



environmental affairs

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**Compilation of the 3rd South Africa Environment
Outlook Report**
Chapter_Introduction
FIRST DRAFT

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Introduction

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1 The 3rd South Africa Environmental Outlook Report

1.1 Introduction

National policy is imperative in providing contextual information for the SAEO Report, as it provides insights into the Government's vision from a sustainable development perspective and also provides insights into the importance the South African Government places on environmental issues. The National Development Plan: Vision for 2030 (NDP) was published by the National Planning Commission in 2012, and stipulated twelve priority areas to eliminate poverty, create jobs and reduce inequality by 2030. Further to these twelve priority areas, the NDP also acknowledges the need for "building environmental sustainability and resilience" and that change is needed to ensure protection of the natural environment whilst enabling benefits from natural resources (NPC, 2012).

In addition to the NDP, the South African Government has decided on 14 outcomes, based on the Medium Term Strategic Framework (MTSF), as focus policy priority areas. The environment is interconnected to the livelihoods of communities and entrenched in our economy; therefore, the SAEO will cover various aspects related to the 14 outcomes discussed in the MTSF. Of particular interest to the context of the SAEO is Outcome 10, which is related to the environment. As stated, the outcome is: *"Environmental assets and natural resources that are well protected and continually enhanced."* Outcome 10 makes specific reference to the obligation placed on government in respect of realising the environmental right in the Constitution. The Constitution has environmental governance strongly entrenched in Section 24, which states that *"Everyone has the right to an environment that is not harmful to their health or wellbeing and to have the environment protected through reasonable legislative measures"*. Four outputs (each of which has sub-outputs) have been identified in Outcome 10 (Republic of South Africa, 2014):

- Sub-outcome 1: Ecosystems are sustained and natural resource are used efficiently;
- Sub-outcome 2: An effective climate change mitigation and adaptation response;
- Sub-outcome 3: An environmentally sustainable, low-carbon economy resulting from a well-managed just transition;
- Sub-outcome 4: Enhanced governance systems and capacity; and
- Sub-outcome 5: Sustainable human communities.

South Africa also has international obligations and agreements which align to the NDP, as these aim to alleviate poverty. The Southern African Millennium Ecosystem Assessment (Biggs *et al.*, 2004) notes that: *"All people, everywhere, are absolutely dependent on ecosystem services, although well-being is also affected by many other factors... Low levels of well-being can make it difficult to focus resources on protecting ecosystem services. This can lead to a downward spiral of ecosystem degradation and declining well-being through the creation of a 'poverty trap'. On the other hand, if appropriate interventions are made, it can drive an upward spiral of healthy ecosystems and rising well-being..."* Between 2000 and 2015, the Millennium Development Goals (MDGs) were used as a framework for developing countries in trying to alleviate poverty. However, by the end of 2015, at least four, namely reducing hunger, reducing child mortality, combating diseases and ensuring environmental sustainability, of the eight MDGs were not met in the Southern African region (DEADP, 2017). Continuing from the MDGs, an outcome of the RIO+20 summit held in Rio De Janeiro

in 2012 was the establishment of the Sustainable Development Goals (SDGs) for the period 2015-2030. The new set of goals aims to end poverty and hunger by 2030; with one in eight people still living in extreme poverty and nearly 800 million people suffer from hunger across the globe (UN, 2016).

At the 1992 United Nations (UN) Conference in Rio de Janeiro, there was a call on national governments to develop, on a regular basis, State of Environment Reports (SoERs). South Africa met this international call through the development of the National State of Environment Report (1999). Further to that call, South Africa published the 1st South Africa Environment Outlook Report in 2006 and a subsequent 2nd South Africa Environment Outlook Report in 2012. These reports were never mandatory in terms of South African legislation. However, as a result of recent amendments that have been made to the National Environmental Management Act (Act No. 107 of 1998) known as “NEMA”, through the National Environmental Management Laws Second Amendment (Act No. 30 of 2013), national and provincial government is required to compile Environment Outlook Reports. This legal requirement for developing national and provincial Environment Outlook Reports came into effect from December 2014. In accordance to the 1992 UN Conference and the recent amendments to NEMA, the 3rd South Africa Environment Outlook (SAEO) Report is being compiled on behalf of the DEA Branch: Environmental Advisory Services.

The objectives of the Environment Outlook Report, as per a draft directive that was issued in terms of the National Environmental Management Laws Second Amendment (Act No. 30 of 2013), are to:

1. provide objective, accurate and scientifically credible information about the condition and prospects of the environment;
2. increase stakeholder awareness and understanding of trends and state of the environment, and their causes and consequences;
3. facilitate the measurement of progress toward achieving environmental standards and targets;
4. provide early warnings in terms of environmental degradation;
5. make recommendations and influence the strengthening of environmental policies and programmes aimed at the remediation of environmental degradation; and
6. provide a foundation for improved decision-making at all levels (DEA, n.d.).

The 3rd SAEO Report aims to continue with these objectives, through assessing the major challenges that South Africa is currently facing, and providing a reliable source of information regarding the overall and high level state of the environment, how this environment is changing over time and what is being done in response to this change. This type of information is critical for both decision- and policy-makers.

1.2 Approach to the 3rd SAEO Report

The approach to compiling the 3rd SAEO Report utilises the Drivers-Pressures-State-Impact-Responses (DPSIR) Model to evaluate persisting and emerging issues in nine thematic areas (refer to Figure 1) that are considered crucial to the South African environment and context. After which an analysis on the outlook (i.e. if nothing changes) of the environment is undertaken.



Figure 1: Thematic areas outlined in the 2nd SAEO Report

The compilation of the thematic based integration of the 3rd SAEO Report was undertaken by policy and framework development specialists and was overseen and co-ordinated by the Department of Environmental Affairs. The specialist research and reporting for this edition of the SAEO took place during June 2017 and January 2018, and focussed on collecting and interpreting information on the current state of the environment in South Africa, as well as obtaining general consensus on changes in the state of representative indicators.

Stakeholders were invited to participate in the compilation process either through contributions in the form of environmental information and data, as reviewers of the different specialist chapters and through the hosting of numerous specialist chapter focus group meetings. Engagement focussed on governmental entities or forums with mandates that include data custodianship, but also included certain private and semi-governmental bodies that play important roles within specific specialists’ chapters. The assembly of stakeholders and reviewers from wide-ranging fields and organisations ensured that the SAEO maintains a high level of robust objectivity without bias towards particular viewpoints.

1.2.1 DPSIR Model

The Drivers-Pressures-State-Impact-Responses (DPSIR) Model has been a fundamental element in the reporting process of the 2nd SAEO Report. The DPSIR Model is a widely used integrated approach for reporting (Kirstensen, 2004), and has also been used in numerous State of Environment Reports (SoER) and Environment Outlook Reports nationally (including provincial) and internationally. The DPSIR Model is the generally accepted standard practise for environmental reporting, with only a few organisations, such as the Organisation for Economic Co-operation and Development (OECD) and countries such as Australia and Scotland, opting for the use of the predecessor of the DPSIR Model, namely the Pressure-State-Response (PSR) Model. Table 1 provides a summary of the models used in the various SoER and Environment Outlook Reports (EOR) published both nationally and internationally.

Table 1: Reporting process for various State of Environment and Environment Outlook Reports

State of the Environment Report / Environment Outlook Report	Year	Reporting process	
		DPSIR	Other model
Provincial (South Africa) Environmental Reporting			
KwaZulu-Natal State of Environment Report	2004	✓	-
Free State Environment Outlook Report	2008	✓	-
Gauteng State of Environment Report	2011	✓	-
State of Environment Outlook Report for the Western Cape Province	2013	✓	-
North West Environment Outlook Report	2013	✓	-
Limpopo Environment Outlook Report	2016	✓	-
Regional (Africa) Environmental Reporting			
Africa Environment Outlook 2	2006	-	Opportunity Framework
City of Nairobi Environment Outlook Report	2008	✓	-
Malawi State of Environment and Outlook Report	2010	✓	-
Africa Environment Outlook 3	2013	-	Opportunity Framework and Drivers-Pressures-State-Exposures-Effects-Actions (DPSEEA) Framework
Rwanda State of Environment and Outlook Report	2014	✓	-
International and Global Environmental Reporting			
Western Australia State of the Environment	2007	-	Pressures-States–Responses (PSR) Framework
Global Environment Outlook 4	2007	✓	-
Environment New Zealand	2007	✓	-
OCED Environment Outlook to 2030	2008	-	Not specifically stated – although report focuses on pressures, state and policy response
North America Environment Outlook to 2030	2010	✓	-
Australia State of Environment Report	2011	✓	-
Global Environment Outlook 5	2012	✓	-
Scotland’s State of Environment Report	2014	-	Pressures-States–Responses (PSR) Framework
Queensland State of the Environment Report	2015	-	Pressures-States–Responses (PSR) Framework
Global Environment Outlook 6	2016	✓	-

The DPSIR framework was initially developed by the European Environmental Agency for the purpose of environmental reporting and is used to both identify and analyse the complex multi-dimensional casual chain relationships (i.e. cause and effect) between different aspects of the socio-ecological system (i.e. society and the environment).

Essentially, the environmental reporting process is described as a feedback loop controlling a cycle consisting of 5 stages (refer to Figure 2) namely, Drivers-Pressures-State-Impact-Responses.

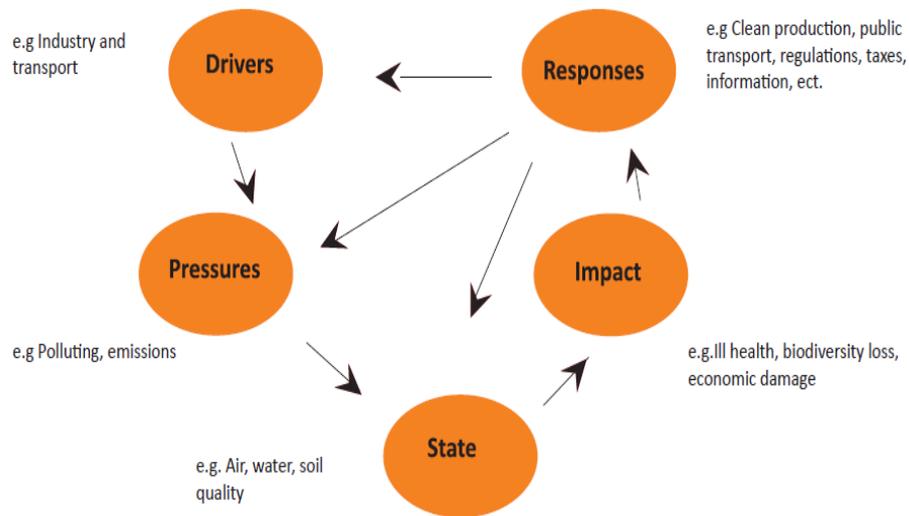


Figure 2: DPSIR framework (DEA, 2012)

Driving forces (driver) are the underlying causes that result in environmental pressure. Drivers such as population dynamics, energy and demand for agricultural land are processes that lead to impacts on the environment. Often driving forces both directly and indirectly result in pressures on the environment, such as increased emissions and exploitation of resources. These pressures can cause significant changes to the state of the environment with associated impacts on both humans and ecosystems. Lastly, an effort by society from varying scales i.e. community action to international treaties, to solve the issues identified by the assessed impacts, takes place in the form of responses (Giupponi, 2002; UNEP, 2012). The DPSIR framework essentially aims at answering three questions (Pinter *et al.* 1999):

- 1 What is happening to the environment and why (pressure and state)?
- 2 What is the consequence of the changed environment (impact)?
- 3 If appropriate, what is being done about it and how effective is it (response)?

1.2.2 Report Structure

The 3rd SAEO Report comprises of thirteen chapters, containing two different parts. Part 1 contains the ‘introduction’ chapter, which provides the context to the 3rd SAEO Report and describes the methodology taken in its compilation. The ‘drivers of change’ chapter essentially sets the scene for the current significant challenges facing South Africa today. Lastly, the ‘governance’ chapter provides an overview of the major legislative changes that have taken place that influence how humans interact with the environment since the last (2nd) SAEO Report.

Part 2 of the 3rd SAEO Report will focus on each of the specialist thematic chapters (refer to Figure 1). Each of these chapters is described in terms of three primary sections. These sections are discussed in terms of the DPSIR model; therefore, explain the relevant **drivers and pressures**, the **states and impacts** and the **responses** relating to each specialist chapter. Lastly, part 2 of the 3rd SAEO will also include a chapter on the 'challenges and outlook'. The 'challenges and outlook' chapter will provide a summary of the major challenges facing South Africa and provide an outlook of what South Africa will look like should no action be taken.

1.2.3 Indicators

In order to attempt to report on the natural environment as comprehensively as possible, proxies for the state of the environment are used to track the "health" of the environment. These proxies are in the form of either quantifiable or qualitative indicators. Indicators for the SAEO are carefully selected to provide a representative picture of the state of various environmental themes, as well as the changes over time to the drivers, pressures, impacts and responses related to those themes. By tracking the indicators over time, the SAEO can assess the effectiveness of responses to environmental challenges.

The reporting framework for the SAEO attempts to use similar indicators from previous SAEO Reports, in order for reporting to be consistent and for trends in indicators to be evaluated. However, contextual changes and data availability often necessitate ongoing adjustment to the set of indicators being reported against. The SAEO will also make recommendations on whether new indicator data should be collected in order to track the impacts or state of the environment.

1.2.4 Aims/limitations/audience

As with the 2012 SAEO Report, it needs to be reiterated that this report is aimed at providing an accessible, non-specialist and user-friendly overview of the state of environmental features and trends over time. This broad objective implies that the information and guidance that is provided by this report needs to be reproduced in a simple manner that appeal to and is considered useful and accessible to a wide range of readers. As a consequence, the report should be seen as a summary of environmental information and expert knowledge of the relationships between components of the environmental system rather than an original detailed scientific research project (DEA, 2012).

Every effort has been made to present a report that is free from undue bias, technical jargon and information with limited relevance. The report's aim is to not only capacitate non-specialists, but also key decision-makers to allow them to participate as well-informed contributors to environmental debates and decision-making processes that affect the living environment. The report might, therefore, not answer an exhaustive list of questions from all audiences and in sufficient enough depth for some, but will at least go a long way towards fostering a more inclusive debate in the environmental management field (DEA, 2012).

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