

THE INCEPTION AND ROLE OF INTERNATIONAL ENVIRONMENTAL LAW IN DOMESTIC BIODIVERSITY CONSERVATION EFFORTS: THE SOUTH AFRICAN EXPERIENCE

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I INTRODUCTION

South Africa is internationally renowned for its rich biodiversity heritage that comprises, amongst others, many endemic animals and birds, an abundance of marine biodiversity and a large diversity of flora populations.¹ These biodiversity resources are however under continual threat of exploitation and extinction. Moreover, South Africa is in the process of social, developmental and economical reconstruction and upliftment. These considerations may place an additional burden on biodiversity resources if the developmental needs of society are not balanced harmoniously with the conservation needs of the environment in general, and biodiversity resources in particular.

Having noted this, the South African government recently enacted the *National Environmental Management: Biodiversity Act 10 of 2004* (the 'NEMBA'). The Act is currently the main legal platform on which biodiversity conservation is based in South Africa. The NEMBA specifically provides for management and conservation of South Africa's biodiversity within the framework of the *National Environmental Management Act 107 of 1998* (the 'NEMA').² It also provides for the protection of species and

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¹ South Africa has been described as one of the 'top five mega-[bio]diverse countries in the world'. See Jan Glazewski, *Environmental Law in South Africa* (2005) 257-258.

² The NEMA is the principal environmental framework act in South Africa. In this respect, it serves as the general legislative framework in terms of which sectoral, or issue-specific environmental

ecosystems that warrant national protection; the sustainable use of indigenous biological resources; and the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources.³ The NEMBA must be considered in terms of the environmental right contained in s 24 of the *Constitution of the Republic of South Africa*, 1996 (the 'Constitution'). Section 24 states that:

Everyone has the right -

- (a) to an environment that is not harmful to their health or well-being; and
- (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that -
 - (i) prevent pollution and ecological degradation;
 - (ii) promote conservation; and
 - (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Biodiversity resources form part of the environment⁴ and are consequently entitled to the scope of constitutional protection provided by s 24. Section 24(b) is specifically relevant in this regard, since it may be construed as a socio-economic right that imposes duties on the state to protect the environment for present and future generations.⁵ The socio-economic character of s 24(b) corresponds with other socio-economic rights in the Constitution, including, amongst others, the right to access to housing; the right to access to health care, food, water and social security; and the socio-economic rights of children.⁶ The State must comply with this constitutional duty by way of 'reasonable legislative and other measures' which must, *inter alia*, prevent pollution and ecological

acts may be promulgated. See in this regard Johan Nel and Willemien Du Plessis, 'An Evaluation of NEMA Based on a Generic Framework for Environmental Framework Legislation' (2001) *South African Journal of Environmental Law and Policy* 1-37. The NEMBA serves as an example of an issue-specific act which has been promulgated in terms of the NEMA. The provisions of the NEMBA conform to the aims and objectives of the NEMA, which entail, *inter alia*, compliance with the principles of sustainability and environmental management contained in section 2 of the latter act. These principles serve as guidance in the execution of environmental governance tasks in South Africa and include, amongst others: the duty of care principle; the polluter pays principle; principles of transparency, public participation and democracy; the integration principle, principles on co-operative governance; the principle of sustainability; the precautionary and preventive principles; and the principle of environmental justice.

³ Preamble of the NEMBA.

⁴ Environment' is comprehensively defined in section 1 of the NEMA as meaning:

...the surroundings within which humans exist and that are made up of-

- (i) the land, water and atmosphere of the earth;
- (ii) micro-organisms, plant and animal life;
- (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and
- (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

⁵ Section 24(a) is an individual, justiciable right, which may be invoked by individuals where this right is violated by state or private individual conduct. This right may specifically be invoked where the health or well-being of individuals is affected in an environmental context. See Helen Stacy, 'Environmental Justice and Transformative Law in South Africa and some Cross-jurisdictional Notes about Australia, the United States and Canada' in Jan Glazewski and Graham Bradfield (eds) *Environmental Justice Environmental Justice and the Legal Process* (1999) 51. See for a general discussion on the relationship between the Bill of Rights and environmental law in South Africa, Glazewski, above n 1, 65-102; and Loretta Feris and Dire Tladi in Danie Brand and Christof Heyns (eds) *Socio-economic Rights in South Africa* (2005) 249-264.

⁶ See respectively sections 26, 27 and 28 of the Constitution.

degradation, promote conservation, and secure sustainable development and use.⁷ Whilst 'legislative measures' relate to policies and environmental legislation, 'other measures' may be construed to mean administrative measures executed in terms of environmental governance mandates, including, amongst others, protection of natural resources, administrative regulation by way of, for example, permits, and enforcement and compliance measures.⁸ It may be derived from the foregoing that there is a constitutional duty on the South African Government to protect, conserve and manage biodiversity resources through legislative measures in the form of the NEMBA, and other measures such as permit systems and management plans provided by the Act.⁹

Although the new domestic framework for biodiversity conservation is commendable, some aspects relating to the interpretation, implementation, and enforcement of the NEMBA remain unclear. International environmental law ('*IEL*') relating to biodiversity resources may assist in guiding government, policy makers and enforcement units with regard to some of these aspects. IEL has developed in a rapid fashion, mostly by way of multilateral agreements and treaties. South Africa has signed and ratified a large number of these agreements, including instruments relating to biodiversity. These instruments include, amongst others: the *Convention on Biodiversity* (the '*CBD*'); and the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* ('*CITES*').

The central question posed in this article is: how has IEL influenced the development of the NEMBA, and how may primary IEL instruments relating to biodiversity guide the future interpretation, implementation and enforcement of the Act? This article commences with an exposition on the importance of IEL in the South African legal order. The article further critically considers the NEMBA in order to determine the extent to which certain primary provisions of some international and regional biodiversity instruments have been incorporated to allow for domestic implementation and sustainable utilisation and conservation of biodiversity. The NEMBA is measured, for these purposes, against the objectives, aims and obligations distilled from the CBD and CITES. The article concludes with suggestions on how these instruments may further guide the interpretation, implementation and enforcement of the NEMBA.

II INTERNATIONAL ENVIRONMENTAL LAW AND BIODIVERSITY CONSERVATION

A *The significance and role of international environmental law in South Africa*

In order to introduce a comprehensive environmental legal protection regime in domestic law, the ratification and implementation of international conventions, as well as consideration of the legal principles of international customary law and soft law, are

⁷ Section 24 (b) of the Constitution.

⁸ These provisions furthermore do not only mean that everyone is entitled to the realisation of section 24 by way of legislative and other measures, but also that all legislative and other measures must conform to the criteria espoused by section 24(b)(i)-24(b)(iii). See in this regard Glazewski, above n 1, 79-81. See in this regard Glazewski, above n 1, 79-81.

⁹ See the discussion in Part III in Part III below.

regarded as high priorities of the South African Government.¹⁰ International law, which includes IEL, is traditionally described as a body of rules and principles which are binding upon states in their relations with one another.¹¹ International law may also be defined in terms of a broader description, which determines that it not only regulates relations between states, but also relations between international organisations and individuals.¹² According to article 38(1) of the *Statute of the International Court of Justice*, treaties, customary international law and general legal principles, as well as judicial decisions and works of jurists, form part of the sources of international law.¹³

Conventions and customary law arguably represent the main sources of IEL. Express consent by means of signing and ratification of a convention is necessary to make it binding on the state party involved. This also applies to South African law, since any bilateral or multinational agreement needs to be incorporated into domestic law in one form or another in order to have force and effect within the jurisdiction of South Africa. South Africa follows the dualist approach with regard to the incorporation of international law into domestic law.¹⁴ This approach proposes that, due to the differences between international and municipal law, domestic courts can only apply international law once it has been transformed into local law by means of legislation.¹⁵ According to this approach, the CBD and CITES, for example, would require domestic legislation on biodiversity that specifically incorporate the provisions of these instruments into South African law. The NEMBA represents the principal instrument for the incorporation of the provisions of these conventions. It specifically provides in this regard that the Act "...gives effect to ratified

international agreements affecting biodiversity to which South Africa is a party, and which bind the Republic".¹⁶

Apart from the fact that the NEMBA gives domestic effect to international biodiversity conventions, there are several other reasons why IEL must be taken into account when interpreting and applying the provisions of the NEMBA. Firstly, s 231 of the Constitution specifically deals with international agreements and the signing, ratification and transformation thereof.¹⁷ This section provides, *inter alia*: that any

¹⁰ Louis J Kotzé and Linda Jansen van Rensburg, 'Legislative Protection of Cultural Heritage Resources: A South African Perspective' (2003) *Queensland University of Technology Law and Justice Journal* 125-127.

¹¹ John Dugard, *International Law: A South African Perspective* (2005) 1, and Michele Olivier, 'Enforcement of International Environmental Law' (2002) *South African Journal of Environmental Law and Policy* 152. See also for a comprehensive discussion on the role of IEL in South African context, Glazewski, above n 1, 29-63.

¹² In order to form part of international law, these relations between states, international organisations and individuals must operate at international level. See further Kotzé and Jansen van Rensburg, above n 10, 125-127.

¹³ Treaties, which arguably constitute the most important source of IEL, are agreements between states or between states and international organisations that relate to environmental law at international level. See also Patricia Birnie and Alan Boyle, *International Law and the Environment* (2002) 13.

¹⁴ Louis J Kotzé and Loretta Feris, "South Africa" in Morné Van der Linde (ed), *Environmental Law in Southern Africa* (To appear Summer 2006) 7.

¹⁵ Dugard, above n 11, 47.

¹⁶ Section 5.

¹⁷ Section 231 states that:

(1) The negotiating and signing of all international agreements is the responsibility of the national executive.

international agreement becomes law in the Republic when it is enacted into law by national legislation. Secondly, s 232 of the Constitution grants customary IEL legal force in South Africa.¹⁸ A common law presumption furthermore exists which requires a court to interpret legislation in accordance with established international law.¹⁹ This common law presumption is given effect by section 233 of the Constitution, which provides that when interpreting any legislation, a court must prefer any reasonable interpretation of the legislation that is consistent with international law over any alternative interpretation that is inconsistent with international law.²⁰

Thirdly, even in those instances where South Africa is not legally bound by obligations under a treaty, s 39(1)(b) of the Constitution compels adversarial bodies, when interpreting the Bill of Rights, including the s 24 environmental right, to consider international law.²¹ According to the Constitutional Court decision in *S v Makwanyane and Another*,²² public international law includes non-binding (soft law), as well as binding law, which must be considered when interpreting any provisions of the Bill of Rights. International agreements and customary international law thus provide a framework within which the Bill of Rights may be evaluated and understood.²³

Chapter 6 of the NEMA further contains provisions which specifically deal with the incorporation of IEL into the domestic environmental law regime.²⁴ It is provided in this regard that where South Africa is not yet bound by an international environmental

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- (2) An international agreement binds the Republic only after it has been approved by resolution in both the National Assembly and the National Council of Provinces, unless it is an agreement referred to in subsection (3).
 - (3) An international agreement of a technical, administrative or executive nature, or an agreement which does not require either ratification or accession, entered into by the national executive, binds the Republic without approval by the National Assembly and the National Council of Provinces, but must be tabled in the Assembly and the Council within a reasonable time.
 - (4) Any international agreement becomes law in the Republic when it is enacted into law by national legislation; but a self-executing provision of an agreement that has been approved by Parliament is law in the Republic unless it is inconsistent with the Constitution or an Act of Parliament.
 - (5) The Republic is bound by international agreements which were binding on the Republic when this Constitution took effect.

¹⁸ Section 232 provides that customary international law is law in South Africa unless it is inconsistent with the Constitution or an Act of Parliament.

¹⁹ See *The Government of the Republic of South Africa and Others v Grootboom and Others* [2000] 11 BCLR 1169 CC.

²⁰ See also *The Azanian Peoples Organization (AZAPO) and Others v The President of the Republic of South Africa* [1996] 4 SA 671 CC.

²¹ See, for example: *S v Williams* [1995] 3 SA 632 CC; *Ferreira v Levin NO* [1996] 1 SA 984 CC; *S v Rens* [1996] 1 SA 1218 CC; *Coetzee v Government of South Africa* [1995] 4 SA 631 CC; *Bernstein v Bester* [1996] 2 SA 751 CC; *In re Gauteng School Education Bill 1995* [1996] 3 SA 165 CC; *The Government of the Republic of South Africa and Others v Grootboom and Others* [2000] 11 BCLR 1169 CC.

²² *S v Makwanyane and Another* [1995] 3 SA 391 CC; *S v Makwanyane and Another* [1995] 6 BCLR 665 CC.

²³ For this purpose, decisions of tribunals dealing with comparable instruments, such as the United Nations Committee on Human Rights, the Inter-American Commission on Human Rights, the Inter-American Court of Human Rights, the European Commission on Human Rights, and the European Court of Human Rights, and in appropriate cases, reports of specialised agencies such as the International Labour Organisation, may provide guidance as to the correct interpretation of particular provisions of the Bill of Rights.

²⁴ See also Nel and Du Plessis, above n 2, 21-22.

instrument, the Minister of the Department of Environmental Affairs and Tourism ('DEAT') may make a recommendation to Cabinet and Parliament regarding accession to and ratification of such an instrument.²⁵ Where South Africa is a party to an international environmental instrument, the Minister, after compliance with the provisions of s 231(2) and (3) of the Constitution, may publish the provisions of the international environmental instrument in the Government Gazette.²⁶ The Minister may further introduce legislation in Parliament, or make such regulations as may be necessary in order to give effect to an international environmental instrument to which South Africa is a party.²⁷

It may be derived from the foregoing that IEL, which includes international biodiversity instruments, plays an important role in the South African legal order. It is also apparent that South African law provides an enabling framework for the incorporation and application of IEL. Whilst the Constitution sets out general provisions for the application of IEL, the NEMA as environmental framework legislation further supports endeavours to incorporate and apply IEL in South Africa. This may be interpreted as an "international friendly" approach, which may be considered a positive development so far as the incorporation of IEL relating to biodiversity is concerned. Moreover, international biodiversity instruments may further enhance domestic biodiversity conservation and management efforts in this respect. Subsequent paragraphs reflect on this issue.

B *International Biodiversity Law Instruments*

In light of increased concern over endangered biodiversity resources world-wide, the last three decades saw the birth of numerous global conventions that contributed to the expansion of the IEL framework on biodiversity. These included the *Convention on Wetlands of International Importance*, the *Convention on the Protection of the World Cultural and Natural Heritage*, CITES, the *Convention on the Conservation of Migratory Species of Wild Animals*, and the CBD.²⁸ At a regional level the revised *African Convention on the Conservation of Nature and Natural Resources*, ('*African Convention*') is the most comprehensive regional instrument that belongs to the legal framework on biodiversity conservation.²⁹ Subsequent paragraphs will briefly reflect on the CBD and CITES as the two primary IEL instruments applicable to, and regulating, biodiversity in South Africa.³⁰

C *Convention on Biodiversity*

²⁵ Section 25(1).

²⁶ Section 25(2). See also above n 17 for what s 231(2),(3) of the Constitution requires.

²⁷ Section 25(3). According to section 26, there is also an obligation on the Minister to report to Parliament once a year regarding international environmental instruments for which he or she is responsible.

²⁸ For a South African perspective of the CBD and other conventions relevant to biodiversity, see Glazewski, above n 1, 259–265.

²⁹ The African Convention was revised in 2003. It supersedes the original text of 1968 and will only come into force once 15 countries in Africa have ratified it. Since South Africa has not yet ratified the original or revised African Convention, its provisions will not be considered for the purpose of this article.

³⁰ In order to limit the scope of this article, some key obligations of South Africa in terms of the CBD and CITES are identified to determine the extent to which these obligations have been incorporated in the NEMBA to facilitate national implementation, sustainable utilisation and conservation of biodiversity.

The primary international legal regime for the conservation and sustainable use of biodiversity is embedded in the CBD.³¹ The CBD proposes a holistic and integrated, rather than an issue-specific and species-based approach to conservation and sustainable utilisation of biodiversity resources.³² The objectives of the CBD include the conservation and sustainable use of biodiversity, equitable sharing arising out of the benefits of utilisation of genetic resources, appropriate access to these resources, and appropriate transfer of relevant technology.³³

The Convention covers a wide array of topics, ranging from the conservation of endangered species, and protection of indigenous knowledge, to provisions dealing with safety ramifications of genetic modification, and ultimately, the global phenomenon of bioprospecting.³⁴ The CBD establishes a so-called framework treaty, in that its provisions are generally expressed as overall goals and policies rather than precise obligations.³⁵ It also adopts a holistic approach by not setting targets or including lists of species or areas to be protected.³⁶ Since the CBD provides framework goals and policies to be achieved by contracting parties, national legislatures are left with the responsibility to reform and improve domestic legislation in order to achieve the CBD obligations.³⁷

Some of South Africa's key obligations (whether broadly implied or explicitly defined) in terms of the CBD, may be summarised as follows:

- To ensure that activities within South Africa's jurisdiction or control do not cause damage to the environment of other states, or of areas beyond the limits of the jurisdiction of South Africa;³⁸
- To develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity;³⁹
- To integrate, as far as possible and as appropriate, the former into relevant sectoral or cross-sectoral plans and programmes;⁴⁰
- To identify and monitor the components of national biological diversity important for its conservation;⁴¹
- To take measures related to the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings;⁴² and

³¹ South Africa ratified the CBD in 1995.

³² Glazewski, above n 1, 259 and Clair Collin and Sarah Laird, 'Global Policies, Local Actions: The Role of National Legislation in Sustainable Biodiversity Prospecting' [1996] *Boston University Journal of Science and Technology Law* 6. See also Ernst Basson, 'The Relationship between Multilateral Environmental Agreements and the Rules of the World Trade Organisation' [2002] *South African Journal of Environmental Law and Policy* 95 for a brief discussion of the CBD.

³³ Article 1.

³⁴ Birnie and Boyle, above n 13, 568.

³⁵ For a discussion on the nature, role, scope and objectives of environmental framework instruments, see Nel and Du Plessis, above n 2, 1-37.

³⁶ See for a discussion on the provisions of the CBD relevant to the achievement of its objectives, Birnie and Boyle, above n 13, 572.

³⁷ *Ibid.* See also Collin and Laird, above n 32, 103.

³⁸ Article 3.

³⁹ Article 6(a).

⁴⁰ Article 6(b).

⁴¹ Article 7.

- To respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity.⁴³

The South African Government must also: adopt measures for the conservation of components of biological diversity outside their natural habitats;⁴⁴ see to the integration of biodiversity considerations into national decision-making; address the adoption of measures to avoid adverse impacts on biodiversity, and to facilitate the protection and encouragement of customary use of biological resources in accordance with cultural practices and in co-operation with the private sector;⁴⁵ establish and maintain programmes related to incentive measures, research, training, public education and awareness related to biodiversity conservation;⁴⁶ and introduce and promote appropriate procedures, programmes and policies requiring environmental impact assessments of projects that are likely to have a significant adverse effect on biological diversity.⁴⁷

The government must further create conditions to facilitate access to genetic resources for environmentally sound uses by other contracting parties and is expected not to impose restrictions that run counter to the objectives of the Convention.⁴⁸ Provision should furthermore be made to: facilitate access to, and transfer to, other contracting parties of technologies that are relevant to the conservation and sustainable use of biological diversity; ensure that the use of genetic resources does not cause significant damage to the environment;⁴⁹ facilitate exchange of information relevant to the conservation and sustainable use of biological diversity;⁵⁰ and promote international technical and scientific co-operation in the field of conservation and sustainable use of biological diversity.⁵¹ Legislative, administrative or policy measures should provide for effective participation in biotechnological research activities by countries that provide genetic resources for research and any available information concerning the use and safety regulations in handling such resources should be made available.⁵²

Based on these obligations, it may be derived that South Africa is challenged to define and adopt specific strategies in terms of national biodiversity legislation to meet with the wide-ranging, albeit clear, obligations in terms of the CBD.

D *Convention on International Trade in Endangered Species of Wild Fauna and Flora*

One of the most important instruments and effective international regulatory structures for the conservation of endangered species is CITES.⁵³ The objectives of CITES are to

⁴² Article 8.

⁴³ Article 8(j).

⁴⁴ Article 9.

⁴⁵ Article 10.

⁴⁶ Articles 11-13.

⁴⁷ Article 14.

⁴⁸ Article 15.

⁴⁹ Article 16.

⁵⁰ Article 17.

⁵¹ Article 18.

⁵² Article 19.

⁵³ Michael Kidd, *Environmental Law: A South African Guide* (1997) 114. See also Birnie and Boyle, above n 13, 625.

ensure, through international co-operation, that the international trade in species of wild fauna and flora does not threaten the conservation of species concerned and to protect certain endangered species from over-exploitation by means of a system of import and export permits issued by a management authority.⁵⁴

Several broadly formulated and general obligations are provided for by CITES. Generally it is expected that member states will refrain from allowing trade in specimens of species included in the three appendices to the Convention. Trade may only be allowed if it is in accordance with the provisions of CITES.⁵⁵ It is furthermore expected that member states will: regulate trade (import, export, re-export and introduction from the sea) in specimens of species included in the appendices, by means of a meticulously prescribed system of prior grants and export permits that require the involvement of management and scientific authorities in the states involved;⁵⁶ and ensure that permits and certificates granted are in accordance with CITES's requirements in article VI.

Apart from some general obligations and requirements, CITES further sets out specific obligations. Since South Africa does not have a separate national endangered species act, the NEMBA may be required to address these obligations. The South African Government is expected to take appropriate measures to enforce the provisions of CITES on trade in certain specimens. These include measures to penalise and to provide procedures for the confiscation, return and internal reimbursement of expenses incurred as a result of the former, where specified specimens are involved.⁵⁷ There is also an obligation to: ensure that specimens shall pass through any formalities required for trade with minimal delay and that all living specimens, during transit, holding or shipment, are properly cared for so as to minimise the risk of injury, damage to health or cruel treatment;⁵⁸ provide specified entrustment and return procedures where a living specimen is confiscated as a result of the measures provided for in art VIII(1);⁵⁹ and maintain records of trade in specimens of specified species included in the three appendices to CITES.⁶⁰ Further specific obligations include: to prepare periodic reports on the implementation of CITES; to transmit to the Secretariat annual and biennial reports on specified information as well as legislative, regulatory and administrative measures taken to enforce CITES's provisions;⁶¹ to designate one or more management authorities competent to grant permits or certificates on behalf of the country; and to designate one or more scientific authorities.⁶²

⁵⁴ See also Basson, above n 32, 92-93 for a brief discussion on CITES and trade related aspects.

⁵⁵ Article II.

⁵⁶ Article II. CITES provides no clarity on the scope and nature of the scientific authority's roles and responsibilities. It is also unclear whether this authority should be afforded any mandate to ensure compliance and enforcement. The wording of the Convention suggests that the scientific authority should fulfil mostly an advisory role to a state's government and management authority. See, for example, articles III and IV. It will arguably be left largely to the discretion of every state to determine the specific roles and responsibilities of this authority.

⁵⁷ Articles VIII(1)-VIII(2).

⁵⁸ Article VIII(3).

⁵⁹ Article VIII(4).

⁶⁰ Article VIII(6).

⁶¹ Articles VIII(7)-(8).

⁶² Article IX(1).

CITES is clear and unambiguous in its expectations for, and obligations on, member states, and accordingly allows, to a great extent, for the verbatim inclusion of its provisions in national biodiversity legislation.

III THE SOUTH AFRICAN LEGISLATIVE FRAMEWORK ON BIODIVERSITY CONSERVATION

The democratic election of 1994 served as a catalyst for a series of fundamental changes to South Africa's legislative, policy and institutional framework for biodiversity conservation.⁶³ In 1995, the South African Government initiated a national consultative process to develop a policy and strategy for biodiversity conservation that would reflect the interests and aspirations of all South Africans. This culminated in the *White Paper on the Conservation and Sustainable Use of Biological Diversity*⁶⁴ (the 'White Paper'), which serves as South Africa's central policy statement on biodiversity. The domestic legal framework for the regulation of biodiversity and matters connected therewith currently comprises the Constitution, IEL, the NEMA, the White Paper, the NEMBA, and various sectoral environmental policies and acts that may be directly and indirectly applicable to biodiversity conservation.⁶⁵

Preceding the enactment of the NEMBA, South Africa had in place a fairly comprehensive body of legislation, which more or less gave effect to its obligations under the IEL framework relating to biodiversity conservation.⁶⁶ Particular legislative intervention was however required in order to consolidate the various laws and to regulate, amongst others, the controversial question of access to South Africa's genetic resources and the handling of biotechnology.⁶⁷ In terms of this legal framework, the NEMBA may be viewed not only as a novel, but also as a key instrument for the realisation of South Africa's constitutional and international obligation to incorporate IEL and to implement measures to ensure sustainable biodiversity conservation.⁶⁸

The development of rules of international law concerning biodiversity protection is of little significance unless accompanied by effective means for ensuring enforcement and compliance at a domestic level.⁶⁹ Having reflected briefly on some of the principal IEL

⁶³ Rachel Wynberg, 'A decade of biodiversity conservation and use in South Africa: tracking progress from the Rio Earth Summit to the Johannesburg World Summit on Sustainable Development' (2000) *South African Journal of Science* 234.

⁶⁴ Department of Environmental Affairs And Tourism, 1997 White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity. *Government Gazette* Notice 1095 of 1997, Vol 385 No 18163. See also Wynberg, above n 63, 234.

⁶⁵ These sectoral environmental acts include, amongst others the, *National Environment Management: Protected Areas Act* 57 of 2003, *National Forests Act* 84 of 1998, *Plant Improvement Act* 25 of 1996, *Animals Protection Act* 71 of 1962, *Plant Breeders' Right Act* 22 of 1976, *Genetically Modified Organisms Act* 15 of 1997, and *National Heritage Resources Act* 25 of 1999. Due to the scope of this article, only the provisions of the NEMBA are discussed comprehensively. Other issue-specific acts will be referred to where applicable.

⁶⁶ The legislation included, for example, the, *National Environment Management: Protected Areas Act* 57 of 2003, *National Forests Act* 84 of 1998, *Wild Bird Export Prohibition Act* 18 of 1959, *Fruit Export Act* 27 of 1957, and *Animals Protection Act* 71 of 1962.

⁶⁷ See for his introductory notes on biodiversity conservation, utilisation and genetic modification, Glazewski, above n 1, 258.

⁶⁸ See the discussion in above Part II.

⁶⁹ See Birnie and Boyle, above n 13, 178.

biodiversity instruments,⁷⁰ the question arises if, and to what extent, the NEMBA provides for adherence to, and implementation of, the obligations espoused by these conventions. Subsequent paragraphs provide a brief analysis in this regard of the objectives of the NEMBA as well as the South African National Biodiversity Institute. The national biodiversity framework; bioregions and bioregional plans; biodiversity management plans; monitoring and research; threatened or protected ecosystems and species; species and organisms posing potential threats to biodiversity; bioprospecting, access and benefit-sharing; as well as the permit system provided by the Act, are also considered.

E *Objectives of the NEMBA*

The objectives of the NEMBA include, *inter alia*: to provide for the management and conservation of biological diversity within South Africa;⁷¹ to enable the use of indigenous biological resources in a sustainable manner; the fair and equitable sharing among stakeholders of benefits arising from bioprospecting; to give effect to ratified international agreements relating to biodiversity which are binding on the country; to provide for co-operative governance in biodiversity management and conservation; and to provide for the South African National Biodiversity Institute (the 'SANBI').⁷² In fulfilling the environmental right contained in s 24 of the Constitution, government must manage, conserve and sustain South Africa's biodiversity, its components and genetic resources, and must implement the NEMBA to achieve progressive realisation of this right.⁷³ These aims and objectives correspond with those set out by the CBD and CITES.⁷⁴

The objectives of the NEMBA, however, reach beyond the objectives of some of these instruments, since it also aims to provide for co-operative environmental governance practices.⁷⁵ Co-operative governance is also provided for in ch 3 of the Constitution

⁷⁰ See the discussion in above Part II.

⁷¹ It is noteworthy that the definition of biodiversity in s 1 of the NEMBA mirrors the definition of biodiversity contained in art 2 of the CBD. Section 1 of the NEMBA defines biodiversity 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.

⁷² Section 2.

⁷³ Section 3. Section 24(b) of the Constitution specifically provides that the environment must be protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources. The NEMBA and the various mechanisms it provides for, may serve as 'reasonable legislative and other measures' for this purpose.

⁷⁴ See the discussion in Part II above.

⁷⁵ See ss 2 and 99 of the NEMBA. Section 99 specifically provides in this regard that:

- (1) Before exercising a power which, in terms of a provision of this Act, must be exercised in accordance with this section and section 100, the Minister must follow an appropriate consultative process in the circumstances.
- (2) The Minister must, in terms of subsection (1)-
 - (a) consult all Cabinet members whose areas of responsibility may be affected by the exercise of the power;
 - (b) in accordance with the principles of co-operative governance set out in Chapter 3 of the Constitution, consult the MEC for Environmental Affairs of each province that may be affected by the exercise of the power; and
 - (c) allow public participation in the process in accordance with section 100.

and the NEMA, and essentially aims to facilitate co-operation between national, provincial and local spheres of government, and the various line functions, or environmental departments, in each sphere.⁷⁶ Section 41 of the Constitution provides in this regard that:

- (1) All spheres of government and all organs of state within each sphere must -
 - (i) provide effective, transparent, accountable and coherent government for the Republic as a whole;
 - (ii) respect the constitutional status, institutions, powers and functions of government in the other spheres;
 - (iii) not assume any power or function except those conferred on them in terms of the Constitution;
 - (iv) exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere; and
 - (v) co-operate with one another in mutual trust and good faith by -
 - (vi) fostering friendly relations;
 - (vii) assisting and supporting one another;
 - (viii) informing one another of, and consulting one another on, matters of common interest;
 - (ix) co-ordinating their actions and legislation with one another;
 - (x) adhering to agreed procedures; and
 - (xi) avoiding legal proceedings against one another.⁷⁷

Co-operative environmental governance practices are specifically relevant for sustainable biodiversity conservation efforts in developing countries where environmental governance regimes are characterised by fragmentation.⁷⁸

It should be noted that the CBD provides in art 10 that contracting parties must encourage co-operation between its governmental authorities and other interested stakeholders in developing methods for sustainable use of biological resources. Similarly, art 5 provides for co-operation between contracting parties at an international level. These articles however do not explicitly provide for the establishment of co-operation measures between organs of state themselves.

⁷⁶ The provisions on co-operative governance established in these two acts are also applicable to the NEMBA.

⁷⁷ The NEMA provides for institutions, structures and procedures to facilitate co-operative governance in an environmental context. These include: the National Environmental Advisory Forum; the Committee for Environmental Co-ordination; environmental implementation and management plans; and procedures for inter-governmental dispute resolution. See respectively ss 3, 7, 11-22 of the NEMA. See also Elmene Bray 'Focus on the National Environmental Management Act: Co-operative Governance in the Context of the National Environmental Management Act 107 of 1998' (1999) *South African Journal of Environmental Law and Policy* 1-12, for a detailed discussion.

⁷⁸ It is stated in this regard that former colonies tend to replicate the judicial, executive, legislative and administrative structures of the former mother land. An imbalance is accordingly created because when these structures are imposed, they create a wide gulf between formal procedures and actual practices, resulting in fragmented structures, processes and governance efforts. Developing countries such as South Africa, furthermore inherited fragmented and uncoordinated legislation that paid little thought to sustainability and an integrated, ecosystem-orientated legal regime that permits a holistic view of the ecosystem and of the inter-relationships and interactions within it. Rather than advocating sustainability and an integrated approach to environmental management and governance, practices, legislation, and policies were essentially concerned with the facilitation of resource allocation and resource exploitation. Although South Africa currently has a comprehensive and modern environmental law regime that establishes measures for the achievement of sustainable environmental governance, it is noted that the fragmented legal and

Fragmentation includes: vertical fragmentation between the various spheres of government; horizontal fragmentation between the different line functions, or government departments in each sphere; and fragmentation of policies, legislation, governance tools, processes and procedures.⁷⁹ Fragmentation is also evident in the South African governance regime that regulates biodiversity resources. Although the NEMBA may be regarded as an integrated act for the regulation of biodiversity, it is observed that various other acts may also be relevant to biodiversity management and governance. These include, *inter alia*, the *Genetically Modified Organisms Act 15 of 1997* (the ‘GMOA’) insofar as regulation of genetically modified organisms (‘GMOs’) are relevant for biodiversity conservation;⁸⁰ all the provisions of the NEMA as primary environmental framework legislation; the *National Environmental Management: Protected Areas Act 57 of 2003*, insofar as protected areas are concerned in conservation of biodiversity resources; and the *National Heritage Resources Act 25 of 1999*, insofar as cultural heritage resources form part of biodiversity conservation efforts. Regulation authorities responsible for biodiversity conservation are furthermore fragmented in terms of the three spheres of government and various line functions in each sphere.⁸¹

This fragmented governance regime may inhibit the achievement of sustainable biodiversity protection efforts. Co-operative governance accordingly represents a mechanism to facilitate inter-governmental co-operation, coordination and alignment of biodiversity-related structures, procedures, tools, legislation and policies, with the principal aim to achieve sustainable results. In the cadre of the NEMBA objectives, the express provision of co-operative governance in biodiversity-related governance efforts may provide a useful mechanism to enhance biodiversity conservation and management efforts at a domestic level. These provisions may accordingly provide for local biodiversity conservation needs even beyond the expectations contained in international biodiversity instruments.

F *The South African National Biodiversity Institute*

Section 10 of the NEMBA establishes the SANBI. Various tasks are assigned to the Institute. These include, amongst others: regular monitoring and reporting on the status of South Africa’s biodiversity; the conservation status of all listed threatened or protected species and listed ecosystems; and the status of all listed invasive species.⁸² The SANBI must also monitor and regularly report to the Minister of DEAT on the

governance framework remains. See further Louis J Kotzé, ‘Strategies for Integrated Environmental Governance in South Africa: Towards a More Sustainable Environmental Governance and Land-use Regime’ in N Chalifour *et al Sustainable Land Use, Volume Two of the Annals of the IUCN Academy of Environmental Law* (To Appear Forthcoming Fall 2006), and Louis J Kotzé *A Legal Framework for Integrated Environmental Governance for South Africa and the North West Province* (LLD Thesis, North West University 2006).

⁷⁹ *Ibid.*

⁸⁰ See also the discussion in Part III(H) below.

⁸¹ Fragmentation is specifically ubiquitous in the governance structures relating to biodiversity conservation. This is apparent from the fact that authorities that may be involved with the regulation of biodiversity resources include, amongst others, the DEAT, the South African National Biodiversity Institute, and various other authorities in the provincial and local spheres of government.

⁸² Section 11(1)(a).

impacts of any GMO that has been released into the environment.⁸³ It may act as an advisory and consultative body on matters relating to biodiversity, to organs of state and other biodiversity stakeholders, and must coordinate and promote the taxonomy of South Africa's biodiversity. It must manage, control and maintain all national botanical gardens.⁸⁴ The Institute must further: establish, maintain, protect and preserve collections of plants in national botanical gardens and in herbaria; establish, maintain, protect and preserve collections of animals and micro-organisms in appropriate enclosures; and collect, generate, process, coordinate and disseminate information about biodiversity and the sustainable use of indigenous biological resources, and establish and maintain databases in this regard.⁸⁵

It may be derived from the foregoing that the SANBI institutionalises many of the biodiversity governance tasks set out by the NEMBA. The Institute must, through its monitoring, reporting, advisory, co-ordination, consultation, conservation, research, and information dissemination efforts, endeavour to realise the objectives of the NEMBA.⁸⁶ The establishment of the SANBI must be lauded as a progressive development in domestic biodiversity conservation efforts. It is specifically noteworthy that the Institute primarily aims to operationalise and institutionalise a number of the provisions of the CBD. These include: art 7 of the CBD, which relates to the identification and

⁸³ Section 11(1)(b). This provision must also be read with the provisions of the *Genetically Modified Organisms Act* 15 of 1997 (the 'GMOA'). The objectives of the Act (as specified in the long title) include: to provide for measures to promote the responsible development, production, use and application of GMOs; to ensure that all activities involving the use of GMOs (including importation, production, release and distribution) shall be carried out in such a way as to limit possible harmful consequences to the environment; to give attention to the prevention of accidents and the effective management of waste; to establish common measures for the evaluation and reduction of the potential risks arising out of activities involving the use of GMOs; to lay down the necessary requirements and criteria for risk assessments; to establish a council for GMOs; to ensure that GMOs are appropriate and do not present a hazard to the environment; to establish appropriate procedures for the notification of specific activities involving the use of GMOs; and to provide for matters connected therewith. Article 8(g) of the CBD provides that contracting parties must establish or maintain means to regulate, manage, or control the risks associated with GMOs, which may have adverse environmental impacts that could affect biological diversity. Although the NEMBA does not comprehensively provide for the regulation of genetically modified organisms, this aspect is dealt with comprehensively by the GMOA which also forms part of the broader framework of biodiversity legislation in South Africa.

⁸⁴ Section 11(1)(c)- 11(1)(e).

⁸⁵ Further tasks of SANBI include: it may allow, regulate or prohibit access by the public to national botanical gardens, herbaria and other places under the control of the Institute, and supply plants, information, meals or refreshments or render other services to visitors; it may undertake and promote research on indigenous biodiversity and sustainable use of indigenous biological resources; it may coordinate and implement programmes for the rehabilitation of ecosystems, and the prevention, control or eradication of listed invasive species; and it may coordinate programmes to involve civil society in the conservation and sustainable use of indigenous biological resources, and the rehabilitation of ecosystems. On the Minister's request, SANBI must: assist him or her in the performance of duties and the exercise of powers assigned to the Minister in terms of the Act; and advise him or her on any matter regulated in terms of the Act, including: the implementation of the Act and any international agreements affecting biodiversity which are binding on the Republic; the identification of bioregions and the contents of any bioregional plans; other aspects of biodiversity planning; the management and conservation of biological diversity; and the sustainable use of indigenous biological resources. On the Minister's request, SANBI must also advise him or her on the declaration and management of, and development in, national protected areas; and must perform any other duties assigned to it in terms of the Act or as may be further prescribed. See in this regard sections 11(1)(k)-11(1)(r).

⁸⁶ See the objectives of the NEMBA in Part III(A) above.

monitoring of components of biodiversity for conservation purposes, and the establishment of a database for this purpose; art 12, which relates to the obligation to establish and maintain programmes for scientific and technical research, training and education; art 13, which relates to the promotion of public education and public awareness-raising; art 14, which provides for the creation of conditions to facilitate access to genetic resources; and art 17, that provides for exchange of information. The SANBI may also serve to comply with art IX(1)(a) of CITES which expects parties to designate, for the purpose of the Convention, one or more management authorities competent to grant permits or certificates.⁸⁷ Although this is not the primary task of SANBI, it is argued that it will at the very least assume the role of a commenting authority which, together with DEAT, may also play an overseeing and supervisory role.

G *The National Biodiversity Framework*

Section 38 of the NEMBA provides for the preparation and adoption of a national biodiversity framework by the year 2007 that must be monitored, reviewed and, where necessary, amended by the Minister of DEAT. This 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.⁸⁸ The framework must also: identify priority areas for conservation action and the establishment of protected areas; reflect regional co-operation on issues concerning biodiversity management in Southern Africa; and determine norms and standards for provincial and municipal environmental conservation plans.⁸⁹ It must furthermore be consistent with the overall provisions of the NEMBA, the national environmental management principles espoused by the NEMA;⁹⁰ and any relevant international agreements binding on South Africa, including, for example, the CBD and CITES.⁹¹

It is argued that provisions enabling the establishment of a national biodiversity framework are a positive legislative arrangement that may promote conservation of biodiversity in South Africa in an integrated and sustainable fashion.⁹² Insofar as this

⁸⁷ Article XI(1) requires parties to designate one or more management authorities competent to grant permits or certificates on behalf of the party, as well as one or more scientific authorities. Although s 60 of the NEMBA provides for the establishment of a scientific authority, no explicit provision is made for the establishment of a management authority. The Act does refer to a 'competent authority' and 'issuing authority' which means the Minister, any organ of state in the national, provincial or local sphere of government designated by regulation as a competent authority for the control of an alien species or a listed invasive species in terms of the Act, or any other organ of state that may arguably include the SANBI. See in this regard ss 1 and 97.

⁸⁸ Section 39. The eventual success of this framework may arguably depend to a large extent on the successful implementation of the provisions on co-operative environmental governance discussed above.

⁸⁹ Sections 39(1)(c)-39(1)(d) and section 39(2).

⁹⁰ Section 2 of the NEMA provides a set of principles that apply throughout South Africa to the actions of all organs of state that may significantly affect the environment. This serves as the general framework within which environmental management and implementation plans must be formulated. See also the discussion above.

⁹¹ Section 39(1)(b).

⁹² Sustainability in terms of the NEMBA means:
...the use of such [biodiversity] resource in a way and at a rate that-
(a) would not lead to its long-term decline;
(b) would not disrupt the ecological integrity of the ecosystem in which it occurs; and

framework meets international obligations, it arguably conforms to art 6(a), (b) of the CBD. These articles specifically relate to the development of national strategies, plans or programmes for the conservation and sustainable use of biological diversity, and the integration of these into relevant sectoral or cross-sectoral plans and programmes.⁹³ The framework, as an instrument to enhance regional cooperation, may also serve to satisfy art 5, 17, 18 of the CBD which provide respectively for regional and international co-operation, exchange of information, and technical and scientific co-operation.

H *Bioregions and Bioregional Plans*

Section 40 of the NEMBA states that the Minister of DEAT or the Member of the Executive Committee ('MEC') for environmental affairs in a South African province, may determine a geographic region as a bioregion for the purposes of the NEMBA if that region contains whole or several nested ecosystems and is characterised by its landforms, vegetation cover, human culture and history.⁹⁴ Provision is also made for the publication of a plan for the management of biodiversity in a bioregion.⁹⁵ The Minister may furthermore enter into an agreement with a neighbouring country to secure effective implementation of a bioregional plan.⁹⁶ A bioregional plan must contain measures for effective management of biodiversity and the components of biodiversity in the region, and must also provide for monitoring of the plan.⁹⁷

Development and implementation of bioregions and bioregional plans may serve to satisfy the requirements of, amongst others, art 5-8 of the CBD. These articles relate respectively to: regional and international co-operation; general measures for conservation and sustainable use, including development of plans and programmes for conservation that must also be integrated with other sectoral or cross-sectoral plans and programmes; identification and monitoring obligations; and *in-situ* conservation measures relating to the establishment of protected areas.

I *Biodiversity Management Plans*

Section 43 of the NEMBA allows for any person, organisation or organ of state desiring to contribute to biodiversity management, to submit to the Minister of DEAT a draft management plan for a specified ecosystem, indigenous species, or migratory species in order to give effect to South Africa's obligations in terms of an international agreement. The Act itself is unfortunately silent on the manner of implementation of such biodiversity management plans, and merely states that the Minister must determine the manner of implementation of these plans.⁹⁸ Section 45 addresses the contents of biodiversity management plans and states that such a plan must, *inter alia*, be consistent

(c) would ensure its continued use to meet the needs and aspirations of present and future generations of people.

See section 1 of the NEMBA.

⁹³ See also the discussion in Part III(A) above.

⁹⁴ A bioregional plan must be consistent with the NEMBA, the national environmental management principles, the national biodiversity framework, and any relevant international agreements binding on South Africa. Section 41(c).

⁹⁵ Section 40(1)(b).

⁹⁶ Section 40(5)(a).

⁹⁷ Sections 41(a)-41(b).

⁹⁸ Section 43(3)(b).

with the NEMBA, the national environmental management principles,⁹⁹ the national biodiversity framework, any applicable bioregional plan, any municipal integrated development plans and any relevant international agreements binding on South Africa. These plans must further be aimed at ensuring long-term survival in nature of the species or ecosystem to which the plan relates, and it must provide for the responsible person, organisation, or organ of state to monitor and report on progress with implementation of the plan.¹⁰⁰ Section 48 stipulates that the national biodiversity framework, a bioregional plan and a biodiversity management plan, must be integrated and aligned with spatial development frameworks (integrated development plans established in terms of the *Local Government: Municipal Systems Act* 32 of 2000), and any environmental implementation or environmental management plans prepared in terms of ch 3 of the NEMA. This is clearly an attempt to give effect to art 6 of the CBD which requires the development of national biodiversity conservation strategies, plans and programmes which must also be integrated and aligned with other sectoral or cross-sectoral plans, programmes and strategies. These plans also conform to art 8, 9 of the CBD which require measures for *in-situ* and *ex-situ* biodiversity conservation.

J Monitoring and Research

The Minister of DEAT must designate monitoring mechanisms and set indicators to determine the conservation status of various components of South Africa's biodiversity, and any negative and positive trends affecting the conservation status of the various components.¹⁰¹ Any person involved with such monitoring activities, apart from the Minister, must also regularly report the results.¹⁰² The Minister must likewise annually report to Parliament on the information submitted to him or her, and make such information publicly available.¹⁰³

The NEMBA further requires the Minister to promote research done by the SANBI and other institutions on biodiversity conservation, including the sustainable use, protection and conservation of indigenous biological resources. Research on biodiversity conservation may include the: collection and analysis of relevant information; assessment of strategies and techniques for biodiversity conservation; determination of biodiversity conservation needs and priorities; and the sustainable use, protection and conservation of indigenous biological resources.¹⁰⁴

The provisions on monitoring and research correspond with arts 7, 12 of the CBD which relate to identification and monitoring obligations on contracting parties, and the establishment of programmes for scientific research and training. Measures to be taken by parties to CITES, as contained in art VIII also include maintenance of records of trade in specimens of species contained in the Convention's appendices¹⁰⁵ and the preparation of periodic reports on implementation of CITES provisions.¹⁰⁶ Article VIII(8) requires this information to be made available to the public. The NEMBA

⁹⁹ Contained in section 2 of the NEMA.

¹⁰⁰ Sections 45(a)-45(b).

¹⁰¹ Section 49.

¹⁰² Section 49(2).

¹⁰³ Section 49(3).

¹⁰⁴ Section 50.

¹⁰⁵ Article VIII(6).

¹⁰⁶ Article VIII(7).

provisions on monitoring and research accordingly serve to satisfy a number of obligations in terms of the CBD and CITES.

K *Threatened or Protected Ecosystems and Species*

Chapter 4 of the NEMBA aims to: provide for the protection of ecosystems that are threatened or in need of protection to ensure maintenance of their ecological integrity,¹⁰⁷ and for the protection of species that are threatened or in need of protection to ensure their survival in the wild;¹⁰⁸ give effect to South Africa's obligations under CITES; and ensure that the utilisation of biodiversity is managed in an ecologically sustainable way.¹⁰⁹

Chapter 4 essentially aims to give effect to South Africa's categorising obligations under CITES. Part 1 of the NEMBA provides for the publication of national and provincial lists of threatened ecosystems according to certain categories, which include: critically endangered ecosystems; less endangered ecosystems; vulnerable ecosystems; and protected ecosystems. It furthermore provides for the identification of threatening processes in listed ecosystems in terms of s 24(2)(b) of the NEMA relating to environmental impact assessments.¹¹⁰ The provisions of Pt 1 allow for compliance with, *inter alia*, arts 7-10 and 14 of the CBD. These articles provide for: identification and monitoring measures; *in-situ* and *ex-situ* conservation measures; sustainable use of biological diversity; impact assessment and minimisation of adverse impacts on biodiversity resources.

Part 2 provides for the listing of critically endangered species, endangered species, vulnerable species and protected species. Section 57(1) determines that a person may not carry out a restricted activity involving a specimen of a listed threatened, or protected, species without a permit issued in terms of ch 7 of the NEMBA. This may be seen as the domestic effort to comply with, amongst others, art 14 of the CBD and art VIII(1) of CITES - which relate to listing of endangered biodiversity resources, enforcement of measures to prohibit trade in specified specimens, and environmental impact assessment procedures.

As far as trade in listed threatened, or protected, species is concerned, pt 3 of the NEMBA explicitly provides for compliance measures relating to CITES. It determines that the Minister of DEAT must, *inter alia*, monitor compliance in South Africa with the provisions of CITES.¹¹¹ It further determines that the Minister must consult the scientific authority on issues relating to trade in specimens of endangered species regulated by CITES,¹¹² and that the Minister must further prepare and submit reports

¹⁰⁷ Sections 52-55.

¹⁰⁸ Sections 56-58.

¹⁰⁹ Part 3, sections 59-68.

¹¹⁰ Section 24(2)(b) of the NEMA provides for the identification of geographical areas (based on environmental attributes) in which specified activities may not commence without an environmental authorisation from the competent authority. Areas where threatened or protected ecosystems or species occur may arguably be included in these geographical areas. Before the commencement of an activity in such an area an environmental impact assessment is required before authorisation will be granted to commence with any activity which may have a detrimental effect on the environment, including biodiversity.

¹¹¹ Sections 59-62.

¹¹² Section 59(b).

and documents in accordance with South Africa's obligations in terms of the Convention.¹¹³ The Minister may provide administrative and technical support services and advice to organs of state to ensure the effective implementation and enforcement in South Africa of CITES, and may make information and documentation relating to this Convention publicly available.¹¹⁴ In terms of s 60 of the NEMBA, the Minister must establish a scientific authority for the purpose of assisting in regulating and restricting trade in specimens of listed threatened, or protected, species. The scientific authority must publish any annual non-detriment findings on trade in specimens of listed threatened or protected species in accordance with CITES.¹¹⁵ Part 3 may be seen as an explicit effort by the South African legislature to incorporate most of the international obligations derived from art VIII, IX of CITES, and arts 10, 14 of the CBD. The former articles require, amongst other things, the integration of biodiversity conservation into national decision-making, co-operation with the private sector, designation of scientific authorities, and prescribed authorisation processes in the case of trade in classified species.

L *Species and Organisms Posing Potential Threats to Biodiversity*

Chapter 5 of the NEMBA aims to regulate: the prevention of unauthorised introduction and spread of alien and invasive species to ecosystems and habitats where they do not naturally occur; management and control of alien and invasive species to prevent and minimise harm to the environment and to biodiversity in particular; and the eradication of alien and invasive species from ecosystems and habitats where they may harm such ecosystems or habitats.¹¹⁶ This chapter also aims to ensure that environmental assessments, for purposes of permits in terms of national environmental legislation, are conducted. It is required by chapter 5 that environmental impact assessments be conducted prior to any authorisation relating to species and organisms posing potential threats to biodiversity are issued. Section 64 states, for example, that a permit in terms of the GMOA will only be issued insofar as an environmental assessment, provided for in chapter 5 of the NEMBA, has been conducted. Chapter 5 requires that environmental impact assessments be conducted prior to any authorisation, relating to species and organisms posing potential threats to biodiversity, being issued. Section 64 states, for example, that a permit in terms of the GMOA will only be issued insofar as an environmental assessment, provided for in ch 5 of the NEMBA, has been conducted. Subsequent provisions in the chapter regulate: restricted activities involving alien species;¹¹⁷ a general duty of care relating to alien species;¹¹⁸ restricted activities involving listed invasive species;¹¹⁹ and other threats such as GMOs.¹²⁰

¹¹³ Section 59(c).

¹¹⁴ Sections 59(d) and 59(e).

¹¹⁵ Section 62.

¹¹⁶ Sections 70-77.

¹¹⁷ Sections 65-67.

¹¹⁸ Section 69.

¹¹⁹ Sections 70-77.

¹²⁰ Section 78. The provisions of the GMOA relating to granting of permits, and the provisions of the NEMA relating to environmental impact assessment with regard to GMOs, will also be applicable to these sections. It is specifically stated, in this regard, that if the Minister has reason to believe that the release of a GMO into the environment, under a permit applied for in terms of the GMOA, may pose a threat to any indigenous species or the environment, no permit for such release may be issued in terms of the GMOA unless an environmental assessment has been conducted in accordance with ch 5 of the NEMA.

Chapter 5 of the NEMBA specifically addresses South Africa's international obligations on: special protection of animal and plant species that are threatened with extinction; protection of listed species in terms of CITES; and *in situ* and *ex situ* conservation measures. These are distilled from, *inter alia*, arts 3, 8, 9, 10 of the CBD;¹²¹ and art VIII of CITES.¹²²

M *Bioprospecting, Access and Benefit-sharing*

The NEMBA furthermore provides, in ch 6, for the regulation of bioprospecting, access to biodiversity resources and benefit-sharing. By means of a permit system, and benefit-sharing and material transfer agreements, this chapter aims to regulate: bioprospecting; the export of indigenous biological resources from South Africa for the purpose of bioprospecting or other research; and the fair and equitable sharing by stakeholders of benefits arising from bioprospecting. The purpose of the permit system is to regulate bioprospecting involving indigenous biological resources; to regulate the export from South Africa of indigenous biological resources for the purpose of bioprospecting or any other kind of research; and to provide for a fair and equitable sharing by stakeholders in benefits arising from bioprospecting involving indigenous biological resources.¹²³ Section 81 specifically provides in this regard that no person may, without a permit issued in terms of ch 7, engage in bioprospecting involving any indigenous biological resource; or export from South Africa any indigenous biological resource for the purpose of bioprospecting or any other kind of research.¹²⁴ It should be noted that the permit system is further complimented by the provisions on environmental impact assessment provided by ch 5 of the NEMA, in terms of which an environmental assessment and authorisation is required before commencement of a certain activity which may have a detrimental effect on biodiversity. Section 24 of the NEMA deals extensively with environmental impact assessment in South Africa and provides, amongst others, for provisions that require an environmental assessment to be conducted prior to issuing an environmental authorisation to enable an applicant to continue with an activity that may have a detrimental impact on the environment.

Chapter 6 furthermore specifically provides for: certain interests to be protected before a permit is issued;¹²⁵ benefit-sharing agreements;¹²⁶ material transfer agreements;¹²⁷

¹²¹ These CBD provisions respectively regulate: the sovereign right of Member States to exploit their own resources pursuant to environmental policies; the responsibility to ensure that activities within their control do not cause damage to the environment of other states; *in-situ* and *ex-situ* conservation; and sustainable use of components of biodiversity.

¹²² Article VIII expresses the measures to be taken by Member States and include the art VIII(3) which states, *inter alia*, that as far as possible, parties should ensure that specimens shall pass through any formalities required for trade within a minimum of delay. To facilitate such passage, a party may designate ports of exit and ports of entry at which specimens must be presented for clearance.

¹²³ Section 80.

¹²⁴ Section 81(2) further provides that before any application for a permit may be considered by a relevant issuing authority, the applicant must, at the request of the issuing authority, disclose to the authority all information concerning the proposed bioprospecting, and the indigenous biological resources to be used for such bioprospecting, that is relevant for a proper consideration of the application.

¹²⁵ Interests of: a person, including any organ of state or community, providing or giving access to the indigenous biological resources to which the application relates; and any indigenous community, must be taken into account before a permit is issued. Section 82.

exemptions; and the establishment of the Bioprospecting Trust Fund. The Fund regulates all moneys arising from benefit-sharing and material transfer agreements which are due to stakeholders.¹²⁸ These provisions strongly resemble the obligations in terms of arts 8(j), 10, 15-19 of the CBD. The latter provisions relate to: indigenous knowledge; sustainable use of biological diversity resources; access to genetic resources; access to and transfer of technology; exchange of information; and technical and scientific co-operation. It also conforms to art VII of CITES.¹²⁹

N *The Permit System in Terms of the NEMBA*

The provisions on bioprospecting, access, and benefit-sharing must be read with the provisions of ch 7. Chapter 7 of the NEMBA aims to provide for “command-and-control” type regulation relating to biodiversity resources in the form of a permit system. The permit system further aims to regulate permits authorising restricted activities involving: specimens of listed threatened, or protected, species;¹³⁰ alien species;¹³¹ and listed invasive species.¹³² It also deals with: authorisation of activities regulated in terms of a notice published under s 57(2);¹³³ bioprospecting involving indigenous biological resources;¹³⁴ and the export of indigenous biological resources for bioprospecting or any other type of research.¹³⁵ The remainder of ch 7 deals with procedural and substantive aspects of permits. These include: the permit application procedure; risk assessments and expert evidence; the content of permits; additional requirements relating to alien and invasive species; the issuance of integrated permits; the cancellation of permits; and appeals.¹³⁶

Chapter 7 serves to address obligations derived from arts 8, 9 of the CBD. The latter provisions specifically relate to the establishment of measures to regulate *in-situ* and *ex-*

¹²⁶ A benefit-sharing agreement must specify: the type of indigenous biological resources to which the relevant bioprospecting relates; the area or source from which the indigenous biological resources are to be collected or obtained; the quantity of indigenous biological resources that is to be collected or obtained; any traditional uses of the indigenous biological resources by an indigenous community; and the present potential uses of the indigenous biological resources. Such an agreement must also: name the parties to the agreement; set out the manner in which and the extent to which the indigenous biological resources are to be utilised or exploited for purposes of such bioprospecting; set out the manner in which, and the extent to which, the stakeholder will share in any benefits that may arise from such bioprospecting; provide for a regular review of the agreement by the parties as the bioprospecting progresses; and comply with any other matters that may be further prescribed. Section 83.

¹²⁷ A material transfer agreement must specify: particulars of the provider, and the exporter or recipient, of the indigenous biological resources; the type of indigenous biological resources to be provided or to be given access to; the area or source from which the indigenous biological resources are to be collected, obtained or provided; the quantity of indigenous biological resources that is to be provided, collected, obtained or exported; the purpose for which such indigenous biological resources are to be exported; the present potential uses of the indigenous biological resources; and the conditions under which the recipient may provide any such indigenous biological resources, or their progeny, to a third party. Section 84.

¹²⁸ Section 85.

¹²⁹ Article VII addresses exemptions and other special provisions relating to trade.

¹³⁰ See section 57(1).

¹³¹ Section 65(1).

¹³² Section 71(1).

¹³³ This section deals with restricted activities involving listed threatened, or protected, species.

¹³⁴ Section 81(1).

¹³⁵ Section 8 1(1).

¹³⁶ Sections 88-96.

situ conservation. These provisions also correspond to arts VIII(1), IX(1)(a) of CITES that require: measures to be taken to enforce the provisions of the Convention and to prohibit trade in specimens in violation thereof,¹³⁷ and the designation management authorities competent to grant permits or certificates.¹³⁸

IV SOME OBSERVATIONS AND RECOMMENDATIONS

In light of the foregoing exposition it may be derived that the South African legislature thoughtfully took into consideration many of South Africa's key international obligations in terms of the CBD and CITES. It is accordingly proposed that at policy-level, and in the broader context of its biodiversity law framework, the NEMBA succeeds in addressing most of the principal international biodiversity law obligations.

The NEMBA, in some instances, even reaches beyond the provisions of international biodiversity instruments. The provision on co-operative governance is a novel introduction in domestic biodiversity conservation efforts. This concept essentially aims to address uncooperative, fragmented and disjointed governance efforts relating to environmental governance in general, and biodiversity conservation in particular. It has been observed that environmental governance regimes of specifically developing countries, including South Africa, are characterised by serious fragmentation that manifests in discontinuous and fragmented legislations; policies; and governance tools, processes, structures and procedures. This fragmentation may also inhibit the achievement of sustainable conservation efforts with regard to biodiversity resources. Co-operative governance may thus serve as a useful mechanism to address the fragmentation of the environmental governance regime in South Africa, with the ultimate aim to establish co-operative, aligned and integrated structures, processes and tools for sustainable biodiversity conservation. Co-operative governance may also be an elemental prerequisite for the effective realisation of any of the aims and objectives of those international biodiversity instruments that South Africa belongs to.

It is further apparent from the NEMBA that the State holds biodiversity resources in public trust.¹³⁹ This is also evident from the socio-economic character of the s 24(b) environmental right provided by the Constitution. Whilst the conservation of biodiversity resources is primarily the obligation of government, the NEMBA does provide for mechanisms to facilitate participative governance with all interested and affected stakeholders.¹⁴⁰ Some of these mechanisms include biodiversity management plans, biodiversity management agreements, and express provisions on the protection of the interests of certain individuals and groups.

It has further been stated that the provisions of the NEMBA are subject to the provisions of the NEMA.¹⁴¹ Moreover, it is specifically required, in this regard, that the application of the NEMBA must be guided by the national environmental management principles set out in the NEMA. These principles essentially give effect to the internationally recognised principles of sustainability which include, amongst others:

¹³⁷ Article VIII(1).

¹³⁸ Article IX(1)(a).

¹³⁹ Section 3.

¹⁴⁰ This strategy is also referred to as 'management by outsiders' whereby all interested and affected parties, especially the public, are engaged and involved in governance activities.

¹⁴¹ Section 2 of the NEMA.

the precautionary approach; the polluter pays principle; a general duty of care; the preventive principle; the life-cycle and ecosystem approach; an integrated and holistic approach to environmental management and governance; the concept of sustainable development; and the principles of transparency, democracy and public participation.¹⁴² It is argued that these principles are also meant to enhance biodiversity conservation efforts, and that due recognition and implementation of these principles in terms of both the NEMA and NEMBA may further guide biodiversity conservation on a sustainable path at domestic level.

The establishment of the SANBI is another positive facet of the NEMBA. The CBD and CITES do not explicitly require the establishment of a central agency responsible for biodiversity conservation and management. However, in a country where the environmental governance regime is characterised by fragmentation, the SANBI, together with DEAT, may particularly contribute to enhanced biodiversity management and conservation efforts - since it provides for an integrated body responsible for, *inter alia*, monitoring, consultation, research, education, public participation and rendering of advice to all stakeholders.

A number of shortcomings in the NEMBA with regard to the implementation of international biodiversity instruments are however also observed. These specifically relate to the establishment of incentive measures in terms of art 11 of the CBD. Article 11 requires contracting parties to establish economically and socially sound measures that act as incentives for the conservation and sustainable use of biodiversity. It is unfortunate that the NEMBA does not provide for any such measures. This oversight may be attributed to the Act's emphasis on "command-and-control" tools in the form of permits. In keeping with the global approach to move away from overt 'command-and-control' regulation,¹⁴³ it may be a useful endeavour should the legislature also include fiscal or economic environmental management tools for regulation, which may include certain financial incentives.

Apart from the Bioprospecting Trust Fund, it is also observed that the NEMBA does not provide for specific financial resources for the execution of activities under the Act and national activities intended to realise the objectives of international biodiversity instruments. This clearly overlooks the art 20 obligations of the CBD, which require such measures, and may inhibit comprehensive implementation and enforcement of the provisions of the NEMBA.

In general it is also observed that national biodiversity conservation instruments, which include international IEL mechanisms, may prove to be worthless where a country fails to ensure implementation, compliance and good environmental governance in terms of domestic biodiversity law. This may be the case even where national policy and legislation, as in South Africa's case, has theoretically been carefully developed together with the relevant international instruments, obligations and principles applicable to the country. A great deal arguably depends on the involvement and commitment of all authorities concerned with biodiversity governance, management and conservation. The NEMBA itself is, for example, silent on the manner of implementation of the biodiversity management plans it aims to establish, and merely

¹⁴² See s 2 of the NEMA.

¹⁴³ See in this regard Nel and Du Plessis, above n 2, 13-19.

states that the Minister must determine the manner of implementation of these plans.¹⁴⁴ The Act, as is the case with most national legislation, does not determine a remedy for the intricate situation where authorities refrain from fulfilling their lawfully expected duties in terms of the legislation. Moreover, the effectiveness of national enforcement of international, regional and national biodiversity laws is arguably not a concern of international biodiversity instruments such as the CBD and CITES.¹⁴⁵

V CONCLUSION

IEL, and specifically international law on biodiversity, is growing rapidly in response to international needs to provide a comprehensive framework for biodiversity conservation.¹⁴⁶ Global initiatives are however inadequate without local actions attuned to the different needs of individual countries. With some exceptions, little progress has been made globally in passing national legislation and implementing international biodiversity instruments that would promote the global, regional and domestic goals of sustainable biodiversity conservation.¹⁴⁷ South Africa is an exception to this general rule. The NEMBA, together with: the NEMA; other issue-specific acts, and s 24 of the Constitution, provide a comprehensive legislative framework for biodiversity conservation at national level.

The NEMBA, as South Africa's primary biodiversity act, follows an "international-friendly" approach with regard to biodiversity conservation, since it incorporates most of the provisions and obligations set out by international biodiversity instruments, including the CBD and CITES. In some instances the Act even reaches beyond the provisions of these instruments. Although provision on some aspects are lacking, it is proposed that the NEMBA is a commendable effort in domestic biodiversity conservation endeavours. Future experience and development may serve to further enhance protection efforts in terms of the NEMBA, especially within the broader framework set out by the comprehensive array of international biodiversity instruments.

¹⁴⁴ Section 43(3)(b).

¹⁴⁵ It may however be argued that the constitutional provisions on the application of IEL in South Africa may be invoked in order to compel authorities, to some extent, to heed and enforce obligations stemming from international biodiversity instruments.

¹⁴⁶ See Jonathan Charney, 'Biodiversity: Opportunities and Obligations' (1995) *Vanderbilt Journal of Transnational Law* 614, and Birnie and Boyle, above n 13, 541.

¹⁴⁷ See Collin and Laird, above n 32, 2, 4.