure prosperity.

1869 Oranje and Van Wyk 2019 *Town Reg Plan* 116.

1870 Harelimana *et al* 2020 *J Clean Prod*. The ignorance of employee and employers with regard to EIA implementation was not ideal.

1871 Rwanda VNR Report 2019 75. The VNR states that this is testament to the political commitment to deliver on the Agenda 2030.

required to monitor SDGs.[1872]

Despite these comments, there is no doubt that Rwanda's progress and the course it has pursued is beginning to pay dividends especially with regard to improving the economic situation in Rwanda.

6.9 Lessons and conclusion

The land of a thousand hills, Rwanda, is aptly summed up in the quote at the beginning of this Chapter. Rwanda has been transformed from a war-torn country to a country that symbolises sustainable development and is the envy of many other African countries. What Singapore is to the global world, is what Kigali is to the rest of Africa. The process of building infrastructure and roads began with no consideration for the environment.[1873] Rwanda now incorporates environmental protection in its planning and leads the way in Africa on the development of sustainable cities. Rwanda had over-zealous expectations and plans with regard to urbanisation and sustainable development that have not all been achieved. However, its environmental thread is getting stronger as it runs through all its land use and planning legislation and policies. The country is still encountering sprawl and other challenges and its leadership is criticised for its authoritarian style. However, Rwanda's journey in protecting the environment, in improving sustainability in development and how far it has come since the genocide and civil war is significant. It has resulted in a respect that Rwanda now enjoys.

Rwanda's progress and sustainable development was tracked, from a legal perspective, with a view to addressing the situation regarding conflict with the environment and development in South African urban areas.[1874] The following have relevance in that regard:

1. The scarcity of land and sprawl in peri-urban areas had to be addressed. To that

[1872] There is a need to address the prevailing data gaps across sectors and addressing many issue that relate to poverty, economics and jobs. Rwanda commits to building on its success through reforms.
[1873] See Chapter 6.5.1.
[1874] See Chapter 6.1.1 above.

end detailed land use management and Master Plans were introduced and the 2013 KMP implemented and included an urban growth boundary.[1875] As well as a rural boundary. Conservation areas and environmentally significant areas are now being "zoned out" so they are not used for development.[1876] Although KMP 2050 provides that urban growth boundaries will only be extended when populations reach certain numbers and the "zoned out" strategy has been introduced to address and prevent unplanned extensions to the urban growth boundary,[1877] there is still some evidence of sprawl and unplanned informal settlements in Kigali.[1878]

2. *Vision 2020* was finalised after extensive consultation with the people of Rwanda. A consolidated approach involving governmental and non-governmental cooperation that included the community was used to ensure that the goals of urbanisation, stimulation of the economy and environmental protection were pursued.[1879] *Vision 2020* promoted development that is sustainable and avoids sprawl. This concerted effort paid dividends for Rwanda. By comparison, South Africa did not achieve the anticipated success with its RDP programme or the DFA.[1880]

3. The *Law Governing Urban Planning and Building in Rwanda* is "stand alone" legislation governing urban planning in Rwanda. By comparison, South Africa does not have stand-alone legislation that deals with sustainable development in cities.[1881] This law is ably supported by the *National Urbanization Policy* to guide urban development and its governance and ensure the incorporation of the environment in urbanisation. It is legislation geared to promote the inclusion of environmental considerations in economic and social development at all levels of government.[1882] Two of the pillars of this policy, namely densification and

[1875] See Chapter 6.6.2.
[1876] See Chapter 6.6.2.
[1877] See Chapter 6.6.2.
[1878] See Chapter 6.6.1.
[1879] See Chapter 6.3.2.
[1880] See Chapter 2.1.
[1881] See Chapter 6.6.2.
[1882] See Chapter 6.4.2.

coordination would serve a useful purpose in avoiding conflict in South African urban areas.[1883]

4. Densification, rural and urban linkages and proper infrastructure development[1884] that includes conservation and open and green spaces are advanced to make development sustainable and improve the quality of life of its people.

4. The NDPR (in the Ministry of Finance and Economic Planning) had the job of reconstructing the country.[1885] It acted as a coordinating authority between the different sectors and ministries involved with planning, development and the protection of the environment. Similarly, REMA was a key authority to monitor, regulate and enforce environmental issues in Rwanda.[1886]South Africa does not have similar bodies that coordinate and guide the process and such bodies are worthy of consideration in South Africa.

5. The roadmap or yardstick used to track progress and assist with budget allocations is EDPRS 1 and EDPRS 2.[1887] They played a positive role in advancing Rwanda's progress in line with the MDGs and supported public participation, empowering communities and pursuing a green economy. Secondary cities are promoted through these roadmaps as sustainable human settlements, for the transport benefits they generate and the jobs they create with new businesses being established in the satellite cities.[1888] The secondary or satellite cities of Rwanda are planned as poles of green economic growth and development.[1889] As in Singapore they are recommended for various reasons such as mitigating the effects of sprawl, decentralising, improving rural and urban linkages and densification. These cities are planned to eventually become autonomous, decentralised sustainable cities.

1883 See Chapter 6.4.2.
1884 See Chapter 6.4.2.
1885 See Chapter 6.3.1.
1886 See Chapter 6.5.3.
1887 See Chapter 6.4.4.
1888 See Chapter 6.6.3.
1889 See Chapter 6.6.3.

6. Rwanda also uses OSCs (similar to Singapore's OSCs). The performance-based code and online Building Permits Management Information System is sophisticated and more effective than the cumbersome and delayed system used in South Africa.[1890]

7. The publication of the *National Environment and Climate Change Policy* of 2019 incorporates international guidelines and policies that relate to the protection of the environment. Issues such as deforestation, land degradation and green infrastructure development are highlighted for their importance.[1891]

8. Cognisance must also be taken of the long list of UNEP recommendations.[1892] Enhancing and promoting regional and municipal environmental cooperation and enhancing the role of municipalities to protect the environment are important considerations. Various other issues such as pollution, reducing traffic on roads and capacity building at all levels are recommendations that need consideration for sustainable development in cities. The Constitution talks of protection of the environment, but various statutes and policies make it compulsory as in the case of South Africa, to ensure sustainable development and to avoid conflict between property development and the environment during the process of urbanisation.

9. The *National Land Use Planning Guidelines*[1893] were introduced in Rwanda to incorporate all existing land use plans, policies and legislation relating to the planning and the environmental sector. They serve as a planning tool and ensure that there is cooperation between the national and local government levels. They also act as guidelines on various issues relating to property development, the environment and sustainable development. The *Guidelines* are complementary of the legal frameworks and coordinate and consolidate information. In addition they facilitate decision-making that is economically, socially and environmentally sustainable. For these reasons the *Guidelines* may have a role to play in South

[1890] See Chapter 6.4.6.
[1891] See Chapter 6.5.2.
[1892] See Chapter 6.5.6.
[1893] See Chapter 6.7.

Africa.

10. The future for Rwanda is set out in its *Vision 2020*.[1894] The focus will be modern infrastructure and livelihoods, including "green/eco-friendly" cities and neighbourhoods powered by renewable energy and with features such as recycling playing a bigger role.

[1894] See Chapter 6.3.2.

Chapter 7

Findings and recommendations

7.1 Introduction

The main aim of this study was to analyse how South Africa should address the conflict between property development and the environment when such conflict occurs within the urban edge, taking into consideration existing laws and policies, learning points from foreign jurisdictions as well as the international context. The foreign jurisdiction of Singapore and Rwanda were examined to determine if they could provide insights to address this conflict in South Africa. Singapore, despite the fact that it has no demarcated urban edge, was chosen as its historical background has similarities with South Africa's historical background and it has achieved substantial success in addressing some of the same challenges faced by South Africa. Singapore promotes policies of intensification and densification in its urban development and has made great strides with regard to property development while simultaneously protecting the environment. Rwanda was chosen for the reason that in the despite the atrocities faced by the genocide and civil war, it is widely recognised today as a "promising showcase" of African sustainable development.[1895] Rwanda was advised and assisted by the UN and its success, in a short period of time, provides lessons with regard to urbanisation.[1896] Lessons learnt from Rwanda include the eradication of sprawl and improving the quality of life of its inhabitants.[1897] Both foreign jurisdictions chosen focussed on stamping out issues of corruption and ensuring that development was promoted and accelerated whilst at the same time the environment was protected.

South Africa has a hybrid system of land holding that is informed by its *apartheid* and colonial history. It inherited the Dutch system of land ownership but the indigenous

[1895] See Chapter 6.1.
[1896] See Chapter 6.5.6 for recommendations made by UNEP.
[1897] See Chapter 6.9.

population has always subscribed to a system of customary land holding.[1898] Singapore has a hybrid system and the land tenure was originally freehold. This land ownership tenure changed with the government requiring land for developmental projects.[1899] As a result, most land in Singapore is presently held by the state with the two categories of land holding prevalent being freehold and leasehold.[1900] Rwanda's land tenure system is unlike that of Singapore, and more like that of South Africa. Initially, the land tenure system in Rwanda was mainly one of collective ownership of land.[1901] As a result of developments taking place the land tenure regularisation programme was initiated and individual ownership of land was introduced in Rwanda, alongside the more traditional forms.[1902] The tenure system of South Africa and the foreign jurisdictions of Singapore and Rwanda do not appear to play a significant role with regard to the urban edge, urbanisation or urban sprawl issues. It is possible that it has however, impacted the type of developments in each jurisdiction.

As a result of the legacy of the *apartheid* regime the boundaries of cities expanded exponentially. Although transformation of the planning system in South Africa has been welcomed, it has still not facilitated and transformed urban, regional and rural spaces satisfactorily and the South African landscape still reflects the spatial legacy of the past.[1903]

7.2 The urban edge

7.2.1 South Africa

The urban edge was introduced as one of the ways to correct the previous fragmented spatial pattern of *apartheid* planning laws in all cities in South Africa.[1904] Its main aims, as a planning tool of a local authority, are to prevent sprawl contain unstructured

[1898] See Chapter 2.2.
[1899] See Chapter 5.2.
[1900] See Chapter 5.2.
[1901] See Chapter 6.1.1.
[1902] See Chapter 6.1.1.
[1903] See Chapters 2.1, 3.11 and 4.7.
[1904] See Chapter 2.2.

development intensify development with higher densities within it and efficiently utilise municipal services and infrastructure.[1905] The usefulness of the urban edge as a solution for the protection of the environment and critical biodiversity is also recognised.[1906]

The South African courts have confirmed the connection between the urban edge and SDFs as well as that planning decisions must be aligned with legislation, plans, by-laws and municipal policies or concepts (such as an urban edge policy).[1907] They have further confirmed that a decision taken by local authorities with regard to the urban edge may be classified as "administrative action", that may not be interfered with if it is *bona fide* and rational.[1908]

The importance of the urban edge as a tool for sustainable development was acknowledged when it was utilised by the UN in 2019 as the main criterion in a survey to assess the effectiveness of the planning laws of Sub-Saharan African cities.[1909] The UN used the implementation of an urban growth boundary (or urban edge), which separates urban or built-up areas from non-urban areas such as "agrarian, forested or environmentally protected land" as an indicator of a policy of compactness and sustainability. While an urban edge or growth development boundary may be an indicator of a country's policy of compactness, various factors nevertheless impact on its success.[1910] However, not much has been written on how the urban edge is determined and if it is merely an estimate by planners.[1911]

7.2.2 Singapore and Rwanda

Although Singapore has no urban edge as such, the sea is its natural and definitive boundary and *de facto* urban edge.[1912] As a result all development in Singapore is deemed to take place within the urban edge. Development in the city-state may be

[1905] See Chapter 2.2.
[1906] See Chapters 2.2, 2.4 and 2.5.
[1907] See Chapter 3.4.
[1908] See Chapter 2.4.
[1909] See Chapters 2.4.3 and 6.6.2.
[1910] See Chapter 2.4.3.
[1911] See Chapter 2.4.3.
[1912] See Chapter 5.1.

characterised as large-scale, compact and sustainable without outward expansion or sprawl. This has been achieved as a result of the pursuit of a policy of intensification and densification. As land and space for development is scarce, Singapore has embraced sustainable development in terms of its Concept Plans and the Master Plan to become a compact city.[1913] Since the effectiveness of an urban edge is enhanced through the use of policies similar to those being used in Singapore a study of Singapore is relevant to the urban edge.

Besides South Africa and Rwanda the concept of the urban edge or an urban growth boundary is not widely used in other African countries.[1914] In the city of Kigali in Rwanda sprawl was identified as a problem and in 2013 it implemented an urban development boundary through the Kigali Master Plan (KMP).[1915] The specific purpose of the urban growth boundary in the KMP and in local and specific land development plans is to improve urban land use management and avoid uncontrolled urban expansion or sprawl. The urban development boundary, together with the densification policy, is viewed as a way to optimise the use of scarce urban land, reduce the cost of infrastructure and promote compact development in Kigali. Urban and rural linkages are promoted and strengthened in the periphery near the urban growth boundary as part of the *National Urbanization Policy* and the EDPRS 2.[1916] The recently released 2020 KMP identifies many areas where urban-rural linkages (or "rurban" as it is referred to there) must be actively pursued.[1917] In terms of the latest KMP, extensions of the urban edge may only take place when the population of the city increases sufficiently to warrant an extension.[1918] Both these aspects are pertinent to the South African context.

While many descriptions and definitions of "urban edge" exist in South African court decisions, legislation, provincial guidelines and opinions of authors, there is no

[1913] See Chapter 5.
[1914] See Chapters 6.6.2. and 2.2.
[1915] See Chapter 6.6.2.
[1916] See Chapters 6.4.2, 6.4.4 and 6.6.2. The advantages of urban-rural linkages are discussed in Chapter 3.4.
[1917] See Chapter 6.6.2.
[1918] See Chapter 6.6.2.

standard definition or description that contains all the relevant criteria that relate to the urban edge.[1919] Adopting an acceptable definition will ensure that all the criteria are carefully considered when any decision is made to implement or extend the urban edge.[1920]

[1919] See Chapter 2.4.
[1920] See Chapter 2.4.

7.3 The Constitution

The Constitution played a pivotal role in transforming and re-shaping the political and legal history of South Africa. It contains various provisions that have a direct or indirect impact on both property development and the environment. Many of the values and rights such as human dignity, equality, and freedom,[1921] the right to a healthy environment,[1922] just administrative action[1923] and the requirement that no one may be "deprived of property" in terms of section 25,[1924] impact on all laws, on government and even on the actions of private persons in certain instances.[1925] These are all closely linked to problems that must be addressed in urban areas.[1926]

The wording of section 24 of the Constitution suggests that there is a "potential relationship of conflict" between the need to protect the environment and the need to promote social and economic interests. The guide, a compulsory one,[1927] to resolving this situation is to balance environmental, social and economic interests as set out section 24(b)(iii).[1928]

Section 153 of the Constitution directs local government to be a party to the country's pursuit of sustainable development and lays down developmental roles for municipalities along those lines.[1929] These include promoting a safe and healthy environment, prioritising the basic needs of the community and promoting social and economic development whilst simultaneously encouraging participatory democracy.[1930]

The South African Constitution goes much further in protecting the environment and

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1921 See Chapter 1.
1922 See Chapter 4.
1923 See Chapters 2.4.2, 3.2 and 4.2.
1924 See Chapter 1.
1925 See Chapter 1.
1926 See Chapters 1.3.1 and 3.2.
1927 See Chapter 4.2.3 for a discussion on balancing of interests.
1928 See Chapter 4.2.3 that refers to court decisions regarding the balancing of interests in terms of s 24.
1929 See Chapters 3.2 and 3.11.
1930 See Chapter 3.2.

promoting development that is sustainable[1931] than its Singapore and Rwanda counterparts. Unlike the South African Constitution, the *Constitution of the Republic of Singapore* does not contain any provision relating to the environment (nor the right to property)[1932] while the *Constitution of the Republic of Rwanda* (and the *Organic Law)* entrusts the state with the responsibility to protect, conserve and promote the environment.[1933]

7.4 International context

Internationally, sustainable development in relation to cities is regarded as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".[1934] The consensus is that while cities contribute to unsustainable development they are also drivers of change with regard to aspects such as, but not limited to, transport systems, housing and climate change.[1935]

The SDGs of the 2030 Agenda for Sustainable Development, adopted by world leaders in September 2015 at an historic UN Summit, set a target date of 2030 for achieving these goals. This brings urgency to the need to create safe and sustainable cities and communities in terms of SDG 11,[1936] which determines that urban planning and management[1937] must be sustainable, participatory and inclusive.[1938] Moreover, sustainability in accordance with SDG 11 includes access to safe and affordable housing; upgrading of slum settlements; investment in public transport and the creation of green public spaces. Since these are lacking in South Africa,[1939] they must be explored.

1931 See Chapter 4.2.3.
1932 See Chapter 5.2.
1933 See Chapter 6.5.2.
1934 See Chapter 2.6.
1935 See Chapter 2.6.
1936 See Chapter 2.6.
1937 See Chapter 3.4.
1938 See Chapter 2.6.
1939 See Chapters 2.6, 3.11 and 4.7.

It is also necessary to consider the implications of the *New Urban Agenda*[1940] and the "smart city agenda" as these form part of the global standards required to address conflict between property development and the environment within the urban edge.

7.5 Planning and environmental legislation, plans and policies

7.5.1 South Africa

South Africa does not have dedicated legislation for the sustainable development of cities. However, the array of existing planning and environmental legislation, plans and policies has the capacity to resolve the problems that confront South Africa with regard to sustainability.[1941]

These instruments were examined against the background of the urban edge in order to address any conflict regarding the environment as a result of property development. The delay in fully implementing SPLUMA, the first comprehensive statute on spatial planning and land use management after the demise of the DFA, was exacerbated because contradictory old-order legislation and policies are still in place.[1942] This has resulted in confusion and delays in the implementation of sustainable development in urban areas. SPLUMA's effectiveness in urban areas is further compromised by the constitutional system that places the executive responsibility of the Act in the hands of the Department of Agriculture, Land Reform and Rural Development[1943] rather than it being the responsibility of all three spheres of government. Without an effective system of intergovernmental cooperation and governance SPLUMA's full potential may be difficult to achieve.[1944]

Each sphere of government has an obligation to respect, protect, promote and fulfil all the rights in the Bill of Rights and to take reasonable legislative and other measures, to achieve an integration of social, economic and environmental considerations to

[1940] See Chapter 3.9.
[1941] Chapters 3 and 4 deal with South African planning and environmental instruments.
[1942] See Chapters 2.1 and 3.4.
[1943] See Chapter 3.11.
[1944] See Chapter 3.11.

protect present and future generations.[1945] The recognition of environmental issues in SPLUMA was a major step in enhancing sustainable development within the urban edge.[1946] SPLUMA and its principles[1947] (relating to spatial justice, spatial sustainability, spatial resilience, efficiency and good administration), together with South Africa's planning and environmental legal instruments have the potential to address negative impacts on the environment caused by property development in urban areas. These instruments include the IDP,[1948] the draft NSDF,[1949] municipal SDFs,[1950] the *Infrastructure Development Act*,[1951] the Constitution[1952] and the urban edge[1953] itself. The NDP[1954] and IUDF[1955] are also significant because they were created and adapted to be in line with SDG 11 and lay the foundation for its attainment.

Environmental legislation in the form of NEMA gives effect to section 24 of the Constitution and ensures a risk free and cautious approach through the use of various appropriate environmental tools. They include EMFs,[1956] EIAs[1957] and SEAs.[1958] Importantly, NEMA makes reference to the urban edge and addresses details of environmental governance and environmental management.[1959] Its principles,[1960] such as the environmental justice principle, the precautionary principle and the polluter pays principle as well as public participation, make it a key enforcement instrument.[1961] NEMBA, NEMPAA, NEMICMA and the consolidated Environmental Implementation and Management Plan for 2015-2020[1962] all have features in common with internationally accepted environmental and sustainable development principles

1945 See Chapter 3.2.
1946 See Chapters 3.11 and 4.5.
1947 See Chapter 3.5.
1948 See Chapter 3.3.
1949 See Chapter 3.6.1.
1950 See Chapter 3.6.2.
1951 See Chapter 3.11.
1952 See Chapter 3.2.
1953 See Chapter 2 which deals with the urban edge.
1954 See Chapter 3.9.
1955 See Chapter 3.9.
1956 See Chapter 4.3.4.
1957 See Chapter 4.3.5.
1958 See Chapter 4.3.5.
1959 See Chapter 4.3.
1960 See Chapter 4.3.1.
1961 See Chapter 4.3.1.
1962 See Chapter 4.3.2.

and have a role to play.[1963] The integration of the concept of sustainability in planning and environmental policies is better aligned now and makes it possible to ensure that development is socially, environmentally and economically sustainable.

The municipal planning departments that issue planning approvals and the provincial environmental departments that grant environmental authorisations make decisions independently of each other and operate separately in South Africa. Therefore, the process to obtain approval for an entire development is cumbersome and delays are experienced. Recently comments were called for with regard to proposed minimum environmental standards for the preparation and review of municipal SDFs to ensure that environmental and development planning achieve "mutually reinforcing outcomes in terms of sustainability".[1964] This is an improvement and will assist municipalities make better decisions from an environmental perspective because different planning documents such as EMFs and SDFs will eventually use the same maps or criteria for both planning and environmental purposes.

7.5.2 Singapore and Rwanda

The quote at the beginning of Chapter 5 describes Singapore as "an efficient, well-run city". By comparison, effective implementation and strict controls in planning have been lacking in South Africa. By tracking Singapore's progress through the years, lessons have emerged regarding the development of a compact city that is sustainable and avoids conflict with the environment. Singapore's Concept and Master Plan[1965] introduced the "ring system" and satellite cities as part of the decentralisation process with a rapid train system for transport to and from these satellite cities, reducing private motor vehicle use. There is a concerted effort made to use reserve land for developments, to intensify new developments, to recycle land with lower intensity uses (such as golf courses and old industrial areas) and further to increase the use of public transport.[1966] Avoiding future slums was ensured through dense human

[1963] See Chapter 2.6.
[1964] See Chapter 4.5.
[1965] See Chapters 5.3.2 and 5.3.3.
[1966] See Chapter 5.3.2.

settlements in compact satellite cities, integrated with strategic and quality green spaces in all urban areas.

By integrating environmental considerations into planning in Singapore at an early stage, extremely rapid economic development and an enhanced environmental quality for its citizens were achieved.[1967] A clear vision, long-term environmental planning, effective implementation and a resolve to stamp out any corruption in government or business has resulted in a good balance between property development, social and economic growth and environmental protection. Making changes along similar lines in South Africa will address many issues regarding sustainability that need attention.

Singapore's MND and MSE are integrated to make sound and speedy decisions regarding sustainable development at every stage of development.[1968] The URA, created to redevelop Singapore sustainably, consults with the NEA to ensure that development is in accordance with environmental restrictions and requirements.[1969] The NEA assists the URA in manning the licence control OSCs for approval of plans.[1970] All the processes in Singapore are digitalised and applications are initially made online. Consideration must be given to establish an intergovernmental committee so that cooperation between the different spheres may be improved in South Africa.

Sustainable development and Singapore's commitment to achieving SDG 11 is paramount in the minds of authorities and the public. In April 2009, an Inter-Ministerial Committee on sustainable development was formed and resulted in the *Sustainable Singapore Blueprint* being launched.[1971] Both the authorities and the people of Singapore have embarked on a journey of sustainability together and show concern not only for Singapore's sustainability but also for global sustainability.[1972] This approach has yielded positive outcomes such as corporate social responsibility and funding for projects being offered only for sustainable development. Final decisions

[1967] See Chapter 5.1.
[1968] See Chapter 5.2.
[1969] See Chapter 5.3.4.
[1970] See Chapter 5.3.4.
[1971] See Chapter 5.4.1.
[1972] See Chapter 5.5.

regarding conflicts between property development and the environment are, however, made by government (in innovate ways sometimes) rather than the courts.

The Singapore Environment Council received UNEP-accredited environmental NGO status to oversee and monitor Singapore's progress regarding the SDGs. South Africa has no dedicated body or organisation to oversee such a process.[1973]

There is an area of grave concern with regard to EIAs and related public participation in respect of developments in Singapore.[1974] Although public participation applies in relation to Concept Plans[1975] this is not the same for all developments. EIAs play a crucial role in avoiding conflict between property development and the environment and are recognised internationally as such.[1976] South Africa's EIA system and its public participation process are by contrast, on track[1977] with sustainable development objectives.

Speedy progress was also made in war-torn Rwanda through reconstruction, development and nation-building since 2000. Rwanda, like Singapore has also made huge strides in sustainable development and is regarded as a "showcase of African sustainable development" although it started its democracy a bit later.[1978] The leadership of the country planned, implemented and adhered to clear development strategies and guiding principles and introduced a flurry of laws and policies. *Vision 2020*[1979] and then *Vision 2050* (even before *Vision 2020* had expired) were implemented together with a *National Urbanization Policy* to assist Rwanda on its path of sustainability.

Rwanda sought the assistance of the UN to conduct an audit and advise it on the way forward.[1980] The long list of recommendations provided are useful to any country that is confronted with challenges of sustainability. In this regard, some of these

[1973] See Chapter 5.4.2.
[1974] See Chapter 5.4.3.
[1975] See Chapter 5.3.2.
[1976] See Chapter 5.4.3.
[1977] See Chapter 5.4.3.
[1978] See Chapter 6.1.
[1979] See Chapter 6.3.2.
[1980] See Chapter 6.5.3.

suggestions are applicable in South Africa. It was the UN[1981] that recommended that Rwanda strengthen the decentralisation of environmental management. It also recommended the use of secondary or satellite cities[1982] as poles of growth to pursue a green economy. The promotion of secondary cities through the *Decentralisation Policy* and the seven year strategic plans (EPDRS1 and 11) to facilitate urbanisation[1983] certainly have merit and should be considered for implementation in South Africa.

The implementation of the new *Environmental and Climate Change Policy 2019*[1984] enhances development that promotes modern infrastructure and the creation of smart and green cities. The *Law Governing Urban Planning and Building* in Rwanda[1985] provides the main guidelines and basis for this process. The NDPR[1986] in the Ministry of Finance and Economic Planning, was crucial in coordinating all national planning between central and local governments or municipalities, monitoring progress and ensuring alignment between the plans.[1987]

The *Organic Law* (or *Environment Law*), enacted in 2005,[1988] incorporates fundamental principles for the protection, conservation and sustainable management of the environment. It is the counterpart of NEMA in South Africa.[1989] The integration of environmental considerations in the broader development framework in terms of EDPRS 2 (2013-2018)[1990] is a milestone, similar to SPLUMA being implemented in South Africa. A key authority created to deal exclusively with the regulation, monitoring and enforcement of environmental issues is REMA in the Ministry of the Environment.[1991] It was credited by the UN for its strong and high-level government support for environmentally sustainable development in Rwanda. South Africa does not have an institution such as REMA in its Department of Environment, Forestry and

1981 See Chapter 6.5.5.
1982 See Chapter 6.6.3.
1983 See Chapter 6.6.3.
1984 See Chapter 6.5.3.
1985 See Chapter 6.6.2.
1986 See Chapter 6.3.1.
1987 See Chapter 6.3.1.
1988 See Chapter 6.5.2.
1989 See Chapter 4.3 for a full discussion on NEMA.
1990 See Chapter 6.4.4.
1991 See Chapter 6.5.2.

Fisheries (DEFF) to assist with coordination between departments or spheres and this requires consideration.

Rwanda has achieved effectiveness in its environmental sector by focusing on implementation and administration. Its "One Stop Centres"[1992] and an online BPMIS (as in the case of Singapore) are equipped with features that permit applicants to access information, closely follow-up applications and be notified on the progress made in a speedy and transparent manner. This is recommended[1993] as being extremely useful for South Africa.

The Rwandan MINIRENA found it necessary to consolidate all existing land use guidelines and standards relating to social, economic and physical infrastructure provision from various sectors (including the environmental sector) into one document for ease of implementation and enforcement and issued the NLUPG.[1994] This serves as a planning tool for land use plan preparation, processes and major land use development controls but the main aim was to ensure that national planning, processes and procedures were aligned with local government levels.[1995] This coordinated planning approach and process that has facilitated decision making to focus on economically, socially and environmentally sustainable development requires consideration in South Africa.

7.6 Challenges

Both the draft NSDF[1996] and South Africa's VNR Report of 2019[1997] have drawn attention to challenges to sustainability and difficulties faced in attaining SDG 11 in urban areas.[1998] These relate amongst other things to human settlements that are unsuitable and insufficient; informal settlements on the periphery of large cities; a failing economy; transport shortcomings and infrastructure upgrades.[1999] Additionally,

[1992] See Chapter 6.4.6.
[1993] See Chapters 5.4.2 and 6.4.6.
[1994] See Chapter 6.7.
[1995] See Chapter 6.7.
[1996] See Chapter 3.6.1.
[1997] See Chapters 3.11 and 4.7.
[1998] See Chapter 3.11.
[1999] See Chapter 3.11 and 4.7.

climate change issues such as the critical shortage of water supply to many cities such as Cape Town from 2018 to 2020 and Nelson Mandela Bay in 2020 are being experienced. The more challenging and serious, lack of capacity of local municipalities also requires urgent attention.[2000] What is clear is that there is a pressing need to resolve the situation not only because of South Africa's commitment to the SDGs in general and SDG 11 in particular but also because it is demanded by section 24 of the Constitution.

This study has revealed that SPLUMA, through its principles, the national and municipal SDFs and land use schemes; the MSA, with its IDPs and NEMA, with its principles, environmental implementation and management plans, tools such as EMFs, EIAs and SEAs are all able to play a positive role in addressing challenges in cities.[2001] Other environmental legislation such as NEMPAA,[2002] that protects certain specified environmental sensitive areas, NEMBA,[2003] that protects areas of biodiversity (near the urban edge in particular) and NEMICMA,[2004] that protects the coastal zone and establishes a "coastal set-back line", fulfil a role in ensuring sustainability. South Africa must effectively use these plans, policies and legislation, to address the issues that are causing conflict.

It is necessary to consider how this situation compares to the situation in Singapore and Rwanda. Singapore's VNR Report indicates many positive outcomes with regard to SDG 11 and concerns relate to an ageing population, ageing infrastructure and property development that is maintenance free. South Africa's situation in that regard appears to be much worse. Rwanda's VNR Report does not have detailed information regarding SDG 11. It refers to the need to accelerate the compliance of all SDGs in Rwanda. Interlinkages, enhanced cooperation and better evaluation systems are required to monitor SDGs.

2000 See Chapter 3.11.
2001 See Chapter 3 for suggestion in that regard by Oranje and Van Wyk, and Du Plessis (Anel). Refer to the relevant paragraphs.
2002 See Chapter 4.4.2.
2003 See Chapter 4.4.1.
2004 See Chapter 4.4.3.

Both Singapore and Rwanda looked at transformative urbanisation issues through various means and the development of satellite or secondary cities[2005] was chosen as a way to achieve sustainable changes in relation to sustainable human settlements, transport, economic issues and poverty reduction.[2006] Singapore has successfully implemented many satellite cities through its Concept Plans and in Rwanda, secondary or satellite cities are created at the periphery of Kigali. In Singapore an Inter-Ministerial Committee on sustainable development provides direction with regard to satellite cities and their development. In Rwanda both the NDPR in the Ministry of Finance and Economic Planning and REMA play substantial roles in coordinating all national planning and environmental issues between central and local governments while monitoring progress and ensuring alignment as well as with regard to the implementation of satellite cities.[2007]

There is a need to coordinate processes relating to property development and the environment in South Africa as these are divided with local authorities exercising planning control and provincial authorities exercising environmental controls.[2008] Delays are thus experienced in obtaining consents for property development. The need for intergovernmental relations and co-operation between the three spheres and between departments in the same sphere are addressed in Chapter 3 of the Constitution[2009] and in the IGRFA.[2010]

7.7 Recommendations

Having considered the South African legal framework, the international context and the studies of Singapore and Rwanda, the following recommendations are made:

7.7.1 The urban edge and addressing the conflict between property development and the environment

[2005] See Chapters 5.6 and 6.6.2.
[2006] See Chapters 5.6 and 6.6.3.
[2007] See Chapter 6.3.1.
[2008] See Chapters 3 which deals with planning law and Chapter 4 which deals with environmental laws.
[2009] See Chapter 3.2.
[2010] See Chapter 4.5.

It was considered necessary to define the urban edge to avoid any confusion with regard to its implementation or review by a local authority. As the urban edge is sometimes depicted in a municipal SDF, in terms of SPLUMA[2011] and is a planning tool, it is recommended that the definition be authorised by and be included in SPLUMA. The definition of this rather complex concept submitted by the author, incorporates various recommended aspects of the urban edge from other definitions. Included are "reviewable tool" and "transition area". However, the various definitions (including a definition of the urban edge in the NSDF)[2012] are lacking because they do not address issues such as "sustainability" and the "norms" that are set out in section 24 of the Constitution. These aspects included in the writer's definition[2013] submitted, are regarded as being integral to the definition of the urban edge:

> The urban edge (urban boundary or urban growth boundary) is a reviewable tool implemented by local government in planning law to demarcate an area where a transition occurs from urban development to environmental and agricultural purposes in order to promote a compact and efficient town or city in accordance with justifiable economic, social, and sustainable development norms as required in the Constitution and in terms of spatial development principles.

The NSDF[2014] and following it, the municipal SDFs[2015] must take their cue from SPLUMA and include the definition as the acceptable definition of the urban edge.[2016] As a consequence of this, any decision taken by a local authority in connection with the implementation or review of an urban edge, (either when the municipal SDF is updated every five years[2017] or when an application is made to extend the urban edge), must take cognisance of the following factors:

7.7.1.1 The urban edge plays a vital role in eliminating sprawl and must be implemented and managed correctly to be effective.[2018] There is an urgent need to resolve the problem of sprawling developments near the periphery of

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2011 See Chapter 3.6.2.
2012 See Chapter 3.6.1.
2013 For more information regarding the definition, see Chapter 2.5.
2014 See Chapter 3.6.1.
2015 See Chapter 3.6.2.
2016 See Chapter 2.5.
2017 See Chapter 3.6.2.
2018 See Chapters 2.2 and 2.3.

cities in South Africa[2019] and it is important that the implementation and management of the urban edge by local government[2020] is carefully considered.[2021]

7.7.1.2 In terms of section 153 of the Constitution, local authorities, as opposed to provincial authorities,[2022] have the final say with regard to the urban edge. The reason is that an urban edge forms a part of municipal planning.[2023] In Rwanda this is done on a more scientific basis and population counts are taken to determine when the urban edge should be extended in terms of the KMP.[2024] Adopting this requirement, will help resolve issues of political interference presently faced by cities in South Africa with regard to urban edge decisions.

7.7.1.3 The urban edge must be implemented and managed in accordance with, amongst others, the principles of the Constitution, SPLUMA, the IDP, the draft NSDF, municipal SDFs, the NDP and the IUDF, any urban edge guidelines and frameworks as well as the environmental tools and policies promoted in NEMA for use by municipalities when making planning decisions.[2025]

7.7.1.4 The implementation and management of the urban edge must promote a compact and efficient town or city and avoid sprawl.[2026] In Singapore, densification and a well-planned compact city, with environmentally efficient infrastructure, are evident. These factors are recommended as they enhance the role of the urban edge and help make cities prosperous and more

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2019 See Chapter 2.1.
2020 The differential roles of the local authorities and provinces was discussed at length in Chapters 4 and 5.
2021 See Chapter 2.
2022 See Chapter 3.2.
2023 See Chapters 2.1, 2.2, 2.4 and 2.5.
2024 See Chapter 6.6.2.
2025 All these are discussed at length in Chapters 3 and 4.
2026 See Chapter 2.3.

liveable.[2027]

7.7.1.5 The NEMA principles[2028] must be considered when making decisions relating to the urban edge. This will ensure that adverse environmental impacts are not targeted to poorer sectors of the community.[2029] In terms of the precautionary and preventative principles in NEMA[2030] care must be taken to avoid costly errors. It is also more beneficial to prevent environmental harm than to remedy damage. A municipality must consider the urban edge holistically so that its demarcation is neither too restrictive nor too permissive.[2031] If it is too restrictive, it will prevent development that is necessary and if it is too permissive, it will encourage sprawl.[2032]

7.7.1.6 Environmental implementation and management plans,[2033] EMFs[2034] and SEAs,[2035] although prepared by provincial and national authorities must be taken into account by municipalities when making decisions relating to the urban edge. They are effective, environmentally-focused, spatial development tools that help municipalities make informed and sustainable planning decisions. They identify areas where specified activities should not take place. The EMF and SDF must both indicate the urban edge as demarcated by the municipality. It is important that this demarcation is the same in both documents to avoid conflict.[2036] The SEA shows areas with environmental sensitivities that need to be protected. It is proposed that the urban edge excludes sensitive areas so that they are located outside the urban edge as this will ensure additional protection for such area.

7.7.1.7 Likewise, recommended areas for development must be indicated inside the

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2027 See Chapters 5.1 and 5.5.
2028 See Chapter 4.3.1.
2029 See Chapter 4.3.1.
2030 See Chapter 4.3.1.
2031 See Chapter 2.4.3.
2032 See Chapter 2.4.3.
2033 See Chapter 4.3.2.
2034 See Chapter 4.3.4.
2035 See Chapter 4.3.4.
2036 See Chapter 4.3.4.

urban edge so that the development potential of these areas is used to the maximum.

7.7.1.8 Section 24 of the Constitution and the balancing of economic, social and environmental norms are important when demarcating, implementing and managing the urban edge.[2037] Other planning and environmental plans and policies that promote sustainable development and public participation are also important as they are in accordance with international norms.[2038]

7.7.1.9 A transition zone is referred to in the writer's definition of an urban edge to imply an area that is less rigid and does not separate the rural from the urban. Under the previous regime, they were regarded as totally separate areas.[2039] A transition zone is indicative of integration[2040] and linkages[2041] that must be promoted between these areas.[2042] The importance of urban-rural linkages near the urban edge is referred to in the draft NSDF. It calls for protection of rural areas[2043] and stresses the importance of agriculture and urban-rural linkages. Urban-rural linkages are useful as they create jobs and opportunities for people from rural areas; provide agricultural products to cities; help with poverty reduction for both sectors; have the capacity to create national markets and trade networks and promote tourism.[2044] They are used to address inequality and environmental challenges at the periphery of cities.[2045] While the economic and social benefits are often acknowledged, the environmental benefits of urban-rural linkages are now being recognised. They help reduce sprawl; protect the environment; prevent degradation and are an ideal way to complement the role played by the urban edge.[2046] In this way they enhance and improve the effectiveness of the urban edge. Linkages

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2037 See Chapter 4.2.
2038 See Chapter 2.6.
2039 See Chapter 3.10.
2040 See Chapter 2.4 and Chapter 3.10.
2041 See Chapters 3.10 and 6.6.2.
2042 See Chapter 3.10.
2043 See Chapter 3.6.1.
2044 See Chapter 3.10.
2045 See Chapter 3.10.
2046 See Chapter 3.10.

must not be promoted in areas of critical biodiversity or sensitive areas as identified by NEMBA,[2047] NEMPAA[2048] and even NEMICMA.[2049] To be effective, proper infrastructure, roads and transport must be made available and infrastructure in terms of the *Infrastructure Development Act*[2050] must be used to facilitate the linkages between the urban and rural areas. The draft NSDF[2051] refers to Regional-Rural models that must be identified in the IDP[2052] and SDF[2053] of municipalities.[2054] Since a large part of the Rwandan population still lives in rural areas, linkages play an important role[2055] that should influence an examination of them for inclusion in municipal or regional SDFs to enable them to reach their full potential.[2056]

7.7.1.10 It is proposed that the above considerations be included in *Guidelines*[2057] to assist municipalities make correct decisions with regard to the urban edge.

7.7.2 Guidelines to address the conflict between property development and the environment

Guidelines are used both in Singapore and in Rwanda. In Rwanda, the NLUPGs[2058] consolidate information to facilitate and ensure compliance with the processes relating to land use and development. Similarly, *Development Control Handbooks* (or *Guidelines)* are used in Singapore by the OSCs to facilitate approval of building plans.[2059]

Existing legislation, plans and policies relating to sustainable development in urban areas in South Africa are not coordinated or consolidated. *Guidelines* will be a useful

[2047] See Chapter 4.4.1.
[2048] See Chapter 4.4.2.
[2049] See Chapter 4.4.3.
[2050] See Chapter 3.11.
[2051] See Chapter 3.6.1.
[2052] See Chapter 3.3.
[2053] See Chapter 3.6.2.
[2054] See Chapter 3.10.
[2055] See Chapter 6.6.2.
[2056] See Chapter 6.4.2.
[2057] See Chapter 7.7.2.
[2058] See Chapter 6.7.
[2059] See Chapter 5.3.1.

way to consolidate and coordinate all legal instruments so that both the authorities and the private sector have proper direction for sustainable development.[2060] Similar *Guidelines* as the NLUPG[2061] in Rwanda are recommended for use in South Africa: The following is suggested with regard to the implementation of a set of *Guidelines:*

7.7.2.1 The NSDF[2062] is the key document to facilitate the implementation of the *Guidelines*. The Minister of Agriculture, Rural Development and Land Reform,[2063] who administers SPLUMA, is required, in terms of the NSDF, to consider all public and private policies, plans and programmes that impact on spatial planning, land development and land use management. The Minister has the power in terms of clauses 13(1) and 13(2) of the NSDF[2064] to consider and authorise the implementation of the proposed *Guidelines*. The NSDF acknowledges that transformation in cities is essential and that for successful transformation, intervention at a national scale is required. This justifies why the NSDF is the appropriate medium to implement the *Guidelines*.[2065]

7.7.2.2 The *Guidelines* must contain a definition of the urban edge and details of all considerations to be taken into account by municipalities.[2066]

7.7.2.3 The *Guidelines* must explain the constitutional rights as contained in the Bill of Rights, explain their values and rights[2067] (this must include human dignity, equality and freedom, housing rights, the right to property, just administrative action and the right of access to information) as well as details of section 24. These values and rights are all closely linked to the problems that need to be addressed.[2068] It is important that development promoted by the *Guidelines*

2060 See Chapters 3.11 and 4.7.
2061 See Chapter 6.7.
2062 See Chapter 3.6.1.
2063 See Chapter 3.4.
2064 See Chapter 3.6.1.
2065 Draft NSDF 29.
2066 See Chapter 7.7.1.
2067 See Chapter 1.3.1.
2068 See Chapter 3.2.

must be "socially, environmentally and economically sustainable".[2069]

7.7.2.4 The *Guidelines* must include, amongst others:

- Details of SPLUMA,[2070] the SPLUMA principles,[2071] reference to the NSDF,[2072] municipal SDFs[2073] and land use schemes.[2074]
- The IDP implemented in terms of the MSA and its important role.
- The IUDF[2075] and NDP[2076] as they deal with issues of sustainability.[2077]
- NEMA, its principles, environmental tools such as Environmental Implementation and Management Plans,[2078] EIAs,[2079] EMFs[2080] and SEA.[2081]
- NEMBA,[2082] NEMPAA[2083] and NEMICMA[2084] are also relevant and must be included together with all plans, policies or legislation that impacts on sustainability within the urban edge, such as the *Infrastructure Development Act*.[2085]

7.7.2.5 The *Guidelines* must contain all information linked to international soft law paradigms, such as the SDGs (in particular SDG 11), the *New Urban Agenda*, and the "smart city agenda"[2086] and ensure that all climate change laws and

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2069 Chapters 3 and 4 deals with all the legislation in that regard.
2070 See Chapter 3.4.
2071 See Chapter 3 6.
2072 See Chapters 3.6.1.
2073 See Chapter 3.6.2.
2074 See Chapter 3.7.
2075 See Chapter 3.9.
2076 See Chapter 3.9.
2077 See Chapter 2.6.
2078 See Chapter 4.3.2.
2079 See Chapter 4.3.2.
2080 See Chapter 4.3.1.
2081 See Chapter 4.3.3.
2082 See Chapter 4.4.1.
2083 See Chapter 4.4.2.
2084 See Chapter 4.4.3.
2085 See Chapter 3.11.
2086 See Chapter 2.6.

precautions are included and have been taken into account.[2087]

7.7.2.6 The *Guidelines* must give directions for the implementation and management of sustainable development of property. As municipalities lack capacity[2088] the *Guidelines* will assist them to manage their new role in terms of the section 153 of the Constitution as it will give advice on procedures to be followed and stipulate what must be taken into account when decisions are made. The *Guidelines* should contain the full planning process; property development procedures; which consents are necessary and which standards must be complied with to ensure that development is sustainable.[2089] The process must be detailed from beginning to end and be laid out with checks and balances to ensure that there is no place for deviation from the goals or for corruption anywhere in the process. While both Rwanda[2090] and Singapore[2091] pride themselves on the fact that they do not have corruption, safeguarding against corruption is a necessity in South Africa. Singapore and Rwanda are however, criticised for their autocratic style[2092] and they require more bottom-up processes. The *Guidelines* must ensure that in terms of international soft law paradigms and in accordance with the Constitution, NEMA and SPLUMA, bottom-up processes, community involvement and private sector participation are made essential to the process.[2093] It is imperative that the proposed *Guidelines* ensure that all precautions are taken to attain sustainable development. The *Guidelines* must be accessible to the public, communities, professionals such as, (but not limited to) town planners, attorneys, architects, EIA practitioners, NGOs and all government spheres and line departments. They must be the sole source of reference for all parties involved.

7.7.2.7 These *Guidelines* must be recommended by the Minister in terms of the

[2087] See Chapter 2.6.
[2088] See Chapter 3.11.
[2089] See Chapter 4.2.3.
[2090] See Chapter 6.1.
[2091] See Chapter 5.1.
[2092] See Chapters 5.1 with regard to Singapore and Chapter 6.8 with regard to Rwanda.
[2093] See Chapter 2.6.

NSDF,[2094] as being necessary for land use plan preparation, and for monitoring all processes relating to sustainable development and major land use development controls.

7.7.3 Cooperation between different departments and spheres

7.7.3.1 Cooperation between the three spheres is recommended in the Constitution,[2095] NEMA[2096] and SPLUMA. It is also required for the effective implementation of certain legislation, such as NEMICMA[2097] that is totally dependent on cooperation. The reason is that all three spheres of government have control over the coastal areas governed by the Act.

7.7.3.2 An Intergovernmental Committee for Sustainable Development is recommended to oversee and monitor the *Guidelines*[2098] on balancing the interests between property development and the environment[2099] and manage the process.[2100] Such institutions are widely used in both Singapore (such as the Inter-Ministerial Committee and the Singapore Environment Council) and in Rwanda[2101] (such as REMA and NDPR). They provide support and coordinate both implementation and management. Both private and public sectors will benefit from such an institution in South Africa.

7.7.3.3 Consents are required from different spheres of government and even different departments in a sphere for development within the urban edge. The SPLUMA, NEMA and the *Intergovernmental Relations Framework Act*[2102] all recommend intergovernmental cooperation. It is proposed that an Intergovernmental Committee (or similar committee) is appointed by the President, in terms of IGRFA. The establishment and the role of the committee

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2094 See Chapter 3.6.1.
2095 See Chapters 3.2 and 4.2.
2096 See Chapter 4.5.
2097 See Chapter 4.4.3.
2098 See Chapter 7.7.2.
2099 As recommended in Chapter 7.3.3.
2100 See e.g. Chapters 5.4.2 and 6.5.3.
2101 See Chapter 7.5.2.
2102 See Chapter 4.6.

must be clearly stipulated.

7.7.3.4 The Intergovernmental Committee must foster cooperation between the three spheres and separate line ministries and work towards one goal. That goal is to implement the balancing of interests between property development and the environment development in accordance with the proposed *Guidelines*.[2103] All spheres of government and all sectors such as housing, transport and economics must cooperate in a coordinated and controlled manner and be monitored by the Intergovernmental Committee to achieve their goal. This coordination will expedite and guide the process of developments within the urban edge and there will be no confusion regarding the process and the priorities.

7.7.3.5 The Intergovernmental Committee must also oversee the introduction of OSCs (as used in Singapore and Rwanda).[2104] OSCs are now a distinct possibility in terms of NEMA and SPLUMA.[2105] This joint venture of the planning and environmental sectors must incorporate any other necessary sectors from which permission is required. In this way delays with approvals and duplication will be prevented and the process will be expedited.

7.7.3.6 The Online Building Permits Management Information System as used in Rwanda and Singapore must be introduced in the OSCs and be equipped with features that permit applicants to access information, closely follow-up the joint applications and be notified on the progress made in a speedy and transparent manner. This will assist with capacity issues and service delivery in the municipalities in South Africa.[2106]

7.7.4 Satellite cities as alternative

As an alternative or in conjunction with the above, it is proposed that the satellite or

[2103] See Chapter 4.2.3.
[2104] See Chapters 5.4.2 and 6.4.6.
[2105] See Chapter 4.5.
[2106] See Chapters 3.11 and 4.7.

secondary cities of Singapore[2107] and Rwanda[2108] be introduced in South Africa. The advantages of these satellite cities will outweigh their disadvantages[2109] in the South African context. Satellite cities are proposed as an appropriate replacement for existing sprawled developments, introduced by the *apartheid* era but still prevalent in South African urban areas.[2110] The draft NSDF refers to the need to pursue "a new kind of city".[2111] These newly created satellite cities will fit in with the requirements of the draft NSDF. Denser and smaller polycentric systems of settlements that span urban and rural areas are recommended. The South African IUDF[2112] and the draft NSDF (with similarities to the *Sustainable Singapore Blueprint*)[2113] aim to improve existing footprints. These must be exchanged for "compact, coordinated and connected cities" using urban planning strategies to produce desirable social, economic and environmental outcomes. Satellite cities fulfil the criteria as motivated by the NSDF. Fortunately, South Africa has access to land at the periphery of cities that may be acquired for development of satellite cities. The following considerations are proposed with regard to implementing satellite cities:

7.7.4.1 The draft NSDF[2114] draws attention to the strength of the SPLUMA principles[2115] that guides all frameworks, schemes and procedures. The SPLUMA principles support and justify the concept of satellite cities. The sustainable satellite cities must be designed to address or reduce sprawl. They must create viable[2116] communities in acceptable areas within the urban edge in accordance with the principle of spatial sustainability.[2117] The principles of spatial justice in terms of SPLUMA and the principle of environmental justice in terms of NEMA[2118] support satellite cities as they address the past spatial

2107 See Chapter 5.6.
2108 See Chapter 6.6.3.
2109 See Chapter 6.6.3.
2110 See Chapters 2.1, 3.11 and 4.7.
2111 See Chapter 3.6.1.
2112 See Chapter 3.9.
2113 See Chapter 5.4.1.
2114 See Chapter 3.6.1.
2115 See Chapter 3.5.
2116 See Chapter 3.5.
2117 See Chapter 3.5.
2118 See Chapter 4.3.1.

imbalances. Improved access to available land in cities must be made available for all. The principle of spatial resilience[2119] justifies the changed format. As much of the existing infrastructure may be used and expanded, satellite cities will also fulfil the requirement of the efficiency principle in SPLUMA.[2120]

7.7.4.2 The draft NSDF[2121] promotes the development of non-motorised, mini public transport systems such as modern and fast rail transport. These must be used to and from satellite cities and the main cities (as are implemented in Singapore). It will be a starting point to improve and integrate other transport systems and will encourage transit-oriented development.

7.7.4.3 Satellite cities are usually integrated, purpose-built developments nearby larger cities or on the outskirts of cities and are designed to curb urban sprawl. They are well-organised, self-contained urban spaces.[2122] These newly created satellite cities must be developed as poles of growth in the urban peripheral areas and include commercial and mixed developments. They must be designed with a view to improving economies of their residents, help create jobs and also bring jobs closer to home. This will be in keeping with the requirements of the Constitution, SDG 11, the draft NSDF and the *New Urban Agenda*.[2123] The satellite cities must be developed as "green and smart cities" that take into account climate change and liveability of the majority of the population.[2124] Compact and mixed medium and low rise, suitable and affordable human settlements with quality green spaces must be established in these satellite cities with choices available to the public. This was done in Singapore and is now being done in Rwanda as well.

7.7.4.4 Prioritisation of the issues of satellite cities is crucial as they have the capability of addressing urgent housing, transport and economic issues as well as

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2119 See Chapter 3.5.
2120 See Chapter 3.5.
2121 See Chapter 3.6.1.
2122 See the discussion on satellite cities in Singapore in Chapter 5.6 and in Rwanda in Chapter 6.6.3.
2123 See Chapter 2.6.
2124 See Chapter 2.6.

linkages between urban and rural areas as emphasised in the draft NSDF. Satellite cities at the peripheries of cities help to enhance and improve urban-rural linkages as they are usually located in close proximity to the rural area and are well positioned to do this.[2125.]

7.7.4.5 The proposed satellite cities must include and fulfil the overall objective of ensuring spatial integration, improving access to services, promoting social and economic inclusion and active citizen participation as required by the IUDF and draft NSDF. To be successful however, it needs the full support of all three spheres of government as well as the community. The result will be sustainable development that is viable and equitable for all South Africans within the urban edge for generations to come.

7.7.4.6 The NSDF is the crucial starting point to initiate, support and encourage the process. The implementation of satellite cities will address the historical imbalances in South Africa. Local municipalities must take their cue from the NSDF and advance satellite cities through their IDP. The IDP is the most important planning document that drives, coordinates and integrates all development plans of a municipality (created in terms of the MSA).[2126] It is necessary for the IDP to sanction the implementation of satellite cities and endorse the budgeting requirements needed for each satellite city.

7.7.4.7 The municipal SDF must designate areas where satellite cities must be implemented and direct where their development must take place. Land use schemes must be created in these areas.

7.7.4.8 The *Infrastructure Development Act* is capable of facilitating and coordinating public infrastructure development of significant economic or social importance to South Africa by implementing SIPs.[2127] Satellite cities could be listed as one of the SIPs in Schedule 1 to the Act as it would fit neatly into this SIP.

[2125] See Chapter 3.10.
[2126] See Chapter 3.3.
[2127] See Chapter 3.11.

In conclusion, a concerted effort is required, with support from business and communities. This is necessary to ensure that developments and cities are sustainable. Oranje and Van Wyk[2128] believe that as a nation we need to build capacity, "get to work and be efficient, effective and dedicated to the cause" so that we may rid the country of the issues that cause conflict and prevent harmony. This bottom-up process is encouraged in the draft NSDF. It will mean an improved lifestyle for the majority of the people in South Africa who will be transported from the sprawling unsustainable developments on the peripheries to "green" and "smart" satellite cities.

[2128] Oranje and Van Wyk 2019 *Town Reg Plan* 121.

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