


# The regulation of biodiversity offsets in South Africa and Australia

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## **Abstract**

The concept of biodiversity offsets is the quantifiable conservation outcomes that derive from activities intended to compensate ongoing biodiversity loss resulting from development initiatives. They are meant to be used after appropriate precautions have been taken to prevent and minimise biodiversity loss at a development site. The study considers various international guideline documents that have been published in this regard. The mini dissertation compares the enabling legislation and the biodiversity offset policies and guidelines in South Africa and Australia. Australia already has experience and apply policies and legislation in this regard. South Africa can learn from this experience as South Africa relies on existing legal provisions in environmental legislation as the foundation for offset requirements due to the lack of a clear national policy on biodiversity offsets. The use of offsets in South Africa has repeatedly fallen short of achieving desired biodiversity objectives as set out in international guidelines. Subsequently a Draft Biodiversity Offset Policy and Draft Biodiversity Offset Guidelines were published. The Australian Commonwealth, state and local government levels published biodiversity offset policies and guidelines. The Australian national environmental framework legislation specifically provides for biodiversity offsetting while this is lacking in South Africa. This study proposes that regulations used in Australia can also be utilised in South Africa and thereby improve the current system of regulating biodiversity offsets.

### **Key words:**

Biodiversity Offsets, Australian legal framework, South African legal framework, biodiversity offset policies, biodiversity offset guidelines.

## List of Abbreviations

ACT	Australian Capital Territory
BBOP	Business and Biodiversity Offsets Programme
CA	Competent Authority
Constitution	Constitution of the Republic of South Africa, 1996
DFFE	Department of Fisheries, Forestry and Environment
EA	Environmental Authorisation
EIA	Environmental Impact Study
EM	Environmental Management
EPBC Act	Environment Protection and Biodiversity Conservation Act of 1999
IAIA	International Association for Impact Assessment
IUCN	International Union for Conservation of Nature
NBF	National Biodiversity Framework, 2019-2024
NEMA	National Environmental Management Act 107 of 1998
NEMBA	National Environmental Management: Biodiversity Act10 of 2004
NGOs	Non-governmental Organisations
NNL	No Net Loss
NG	Net Gain
OECD	Organisation for Economic Co-operation and Development

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Table 1: Comparison between Biodiversity Offset Policies – South African and Australia

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## Chapter 1: Introduction

### 1.1 Background

Biodiversity<sup>1</sup> offsets may be regarded as

"Measurable conservation outcomes that result from actions designed to compensate for significant, residual biodiversity loss from development projects. They are intended to be implemented only after reasonable steps have been taken to avoid and minimise biodiversity loss at a development site".<sup>2</sup>

Many countries around the world introduced the concept of biodiversity offsets as "conservation measures designed to compensate for projects' residual, inevitable impacts on biodiversity, ensuring at least no net loss and, if possible, a net gain".<sup>3</sup>

Internationally, the *Business and Biodiversity Offsets Programme* (hereafter BBOP), *World Bank Group* and *International Union for Conservation of Nature* (hereafter IUCN) developed biodiversity offset guidelines.<sup>4</sup> Biodiversity offsetting was designed to allow economic development that still ensures the protection of biodiversity, even if the protection occurs at another place than where the development takes place.<sup>5</sup>

Biodiversity offsets are accordingly regarded as

"Those acts that counteract the impact that humans and their activities have on biodiversity. Biodiversity offsets would, for example, include measurable conservation outcomes that result from actions designed to compensate for significant, residual biodiversity loss from development projects".<sup>6</sup>

Several developing and developed countries have drafted or are in the process of drafting offset policies to scale environmental conservation efforts and assist in reaching national biodiversity targets.<sup>7</sup> These policies inform biodiversity offsetting. South Africa followed this route.

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<sup>1</sup> Biodiversity is defined as "The variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems" - s 1 of the *National Environmental Management: Biodiversity Act* 10 of 2004 (NEMBA).

<sup>2</sup> OECD *Environmental Outlook to 2050*.

<sup>3</sup> IUCN *Policy on Biodiversity Offsets* 2018.

<sup>4</sup> IUCN *Policy on Biodiversity Offsets* 2016.

<sup>5</sup> Brownlie *et al* 2017 *Impact Assessment and Project Appraisal* 248-256.

<sup>6</sup> Brownlie *et al* 2017 *Impact Assessment and Project Appraisal* 248-256.

<sup>7</sup> OECD *Environmental Outlook to 2050*.

The South African *Draft National Biodiversity Offset Policy*<sup>8</sup> (*Draft Policy*) is based on principles found in the *Constitution of the Republic of South Africa*, 1996 (Constitution), the *National Environmental Management Act* 107 of 1998 (NEMA) and the *National Environmental Management: Biodiversity Act* 10 of 2004 (NEMBA). Biodiversity offset guidelines have also been published for comment, although the final version of the draft *Biodiversity Offset Guideline*<sup>9</sup> (*Draft Guideline*) had not been finalised at the time this dissertation was written.<sup>10</sup> The *Draft Guideline* follows the international guidelines<sup>11</sup> to some extent.<sup>12</sup> This include, amongst others, that biodiversity offsets are to be used as a last resort, but sometimes they may be implemented at an early stage in a project or development.<sup>13</sup> Biodiversity offsets, though not regulated, are from time to time included in the conditions of environmental authorisations.<sup>14</sup> The use of biodiversity offsetting is contentious in South Africa and subject to critique.<sup>15</sup>

In Australia, the Commonwealth, state and local levels of government all have their own biodiversity offset policies.<sup>16</sup> These states include, Victoria, New South Wales, Queensland, South Australia, Australian Capital Territory (ACT), Western Australia and Tasmania. The Commonwealth *Environmental Offsets Policy* was issued in terms of the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act). The Commonwealth Policy deals with matters of "national environmental significance", such as nationally threatened species and ecological communities that are endangered or critically endangered.<sup>17</sup> A Biodiversity Offsets Scheme (BOS) was further established under the *Biodiversity Conservation Act* 2016.<sup>18</sup>

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<sup>8</sup> GN R621 in GG 40733 of 31 March 2017: *Draft National Biodiversity Offset Policy* 5-7.

<sup>9</sup> GN 1924 in GG 46088 of 25 March 2022.

<sup>10</sup> August 2022.

<sup>11</sup> IUCN *Policy on Biodiversity Offsets* 2018.

<sup>12</sup> See the discussion in Chapter 3.2. Scheepers *Regulating Biodiversity Offsets in South Africa*.

<sup>13</sup> Brownlie *et al* 2017 *Impact Assessment and Project Appraisal* 248-256.

<sup>14</sup> Brownlie *et al* 2017 *Impact Assessment and Project Appraisal* 248-256. Environmental authorisations are issued in terms of s 24 of NEMA. See Chapter 3 of this dissertation.

<sup>15</sup> Brownlie *et al* 2017 *Impact Assessment and Project Appraisal* 248-256. See Chapter 2.3 for a discussion on the advantages and disadvantages of biodiversity offsets in this dissertation.

<sup>16</sup> This concept will be discussed further in Chapter 4 of this dissertation.

<sup>17</sup> *Biodiversity Offsets Guideline: Australia* 2019.

<sup>18</sup> Ruoso *et al* 2021 *Ecosystems and people* 6-24.

South Africa's biodiversity is comparable to Australia's biodiversity as these countries share a close biogeographical relationship.<sup>19</sup> Both countries rely, for example, on mining and agriculture as part of their Gross Domestic Income, but these activities have impacts on biodiversity.<sup>20</sup> Both countries also experience the impacts of climate change and its resultant impact on biodiversity.<sup>21</sup>

Australia has introduced several measures to regulate biodiversity offsets while South Africa still relies on policies and guidelines in their decision-making, some of them still draft documents. Accordingly, the application of biodiversity offsets is based on the *ad hoc* decision of the official at the time. Decision-making is not always consistent. There is therefore a need to determine whether South Africa can learn from the Australian regulation to address the challenges currently experienced with biodiversity offsetting in South Africa.

## **1.2 Research question and aim**

The research question is, therefore: how do the circumstances of the South African biodiversity offset framework diverge from the standards set by the Australian framework?

The study aims to compare and evaluate the South African legal framework regarding biodiversity offsetting with the Australia framework. To support the main aim, the following objectives are stated, namely to:

- Provide a theoretical framework and benchmark for biodiversity offsetting.
- Discuss the manner in which biodiversity offsetting is regulated in South Africa.
- Discuss the manner in which biodiversity offsetting is regulated in Australia.
- Compare the position in South Africa with the position in Australia in order to make recommendations for South African legislation, policies and guidelines on biodiversity offsets.

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<sup>19</sup> Moll 2014 *JEE* 50-56.

<sup>20</sup> Moll 2014 *JEE* 50-56.

<sup>21</sup> Moll 2014 *JEE* 50-56.

### **1.3 Research methodology**

This dissertation is a desktop study concluded by means of a literature review of international guidelines, government policy, legislation and case law, supported by textbooks, chapters in books, journal articles and applicable electronic resources from both South Africa and Australia.<sup>22</sup> The legal comparative method will be used to compare the legal systems of South Africa and Australia.<sup>23</sup> If there are new developments in law, countries tend to borrow policy and legislation from each other and adapt it to their own circumstances. This is especially so in the field of environmental law which needs multi-disciplinary inputs to formulate policy and legislation.<sup>24</sup>

South Africa and Australia have policies on biodiversity offsets as well as other legislation which support the introduction thereof.<sup>25</sup> Australia was chosen because of the similarities in industrial and mining projects in the two countries and having similar challenges in relation to the disastrous impact of these activities on biodiversity, amongst other things. Australia also has more experience in introducing biodiversity offsetting and regulates it in legislation.<sup>26</sup>

### **1.4 Framework of the study**

Chapter 2 provides a theoretical background and defines the concept of biodiversity offsets. Biodiversity offsets will be further discussed in general, as well as their advantages and disadvantages. The chapter also refers to international best practice in relation to biodiversity offsets that will be used to benchmark the South African and Australian legislation, guidelines and policies in subsequent chapters.

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<sup>22</sup> The study builds on my LLB mini dissertation completed at the North-West University, entitled: Scheepers *Regulating Biodiversity Offsets in South Africa* (2021). Some of the material is re-used in this mini-dissertation; however, when material from the mini-dissertation is re-used, it is indicated in the footnotes.

<sup>23</sup> Collier *The Comparative Method* 106.

<sup>24</sup> Wiener 2001 27 *Ecology Law Quarterly* 1295-1372.

<sup>25</sup> Moll 2014 *JEE* 50-56.

<sup>26</sup> The author acknowledges that other countries also have experience in this regard, however, due to the scope of the study, these countries could not be included.

Chapter 3 discusses and evaluates the legal framework in South Africa in relation to biodiversity offsets.

Chapter 4 evaluates the South African *Draft Policy* and *Draft Guidelines*.

Chapter 5 analyses the legal position in Australia in relation to legislation and policies as well as biodiversity offset schemes.

Chapter 6 concludes the study and provides a comparison of South African and Australian legislation, policies and guidelines, as benchmarked against the best practices distilled in Chapter 2. In the final instance, recommendations for South Africa to improve its draft and eventual final biodiversity policy and guidelines are made.

## Chapter 2: Theoretical background

### 2.1 Introduction

This chapter aims to provide a theoretical background for biodiversity offsetting by defining biodiversity offsets, discussing the different types of biodiversity offsets that may be adopted, examining the general advantages and disadvantages of biodiversity offsets and highlighting the manner in which the international framework acts as a benchmark for biodiversity offset policies in other countries.

### 2.2 Defining biodiversity offsets

The idea of addressing biodiversity loss via biodiversity offsets was initially introduced at the Ramsar Convention in 1972.<sup>27</sup> Biodiversity offsets are considered as economic tools based on the polluter-pays principle.<sup>28</sup> The Rio Declaration established the polluter pays idea as a key tenet of environmental law.<sup>29</sup> According to the polluter pays principle, the damage that pollution causes to society and the environment must be paid for by the polluter. This principle is a widely accepted economic tenet that protects consumers.<sup>30</sup> This means that by adding a price to actions that have a negative impact on biodiversity, the external costs of biodiversity loss from development initiatives are internalised.

Although some biodiversity offset programmes refer to the more ambitious goal of Net Gain (NG), the most common target used in offset programmes is to produce No Net Loss (NNL).<sup>31</sup> NG is the idea of making sure that developers leave the environment in a substantially better condition than it was before the development. NNL means that

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<sup>27</sup> Director, Office of International Standards and Legal Affairs United Nations Educational, Scientific and Cultural Organization (UNESCO) *Convention on Wetlands of International Importance especially as Waterfowl Habitat* Ramsar, Iran, 2.2.1971, amended by Protocols of 3.12.1982 and 28.5.1987 Paris, 13 July 1994 (hereafter the Ramsar Convention). Also see Ruoso *et al* 2021 *Ecosystems and People* 6-24.

<sup>28</sup> Oosthuizen 1998 *SAJELP* 356.

<sup>29</sup> Principle 16 of the *Rio Declaration on Environment and Development* A\_CONF.151\_26\_Vol.I adopted at the United Nations Conference on Environment and Development of 1992 (hereafter the Rio Declaration).

<sup>30</sup> Oosthuizen 1998 *SAJELP* 356.

<sup>31</sup> OECD *Environmental Outlook to 2050*.

the first objective should be to avoid or prevent negative impacts that are derived from any human activity or development.<sup>32</sup>

To expand on the definition provided in Chapter 1, it can be said that biodiversity offsets are the "supply of an ecological gain, in response to an ecological loss, located in a compensation site distinct from the impacted site, following agreed-upon criteria for the ecological equivalence between gains and losses".<sup>33</sup>

The *Draft Policy* defines biodiversity offsets as:

"the measurable outcome of compliance with a formal requirement contained in an environmental authorisation to implement an intervention that has the purpose of counterbalancing the residual negative impacts of an activity, or activities, on biodiversity, through increased protection and appropriate management, after every effort has been made to avoid and minimise impacts and rehabilitate affected areas".<sup>34</sup>

The BBOP, which is an international collaboration for the development of offset methodologies, provides a more comprehensive definition:

"Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people's use and cultural values associated with biodiversity".<sup>35</sup>

The BBOP definition is the more comprehensive than the other definitions and provides more guidance than the other definitions.<sup>36</sup> However, all three definitions have certain aspects in common. The following elements can be distilled from the definitions:

- Biodiversity offsets must be measurable.
- It is a compensation measure.

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<sup>32</sup> OECD *Environmental Outlook to 2050*.

<sup>33</sup> Ruoso *et al* 2021 *Ecosystems and People* 6-24.

<sup>34</sup> *Draft Policy* 2.

<sup>35</sup> The Business and Biodiversity Offsets Programme (BBOP) <https://www.forest-trends.org/wp-content/uploads/imported/final-revised-bbop-strategy-20-1-16-pdf.pdf>; also see Joseph *et al* 2013 *Fauna & Flora International* 369.

<sup>36</sup> The Business and Biodiversity Offsets Programme (BBOP) <https://www.forest-trends.org/wp-content/uploads/imported/final-revised-bbop-strategy-20-1-16-pdf.pdf>; also see Joseph *et al* 2013 *Fauna & Flora International* 369.

- Biodiversity offsets may be taken only after other reasonable measures, such as prevention and mitigation have been undertaken.
- It should ideally achieve NG but definitely NNL.
- Biodiversity offsets can relate to the natural, social and cultural environment.
- Biodiversity offsetting is a strategy that connects industry with conservation, possibly resulting in better ecological results along with development.<sup>37</sup>

It is important to distinguish between biodiversity trade-offs and offsetting. Trade-offs may include ecological<sup>38</sup> or financial compensation. It is possible to attain NNL results for biodiversity by offsetting the measurable conservation outcomes to compensate for severe residual biodiversity loss. According to the *Draft Biodiversity Offset Guideline*,<sup>39</sup> trade-offs may include a positive outcome for biodiversity loss, but the gain is not geared towards the protection of biodiversity. However, by accepting biodiversity loss as a cost of achieving socio-economic success, the global ecological deficit is expanding, posing dangers to human well-being.<sup>40</sup> While offsets are aimed at preventing biodiversity loss, trade-offs are not necessarily aimed at this goal. Instead, trade-offs accept that there will be a biodiversity loss, and this is why they are not as well-regarded as offsets. The *Draft Guideline* states clearly that trade-offs should be the last resort. This study focuses on offsetting rather than trade-offs.<sup>41</sup>

The following paragraph explains the types of biodiversity offsetting approaches.

### **2.3 Types of biodiversity offsetting approaches**

Generally, biodiversity offsetting is implemented by using one of the following approaches:

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<sup>37</sup> The Business and Biodiversity Offsets Programme (BBOP) <https://www.forest-trends.org/wp-content/uploads/imported/final-revised-bbop-strategy-20-1-16-pdf.pdf> also see Joseph *et al* 2013 *Fauna & Flora International* 369,

<sup>38</sup> Defined as "the outcome of measurable actions to protect, restore and manage priority biodiversity, aimed at compensating for residual negative impacts on irreplaceable biodiversity and ecological infrastructure where these impacts cannot be offset and which should, instead and in the first instance, be avoided."

<sup>39</sup> GN 1924 in GG 46088 of 25 March 2022.

<sup>40</sup> Brownlie *et al* 2013 *Impact Assessment and Project Appraisal* 24-33.

<sup>41</sup> Also see Bull, Lloyd and Strange 2016 *Conservation Letters* 656-669; Sonter *et al* 2022 *Ambio* 892-902; Pope *et al* 2021 *Environmental Management* 424-435.

1. "One-off offsets": The developer or a subcontractor implements the biodiversity offset once any negative effects have been assessed. The developer accepts all financial and legal responsibility for the offsets. A reputable third party or a government body often conducts the verification. One-off methods are frequently employed in regulatory programmes<sup>42</sup> and voluntary offsets.<sup>43</sup>
2. 'In-lieu fee agreements': A government agency establishes a price that a developer must pay to a third party in order to make up for any lingering negative effects on biodiversity. The third party accepts all financial and legal responsibility for the offsets.<sup>44</sup>
3. 'Biobanking': Once any negative effects have been assessed, the developer can directly buy offsets from a public or private biobank. "A biobank is a collection of already-issued offset credits, each of which reflects a measurable increase in biodiversity as a consequence of measures taken to develop, maintain, improve and/or conserve biodiversity. All financial and legal responsibility is passed from the developer to the supplier, similar to the in-lieu fee agreement".<sup>45</sup>

Developers may choose any of these methods, but nothing prevents a developer from combining them or from adopting an innovative approach.

In the following paragraph the advantages and disadvantages of biodiversity offsetting are discussed.

## ***2.4 General advantages and disadvantages***

Biodiversity offsetting may have advantages for businesses, governments, conservation groups and communities, amongst others . These advantages align with biodiversity offsets' aim, namely, to improve conservation outcomes by compensating

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<sup>42</sup> A regulatory programme refers to a set of rules, policies, and procedures implemented by a government agency or regulatory body to oversee and control specific activities or industries. Regulatory programmes are designed to ensure compliance with laws, standards, and regulations that are intended to protect public health, safety, and the environment. These programmes may include licensing, inspection, enforcement, and monitoring activities, as well as the development and enforcement of standards and regulations. Regulatory programs may be implemented at the local, state, or federal level, depending on the scope of the regulations and the jurisdiction of the regulatory body.

<sup>43</sup> OECD *Environmental Outlook to 2050*.

<sup>44</sup> OECD *Environmental Outlook to 2050*.

<sup>45</sup> OECD *Environmental Outlook to 2050*.

for habitat degradation that has a relatively low biodiversity value for conservation or habitat restoration that has a high biodiversity value.

By allowing regulators to approve new developments and winning the backing of local communities and non-governmental organisations, biodiversity offsets can be included in the conditions of corporations' operating licenses. Investment in biodiversity offsets may be a profitable way for businesses to show society why they should continue to be trusted with access to, for example, the land and water they need for their operations.<sup>46</sup>

Biodiversity offsets also provide policymakers with a way to incentivise businesses to support conservation efforts, frequently without the need for new legislation and at a lower cost than other policies.<sup>47</sup> Offsets can also ensure that development initiatives intended to meet the rising demand for energy, minerals, metals, crops and transportation are planned within the framework of sustainable development<sup>48</sup> and are accompanied by counterbalancing measures to ensure the conservation of ecosystems and species impacted by development.<sup>49</sup>

Conservation organisations can employ biodiversity offsets and exert control over them to ensure more and better conservation and to raise more funds for it. For instance, they can use the money to build adequately funded ecological corridors or to fortify protected area networks. Offsets may also ensure that local or national conservation priorities are considered when making business plans.<sup>50</sup>

Local people may employ biodiversity offsets to guarantee that ecosystems are healthy and productive throughout and after development projects, not just with well-restored

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<sup>46</sup> Ten Kate *et al*/IUCN 2004.

<sup>47</sup> Ten Kate *et al*/IUCN 2004.

<sup>48</sup> Sustainable development is defined in NEMA as "the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations". However, due to the scope of the study, the concept of sustainable development will not be discussed in detail. See in this regard Redclift 2005 *Sustainable Development*, Bosselmann *The Principle of Sustainability*.

<sup>49</sup> Ten Kate *et al*/IUCN 2004.

<sup>50</sup> Ten Kate *et al*/IUCN 2004.

project areas but also with extra conservation results outside the project's borders, to sustain livelihoods and amenities.<sup>51</sup>

Biodiversity offsetting is subject to critique and researchers have highlighted its disadvantages or challenges. Businesses, governments, communities and conservation non-governmental organisations (NGOs) need to have a common understanding of what offsets imply and the requirements that must be met. Additionally, the method must win the support and trust of important stakeholders, enhance the business case that will drive firms and provide the foundations for legislation that will support offsets. This can be challenging.<sup>52</sup>

The value of offsets for business and conservation seems to go against nature's inherent values and the fact that it harms people, especially those who are weak, defenceless, or excluded from decision-making. For this reason, biodiversity offsets may also affect the economy and businesses. NGOs do not always participate in debates on whether and how biodiversity offsets should be carried out and if they do, their opinions are not always treated seriously.<sup>53</sup>

Biodiversity offsets may also overwhelm the capacity of the administrative institutions in charge of nature conservation.<sup>54</sup> It can also be said that they undermine groups that are seeking money for protected areas and they create uncertainty about protected area policies.<sup>55</sup> If, for example, a biodiversity offset culminates in establishing a protected area or private nature reserve, the government may not in future have the funding or the human resources to ensure the upkeep of the protected biodiversity area.<sup>56</sup>

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<sup>51</sup> Ten Kate *et al*/IUCN 2004.

<sup>52</sup> Ten Kate *et al*/IUCN 2004.

<sup>53</sup> Ten Kate *et al*/IUCN 2004. Also see 3.4 where the South African challenges are discussed.

<sup>54</sup> The potential for corruption and the lack of transparency in the implementation of biodiversity offset programs can further exacerbate the challenges facing administrative institutions. All of these factors can lead to overwhelmed administrative institutions and undermine the effectiveness of biodiversity offset programs in achieving their conservation objectives.

<sup>55</sup> Guillet *et al* 2018 *Biological Conservation* 86-90.

<sup>56</sup> IAIASA Symposium 20 October 2020: Panel on Biodiversity Offset Guideline.

It is clear that biodiversity offsetting is not clear cut, and that decision-makers should focus not only on its advantages but should also consider possible disadvantages or challenges and address them.

Having identified some of the advantages and disadvantages of biodiversity offsetting, the next paragraph discusses the international framework of biodiversity offsetting and how it has been implemented.

## **2.5 International framework**

International organisations including the World Bank Group, BBOP and the IUCN have released standards for biodiversity offsetting.<sup>57</sup> Most countries have adopted a hybrid version of these standards in order to comply with their own legislation and policies as well as their own specific circumstances.<sup>58</sup>

There is a difference between developed and developing countries' needs for biodiversity offsetting and the manner in which offsets should be implemented to achieve the desired outcomes. The societal impacts of biodiversity offsets are expected to be different in high- and low-income countries for a variety of reasons. There are various legal frameworks, with biodiversity markets being common and well-regulated in the United States of America (US), Australia and several other high-income countries,<sup>59</sup> whereas volunteer initiatives are more common in Africa.<sup>60</sup>

Whilst maintaining relatively undisturbed environments is a top priority in many low-income nations, high-income countries may have conservation targets as a result of low-intensity agricultural practices.<sup>61</sup> In low-income nations, rural populations may

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<sup>57</sup> IUCN <https://www.iucn.org/theme/business-and-biodiversity/our-work/business-approachesand-tools/biodiversity-offsets>.

<sup>58</sup> Bidaud *et al* 2017 *Conservation and Society* 1.

<sup>59</sup> Madsen *et al* 2011 *Forest Trends* 3-39.

<sup>60</sup> Bidaud *et al* 2017 *Conservation and Society* 2.

<sup>61</sup> Bidaud *et al* 2017 *Conservation and Society* 2. Conservation targets refer to specific goals or objectives for the protection and preservation of biodiversity and ecosystems. They are typically established based on scientific evidence of the species, habitats, or ecological processes that are most in need of protection. Low-intensity agricultural practices, such as traditional farming methods that rely on low levels of external inputs, have been shown to support higher levels of biodiversity than intensive or industrial farming practices. As a result, maintaining these low-intensity agricultural practices has become a conservation target in many regions. However, in high-income countries, low-intensity agricultural practices have become increasingly rare as industrialised

often be more dependent on natural resources and ecosystem services for survival than urban populations.<sup>62</sup> By slowing the pace of biodiversity loss in underdeveloped regions, biodiversity offsets frequently assist poor nations in balancing the detrimental impacts of development on biodiversity.<sup>63</sup> However, when the risks targeted by a biodiversity offset project are connected to local livelihood activities, the well-being of the local population may be influenced. This is due to the fact that these offsets depend on changing residents' behaviour, especially in areas where people strongly depend on natural resources for survival. Families who, for example, would have expanded their agricultural land in the area designated as a biodiversity offset, could object to the biodiversity offset. Because of this, biodiversity offsets and protected areas may both have a negative impact on society.<sup>64</sup>

The first worldwide policy on biodiversity offsets was drafted by the IUCN.<sup>65</sup> This policy was accepted by IUCN Members at the IUCN World Conservation Congress in September 2016.<sup>66</sup> The Policy stipulates that biodiversity offsets must be employed only when all of the steps in the mitigation ladder have been investigated and no other choices or alternatives have been discovered. Four phases make up the hierarchy of mitigation, namely avoidance, minimisation, rehabilitation and ultimately offsetting.<sup>67</sup>

The following guidelines can be distilled from the IUCN policy:<sup>68</sup>

1. "Measuring and exchanging biodiversity": Sufficient baseline surveys, defensible and replicable metrics and units of exchange, and specified exchange rules specifying which residual harms can be offset by which types of gains must be identified.

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agriculture has become dominant. This is a problem because the loss of low-intensity agricultural practices can lead to significant declines in biodiversity, as these practices often provide important habitats for many species.

<sup>62</sup> Bidaud *et al* 2017 *Conservation and Society* 2.

<sup>63</sup> Bidaud *et al* 2017 *Conservation and Society* 2.

<sup>64</sup> Bidaud *et al* 2017 *Conservation and Society* 2.

<sup>65</sup> IUCN *Policy on Biodiversity Offsets* 2016.

<sup>66</sup> IUCN *Policy on Biodiversity Offsets* 2016. This policy is only regarded as guidelines as international law is not binding and establishes normative guidelines and a common conceptual framework.

<sup>67</sup> IUCN *Policy on Biodiversity Offsets* 2016.

<sup>68</sup> These principles are also mentioned and discussed in Scheepers *Regulating Biodiversity Offsets in South Africa* Chapter 4. Also see the discussion in Chapter 3 of this dissertation.

2. "Additionality": Offsets for biodiversity must ensure additional conservation effects that otherwise would not have occurred.
3. "Timeframe": The offset benefit should endure for at least as long as the impact is addressed, which is typically forever.
4. "Uncertainty": Offsets must take into account uncertainty by stating data sources, suppositions and knowledge gaps in plain and concise terms.
5. "Monitoring and evaluation": Ongoing analyses of consequences and mitigation measures to determine the actual gains and losses.
6. "Governance and permanence": For the design and implementation of offset schemes to be successful, there must be appropriate legal, institutional and financial safeguards. The planning and regulation at the landscape and seascape levels should incorporate the mitigation hierarchy framework.
7. The World Bank Group claims that, in addition to the aforementioned, the fundamental concept of biodiversity offsets include additionality, equivalence and permanence.<sup>69</sup>
  - 7.1 Additionality: The conservation advantages from biodiversity offsets must be greater than those from existing or future activities that are not included in the offset.<sup>70</sup>
  - 7.2 Equivalence: According to the like-for-like concept, biodiversity offsets should generally preserve the same biodiversity assets as those lost to the original project.<sup>71</sup>
  - 7.3 Permanence: In general, it is believed that biodiversity offsets will last at least as long as the original project's unfavourable effects on biodiversity, which in practice means forever.<sup>72</sup>

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<sup>69</sup> World Bank Group 2016 *A User Guide: Convention on Biodiversity Offsets* 11.

<sup>70</sup> World Bank Group 2016 *A User Guide: Convention on Biodiversity Offsets* 11.

<sup>71</sup> World Bank Group 2016 *A User Guide: Convention on Biodiversity Offsets* 11.

<sup>72</sup> World Bank Group 2016 *A User Guide: Convention on Biodiversity Offsets* 11.

Following appropriate avoidance, reduction and rehabilitation, activities must be carried out in accordance with the mitigation hierarchy. The following BBOP Principles should be considered:"<sup>73</sup>

1. "Limits to what can be offset": Due to the fragility of biodiversity, certain residual effects cannot be sufficiently made up for by a biodiversity offset.<sup>74</sup>
2. "Landscape context": When evaluating the conservation efforts, it is important to take into account the range of biological, social and cultural components of biodiversity as well as the supporting ecosystem approach.<sup>75</sup>
3. NNL: A biodiversity offset should result in an NNL of biodiversity and it is also advantageous if it produces an NG.<sup>76</sup>
4. "Additional conservation outcomes": A biodiversity offset should offer conservation benefits that are superior to those that would have happened if the offset were not implemented, which essentially implies that the design and execution of offsets should stop activities that are harmful to biodiversity.<sup>77</sup>
5. "Stakeholder participation": In regions impacted by the project and the biodiversity offset, it is important to make sure that stakeholders are effectively engaged in decision-making about biodiversity offsets.<sup>78</sup>
6. "Equity": The planning and implementation of a biodiversity offset should be fair, "which implies that rights and duties, risks and benefits connected with a project and offset should be divided equally amongst all stakeholders whilst adhering to legal requirements."<sup>79</sup>

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<sup>73</sup> The *BBOP Principles on Biodiversity Offsets* [https://www.forest-trends.org/wp-content/uploads/2018/10/The-BBOP-Principles\\_20181023.pdf](https://www.forest-trends.org/wp-content/uploads/2018/10/The-BBOP-Principles_20181023.pdf) (hereafter, *BBOP Principles*).

<sup>74</sup> *BBOP Principle 1.*

<sup>75</sup> *BBOP Principle 2.*

<sup>76</sup> *BBOP Principle 3.*

<sup>77</sup> *BBOP Principle 4.*

<sup>78</sup> *BBOP Principle 5.*

<sup>79</sup> *BBOP Principle 6.*

7. "Long-term outcomes": Biodiversity offsetting should ultimately include effects that persist at least as long as the project's consequences and longer if possible.<sup>80</sup>
8. "Transparency": Creating and executing a biodiversity offset, as well as informing the affected community of the results in a transparent and timely manner.<sup>81</sup>
9. "Science and traditional knowledge": A well-documented procedure based on excellent research, with traditional knowledge taken into consideration as appropriate should be used for biodiversity offsetting.<sup>82</sup>

These guidelines and principles<sup>83</sup> serve to ensure collaboration between businesses, governments, communities, conservationists and financial institutions and aim to determine whether, under the right conditions, biodiversity offsets can assist in achieving better and more affordable conservation outcomes than is the case in typically occurring infrastructure developments. They may also assist businesses in managing their risks, liabilities and expenses.

The Sustainable Development Goals<sup>84</sup> (SDGs) should be visibly impacted by biodiversity offsets, ensuring access to new resources without harming communities or the environment. SDG 13<sup>85</sup> is of particular importance as it states that countries need to "strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries". South Africa is a signature to the SDGs and must, therefore, contribute to the goal in order to achieve the desired outcome. This can thus be achieved by implementing biodiversity offsets.<sup>86</sup>

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<sup>80</sup> *BBOP Principle 7.*

<sup>81</sup> *BBOP Principle 8.*

<sup>82</sup> *BBOP Principle 9.*

<sup>83</sup> The IUCN, the World Bank Group and the BBOP guidelines/principles.

<sup>84</sup> United Nations 2019 Sustainable Development Goals: 17 goals to transform our world.

<sup>85</sup> Climate Action.

<sup>86</sup> In order to demonstrate enhanced and additional conservation and business effects, the BBOP has been investigating, developing and testing best practices for biodiversity offsets through a portfolio of pilot projects in various settings and industry sectors in order to prove how biodiversity offsets are beneficial to both the economy and the environment. See in this regard Bidaud *et al* 2017 *Conservation and Society* 1-14.

## **2.6 Conclusion**

This chapter evaluated the definition of biodiversity offsets, the different types of biodiversity offset approaches, their general advantages and disadvantages and the international framework that acts as a guideline for biodiversity offset policies.

Biodiversity offsets should regulate impacts arising from project development.<sup>87</sup> After analysing the different definitions of biodiversity offsetting it became clear that biodiversity offsets must be measurable, can serve as a compensation measure for biodiversity loss, must be taken after all other reasonable measures, mitigation and alternatives were considered, should achieve NNL and ideally an NG within the natural, social and cultural environment. Biodiversity offsetting is a strategy that connects industry with conservation, possibly resulting in better ecological results along with development.

The chapter considered the advantages and disadvantages of biodiversity offsetting. For example, the implementation or introduction of biodiversity offsets has the advantage of improving conservation outcomes by compensating for habitat degradation, while offsets may overwhelm the capacity of administrative institutions in charge of nature conservation.<sup>88</sup>

The international standards of BBOP, IUCN and World Bank provide a benchmark for biodiversity offsetting and also state the general principles of biodiversity offsetting.

The next chapter focuses on the South African legal framework and how the legal framework supports the concept of biodiversity offsets.

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<sup>87</sup> See par 2.2.

<sup>88</sup> Joseph *et al* 2013 *Fauna & Flora International* 369.

## Chapter 3: Legal position in South Africa

### 3.1 Introduction

This chapter assesses the South African legal framework to determine how it supports biodiversity offsets. Legislation, such as the Constitution, NEMA and NEMBA and policies and strategies, are evaluated and the general approach to implementation of biodiversity offsetting and its challenges are discussed.

South Africa does not refer to biodiversity offsets as such in legislation. Several NEMA principles, the current environmental impact assessment (EIA) regime, the NEMBA and the constitutional mandate for sustainable development serve as evidence that South Africa's framework law is conducive to the idea of a dedicated biodiversity offset regime. At the time this dissertation was written, the *Draft Policy and Draft Guideline* on biodiversity offsetting were published for comment (referred to in Chapter 4) but had not yet been finalised.<sup>89</sup> Only two of South Africa's nine provinces, the Western Cape<sup>90</sup> and KwaZulu-Natal<sup>91</sup> have published Guidelines for biodiversity offsets. The relevant authorities, on a case-by-case basis, sometimes stipulate offsets as conditions in an environmental authorisation for development projects.<sup>92</sup>

### 3.2 Constitution

Section 24 of the Constitution aims to protect the environment and the health and well-being of South Africans. The environment includes both biodiversity and people which form part of it.<sup>93</sup> As a result, any biodiversity offsetting will have to comply with

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<sup>89</sup> End October 2022.

<sup>90</sup> Western Cape Guideline on Biodiversity Offsets 2015  
<https://www.westerncape.gov.za/eadp/files/atoms/files/DeadP4-Offsets%20Guideline%2025%20March%202015%20%27clean%27.pdf>.

<sup>91</sup> Concise Guideline: Biodiversity Offsets in Kwazulu-Natal 2013  
[http://www.kznwildlife.com/Documents/ekznw\\_finaldraft\\_offsets\\_concisefinal\\_130213.pdf](http://www.kznwildlife.com/Documents/ekznw_finaldraft_offsets_concisefinal_130213.pdf).

<sup>92</sup> Jenner and Balmforth 2015 *Fauna and Flora International*.

<sup>93</sup> See also the definition of environment in s 1 of NEMA. In this regard see Kidd Environmental Law 17 and Strydom and King *Fuggie and Rabie's Environmental Management in South Africa* 139.

section 24 of the Constitution. Section 24(b) states that everyone has the right to, amongst other things, the

"protection of the environment for the benefit of present and future generations through reasonable legislative and other measures, the promotion of conservation, the prevention of pollution and ecological degradation, and the securing of ecologically sustainable development and use of natural resources while promoting justifiable economic and social development".<sup>94</sup>

Biodiversity offsets should therefore in principle also promote sustainable development and prevent ecological degradation.<sup>95</sup> Since the Constitution mandates environmental conservation through legislation and other means, such actions ought to support environmental protection, ensure sustainable resource usage and advance ethical economic and social growth.<sup>96</sup> Whenever a specific development is permitted to proceed subject to a dedicated biodiversity offset system aimed at ensuring NNL or even NG, that specific biodiversity offset system could be classified as an "other measure" that promotes sustainable development. . For example, conservation efforts can be aided by increasing the protected areas in South Africa through biodiversity offsetting. It may also assist in ensuring environmentally sustainable development by reducing the detrimental consequences of economic and social development on biodiversity. Biodiversity offsetting has the potential to encourage a more thorough investigation of viable development options that avoid and minimise negative impacts on biodiversity. It may also assist in reversing and offsetting the degradation and loss of biodiversity through improved protection and appropriate management of biodiversity offsets and help South Africa achieve its international biodiversity and protected area targets.<sup>97</sup>

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<sup>94</sup> Section 24 of the Constitution.

<sup>95</sup> "The concept of sustainable development will ensure that socio-economic developments remain firmly attached to their ecological roots and that these roots are protected and nurtured so that they may support future socio-economic developments", according to Justice Ngcobo in the case of *Fuel Retailers Association of Southern Africa v Director General Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province* 2007 (6) SA 4 (CC) (hereafter the *Fuel Retailer case*).

<sup>96</sup> Section 24(b)(iii) of the Constitution.

<sup>97</sup> *Draft National Biodiversity Offset Guideline* 11.

The duties of government as environmental public trustee<sup>98</sup> were unpacked in the *White Paper* outlining South Africa's policy on the management of the environment.<sup>99</sup> The duties include, amongst others, keeping the country's resources in good condition, safeguarding the public interest in them, ensuring equal access to natural resources and generally ensuring that everyone in South Africa lives in a healthy environment. Additionally, it entails the need to guarantee that sustainable development is practised in environmental governance. According to the *White Paper*, the three pillars of sustainable development<sup>100</sup> (environmental, social and economic) must be balanced when any development, which could harm biodiversity, is taken under consideration.<sup>101</sup> The *White Paper* served as the foundation for the NEMA that is discussed in the following paragraph.

### **3.3 NEMA**

NEMA, as the environmental framework law that gives effect to section 24 of the Constitution,<sup>102</sup> stipulates in section 2 its sustainable development principles.<sup>103</sup> All organs of state must adhere to these principles where their decision-making may impact on the environment,<sup>104</sup> therefore, also in relation to biodiversity offsetting.

The section 2 principles include, amongst other, that "people and their needs" should come first and that "their physical, psychological, developmental, cultural, and social" interests be met "in an equal way".<sup>105</sup> Biodiversity offsetting should prevent the loss of natural resources.<sup>106</sup> Section 2(4)(a) of NEMA lists the factors that government officials will have to take into account. These factors include, amongst others, to avoid

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<sup>98</sup> Also mentioned in s 2(4)(o) of NEMA. On custodianship and public trusteeship, see van der Schyff 2013 *SALJ* 369 also see Blackmore 2015 *SAJELP* 3.1.

<sup>99</sup> *White Paper on Environmental Management Policy for South Africa*, GN 749 in GG 18894 of 15 May 1998 at 18.

<sup>100</sup> Section 2(3) of the NEMA.

<sup>101</sup> On the concept of sustainable development, see the *Fuel Retailer* case as well as Field *SALJ* 409 at 414–17 and Kidd *Environmental Law* 17.

<sup>102</sup> See preamble to 'Our Common Future', Report of the World Commission on Environment and Development, World Commission on Environment and Development at 15. Published as Annex to General Assembly document A/42/427, Development and International Co-operation: Environment (1987). Herein referred to as the 'Brundtland Report'.

<sup>103</sup> See 3.2.1 above.

<sup>104</sup> Section 2(1) of the NEMA.

<sup>105</sup> Section 2(2) of the NEMA.

<sup>106</sup> Section 2(4)(a)(i) of the NEMA.

disturbing ecosystems, landscapes. cultural heritage, non-renewable resources, pollution, waste and loss of biodiversity.<sup>107</sup>

According to the mitigation hierarchy, harmful impacts on the environment must be avoided, minimised when they cannot be prevented and then remedied as a last resort.<sup>108</sup> Applying a risk-averse and cautious mindset is another aspect pertinent to the consideration of sustainability.<sup>109</sup> Section 2(4)(a)(vii) of NEMA, which mandates that "harmful environmental impacts be foreseen and avoided" before the adoption of the mitigation hierarchy, contains another element that is extremely pertinent to biodiversity offsetting.

Perhaps the most applicable principle for a biodiversity offsetting regime is the polluter pays notion which is discussed in Chapter 2.2. According to section 2(4)(p) of NEMA, persons who cause environmental deterioration and adverse health consequences are accountable for paying for their remediation as well as any costs associated with preventing, reducing, or managing future environmental deterioration or health effects.

Under NEMA, an environmental assessment (either EIA or a basic assessment (BA)) is mandated for a broad range of activities that might have a negative impact on the environment in South Africa.<sup>110</sup> Some of the activities refer to projects that may impact biodiversity and others to biodiversity as such or the clearing of indigenous vegetation, but any of the listed activities may be eligible for biodiversity offsetting.<sup>111</sup>

Planning offsets to compensate for the negative effects of development on biodiversity is becoming more and more integrated into the EIA process, where offsets are used as a "last resort" when options at earlier stages in the hierarchy of mitigation, including

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<sup>107</sup> Sections 2(4)(a)(i)-(iv) and (vii).

<sup>108</sup> Section 2(4)(a)(i).

<sup>109</sup> Section 2(4)(a)(vii). Also see Jenner and Balmforth 2015 *Fauna and Flora International*.

<sup>110</sup> Section 24(2) NEMA. The Regulations were promulgated in terms s 24 of Chapter 5 of NEMA and published on 4 December 2014. GN R982-R985 in GG 38282 of 4 December 2014, as amended, list activities that are subject to environmental assessment. Also see Du Pisani *et al* 2006 *Environmental Impact Assessment Review* 707-724.

<sup>111</sup> See, for example, listed activities 12, 27-35 GN R983 in GG 38282 of 4 December 2014 as amended; listed activities 13-24 GN R984 in GG 38282 of 4 December 2014 as amended; listed activities 2 and 3 GN R985 in GG 38282 of 4 December 2014 as amended.

avoidance, minimisation and restoration, have been exhausted.<sup>112</sup> The requirement for offsets, which could be used to mitigate impacts on biodiversity projected to be of mid to high significance, is triggered by the significance of residual impacts. Impacts that could lead to the loss of irreplaceable biodiversity are deemed to be of extremely high significance and must be avoided.<sup>113</sup>

Section 24E sets out the minimum conditions attached to environmental authorisations which state that each environmental authorisation must, at the very least, ensure that sufficient provisions are made for the ongoing management and monitoring of the activity's environmental impacts throughout the activity's life cycle. The conditions that could be specified in an environmental authorisation are outlined in regulation 26(d) of the Environmental Impact Assessment Regulations, 2014.<sup>114</sup> The authorisation must include the terms subject to which the authorised action is to be carried out. The conditions include the duration of authorisation, the time at which the activity must commence, as well as the obligations for avoiding, managing, mitigating, monitoring and reporting any environmental impacts of the activity throughout its lifetime.<sup>115</sup> One of the mitigation conditions could, therefore, include biodiversity offsets.

Section 240 stipulates the criteria competent authorities have to take into account when considering environmental authorisation applications. According to section 240(1)(b), "any pollution, environmental impacts, or environmental degradation likely to be caused if the application is approved or refused" are amongst the relevant elements that may be taken into account.<sup>116</sup> Additionally, the measures that may be undertaken must be intended to preserve the environment from damage caused by the activity and to prevent, regulate or mitigate any pollution, significant negative environmental impacts, or environmental deterioration.<sup>117</sup> This includes biodiversity offsetting.

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<sup>112</sup> Strydom *et al Fuggle and Rabie's Environmental Management in South Africa* 4.4.12.

<sup>113</sup> Brownlie *et al 2017 Impact Assessment and Project Appraisal* 248-256.

<sup>114</sup> GN R982 in GG 38282 of 4 December 2014 as amended.

<sup>115</sup> Regulation 26(1)(d) of GN R982 in GG 38282 of 4 December 2014.

<sup>116</sup> Section 240(1)(b)(ii) (bb).

<sup>117</sup> Section 240(1)(b)(iv).

Section 24J allows the Minister/MEC to publish guidelines on the "implementation, administration and arrangements" of the section 24 Regulations. It is, therefore, possible for the Minister/MEC to publish biodiversity offsetting guidelines to augment the environmental impact assessment procedures.

The above discussion is also applicable to applications for rectification under section 24G, emergency directives under section 30A, applications for licences under the *National Water Act* 36 of 1998, the *National Forests Act* 84 of 1998, the *National Environmental Management: Waste Act* 59 of 2008, as well as applications for development rights under the *Spatial Planning and Land Use Management Act* 16 of 2013.<sup>118</sup>

The following paragraph discusses the possible regulation of biodiversity offsets by the NEMBA.

### *3.3.3 NEMBA*

The NEMBA is a specific environmental management Act (SEMA) that also gives effect to the constitutional mandate as well as the section 2 NEMA principles.<sup>119</sup> The NEMBA mandates the fair and equitable distribution of benefits resulting from the "bio-prospecting"<sup>120</sup> of biological resources, the management and conservation of biological diversity and its constituent parts, the sustainable use of indigenous biological resources and cooperative governance in biodiversity management and conservation within the NEMA framework.<sup>121</sup> Section 2 of the NEMBA states that the aforementioned national environmental management principles must be used to govern the execution of this Act.

The South African National Biodiversity Institute (SANBI), instituted by the NEMBA, is responsible for monitoring, advising and coordinating biodiversity in South Africa. Although NEMBA states that the sustainable use of biological resources is necessary

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<sup>118</sup> *Draft Guideline* 11.

<sup>119</sup> Section 1 of NEMA.

<sup>120</sup> Section 1 of the NEMBA: "Bioprospecting is defined as a systematic and organized search for useful products derived from bioresources including plants, microorganisms, animals, etc., that can be developed further for commercialisation and overall benefits of the society".

<sup>121</sup> Preamble of NEMBA.

to protect biodiversity and maintain intergenerational justice, the extent necessary to achieve these goals is not expressly addressed.<sup>122</sup> The use of a biological resource must "(a) not cause its long-term decline; (b) not disturb the ecological integrity of the ecosystem in which it occurs; and (c) ... ensure its continued use to meet the needs and aspirations of present and future generations of people".<sup>123</sup> Additionally, the NEMBA demands the preservation of endangered ecosystems and species, the management of invading alien species, the regulation of genetically modified organisms and the control of bio-prospecting.<sup>124</sup>

The NEMBA provides that government must publish a national biodiversity framework<sup>125</sup> and that the framework must be made public in accordance with the Act.<sup>126</sup> Section 39 states that the national biodiversity framework must "provide for an integrated, co-ordinated and uniform approach to biodiversity management by organs of state in all spheres of government, non-governmental organisations, the private sector, local communities, other stakeholders and the public".<sup>127</sup> The *National Biodiversity Framework, 2019-2024* (NBF) provides instructions on how to coordinate and align the actions of the various parties involved in maintaining and conserving the country's biodiversity. Its objectives include highlighting the "roles and responsibilities of key stakeholders, including key organs of state whose mandates directly impact biodiversity conservation and management" and "focusing attention on the most urgent strategies and actions required for conserving and managing South Africa's biodiversity".<sup>128</sup> Although the NBF does not define biodiversity offsetting, it refers to it under the *National Ecosystem Classification System*:

"National ecosystem types are important units underpinning the work of the South African biodiversity sector. They form the basis of systematic biodiversity plans that inform policy, management, monitoring and decision-making, including the national

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<sup>122</sup> Section of NEMBA defines indigenous biological resources as " ... any resource consisting of- (i) any living or dead animal, plant or other organism of an indigenous, species (ii) any derivative of such animal, plant or other organism; or (iii) any genetic material of such animal, plant or other organism".

<sup>123</sup> Definition of sustainable in Section 1 of NEMBA.

<sup>124</sup> Louw *Assessing the Effectiveness of Current Biodiversity Offset Strategies in South Africa: A Case Study on Current Perceptions and Views in The Mining Industry* 23-25.

<sup>125</sup> Section 38 of the NEMBA.

<sup>126</sup> GN 594 in GG 38282 of 4 December 2014.

<sup>127</sup> Section 39 of NEMBA.

<sup>128</sup> *South Africa's National Biodiversity Strategy and Action Plan* 10.

biodiversity assessment, development of protected area expansion strategies, listing of threatened ecosystems and environmental impact assessment; they provide the basis for ecosystem accounting, and the development of biodiversity offsets; and, are strategic informants of a wide-range of surveys and research activities."

SANBI published a *South African National Ecosystem Classification System Handbook* in 2021. The *Handbook* refers to biodiversity offsetting as follow:

"Ecosystem types are used in implementing biodiversity offsets, in which unavoidable loss of biodiversity as a result of certain types of development is offset by securing similar biodiversity elsewhere. Clearly defined ecosystem types provide the scientific foundation for determining when offsets are required, calculating offset ratios and identifying offset receiving areas".<sup>129</sup>

Bioregional plans, which map and identify Critical Biodiversity Areas (CBAs), and biodiversity management plans for ecosystems are particularly crucial tools for guiding land-use planning, environmental authorisations and natural resource management outside of protected areas but may also be used in decision-making in relation to biodiversity offsetting. Bioregional plans are strong tools as they may be used to guide land-use plans, integrated development strategies and spatial development frameworks. <sup>130</sup> The NEMBA must be read with protected areas legislation.

### 3.3.4 NEMPAA

The *National Environmental Management: Protected Areas Act* 53 of 2003 (NEMPAA) serves as the legislation which provides protection and conservation for ecologically viable areas representative of South Africa's biological diversity.<sup>131</sup> Section 9 of the NEMPAA specifies the types of areas that are protected by this Act.<sup>132</sup>

Biodiversity offsets are reliant on the NEMPAA because by generating an "ecologically equal" benefit elsewhere, biodiversity offsetting attempts to make up for the harm that development, such as growing cities, developing mines and building dams, does to

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<sup>129</sup> *South African National Ecosystem Classification System Handbook* 29.

<sup>130</sup> *South Africa's National Biodiversity Strategy and Action Plan* 29.

<sup>131</sup> Preamble of NEMPAA.

<sup>132</sup> Special nature reserves, national parks, national reserves and protected environments, World Heritage Sites, marine protected areas, specially protected forest areas, forest nature reserves and forest wilderness areas, mountain catchment areas.

species and habitats.<sup>133</sup> Biodiversity offsets could further be used as a tool to reach the targets for protected areas in South Africa which were determined by the Convention on Biological Diversity and relate to:

- "Management of biodiversity assets and their contribution to the economy, rural development, job creation and social well-being is enhanced."<sup>134</sup>
- Investments in ecological infrastructure enhance resilience and ensure benefits to society.<sup>135</sup>
- Biodiversity considerations are mainstreamed into policies, strategies and practices of a range of sectors.<sup>136</sup>
- People are mobilised to adopt practices that sustain the long-term benefits of biodiversity.<sup>137</sup>
- Conservation and management of biodiversity are improved through the development of an equitable and suitably skilled workforce.<sup>138</sup>
- Effective knowledge foundations, including indigenous knowledge and citizen science, support management, conservation and sustainable use of biodiversity."<sup>139</sup>

According to South Africa's commitments to the Convention on Biodiversity, the use of biodiversity offsets cannot interfere with or supplant national biodiversity targets and must complement these goals.

The following paragraph discusses the challenges regarding biodiversity offsetting as identified in the literature and discussed at a panel during the IAIAsa Conference of 2021.

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<sup>133</sup> Maron *et al* 2014 *Nature* 401-403. Biodiversity offsets do not always take the form of a protected area. Protected areas are a type of conservation measure that is established to conserve biodiversity and ecosystem services within a defined area. Biodiversity offsets can take a variety of forms, including habitat restoration, creation enhancement of habitat, and conservation of species, among others. However, biodiversity offsets and protected areas can be related in some cases. For example, in some cases, biodiversity offsets may be used to support the establishment or management of protected areas. In other cases, protected areas may be used as a form of biodiversity offset, for example, by designating an area for conservation to offset the loss of biodiversity resulting from development activities elsewhere.

<sup>134</sup> Convention on Biological Diversity Strategic Objective 1.

<sup>135</sup> Convention on Biological Diversity Strategic Objective 2.

<sup>136</sup> Convention on Biological Diversity Strategic Objective 3.

<sup>137</sup> Convention on Biological Diversity Strategic Objective 4.

<sup>138</sup> Convention on Biological Diversity Strategic Objective 5.

<sup>139</sup> Convention on Biological Diversity Strategic Objective 6.

### **3.4 Challenges**

The implementation of biodiversity offsets in South Africa currently faces several challenges, including:<sup>140</sup>

- (a) the lack of legislation and a "national policy" to direct and shape offset implementation;<sup>141</sup>
- (b) "insufficient capacity to evaluate, design, and implement offsets";<sup>142</sup>
- (c) "inconsistent decision-making";
- (d) difficulties "establishing sustainable financing mechanisms"; and<sup>143</sup>
- (e) insufficient "enforcement and monitoring, linked to poor drafting of licencing conditions and/or insufficient capacity to monitor".<sup>144</sup>

At a panel discussion at the IAIASA Conference held on 22 October 2021 the following additional challenges were raised that may impact decision-making on biodiversity offsets:<sup>145</sup>

- a. Inconsistency in the use of biodiversity offsets in South Africa has been exacerbated by the lack of a defined strategy, weakening the South African government's ability to produce the necessary biodiversity outcomes and support conservation.

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<sup>140</sup> Brownlie *et al* 2017 *Impact Assessment and Project Appraisal* 248-256.

<sup>141</sup> Brownlie *et al* 2017 *Impact Assessment and Project Appraisal* 248-256; Von Hase, Theart, Botha, Brownlie and Solomons Panel discussion "The Opportunities and Limitations of Biodiversity Offsets and Ecological Mitigation in Supporting SDGs".

<sup>142</sup> Brownlie *et al* 2017 *Impact Assessment and Project Appraisal* 248-256; Von Hase, Theart, Botha, Brownlie and Solomons Panel discussion "The Opportunities and Limitations of Biodiversity Offsets and Ecological Mitigation in Supporting SDGs".

<sup>143</sup> Brownlie *et al* 2017 *Impact Assessment and Project Appraisal* 248-256; Von Hase, Theart, Botha, Brownlie and Solomons Panel discussion "The Opportunities and Limitations of Biodiversity Offsets and Ecological Mitigation in Supporting SDGs".

<sup>144</sup> Brownlie *et al* 2017 *Impact Assessment and Project Appraisal* 248-256; Von Hase, Theart, Botha, Brownlie and Solomons Panel discussion "The Opportunities and Limitations of Biodiversity Offsets and Ecological Mitigation in Supporting SDGs".

<sup>145</sup> Von Hase, Theart, Botha, Brownlie and Solomons "Panel discussion The Opportunities and Limitations of Biodiversity Offsets and Ecological Mitigation in Supporting SDGs" IAIAsa 2021 virtual conference: Re-Thinking IEM in pursuit of the Sustainable Development Goals 17-19 August 2021. The challenges were raised by the panel members as well as the virtual audience.

- b. There is currently no case law on biodiversity offsetting which can assist the drafters of the policy, guidelines and legislation.
- c. Sometimes biodiversity offsetting is abused in order to get an authorisation. It is only after the authorisation is granted that it seems that the biodiversity offset cannot happen. Some developers are of the opinion that if you include a biodiversity offset option you will be allowed to continue with the development.<sup>146</sup>
- d. Despite the implementation of biodiversity offset programmes, there is still a loss of biodiversity. There is no evidence of durable outcomes.
- e. The provinces interpret biodiversity offsetting in a different manner.
- f. The conditions in the environmental authorisation with regard to biodiversity offsetting are not always enforceable.
- g. There is not enough stakeholder engagement on biodiversity offsetting.
- h. Offsets are not always used as a last resort or last in the mitigation hierarchy.
- i. The role of offsets is not clear.
- j. Restoration is not always an option as it takes many years for ecosystems to recover. It is sometimes better to conserve a site that is intact than to restore the degraded one.
- k. Biodiversity offsets are costly, the developer must be committed, and there are long-term commitments that need to be undertaken.
- l. There is uncertainty as to whether the developer will continuously have the financial and technical expertise to continue with the biodiversity offset project.
- m. There are no areas identified where no development can take place, for example, ecosystems that deliver services to the environment and people and that should not be degraded.
- n. There is uncertainty about who will benefit from the biodiversity offset.
- o. Compensation for communities or conservation banks has not yet been investigated.
- p. The financial implications of biodiversity offsets have not been determined yet.

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<sup>146</sup> Biodiversity offsets are the last step in the mitigation hierarchy.

- q. A biodiversity offset plan may be good on paper, may be implemented initially and the developer may then disappear with no consequences. The other environment in which the development takes place is then destroyed.
- r. The conservation authorities do not always have the means to continue with the project post-closure of the development. The biodiversity offset may become a liability for the state if the offset liability holder discontinues the management aspect after 30 years.

The significance of developing national policy and guidelines (which will be discussed in depth in Chapter 4) has been emphasised. The policy and guidelines will be discussed in the following chapter.

### ***3.5 Conclusion***

This chapter discussed the legal framework laying the foundation for biodiversity offsetting in South Africa. The Constitution, NEMA and NEMBA underpin biodiversity offsetting. NEMBA must be read with the NEMPAA. Although there are legal measures in place, there are no specific provisions in the NEMA, and the application of biodiversity offsetting relies on provincial guidelines. Biodiversity offsetting is included in the conditions of environmental authorisations. As stated, NEMBA does not specifically deal with biodiversity offsets as such, but the NBF refers to biodiversity offsets.

Practitioners raise many challenges with the implementation of biodiversity offsetting as the Department of Forestry, Fisheries and Environment's *Draft Policy* on biodiversity offsets has not been finalised. The following paragraph discussed the *Draft Policy* as well as the *Draft Guideline*.

## **Chapter 4: Draft Policy and Draft Guideline for Biodiversity Offsetting**

### ***4.1 Introduction***

This chapter aims to discuss the *Draft Policy* and the *Draft National Biodiversity Offset Guideline (Draft Guideline)* to determine if gaps exist in either document when measured against the international guidelines and the challenges raised by practitioners.

### ***4.2 Draft Policy***

The *Draft Policy* was first released in 2017.<sup>147</sup> The *Draft Policy's* goal is to ensure that the significant impacts of projects are addressed as required by NEMA, enabling long-term growth.

The *Draft Policy's* implementation will guarantee that appropriate redress is provided for major negative impacts on biodiversity brought on by development. The goal of the *Draft Policy* is to ensure that critical ecosystem functions and biodiversity are preserved for both current and future generations. According to the *Draft Policy*, the provinces in South Africa each have unique traits, institutional capacity and conservation goals for biodiversity. It is crucial that they create their own, individualised offset programmes that adhere to the *Draft Policy*.<sup>148</sup>

According to the *Draft Policy*, the main goal of environmental offsetting is to "slow and progressively reverse ecological deficit through counterbalancing human-induced negative effects on the environment that remain after every effort has been made to avoid, minimise and then rehabilitate impacts through avoiding, minimising and rehabilitating impacts or impacted areas elsewhere". The *Draft Policy* outlines general principles for environmental offsetting and suggests that additional specific sector-specific environmental offsetting guidelines be developed.<sup>149</sup>

The general principles set out in the *Draft Policy* are as follows:

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<sup>147</sup> GN 276 in GG 40733 of 31 March 2017.

<sup>148</sup> *Draft Policy 2*.

<sup>149</sup> *Draft Policy 1*.

### 1. The Eco-system approach:

This approach acknowledges the connection between ecosystems, biodiversity and the advantages they offer to humans via usage and cultural values. To allow for the assessment of cumulative consequences, a landscape-scale perspective is required rather than a site-specific size approach.<sup>150</sup>

### 2. Offsets – the last resort in the Mitigation Sequence:

Biodiversity offsets should be taken into consideration as a mitigation option only after all practical actions and options have been taken into consideration to, first, avoid or prevent significant impacts on biodiversity; second, to minimise the impacts; and, finally, to repair or restore areas harmed by the significant impacts.<sup>151</sup>

### 3. Limits to what can or should be offset:

When the EIA process reveals negative residual impacts on biodiversity that are of "medium" or "high" significance, biodiversity offsets are to be applied. Activities with "low" significant effects might not need to be compensated.<sup>152</sup>

### 4. Ecosystem protection:

By ensuring the long-term protection of priority ecosystems on the ground and enhancing their condition and functionality, biodiversity offsets should produce measurable benefits for biodiversity conservation.<sup>153</sup>

### 5.>NNL up to specified limits of acceptable change:

The design of biodiversity offsets should ensure that long-term scientific goals for protecting ecosystems and other biodiversity aspects are achievable and are not jeopardised by the planned activity.<sup>154</sup>

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<sup>150</sup> *Draft Policy 6.*

<sup>151</sup> *Draft Policy 6.*

<sup>152</sup> *Draft Policy 6.*

<sup>153</sup> *Draft Policy 6.*

<sup>154</sup> *Draft Policy 6.*

## 6. Locating biodiversity offsets in the landscape:

The placement of biodiversity offsets in the landscape should ensure that they contribute to the protection of important conservation areas, enhance connectivity between these areas and consolidate or enlarge already existing protected areas.<sup>155</sup>

## 7. Equivalence – 'like for like':

The same biodiversity components that would be adversely impacted by development should be included in or benefit from biodiversity offsets.<sup>156</sup>

## 8. Additionality – new action required:

The conservation advantages through biodiversity offsets must go beyond those mandated by law or those that would have happened anyhow had the offset not taken place.<sup>157</sup>

## 9. Timing and duration of biodiversity offsets:

The biodiversity offset should ideally be put into place before the activity has any negative effects, or as soon as it is practical and reasonable to do so. In order to “provide a long-term contribution to biodiversity protection, the biodiversity offset site should last at least as long as the residual impact on biodiversity, ideally in perpetuity.” To maintain the benefits of biodiversity, it should be monitored and maintained in an adaptable manner.<sup>158</sup>

## 10. Defensibility:

The best available biodiversity data, reliable research and, where applicable, local traditional or customary knowledge, should be utilised to quantify the residual negative impacts on biodiversity produced by a planned development as well as to create and execute biodiversity offsets.<sup>159</sup>

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<sup>155</sup> *Draft Policy 6.*

<sup>156</sup> *Draft Policy 7.*

<sup>157</sup> *Draft Policy 7.*

<sup>158</sup> *Draft Policy 7.*

<sup>159</sup> *Draft Policy 7.*

#### 11. Precaution:

To account for uncertainty regarding the assessment of residual negative impacts, the successful outcome and the timing of the biodiversity offset, the biodiversity offset must be developed in a risk-averse and careful manner.<sup>160</sup>

#### 12. Fairness and equity:

The "identification of residual negative consequences, as well as the design and execution of biodiversity offsets, should be carried out in an open and transparent way" that allows for stakeholder input, respects acknowledged rights and seeks to benefit those who may be impacted.<sup>161</sup>

#### 13. Non substitutable:

An offset for biodiversity cannot be substituted for or countered by compensation for social benefits, cultural heritage preservation, or any lingering effects unrelated to biodiversity.<sup>162</sup>

#### 14. Enforceable and auditable:

Clear management and performance goals must be able to be monitored and audited. They must additionally be enforceable by expressly stated, binding terms and common law contracts.<sup>163</sup>

The *Draft Policy* stipulates four main approaches to biodiversity offsetting, namely:<sup>164</sup>

- "Averting" the threat of impending or predicted biodiversity loss by "securing" places for long-term conservation and management.
- "Enhancing the management" of degraded areas.
- Addressing the "underlying causes or drivers" of biodiversity loss in a given region so that the risk of imminent or anticipated biodiversity loss can be

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<sup>160</sup> *Draft Policy* 7.

<sup>161</sup> *Draft Policy* 7.

<sup>162</sup> *Draft Policy* 7.

<sup>163</sup> *Draft Policy* 8.

<sup>164</sup> GN R267 in GG 40733 of March 2017 par 9.1.

reduced. This approach will be deemed an offset only if the risk is successfully eliminated "Re-creating or fully restoring" lost habitat.<sup>165</sup>

In order to give effect to the *Draft Policy*, the *Draft Guideline* was published for comment in 2022.

### **4.3 Draft Guideline**

The Department of Forestry, Fisheries and the Environment (DFFE) published an implementation guideline for biodiversity offsets in terms of section 24J of the NEMA following consultation on the *Draft Policy*.<sup>166</sup> The publication of the Guidelines is in line with the objectives of the *Draft Policy* and is intended to provide appropriate guidance on biodiversity offsetting in the process of applying for environmental authorisations.<sup>167</sup> The *Draft Guideline* acknowledges that "habitat loss is the primary" cause of biodiversity loss and that biodiversity offsets are increasingly recognised as a tool for ensuring ecologically sustainable development "by enhancing the conservation and sustainable use of priority ecosystems and fragile biodiversity-rich areas" that are not formally protected.<sup>168</sup>

#### *4.3.1 Desired outcomes*

The *Draft Guideline* stipulates the following outcomes for biodiversity offsetting:<sup>169</sup>

1. Biodiversity is long-term secured by protecting and managing ecosystems.
2. Efforts to safeguard biodiversity over the long term must be concentrated in regions designated as biodiversity priority areas, with a focus on the consolidation of these priority areas and the establishment of ecological corridors between the areas.
3. The natural infrastructure, together with the advantages and services it offers, is preserved and, if required, repaired.
4. No ecosystem with a threat status of vulnerable or, at least, concern should become endangered, and no endangered ecosystem should become critically endangered

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<sup>165</sup> *Draft Policy* 12.

<sup>166</sup> Preface of *Draft Guideline*.

<sup>167</sup> See 3.2.2 above.

<sup>168</sup> *Draft Guideline* 12.

<sup>169</sup> *Draft Guideline* 15

as a result of an authorised activity, or activities, or changes to land and resource use.<sup>170</sup>

#### 4.3.2 Principles

In addition to the NEMA principles,<sup>171</sup> and the principles in the *Draft Policy*, the *Draft Guideline* specifies the following principles:<sup>172</sup>

1. "Offsets are the final option in the mitigation hierarchy":<sup>173</sup>

The consideration of biodiversity offsets must wait until the previous steps in the mitigation ladder have been fully and practically addressed. However, it is not stipulated exactly how to determine or what scale to use to determine the severity of any actions that will trigger an offset within the context of biodiversity offsets.

2. "Ecological equivalence (like-for-like) is the preferred offset type":

To counteract a residual impact, biodiversity offsets should include the same or similar biodiversity components as those that will be adversely affected by the development, but only if offsets continue to be the only tool available to control residual negative impacts.

3. "Residual impacts on irreplaceable biodiversity cannot be offset":

The ecological equivalence (like-for-like) principle states that residual impacts cannot be mitigated when there are no additional possibilities in the landscape to make up for them. In other words, there would be a lasting effect on irreplaceable biodiversity, making it impossible to meet national biodiversity targets. In these situations, the development is typically not acceptable, and it is best to minimise any negative effects. Ecological compensation for residual impacts that cannot be mitigated should be taken into consideration in

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<sup>170</sup> *Draft Guideline* 15.

<sup>171</sup> Chapter 3.2.2.

<sup>172</sup> *Draft Guideline* 15.

<sup>173</sup> Chapter 2.5.

extremely rare situations when there is a compelling justification for doing so and that outweighs the general public interest.<sup>174</sup>

4. "Additionalty":

Biodiversity offset interventions must be in addition to, or over and above, any existing legal requirements for biodiversity conservation or actions that would have been taken had the biodiversity offset not occurred.

5. "The quality and quantity of residual impacts on biodiversity must be considered in decision-making involving biodiversity offsetting":

The "nature of the impacted biodiversity, its threat status and protection level, its ecological condition and the size of the impacted area must at the very least be taken into consideration when determining the significance of the residual impact to be counterbalanced by an offset intervention."

6. "Biodiversity offsets should embody the ecosystems approach and promote connectivity in the wider landscape":

The management of land, water and living resources should be undertaken in an integrated manner that encourages ecological functionality and persistence and should ideally be a component of biodiversity offsets.

7. "Biodiversity offsets must result in long-term security and management of priority biodiversity":

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<sup>174</sup> "Socio-economic advantages should not be confused with reasons for transcending public interest. Given the significance of protecting priority biodiversity, the claim that one or more activities would have socio-economic benefits will not be enough to qualify as reasons for overriding public interest on its own. Socio-economic advantages cannot compensate for the irreparable loss of biodiversity. If an activity is expected to have an adverse effect on irreplaceable species, or is terminally defective from a biodiversity standpoint, then the conditions under which it may be authorised must be exceptional and severe in scope and expense." See *Draft National Biodiversity Offset Guideline 17*.

In order to produce concrete and quantifiable benefits for biodiversity conservation, "biodiversity offsets should contribute to the long-term security of biodiversity priority areas and preserve or improve their ecological condition."

8. "Biodiversity offset design must be defensible and transparent":

The "design and implementation of biodiversity offsets should be based on the best available biodiversity information and sound science and should include local, traditional and conventional knowledge and values as appropriate. The size and significance of the residual impacts on biodiversity caused by a proposed activity should also be measured, as well as their design and implementation."

9. "Offsets must follow a risk-averse and cautious approach":

To account for uncertainty regarding the measurement of the scope and importance of the residual consequences, as well as uncertainties regarding the success and timeliness of the biodiversity offset intervention, a "biodiversity offset must be constructed in a risk-averse and careful manner."

10. "Offsets must be fair and equitable":

The identification of residual impacts, as well as the creation and implementation of biodiversity offsets to mitigate these impacts, must be done in an open and transparent manner, with the participation of stakeholders, the observance of recognised rights and the pursuit of beneficial outcomes for those who will be impacted.

11. "Offset intervention timing":

It is preferable to implement a biodiversity offset before the activity has any negative effects or as soon as is acceptable and practical afterwards.

12. "Biodiversity offsets must be measurable, auditable and enforceable".

A biodiversity offset's desired results must be concretely quantifiable on the ground. To make sure that the counterbalancing offset is still sufficient, residual consequences should be tracked and quantified once the development is under way.

The next paragraph will discuss the procedures for implementing biodiversity offsets.

#### **4.4 Biodiversity offset procedures**

The *Draft Guideline* set out the following procedures:

1. Identifying the need for a biodiversity offset:

Experts evaluate the likelihood that there will be severe, lasting, negative impacts on biodiversity that would necessitate a biodiversity offset.<sup>175</sup>

2. Determining the requirements of a biodiversity offset and compilation of a Biodiversity Offset Report:

This step entails the creation of a biodiversity offset report that outlines, amongst other things, the biodiversity outcomes that must be accomplished when implementing a biodiversity offset and the potential sites for that offset.<sup>176</sup>

3. Selecting a biodiversity offset site:

A biodiversity offset site must be chosen that complies with the specifications laid out in a biodiversity offset report and the requirements of an environmental assessment. The best option for the biodiversity offset site is to be chosen from the list of potential locations provided in the Biodiversity Offset Report.<sup>177</sup>

4. Securing the biodiversity offset site:

The biodiversity offset site must be permanently protected. The site's designation as a protected area under the NEMPAA would secure the biodiversity offset site.<sup>178</sup>

5. Preparing a Biodiversity Offset Management Plan:

A biodiversity offset management plan outlines the precise actions that must be followed to accomplish the desired biodiversity outcomes on the biodiversity offset site.<sup>179</sup>

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<sup>175</sup> *Draft Guideline* 20.

<sup>176</sup> *Draft Guideline* 21.

<sup>177</sup> *Draft Guideline* 22.

<sup>178</sup> *Draft Guideline* 23.

<sup>179</sup> *Draft Guideline* 23.

6. Preparing biodiversity offset conditions for an environmental authorisation:  
This step entails that the competent authority lists conditions in an environmental authorisation that demands the implementation of a biodiversity offset.<sup>180</sup>
7. Concluding a Biodiversity Offset Implementation Agreement:  
Here, the applicant and an implementing party must sign a Biodiversity Offset Implementation Agreement. The terms of the Biodiversity Offset Management Plan must be incorporated into the Agreement and are binding upon the parties.<sup>181</sup>

Even if the aforementioned process outlined in the *Draft Guideline* appears to be sufficient, biodiversity offsetting has not always been implemented in South Africa in a justifiable and consistent manner, particularly in the context of environmental impact assessments. The reason for this being that the Guidelines are not finalised but despite that biodiversity offsets are included into the conditions of authorisations. By outlining the fundamental principles of biodiversity offsetting and providing procedures on when biodiversity offsetting is necessary, how to determine the requirements for a biodiversity offset and how to ensure that biodiversity offsets are implemented, the *Draft Policy* and *Draft Guideline* seek to address the shortcomings of biodiversity offset practice in that context.

#### ***4.5 Draft Policy and Draft Guideline versus International standards***

From the above, it can be observed that, whilst the *Draft Policy* and the *Draft Guidelines* principles are similar when compared to Chapter 2.5, the main principle in both documents that is not addressed is "Governance and Permanence",<sup>182</sup> which could be resolved by promulgating legislation that ensures that there will be no confusion as to which guidelines and procedures to follow when biodiversity offsets must be implemented. Differences include the types of biodiversity offsets mentioned in international standards such as bio-banking and in-lieu fees which have not yet been incorporated into the *Draft Policy* and the *Draft Guideline*.<sup>183</sup>

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<sup>180</sup> *Draft Guideline* 23.

<sup>181</sup> *Draft Guideline* 24.

<sup>182</sup> See 2.5.

<sup>183</sup> See 2.5. Due to the scope of the mini-dissertation these types of biodiversity offsets could not be discussed.

## **4.6 Conclusion**

This chapter discussed the *Draft Policy* and the *Draft Guideline* and measured this against the international principles and guidelines regarding biodiversity offsets. It was determined that the international standards serve as a basis for South African policy and guidelines but there are differences in the basic principles such as governance, permanence and approaches that are implemented in the international standards such as bio-banking and in-lieu fees.

The international standards are useful in providing guidance, but they must take into account the particular political, social, environmental and economic pressures faced by South Africa when they are implemented here. The *Draft Policy* and *Draft Guidelines* are tailored to South Africa's specific needs.

The next chapter discusses the Australian policies and legislation on biodiversity offsetting.

## **Chapter 5: Australian legal framework**

### ***5.1 Introduction***

This chapter focuses on the legal framework for biodiversity offsetting in Australia which is regulated through policies and legislation. The framework, principles and procedures will also be compared to South Africa in order to determine if there is anything South Africa can find useful from that of Australia.

### ***5.2 Background***

The Commonwealth of Australia consists six states, together with the Northern Territory and the Australian Capital Territory, which are internal territories. The Commonwealth is also referred to as the federal government. The *Constitution*<sup>184</sup> describes the role of each of the territories. Some of the competencies are shared amongst the federal government and the states. The territories have a high degree of autonomy though.<sup>185</sup> However, compared to the territories, the states enjoy a far higher level of autonomy. For instance, while the territories are governed by federal law, each state is given autonomy by its own constitution.<sup>186</sup>

### ***5.3 Legal framework***

#### ***5.3.1 General***

In Australia, the use of biodiversity offsets, within the framework of the mitigation hierarchy, has been growing quickly as a method to mitigate the impacts of developments on biodiversity. The Australian public is in favour of “market-based instruments for conservation”. They regard these instruments as an effective mechanism to protect biodiversity for future generations, while allowing natural resource extraction in certain areas. However, extraction of natural resources impact on biodiversity and therefore the environmental, social and economic impacts must be mitigated. This has led to the “growth and use of biodiversity offsets and associated

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<sup>184</sup> Section 62 of the *Commonwealth of Australia Constitution Act* 6 of 1977.

<sup>185</sup> Australian Government: Department of Foreign Affairs and Trade "Protocol Guidelines".

<sup>186</sup> Australian Government: Department of Foreign Affairs and Trade "Protocol Guidelines".

markets in Australia".<sup>187</sup> South Africa has not introduced biodiversity markets as a concept.

### 5.3.2 *Environment Protection and Biodiversity Conservation Act*

Even though more than fifty countries have constitutionally entrenched environmental rights, Australia does not have an environmental constitutional right.<sup>188</sup> The primary environmental law is the Commonwealth *Environment Protection and Biodiversity Conservation Act* 91 of 1999 (EPBC Act). It is regarded as Australia's principal environmental legislation. This Act is comparable to the NEMA and the NEMBA.<sup>189</sup> Both the national government and the sub-national governments have legislation and jurisdiction over biodiversity-related concerns.<sup>190</sup> In South Africa, national government and the provinces have jurisdiction over environmental matters, which include biodiversity.<sup>191</sup>

In both terrestrial and marine ecosystems, the EPBC Act intends to safeguard "matters of national environmental significance," such as critically endangered species and ecological communities, migratory species, World Heritage sites, internationally "significant wetlands, and the Great Barrier Reef Marine Park".<sup>192</sup>

Unlike NEMA or NEMBA, the EPBC Act refers specifically to biodiversity offsets. In the context of the EPBC Act, offsets are mechanisms, "available through environmental impact assessment and approval processes, to compensate for the impacts of developments on those matters of national environmental significance protected by the EPBC Act".<sup>193</sup> Biodiversity offsets are only available for assessments made under the EPBC Act if the remaining residual impacts are assessed to be severe in relation to

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<sup>187</sup> Hawdon, Parham and Marsh 2015 *Fauna and Flora International* 9.

<sup>188</sup> Crawford 1991 *SLR* 13.

<sup>189</sup> See 3.2.2. South Africa has sector-specific legislation that deals with the different matters listed here. In addition to the NEMA and NEMBA, see the *World Heritage Act* 49 of 1999, the *National Environmental Management: Integrated Coastal Management Act* 24 of 2008, *Marine Living Resources Act* 18 of 1998.

<sup>190</sup> Hawdon, Parham and Marsh 2015 *Fauna and Flora International* 9.

<sup>191</sup> Schedule 4A of the Constitution.

<sup>192</sup> Section 3(1)(a) of the EPBC Act states that "to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance".

<sup>193</sup> Section 5 of the EPBC Act; also see Hawdon, Parham and Marsh 2015 *Fauna and Flora International* 2-3.

the guideline criteria.<sup>194</sup> Each proposed development must adhere to the pertinent sub-national legislation in addition to the requirements of the national legislation.

Biodiversity offsets are "subject to the same legislative requirements" that apply to all "approval conditions" under Part 9<sup>195</sup> of the EPBC Act.<sup>196</sup> The EPBC Act identifies eight principles<sup>197</sup> for the use of biodiversity offsets. To guarantee consistency, openness and equity under the EPBC Act, any proposed biodiversity offsets are evaluated in accordance with the following eight criteria:<sup>198</sup>

1. Environmental offsets should be targeted to the matter protected by the EPBC Act that is being impacted.
2. A flexible approach should be taken to the design and use of environmental offsets to achieve long-term and certain conservation outcomes which are cost-effective for proponents.
3. Environmental offsets should deliver a real conservation outcome.
4. Environmental offsets should be developed as a package of actions - which may include both direct and indirect offsets.
5. Environmental offsets should, as a minimum, be commensurate with the magnitude of the impacts of the development and ideally deliver outcomes that are 'like for like'.
6. Environmental offsets should be located within the same general area as the development activity.
7. Environmental offsets should be delivered in a timely manner and be long-lasting.
8. Environmental offsets should be enforceable, monitored and audited."

South Africa does not have a similar provision in legislation, but the *Draft Guidelines* contain some of these criteria which is the equivalent of the EPBC Act of Australia.

The EPBC Act further sets out principles of ecologically sustainable development in section 3A. A decision-making process should effectively take into account both long-term and short-term economic, environmental, social and equitable factors. If serious

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<sup>194</sup> Section 66 of the EPBC Act.

<sup>195</sup> Which includes the "Approval of Actions".

<sup>196</sup> Sections 134 and 136 of the EPBC Act.

<sup>197</sup> Sections 136–140A of the EPBC Act.

<sup>198</sup> Sections 136–140A of the EPBC Act.

or irreversible environmental damage is a threat, a lack of complete scientific certainty should not be used as an excuse to put off taking action to “prevent environmental degradation. The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.” It is also important that intergenerational equity (which is the current “generation ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations) should be promoted.”<sup>199</sup> These principles are similar as those in section 2 of NEMA, except that inter-generational equity is not described. The South African Constitution also refers to inter-generational equity.<sup>200</sup>

A "proposed action" must be referred for an evaluation under the EPBC Act if it is anticipated to have a significant impact on any environmental asset or other protected activity.<sup>201</sup> Biodiversity offsetting is intended to safeguard national environmental assets, also referred to as matters of national environmental significance.<sup>202</sup> Under the EPBC Act, offsets are taken into account where appropriate throughout the application phase of an EIA.<sup>203</sup> Offsets are not necessary for all authorisations under the EPBC Act. If a proposed action's impacts are not considered significant or could be avoided or mitigated, then biodiversity offsetting will not be allowed.<sup>204</sup> In South Africa, biodiversity offsets are included as a condition in the environmental authorisation.<sup>205</sup>

This EPBC Act's *Environmental Offsets Policy* addresses issues of national environmental importance, such as ecological communities<sup>206</sup> that are endangered or severely endangered and nationally threatened species that are listed in the EPBC Act.<sup>207</sup> The “EPBC Act and its *Environmental Offset Policy* recognise the potential for interaction with state and territory offset policies. One of the principles of the *EPBC*

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<sup>199</sup> Section 3A of the EPBC Act.

<sup>200</sup> Section 24(b) of the Constitution.

<sup>201</sup> Department of the Environment, Submission 79 p 1: *EPBC Act Environmental Offset Policy 1*.

<sup>202</sup> *EPBC Act Environmental Offset Policy 1*.

<sup>203</sup> *EPBC Act Environmental Offset Policy 1*.

<sup>204</sup> *EPBC Act Environmental Offset Policy 12*.

<sup>205</sup> See 3.3.

<sup>206</sup> "An ecological community is a naturally occurring group of native plants, animals and other organisms that are interacting in a unique habitat. Its structure, composition and distribution are determined by environmental factors such as soil type, position in the landscape, altitude, climate and water availability." See *EPBC Act Environmental Offset Policy 4*.

<sup>207</sup> See 5.3.2.

*Act Environmental Offsets Policy* (hereafter *Environmental Offsets Policy*) is that suitable offsets must be additional to what is already required, determined by planning regulations or agreed to under other schemes, but this does not preclude the recognition of state or territory offsets that may be suitable as offsets under the EPBC Act for the same action."<sup>208</sup>

### 5.3.2 The Environmental Offset Policy

The *Environmental Offsets Policy* prescribes the methodology for evaluating offsets. It describes what offsets are and when they could be utilised. Ten policy guiding principles are also stated in the Environmental Offsets Policy:

Principle 1: "Suitable offsets must deliver an overall conservation outcome that improves or maintains the viability of the aspect of the environment that is protected by national environment law and affected by the proposed action."

Principle 2: "Suitable offsets must be built around direct offsets but may include other compensatory measures."

Principle 3: "Suitable offsets must be in proportion to the level of statutory protection that applies to the protected matter."

Principle 4: "Suitable offsets must be of a size and scale proportionate to the residual impacts on the protected matter."

Principle 5: "Suitable offsets must effectively account for and manage the risks of the offset not succeeding."

Principle 6: "Suitable offsets must be additional to what is already required, determined by law or planning regulations or agreed to under other schemes or programs."

Principle 7: "Suitable offsets must be efficient, effective, timely, transparent, scientifically robust and reasonable."

Principle 8: "Suitable offsets must have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced."

Principle 9: "In assessing the suitability of an offset, government decision-making will be informed by scientifically robust information and incorporate the precautionary principle in the absence of scientific certainty."

Principle 10: "In assessing the suitability of an offset, government decision-making will be conducted in a consistent and transparent manner."

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<sup>208</sup> See 5.3.2.

Principles 1 to 8 explain what an offset must do to be considered suitable. Principles nine and ten provide guidance on how the minister will make decisions when assessing offset proposals. Some of the principles are similar to the South African principles, however, there is more emphasis on transparency, consistency and the scientific information that must inform the decision-making. The principles also reflect the EPBC Act's provision on biodiversity offsets, which could be considered for South Africa.

The next paragraph will explain the implementation of biodiversity offsetting.

#### ***5.4 Approach to implementation of biodiversity offsets***

There are three fundamental and typical concepts for biodiversity offsetting and most Australian policies include them as well. These concepts are like-for-like, NNL and additionality. These concepts might offer a basic method of comparing offsetting results. The extent to which the data supplied can show that these principles are being followed, could be used to determine whether or not an offset strategy is successful.<sup>209</sup> The South African *Draft Guideline* also mention these concepts.

In order to successfully implement biodiversity offsets in Australia, the following must be achieved:<sup>210</sup> Environmental offsets must:<sup>211</sup>

1. Generate a NG, also known as an "overall conservation outcome", which enhances or sustains the viability of the environmental component impacted by the proposed action and falls under the purview of the Environmental Offsets Policy.<sup>212</sup>

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<sup>209</sup> Bull *et al* 2013 *Oryx* 369-380.

<sup>210</sup> The principles have been developed to be consistent with the *EPBC Act Environmental Offsets Policy*.

<sup>211</sup> *EPBC Act Environmental Offsets Policy*.

<sup>212</sup> If a biodiversity offset is designed to simply sustain or maintain an existing environmental component, it may not necessarily result in a net gain in biodiversity. A net gain in biodiversity refers to an increase in the quantity or quality of biodiversity that results from a conservation action, such as a biodiversity offset.

A biodiversity offset that sustains an existing environmental component may be considered a "no net loss" offset. This means that the offset is designed to ensure that there is no net loss of biodiversity resulting from development activities, but it may not result in a net gain.

However, it is important to note that the concept of "no net loss" is often considered a minimum standard for biodiversity conservation and may not be sufficient to address the ongoing decline in

2. Be based on "direct offsets but may also include indirect offsets" and other compensatory measures.
3. Be proportionate to the degree of "legal protection that the protected matter is afforded".
4. Be proportional in "size and scope" to the lasting effects on the protected matter (like for like).<sup>213</sup>
5. Adequately take into consideration and control the risks of the offset failing.
6. Be more than what is necessary, as defined by law, planning laws, or what is agreed upon under other plans or programmes, which is another name for additionality.<sup>214</sup>
7. Be productive, timely, transparent, backed by reliable science and reasonable.
8. Possess open governance structures that can be easily measured, followed, audited and enforced.<sup>215</sup>

Again, the outcomes of a biodiversity offset follow the EPBC Act's provisions. In addition to what was stated above, with regard to the emphasis on transparency, science etc, the fact that the biodiversity offset planning must also set out the risks when such a project fails, is important to consider for South Africa. This may address some of the challenges raised by practitioners.<sup>216</sup>

In determining whether an offset is appropriate,<sup>217</sup> the government will:

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biodiversity. To achieve a net gain in biodiversity, offsets should be designed to enhance or restore biodiversity beyond what is currently present or compensate for past losses.

<sup>213</sup> According to the like-for-like principle, any offset must be related to the same precise issue that is being affected.

<sup>214</sup> Additionality refers to the extent to which a conservation action goes beyond what would have happened in the absence of that action, while NG refers to an increase in the quantity or quality of biodiversity resulting from a conservation action. While both concepts are important for effective biodiversity conservation, they focus on different aspects of the conservation outcomes that should be achieved through conservation actions, including biodiversity offsets.

<sup>215</sup> *EPBC Act Environmental Offset Policy* 5.

<sup>216</sup> See 3.4.

<sup>217</sup> Also see 5.3.2.

1. Be informed by data with a strong scientific foundation and apply the precautionary principle when there is no scientific assurance; and<sup>218</sup>
2. Consider whether the process of determining biodiversity offsets was conducted in an organised, open and consistent manner.<sup>219</sup>

### ***5.5 Procedure for implementing biodiversity offsets***

The following procedure is prescribed to implement biodiversity offsets:

1. Identify which prescribed matters are likely to be impacted, evaluate the extent, scope and context of the impacts and analyse the possible effects on the viability of prescribed matters in the impact region, including a determination of whether the impacts will be permanent or temporary.<sup>220</sup>
2. Consider the planning and design of the activity to see if the effects on the specified items can be minimised. Next, see if any of the problems can be completely avoided by choosing a different location or better positioning infrastructure.<sup>221</sup>
3. Consider the effectiveness of developing impact mitigation strategies, such as environmental management plans, putting erosion control measures in place, managing fires, fencing off environmentally sensitive areas and other environmental management actions, in order to ascertain whether the impacts on prescribed matters can be mitigated.<sup>222</sup>
4. Analyse the residual impacts in light of the pertinent substantial impact criteria to decide if they are likely to be significant.<sup>223</sup>
5. Determine if a reasonable offset is able to address the impact's significance.<sup>224</sup>

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<sup>218</sup> EPBC Act Environmental Offset Policy 5.

<sup>219</sup> EPBC Act Environmental Offset Policy 5.

<sup>220</sup> EPBC Act Environmental Offset Policy 18.

<sup>221</sup> EPBC Act Environmental Offset Policy 18.

<sup>222</sup> EPBC Act Environmental Offset Policy 18.

<sup>223</sup> EPBC Act Environmental Offset Policy 18.

<sup>224</sup> EPBC Act Environmental Offset Policy 18.

In comparison to the Australian position, the South African procedure is described in more detail.

## **5.6 State policies and legislation in relation to biodiversity offsets**

There are seven sub-national authorities that have functioning offset programmes and policies (excluding the EPBC Act). The policies of the states include:<sup>225</sup>

### 1. Victoria

- Guidelines for the removal, destruction or lopping of native vegetation.<sup>226</sup>
- Biodiversity Conservation Strategy for Melbourne's Growth Corridors.<sup>227</sup>

### 2. New South Wales

- Biodiversity Offset Scheme.<sup>228</sup>

### 3. Queensland

- Queensland Environmental Offsets Policy.<sup>229</sup>

### 4. South Australia

- Policy for a Significant Environmental Benefit.<sup>230</sup>

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<sup>225</sup> These policies and other documents are mentioned for completeness' sake. However, due to the scope of the mini dissertation, they cannot be discussed in detail.

<sup>226</sup> Department of Environment, Land, Water and Planning 2017: Guidelines for the removal, destruction or lopping of native vegetation [https://www.environment.vic.gov.au/\\_\\_data/assets/pdf\\_file/0021/91146/Guidelines-for-the-removal,-destruction-or-lopping-of-native-vegetation,-2017.pdf](https://www.environment.vic.gov.au/__data/assets/pdf_file/0021/91146/Guidelines-for-the-removal,-destruction-or-lopping-of-native-vegetation,-2017.pdf).

<sup>227</sup> The State of Victoria Department of Environment and Primary Industries 2013: Biodiversity Conservation Strategy for Melbourne's Growth Corridors [https://www.msa.vic.gov.au/\\_\\_data/assets/pdf\\_file/0032/64787/Biodiversity-Conservation-Strategy-Jun-2013.pdf](https://www.msa.vic.gov.au/__data/assets/pdf_file/0032/64787/Biodiversity-Conservation-Strategy-Jun-2013.pdf).

<sup>228</sup> New South Wales: Biodiversity Offsets Scheme 2016 <https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme>.

<sup>229</sup> The Queensland Environmental Offsets Policy 2022 [https://environment.des.qld.gov.au/\\_\\_data/assets/pdf\\_file/0022/255226/offsets-policyv1-11.pdf](https://environment.des.qld.gov.au/__data/assets/pdf_file/0022/255226/offsets-policyv1-11.pdf).

<sup>230</sup> Policy for a Significant Environmental Benefit 2017 [https://cdn.environment.sa.gov.au/environment/docs/native\\_vegetation\\_significant\\_environmental\\_benefit\\_policy\\_1\\_july\\_2019.pdf](https://cdn.environment.sa.gov.au/environment/docs/native_vegetation_significant_environmental_benefit_policy_1_july_2019.pdf).

## 5. Australian Capital Territory (ACT)

- ACT Environmental Offsets Policy.<sup>231</sup>

## 6. Western Australian (WA)

- WA Environmental Offsets Policy.<sup>232</sup>

## 7. Tasmania

- General Principles for Biodiversity Offsets.<sup>233</sup>
- Guidelines for Establishing Offsets for Impacts on Natural Values within the Dam Assessment Framework.<sup>234</sup>
- Guidelines for the use of Biodiversity Offsets in the local planning approval process – Southern Tasmanian Councils Authority.<sup>235</sup>

Some factors may vary in the implementation of biodiversity offsetting in the states and territories:

- The availability of a well-established offset market, which makes it possible to secure offsets quickly.
- Which offsets are needed and the methods by which they are calculated. For instance, the EPBC Act only "requires a residual significant impact" on "Matters of National Environmental Significance", which includes listed migratory shorebirds, listed threatened species and ecological communities and listed

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<sup>231</sup> ACT Environmental Offsets Policy <https://www.environment.act.gov.au/nature-conservation/environmental-offsets-policy/act-environmental-offsets-policy>.

<sup>232</sup> WA Environmental Offsets Policy 2011 [https://www.epa.wa.gov.au/sites/default/files/Policies\\_and\\_Guidance/WAEnvOffsetsPolicy-270911.pdf](https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/WAEnvOffsetsPolicy-270911.pdf).

<sup>233</sup> General Principles for Biodiversity Offsets 2013 [https://www.kingborough.tas.gov.au/wp-content/uploads/2017/05/Biodiversity-Offset-Guidelines\\_Final\\_April2013.pdf](https://www.kingborough.tas.gov.au/wp-content/uploads/2017/05/Biodiversity-Offset-Guidelines_Final_April2013.pdf).

<sup>234</sup> Guidelines for Establishing Offsets for Impacts on Natural Values within the Dam Assessment Framework 2016 [https://nre.tas.gov.au/Documents/Dam%20works%20offsets\\_approval%20guidelines.pdf](https://nre.tas.gov.au/Documents/Dam%20works%20offsets_approval%20guidelines.pdf).

<sup>235</sup> Guidelines for the use of Biodiversity Offsets in the local planning approval process – Southern Tasmanian Councils Authority 2020 [https://stca.tas.gov.au/wp-content/uploads/2020/02/Background-Report-No.5\\_Natural-Values.pdf](https://stca.tas.gov.au/wp-content/uploads/2020/02/Background-Report-No.5_Natural-Values.pdf).

Wetlands of International Significance. Most jurisdictions demand offsets for the removal of native vegetation in addition to those listed in the EPBC Act.

- The list of operations, types of developments and planned areas that are exempted from offsets may vary.
- Potential for a negotiated resolution in cases where offset criteria cannot be met, such as when a landowner is not willing to sign an offset agreement.
- The offset programmes in Victoria and New South Wales have been in place the longest and call for like-for-like offsets.
- The evaluation of residual consequences to threatened native flora, koala habitat and marine fish habitat was needed under a number of distinct offset programmes that Queensland had until recently.<sup>236</sup>

South Africa does not provide for markets but can learn from the states in that it should provide for negotiation where a landowner might not be willing to sign an offset agreement or contract. It is also important to note that Australia only allows biodiversity offsetting in particular circumstances and not for all possible activities and that the outcome of the biodiversity offset programme should be conservation.

### ***5.7 Comparison between South Africa's and Australia's frameworks***

The main difference between the legal frameworks of Australia and South Africa would be that Australian legislation specifically addresses biodiversity offsetting in its primary environmental legislation. The Act's provisions are echoed in the policy. Each state has its own policies which spell out the manner of implementation of biodiversity offsets in the specific territories listed above. South Africa only has Guidelines for two out of the nine provinces and a *Draft Policy and Draft Guideline*, which cause inconsistencies in the application of biodiversity offsetting.<sup>237</sup>

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<sup>236</sup> Bull *et al*/2013 *Oryx* 369-380.

<sup>237</sup> See 4.4.

Furthermore, the approaches to the procedures for the implementation of biodiversity offsetting differ as they do not address all the same factors, for example:

The following table compares the NEMA and *Draft Guideline* principles (3.3.2 and 4.2.3) with the EPBC Act Principles (5.4):

**Table 1: Comparison between Biodiversity Offset Guidelines – South Africa and Australia**

<b>NEMA and the <i>Draft Guideline</i><sup>238</sup></b>	<b>EPBC Act and <i>Environmental Offset Policy</i></b>
"Offsets are the final option in the mitigation hierarchy."	
"Ecological equivalence (like-for-like) is the preferred offset type."	"Environmental offsets should, as a minimum, be commensurate with the magnitude of the impacts of the development and ideally deliver outcomes that are 'like for like'."
"Residual impacts on irreplaceable biodiversity cannot be offset."	The Act lists specific instances where biodiversity offsets will be allowed, even if they cause irreparable loss.
Additionality.	"Suitable offsets must be additional to what is already required, determined by law or planning regulations or agreed to under other schemes or programs"
This is not specifically specified.	"Environmental offsets should deliver a real conservation outcome."
"The quality and quantity of residual impacts on biodiversity must be considered in decision-making involving biodiversity offsetting."	No similar provision
"Biodiversity offsets should embody the ecosystems approach and promote connectivity in the wider landscape."	No similar approach but stating that the offsetting should be in the general vicinity of the development.
"Biodiversity offsets must result in long-term security and management of priority biodiversity."	"Environmental offsets should be delivered in a timely manner and be long lasting."
"Biodiversity offset design must be defensible and transparent."	"Suitable offsets must be efficient, effective, timely, transparent, scientifically robust and reasonable."

<sup>238</sup> In addition to the NEMA s 2 principles, the *Draft Guideline* sets out principles for biodiversity offsets in South Africa.

<b>NEMA and the <i>Draft Guideline</i><sup>238</sup></b>	<b>EPBC Act and <i>Environmental Offset Policy</i></b>
"Offsets must follow a risk-averse and cautious approach."	No similar provision but listed sustainable development principles which will include this principle too.
Cost-effectiveness is not addressed.	"A flexible approach should be taken to the design and use of environmental offsets to achieve long-term and certain conservation outcomes which are cost-effective for proponents".
"Biodiversity offsets must be defensible."	Decisions should be based on science and data.
"Offsets must be fair and equitable."	No similar provision
No similar provision	"Environmental offsets should be developed as a package of actions - which may include both direct and indirect offsets".
"Offset intervention timing."	This is implied in the principles.
No limitation	"Environmental offsets should be targeted to the matter protected by the EPBC Act that is being impacted."
"Biodiversity offsets must be measurable, auditable and enforceable."	"Environmental offsets should be enforceable, monitored and audited."
No similar provision.	The offsets must counter-balance the risks if the offset fails.

From the above, it seems that South Africa has distilled the main principles as they correlate with the Australian principles. In addition, South Africa goes further and also included principles related to offsets being the final step of the mitigation hierarchy, "residual impacts on irreplaceable biodiversity cannot be offset, the quality and quantity of residual impacts on biodiversity must be considered in decision-making involving biodiversity offsetting, biodiversity offsets should embody the ecosystems approach and promote connectivity in the wider landscape and offset design must be defensible and transparent." In addition to these principles, the Australian principles also refer to specific impacts that can be offset, that the outcome must be

conservation, cost-effectiveness of the offset; that the decision should be based on science and data; and that measures should be in place if the offset project fails.

South Africa and Australia differ in the regulation of biodiversity offsets, for example:

1. In Australia, there have been instances where offset plans have been created and negotiated with stakeholders apart from the project EIA delivery. In many situations, the nature of the offset plan is determined by regulatory agreements rather than the magnitude and breadth of residual consequences.<sup>239</sup>
2. The *Draft Guideline* makes no specific provision for prior and informed consent or consultation<sup>240</sup> with stakeholders,<sup>241</sup> whereas in Australia section 303FR of the EPBC Act makes explicit provision for public consultation. Section 303FR states that before making a decision, the Minister must publish a notice online that outlines the proposal to make the declaration; provides enough details to allow individuals and organisations to consider the proposal; and invites individuals and organisations to submit written comments to the Minister regarding the proposal within the timeframe specified in the notice.
3. There is an insufficient capability for compliance and enforcement in South Africa. The Centre for Environmental Rights reports in 2015 that there is a trend of decreasing budgets for the compliance and enforcement units of South African environmental authorities, which is leading to fewer inspections, longer completion times for inspection reports, fewer compliance notices and directives being issued and fewer criminal convictions being obtained.<sup>242</sup> The Australian proponent is penalised if an agreed-upon offset is not put into effect. The EPBC Act (and other schemes) has penalties that apply to the violation of offset requirements.<sup>243</sup>

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<sup>239</sup> *Draft Guideline* 12 and also see Lukey *et al* 2017 *Ecosystem Services* 281-290.

<sup>240</sup> See Baleni and Others v Minister of Mineral Resources and Others (73768/2016) [2018] ZAGPPHC 829; [2019] 1 All SA 358 (GP) on prior and informed consent.

<sup>241</sup> *Draft Guideline* and also see Lukey *et al* 2017 *Ecosystem Services* 281-290.

<sup>242</sup> Green Economy Policy Review of South Africa's Industrial Policy Framework 2020 16-18, Centre for Environmental Rights 2015 also see Lukey *et al* 2017 *Ecosystem Services* 281-290.

<sup>243</sup> Hawdon, Parham and Marsh 2015 *Fauna and Flora International* 1-2

4. A lack of understanding about biodiversity offsetting exists in South Africa. A tiny number of consultants, researchers and non-governmental organisations (NGOs) with an emphasis on biodiversity make up South Africa's small offsetting community. These individuals also include government officials who include offset conditions in authorisations. There is no shared knowledge of the theory and use of offsetting, not even within this small group. As a result, discussions about the usefulness or effectiveness of the notion are typically complicated by varying and frequently contradictory interpretations.<sup>244</sup> In Australia, there are a variety of offset schemes and policies which make it possible for each territory to have specially designed biodiversity offsets so there is no confusion.

## **5.8 Conclusion**

This chapter discussed the legal framework for biodiversity offsetting in Australia as well as the policies which govern biodiversity offsetting. Furthermore, this chapter dealt with the approach to regulating biodiversity offsetting and also made a comparison between South Africa's and Australia's legal frameworks regarding biodiversity offsetting.

It was established that in Australia there is no constitutional right pertaining to the environment as there is in South Africa. The EPBC Act is the overarching environmental legislation and the *EPBC Act's Policy on Biodiversity Offsets* regulate environmental offsets. Each state has its own specific policies which are based on the EPBC Policy.

Australia uses advanced procedures for offsetting such as biobanking which has not been implemented in South Africa.

Although in principle, biodiversity offsetting seems to be very similar in both countries, it differs in the following ways:

- In Australia, biodiversity offsetting can take place separately from the EIA process whereas, in South Africa, this is not possible at the moment.

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<sup>244</sup> Hawdon, Parham and Marsh 2015 *Fauna and Flora International* 1-2

- Specific impacts are listed for which biodiversity offsetting will be allowed.
- The outcome of biodiversity offsetting should be conservation.
- Australian legislation and policy make provision for consultation with the community regarding biodiversity offsets whereas, in South Africa, there is no specific mention thereof in the *Draft Policy* of the *Draft Guideline*.
- Compliance and enforcement regarding biodiversity offsets are irregular in South Africa whereas it is very strict in Australia.
- Australia emphasises transparency and decision-making that is based on science and data.
- Provision is made for negotiation if a landowner does not agree to a biodiversity offsetting scheme.
- Biodiversity offset planning must also address the risks and plan if a biodiversity project would fail.
- South Africa has less of an understanding of the concept of biodiversity offsetting due to a lack of legislation, accepted policy and also a very small community of persons and institutions which implement it. It will be important to provide training to come on par with the experts in Australia.

It is also important to note that both Australian as well as South African principles and guidelines differ from the international standards in this regard in the following ways:<sup>245</sup>

- Principles that are not included in South African policies/legislation include:
  - "Monitoring and evaluation": Constant review of outcomes and mitigating actions to ascertain the true advantages and losses.

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<sup>245</sup> Discussed in more detail in the Final Chapter.

- "Governance and permanence": Adequate legal, institutional and financial protections are necessary for the design and implementation of offset schemes to be effective. The framework for mitigating hierarchy should be included in planning and regulation at landscape and seascape levels.
- The following Guidelines are not included in South African policies/legislation:
  - The need to regulate additional conservation impacts.
  - Stakeholders should be actively involved in decisions on biodiversity offsets.
  - The method of biodiversity offsetting should be well-documented, based on solid research and take into consideration traditional knowledge as necessary.
- Principles that are not included in Australian policies/legislation are:
  - "Adherence to the mitigation hierarchy": Following appropriate avoidance, reduction and rehabilitation, activities must be carried out in accordance with the mitigation hierarchy.
- Guidelines that are not included in Australian policies/legislation, include:
  - The need to regulate additional conservation impacts.
  - A biodiversity offset should be designed and carried out equitably.

The next chapter concludes the study and makes recommendations.

## Chapter 6: Conclusion

The study aimed to compare and evaluate the South African legal framework regarding biodiversity offsetting with the Australian framework. Biodiversity offsetting, based on a literature analysis and international definitions, was defined for purpose of this study as:

“Biodiversity offsets must be measurable, can serve as a compensation measure for biodiversity loss, must be taken after all other reasonable measures, mitigation and alternatives were considered, should achieve NNL and ideally an NG within the natural, social and cultural environment.”

This definition correlates with the South African definition but differs from the Australian definition that partially address the scope of the above definition. The South African definition refers to biodiversity offsets in relation to environmental authorisations, while the Australian definition refers to offsets as compensatory measures.<sup>246</sup> South Africa therefore does not necessarily include the concept of compensatory measures in its definition, and it could be amended to do so.

The South African legal framework (Constitution, NEMA and NEMBA) does not specifically provide for biodiversity offsets but some of the provisions provide a basis for biodiversity offsetting. The *Draft Policy and Draft Guideline*, which have not yet been finalised, provide for biodiversity offsetting. In terms of the NEMA, the Minister may issue Guidelines for matters relating to environmental authorisations, and this includes biodiversity offsets. In Australia, the overarching legal framework is the EPBC Act read together with the *Environmental Offset Policy* which is the framework for all other policies or guidelines which are issued in the different states and territories of the Commonwealth.

Australia does not have a constitutional environmental right, whilst South Africa does. Section 24(b) of the Constitution refers to other measures that could be taken to promote conservation. Australia's environmental regulation is via legislation and policies. The EPBC Act and *Environmental Offset Policy* specifically indicates that

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<sup>246</sup> *Draft Policy 2*. See 2.2.

biodiversity offsets should be used for conservation. The Act includes principles, while the Policy sets out the guidelines and procedures that need to be followed as discussed in Chapter 5.<sup>247</sup> Each state and some territories have their own biodiversity offset policies that are specific to the circumstances and biodiversity of that specific region. In South Africa, some of the provinces have biodiversity offset policies. They do not necessarily conform to the new *Draft Policy* and *Draft Guidelines* and will have to be revised.

As stated, the EPBC Act and the *Environmental Offset Policy* set out the principles and procedures for biodiversity offsetting. In South Africa, the *Draft Policy* and *Draft Guidelines* will, once accepted, regulate biodiversity offsetting. Table 2 shows a comparison between the international framework for biodiversity offsetting and the South African and Australian legal and policy frameworks.

Biodiversity offsets are mentioned in the NBF and included as a condition in environmental authorisations, as applicable. Some of the provinces (Western Cape and KwaZulu-Natal) have provincial policies regarding biodiversity offsets, but on a national level, only the *Draft Policy* and the *Draft Guideline* exist that address biodiversity offsets. Australia employs cutting-edge offset techniques like biobanking, which are not used in South Africa.

There are various challenges with biodiversity offsetting in South Africa.<sup>248</sup> The challenges relate to the fact that no legislation or policy is in place to regulate biodiversity offsets, that offsetting is applied differently in environmental authorisations' conditions or are unenforceable from a legal perspective. Biodiversity offsetting is misused. Decision-making in relation to allowing biodiversity offsetting differs. Biodiversity offsetting projects do not always materialise and there is no specific penalty for non-compliance, especially if the developer disappears or becomes insolvent. Projects are not monitored or audited. There is no case law interpreting biodiversity offsetting, and no guidance therefore exists in this regard. Despite biodiversity offsetting there is still loss of biodiversity. Public participation is lacking or

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<sup>247</sup> Chapter 5.6. These policies/guidelines were only mentioned and not discussed in depth for the purpose of this mini dissertation.

<sup>248</sup> See 3.4.

inadequate. Offsets are not applied as the last step in the mitigation strategy. Offsetting should not include restoration as ecosystems take a long time to recover, if at all. Biodiversity offsetting is not cost-effective and long-term commitment lacks to implement biodiversity offsets. The financial sustainability of biodiversity offsetting remains a problem, the reason for this is that biodiversity offsets typically require a significant upfront investment to establish and maintain, while there is a risk that the long-term costs of maintaining the offset may not be sustainable. This is particularly true in cases where the offset is reliant on ongoing funding from the developer or other external sources. Another challenge with biodiversity offsetting is that it requires a long-term commitment to achieve its conservation goals. Biodiversity offsets are designed to provide ongoing conservation benefits over a long period of time, often decades or even centuries. This requires a sustained commitment from all stakeholders involved in the offset, including the developer, the regulatory authority, and the local community. Furthermore, financial sustainability remains a significant challenge for biodiversity offsetting. The long-term financial sustainability of an offset can be difficult to achieve, particularly in cases where the offset is reliant on external funding sources that may be subject to budget cuts or other economic pressures. This can lead to a situation where the long-term conservation benefits of the offset are not fully realized.<sup>249</sup> There are not any no-go<sup>250</sup> areas for development stipulated. It is not clear who the beneficiaries of a project are or who would benefit in future. Biodiversity offsetting does not address conservation banks or compensation. The implementation of biodiversity offsetting is still problematic, and a biodiversity offset project may become a liability for the state once the financing for the project is discontinued.

The international framework of biodiversity offsetting includes the BBOP, IUCN and World Bank standards, which support the fundamental tenets of biodiversity offsetting. These standards include principles in relation to biodiversity offsetting.

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<sup>250</sup> No-go areas for biodiversity offsetting are areas that are considered inappropriate or unsuitable for implementing biodiversity offsets due to their high conservation value, ecological significance, or cultural importance. It is important to carefully consider the potential impacts of biodiversity offsets on these areas and to avoid offsets that may compromise their conservation values and ecological processes.

Table 2 compares the principles of biodiversity offsetting in the international biodiversity standards with the principles set out in South African and Australian law and policies.

**Table 2: Comparison between principles in the international standards, principles, South African and Australian legal frameworks**

<b>International Principles</b>	<b>South Africa</b>	<b>Australia</b>
"Measuring and exchanging biodiversity": Adequate baseline surveys, justifiable and reproducible metrics and exchange units, and specific exchange rules outlining which residual damages can be compensated.	✓	✓
"Additionality": Biodiversity offsets must guarantee additional conservation impacts that would not have happened otherwise.	✓	✓
"Timeframe": The offset benefit must last at least as long as the effect is mitigated, which is often indefinitely.	✓	✓
"Uncertainty": Offsets must account for uncertainty by clearly and concisely presenting the data sources, assumptions and knowledge gaps.	✓	✓
"Monitoring and evaluation": Constant review of outcomes and mitigating actions to ascertain the true advantages and losses.	x	✓

<b>International</b>	<b>South Africa</b>	<b>Australia</b>
"Governance and permanence": Adequate legal, institutional and financial protections are necessary for the design and implementation of offset schemes to be effective. The framework for mitigating hierarchy should be included in planning and regulation at landscape and seascape levels.	x	✓
"Adherence to the mitigation hierarchy": Following appropriate avoidance, reduction and rehabilitation, activities must be carried out in accordance with the mitigation hierarchy.	✓	x
<b>Guidelines</b>		
What may be offset by using biodiversity offsetting should be subject to limits.	✓	✓
The context of the terrain should be taken into account.	✓	✓
The Net impact of a biodiversity offset should be zero (NNL).	✓	✓
There need to be extra conservation impacts.	x	x
Stakeholders should be actively involved in decisions on biodiversity offsets.	x	✓
A biodiversity offset should be designed and carried out equitably.	✓	x

<b>International</b>	<b>South Africa</b>	<b>Australia</b>
Effects that continue at least as long as the project's consequences, and longer, if possible, should be the ultimate objective of biodiversity offsetting.	✓	✓
A biodiversity offset should be designed and implemented in a transparent and timely manner.	✓	✓
The method of biodiversity offsetting should be well-documented, based on solid research and take into consideration traditional knowledge as necessary.	x	✓

The South African *Draft Policy* and *Guideline* include most of the principles in one way or another. However, the documents do not refer to monitoring and evaluation as well as auditing. There is no database that indicates where all the offset projects are located and how they are funded. Australia makes use of biobanking. The principle of sufficient governance and permanence also needs to be addressed because there should be clear government offset direction and assistance. To provide regionally suitable offset guidance and support tools, academic resources and biodiversity offset authorities should be combined with practical implementation, as well as a well-structured strategy for public participation in matters regarding biodiversity offsets where it will affect a community.<sup>251</sup> Furthermore, stakeholders and the community (especially traditional and vulnerable communities) need to be informed of decision-making that might influence their livelihoods. The method of biodiversity offsetting needs to be subject to a well-documented application, based on a solid scientific research approach and data and should also take into consideration traditional

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<sup>251</sup> See 5.7.

knowledge as necessary. There is currently no standardisation, no assurance for developers and no direction for the appropriate authorities for the implementation of biodiversity offsets. The argument is made that the absence of a framework and rules has a substantial negative impact on the effectiveness of the biodiversity offset process and may result in poorly considered judgments and unfeasible biodiversity offsets.

The following recommendations are made:

- The NEMA or its regulations should specifically provide for biodiversity offsetting. The Australian example of the EPBC Act should be followed in that its framework law refers to biodiversity offsetting. South Africa should develop its own specific application in this regard.
- Biodiversity offsetting should be an integral part of an environmental impact assessment rather than as an "add-on" to an environmental authorisation.<sup>252</sup>
- South Africa should have one standard policy and guideline and the provinces should adhere to this policy and guideline when they formulate their own policies and procedures. The *Draft Policy* and *Draft Guideline* should therefore be finalised after proper consultation.
- Biodiversity offsetting should be defined as to clearly indicate as a minimum that it should be used as a last resort in the mitigation process and should promote conservation, resulting in NNL and strive towards NG.
- The South African principles should reflect the principles set out internationally as well as include the Australian principles as set out in Tables 1 and 2 as far as they are applicable to South African circumstances.
- Similar to Australia, South Africa should restrict biodiversity offsetting to limited circumstances or impacts.

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<sup>252</sup> Lukey et al 2017 *Ecosystem Services* 281-290.

- Biodiversity offsetting should not be misused to obtain an environmental authorisation and guidelines should be in place to steer decision-making in this regard.
- The financial viability and long-term commitment in relation not biodiversity offsetting should be clear and provision should be made that the funds are placed in a trust, or a bank guarantee or similar instruments are provided.
- The biodiversity offset project should not become a liability to government and measures should be in place to ensure that government in future budgets to take over the projects.
- The procedures should specifically make provision for public participation and negotiation.
- The procedures should provide that biodiversity offsets must be carried out in a structured, transparent and consistent manner. This would result in stronger governance regarding biodiversity offsets.
- In South Africa, the capacity for compliance and enforcement is limited. Fewer inspections, longer turnaround times for inspection reports, fewer compliance notices and directives being given, and fewer criminal convictions are all results of declining resources for the compliance and enforcement sections of South African environmental agencies. If the agreed-upon offset is not implemented as specified by Australian law, it is advised to provide for tougher fines.<sup>253</sup>

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<sup>253</sup> See 3.4 and Hawdon, Parham and Marsh 2015 *Fauna and Flora International* 1-2

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