Dutch lessons on including climate impact assessments in South African environmental law

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ABSTRACT

In pursuit of economic development, human kind has throughout the ages repeatedly and continuously interfered with nature. Historically, nature has been exploited without regard to the impacts of human activities on the environment. Owning to our new scientific insight and awareness of the necessity to protect the environment for the present and future generations, though, environmental management tools have now been advanced.

Environmental Impact Assessment (EIA) is one of these. This regulatory technique exists in both international and national law. It was developed to assess the likely significant impacts of proposed activities and to investigate mitigation of propose alternatives to the activity under investigation.

At the heart of the South African environmental management framework is environmental sustainability, as guaranteed by the *Constitution.* In regard to the achievement of sustainable development, the *National Environmental Management Act* (NEMA) demands that EIA must be carried out any listed activities authorised and makes a list of relevant factors to be taken into consideration in decision-making. The EIA regulations put forward substantive and procedural requirements for EIA. However, despite the existence of such laudable attempts to prevent the further degradation of the environment, there is still no explicit requirement for climate change considerations to be included in EIAs.

However, the ground-breaking judgement of *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others* held that climate change considerations must be addressed in EIA. Following from this judgment, this research therefore seeks to investigate how to incorporate climate change concerns in EIA. In this regard, the writer will analyse the Dutch legal framework relating to the inclusion of climate change in EIA to put forward recommendations on how South Africa may approach climate change concerns in EIA.

Key words: Environmental Impact Assessment, climate change, sustainable development, precautionary principle and mainstreaming.

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LIST OF ABBREVIATIONS (TOC_HEADING)

AEL	Atmospheric Emission Licence
CA	Competent Authority
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
Espoo Convection	UN Convention on Civil and Political Rights, Economic, Social and Cultural Rights, the Convention on Environmental Impact Assessment in a Transboundary Context
EU	European Union
I&APs	Interested and Affected Parties
IPCC	Intergovernmental Panel on Climate Change
IPP	Independent Power Producers
IRP	Integrated Resource Plan
MDGs	Millennium Development Goals
NAS	National Adaptation Strategy
NCCRP	National Climate Change Response White Paper
NCEA	Netherlands Commission for Environmental Assessment
NDP	National Development Plan 2030
NEMA	*National Environmental Management Act* 107 of 1998
NSDD	National Framework for Sustainable Development and the National Strategy for Sustainable Development and Framework and Action Plan
PLB	*Planbureavoor de Leefomgeving* (Netherlands Environmental Agency)
Stockholm Declaration	Declaration of the United Nations Conference on the Human Environment (1992)
S&EIR	Scoping and Environmental Impact Reporting
SANEDI	The South African National Energy Development Institute

LIST OF FIGURES (HEADING 0)

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1 INTRODUCTION

1.1 Background

How can the Dutch legal approach to climate impact assessments serve as instruction for South African legal development in the field of environmental impact assessments?

The Constitution of the Republic of South Africa, 1996 under the Bill of Rights encapsulates a right to environment under section 24, which states that everyone has a right:[1]

(a) To an environment that is not harmful to their health or wellbeing; and

(b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-

(i) Prevent pollution and ecological degradation;

(ii) Promote conservation; and

(iii) Secure the ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

In pursuit of sustainable environmental protection, an environmental impact assessment (EIA) must be conducted for proposed activities that are likely to have a significant adverse impact on the environment.[2] An EIA may be defined as:

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1 Section 24 of the *Constitution of the Republic of South Africa*, 1996.
2 Principle 7 of the *Rio Declaration on Environment and Development* (1992).

a formal procedure for decision-makers to gather environmental information about projects, and for this information to be taken into account in decision making.[3]

Striving towards this, section 24 of the *National Environmental Management Act* (NEMA)[4] demands that an EIA must be carried out before granting the authorisation of listed activities, and lists a number of relevant factors to be taken into consideration. In forwarding the objectives of the NEMA under section 24, there are EIA Regulations which prescribe the procedural and substantive requirements for undertaking an EIA. Despite the attempts by the NEMA and the EIA Regulations to effectively assess the environmental impacts of projects, there still is no express mention of the need to consider climate change in undertaking an EIA. Consequently, climate change considerations had never been part of the EIAs.

However, in the recent case of *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP)* the topic of climate change in impact assessments was addressed. The Chief Director of Department of Environmental Affairs authorised Thabametsi (independent power producer) to construct a power station, upon certain conditions – none of which related directly to climate considerations. Earthlife contested the grant of the environmental authorisation upon the basis that a climate change impact assessment should be conducted before granting the environmental authorisation. The respondents in their defence argued that South African environmental law does not have an express national legal requirement to conduct a climate change impact assessment, regardless of the fact that the said project may even potentially contribute to climate change. The court held that the South African national environmental framework indeed necessitates that a climate impact assessment be conducted – albeit implicitly. In reaching this decision, the honourable judge looked beyond the provisions of the NEMA and went further into the *Environmental Impact Assessment Regulations*,[5] the *National Environmental Management: Air Quality Act* 39 of 2004, the *Electricity Regulation Act* 4 of 2006, and other environmental policies. This

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3 Bell and McGillivray *Environmental Law* 508.
4 Section 24 of the *National Environmental Management Act* 107 of 1998.
5 GNR543 in GG 33306 of 18 June 2010.

judgment embodies a bold step forward in South African environmental law as it provides a legal mandate for the inclusion of climate change considerations during the performance of environmental impact assessments.

With the above-mentioned mandate in mind, the question now arises as to how climate change considerations are to be included in EIAs in South Africa. On this subject, there are only a few countries that have developed functioning guidelines for integrating climate change considerations in EIAs, and for the purposes of this paper, the writer intends to put forward recommendations as to how to effectively integrate climate change considerations by consulting Dutch law on the topic.

The Dutch *Environmental Management Act* (EMA) creates a legal framework for EIAs in the Netherlands by establishing an advisory body for EIAs,[6] namely the Netherlands Commission for Environmental Assessment (NCEA). This independent expert body gives advisory services and capacity development on environmental assessments and also on how climate considerations are to be incorporated in environmental assessments. In this regard the NCEA applies the Overall Approach for climate change in environmental assessments and has recently published a list of good practice cases in climate-smart environmental assessments.[7]

The above-mentioned therefore indicates that the major underlying problem is that South African legislation and policy does not explicitly require that climate change consideration be taken into consideration during EIA's. The aim of this research is to critically analyse *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others* judgment, it's implications and how the judgment should be implemented to effect the necessary changes to said legislation and policy. In this regard, the writer in conjunction with Dutch law will discuss how Dutch procedure to incorporating climate change in EIA can contribute to legal development in the field of South African environmental law. Specific focus will fall on the mandate provided by the case on the inclusion of a climate impact assessment within the EIA

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6 Section 2.17 of the *Environmental Management Act* 2014.

7 http://www.eia.nl/ accessed 23 August 2017.

process. As to how such a climate impact should be approached, existing Dutch legislation and case law will be consulted and applied to the South African situation.

1.2 Framework

Chapter 2 critically discusses environmental impact assessments in a regulatory instrument in international and national environmental law. The aim of this chapter is to look into the definition of and rationale behind environmental impact assessment and how it is regulated under both international law and South African law. Chapter 3 deals with the South African legal mandate for climate impact assessment, a critical study of the Earthlife case, and the mainstreaming of climate change in South Africa. Chapter 4 explores the Dutch approach to incorporating climate change in EIA. The fifth and final chapter presents recommendations based on the prior chapters, and concludes the study.

1.3 Research methodology

The research study will take the form of a literature survey of South African, international and Dutch primary legal sources such as legislation and case law. The Dutch approach to regulating the inclusion of climate consideration into EIAs will be scrutinised in order to make recommendations applicable to South Africa. The second component of the research will therefore entail determining how to incorporate climate into EIAs using the Dutch approach to the topic.

2 ENVIRONMENTAL IMPACT ASSESSMENT AS A REGULATORY INSTRUMENT IN INTERNATIONAL AND NATIONAL ENVIRONMENTAL LAW

2.1 Introduction

Throughout the ages human kind has repeatedly and continuously interfered with nature in pursuit of economic development, and for other reasons. Historically, this was done with disregard of the impacts of our activities on the environment. Thanks to the development of scientific awareness and an acknowledgment of the need to protect the environment for the present and future generations, new environmental management tools have been developed.[8]

In this chapter the writer will discuss EIA as a regulatory technique within the discipline of both international and national environmental law. The writer will first discuss the rationale behind conducting an EIA. In this regard the preventive principle, the precautionary principle and sustainable development will be extensively discussed. Also, EIA under the following international instruments will be addressed: the United Nations Environment Programme, the Rio Declaration, the UN Convention on Civil and Political, Economic, Social and Cultural Rights, the Convention on Environmental Impact Assessment in a Transboundary Context (hereafter "the Espoo Convention"), and the Declaration of the United Nations Conference on the Human Environment (hereafter "the Stockholm Declaration").

The second and last part of this chapter looks into the South African legal framework of EIA and the EIA application process. For the purposes of this paper, in Part 2 of this chapter the writer will discuss the South African framework of EIA, and the content and procedure of an EIA application.

2.2 Defining EIA

UNEP states that-

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8 *Gabčikovo-Nagyamaros Project (Hungary/Slovakia)* 1997 ICJ Rep 7 para 140.

> EIA means an examination, analysis and assessment of planned activities with a view to ensuring environmentally sound and sustainable development.[9]

The term "environmental assessment" suggests a method and procedure by which facts about the possible environmental impacts of proposed actives are collected, then taken into consideration by the planning authority in making a decision on whether to go ahead with the proposed activity.[10]

2.3 The rationale for EIA

While industrialisation is a great boost for the economy, development projects may have negative impacts on the environment. This therefore calls for an assessment of the possible impacts of such projects before they are untaken. EIA is one such assessment. It is therefore imperative to analyse the essence of EIAs.

An EIA works as an anticipatory and precautionary tool that assists in decision making in that it investigates the possible potential impacts of a project, then attempts to find ways of avoiding or mitigating such adverse impacts.[11] Consequently, an EIA helps the relevant authority to make an informed decision prior to granting the authorisation of an activity that may have significant impacts on the environment. Tromans and Full endorse this principle by stating that EIA plays a significant procedural role in that it seeks to impose safeguards, ensures that decisions are made in the light of full information on the potential impacts of a project, and provides for alternatives and mitigatory actions.[12] The fundamental principle of EIAs is therefore that decisions are arrived at in the light of full comprehension of their likely effects.[13] It is important to note that the aim of EIAs is not necessarily to prevent activities that may have significant impacts on the environment from being implemented. Instead, the rationale behind EIAs is that authorisations are made with the full knowledge of the potential environmental

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9 Duncan 2016 https://www.soas.ac.uk.
10 Glasson, Therivel and Chadwick Introduction to Environmental Impact Assessment 3-4.
11 Gillespie 2008 *RECIEL* 226.
12 Tromans and Fuller Environmental Impact Assessments-Law and Practice 5.
13 Neil The International Law of Environmental Impact Assessment: Process, Substance and Integration 4.

impacts of the projects.[14] Moreover, EIA promotes transparency in decision-making as it creates a platform for affected parties of the public and environmental groups to participate in decision-making.[15]

Frank Freidman argues that although environmental auditing or assessment has been receiving considerable attention, it is only one aspect of environmental management. He further maintains that EIAs give only a limited awareness and control of the possible significant environmental impacts of a project. The writer concludes that EIA is "merely a snapshot" of existing environmental controls and therefore an effective examination of the potential environmental impacts of a proposed activity is that which considers other strong systems, programmes and procedures.[16] Under international law, EIA is taken to mean that we are able to anticipate the impacts of the proposed activities and find ways to mitigate the threats before they actually happen. This therefore goes hand in hand with the environmental principle of prevention.

EIAs are not necessarily a barrier to development, but are a way of cautioning decision-makers about what may take place in future, and recommend ways in which such adverse impacts may be mitigated. In the event that such adverse impacts do eventually occur, we already have adaptive methods to be resilient in an environmentally risky situation. The essence of EIA is therefore to forestall the environmentally unacceptable effects of proposed activities.[17]

2.4 International law regarding EIA

2.4.1 The preventive principle in case law and international law

International law requires EIAs to be conducted under particular circumstances.

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14 Wood Environmental Impact Assessments: A Comparative Review 1-3.

15 Craik International Law of Environmental Impact Assessment: Process, Substance and Integration 4.

16 Friedman Practical Guide 204

17 Wood Environmental Impact Assessment: A Comparative Review 1-3; Glosson, Therivel and Chadwick Introduction to Environmental Impact Assessment 7.

Principle 17 of the Rio Declaration states the following:

> Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.[18]

It is evident that principle 17 of the Rio Declaration embodies the preventive principle. This principle is the basis for EIA. International law appreciates the need to undertake EIA before the commencement of any project that may have significant negative impacts on the environment. Under this section, the writer intends to discuss the jurisprudential basis of EIA under international law.

Historically, every state was allowed to freely conduct any environment-related activity without any regard to its harmful impacts on any transboundary area.[19] This situation was altered dramatically following the judgement in *United States v Canada* 1 (hereafter "*Trail Smelter Arbitration*"),[20] which some scholars maintain to be the first manifestation of the principle of prevention.[21] In *Trail Smelter Arbitration* the Canadian zinc smelter was found to be releasing pollution that went beyond its borders into the United States of America, where it was causing environmental and property damage. In determining the matter, the tribunal held that-

> Under the principle of international law, no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of a serious consequence and the injury is established by clear and convincing evidence.[22]

This judgement established the preventive principle. It maintains that a state has an obligation not to cause transboundary harm.[23]

Treaties that advocate transboundary EIA seek to ensure that nations pay attention to the possible extraterritorial impacts of proposed activities.[24] The preventive

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18 Principle 17 of *The Rio Declaration on Environment and Development* (1992)

19 Peel and Godden Environmental Law: Scientific, Policy and Regulatory Dimensions 336.

20 *United States v Canada Trail Smelter Arbitral Decision (United States v. Canada)* 3 RIAA 1905.

21 Sands Principles of International Environmental law 195; Peel and Godden Environmental Law: Scientific, Policy and Regulatory Dimensions 336.

22 *United States v Canada Trail Smelter Arbitral Decision (United States v. Canada*) 3 RIAA 1905.

23 Peel and Godden Environmental Law: Scientific, Policy and Regulatory Dimensions 336; Birnie, Boyle and Redgwell International Law & Environment 137.

24 Kersten *Yale J.Int'L* 174.

principle is expanded in principle 21 of the Declaration of the United Nations Conference on the Human Environment, which provides that states must guard against:

> any pollution, environmental impacts or environmental degradation likely to be caused if the application is approved or refused; States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdictions or control do not cause damage to the environment of other states or to areas beyond the limits of national jurisdiction.[25]

In the same accord, the Stockholm Declaration maintains the principle of state sovereignty over its own territory and environment and at the same time acknowledges the need to prevent serious harm from occurring across its borders.[26]

The preventive theory was beautifully captured by the ICJ in *Legality of the Threat or Use of Nuclear Weapons* (*Advisory Opinion)* in observing that

> The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other states or of areas beyond national control is now part of the corpus of international law relating to the environment.[27]

The ICJ's pronouncement, the "[no harm principle] is now part of corpus of international law relating to the environment", means that the preventive principle has been declared to be customary law, therefore binding all states regardless of whether they are parties to the treaty to abide by the no harm principle. [28]

The implications of the preventative theory and EIA are set out in the *Convention on Environmental Impact Assessment in a Transboundary Context* (hereafter Espoo Convention), whose objective is the enhancement of international co-operation in EIA, particularly in a transboundary context. The Convention obliges parties to

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25 Principle 21 of *Declaration of the United Nations Conference on the Human Environment* (1972).
26 Peel and Godden Environmental Law: Scientific, Policy and Regulatory Dimensions 336.
27 Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons
28 Craik The International Law of Environmental Impact Assessment: Process, Substance and Integration60.

> [t]ake all appropriate and effective measures to prevent, reduce and control significant adverse transboundary environmental impacts from proposed activities.[29]

In order to ensure that states do not cause environmental harm in other jurisdictions, it is necessary to conduct an EIA of the possible impacts of the proposed activities. In the realisation of this principle, the ICJ in the *Request for an Examination of the Situation* noted that without EIA it is impossible to have a meaningful notification and consultation about environmental risks that may potentially occur.*[30]*

Sands maintains that the requirement of EIA has become a principle of international law specifically concerning environmentally harmful activities that may cause transboundary harm.[31]

In the *Pulp Mills on the River of Uruguay case*, the ICJ pronounced for the first time, that due to state practice over the years, EIA has become a requirement under general international law where the environmental risk of a proposed activity may have a significant transboundary impact.[32] Furthermore, due diligence and the duty of vigilance and prevention could not be exercised if EIA is not undertaken prior to the commencement of a proposed activity.[33]

The above international treaties and case law advocate the application of the preventive principle: that states have an obligation not to cause transboundary harm. The effective way of preventing transboundary harm is by firstly assessing the potential impacts of proposed activities and their scope, and this is where EIA as a mode of environmental management comes in.

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29 Article 2(1) of the Convention on Environmental Impact Assessment in Transboundary Context EIA (1991).

30 Request for an Examination of the Situation ICJ Reports 1995 288; Birnie, Boyle and Redgwell *International Law & Environment* 169.

31 Sands Principles of International Environmental law.

32 Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010 para 204.

33 Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010 para 204.

The essence of the preventive principle is to prevent foreseeable harm, and the most effective way to prevent harm is to assess what the harm could possibly be and discover how the harm may be prevented. Consequently, EIA serves as a preventive tool, as it entails assessing the possible impacts of proposed activities before they can take place.

2.4.2 The precautionary principle

The precautionary principle is used as a response to scientific uncertainty in order to provide assurance that there is a tool for decision-making even in such[34] scenarios. It is enunciated in principle 5 of the Rio Declaration, which provides:

> In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious irreversible damage, lack of scientific certainty shall not be used as a reason for postponing effective measures to prevent environmental degradation.[35]

Simply, this principle is invoked to prevent potential threats resulting from proposed activities.[36] In this case, the EIA serves as a precautionary measure for the assessment of potential significant impacts of proposed activities. The decision makers are able to anticipate possible risks and propose measures to prevention or mitigate the potential harm.

2.4.3 Sustainable development

The UN Convention on Civil and Political, Economic, Social and Cultural Rights declares that:

> All peoples have the right of self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development[37]

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34 Peel and Godden Environmental Law: Scientific, Policy and Regulatory Dimensions 239.

35 Principle 5 of the Rio Declaration on Environment and Development (1992).

36 Pyhälä, Brusendorff and Paulomäki Hanna "The Precautionary Principle" 205; Peel and Godden *Environmental Law: Scientific, Policy and Regulatory Dimensions* 239.

37 Article 1 of The UN Convention on Civil and Political Rights, Economic, Social and Cultural Rights (1966).

This implies that people have the right to freely exploit natural resources, but their right to do so is not absolute, and other international treaties recognise the need to attain development in a sustainable manner. The Brundtland Report is the landmark enunciation of the modern understanding of environmental problems, and formally initiated the principle of sustainable development. It provides that

> Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs[38]

One of the utmost important aspects of this report is that it appreciates the connection between the economic and environmental considerations in development.[39]

In *Advisory Opinion on the Legality of the Use of Nuclear Weapons* the ICJ made the following declaration:

> The court also recognises that the environment is not an abstraction but represents a living space, the quality of life and the very health of human beings, including generations unborn. The existence of the general obligation of the States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment.[40]

The Rio Declaration also endorses sustainable development by declaring:

> The right to development must be fulfilled so as to equitably meet the developmental and environmental needs of the present and future generations.[41]

Sustainable development is a political and a socio-economic project that seeks to promote environmental issues while at the same time promoting social and economic considerations.[42] The essential element that can be drawn from the treaties about sustainable development is that, while recognizing the right to pursue economic development and the enjoyment of natural resources, it is also very

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38 Article 27 of Report of the World Commission on Environment and Development: Our Future (1987).

39 Article 3 of Report of the World Commission on Environment and Development: Our Future (1987); Bells and McGillivray *Environmental Law* 157.

40 Advisory Opinion on the Legality of the Use of Nuclear Weapons 1996 241 para 29.

41 Principle 3 of The Rio Declaration on Environment and Development (1992).

42 French "Sustainable Development" 51.

important that the development is attained in a way that does not have detrimental impacts on the environment and on the rights of future generations.

The ICJ made a pronouncement on the concept of sustainable development for the first time in the *Gabčikovo-Nagyamaros* case*,* where the court stated that the concept of sustainable development suggests the "need to reconcile economic development with the protection of the environment."[43] Furthermore, it indicated that sustainable development entails assessments of the potential impacts of proposed activities prior to the commencement of the projects, and that there must be monitoring of the impacts throughout the life of the project. Sands observes that sustainable development is rooted in a number of principles. Among them is the preventive principle.[44]

EIA provides ways to identify the significant potential environmental impacts of projects that may cause adverse effects upon the rights of the present generation and the ability of future generations to meet their needs. In conclusion, EIAs are anchored in the notion of sustainable development.

Under international environmental law, the requirement of EIA helps to alert states to the possible impact of transboundary harm, and also assists states to foresee and avoid international disputes and financial loss where they are found legally responsible for harms caused in foreign territories.[45] The basic principle under international law is the concept of sustainable development, which is underpinned by the preventive principle and the precautionary principle.

2.5 EIA in South Africa

The South African Constitution guarantees the right to an environment that is not harmful to health and well-being, and is committed to sustaining natural resources while promoting justifiable economic and social development.[46] Following from the

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43 *Gabčikovo-Nagyamaros Project (Hungary/Slovakia*) 1997 ICJ Rep 7 para 141.
44 Sands International Law in the Field of Sustainable Development: Emerging Legal Principles 12.
45 Birnie, Boyle and Redgwell *International Law & Environment* 164.
46 Section 24 of the *Constitution of the Republic of South Africa*, 1996.

constitutional obligation to protect the environment and to achieve ecologically sustainable development, the government has taken measures to fulfil this duty by enacting environmental laws and policies. The umbrella environmental legislation, which is embodied in the *National Environmental Management Act* 107 of 1998 (hereafter NEMA),[47] establishes environmental principles and provides for environmental management that is regulated by the government (national, provincial and local) and requires environmental authorisations for activities that may have impacts on the environment. In order to ensure that there is a healthy environment for everyone, it is fundamental to know what activities may have impacts on the environment.[48] This therefore calls for an environmental management tool that would help find what the potential impacts of proposed activities are.

As a first step to fulfil this obligation, the state promulgated the *Environment Conservation Act* (hereafter ECA).[49] The formal introduction of the EIA process in South Africa was by the ECA*,* which provides that:

> the Minister may by notice in the Gazette identify those activities which in his opinion may have a substantial detrimental effect on the environment, whether in general or in respect of certain activities.[50]

Under the ECA, an "identified activity" is prohibited from being undertaken without an authorisation from a competent authority.[51] In 1999, when the NEMA was enacted and in pursuit of securing environmental protection, Chapter 5 (of the NEMA)

> Promote[d] the application of appropriate environmental management tools in order to ensure the integrated environmental management of activities.

One of the environmental management tools is the EIA.

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47 *National Environmental Management Act* 107 of 1998.

48 Dina Townsend-Centre for Environmental Rights (CER) 2017 http://www.enviropaedia.com.

49 *Environment Conservation Act* 73 of 1989; *BP South Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment & Land Affairs* 2004 5 SA 124 (W) para 14.

50 Section 21 *of Environment Conservation Act* 73 of 1989.

51 Section 22 of *Environment Conservation Act 73* of 1989; Kidd and Retief "Environmental Assessment" 974.

Section 24 of NEMA provides that the potential impact on-

> socio-economic conditions, and the cultural heritage of activities that require authorisation or permission by law and which may significantly affect the environment, must be considered, investigated and assessed prior to their implementation and reported to the organ of state charged by law with authorising, permitting, or otherwise allowing the implementation of an activity. [52]

This section states that *any activity* under *any law* that may have a significant potential impact on the environment, *socio-economic and cultural heritage* required an environmental authorisation, thereby widening the scope of environmental authorisation from the position previously provided by ECA. However, this section has been amended, and it currently provides that, in order to effectively promote the general objectives of the integrated environmental management laid out in Chapter 5,

> 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 or the Minister responsible for mineral resources, as the case may be, except in respect of those activities that may commence without having to obtain an environmental authorisation in terms of this Act.[53]

As a result, the environmental authorisations are not required for all activities but are required for *listed activities* only.[54] It is also important to note that the amended section has deleted the reference to "socio-economic conditions and cultural heritage", which were provided for in the initial section. It is also worthwhile noting that the current authorisation system is like the one that was provided for by the ECA in this regard. A question arises therefore if the current section requires socio-economic conditions and cultural heritage to be taken into account. A couple of cases have addressed the question, as follows.

For instance, the Supreme Court *in BP South Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment & Land* held that

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52 Section 24(1) of *National Environmental Management Act* 107 of 1998.
53 Section 24(1) of *National Environmental Management Act* 107 of 1998.
54 Kidd Environmental Law 198-199.

> All of these statutory obligations make it abundantly clear that the Department's mandate includes the consideration of socio-economic factors as an integral part of its environmental responsibility.[55]

The basis of this decision was the Constitutional environmental right guaranteed in section 24 thereof, read together with section 24 of the NEMA, and the national environmental management principles provided by section 2 of the NEMA, that bind all organs of State to adhere to the relevant principles in making environmental decisions.[56]

In a similar vein, the court in *MEC for Agriculture, Conservation, Environment & Land Affairs v Sasol Oil (Pty) Ltd* noted that the NEMA mandates that:

> the interpretation of any law concerned with the protection and management of the environment must be guided by its principles. At the heart of these is the principle of sustainable development, which requires organs of state to evaluate the social, economic and environmental impacts of activities.[57]

Section 24 requires that there must be a balance between environmental protection and social and economic aspirations, and decision-making must be inspired by the general environmental principles provided for in section 2 of the NEMA, which are rooted in the notion of sustainable development.

Section 24F of the NEMA provides that commencing a listed activity without authorisation from a competent authority is prohibited.[58] Therefore, an applicant must apply for an environmental authorisation to undertake a listed activity. Prior to the granting of an environmental authorisation, an EIA must have been completed.

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55 *BP South Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment & Land Affairs* 2004 5 SA 124 (W) para 151E; *Fuel Retailers Association of South Africa v Director-General Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province & others* 2007 6 SA (CC) para 62.

56 Kidd Environmental Law 203.

57 *MEC for Agriculture, Conservation, Environment & Land Affairs v Sasol Oil (Pty) Ltd* 2005 2 SA 17 para 17.

58 Section 24F of *National Environmental Management Act* 107 of 1998.

2.5.1 EIA as a tool that effectively realises the section 2 principles

The NEMA in section 2 contains the National Environmental Management Principles that are the cornerstone in decision-making.[59] Section 2 provides that the principles "apply … to the actions of all organs of state that may significantly affect the environment."[60] The Constitutional Court confirmed in *Fuel Retailers Association of South Africa* that these principles must be used as guidelines that should direct state organs while exercising their duties that may have an impact on the environment.[61]

Furthermore, the court in *BP Southern Africa* also noted that sustainable development is at the heart of the principles of the management of development. Judge Claassen endorsed that sustainable development is the

> Fundamental building block around which environmental legal norms have been fashioned, both internationally and in South Africa, [as] is reflected in s 24(b)(iii) of the Constitution. Pure economic principles will no longer determine in an unabridged fashion whether development is acceptable. Development, which may be regarded as economically coherent and cognisant of the principle of intergenerational equity and sustainable development and socio-economic concerns.[62]

The above cases are true manifestations of the importance of sustainable development in South African environmental law.

With the purpose to investigate the efficiency and effectiveness of the South African EIA system over a 10-year period, the Department of Environmental Affairs and Tourism (DEAT) conducted a comprehensive investigation and review of its efficiency and effectiveness (REE).[63] At the "Ten Years of EIA in South Africa Conference" it was determined that the objectives of IEM as given in section 23 of the NEMA were inadequate. As a tool to solve this problem it was agreed that an

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59 Van der Linde "National Environmental Management Act 107 of 1998 (NEMA)" 198.

60 Section 24F of National Environmental Management Act 107 of 1998.

61 *Fuel Retailers Association of South Africa v Director-General Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province & others* 2007 6 SA (CC) para 67.

62 *BP South Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment & Land Affairs* 2004 5 SA 124 (W) para 144.

63 Department of Environmental Affairs 2008 http://www.environment.gov.za.

Environmental Impact Assessment and Management Strategy (EIAMS) should be drafted for South Africa.

The EIAMS was subsequently drafted. It acknowledges the precautionary principle as follows:

> Ensuring the effective utilisation of sustainability indicators enhances the integration of the precautionary principle into sustainability/environmental assessment by establishing early warnings based on expert opinions on uncertainty and identifying the need for immediate remedial action.[64]

The acknowledgement of the precautionary principle in EIA means endorsing its function of determining potential environmental risks and assessing and setting up measures that are necessary to manage the environment is a sustainable manner, thereby complying with and promoting the realisation of the Constitutional environmental right.

2.5.2 The duty of care

Section 28(1) of the NEMA provides:

> Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment.[65]

This section imposes a duty of care on anyone who may cause an adverse impact on the environment; demanding that such a person must take reasonable measures to lessen or avoid such a negative impact on the environment from occurring. As established in *Hichange Investment,* there are two instances in which EIA is a requirement under South African environmental law,[66] the first being where the proposed activity is contained in the notice listing activities that require environmental authorisation. Second is the obligation imposed in section 28(4) that

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64 Department of Environmental Affairs, 2014, Environmental Impact Assessment and Management Strategy.

65 Section 28(1) of National Environmental Management Act 107 of 1998.

66 Hichange Investment (Pty) Ltd v Cape Produce (Pty) Ltd t/a Pelt Products and Others 2004 SA 2 393 (E) para 33-38

mandates an EIA to be undertaken in an instance where the responsible person is under a duty of care to take measures to address the pollution.[67]

Therefore, EIA is an effective tool to determine the potential significant impacts of a project, and helps the person responsible for that project to find alternatives and mitigation measures as a way of exercising due diligence.

2.6 Procedure for EIA in South Africa

The Minister has published three Listing Notices[68] in accordance with section 24(2) of the NEMA, which places a duty on the Minister to identity activities that may not begin without authorisation from the competent authority.

The South African EIA Regulations provide for two approaches to EIA. The first is the basic assessment, and the second is scoping and environmental impact reporting. The Listing Notices determine which approach must be followed. It is a duty of an Environmental Assessment Practitioner (EAP) to determine which form of assessment is appropriate.

The writer finds it necessary first to identify the parties involved in the EIA process.

An applicant means

> a person who has submitted an application for an environmental authorisation to the competent authority and has paid the prescribed fee.[69]

This is a person who has the intention to legally undertake a listed activity. The applicant has a duty to appoint an EAP and must pay the costs that may arise relating to the EIA process.

An Environmental Assessment Practitioner ("EAP") is

> the individual responsible for the planning, management, coordination or review of environmental impact assessments, strategic environmental assessments,

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67 Van der Linde "National Environmental Management Act 107 of 1998 (NEMA)" 205.

68 GN R 983 in GG 28282 of 24 December 2014, GN R 984 in GG 28282 of 24 December 2014 and GN R 984 in GG 28282 of 24 December 2014.

69 Section 1 of National Environmental Management Act 107 of 1998.

environmental management programmes or any other appropriate environmental instruments introduced through regulation.[70]

The EAP has a duty to determine which assessment process is necessary in an application.[71]

The Public: the EIA Regulations make it a prerequisite to afford members of the public an opportunity to participate in the EIA process by stating their opinions regarding the proposed activity. Members of the public that are interested in and/or may be affected by the activity or operation are referred to as Interested and Affected Parties (hereafter I&APs).

The Competent Authority ("CA") is the person who has the power to make decisions concerning the environmental authorisation application.

In a case where the CA is a MEC, the application ought to be submitted to the Provincial Department responsible for environmental affairs (DEASTEA), and in an instance where the Minister is the CA, the application must be submitted to the National Department of Environmental Affairs. However, when the application is in respect of mineral resources, it must be submitted to the regional office of the Department of Mineral Resources within the mining area.

2.6.1 Screening

This is phase of the EIA process when it is determined whether or not the EIA is necessary, and if it is, the extent to which it is required.[72]

2.6.2 The basic assessment

The process of the basic assessment is concise but includes all aspects mandated by the NEMA. This approach is required to be undertaken when the activities concerned are among those contained in Listing Notice 1 of the Regulations.[73]

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70 Section 1 of National Environmental Management Act 107 of 1998.
71 Reg 15 of GN R982 in GG 38282 of 4 December 2014.
72 Retief, Welman and Sandham 2011*South African Geographical Journal* 155.
73 GN R983 in GG 38282 of 4 December 2014.

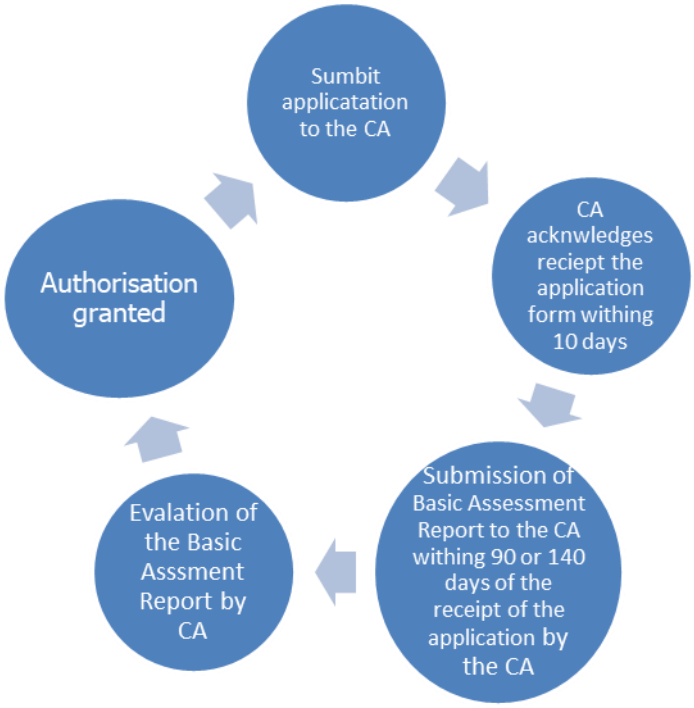
2.6.2.1 Application for basic assessment

As mentioned earlier, this route is used regarding activities to be found in Listing Notice 1 and Listing Notice 3 (concerning specific geographical areas). Upon determining which activity is to be conducted, the EAP has an obligation to submit a basic assessment application and conduct a public participation process.

The applicant must, within a period of 90 days of lodging an application with the competent authority, submit-

a basic assessment report, inclusive of specialist reports, an EMPr, and where applicable a closure plan, which have been subjected to a public participation process of at least 30 days, and which reflect the incorporation of comments received, including any comments of the competent authority;

Figure 2-1: Procedure for a basic assessment



2.6.3 Scoping

Scoping is the process that determines the scope of the assessment.

The Scoping and Environmental Impact Reporting (S&EIR) process entails a more complicated and comprehensive assessment of the potentially significant impacts of a proposed activity. There are three stages of the S&EIR, namely: the submission of an application form, scoping, and the EIA.

The objectives of scooping as outlined in Appendix 2 include:[74]

- Identifying issues (policies and legislation relevant to the activity)
- Identifying potential impacts
- Stating the methodology to be applied
- Suggesting potential alternatives

[74] Appendix 2 of GN R982 in GG 38282 of 4 December 2014.

- Suggesting mitigation measures to be applied to identified impacts and examining the extent of the residual risks to be managed and monitored.

2.6.3.1 Submission of the application

The Regulations provide that if the S&EIR must be undertaken, the applicant is bound to submit an application to the CA before the scoping process commences.[75] Within 44 days of submitting the application, the applicant must submit a complete scoping report which has been reviewed by the I&APs and has incorporated their comments.[76]

The public consultation process is of the utmost importance in scoping and it must be conducted in least 30 days. The public's comments must be reflected in the scoping report.[77]

2.6.3.2 Consideration of the scoping report and plan of study for EIA

Within 43 days of receiving a scoping report, the CA must examine the report and decide whether to:[78]

> accept the scoping report, with or without conditions, and advise the applicant to proceed or continue with the tasks contemplated in the plan of study for environmental impact assessment; or
>
> refuse environmental authorisation if
>
> (i) the proposed activity is in conflict with a prohibition contained in legislation; or
>
> (ii) if the scoping report does not substantially comply with Appendix 2 to these Regulations and the applicant is unwilling or unable to ensure compliance with these requirements within the prescribed timeframe.

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75 Regulation 21 of of GN R982 in GG 38282 of 4 December 2014; DEAT *Guide 3: General Guide to the EIA Regulations.*

76 Regulation 21 of GN R982 in GG 38282 of 4 December 2014.

77 Regulation 21 of GN R982 in GG 38282 of 4 December 2014.

78 Regulation 22 of GN R982 in GG 38282 of 4 December 2014.

2.6.3.3 Revision or additions to the scoping report

In the event that the CA makes a request for amendments to the scoping report or further alternatives, the revised plan of study for EIA must go back to the I&AP for comments. The amendments report may then be resubmitted to the CA.

2.6.3.4 Submission and consideration of EIA and EMP

Within 106 days of the scoping report's being accepted, the applicant has the duty to submit the environment impact report to the competent authority in terms of Regulation 23.[79]

The objective of the EIA Report is to:[80]

- Address issues that are contained in the scoping report
- Identify the development footprint of the proposed activity on the geological, physical, biological, social, economic, heritage and cultural aspects of the environment.
- Assess alternatives to the proposed activity
- Assess the identified possible impacts and determine the significance of each impact
- Identify and formulate mitigation measures

2.6.3.5 Regulation of decision-making

In the final instance, the NEMA lists a series of criteria which the CA must take into consideration when granting an EIA. In order for the CA to grant or reject an EIA application, he or she must examine whether the contents of the EIA Report comply with Appendix 3 of the EIA Regulations. Appendix 3 must be read together with section 24(O) of the NEMA, which provides the criteria to be taken into account by

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79 Regulation 23 of GN R982 in GG 38282 of 4 December 2014.

80 Appendix 2 of GN R982 in GG 38282 of 4 December 2014; Guideline 4.3.3.2 of the *Guideline 3: General Guide to the Environmental Impact Assessment Regulations* 2006.

the CA in considering an application. Section 24(O) obliges the CA in decision-making to comply with the Act and that s/he ought to take into account all of the relevant factors, including[81]

> (i) any pollution, environmental impacts or environmental degradation likely to be caused if the application is approved or refused;
>
> (ii) measures that may be taken —
>
> (aa) to protect the environment from harm as a result of the activity which is the subject of the application; and
>
> (bb) to prevent, control, abate or mitigate any pollution, substantially detrimental environmental impacts or environmental degradation;
>
> (iii) the ability of the applicant to implement mitigation measures and to comply with any conditions subject to which the application may be granted;
>
> (iv) where appropriate, any feasible and reasonable alternatives to the activity which is the subject of the application and any feasible and reasonable modifications or changes to the activity that may minimise harm to the environment;
>
> (v) any information and maps compiled in terms of section 24(3), including any prescribed environmental management frame-works, to the extent that such information, maps and frame-works are relevant to the application;
>
> (vi) information contained in the application form, reports, comments, representations and other documents submitted in terms of this Act to the Minister, Minister of Minerals and Energy, MEC
>
> (vii) any comments received from organs of state that have jurisdiction over any aspect of the activity which is the subject of the application; and
>
> (viii) any guidelines, departmental policies and decision making instruments that have been developed or any other information in the possession of the competent authority that [is] relevant to the application; and
>
> (c) [must] take into account the comments of any organ of state charged with the administration of any law which relates to the activity in question or competent authority in connection with the application

It is important to note that despite the legislature's attempt to safeguard the environment from the possible significant impacts of proposed activities, this list of factors has not explicitly included consideration of climate change, although it is one

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[81] Section 24(O) of the National Environmental Management Act 107 of 1998.

of the greatest threats to the environment and sustainable development that the South African Constitution and other legislations seek to achieve.

2.7 Conclusion

In conclusion, the basic principles of EIA under international law are the preventive and precautionary principles, which are underpinned by the concept of sustainable development. Under international law, EIA is common to ensuring and preventing the extraterritorial impacts of the activities proposed. Furthermore, EIA is based on the precautionary principle as a response to scientific uncertainty. Last, but certainly not least, EIA is founded on the concept of sustainable development, as the very nature of EIA is to identify the short- and long-term impacts of the proposed activities on the environment. Therefore, affording the current generation and future generations to meet their needs.

The South African EIA procedure is beautifully drafted to prevent and be precautious against significant adverse environmental impacts in order to promote sustainable development. Also its procedure reflects the spirit of democracy and the concept of transparency, as it considers the voice of the affected person in decision-making and makes the EIA information available to the public. However, as the legislative framework currently stands, it has not expressly included the necessity to consider climate change in conducting EIA. The climate change impacts of proposed activities have previously been ignored, since the NEMA and the EIA Regulations are silent about them.

3 THE SOUTH AFRICAN LEGAL MANDATE FOR CLIMATE CHANGE IMPACT ASSESSMENT: THE EARTHLIFE AFRICA CASE AND THE EVOLUTION OF EIA'S IN SOUTH AFRICA

3.1 Introduction

As concluded in the previous chapter, the statutory mandate and content of EIA in South Africa is silent about climate change considerations in EIA, thereby leaving a doubt as to whether or not climate change must be considered in EIA. In situations such as this, du Plessis maintains, "the realisation of statute law depends decisively on juridical interpretation."[82] And the court in the recent case of *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others*[83] interpreted the South African legislation, policies and international commitments to imply the need to incorporate climate change considerations into the EIA process.

This chapter seeks to critically analyse the judgement made by the High Court in *Earthlife case.* First it describes the facts of the case, extrapolating the main issues and describing the court's approach to deciding on the issues. This is followed by a discussion of whether or not South Africa is bound under international and national law to consider climate change impacts prior to granting an environmental authorisation, and if so, how climate change has been incorporated into the national environmental framework.

Earthlife Africa Johannesburg (the Applicant, hereafter "Earthlife")[84] appealed to the Minister of Environmental Affairs (the First Respondent, hereafter "Minister") against the authorisation of a project by the Chief Director of the Department of Environmental Affairs. Earthlife's main contention was that the Chief Director had

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82 LM du Plessis Statute Law and Interpretation para 291.

83 Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP)

84 Earthlife Africa is a non-profit organisation founded in 1988 to mobilise civil society around environmental issues in relation to people. It qualifies as an "Interested and Affected Person" under section 24(4)(v) (a) of the *National Environmental Management Act* 107 of 1998. This therefore means that Earthlife had *locus standi* to participate in environmental issues of this kind.

failed to correctly exercise his obligations, as climate change had not been taken into account prior to granting the authorisation.

There were two main issues in this case. The first one was whether or not South African legislation requires climate change to be considered during environmental impact assessment. The second was whether the administrative action by the Chief Director of the Department of Environmental Affairs was lawful and rational. However, for the purposes of this paper, this writer seeks to address only the first issue.

3.2 Whether South Africa has international obligations to consider climate change in EIA

Earthlife's case was founded on section 24O(1) of the NEMA,[85] which mandates the CA's to consider all relevant factors in decision-making on an environmental authorisation application, including any pollution, environmental impacts or environmental degradation that may possibly occur upon approval or refusal of an application. Earthlife asserted that the climate change impacts of the proposed coal-fired power station were within the ambit of section 24O(1) and were therefore relevant factors which should have been considered in decision-making. It therefore contended that the Chief Director's failure to completely assess and investigate the climate change impacts of the proposed coal-fired power station was an error of law. Due to the Chief Director's failure, it appealed in the first instance to the Minister.

The Minister responded that the climate change impacts of the proposed project had not been "comprehensively assessed and/or considered" prior to the granting of the environmental authorisation by the Chief Director.[86] She consequently amended the authorisation (relying on section 43(6) of the NEMA, which empowers

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85 See paragraph 2.6.1.6 above.

86 *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others* 2017 2 SA 519 (GP) para 7.

her to vary a decision on appeal) by making it conditional on the performance of a climate change impact assessment before the commencement of the project.[87]

In spite of finding that a fuller assessment was required, the Minister upheld the decision by the Chief Director to grant the environmental authorisation. This prompted Earthlife to apply for a judicial review of the Minister's decision. Earthlife argued that the Minister had acted unlawfully and had overlooked the purpose of climate change impact assessment and the EIA process, because in the event that the climate change impact assessment indicated that the proposed project should not have been authorised in the first place, the Minister would not have the power to withdraw her decision.

Earthlife therefore maintained that the environmental authorisation had been granted without consideration of the prerequisites contained in section 24O (1), which mandates that a detailed EIA (establishing the quantity of the pollution and degradation that could be caused, and proposing mitigating measures for the possible harm) must be performed.

The respondents argued to the contrary that there was no national legislative framework demanding that climate change considerations be incorporated in the EIA. In advancing their argument, they maintained that the rule of law as enshrined in section 1 of the Constitution required that the law must be enacted and publicised in a clear and accessible manner, so as to enable subjects to behave in a manner which followed from the law.[88]

In determining whether the South African national legislation and policy framework advocated the performance of climate change impact assessments, the court deemed it necessary to look into what the legislation and statements of policy said.

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87 Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP) para 8.

88 Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP) para 85.

The starting point was the constitutional environmental protection right. It was common cause that the proposed coal-fired power station would pollute the atmosphere by emitting GHGS that might be harmful to human health and well-being.

In interpreting section 24 of the Constitution, the court noted that the Constitution takes cognisance of the interrelationship between the environment and development by providing that environmental considerations ought to be balanced with socio-economic concerns. It was clear from a reading of section 24(b)(ii) that environmental protection was to be afforded through securing ecologically sustainable development and the ecologically sustainable use of natural resources while promoting economic and social development.[89] Furthermore, the court recognised that climate change posed a critical risk to sustainable development in South Africa.[90]

Regarding the atmospheric pollution that might be caused by the performance of the proposed project, the court consulted the NAMAQA,[91] which acknowledges that

> atmospheric emissions of ozone-depleting substances, greenhouse gases and other substances have deleterious effects on the environment both locally and globally.[92]

As a result, the NAMAQA made it a requirement to conduct an EIA before granting an Atmospheric Emission Licence ("AEL") to projects that were likely to emit GHGs.[93] Thus, the environmental impact assessment report by Thabametsi had to contain an estimate of the quantity of GHGs to be emitted in the air, and how such emissions would not infringe the constitutionally protected right to a healthy environment.

In regard to whether or not the impacts of climate change had been fully addressed in the AEL process, the court held that, although it might be true that the quantity

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89 Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP) para 82.

90 Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP) para 82.

91 Act 39 of 2004.

92 The Preamble of National Environmental Management: Air Quality Act 39 of 2004.

93 If the activity is listed in either or both of Government Notice 983 and 984 of 4 December 2014.

of GHG emissions had been assessed during the AEL process, there was doubt about the scope and depth of the investigation performed. In addition, the authority to grant an AEL did not vest in the DEA at a national level; instead, it rested upon the air quality officer at provincial level.[94] As much as the AEL under NAMAQA dealt with GHG emissions, it did not change the peremptory statutory obligation of the Chief Director and the Minister of Environmental Affairs to thoroughly investigate the climate change impacts of the proposed coal-fired power station in terms of section 24O(1) of the NEMA,[95] which outlines the criteria to be taken into account by the competent authority when considering an application for authorisation. This compelled the Minister of Environmental Affairs in this case to comply with the NEMA and take into consideration the factors set out in this section prior to making a decision.[96] The question that followed was whether climate change was one such factor that needed to be taken into consideration prior to issuing an environmental authorisation. The court noted that a plain reading of section 24O(1) provided that climate change impacts were indeed factors to be taken into consideration. In interpreting section 24O(1) the court held that the section covered the need to assess climate change impacts, as it made it a requirement to consider any pollution, environmental impacts or environmental degradation, thereby rationally imposing the assessment of climate change impacts.[97] In reaching its final decision, the court looked at the South African legal framework relating to both energy and climate change. It firstly looked at the nation's socio-economic and environmental context.

South Africa was struggling with high levels of poverty and inequality.[98] As a solution the government had come up with the National Development Plan 2030 ("NDP")[99] which aims at the elimination of poverty and the reduction of inequality by 2030.[100]

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94 Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP) para 124.
95 Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP) para 124.
96 Maccsand (Pty) Ltd v City of Cape Town and Others 2012 2 SA 181 (CC) para 12.
97 Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP) para 78.
98 Kotze *et al* "Climate Change Law and Governance in South Africa - Setting the Scene" 1-6.
99 National Development Plan 2030: *Our Future - Make it Work*
100 https://www.gov.za/documents/national-development-plan-2030-our-future-make-it-work 24.

Even though this plan was aimed mainly at achieving socio-economic development, it was also cognisant of the fact that South Africa was not only a GHG contributor but was also vulnerable to the impacts of climate change on health, livelihoods, water and food, which adversely affected the poor, particularly women and children. Therefore, the NDP maintained that while it paved the way for development through industrialisation, there measures had to be taken to reduce the adverse impacts of development on the environment.[101]

However, South Africa was one of the most significant GHG emissions contributors on the globe. This was due to its heavy dependence on coal. The country's economy was based on mining and the processing of minerals, and its energy system was coal-intensive.[102] It had been reported that in the energy industry electricity generation was the major GHG emitter.

In order to govern electricity generation, the government had drafted the Integrated Resource Plan ("IRP"). The IPR outlined South Africa's electricity generation plans for the period 2010 to 2030.[103] It determined that there had to be a mix of generation technologies in order to secure a continued and uninterrupted energy supply. In the mix of new generation technologies, 6,3 GW had been allocated to coal generation.[104]

In terms of section 34(1) of the Electricity Act,[105] the Minister of Energy, in consultation with the National Energy Regulator, had made a "Determination" that 2500 megawatts of new electricity generation capacity would be coal-generated, and that Independent Power Producers ("IPP") would be granted the capacity to produce such coal-generated electricity. Accordingly, the Determination effectively

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101 https://www.gov.za/documents/national-development-plan-2030-our-future-make-it-work 33.

102 Murombo "South African Energy Mix-Towards a Low-Carbon Economy" 18-2; Devaraja *et al* 2009 https://www.worldbank.org;Olanewju 2017 *SAGE* 235.

103 GN 400 in GG 34263 of 6 May 2011.

104 Summary of GN 400 in GG 34263 of 6 May 2011.

105 Section 34(1) of the Electricity Regulation Act 4 of 2004 provides that the Minister, in consultation with the Regulator, may determine the new generation capacity that is required to ensure the continued and uninterrupted supply of electricity and also the type of energy source from which such electricity must be derived.

put into force the electricity generation policy set out in the IRP.[106] Thabametsi had been appointed as an IPP to construct a 1200MW coal-fired power station, so this meant that Thabametsi was within the ambit of the Determination set in the IPR.

The court in the *Earthlife* case correctly acknowledged that South Africa is already a water-stressed country that faces possible potential dryness and weather viability with cycles of drought and sudden excessive rains.[107] It also noted that due to socio economic and environmental context, South Africa is vulnerable to climate change.[108]

As a response to climate change, the South African government had published the National Climate Change Response White Paper ("NCCRP"), which outlined the country's vision for an effective climate change response and a long-term, just transition to a climate-resilient and lower carbon economy and society. The objective of the NCCRP was to address climate change through mitigation and adaptation approaches. The approach was to balance South Africa's contribution to the international effort to curb GHG emissions with social and economic development.[109]

The NCCRP acknowledged that the South African government

> Regards climate change as one of the greatest threats to sustainable development and believes that climate change, if unmitigated, has the potential to undo or undermine many of the positive advances made in meeting South Africa's own development goals and the Millennium Development Goals.[110]

Even though it was mainly aimed at climate change mitigation and adaptation, nonetheless it expressly recognised that South Africa's dependence on coal-

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106 *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others* 2017 2 SA 519 (GP) para 34.

107 *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others* 2017 2 SA 519 (GP) para 25.

108 *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others* 2017 2 SA 519 (GP) para 26.

109 National Climate Change Response White Paper 5; Murombo "South Africa's Energy Mix-Towards a Low-Carbon Economy" 18-13; *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others* 2017 2 SA 519 (GP) para 27.

110 National Climate Change Response White Paper 9; Kotze *et al* "Climate Change Law and Governance in South Africa - Setting the Scene" 1-9.

generated electricity would continue. It proposed that a shift to low-carbon electricity generation alternatives should be attempted in the medium term. This therefore meant that South Africa was expected to increase its GHG emissions and peak in the short term, but that they would plateau and decline over time.[111]

Consequently, the court remarked that all the relevant legislation and policy instruments required the competent authorities to take into account the prevention, mitigation and remediation of the environmental impacts of a project, and this logically encompassed an assessment of the project's climate change impacts and measures to avoid, lessen and remedy them.

In conclusion, the court held that the South African legislative and policy framework "overwhelmingly supported" climate change impact assessment and mitigation measures as relevant factors in the environmental authorisation process, and that the text, purpose, intra- and extra-statutory context of section 24O(1) of the NEMA supported the inference that the climate change impacts of the proposed coal-fired power station were relevant factors to be taken into consideration prior to granting environmental authorisation. In its ruling the court decided to remit the matter to the Minister instead of setting aside the environmental authorisation.

3.3 Mainstreaming climate change into sustainable development

The Intergovernmental Panel on Climate Change ("IPCC") reports that developmental policies in different governmental sectors can have strong impacts GHG emissions, thereby contributing to climate change. Therefore, in order to make development more sustainable, decision-making regarding sustainable development and climate change mitigation henceforth ought to be addressed by various levels of government, the private sector, non-governmental organisations and civil society, instead of being solely the purview of government.[112]

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111 Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP) para 27.

112 Section 12.2.1 of Intergovernmental Panel on Climate Change (IPCC) Forth Assessment Report: Mitigation of Climate Change (2007).

It further explains that the more that climate change concerns are mainstreamed into planning and implementation, and the more all stakeholders are participating in the decision-making process in a "meaningful" manner, the more likely it is that the desired ideal will be achieved.[113]

The IPCC says mainstreaming means that

> development policies, programmes and/or individual actions that otherwise would not have taken climate change mitigation into consideration explicitly include these when making development choices. This makes development more sustainable.[114]

This therefore means that mainstreaming involves incorporating climate change mitigation into development policies, plans and programmes with the aim of achieving sustainable development.

As a member of a number of international climate change instruments, South Africa is committed to curbing climate change. These commitments are iterated in the NCCRP. The government aims at integrated planning as a response to climate change. It intends to do this by prioritising

> the mainstreaming of climate change considerations and responses into all relevant sector, national, provincial and local planning regimes such as, but not limited to, the Industrial Policy Action Plan, the Integrated Resource Plan for Electricity Generation, Provincial Growth and Development Plans, and Integrated Development Plans.[115]

In effect, South Africa has resolved to mainstream climate change measures into development policies, plans and programmes in all sectors of government.

In the NCCRP the South African government accepts the conclusion drawn by the IPCC in its Fourth Assessment Report that climate change is a result of anthropogenic behaviour. It also regards climate change as the greatest threat to sustainable development, and avers that if it is unmitigated it would jeopardise

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113 Section 12.2.1 of Intergovernmental Panel on Climate Change (IPCC) Forth Assessment Report: Mitigation of Climate Change (2007).

114 Section 12.2.4.6 Intergovernmental Panel on Climate Change (IPCC) Forth Assessment Report: Mitigation of Climate Change (2007)

115 The Government's National Climate Change Response White Paper of 201215.

South Africa's own developments and chances of reaching its Millennium Development Goals (MDGs). [116]

Consequently, South Africa aims at mainstreaming climate-resilient development through all departments of government and state-owned enterprises, which are required to review the policies, strategies, legislation, regulations and plans within their jurisdiction to ensure that they are in conformity with the national response to climate change. [117]

The government has recently passed a Climate Change Bill, which is a "first" in South African environmental jurisprudence. The Bill was enacted as response to climate change. It provides for a long-term, just transition to a climate-resilient and lower carbon economy with the goal of achieving sustainable development.[118] The Climate Change Bill emphasises the need for cooperative governance in coordinating and integrating a response to climate change through all government sectors.[119]

The South African Constitution clearly aspires to an environment that is not harmful to health and wellbeing. In spite of this aspiration, the energy industry is responsible for emitting high levels of air pollution from burning fossil fuels, emitting the GHGs that are major culprits in inducing climate change.[120]

Energy is regarded as the oxygen of economic development and the lifeblood of South African growth.[121] The South African National Energy Development Institute ("SANEDI")[122] reports that the generation of electricity, liquid fuel production and chemical production through the use of coal is the basis of the economic activity in the country. Moreover, not only does the use of fossil fuels provide households,

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116 National Climate Change Response White Paper 2012 9.
117 Section 10 of National Climate Change Response White Paper 2012.
118 Climate Change Bill 2018.
119 Section 2 of Climate Change Bill 2018.
120 Murombo "South African Energy Mix-Towards a Low-Carbon Economy" 18-3.
121 South African National Energy Development Institute "Delivering Sustainable Energy Annual Report" 2015/16 5.
122 South African National Energy Development Institute

commerce and industry with the energy they require, but it also creates foreign exchange through the export of coal.[123]

In an effort to curb the inevitable climate change impacts, the South African government enacted the Draft Carbon Tax Bill as a climate change mitigation response. It seeks to impose a tax on the emission of carbon dioxide with the purpose of sustaining the nation's social, economic and environmental resilience and emergency response capacity.[124]

As the Draft Carbon Tax Bill and the Climate Change Bill advocate the need to set carbon budgets as a mitigation response to climate change. Carbon budgets are the GHG emissions allowed to an entity over a specified time period.[125] Thanks to scientific research, it is now possible to assess the quantity of emissions that results in a specific rise in temperature and to determine the impact of higher temperatures on the climate.[126] In order to avoid intensifying the impacts of climate change, the temperature ought to the stay within the threshold set in the carbon budget.[127]

Incorporating climate considerations into EIA would not only provide for investigating and assessing possible climate change impacts and their mitigation measures, but would also help the Minister to determine the threshold for the carbon budget for a prospective project prior to granting an environmental authorisation.

Both the South African legislation and policy framework on climate change and energy law indicate that the government wishes to achieve its socio-economic goals together with its environmental goals in order to secure sustainable development. The state repeatedly makes the point that in establishing developmental projects it is important to mitigate the environmental impacts of such projects.

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123 South African National Energy Development Institute "Energy Innovation for Life Annual Report" 201213 4.

124 Section 11 of *Draft Carbon Tax Bill* 2017.

125 National Climate Change Response White Paper 25; Section 11 Draft Carbon Tax Bill; Section 13 of Climate Change Bill 2018.

126 WWF 2014 http://wwf.org.za.

127 WWF 2014 http://wwf.org.za.

As discussed in the previous chapter, the logic behind conducting EIA is to determine the potential impacts of proposed activities on the environment. Since the use of coal inevitably has implications for climate change, it is indeed necessary that climate change considerations be taken into account by the competent authority prior to the issuing of an environmental authorisation to a project that may contribute to climate change, and that steps be taken to mitigate such impacts.

Logically, the only way to mitigate a problem is by first identifying what the problem is. Thus, for effective climate change mitigation, the key is to first investigate the potential impacts of the proposed project.

3.4 Conclusion

South Africa is faced with high levels of poverty and inequality and is heavily dependent on its natural resources to support the requisite socio-economic development. As for its climatic conditions, the country is dry and water-stressed. Climate science indicates that South Africa is vulnerable to adverse climate change impacts with the evidence pointing to the likelihood that evaporation and high temperatures are likely to increase in the 21st century.[128] Climate change will adversely affect ecosystems, human settlements, coastal areas, health, forestry and other sectors that are dependent on water, such as agriculture. It is noteworthy that the South African agricultural sector performs an important role in the formal and informal economy, and climate change may ultimately threaten the food security of the country. This shows that climate change is not an environmental problem only. It affects all sectors, and importantly, all the three spheres of government engaged with the sustainable development that the country sincerely aspires to achieve.

Throughout the paper is has been evident that South African environmental law has been drafted with sustainable social, economic and environmental development in mind. At the heart of sustainable development is the need to secure natural

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[128] Davis 2011 https://www.environment.gov.za 4; Midgley "Scientific Aspects of Climate Change and their Impacts in South Africa" 2-1-2-2.

resources for future generations. However, climate change is the greatest threat to the future that we all aspire to.

The connection between climate change and development is very close. There is no doubt that climate change is caused by human-induced greenhouse gas emissions. As discussed earlier, the energy industry is not only the highest GHG emitter in South Africa, but also the centre of the country's economy. Consequently, effective mitigation measures ought to begin by addressing emissions from the energy sector.[129]

However, this places South Africa in a dilemma, as taking the required climate change mitigation measures may potentially have adverse socio-economic implications for the country.[130] In this regard, the Climate Change Bill promises that in its effort to bring about a climate-resilient society it will take into account risks and opportunities that may arise from the implementation of responses to climate change for the socio-economic spheres of development.[131]

Even though coal-fired power stations are the main source of GHG emissions in South Africa, in order to eradicate poverty and inequality[132] the government through legislation and policy acknowledges the need for the use of coal as a source of energy, and also to eradicate poverty and inequality.[133] Therefore, it is now more important than ever to meaningfully integrate climate change considerations into EIA in order to be able to investigate the potential impacts of climate change of proposed activities.

As discussed above, the NCCPR and the Climate Change Bill propose that the country a shift from a high-carbon economy to a low-carbon economy, the starting

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129 Murombo "South African Energy Mix-Towards a Low-Carbon Economy" 18-3.

130 Earthlife Africa Jhb *Oxfam International* 2009 14; Murombo "South African Energy Mix-Towards a Low-Carbon Economy" 18-3.

131 Preamble of Climate Change Bill 2018 (GN 580 in GG 41689 of 8 June 2018).

132 Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others 2017 2 SA 519 (GP) para 25.

133 Murombo "South African Energy Mix-Towards a Low-Carbon Economy" 18-2.

point of this to effectively take place is thorough investigation of the climate change impacts of the potential GHG emissions of proposed projects.

The court in the *Earthlife* case incorporated climate change considerations into EIAs, even though its ruling was vague, since it did not demand a statutory revision of South African EIA requirements.[134] Therefore, the operational question that follows is how can climate change considerations be integrated into the EIA process? This question will be discussed in the following chapter.

[134] Barnard M "Climate change and the individual: South African litigation" 17.

4 THE DUTCH APPROACH TO CLIMATE IMPACT ASSESSMENTS

4.1 Introduction

The Netherlands is a low-lying delta area, located at the mouths of four major rivers discharging into the sea.[135] Therefore, it is vulnerable to disasters. As a result, the Netherlands has a long tradition of water management and is well poised to deal with floods, which are among the major effects of climate change.[136]

As was discussed in the previous chapter, South African environmental law does not explicitly require the consideration of climate change in EIA. However, the ground-breaking judgement in the *Earthlife* case has the outcome that South African legal framework implicitly requires the incorporation of climate change considerations in EIA. Now, what follows is determining how to incorporate climate change concerns in EIA. In this regard, this chapter seeks to analyse the Dutch legal framework relating to the inclusion of climate change in EIA in order to put forward recommendations on the manner in which South Africa could approach incorporating climate change consideration in EIAs.

4.2 The European Union and Dutch reactions to the UNFCC mandate

As discussed in the previous chapters, the UNFCCC operates under the "principle of common but differentiated responsibilities and respective capabilities". This in effect divided member states into two groups, those listed in Annex 1 being developed countries and those in Non-Annex 1 being developing countries.

Article 2 of the UNFCCC binds Annex 1 countries to adopting national policies to mitigate climate change by curbing their GHG emissions to 1990 levels.[137] Since the Netherlands is an Annex 1 country, the GHG emissions targets therefore bind it.

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135 Delta Commissie ETC "Working Together with Water: A Divining Land Builds for its Future: Finding of the Delta Commissie" 2008 3; Gerristen 2005 *Royal Society* 1271.

136 Delta Commissie "Working Together with Water: A Divining Land Builds for its Future: Finding of the Delta Commissie" 20083; *National Climate Adaptation Strategy* 2016 5.

137 Article 4 of the United Nations Framework Convention on Climate Change (1992).

Under the Kyoto Protocol, member states were permitted to meet their reduction targets jointly, and the EU's overall target was 8%, which was divided variously among the members as national targets.[138] The Netherlands was allocated a reduction target of 6% under the first commitment period, from 2008 to 2012. Under the second commitment period (2013-2020) the Annex 1 states were expected to reduce their GHG emissions by 25% - 40% by 2020, compared with the 1990 levels. The Netherlands accepted the commitment, but in terms of its national policy it aims for a 17% reduction.

Due to this national policy, the Urgenda Foundation instituted a case against the State on the basis that the State had acted unlawfully by setting a reduction target below its international obligation. It argued that the Netherlands as an Annex 1 country is bound to be in the forefront of climate change mitigation.[139]

Urgenda maintained that the State most importantly has the duty of care to make efforts to protect and improve the living environment, as provided by the Constitution.[140] The court agreed with Urgenda and held that the State indeed has an obligation to safeguard the environment. In addition, the court held that the Netherlands as an Annex 1 country is bound to reduce its carbon dioxide emissions by 25%-40% by 2020, compared with 1990.

In terms of its climate change policies the Netherlands is cognisant of the fact that economic growth in the past decades has been dependent on the use of fossil fuels and the exploitation of natural resources, which are increasingly becoming scarce.[141] Furthermore, the Dutch government accepts the IPCC report that states that climate change threatens biodiversity and the availability of water.[142]

In response to climate change, the Dutch government has developed the *Green Growth in the Netherlands* policy. This policy accepts conclusions of the Stern

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138 European Community date unknown https://ec.europa.eu.
139 Urgenda Foundation v The State of the Netherlands (Ministry of Infrastructure and the Environment 2015
140 Article 21 of the Constitution of the Kingdom of the Netherlands 2008.
141 The Green Growth in the Netherlands 2011.
142 The Green Growth in the Netherlands 2011.

Review (the study conducted to investigate a wide spectrum of evidence on climate change impacts on the economy),which finds that climate change will have highly significant repercussions on the economy.[143]

The "Green Growth" policy serves both as a strategy seeking to implement economic transformation and as a framework for monitoring the suggested set of indicators. One the key principles of this policy is achieving sustainable development through making the Netherlands competitive while at the same time reducing its dependence on fossil fuels.[144]

The*Climate Agenda: Resilient Prosperous and Green* also echoes the sentiments of the Delta Commission, as it states that there is a call for perseverance in maintaining a strong and consistent approach to climate change, both internationally and nationally, with the goal of ensuring a sustainable, prosperous economy to sufficiently prepare for the impacts of climate change.[145]

In the National Adaptation Strategy ("NAS") the Dutch government seeks to "make room for climate change" and describes how spatial planning in the Netherlands will be made "climate proof".[146] In addition, the NAS encourages all stockholders (government, citizens and business) to partake in the fight against climate change in order prepare for the inevitable impacts of climate change.

4.3 The historical development of climate change risk assessment

In 1953 the Netherlands experienced disastrous floods, and in the same month the Minister of Transport and Public Works put in place a committee (the Delta Committee) whose mandate was to examine "which hydraulic engineering works

143 Stern *Stern Review: The Economics of Climate Change*; The Green Growth in the Netherlands 2011 12.
144 The Green Growth in the Netherlands 2011 12.
145 Climate Agenda: Resilient Prosperous and Green of 2014 5.
146 Draaijers and van der Velden 2009*mer* 16-17.

should be undertaken in relation to those areas ravaged by the storm surge (and) also to consider whether closure of the sea inlets should form one of the works."[147]

The first Delta Commission introduced the phenomenon of risk-based assessment flood protection; that is to assess the likelihood of floods and their impacts in order to determine the optimum level of safety.[148] Long before environmental assessments and climate change became major public topics, the Dutch already had a long tradition of flood relief works and water management.

4.3.1 The second Delta Commission

Climate change is a global threat, and the Netherlands is also subject to its effects. In the Netherlands climate change is becoming a driver of sea level rise in an inherently low-lying delta. It has therefore become a reality that the Dutch seek to address urgently.

In an urgent response to climate change, the second Delta Committee was set up with the mandate to make recommendations on the protection of the Dutch coast and the low-lying hinterland against the impacts of climate change.[149] The Committee maintains that in order to be well equipped for the possible effects of climate change it is necessary to strengthen the flood defences and change the method by which the country is managed, both regarding the physical and administrative aspects thereof.[150] The Delta Committee's recommendations are mainly centred on development together with climate change and ecological processes. That is, their methods are designed to be cost effective and to result in additional value for society.[151]

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147 Delta Commissie "Working Together with Water: A Divining Land Builds for its Future: Finding of the Delta Commissie" 2008 5.

148 Delta Commissie "Working Together with Water: A Divining Land Builds for its Future: Finding of the Delta Commissie" 2008 3.

149 Delta Commissie "Working Together with Water: A Divining Land Builds for its Future: Finding of the Delta Commissie" 2008 4.

150 Delta Commissie "Working Together with Water: A Divining Land Builds for its Future: Finding of the Delta Commissie" 2008 7.

151 Delta Commissie "Working Together with Water: A Divining Land Builds for its Future: Finding of the Delta Commissie" 2008 8.

4.4 The current Dutch approach to climate change considerations in EIA

The Netherlands Environmental Assessment Agency (*Planburea voor de Leefomgeving*; hereafter "PBL") in collaboration with various institutions has compiled a report that details the current and potential projections of the effects of climate change.[152]

The PBL notes that it is evident that the climate is changing. In the 20thcentury the global temperature rose by 0.7°C, while in the Netherlands it increased by about 1°C. Therefore, it is most likely that there will be a further rise in the coming century due to climate change.[153]

The PBL states that it is necessary to recognise that not all the effects of climate change are negative in Netherlands. It has been projected that the agriculture and tourism sectors may flourish and thereby increase the economy of the country, depending on developments elsewhere in Europe.[154]

The PBL projects that many species may be unable to adapt to the expected increase in temperature. Therefore, there is a threat of biodiversity loss in the Netherlands due to climate change impacts.[155]

There is likely to be an increase in the annual average precipitation, causing a trend of more days with heavy rainfall.[156]

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152 Netherlands Environmental Assessment Agency "The Effects of Climate Change in the Netherlands" 2005.

153 Netherlands Environmental Assessment Agency "The Effects of Climate Change in the Netherlands" 2005 8.

154 Netherlands Environmental Assessment Agency "The Effects of Climate Change in the Netherlands" 2005 7.

155 Netherlands Environmental Assessment Agency "The Effects of Climate Change in the Netherlands" 2005 8.

156 Netherlands Environmental Assessment Agency "The Effects of Climate Change in the Netherlands" 2005 48.

4.4.1 Environmental regulatory framework in the Netherlands

Generally, Dutch environmental law is influenced by the European Union (hereafter the EU").[157] The EU Council has adopted the Directive "on the assessment of the effects of certain public and private projects on the environment."[158] This Directive requires that the impacts of projects on the environment must be assessed. As a member to the EU the Netherlands translated this Directive into national law through the inclusion of Chapter 7 of the Environmental Management Act, which is the legal framework that governs environmental assessments in the Netherlands. The regulations officially came into force in 1987 when the EIA Decree was issued to implement the EU EIA Directive.[159] The author of this dissertation seeks to discuss the Dutch EIA system in this section.

Just as the South African environmental jurisprudence acknowledges that one of the bases of EIA is the duty of care, section 1.1a of the Netherlands Environmental Management Act also imposes a duty of care upon everyone, as follows:[160]

> 1. Every person shall treat the environment with due care.
>
> 2. The care referred to in subsection 1 shall in any event mean that any person who knows or may reasonably suspect that his acts or omissions may have damaging effects on the environment shall be obliged to refrain from such acts in so far as this can reasonably be demanded of him, or to take every possible measure which may reasonably be demanded of him to prevent these effects or, in so far as these effects cannot be prevented, to minimise or rectify them.

This means that the duty of care for the environment is an obligation of "every person", implying that the project-developer has an equal responsibility to assess the impacts of the project on the environment and determine the prevention, reduction and rectification measures of such impacts. In addition, the project-developer must comply with the relevant environmental laws.[161]

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157 Arts 2012 Journal of Environmental Assessment Policy Management [1].
158 European Union Council Directive 337/85/EEC of 27 June 1985.
159 Arts *et al* Arts 2012 Journal of Environmental Assessment Policy Management 12.
160 Section 1.1a of Environmental Management Act 2014.
161 Hobma and Jong Planning and Development Law in the Netherlands: An Introduction 107.

4.4.2 The Dutch EIA system

Section 7.2 of the EMA provides that activities that may have a serious adverse impact on the environment require an EIA.[162] The list of these activities is contained in the EIA Decree, whose main objective is "to ensure that environmental values are fully considered in decision-making."[163] The EIA Decree determines whether or not a proposed activity is subject to an EIA procedure.[164] The EIA Decree is therefore parallel to the NEMA Regulations in South Africa.

The EIA Decree classifies activities into two lists, list C and list D. List C contains activities for which EIA is mandatory, while list D sets out activities that the competent authority ought to be assess, case by case, to determine if EIA is necessary.[165]

The contents of an environmental impact statement are stipulated in Section 7.10. Section 7.13 states that in instances that require the competent authority to make a decision it must draw up an environmental impact statement, and he or she must notify the Committee and advisors in writing of such an intention.[166]

In turn, the committee and the advisers are granted the opportunity to make recommendations on the issuing of guidelines with regard to the contents of an environmental impact statement.[167]

The EMA establishes an independent expert review body for environmental assessments,[168] namely the Netherlands Commission for Environmental Assessment ("NCEA").[169] Its independent status fosters assessments that are conducted independently of governmental and political interference.[170] The independence of

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162 Section 7.2 of the Environmental Management Act 2014.
163 Arts *et al* Arts 2012 Journal of Environmental Assessment Policy Management 12
164 Netherlands Environmental Assessment Commission 2013 https://www.eia.nl.
165 Appendices to EIA Decree; Ministry of Housing, Spatial Planning and the Environment 2009 https://www.unece.org 8; Netherlands Environmental Assessment Commission 2013 https://www.eia.nl 5.
166 Section 7.13 subsection 1 of the *Environmental Management Act 2014.*
167 Section 7.14 subsection 1of the *Environmental Management Act 2014.*
168 Section 7.13 subsection 1 of the *Environmental Management Act 2014.*
169 Hoevenaars 2018 *mer* 11.
170 NCEA's Mission Statement.

the NCEA is highlighted by the fact that it never communicates its opinion on the desirability of the project. Instead, it is concerned only with the information required for decision-making.[171]

The NCEA plays the role of ensuring that there is quality control in the Dutch EIA and SEA system. After the NCEA experts have analysed the relevant documents they draw up an advisory report for the competent authority that contains recommendations on the EIA.

4.4.3 Procedure for climate change considerations in EIA

In terms of the recent EU EIA Directive, the Netherlands has an obligation to assess a proposed project's contribution to climate change in an EIA. It is also required to look into the vulnerability of the project in terms of its potential climate change effects.

The EIA Directive states that:[172]

> Climate change will continue to cause damage to the environment and compromise economic development. In this regard, it is appropriate to assess the impact of projects on climate (for example greenhouse gas emissions) and their vulnerability to climate change.

In 2015,Article 7.1(6)(c) EMA expressly stipulated the integration of climate change into the EIA .NCEA nonetheless (even prior to the adoption of this requirement) recommends that the EIA procedure is potentially very helpful in testing the climate resilience of spatial planning and spatial strategies.[173]

Environmental Assessment is a great tool that can be used to map the uncertain effects of climate change.[174] It facilitates distinguishing between climate change objectives and other sector-specific objectives. This comparison unveils on the one hand the impact of climate change strategies on sectors like nature, biodiversity,

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171 Hoevenaars 2018 *mer* 12.

172 *European Union Council Directive 2011/92/EU* of 13 December 2011 (As amended by *Directive 2014/25/EU* of the European Parliament and Council of 16 April 2014).

173 Draaijersand van der Velden 2009*mer* 16.

174 Kolhoff and Barten 2015 *mer Views and Experiences* 9.

landscape and cultural heritage. On the other hand, it reveals how the achievement of sector- and area-specific objects can subscribe to climate change goals.[175]

4.4.3.1 Mitigation and adaptation

In 2009 the NCEA's Views and Experiences [176]stated that mitigation is required wherever an activity may possibly contribute to GHG emissions in the Netherlands. The first step to take is to investigate the quantity and nature (CO_2, CH_4, N_2O and F gases) of the GHGS and assess and determine the mitigation measures necessary.[177] The second step is to analyse the options to increase energy efficiency. Thirdly, the NCEA recommends that there must be a presentation of how the proposed activity contributes to national, provincial, local and sectoral emissions targets.

In attempting to improve the adaption measures for a project, the NCEA investigates whether the project can be made more resilient to the effects of climate change and what measures can be taken to make the project more adaptable to the extent and speed of climate change.

4.4.3.2 Step 1: Assessing climate change risks

The NCEA begins by assessing the vulnerability of the area around which the proposed activity is to take place, the impacts of climate change on the area in the short and long term, together with the associated risks the area faces.[178] Thereafter, the likelihood of the proposed activity to modify the vulnerability is evaluated and the probable scope of such change, if any, is predicted.[179]

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175 Kolhoff and Barten 2015 *mer Views and Experiences* 9.
176 Draaijersand van der Velden 2009 *mer*
177 Draaijersand van der Velden 2009 *mer* 17.
178 Kolhoff and Barten 2015 *mer Views and Experiences* 9.
179 Kolhoff and Barten 2015 *mer Views and Experiences* 9.

(a) Using scenarios

As discussed earlier, it is clear that the climate is changing. However, the rate and magnitude of the change remains uncertain.[180] The NCEA recommends the use of scenarios to deal with climate change uncertainty.[181]

The vulnerability assessment entails two climate change scenarios. The first is intended to provide insight into the effects of climate change that are most probable to arise within the short term. The second scenario serves to provide knowledge regarding the call for reserve areas. For instance, "extra-large dikes, for water storage, or for extra drainage capacity."[182] As a result, these scenarios furnish the planner and decision maker with more knowledge about the flexibility required to comprehend the uncertain impacts of climate change.[183]

4.4.3.3 Step 2: Policy compliance

The aim of this phase is to assess the compliance of the proposed activity with the objects of the state's climate change policy plans.[184] This step, together with the vulnerability assessment, helps the competent authority to have insight into the urgent need for more plans and projects that are climate-robust.[185]

4.4.3.4 Step 3: Climate-robust alternatives measure

As discussed in Chapter 2, the core of environmental impact assessment is to investigate mitigation measures, or to develop alternatives and determine adaptation measures for the proposed project.

Here, the NCEA seeks to develop alternatives, encompassing measures that are likely to ameliorate the effects of climate change or improve the stakeholders'

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180 Draaijersand van der Velden 2009 *mer* 16; Vershuuren 2006 *Potchefstroom Electronic Law Journal* 48.
181 Kolhoff and Barten 2015 *mer Views and Experiences* 9.
182 Kolhoff and Barten 2015 *mer Views and Experiences* 9.
183 Kolhoff and Barten 2015 *mer Views and Experiences* 9.
184 Kolhoff and Barten 2015 *mer Views and Experiences* 12.
185 Kolhoff and Barten 2015 *mer Views and Experiences* 12.

adaptive capacity to climate change impacts.[186]To accomplish this goal, the Netherlands has developed the concept of "building with nature." This concept seeks to find "innovative measures to improve the resilience of a flood-prone area," for instance, by setting up flood control systems or farming salt-tolerant crops in cases where it is difficult to prevent the actual risk of flooding.[187] Therefore, the "building with nature" is aimed at learning about the ability to cope with the adverse effects of climate change.

4.5 Conclusion

Climate change may be one of the greatest threats the international community faces today, as its effects are not only those currently visible but are predicted to extend even into the future, threatening not just the environment but all other sectors as well, thereby threatening the very ideal of sustainable development that is so dear to the international and national community.

It is very clear that the climate is changing, but the rate and extent of the impacts of climate change are still uncertain. This is where EIA comes in. As seen in Chapter 2, the purpose of EIA is to investigate, assess and prevent the significant adverse impacts of proposed activities on the environment. Integrating climate change considerations into EIA therefore serves to give the decision-makers the information about how to address the impacts of climate change. Most importantly, incorporating climate change into the EIA serves as a precautionary measure to ameliorate uncertain climate change effects.

In implementing the precautionary principle and the concept of sustainable development, the Netherlands looks not only into the project's contribution to climate change, but also wisely goes further by assessing the project's vulnerability to climate change.

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186 Kolhoff and Barten 2015 *mer Views and Experiences* 13.
187 Kolhoff and Barten 2015 *mer Views and Experiences* 13.

5 CONCLUSION

The main aim of this study, as stated at the outset, is to ascertain how the Earthlife judgment and Dutch law can/should influence the development of South African environmental law. The context and scope of this study was set in the first chapter, where the research question and problem statement were supplied. This chapter presents a summary of the findings of the research, together with a set of recommendations

The second chapter dealt with the various environmental principles which are the basis of EIA. EIA has been found to be a procedure that is conducted to assess the environmental impacts of activities that may significantly affect the environment. The research has emphasised the point that EIA is an anticipatory and precautionary tool that assists in decision making. It has been found that EIA not only assesses the potential impacts of proposed activities on the environment but also investigates potential mitigation and adaptation methods so that harm may be avoided.

In the context of South African environmental jurisprudence, the Constitution guarantees environmental sustainability, which is at the heart of the South African environmental legal framework. The basis of EIA in South Africa is the duty of care, as provided for under the NEMA. The EIA procedure effectively realises the environmental legal principles contained in section 2 of the NEMA, as it demands that all organs of state must adhere to the relevant legal principles prior to taking decisions about listed activities.

In South Africa the EIA procedure is governed by the NEMA and the EIA Regulations. Section 24 of the NEMA provides that activities that may potentially have a significant impact on the environment ought to be assessed and investigated and require an environmental authorisation prior to their implementation.

Section 24O of the NEMA lists the factors that must be considered by a competent authority in decision-making. The factors include any pollution, environmental impacts or environmental degradation that may result from the proposed activity. The South African EIA procedure has traditionally dealt with the factors expressly

contained in this section. However, due to the recent *Earthlife* case, climate change has been interpreted to complement this list.

In the *Earthlife* case, the Chief Director had authorised the construction of a coal-fired power station at Thabametsi in terms of section 24O of the NEMA. Earthlife Africa contested the decision by the Chief Director with regard to the fact that climate change had not been considered in the EIA of a proposed power station. Earthlife's main argument was that a correct interpretation of section 24O of the NEMA requires climate change to be considered in an EIA, and that the failure to assess the climate change impacts of the proposed coal-powered station was an error of law. On the other hand, the Chief Director and the Minister rebutted the argument, stating that South Africa does not have any requirement under either international or national law to consider climate change in EIA.

The core issue before the court was if the current South African legislation requires climate change considerations in an EIA. Before reaching its conclusion, the court noted that South Africa is struggling with high levels of poverty and inequality and is also one of the highest GHG emitting contributors in the globe. In addressing the main issue, the court looked into both international and national law.

Under international law, Article 4(1)(f) of the UNFCCC provides that climate change considerations must be taken into account during EIA in order to minimise the adverse impact on the environment. Therefore, South Africa as a member to the UNFCCC is bound to consider climate change in an EIA.

Under national law, the court looked at section 24 of the Constitution and noted that it guarantees environmental sustainability and acknowledges the interrelationship between the environment and development. In contextually analysing section 24(b)(ii) of the Constitution, which seeks to protect the environment through securing ecologically sustainable development, the court noted that climate change is a threat to the very concept of sustainable development that the Constitution seeks to achieve.

Furthermore, the court went through the South African legislation and policy framework on climate change and energy and found that government's goal is to achieve its socio-economic targets together with environmental targets in order to attain sustainable development. The legal instruments emphasise that it is crucial to assess environmental impact of the proposed activities and to mitigate such impacts. Finally, the court held that is clear from the provisions of section 24O that climate change ought to be taken into consideration in an EIA.

It has been established in Chapter 3 that South Africa is heavily dependent on fossil fuels and that it still intends to continue with this dependence in order meet its energy needs and achieve socio-economic development.

The *Earthlife* judgement is a bold step in South African environmental jurisprudence as it has initiated a legal requirement for the inclusion of climate change considerations during an EIA. Now that the court has introduced the need to integrate climate change in EIA, the question that arises is how climate change considerations can be incorporated in an EIA. The Dutch approach is recommended in this regard.

5.1 Recommendations

5.1.1 Mainstreaming climate change in EIA to achieve sustainable development

At the heart of the South African legal framework is the concept of sustainable development. The Constitution explicitly acknowledges the need to achieve sustainable development, as does the umbrella environmental legislation, the NEMA, which is the legal framework for EIA. It demands that all organs of state adhere to the section 2 principles (which are underpinned by the notion of sustainable development) in decision-making.

As discussed in Chapter 3, the NCCRP echoes the IPCC's sentiments on mainstreaming climate change considerations in decision-making. Expressly integrating climate change in EIA would meaningfully achieve the desired end.

Furthermore, and most importantly, in the NCCPR South Africa states that it regards climate change as the greatest threat to sustainable development and notes that if it is unmitigated it would jeopardise South Africa's achievement of the MDGSs. Therefore, integrating climate change issues in an EIA would work meaningfully toward achieving sustainable development. It is therefore recommended that South Africa mainstreams climate change considerations in the existing EIA framework.

As discussed in Chapter 4, the Netherlands has with good practice integrated climate change concerns in EIA. It is recommended that South Africa should draw lessons from the Netherlands in the following manner.

5.1.2 Establishment of an independent advisory body like the NCEA

Even though the Netherland has not yet expressly integrated climate change into its national legislation, it has adopted the best practice in this regard. The NECA, which is an independent advisory body, recommends and practises the inclusion of climate change in EIA. It is recommended that South Africa should establish an independent advisory body to review all EIAs; particularly those that have climate change considerations in their EIA Reports.

5.1.3 Mitigation and adaptation

The first step to take is to determine whether the activity would require mitigation or adaptation. This may be determined during the screening phase. The EAP must assess whether the proposed project requires mitigation. Regarding this, the EAP must make a thorough investigation of the GHGs which may be emitted. Thereafter, an analysis must be made of the options to increase energy efficiency. Lastly, the EAP ought to show how their mitigation measures to South Africa's emission targets. Regarding adaptation, the EAP must investigate adaptation measures to make the project more resilient to the impacts of climate change. Regarding adaptation measures, the EAP must propose measures through which the project will become more resilient to climate change.

5.1.4 Assessing climate change risks

The EAP should assess the vulnerability of the location surrounding the proposed activity in both the short term and the long term, together with related risks the area may face. Furthermore, the EAP should investigate whether there is a likelihood of the proposed activity altering the vulnerability of the area; and if there is, the extent and scope of such alteration must be predicted. Regarding uncertainties, the EAP must assess the proposed activity in different scenarios.

5.1.5 Policy compliance

Environmental sustainability has been envisaged in the Constitution as being at the heart of the environmental legal framework (legislation and policies). Thus, the NDP 2030[188] has committed the country to protecting its natural resources while simultaneously promoting the country's economic growth and social development. One of the most detailed expressions of the environmental right guaranteed in the constitution is the NCCRP,[189] which deals with sustainable development as follows:

> South Africa will build the climate resilience of the country, its economy and its people and manage the transition to a climate-resilient, equitable and internationally competitive lower-carbon economy and society in a manner that simultaneously addresses South Africa's over-riding national priorities for sustainable development, job creation, improved public and environmental health, poverty eradication, and social equality.[190]

It is therefore recommended that the EAP should comply with the government's policies and show in the EIA Report of how the proposed activity does so.

5.1.6 Climate-robust alternatives measures

As with the Dutch approach to integrating climate change in EIA, the NECA looks not only at mitigation measures but also investigates the related adaptation measure in order to make the project itself resilient to climate change.

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188 See paragraph 3.1 above.
189 See paragraph 3.2 above.
190 See paragraph 3.2 above; du Plessis and Alberts 2014 SAPL 443.

As stated in the relevant policy documents, South Africa intends to establish new coal-fired powered stations. It is therefore necessary to be cautious about the potential impacts of proposed activities that may contribute to climate change.

It is without question that the climate is changing and that climate change is caused by the emission of GHGs, CO_2 being one them. However, the extent and rate of climate change remains uncertain. This is where the need to integrate climate change into EIA becomes apparent. Assessing the proposed project's potential contribution to climate change, together with the project's vulnerably to climate change, would be a precautious move and a step towards ensuring the provision of a safe and sustainable environment for the present and future generations.

Upon determining the possible results, mitigation procedures and alternatives may be established. In situations where there are no alternatives, adaptation measures may be set up as a precaution.

Finally, South Africa should establish robust control methods in cases where it is difficult to mitigate the impacts of climate change. Just as the Netherlands has come up with the concept of "building with nature", South Africa must equally follow the trend to aim at the ability to function under negative adverse effects of climate change.

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