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Republic of South Africa**

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**The business case for biodiversity and good
biodiversity practice in the Republic of South Africa**

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Acronyms

ABS	Access and benefit sharing
ASGISA	Accelerated and Shared Growth Initiative of South Africa
C.A.P.E.	Cape Action for People and the Environment
CBD	Convention on Biological Diversity
DEA&DP	Western Cape Department of Environment Affairs and Development Planning
DEAT	Department of Environment Affairs and Tourism
DLA	Department of Land Affairs
DME	Department of Minerals and Energy
DoA	Department of Agriculture
DPLG	Department of Provincial and Local Government
DPW	Department of Public Works
DTI	Department of Trade and Industry
DWAF	Department of Water Affairs and Forestry
EKZNW	Ezemvelo KwaZulu-Natal Wildlife
EWT	Endangered Wildlife Trust
FFI	Fauna and Flora International
FSC	Forestry Stewardship Council
GCBC	Greater Cederberg Biodiversity Corridor
GDACE	Gauteng Department of Agriculture, Conservation and Environment
GEF	Global Environment Facility
GMO	Genetically modified organism
IAS	Invasive alien species
IUCN	World Conservation Union
KZN	KwaZulu-Natal
MCM	Marine and Coastal Management
MDTP	Maloti-Drakensberg Transfrontier Project
MTPA	Mpumalanga Tourism and Parks Agency
NEMA	National Environmental Management Act
NBF	National Biodiversity Framework
NBSAP	National Biodiversity Strategy and Action Plan
NFSD	National Framework for Sustainable Development
NSBA	National Spatial Biodiversity Assessment
NSDP	National Spatial Development Perspective
SANBI	South African National Biodiversity Institute
SANParks	South African National Parks
SKEP	Succulent Karoo Ecosystem Programme
STEP	Subtropical Thicket Ecosystem Programme
SO	Strategic Objective
TFCA	Transfrontier Conservation Area
WESSA	Wildlife and Environment Society of South Africa
WWF-SA	World Wide Fund for Nature South Africa

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1. Introduction

The Conference of the Parties (COP), as the governing body of the Convention on Biological Diversity, advances implementation of the Convention through the decisions it takes at its periodic meetings. In April 2002, the Parties to the Convention committed themselves to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth.

At its eighth meeting held in Curitiba, Brazil in March 2006, the COP requested the Executive Secretary "to compile information on the business case for biodiversity and good biodiversity practice, and to make this information available through the clearing-house mechanism" (Decision VIII/17, paragraph 3). The information will be made available at the ninth meeting of the COP.

Companies, business organizations and other interested organizations were invited to submit information on good biodiversity practice, including:

- good practice guidelines
- benchmarks
- certification schemes
- reporting guidelines
- standards (particularly performance standards in line with the 2010 indicators)
- tools for assessing the value of biodiversity and ecosystem services, for their integration into decision-making
- biodiversity action plans to define and operationalize companies' biodiversity commitments.

The private sector is arguably the least involved in the implementation of the objectives of the Convention of all stakeholder groups, yet the daily activities of business and industry have major impacts on biodiversity. With 2010 quickly approaching, there is a need to engage the private sector effectively in the implementation of the Convention's objectives, as well as its process. Companies and industry associations worldwide are increasingly acknowledging the importance of biodiversity and its components to their operations and their bottom-line, thereby creating, perhaps for the first time, an enabling environment for meaningful private sector engagement with the objectives of the Convention.

1.1 CBD engagement on business and biodiversity

The Business and the 2010 Biodiversity Challenge scoping meeting held in London in January 2005 agreed that the following industries or groups should be included in the debate:

- industries with a direct footprint on biodiversity
- industries with a supply chain footprint on biodiversity. Retailers, in particular, often have less rigorous and more flexible policies and practices regarding biodiversity than suppliers; thus, the potential impact of engaging retailers may be greater.
- industries dealing with access and benefit-sharing and biosafety

- banking, finance and insurance industries
- state-owned companies that may not be subject to consumer or investor expectations, or equally rigorous regulation
- small and medium-sized enterprises (SMEs) that may have less expertise and capacity to address biodiversity¹.

The scoping meeting felt that the business case for companies to manage biodiversity needs to be strengthened, such that it specifically articulates the risks and consequences for business of not taking biodiversity seriously, as well as the opportunities associated with engaging biodiversity (good reputation and licence to operate, sustainability, productivity). Key success factors for biodiversity need to be related to those for business.

A second Business and the 2010 Biodiversity Challenge meeting, held in São Paulo in November 2005, discussed various forms of engagement with the private sector in relation to the CBD in more detail. The São Paulo meeting concluded that opportunities for engaging different types of industries are influenced by the significance of each industry's impacts, as well its operational dependencies on biodiversity. Industries that rely on biodiversity for productivity, either directly or through their supply chains, or that have significant direct impacts on biodiversity, arguably provide the greatest opportunities for private sector engagement. This is because they already have an interest in biodiversity-related issues (whether explicitly recognized or not) and because, by improving their practice, they could play a major role in reducing the current rate of biodiversity loss.

Such companies also have influence over their supply chains. Engaging industries that have substantial indirect impacts on biodiversity may be more difficult, but may have great potential. Engagement of the banking, finance, and insurance industries, for example, could mainstream biodiversity within the private sector by making it a relevant issue to all companies seeking loans, investments or insurance. While, ultimately, all stakeholders should be engaged in implementing the Convention, it was felt that efforts to facilitate engagement might focus on high impact opportunities first. As the profile of biodiversity is raised within the private sector, more opportunities for engagement will arise.²

1.2 A roadmap for business engagement

The COP-8 roadmap for stronger business engagement has four main lines. First, it encourages parties to engage with business in the development and implementation of national biodiversity strategies and action plans, the main tools for implementing the Convention at the national level.

Second, it promotes the increased participation of business in Convention meetings, including by inviting governments to include private sector representatives on national

¹ Report of the Business and the 2010 Biodiversity Challenge meeting, London, 20-21 January 2005

² CBD, "Strengthening business engagement in the implementation of the Convention on Biological Diversity", paper prepared for the second Business and the 2010 Biodiversity Challenge meeting in São Paulo, 3-5 November 2005.

delegations to CBD meetings. Whilst Curitiba saw the highest participation of business in any CBD meeting to date, this remains relatively low.

Third, it calls for the compilation of good corporate biodiversity practice. The notification to which this report is responding is part of an invitation to organizations to forward guidelines, benchmarks, certification schemes, reporting guidelines, and other tools which can help companies align their policies and practices with the objectives of the Convention and the 2010 target of reducing biodiversity loss.

Fourth, it calls for the articulation of the “business case” for biodiversity, that is, finding arguments that can help convince company executives to embed biodiversity into strategic and operational decision-making.

This report by the South African National Biodiversity Institute (SANBI) prepared for the Department of Environmental Affairs and Tourism for the Secretariat of the CBD summarizes South African experience, programmes and practices in the area of business and biodiversity good practice. The report has been developed in consultation with key role-players in SANBI, its biodiversity programmes and the business and biodiversity initiatives described here.

The report is structured as follows:

Section 2 provides a brief overview of biodiversity and business in South Africa – exploring the use of biodiversity in South Africa and the value of biodiversity to the South Africa economy, outlining the business case for biodiversity and relevant national policy and strategy.

Section 3 summarizes the main established business and biodiversity initiatives in South Africa – in the wine industry, fishing industry, honey industry, indigenous cut flower industry and sugar industry.

Section 4 summarizes emerging business and biodiversity initiatives in South Africa – in the rooibos tea industry, potato industry, red meat industry, citrus industry, tourism sector, forestry sector, mining sector, agricultural sector and retail sector, and highlights some sector earmarked for collaboration.

Section 5 provides some conclusions about South African experience, programmes and practices in the area of business and biodiversity good practice, and highlights issues for further exploration.

2. Biodiversity and business in South Africa

South Africa contains a wealth of biodiversity within its borders. It is ranked as one of the top 25 most biodiverse nations in the world, and contains the 5th highest number of plant species and a relatively high faunal diversity for its land surface area, and marine biological diversity is also high (Reyers *et al.*, 2001). The diversity of peoples, topography, climate and geology of the country ensures a wide variety of landscapes, scenic vistas, lifestyles and knowledge. These natural and cultural resources underpin a large proportion of the economy and many urban and rural people are directly dependent on them for jobs, food, shelter, medicines and spiritual well-being.

Three globally recognised biodiversity hotspots are found in South Africa: the Cape Floral Kingdom (equivalent to the fynbos biome), Succulent Karoo (shared with Namibia) and the Maputaland-Pondoland-Albany centre of endemism (Maputaland-Pondoland is shared with Mozambique and Swaziland). The succulent Karoo biome is one of only two arid biodiversity hotspots in the world, the other being the Horn of Africa. Major pressures on biodiversity in South Africa include loss and degradation of natural habitat, in terrestrial and aquatic ecosystems; invasive alien species; over-harvesting of species, especially in the marine environment; over-abstraction of water; and climate change.

A growing concern globally around the loss of biodiversity led to the promulgation of the CBD in 1992, which South Africa signed in 1995. However, awareness around biodiversity issues in South Africa has only really gathered momentum since the promulgation of the National Environmental Management Act, 1998 (Act No. 107 of 1998), which subsequently led to the National Environmental Management: Biodiversity Act (NEMBA), 2004 (Act No. 10 of 2004). NEMBA gives effect to international agreements on biodiversity and provides the guiding policy and direction for biodiversity management in South Africa.

As part of South Africa's obligation under the Convention, a National Biodiversity Strategy and Action Plan (NBSAP) was developed by the Department of Environmental Affairs and Tourism (DEAT) during the period May 2003 to May 2005. The NBSAP sets out a framework and a plan of action for the conservation and sustainable use of South Africa's biological diversity and the equitable sharing of benefits derived from this use. The NBSAP is supported by a Country Study, which is based on a rapid assessment of South Africa's biodiversity, socioeconomic and political context. The following information from the NBSAP provides an overview of the use values of biodiversity in South Africa today.

2.1 The use of biodiversity in South Africa

Terrestrial, inland water, coastal and marine ecosystems and their associated species are widely used for commercial, semi-commercial and subsistence purposes through both formal and informal markets. While some of this use is well managed and / or is at levels within the capacity of the resource for renewal, much is thought to be unsustainable. "Use" in this case refers to extractive use, such as collecting, harvesting, hunting, fishing, and so on, for human consumption and production, as well as more

indirect use such as ecotourism (bird watching, photography etc.) There is generally good information available on formal commercial industries based on biological resources (e.g. hunting, game farming, ecotourism and organised forest timber, wildflower and fern harvesting) because they are regulated, and managed through permit and licensing systems. This trade is largely regulated through South Africa's provincial conservation authorities.

Wildlife ranching (game farming) is an important economic activity in the savanna biome, particularly in the Limpopo province (where more than half of all game farms are located) and the Northern Cape province. Game farming is also growing rapidly in the Eastern Cape province. There are an estimated 9 000 privately owned game ranches in South Africa, covering an area of more than 17 million hectares. The sale of game has shown substantial growth in the last decade from 8 292 animals sold in 1991 (worth R9 million) to 20 022 animals sold in 2002 (worth R105 million) at 52 auctions held throughout South Africa. However, hunting is much more profitable than the sale of wild game. Professional hunting is estimated to support 70 000 jobs and generates R1 billion a year from trophy hunting fees, taxidermy, accommodation and venison.

As with game farming, the farming of wildflowers to service the horticultural industry has become big business in some areas, especially in the Western Cape province. While some indigenous species are cultivated as with any other agricultural crop, selected fynbos plant species are also harvested from the wild for commercial purposes. Harvesting is done according to international certification standards based on currently known sustainable levels. A number of plants yield traditional beverages (such as rooibos tea and honeybush tea), or aromatic oils or remedies (such as buchu, hoodia and devil's claw), which have been commercialized. The market for wildlife and wildflowers has had positive impacts and has led to an increase in the area of land under conservation management.

South Africa is actively engaged in bioprospecting and the past decade has witnessed a flurry of activities in the exploration of local biodiversity for commercially valuable genetic resources and biochemicals. This is due largely to the country's extraordinarily rich and unique biodiversity and well developed research and institutional capacity, which combined provide an extremely favourable environment for bioprospecting, as well as for other approaches based on trading and using biodiversity for commercial gain. The absence of legal and administrative mechanisms to control access to South Africa's genetic resources and to set conditions for benefit-sharing has in the past been a key constraint to achieving more meaningful benefit sharing.

There is considerable lack of understanding of subsistence use of terrestrial, wetland and coastal resources in South Africa, except that it is known to be extensive and in many cases is thought to be unsustainable. Poverty and unemployment levels are extremely high, particularly in communally-owned lands, and natural resource harvesting is often a significant component of livelihood strategies – including food, material for craft production, building material, fuel and medicinal plants. Permits are required to collect resources such as thatch, reeds and bulbs from protected areas, but the existence of regulations or permit systems does not ensure sustainability.

Based on several South African case studies referred to in the National Biodiversity Framework, the average rural person who has open access to mostly communal lands

derives a largely unaccounted value of R800-R1 000 per person per annum from wild products and ecosystem grazing services to support their livestock. That is an average value of R6 000 per household per annum³. According to the National Spatial Biodiversity Assessment (NSBA), the total adjusted direct consumption value of these products was estimated at R396 million, R1 529 million and R842 million for the Eastern Cape, KwaZulu-Natal and Limpopo Provinces respectively in 1998. This translates into 31.3%, 21.2% and 59.1% of the gross geographic products for agriculture of the respective provinces. These numbers are significant and point to a considerable underestimation of the value and contribution of the natural resources in these provinces to the livelihoods of their people and to their economic development.⁴

Although land degradation and over-harvesting of terrestrial resources is a concern in many areas, it is South Africa's freshwater ecosystems that are under most pressure. South Africa is a water-poor country and freshwater is a scarce resource. Most river systems in South Africa have been transformed, both physically and in terms of water quality. The poor condition of most inland aquatic ecosystems is a direct reflection of poor land and water management and development within the catchment area. Thus, the greatest threat to aquatic biodiversity is not merely as a result of unsustainable use levels of the resources, but rather because of decreasing freshwater availability and widespread ecosystem degradation. Aquatic habitats are impacted on by overgrazing, invasive alien species, informal settlements, urban development and industrial and agricultural pollution. Riparian activities (sand mining, impoundments, cultivation) also threaten aquatic habitats and associated biodiversity. The movement of fish (indigenous and alien) to new catchments severely threatens biodiversity of aquatic systems, and should be subject to strict control and strong enforcement.

The marine fishing sector is an important economic sector in South Africa. About 600 000 tons of marine resources are harvested annually by 27 000 South African fishermen and women, with a value of approximately R2.5 billion. The value of the entire fishing industry, incorporating commercial, recreational and subsistence fishing, is estimated to be R4.5 billion a year. As with terrestrial resources, the commercial sector is regulated, co-ordinated and well researched, but there is limited information on the subsistence sector.

Strict allocation of fishing licences linked to scientific assessment of Total Allowable Catches has enabled some pelagic fish stocks to recover. Despite the strict controls, certain commercial sectors (particularly abalone and line-fishing) are under severe threat and priority actions are needed to address this. Certain rocky intertidal invertebrates are over-exploited by subsistence and semi-commercial harvesting. Sea birds (especially albatross, nine species of which are listed as endangered, vulnerable or near threatened) suffer high mortality during longline fishing activities for hake, tuna, swordfish, Patagonian toothfish and sharks. Poaching is a significant problem for some marine resources, particularly abalone.⁵

³ Department of Environmental Affairs and Tourism, 2007, *South Africa's National Biodiversity Framework*

⁴ Department of Environmental Affairs and Tourism, 2006, *National Biodiversity Strategy and Action Plan*

⁵ *ibid*

2.2 The value of biodiversity to the South Africa economy

South Africa's biodiversity provides an important basis for economic growth and development, in obvious ways such as providing a basis for its fishing industry, rangelands that support commercial and subsistence farming, horticultural and agricultural industry based on indigenous species, its tourism industry, aspects of its film industry, and commercial and non-commercial medicinal applications of indigenous resources. According to the National Biodiversity Framework⁶, keeping biodiversity intact is also vital for ensuring ongoing provision of ecosystem services such as production of clean water through good catchment management, prevention of erosion, carbon storage (to counteract climate change) and clean air.

Loss of biodiversity puts aspects of our economy and quality of life at risk, and reduces socio-economic options for future generations. The social impacts and economic costs of not managing ecosystems in a sustainable manner is high, as is demonstrated through land degradation, loss of ecosystem resilience, loss of freshwater resources, the intensification of the global carbon cycle and resulting climate change, the loss of fishing stock and the deterioration of air quality.

Scientific and public understanding of the importance of biodiversity is developing rapidly as more knowledge of the nature, role and importance of biodiversity accumulates (DEAT, 1997; Chapin *et al.*, 2000) in terms of both its instrumental and its intrinsic value. Its instrumental value is its use value to humans and includes the goods (fuel wood), services (pollination), information (drug development) and psycho-spiritual (tourism) value of biodiversity. The intrinsic value of biodiversity is its inherent value, a value that is there simply because that biodiversity exists and is not dependent on its use by human beings.⁷

Attempts have been made to calculate the full economic value of the different types of values that biodiversity has in South Africa. This is a very difficult task to accomplish and can be quite contentious. Work by environmental resource economist Martin de Wit in 2006 estimates that the total economic value of *selected* ecosystem goods and services in South Africa is R25 billion per annum, broken down as follows:

Goods and services	Estimated value (in R billion)
Grazing services	R 10
Pollination services	R 7
Wild crops and plants	R 2
Cultivated timber	R 2
Nature-based tourism	R 2
Uncultivated timber	R 1
Wild animals	R 1
TOTAL	R25 billion

⁶ Department of Environmental Affairs and Tourism, 2007, *South Africa's National Biodiversity Framework*

⁷ http://www.environment.gov.za/soer/indicator/Biodiversity_Natural_Heritage.htm

In de Wit's view, these values need to be realized through:

- appropriate policy instruments (tax incentives, appropriate policy instruments, ecosystem trading schemes)
- property right systems
- clear regulatory targets.⁸

According to the NSBA, for the whole of South Africa, the added value of ecosystems in the production of biological resources, as well as the final consumption of ecosystems was conservatively estimated in 2005 at a baseline reference value of R27 billion per annum, or R20 000 per terrestrial km², with a spread of around R30 000/km² for savannas and grasslands to R5 500 per km² for the Karoo. Indirect use values (mostly notably grazing and pollination inputs) account for two thirds of this value, while direct consumptive use values (nature's share of timber resources, aquatic resources, crops and plant resources and animal resources) account for 28% and non-consumptive use (nature based tourism) for 6% of total value.⁹

Contributions by biodiversity to human well-being are well documented, but continued degradation and unsustainable consumption of services are likely when so many ecosystem services are freely available public goods. Economic valuations of biodiversity provide us with information on how biodiversity is contributing to goods and services, help inform decision-making processes, and lay the groundwork for new property rights, pricing and valuation systems that reflect biodiversity's true value.

2.3 The business case for biodiversity

At the second Business and the 2010 Biodiversity Challenge meeting in Sao Paulo in November 2005, the risk to business of loss of biodiversity was highlighted. The continued decline in availability of essential goods and services provided by biodiversity presents a considerable risk to future generations of both people and companies. A growing number of large companies, globally and in South Africa, particularly those that heavily depend, or have major impacts, on biodiversity, feel compelled to invest in biodiversity in order to sustain and improve their profits.

The business case for mitigating biodiversity risks, minimizing adverse impacts on biodiversity and investing in conservation and ecosystem restoration is based on a company's need to maintain its competitive advantage and long-term sustainability. There is an increasing recognition by companies of the business case for managing their impacts on biodiversity as part of their management of risks to their companies' operations, performance and reputation. Moves by the forestry sector in South Africa towards lessening their environmental impact may provide an example of this kind of recognition.

In industries that have significant impacts on biodiversity, a company's productivity, and often its competitive advantage, will be influenced by its biodiversity record. Its record may be defined by compliance with legal requirements; implementation of

⁸ De Wit, M. "The value of biodiversity for the South African economy",. Presentation to International Day of Biological Diversity, Addo Elephant Park, 22 May 2006

⁹ Department of Environmental Affairs and Tourism, 2007, *South Africa's National Biodiversity Framework*

industry standards and reporting mechanisms; response to demands from local communities, civil society groups and shareholders; or the application of consumer-driven standards and other certification schemes. The involvement of parts of the South African indigenous cut-flower industry in international certification programmes to access lucrative export markets is an example of this.

As societal expectations and legal requirements favour biodiversity more and more, companies that have good biodiversity records will have a significant advantage over those that do not. In future in South Africa, as biodiversity considerations are mainstreamed into land use and other resource planning, a company's biodiversity record will increasingly influence its ability to access land, sea and other natural resources essential for its operations, as well as its ability to obtain both the legal and social right to operate in an area. As markets develop and biodiversity values are captured, a company's biodiversity record may also affect its access to capital and insurance. The launch of the Mining and Biodiversity Forum in the South African mining sector provides an example of industry seeking to improve its record in terms of biodiversity.

For retailers and other companies that interact directly with the public, having a good biodiversity record will also facilitate access to consumer markets, particularly as consumer awareness about the importance of biodiversity increases. This certainly true of upmarket food and clothing retailers Woolworths in South Africa, who recently launched their "good business journey" initiative, one of the three priorities of which relates to the company's impact on the environment, in particular the issue of diminishing biodiversity, with organic production, conservation and a new approach to packaging as the key areas of focus.

A company's competitive advantage and long-term sustainability will also be affected by its overall productivity. For industries that depend on biodiversity, its components, or the ecosystem services supported by biodiversity to operate, the decline in the availability of these resources and services is a production risk that could lead to insecure supply chains, decreased productivity, unreliable service, and poor product quality. This is the driving force behind the Southern African Sustainable Seafood Initiative (SASSI), initiated by the World Wide Fund for Nature (WWF) to inform and educate participants along the seafood value chain about levels of threat to particular species.

Companies that can predict or identify new markets for "biodiversity-friendly" products have a competitive advantage. As biodiversity loss continues, such opportunities will become increasingly apparent. Companies that exploit these opportunities will benefit from "first-mover" advantage. The Biodiversity and Wine initiative in South Africa provides an example of this advantage – gained by wine producers who choose to commit themselves to sustainable farming practices and the conservation of fragments of land with biodiversity value and who will, through a nascent labelling scheme, be able to market the purchase of their wine to discerning consumers as contributing to conserving biodiversity.

The initiatives mentioned here are all discussed in more depth below. In addition to these kinds of initiatives, thoughtful businesses in South Africa will, over time, discover new "green" business opportunities, including new technologies and products that can

halt degradation, rehabilitate ecosystems, or increase efficiency of ecosystem service use (e.g. renewable energy, agroforestry and eco-tourism). According to the World Business Council for Sustainable Development, such companies can also benefit from new markets, such as water quality trading, certified sustainable products, and wetland and endangered species banking, and new businesses, such as ecosystem restoration and environmental asset finance or brokerage. There can be new revenue streams for assets that enable companies to capture economic value from ecosystem assets, such as forests, that are currently undervalued.¹⁰

2.4 Business and biodiversity in national policy and strategy

The South African government recognizes the need to mainstream biodiversity priorities into the policies, plans and programmes of a range of stakeholders whose core business is not biodiversity, but whose day-to-day activities significantly impact upon biodiversity. The need to engage with the production sectors is recognised as a key strategy in the country's *National Biodiversity Strategy and Action Plan (NBSAP)* as well as several strategies at the bioregional scale. The NBSAP, developed as part of South Africa's commitments to the CBD, sets out a comprehensive 20-year strategy to conserve and manage terrestrial and aquatic biodiversity in order to ensure sustainable and equitable benefits to the people of South Africa, now and in the future.

The NBSAP includes several objectives and targets aimed at key production sectors and industries to encourage them to integrate biodiversity into their production and service standards. A particular NBSAP outcome requires the various sectors that impact on biodiversity to implement effective changes at an operational level. Changes at a macro-economic level, such as elimination of perverse incentives, or payment for ecosystem services, together with increased awareness of biodiversity considerations, effective enforcement of legislation, application of the principle of co-operative governance, etc., are also addressed in the NBSAP, and are needed to mainstream biodiversity into the key sectors.

NBSAP objectives relating to three areas of economic activity with a significant impact on biodiversity are as follows:

- Include biodiversity considerations in guidelines and best practice codes of key **agricultural** industries, to mitigate negative impacts of agricultural production on biodiversity and encourage sustainable agricultural practices.
- Include biodiversity considerations in **forestry** industry guidelines and best practice codes to mitigate negative impacts of commercial forests and harvesting of natural forests on biodiversity and encourage sustainable forestry practices.
- Include biodiversity considerations in **mining** regulations and guidelines and best practice codes to mitigate negative impacts on biodiversity and encourage sustainable mining practices.

South Africa's *National Biodiversity Framework (NBF)* has been developed by DEAT as a requirement of the Biodiversity Act. The NBF is based on the NBSAP of 2005 and the National Spatial Biodiversity Assessment (NSBA) of 2004, but focuses on priority

¹⁰ <http://www.wbcsd.org/plugins/DocSearch/details.asp?type=DocDet&ObjectId=MjI3MDU>

activities for the next five years rather than a comprehensive set of longer term activities. The NBF draws out 28 priority actions for the next five years within each of the Strategic Objectives (SOs) of the NBSAP. One of the five SOs is that “Integrated terrestrial and aquatic management minimizes the impacts of threatening processes on biodiversity, enhances ecosystem services and improves social and economic security”. This includes priority action 3.4, “Work with key production sectors to minimise loss and degradation of natural habitat in threatened ecosystems and critical biodiversity areas”. Another SO is that “Human development and well-being is enhanced through sustainable use of biological resources and equitable sharing of the benefits”, including priority action 4.3, “Facilitate the development of the natural products sector”.

Loss and degradation of natural habitat are the biggest causes of biodiversity loss in South Africa. Production sectors that are major land and resource users, including agriculture and aquaculture, property development, forestry, mining, fisheries and biofuels, have a vital role to play as custodians of the country’s biodiversity. The NBF argues that these sectors should develop and implement sector-specific wise practice guidelines to minimise the degree to which their operations result in loss of natural habitat and species in threatened ecosystems and critical biodiversity areas, to protect ecosystem functioning, and to ensure biodiversity-friendly management of GMOs where applicable.

The *tools provided by the Biodiversity Act* provide mechanisms for meeting this challenge, by identifying specific geographic areas where loss and degradation of natural habitat should be strongly avoided. The Biodiversity Act provides for the following mechanisms for sustainable use and conservation of biodiversity, in addition to the NBF:

- guidelines for publishing bioregional plans (expected to be published in 2007)
- regulations on invasive alien species (expected to be published in 2007)
- regulations on access and benefit sharing (expected to be published in 2007)
- regulations on bio-prospecting (expected to be published in 2007)
- regulations on threatened and protected species (expected to be published in 2007)
- norms and standards on hunting (expected to be published in 2008)
- listing of threatened and protected species (national list expected to be published in 2007)
- listing of threatened and protected ecosystems (identified as a priority action in the NBF, first national list expected to be published in 2008)
- norms and standards for biodiversity management plans for species (expected to be published in 2007)
- norms and standards for biodiversity management plans for ecosystems (expected to be published in 2008)

South Africa also has five *bioregional programmes*, initiated since 2000, which are multi-sectoral, multi-institutional, landscape-wide conservation initiatives at the regional level, with co-ordination units based in SANBI. They include Cape Action for People and the Environment (C.A.P.E.), Succulent Karoo Ecosystem Programme (SKEP), Subtropical Thicket Ecosystem Programme (STEP), Grasslands Programme and a newly established Wild Coast Conservation and Sustainable Development Programme. SANBI has also recently initiated a Marine Programme in partnership with

WWF-SA. These programmes aim to address biodiversity conservation at the landscape scale, taking into consideration socio-economic development issues.

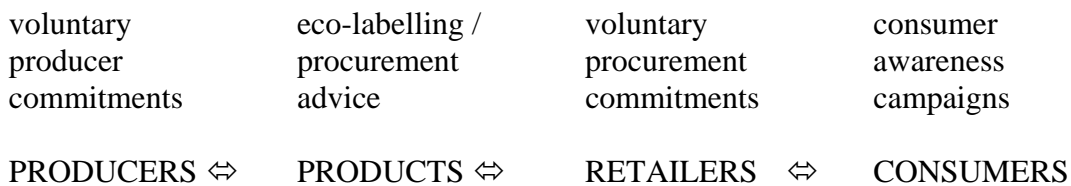
The bioregional programmes have co-ordination units or programme management units that facilitate co-ordination and collaboration between conservation organisations and other key partners. They provide an important means of engaging with business through a series of pilot projects exploring biodiversity in particular industries and economic sectors. Many of the industry initiatives outlined in this report have their origins in one of the bioregional programmes and some continue to be co-ordinated through one of the programmes. Four of the bioregional programmes are currently piloting approaches under the three NBSAP objectives related to agriculture, forestry and mining.

The concept of *biodiversity offsets*, ensuring no net loss of biodiversity in development projects through prioritized in situ conservation outcomes, is increasingly being used in South Africa as a method of compensating for the residual, unavoidable harm to biodiversity caused by mining and development projects, particularly in the context of conducting Environmental Impact Assessments. In 2005 the Western Cape DEA&DP commissioned the preparation of provincial guidelines on biodiversity offsets which are in the process of development. Examples of biodiversity offsets used in mining and construction projects in South Africa in recent years are attached as Annexure 1.

3. Established business and biodiversity initiatives

Over the past few years, conservationists worldwide have identified the need to “mainstream” biodiversity by integrating biodiversity conservation and sustainable use principles into production systems and landscapes where the primary focus is on production. In South Africa this has meant a growing engagement between the business and conservation sectors and the development of some innovative models of “biodiversity-friendly” business.

Five industries where business and biodiversity initiatives have become well established are the wine, fishing, honey, indigenous cutflower and sugar industries. Initiatives in these industries fit in at various stages along the value chain, and involve market mechanisms such as those depicted below. The commitments are referred to as “voluntary” in the sense that they are not legislated requirements or regulatory mechanisms.



The major players in these initiatives, as well as the emerging initiatives discussed in Section 4 of this report, are:

- conservation non-governmental organisations (NGOs) based in South Africa, like the World Wide Fund for Nature (WWF), the Endangered Wildlife Trust, Conservation International and the World Conservation Union
- South Africa’s government- and donor-funded bioregional conservation programmes – C.A.P.E., SKEP, STEP and the Grasslands Programme
- Industry role-players from South African companies and multinationals represented in the country, as well as some of the major retailers.

The costs of these initiatives and the biodiversity conservation measures they involve, while in some cases partially funded by donors, are increasingly being covered by the premium prices these producers are able to charge for their products in niche markets, particularly overseas. They have achieved this through marketing their products as biodiversity-friendly, participating in labelling and certification schemes or working through international trade organisations that accredit producers. WWF-South Africa has recently initiated discussions amongst business and biodiversity initiatives working in fast-moving consumer goods industries (mainly food, but also including flowers) about the possibility of forming an alliance to share expertise and provide a co-ordinated point of engagement with role-players at all points along the value chain.

3.1 Wine industry

South Africa is the world's eighth largest producer of wine, with approximately 90% of wine production occurring within the Cape Floristic Region (CFR). With export markets opening up for South African wines, there was a 15% increase in land under vines from 1990-2000, and today vineyards cover over 100 000 hectares. With only 9% of lowland renosterveld and fynbos remaining, conservationists became concerned by this new wave of viticultural expansion.

Following a study by the Botanical Society of South Africa and Conservation International, the wine industry and the conservation sector formed a partnership in the Biodiversity and Wine Initiative (BWI). The BWI developed biodiversity guidelines for the industry, which were adopted by the Integrated Production of Wine accreditation system in 2004. These guidelines, attached as Annexure 2a, are intended to be practical and realistic for growers and producers to implement, with maximum conservation benefits. Annexures 2b and 2c contain an explanatory brochure from BWI.

Involving members and champions

The BWI aims to prevent further loss of habitat in critical sites and increase the total area set aside as natural habitat in contractual protected areas. Farmers are assisted with assessing the conservation value of their land, implementing biodiversity guidelines and identifying unique marketing elements – from rare species to magnificent scenic routes and trails. The initiative also promotes changes in farming practices that enhance the suitability of vineyards and surrounding natural habitat for biodiversity. Producers and landowners who enter into a biodiversity agreement or establish a contract nature reserve may qualify for 80-100% property rates rebates.

One of the strategies of the BWI is to identify and enlist interested producers as members or champions, who will implement the guidelines, conserve critical ecosystems and incorporate a biodiversity story into their winery experience. By mid-2007 BWI had five champions, five co-operative cellar members and 76 members, bringing the total area conserved amongst all the members and champions to 50 533 hectares, which is equivalent to 50% of the total vineyard footprint in the Cape winelands.

Providing a unique marketing angle

Wines of South Africa, the official marketing arm of the industry, has been able to use the BWI as a unique marketing angle for South African wines, emphasizing that both the wines and the flora of the Cape are unusually diverse as a result of the varied topography, soils and micro-climates of the region. With the marketing slogan “Variety is in our nature”, the Cape Floral Kingdom is providing a unique selling point in a highly competitive global market.

Consumers will soon be able to identify BWI members wine by looking for the BWI symbol (a Cape sugarbird on a protea) or the slogan “*A proud member of the Biodiversity and Wine Initiative*” displayed on the back labels of their wine bottles. The first phase of the BWI primarily funded by the Critical Ecosystem Partnership Fund

(CEPF) was completed at the end of 2006 and the initiative, housed within the Botanical Society of South Africa, now faces the challenge of supplementing funding currently received from The Green Trust (a WWF-Nedbank partnership), Wines of South Africa and Winetech.

- For more information, visit www.bwi.co.za and www.varietyisinournature.com

3.2 Fishing industry

There is global concern about the dramatic depletion of the world's marine fish stocks, including those of South Africa. While South Africa's 21 commercial fisheries are managed according to best available scientific information, the enforcement of the laws is often problematic due to lack of resources, and the large extent of our coastline and Exclusive Economic Zone. Some of our fish stocks, such as pelagic schooling fish (sardines and anchovies) and demersal species (Cape hake, *Merluccius* spp.) are considered to be well managed and in a healthy condition, and in April 2004 the South African hake trawl fishery received a Marine Stewardship Council (MSC) certification.¹¹

However, many years of overexploitation and poor management (often in ignorance) have caused the abundance of many of our other fish species to drop to dangerously low levels. Our linefish stocks are in a worse shape than any other fishery, with the populations of many species considered to be overexploited or even collapsed. This prompted the announcement of a "State of Emergency" in South Africa's linefishery in December 2000 by the authorities. A national programme aimed at reducing the incidental catch of seabirds in longline fisheries was also launched in 2002, led by WWF-SA and Birdlife South Africa, and has become the Responsible Fisheries Programme focusing on assessing and reducing the bycatch of threatened seabirds, sharks, turtles and cetaceans on fisheries in the Benguela Large Marine Ecosystem.

The WWF Sanlam Marine Programme, co-ordinated through SANBI, is an initiative to achieve three aims: to establish and implement a network of effectively managed and ecologically representative Marine Protected Areas (MPAs) by 2020; to restore at least half the over-exploited and depleted fish stocks to sustainably managed levels by 2020, and maintain the status of all sustainably exploited fish stocks; and to apply an Ecosystem Approach to Fisheries in South Africa and reduce associated negative environmental impacts of fishing practices to acceptable levels by 2012. The programme also includes cross-cutting activities that work towards these targets through community development and conservation education.

Southern African Sustainable Seafood Initiative (SASSI)

The oceans that wash South Africa's shores host some of the most diverse marine communities in the world, but these are threatened by unscrupulous harvesting and illegal sales. While locals and visitors to the country may want to enjoy a delicious local seafood feast while enjoying the spectacular scenery, they may unknowingly be

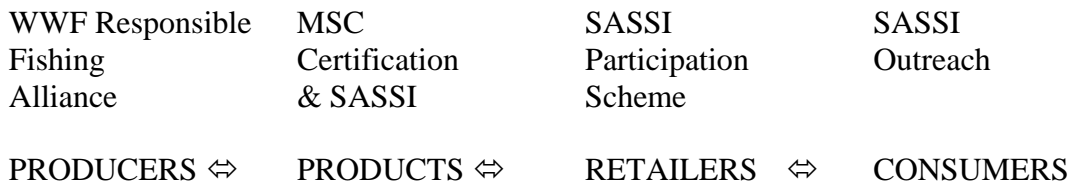
¹¹ See www.panda.org.za/sassi for a list of products available in South Africa with the MSC label – from Woolworths, I&J and Sea Harvest.

contributing to the demise of a threatened or over-exploited species, or even breaking the law.

In response to this lack of information about seafood, the Southern African Sustainable Seafood Initiative (SASSI) was initiated by WWF to inform and educate all participants in the seafood trade, including wholesalers, retailers, restaurateurs, caterers and consumers. The main objectives of SASSI are to:

- promote voluntary compliance with the law through education and awareness
- shift consumer demand away from over-exploited species to more sustainable options
- create awareness on marine conservation issues.

Using the value chain suggested in the introduction to Section 3 of this report, the SASSI initiative can be shown as follows:



Popular guides to species’ status

The primary tool of SASSI is a species list, based on the latest available research, available as a handy fold-up pocket guide (see Annexure 3) detailing those species (or groups of species) which have relatively healthy and well managed populations that can sustain current fishing pressure (green – the best choices), those which are already overexploited or come from problematic fisheries (orange – consider an alternative), and those which may not legally be bought or sold in South Africa (red – absolutely not) – see Annexure 4 for a list of the latter.

Making innovative use of cell-phone technology to promote conservation, the list has been available since December 2006 as a short message service called “FishMS”. Shoppers and diners who are unsure about whether or not to buy or order a particular type of fish can SMS the name of a fish to 079-499-8795. They get an immediate response saying whether that type of fish falls in the green, orange or red category. In this way, consumers are empowered to make informed decisions on the spot. Early indications are that use of the service is significant, with more than 3 000 people enquiring more than 11 000 times over the first six months of the existence of the service.

Further information about overfishing and the various fishing methods used in South Africa is also found in the “Know your Seafood?” booklet (see Annexure 5), or on the SASSI website, which also hosts a species database (with images) for all the listed species. A central message is that continued overfishing is detrimental to everyone involved, from the fish and ecosystem, to the communities whose livelihoods depend on fishing, through to seafood retailers and the consumer, and that by giving certain species a break their populations can recover and they can once again become more widely available.

Awareness and participation

The initiative is housed by WWF-SA and funded by the Green Trust (a WWF-Nedbank partnership), and Pick 'n Pay (a major supermarket chain), in the interest of the sustainable and environmentally sensitive use of seafood resources. SASSI has a number of other support and network partners, including the Department of Environmental Affairs & Tourism (DEAT), Ezemvelo KZN Wildlife, Two Oceans Aquarium, TRAFFIC, Sea World at uShaka, The South African Institute of Aquatic Biodiversity (SAIAB) and the Endangered Wildlife Trust (EWT).

A Restaurant Participation Programme is also in the process of being implemented, allowing seafood businesses to support sustainable and responsible fishing and seafood production by pledging to adhere to certain guidelines. There are two levels of participation, SASSI Aware and SASSI Champion. The difference between the two levels of participation is that the Aware level deals with both Green and Orange species on the SASSI list, while the Champion level chooses to deal with Green species only. The 20 outlets of seafood restaurant chain John Dory's have recently been granted SASSI Aware status.

Both levels undertake to voluntarily adhere to the following guidelines:

- Always buy seafood from legal sources
- Never buy or serve SASSI Red-listed species
- Always have Green-listed species available for sale
- Never promote Orange-listed linefish species (and not sell any Orange-listed species for Champion level)
- Supply their customers with the correct name, place of origin, and production method (farmed or wild-caught) of the seafood served, as well as indicate the fishing method used for wild-caught species.

Additional requirements are that someone from the business must attend a SASSI workshop prior to becoming a participant, and that they have SASSI materials available for display to their customers. Participation lasts for a period of one year, after which the business needs to re-apply. Consumers are encouraged to contact SASSI should they feel that the participant has done anything in contravention to these conditions.

- For more information and to access the SASSI database visit www.wwf.org.za/sassi

3.3 Honey industry

A few years ago conservationists became aware that an alarming number of honey badgers were being killed in gin traps set by beekeepers in South Africa. Contributing an estimated R3.2 billion to the South African economy, many commercial beekeepers would not, in the past, tolerate honey badgers because they raid and destroy the bee hives, seeking out the nutritious larvae of the bees, which is one of many food sources for them. The beekeepers went to war and either poisoned or trapped the badgers, whose numbers plummeted. The honey badger is legally protected and listed as Near Threatened in the South Africa Red Data Book For Mammals (2004), but there is little capacity for enforcement of the law.

Finding solutions for badgers and beekeepers

Honey badgers are surprisingly common in coastal fynbos, although they remain threatened because of their slow rate of reproduction and large home ranges required. As a top predator in many of its ranges, the honey badger plays an important role in maintaining a healthy balance in an ecosystem. Beekeepers play a vital role in the South African farming economy, not just for the honey that they produce, but also because bees pollinate orchards and are crucial to the fruit-growing industry. It became clear that a solution was required which would benefit both beekeepers and badgers, by promoting the use of simple, cheap and effective alternatives to protect the beehives from the badgers.

A partnership was formed in 2001 between the South African Bee Industry Organisation, retailers, conservation authorities, the Wildlife and Environment Society (WESSA), World Wide Fund for Nature (WWF) and the Endangered Wildlife Trust (EWT) to address the problem. The initiative involves undertaking extension work to convince beekeepers to protect hives effectively, auditing adherence by beekeepers and providing an accreditation service to participating honey producers. Beekeepers were shown how to keep the badgers out of the hives, by elevating them beyond the badgers' reach or reinforcing them so that the badgers cannot pull them apart. At minimal cost, this eliminates the need to kill the badgers.

Labelling badger-friendly honey

By the time the initial three-year project ended in 2005, the majority of beekeepers visited had agreed to support the initiative and understood that adequate hive protection was the only long-term cost-effective solution to badger damage. At that point 320 beekeepers and processors had declared their subscription to the SABIO Code of Conduct, which includes badger-friendliness. Beekeepers themselves came up with some innovative and relatively inexpensive methods of hive protection. Some of the original methods of hive protection were adapted by beekeepers, to suit their own unique situations.

The project was expanded to also include all major fruit producers (using bees for pollination) in the Western Cape. Most fruit producers were already subject to overseas standards (e.g. Eurepgap) and therefore welcomed the registration and badger-friendly accreditation of beekeepers. The project also gained formal support from the Deciduous Fruit Producers Trust.

Today participant commercial beekeepers, retailers, farm stalls and fruit producers, including large retailers like Woolworths and Pick 'n Pay, are marketing honey from hives protected in this way as "badger-friendly" honey, signified by a standardised sticker, which must have WESSA, WWF or EWT's logo on it. The South African beekeeping industry monitors and enforces compliance with the criteria for accreditation. In this way, consumer awareness through wide publicity and retailer action have managed to change bad industry practice significantly and promote conservation.

Initially the costs of the initiative (with a full-time project manager) were funded by sponsors (The Carnivore Conservation Group of the Endangered Wildlife Trust, The

Green Trust, a WWF-Nedbank partnership, Leisure Kitchens and the Wildlife & Environment Society of South Africa). Administration of the Badger Friendly Honey certification system has now become completely self-sufficient in that the auditing fees charged to producers cover the cost of administration of the green labelling system. This would not be feasible without the support and benefit accruing to the producer, consumer and environment.

This initiative has provided a solutions-based approach to resolving a specific example of a much broader conflict between farmers and ‘problem predators’ in South Africa. The project had such broad success partly because a readily available and inexpensive solution exists (adequate hive protection), rendering the killing of the problem predator unnecessary. The initiative has also provided a clear example of how consumer awareness (through wide publicity) and retailer action can in fact significantly change bad industry practice and promote conservation.

- For more information, visit <http://www.scienceinafrica.co.za/2003/march/badger.htm>

3.4 Indigenous cut flower industry

Flower Valley

The Agulhas Plain in South Africa’s Western Cape province is home to some of the world’s richest biodiversity, but much of the natural vegetation has been replaced by vineyards and commercial farming. In 1999, the Flower Valley farm near Baardskeerdersbos with its globally important fynbos was up for sale and under threat of being converted to vineyards. With the support of various donors, Fauna and Flora International (FFI) purchased 1 338 hectares of land over the next few years, including two farmsteads with their flower processing plants and export business, and the Flower Valley Conservation Trust (FVCT) was formed to take ownership.

The goals of the Trust are to conserve biodiversity, promote the sustainable use of fynbos and assist local communities to improve their quality of life. With consumers becoming increasingly environmentally and socially conscious, the idea was to use Flower Valley Farm as the base from which to encourage fynbos operations on the Agulhas Plain to harvest wild fynbos more sustainably and to improve the social and economic conditions of workers in the industry, having an incentive to comply with strict codes in order to command premium prices, particularly in Europe.

Building a viable commercial operation

Initially the Trust worked to improve the flower production process and sold flowers through Shell garage shops in South Africa and the United Kingdom. However, in order to become economically sustainable and comply with changes in tax legislation at that time, a commercial partner was needed to manage and expand the business and to develop a marketing strategy.

In 2003 a group of UK-based investors bought the business from FVCT and established FYNSA (Pty) Ltd. A partnership agreement was negotiated between the two parties

detailing their commitments and supply chain arrangements. After an initial period of uncertainty and adjustment, new business management was appointed in 2005 in tune with the sustainable development vision and contracts. The business and the market for certified products have shown healthy trends in the past year.

Getting accredited internationally

In 2005 with help from FFI as well as the Shell Foundation, a relationship was brokered with the Marks & Spencers supermarket chain in the UK facilitating access to a much larger retail market than currently available in South Africa or via the auctions in Europe. The M&S chain has an ethical procurement policy, thus ensuring that international health and safety standards are met in the production of the bouquets at Flower Valley. By June 2006 approximately 330 000 bouquets of fynbos had been sustainably harvested and sold in more than 200 M&S stores, creating 62 sustainable jobs in South Africa. Good progress is now being made to put Flower Valley bouquets onto South African supermarket shelves through the Pick 'n Pay chain of stores.

In their effort to build up a network of certified suppliers, the Trust and FYNOSA are working with around 20 neighbouring farms and picking operations, providing guidelines such as the Vulnerability Index which was put together by Flower Valley team with help from experts in botany, ecology and land use. Training and marketing support as well as help in meeting certification standards are part of the support package. Research is being carried out into the impacts of harvesting and into different methods of rehabilitation of old farmlands and areas cleared of alien vegetation. Monitoring of the socio-economic benefits of the Flower Valley programme on surrounding communities is also being tracked

Together with CapeNature (which issues permits to fynbos harvesters), Flower Valley is developing an accreditation system for biodiversity-friendly harvesting practice. The system builds on early guidelines developed by the South African Protea Producers and Exporters network (SAPPEX) and includes a Code of Practice for Sustainable Harvesting and an auditing system which was piloted in 2005. A feasibility study on the affordability of such a scheme for suppliers, its market value and replicability on a wider scale in the Fynbos region is currently being undertaken. The structure and costing will be decided in August 2007. It is also proposed that future regulations on harvesting in protected areas draw on this Code of Practice and certification model. See Annexures 6a, 6b, 6c, and 6d.

- For more information visit www.flowervalley.org.za

3.5 Sugar industry

In 2003, the Mondi Wetlands Project (with WWF-SA and the Wildlife and Environment Society of South Africa), which had been working with the forestry sector, began to tackle another industry which has major impacts on wetlands – sugar cane. Sugar cane is amongst a group of crops noted for its heavy water consumption, something a water-scarce country like South Africa can ill afford. Cane is often planted too close to, or in wetlands, rivers and estuaries. Poor management of cane fields, especially on steep

slopes, leads to excessive soil erosion and sedimentation of wetlands, and loss of habitat for animal species.

Sustainable Sugar Initiative

The MWP initiated a partnership with the WWF's Global Freshwater Programme and the Noodsberg Canegrowers Association to promote the growing of sugar cane in South Africa in a sustainable manner. Known as the Sustainable Sugar Initiative (SSI), this project involves the national Departments of Water Affairs, Agriculture, Ezemvelo KZN Wildlife (the provincial conservation authority in KwaZulu-Natal province), South African Sugar Association, SA Canegrowers and local environmental committees from various cane growers' associations, and is piloting Africa's first environmental management system for sugar cane. WWF-SA have engaged the sugar industry, through the South African Sugar Association, to investigate the environmental impacts of sugar cultivation, particularly with regard to water use, and have produced conservation and environmental management guidelines.

The innovative 200 commercial farmers and approximately 600 small-scale growers of the Noodsberg Canegrowers Association near Pietermaritzburg in the KwaZulu-Natal Midlands shaped a tailor-made Environmental Management System (EMS) designed specifically for sugar cane agriculture – a first for Africa and possibly in the world. The new approach works by establishing a principle, and then defining criteria, indicators, verifiers/guidelines for that principle. The Noodsberg guidelines were used as the source document for the development of the new system.

The SuSFarMS management system

The Sustainable Sugarcane Farm Management System, known as SuSFarMS, is based on South African law and better practice, so calls for biodiversity protection in terms of the current legislation. SuSFarMS is a management and extension tool to assist users to manage sugarcane farms in an economically, socially and environmentally sustainable manner. SuSFarMS lays out better practice guidelines in a manner suitable for sustainability auditing by the farmer, extension workers or third party auditor. The methodology was developed with farmers and extension workers to be practical to use and implement. SuSFarMS consists of a user manual and Microsoft Excel audit spreadsheet.

SuSFarMS strives to support and grow the positive effects of integrating plant and animal biodiversity and recognizes the farmer, farm worker and surrounding community as an integral component in achieving this. Such integration enhances complex interactions and synergisms and optimizes ecosystem functions and processes, such as biotic regulation of harmful organisms, nutrient recycling, water production and biomass accumulation, thus allowing agro-ecosystems to assist and sponsor their own functioning into the future. This is achieved by adapting and integrating the farm management system with the local resource base and existing environmental and socioeconomic conditions. The end result of such an approach is improved long term economic, agronomic and ecological sustainability of the production system on which farming communities, and ultimately society, depend.

SuSFarMS assess sustainability by ascertaining a farmers adoption of better management practice (BMP) and adherence to applicable South African legislation. This is done under three categories (or Principles): Economic, Social and Environmental. These are underpinned by Criteria, Indicators and Verifiers. During an audit one looks at verifiers to show whether a BMP or legislation has been met. An example is given in the table below:

Principle: Natural assets are conserved, critical ecosystems services are maintained and agricultural resources are sustainably used.		
Criteria: Natural agricultural resources are sustainably used.	Indicator: Soil erosion is minimized	Verifier: Extraction roads follow crest lines or conservation terraces

Ideally SuSFarMS should be applied collectively at a grower group level with extension services assistance. A grower group can decide on the level of performance it would like to achieve. Performance can range from fully compliant to all better practice and legislation, through to partial compliance and/or no compliance. A target percentage of farms on each tier of compliance can be set. As a minimum it is advised that all growers become legally compliant and a target percentage set for growers achieving better practice compliance, which increases each year.

To participate a grower group needs to join the sustainable sugar initiative South Africa. Individual farmers can be accommodated if their grower group does not join. SuSFarMS is administered by the Sustainable Sugar Initiative South Africa which has a steering committee comprised of members from SA Canegrowers, South African Sugar Association, Noodsberg Canegrowers and WWF. Through a members' Canegrower group a fee per tonne is levied to cover the costs of administration, auditing and updating the system. and a once off joining fee per grower group is charged.

In 2006 WWF and the South African Sugar Association (SASA) signed a Memorandum of Understanding (MOU), which will centre on conserving freshwater and estuarine habitats and promoting biodiversity. The South African sugar industry is recognised as a world leader in research, development of better management practices and successful co-operative farming systems. By sharing the ideas developed by the South African sugar industry, WWF aims to help sugar sectors in other countries to apply better environmental practices.

For more information, visit www.wetlands.org.za

4. Emerging business and biodiversity initiatives

In addition to the five industries with established business and biodiversity initiatives discussed in Section 3, South Africa has several emerging initiatives in a range of sectors, including the rooibos tea, potato, red meat and citrus industries, and the tourism, forestry, mining, agriculture and retail sectors. Each of these is summarized below, and other sectors that have been earmarked for collaboration with conservation bodies are highlighted.

4.1 Rooibos industry

Tea made from the rooibos plant (*Aspalathus linearis*) has a growing market around the world because it contains healthy anti-oxidants and no caffeine. In addition to its large local market, many varieties of rooibos or redbush tea are available in grocery, speciality and natural food stores throughout the US, Canada, Europe (Germany is the biggest export market) and Japan.

Because of the increasing popularity of the tea, farmers are converting large areas of land to grow the plant commercially. Whereas some of this land has previously been used to cultivate other crops, the clearing of new lands has a negative impact on the region's richly diverse fynbos habitat. The footprint for cultivated rooibos has grown from 14 000 hectares in 1991 to over 60 000 hectares today. In the Northern Sandveld, an average of 2.7 hectares of virgin land has been cleared for farming every day in the past 15 years, primarily for potato and rooibos cultivation (the two crops are frequently grown in rotation). In some cases farmers, frustrated at the length of time it takes to get permission from the national Department of Agriculture, have gone ahead and cleared land without permission.

This expansion threatens numerous endemic plant and animal species, including the many diverse sub-species of rooibos itself which are more resistant to pests and drought than the cultivated variety. This is particularly relevant following the drought of 2003 which destroyed many hectares of rooibos plantations. The sub-species are important to the sustainability of the commercial crop in case more varieties of plants are needed for cultivation in the future, especially in the light of climatic change.

The Sustainable Rooibos Initiative

The Greater Cederberg Biodiversity Corridor initiative (GCBC) of CapeNature takes place under the auspices of a bioregional programme, C.A.P.E. (Cape Action for People and the Environment). The Project Management Unit of GCBC strives to introduce people to sustainable ways of using their land and the natural resources of this unique region. Partnerships with industries, landowners, community leaders, government and NGOs (non-governmental organizations) are the foundation of the GCBC's biodiversity conservation programme, overseen by a steering committee representative of all these stakeholders.

GCBC, together with the representative body of producers, workers, processors and traders, the South African Rooibos Council (SARC), commissioned the South African Rooibos Initiative (SRI) in an effort to address the enormous threat posed by agriculture on remaining natural vegetation in the Sandveld and elsewhere in the production area. The SRI was tasked with producing a sustainable production strategy for the rooibos industry – see Annexure 7. The strategy is designed to be inclusive and accessible and aims to conserve the biodiversity of the GCBC while delivering benefits to all stakeholders.

The project will undertake research to determine the requirements for sustainable rooibos production, undertake a joint planning process for expansion bearing in mind industry land reform criteria and the need to develop economic opportunities and social benefits. The core of the project is the development of a set of biodiversity guidelines to be promoted through a system of champions, and the eventual aim is to commit all SARC members:

- to the implementation of biodiversity guidelines
- to profitable, ethical business principles
- to undertake joint planning for expansion of the industry
- to economic transformation through sharing of economic benefits with historically disadvantaged communities of the GCBC
- to good governance, working within the framework of national and provincial legislation.

The rooibos biodiversity strategy will protect the interests of rooibos producers and the environment by developing biodiversity best practice guidelines to protect natural areas near rooibos farms and processing plants, promote good production practices and discourage bad ones, monitor the impact of the rooibos industry on the environment and reward responsible rooibos producers. A first draft of biodiversity guidelines was made available for comment in early 2007. If the pilot in the GCBC goes well, it will be used as a model for other agricultural areas in the Western Cape.

The Heiveld Co-operative

Rooibos grows naturally only in and around the Cederberg and Bokkeveld regions of the Western and Northern Cape. In 1998 the Northern Cape Department of Agriculture asked the Environmental Monitoring Group (EMG) to help them combat desertification by supporting sustainable agricultural development in marginalised communities in the Suid Bokkeveld. In 2001 small-scale farmers in the area formed the Heiveld Co-operative with EMG's help, aiming to promote social and economic development, share the cost of equipment and undertake primary processing and marketing of the tea on members' behalf.

Today the 40 members of the Co-operative are working with scientists through EMG to increase the yields they can get from wild rooibos – mapping the distribution and taxonomy of wild sub-species on 44 sites and harvesting at a rate that allows them to regenerate. The work involves determining which varieties are longer-lived and more resistant to drought and fire, and monitoring the effect of management strategies and harvesting practices on different sub-species. The Heiveld also promotes sustainable production of cultivated rooibos. All members are certified organic producers, and

actively conserve biodiversity in and around cultivated lands. Buffer strips of natural vegetation are retained between cultivated fields, and also serve to reduce soil erosion.

Because the Heiveld farmers had not qualified for extension services throughout the apartheid years, even their cultivated rooibos varieties were produced without pesticides and artificial fertilisers. The tea received certification as organic in 2001 and was certified as a Fair Trade product in the Netherlands in 2004, since its sales benefit marginalised farmers, and also has certification from Ecocert and Naturland.

The Heiveld Co-operative now supplies a niche market of consumers in nine countries who are willing to pay a premium for organic, fairly traded products and commands the highest price per kilogram in the industry. The recently established South African Rooibos Council (SARC) is developing a sustainable production strategy for the industry, and the Critical Ecosystem Partnership Fund has provided support via conservation group Indigo development & change to set up the 95-mile Rooibos Heritage Route between Wupperthal and Nieuwoudtville to help the farmers diversify their incomes and preserve the unique culture and ecology of the home of rooibos.

- For more information visit www.heiveld.co.za

4.2 Potato industry

The Sandveld region forms part of the western lowland area of the GCBC. Ploughing of natural habitat for the production of potatoes and rooibos tea have led to the conversion of this important coastal habitat, making it the second most highly threatened ecosystem in South Africa. Potato production is the core economic activity of the Sandveld of the Western Cape. From 2004 to 2006, an average of 6 591 ha were planted annually for the production of seed potatoes, fresh potatoes and potatoes for the processing industry (french fries and frozen products).

Input costs are high and environmental and other farming conditions often pose great challenges to potato farmers in maintaining a viable enterprise. With the exception of the production along the Olifants and Berg Rivers, almost all irrigation depends on groundwater of localised deteriorating quality and still unknown reserve volume. In many cases, the pivot irrigation system is still used, requiring far more water than drip irrigation. A number of important biodiversity features are found within the area, and there is also a need for conservation of fragments of biodiversity-rich land, and the establishment of corridors connecting habitats. Illegal ploughing of land for potato cultivation (sometimes in rotation with rooibos) is also an issue receiving attention.

Draft best practice guidelines

In response to growing consumer awareness and the constraints on the industry, a set of draft guidelines was released in mid-2007 as a joint initiative of Potatoes South Africa and CapeNature, with active participation from retailers across the market, including Freshmarket, Woolworths, Pick 'n Pay and a local french fries factory. These biodiversity best management practice guidelines are aimed at stimulating greater awareness amongst producers and promoting responsible farming practices in support of biodiversity conservation. They include sections on General farming and biodiversity

friendly practices, Soil management, Irrigation practices, Fertilization practices, Integrated pest management, Biodiversity Best Practices Initiative.¹²

Participation in this scheme, although strongly promoted by Sandveld Aartappel Kwekers Organisasie (SAKO), Potatoes South Africa, CapeNature and other environmental agencies, is on a voluntary basis. Each participant needs to score him/herself and only submit the final score card to the auditing agent. Good record keeping is essential and required to support an honest self-assessment. This includes records on all inputs and output from each land as well as corresponding dates, properly documented management plans and a log of all relevant activities.

Auditing will be done by the auditing officer, appointed by Potatoes South Africa and CapeNature as an extension of the Best Practice Guidelines joint venture. The auditing officer will issue the producer with a certificate upon each successful audit to be done on an annual basis. Historic practices in the Sandveld have led to unpermitted water abstraction and land clearing. For some of these actions extenuating circumstances may exist and could require prolonged legal actions to determine the final legality thereof. The auditing scheme cannot condone – or reward – illegal practices and points scored for laudable actions should not outweigh gross transgressions.

Most of the Best Practices proposed are in fact prescribed by statutory regulations and laws, and are thus compulsory. If the initiative were to exclude all producers with historic unlawful practices, its major benefit would be lost. After deliberation, the following three-tier system was proposed in mid-2007 as a first attempt to recognise the good work of a Biodiversity Best Practice Producer:

- Biodiversity Best Practice Producer – Silver: Awarded to producers achieving 50 points in the score sheet
- Biodiversity Best Practice Producer – Gold: Awarded to producers achieving the 60 points in the score sheet *and* have legalized all land clearing and water abstraction by obtaining the necessary permits
- Biodiversity Best Practice Producer – Platinum: Awarded to producers achieving 70 points in the score sheet *and* have legalized all land clearing and water abstraction by obtaining the necessary permits *and* offer land (previously unploughed veld larger than 2 ha in size) for conservation purposes.

The draft guidelines will be revised based on comment from the industry. The guidelines initiative is co-funded by the industry, Conservation International and food retail chain Woolworths. Woolworths has committed itself to using geospatial information available through SANBI to determine which potato-growing areas are suitable for this land use, and should be supported through purchasing from them.

- For more information, visit www.cederbergcorridor.org.za

¹² Potatoes South Africa and CapeNature, "Biodiversity Best Practice Guidelines for Potato Production in the Sandveld", draft produced by Agri Informatics, GEOSS and Nick Helme Botanical Surveys, July 2007

4.3 Red meat industry

Rangelands in South Africa vary from desert shrub to lush grassland, and provide the main fodder source for the national cattle and small-stock herds as well as for wildlife. The productivity of all the rangelands of South Africa has been deteriorating as a result of inter alia desertification, bush encroachment and the loss of palatable plant species. Conservationists believe that, should this deterioration be allowed to continue unchecked, sustainable animal and food production would not be possible in the long term.

An earlier South African marketing initiative, Natural Beef, failed largely due to consumer resistance to premium pricing. This probably occurred due to poor identification of suitable markets for the branded products (i.e. the mass-market supermarket chain Pick and Pay as opposed to the more upmarket retail chain Woolworths). It appears that the market has changed since then and there are other successful initiatives that address the premium local and export markets, including a range of projects attempting to produce predator-friendly lamb, using different approaches, not all of which are compatible.

Emerging ostrich and biodiversity initiative

As part of the Gouritz Initiative (which forms part of the C.A.P.E. and SKEP bioregional programmes), a proposal has been put together for a project working with ostrich farmers to conserve critical biodiversity, including lowland Gannaveld vegetation, in the ostrich farming region of South Africa between Ladismith and Oudtshoorn. The project will involve an extension service to the ostrich industry, drawing in expertise from a botanist and agricultural economist to identify critical biodiversity on 30 selected farms out of about 90 in the area. The extension worker will ground-proof the data and make spatial recommendations to the participating farmers. Three small rehabilitation projects will be funded, and farmers will be assisted with establishing eco-tourism projects where appropriate.

The project will also undertake a review of all the legislative requirements currently applicable to the ostrich industry and assist farmers with compliance. This includes legislation affecting biodiversity, for example, on the need to apply for rezoning before ploughing. The initiative aims to become a risk management tool for farmers who export ostrich meat and other products to exclusive niche markets, for example those covered by European Union Standards.

Predator-friendly lamb initiatives

Leopards and other predators (lynx, jackal, eagle) in the western region of the Eastern Cape are considered by some livestock farmers to be a threat to their livelihoods. Leopards are hunted in an attempt to manage this threat and are unintentionally caught in gin traps and snares set for other predators and game. Other methods of predator control include hunting by dog-packs and poison traps.

The USA WWF-funded Landmark Foundation works to address this by establishing a predator rescue, rehabilitation, release and research project, and is investigating a meat green-labelling initiative together with a major South African meat retailer. The leopard

is the charismatic top-predator species in the region and, as a result, its plight captures the attention of the public.

Other more holistic initiatives locate this work in the content of overall biodiversity conservation, for example, the work of the SKEP bioregional programme on predator-friendly lamb. Another example is the work of EWT, CapeNature and the National Council of SPCAs on human-wildlife conflict, which has led to the establishment of a Green Labelling Working Group aiming to set up an umbrella group (task team) that will encompass all green labelling programmes and projects in South Africa, thereby working towards development of an authority to oversee the green labelling of agricultural products in South Africa. This will include the development of standards and principles (a code of conduct), an effective auditing system, a legal regulatory framework (brand name recognizable nationally and internationally), “Green Label” implementation strategy; and incentives encouraging people to buy into the concept.

Grasslands Programme range-fed red meat certification

The strategic approach of the bioregional Grasslands Programme is mainstreaming biodiversity in production sectors including agriculture (rangeland and cultivation of grain and biofuels) as well as forestry, coal mining and urban development. The Grasslands Programme’s Agriculture Task Team has representation from the Agribusiness Chamber, AgriSA, NAFU, Red Meat Producer’s Organisation (RPO), National Emerging Red Meat Producer’s Organisation (NERPO), Grain SA, Wildlife Ranching SA and the national Department of Agriculture.

These role-players are currently conducting an agricultural demonstration intervention in the Wakkerstroom/Luneberg area to deliver conservation stewardship with private and communal farms, biodiversity best management practices on commercial and communal cattle ranching, and piloting of red meat green certification. A strategic feasibility review of developing a viable green beef/lamb/game certification system has been conducted – see Annexure 8.

Conclusions of the feasibility review

The review concluded that producers should be encouraged to participate in the scheme rather than undergo a strict certification process, and should receive financial incentives for participation (e.g. tax rebates, premium prices). It was felt that the red-meat and game industries should be encouraged to develop the criteria for participation rather than have these thrust upon them by an external institution.

The Grasslands Programme aims to be a facilitator assisting the industry in this regard, not focusing centrally on biodiversity issues *per se*, but including a set of criteria that have been successfully used in other programmes (e.g. organic, animal welfare, traceability, product quality). This increases the scope for successful marketing of branded products. The review makes a case for working with developing or existing programmes, viz. Q-Sure (beef) and Natural Lamb (lamb). Strategies will be formalised for marketing of products with the industries. The marketing of game meat is still in the early stages of development due mainly to health restrictions, but the certification of a game meat programme will be developed in close collaboration with Wildlife Ranching

South Africa. Although the game industry is not well regulated in practice, high consumer awareness in the game export market provides an opportunity in this sector.

The development of the biodiversity components of certification programme is intended to include progression through a series of levels, each with a defined set of criteria. Participation at each level implies that the producer guarantees a product that is branded at that level. An example could be colour-coded products that indicate the level of participation – yellow to green to gold to platinum:

- Yellow: traceability and product quality
- Green: yellow plus animal welfare and protection of biodiversity hotspots on farm
- Gold: green plus modified organic and using biodiversity-friendly burning and grazing management systems, and
- Platinum: gold plus biodiversity conservation as the primary objective of the production system.

According to the review, product branding and target markets will be crucial factors for the success of the programme, and should include specialist chains (e.g. upmarket Woolworths as opposed to mass-market Pick and Pay or Shoprite) as well as niche outlets in affluent centres. Good potential exists for export of branded products using marketing initiatives such as the Fair Trade organisations. Marketing initiatives for participants should extend further than red meat products alone, and could ultimately include farm-based tourism activities provided by participants (e.g. hospitality, nature-, adventure- and cultural-tourism activities). Marketing campaigns must make consumers aware of the importance of biodiversity conservation and their role in supporting the programme by buying branded products, and link with initiatives around organic produce and animal welfare

To obtain participation by producers requires a five-step programme:

- setting up the standards
- introducing the concept to farmers
- encouraging farmer participation
- auditing standards on the farm
- branding and advertising the product.

Potential constraints

Those farmers in the communal and emerging sectors are major role players in environmental conservation / degradation. The communal areas tend to be over-stocked and it is therefore difficult for livestock owners to apply any personal conservation efforts. The new emerging farmers are usually in a similar position because in many cases several families are settled on each commercial farm, with the inevitable consequence of the development of rural slums much like the communal sector. Certification of farmers in the communal/emerging sector presents particular challenges but could play a major role in improving the grassland environment.¹³

¹³ National Grasslands Bioregional Programme, Strategic Feasibility of Green Beef / Lamb / Game Certification: Feasibility Assessment and Identification of Opportunities for Programme Interventions, Report reference # 6, November 2006, prepared by Paterson Agri-Services

Producer passion is the main driver for biodiversity conservation on commercial farms. A desirable result of this is the sustainability of their natural environment and the maintenance of production and income. Certification of their conservation efforts will be an acknowledgement of these efforts and encourage them to continue with this desirable behaviour. However, certification is unlikely to bring additional financial reward to the producer from the consumer even if there are some consumers who are prepared to pay a premium price for this meat. This is because the red meat supply chain is long and the quantities purchased for a premium price are minimal.

The chain store retailers of red meat are interested in certification of this kind because they no doubt see it as a marketing opportunity. From past experience it is clear that they are not likely to pay a premium for this certification. They have also stated that they will pay more for products they require if additional cost is incurred in the production process, but this remains to be proven in practice.

Feedlotter, who fall between the farmers and the abattoirs in the supply chain, are prepared to pay more for weaners from farmers who follow specific good practice methods. This is because they make more money out of these animals because they perform well in the feedlot. It must be emphasised that the feedlotter are paying a premium mainly for specific veterinary treatment rather than for good veld management.

The supply and demand situation in South Africa is such that there is a major shortage for beef and lamb and the country is a net importer of beef and lamb, so South African producers can sell all their product and the buyers have to pay the going price. In this scenario the producers do not have to comply with detailed specification standards because they sell all their products anyway. The country does export some 'natural lamb' and this market does require certification which is similar to the 'natural beef' program. Premium prices are received for this niche market. The same applies to game exports except it is more difficult to certify game to the same level as 'natural lamb' mainly because game are wild and need to be culled in the field and comply with slaughter standards in the field as apposed to an abattoir. The greater majority of South African beef, lamb and game are consumed locally and therefore are not forced into certifying to gain a place in the market.

If chain store outlets would promote the sale of certified meat they could develop a bigger market for the product, but the feasibility review believes it is unlikely that they will extend themselves in this regard. Due to the present supply / demand situation they sell all the products produced without any great promotion effort. This could change if the import tariffs dropped, world meat prices dropped, or the Rand strengthened considerably. These are not likely to happen, so increased imports are not likely to occur in the short term. In the longer term this could change, in which case producers would have to compete against imported products and would need to look to certifying their meat to obtain market share.¹⁴ The work will be taken further by the Grasslands Programme, bearing in mind these constraints.

¹⁴ National Grasslands Bioregional Programme, Strategic Feasibility of Green Beef / Lamb / Game Certification: Feasibility Assessment and Identification of Opportunities for Programme Interventions, Report reference # 6, November 2006, prepared by Paterson Agri-Services

- For more information, visit <http://www.sanbi.org/biodiversity/Grasslands%20Summary%20May%202005.pdf>

4.4 Citrus industry

The Baviaanskloof in the Eastern Cape was identified for mega-reserve status by the C.A.P.E. bioregional programme. The consolidation and expansion of the existing Baviaanskloof Conservation Area to form the Baviaanskloof Mega-Reserve, currently underway, will ensure effective conservation of 12 major vegetation types representative of all of South Africa's seven biomes found in the area, with an extraordinarily high diversity at the ecosystem level, and almost all the major biological patterns of the Southern Africa region.

In the original work plan for the reserve project, engagement with the citrus industry in the Gamtoos River Valley through the Gamtoos Valley Citrus Growers Association was not included. It was quickly realised, however, that the valley formed a critical link down to the coast and that, despite radical transformation of the land, some opportunities existed to link habitats and some of the orange farms had valuable fragments of unusual vegetation types remaining.

A new initiative

A strategy for working with citrus farmers on biodiversity issues is currently being developed, and approaches were made to the local industry body, Patensie Citrus Ltd. This involvement of industry representatives early on was deliberately modelled on the experience of the Biodiversity and Wine Initiative that embedding an initiative in a strong existing producers' association could make a critical difference to the initiative's success. The industry are enthusiastic about the potential for marketing their oranges based on some kind of certification scheme, and have been open to the idea of building in a charge which could fund marketing costs, as well as social and conservation initiatives on the farms.

Some of the conservation issues which are expected to be addressed in a citrus and biodiversity initiative are conservation of valuable natural vegetation and habitats, removal of invasive aliens, and water usage. The water used to irrigate the farms comes from the Gamtoos Irrigation scheme, whose catchment area is inside the mega-reserve.

- For more information, visit www.baviaanskloofmegareserve.org.za

4.5 Tourism sector

In recent decades, the South African economy has shifted away from primary sectors, with secondary and tertiary sectors becoming more important. The tourism industry contributed an estimated 10% of GDP in 1999, and is currently the fastest growing sector of the economy.¹⁵ Tourism has been identified in South Africa as a major driver

¹⁵ DEAT, 2006, *National Biodiversity Strategy and Action Plan*

of post-apartheid socio-economic growth and transformation. It also falls in the category of the type of economic activity which can be very harmful to biodiversity, but which at the same time depends on maintaining biodiversity for its success.

This section focuses on three tourism initiatives that are related to biodiversity in some way: Fair Trade in Tourism South Africa, guidelines for off-road vehicles and an example of a successful ecotourism project that is conserving biodiversity – Grootbos Nature Reserve.

Fair Trade in Tourism

Fair Trade in Tourism South Africa (FTTSA) was initiated by IUCN-SA in 2001, following a two-year pilot project. FTTSA advocates equity in tourism, by promoting globally sanctioned Fair Trade in Tourism principles – fair share, democracy, respect, reliability, transparency and sustainability – and by awarding a special label, the FTTSA Trademark, which certifies business compliance with Fair Trade criteria.

Environmental management is just one of 13 standards in which establishments must show compliance, and there is no special focus on biodiversity *per se*. The environmental criteria are that FTTSA-certified establishments must:

- comply with all relevant national and local regulations especially in relation to planning, building and management of tourism infrastructure
- work to minimize their use of natural resources (inputs), especially the use of scarce and non-renewable resources
- be committed to improving environmental knowledge and awareness of staff and guests, as appropriate to the business context
- invest in conservation initiatives, especially those operating in environmentally sensitive contexts.

FTTSA certification is based on a rigorous assessment process, which tests the extent to which staff, communities and other stakeholders benefit meaningfully from tourism activities. For FTTSA-certified establishments, the Trademark provides credibility while simultaneously opening up access to niche markets. Ultimately, FTTSA is about developing private-sector incentives for good environmental and social practices, and about testing consumer and trade demand for “fair” tourism experiences. The organisation became an independent, local non-profit organisation in its own right in 2005.

- For more information, visit www.fairtourismza.org.za

Off-road vehicle guidelines

The GCBC is working in partnership with the 4x4 industry, represented by South African Route Owners and Operators Forum, to address issues of environmental management and biodiversity conservation. 4x4 trails are increasing in popularity, especially in the Greater Cederberg Corridor where there currently are 34 established trails. Due to the negative impact that badly managed 4x4 tourism ventures can have on the environment, this industry and the conservation sector have been exploring innovative ways of introducing best practices into the corridor area. Uncontrolled

driving and poor maintenance of trails can cause enormous unnecessary damage to biodiversity.

These efforts have culminated in CapeNature, the Association of All Wheel Drive Clubs of South Africa, the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) and SAROOF joining forces to pilot a sustainable utilization strategy for the 4x4 industry in the GCBC. If successful, this will be used as a model for the rest of the Western Cape province.

This project aims to:

- implement credible and sustainable utilisation measures into all facets of the 4x4 industry within the GCBC
- contribute to conservation through the implementation of responsible guidelines and a route accreditation systems
- create employment for disadvantaged communities through trail building, trail maintenance and tourism opportunities
- make people aware of the positive impact that soundly managed 4x4 tourism ventures can have on the environment.

A detailed set of guidelines for the planning, construction, maintenance and signage of trails for off-road vehicles has recently been developed by DEA&DP, and seminars to train 4x4 trail operators have been conducted in several centres. This includes a focus on minimising the damage to biodiversity and practising conservation measures.

- For more information, visit <http://www.capegateway.gov.za/eadp>

Ecotourism at Grootbos Nature Reserve

Situated near Gansbaai on the Agulhas Plain, privately owned Grootbos Nature Reserve conserves 1 700 hectares of pristine fynbos belonging to the Cape Floral Kingdom, including more than 650 plant species, an ancient milkwood forest and remnants of Afro-montane forest. The reserve contains a guest lodge catering for the high end of the overseas tourism market and is able to charge high prices in exchange for a unique luxury ecotourism experience.

Much land on the Agulhas Plain has been used for purposes that are incompatible with conserving biodiversity. When the Lutzeyer brothers bought the Grootbos property in 1990 it was an overgrazed cattle farm infested with alien plants. Over the next decade the land was extensively rehabilitated, with alien vegetation removed and indigenous vegetation restored, also recreating habitats for indigenous fauna.

In a remarkably short space of time the owners have created one of South Africa's premier guest lodges, offering the discerning ecotourist an abundance of experiences including hikes and horse trails through fynbos and thicket, and recreational options around the bay from boat trips to see sharks and whales to beautiful beaches and strandloper caves. Despite suffering the setback of buildings destroyed in a major fire in 2006, the lodge has won numerous international awards.

Building skills and livelihoods

In what doubles as a unique selling point for the lodge and a phenomenal corporate social investment programme, the Grootbos Foundation was established in 2004 to manage and implement projects that generate employment and training for local people, simultaneously conserving indigenous plants and animals in the area. Funds generated by the ecotourism business are invested through the Foundation into project implementation, so that lodge guests are directly supporting biodiversity conservation and social upliftment on the Agulhas Plain.

The Foundation also generates its own income through the sale of indigenous plants and landscaping services provided by the Green Futures Horticultural and Life Skills College. Twelve young people from impoverished townships near Grootbos are taken through the Green Futures course each year – covering fynbos landscaping, horticulture, ecotourism and life skills, and assisting them after graduation in finding work in fynbos landscaping and horticulture.

So far the college has a 100% success rate in ensuring employment for graduates, including many who work at the estate itself, half of whose staff are local. The college is currently undertaking a feasibility study to roll out their model and establish similar colleges on the Cape Flats in metropolitan Cape Town. The Foundation has assisted one of the college's graduates to establish a vegetable growing and greening project in a nearby township, and is also carrying out a study programme on levels of sustainability and carrying capacity of fynbos harvesting.

- For more information, visit www.grootbos.co.za

4.6 Forestry sector

Significant gains have been made in the forestry industry in South Africa with regard to the sustainable use of resources. Although the indigenous forests of South Africa cover less than 0.5% of the country's land area, they are offered strong protection under the National Forests Act of 1998. Demands for timber and timber products are met through plantation forestry, which covers approximately 1 554 000 hectares of the land base and has maintained a relatively stable level of forest cover from 1990 to 2000.

Approximately 80% of commercial timber plantations in South Africa have been certified as well managed according to international standards set by the Forest Stewardship Council (FSC). It is from these forests that most of the pulp, paper and roundwood are sourced. FSC certification in South Africa is held by 22 plantation forests and one semi-natural forest, covering a total area 1 426 362 hectares and 80% of forest plantation land. This positive response of the industry is perhaps partly a result of global exposure to the importance of sustainability in this sector.

Equally importantly, it is linked to the South African experience, where there has been obvious potential for conflicts of interest to develop between the forest industry, on the one hand, and those charged with nature conservation and alien plant control on the other. Early interaction was indeed confrontational. The local forest industry is after all based on the cultivation of species such as pine, wattle and hakea, which have clear

invasive potential. However, once the economic importance of the industry – a major contributor to rural development and to the broader national economy – was recognised by environmental interests and the need to control alien vegetation accepted by the foresters, a basis was established for working together.

Developing local standards

Currently there are no locally developed FSC standards for South Africa, but work has begun on a national initiative to develop more rigorous local standards, as well as tools for assessing the value of biodiversity and ecosystem services, for their integration into decision-making (the High Conservation Value Areas approach is useful and). Biodiversity action plans are being developed to define and operationalize companies' biodiversity commitments.

A forestry sector plan is being developed for securing forestry-owned land that is unplanted and will be secured as part of a private sector stewardship approach in KwaZulu-Natal, Mpumalanga and the Eastern Cape. Programme coordination rests with SANBI, the urban sector will be managed through the provincial Gauteng Department of Agriculture, Conservation and Environment, the forestry sector through ForestrySA, and the agricultural sector through SANBI and appointed agencies at a demonstration district level.

Working for Water

The potential conflicts have thus largely been overcome through a common commitment to finding lasting solutions to the challenges posed by forestry and invasive alien plants. The private forest industry has formed a partnership with the Working for Water programme based on collaboration, integrity, and a shared vision to enhance (i) the control of invading alien species; (ii) the utilisation of local communities in such activities; (iii) the sustainable management of the country's natural resources; and (iv) best management practices.

In terms of the agreement, the forest industry has seconded senior foresters to the Working for Water programme, to provide additional capacity for a range of tasks. In addition, the forest companies make various facilities or services available to Working for Water teams in the field. In return, the Working for Water programme has undertaken to fund the clearing of demarcated areas (including riparian zones planted with alien trees prior to the enactment of environmental regulations that now outlaw such plantings). It will also ensure that the forest industry's efforts with regard to managing invading alien plants are publicised, and it will work closely with industry to develop equitable legislation to govern the forest industry.

The partnership with forestry has impacted on other areas, and there are now links with another forestry initiative, the Mondi Wetlands Trust, to protect, rehabilitate, and manage our precious wetland areas so that they can continue to deliver vital benefits to our communities. Mondi has organised a road show introducing the guidelines to all Mondi foresters, and a training course on the guidelines for consultants contracted to Mondi to develop the management plans for their significant wetlands.

Grasslands Programme forestry work

The bioregional Grasslands Programme is also engaging Forestry South Africa (FSA) and undertaking pilot projects in forestry and biodiversity conservation. 1.25 million hectares of grasslands is currently under monoculture forestry plantations. The Grasslands Programme is working to incorporate biodiversity priority areas into planning and decision-making, develop biodiversity management tools for forestry, support forestry companies in expanding their conservation stewardship role and strengthen forestry certification.

Its Forestry Design Team has representatives from SANBI, the Department of Water Affairs and Forestry, FSA, large timber growers, small / emerging timber growers, private timber growers, Ezemvelo KZN Wildlife, Mpumalanga Tourism and Parks Agency, the Eastern Cape Department of Economic Affairs, Environment and Tourism, Maloti-Drakensberg Transfrontier Project, civil society and research institutions. The design team has developed a high level log-frame for the forestry component of the programme with the following areas for intervention:

- industry-wide interventions to mainstream biodiversity
- securing permanently unplanted forestry land that are priority sites for biodiversity and ecosystem services
- expansion of new plantations
- forestry sector plan for securing forestry owned land that is unplanted and will be secured as part of a private sector stewardship approach in KZN, Mpumalanga and the Eastern Cape
- piloting of market mechanism such as wetland mitigation banking.

4.7 Mining sector

The mining industry in South Africa has not until recently seen biodiversity management as a priority, and it has often been overlooked in favour of other issues that are seen to be more directly relevant to the company's licence to operate. Some of the larger, global mining companies are increasingly starting to include biodiversity aspects into their Environmental Management Systems. As mining companies will always strive to be at minimum legally compliant, undoubtedly biodiversity issues will become more important in the mines' agendas once NEMBA is fully implemented and enforced.

Based on the poor response rate of the smaller mining companies, as well as the comments made by the government sector, NGOs and consultants, it is apparent that it is the larger companies who are taking the lead in biodiversity management. Smaller mining companies are becoming more common, and are starting to have significant impact on the environment, and on biodiversity. These smaller companies do not have the same level of international pressure to demonstrate good practice. They also do not have the same level of internal Safety-Health-Environment controls.

The South African government does not have the capacity at present to enforce the compliance of even the larger mining companies. The challenge is to bring the smaller mining companies to the same level of environmental compliance as the larger companies, potentially through partnerships with larger mining companies.

Mining and Biodiversity Forum

The Mining and Biodiversity Forum, led by the Chamber of Mines and IUCN, is taking on this challenge (at present addressing only terrestrial and not marine mining). The first workshop of the Forum was held in 2005. The South African Chamber of Mines and the IUCN-SA office had been in communication since the World Parks Congress in 2003 over the idea of creating such a forum. The co-ordinating committee consists of expertise from both the mining and the conservation sectors, and is working on a programme of engagement and dialogue.

Some of the key issues explored by the Mining and Biodiversity Forum include mining legacies, trade-offs and legislative gaps, as well as the question of whether technological advancements and innovation in both sectors could assist with reducing the environmental impact of mining and subsequently ensuring biodiversity conservation. Through its four-year programme the Forum is working to ensure that a landscape-based approach to biodiversity conservation is pursued in the mining industry, and that individual mining companies are engaged in debates about improving biodiversity management systems and widening the scope of biodiversity aspects included in management of mine sites.

Insight Investment study

An Insight Investment study in 2005¹⁶ investigated the legislation governing biodiversity management in South Africa, and particularly that relating to the mining industry. A questionnaire was circulated to, and personal interviews were conducted with, key stakeholders to hear their views on mining and biodiversity management. The study found that the biggest concern was that implementation of the legislation is lagging behind. The main reasons given for this by the respondents were the lack of enforcement, the lack of guidelines and standards, capacity and skills of staff, apparently conflicting legislation on environmental assessment processes for mines, and the lack of co-operation between government departments.

Despite this lack of implementation and enforcement of biodiversity legislation, mining companies surveyed in the study said they believe that biodiversity conservation is part of good corporate governance and ensures the companies' future licences to operate. However, more work is required in integrating biodiversity into the mining industry: less than half of the mining companies who responded fully integrate biodiversity issues into their risk assessment process and although biodiversity management commitments are made at the Group level, these have not been fully rolled out to the operations. The performance of smaller mining companies is a concern. Ways of improving their standard of biodiversity management should be investigated, including the use of biodiversity offsets.¹⁷

¹⁶ Foxall, J., Grigg, A. and ten Kate, K. (2005) Protecting Shareholder and Natural Value: 2005 benchmark on biodiversity management practices in the extractive industry. Report is available from Insight Investment website at http://www.insightinvestment.com/Documents/responsibility/protecting_shareholder_and_natural_value_2006.pdf

¹⁷ Chamber of Mines, *Strategic Review of the Status of Biodiversity Management in the South African Mining Industry*, May 2007

Grasslands Programme work in mining

Financial tools for biodiversity conservation in the mining sector are also receiving attention. The Grasslands Programme recently conducted a strategic review of the coal mining industry with regard to grassland biodiversity and identification of opportunities for the development of interventions with the coal industry to address biodiversity, exploring the potential for wetland mitigation banking in coal mining.¹⁸

South Africa is one of the five top coal producing countries in the world, and coal mining has a major impact on biodiversity, particularly in wetland areas. The Grasslands Programme is working to develop a biodiversity offsets scheme piloting wetland mitigation banking and incorporate biodiversity priority areas into planning and decision-making.

4.8 Agricultural sector

Production landscapes in South Africa comprise those areas used for agriculture (both cropping and grazing), plantation forestry and mining. These landscapes cover approximately 70% of the terrestrial landscape and harbour important areas for biodiversity at the species and ecosystem levels. Agricultural activities vary in terms of their compatibility with conservation objectives and different strategies are required to address these. For example, in large parts of the grassland, succulent Karoo and thicket biomes, livestock grazing activities are potentially compatible with biodiversity conservation objectives. In production landscapes where natural habitat transformation, through ploughing, for example, takes place, avoidance of key biodiversity sites is a key aim.

Conservation Farming Project

From 1999 to 2003, the then National Botanical Institute (now SANBI) co-ordinated the Conservation Farming Project, which was a targeted research programme supported by the GEF and the Mazda Wildlife Fund. The research focused on conservation farming practices in four regions in South Africa that have globally significant levels of biodiversity so that these practices can be more widely applied as part of an overall conservation strategy. The four areas selected were the Bokkeveld Plateau (Nieuwoudtville), the Xeric Succulent Thicket (near Kirkwood in the Eastern Cape), the Drakensberg sourveld and the Nama Karoo. The aims of the project were to assess the ecological and economic costs and benefits of various agricultural practices, including both conventional and conservation farming methods; and to promote land use practices that conserve biodiversity and provide sustainable livelihoods for farmers and rural communities.

¹⁸ Kirkman K. 2006. *Strategic review of the coal mining industry with regard to grassland biodiversity and identification of opportunities for the development of interventions with the coal industry to address biodiversity*. Report for the South African National Biodiversity Institute's National Grasslands Biodiversity Programme.

Some of the project focal areas included:

- Biodiversity: the benefits of increased biodiversity on farms for farmers and everyone else.
- Soils: how conservation farming improves soil structure and improves production.
- Ecosystem services: how healthy ecosystem processes provide services to all.
- Carbon sequestration: how to lower atmospheric carbon dioxide levels and so reduce global warming.
- Economic incentives: why it pays to have a healthy environment.
- Putting conservation farming into practice: getting farmers' views on conservation farming, and improving the flow of information to farmers.

The project concluded¹⁹ that:

- All farming systems have an impact on biodiversity, but some are better than others. However, it is important to develop objective criteria for assessments because factors such as land use history and the location of the farm can obscure the impacts of current land use.
- Farmers generally care about the environment and most view themselves as conservation farmers, though there is sometimes confusion regarding what they are trying to conserve (soil, agricultural resources, or biodiversity) and it is important to make the case for biodiversity conservation more explicit.
- The social component of the study showed that land use decision making is a complex process that is influenced by a variety of needs and satisfiers, including support networks (extension services, social networks), quality of life decisions, or security needs.
- A review of past successes in conservation farming showed that enabling mechanisms (subsidies, extension services, research) were more effective at achieving a change in behaviour than legal instruments.
- Farmers identified three relatively simple needs that would enable them to accommodate biodiversity in their farming practices. These needs should be addressed by the newly formed South African National Biodiversity Institute.
 - Information on *what* biodiversity occurs on their farms
 - Information on the *impact* of farming practices on biodiversity
 - Information on *alternatives*, most often articulated as a need for further research on sustainable land use practices,
- The benefits to farmers from local (on farm) use of ecosystem services (pest control, soil health) is often too obscure to elicit a change in behaviour, except perhaps in the case of pollination.
- At present farmers do not derive any benefit from the downstream value of ecosystem services (water provision, carbon sequestration). Land use decisions in places like the Drakensberg may be quite different if water provision and carbon sequestration provided financial benefits to farmers.
- Conservation farming practices are often linked to charismatic individuals with a good understanding of the ecology of their farms.
- Farmers are inherently experimental, but often do not properly assess the outcomes of their experiments, either on farm production or the environment.²⁰

¹⁹ Conservation Farming Project / SANBI, GEF MSP Grant No. TF022859, Implementation Completion Report, 2004

²⁰ Conservation Farming Project / SANBI, GEF MSP Grant No. TF022859, Implementation Completion Report, 2004

Grassland Programme work on agriculture

One of South Africa's five bioregional programmes is the Grasslands Programme. The grassland biome covers about 30% of South Africa's surface and includes much land used for agriculture. According to the 1996 National Land Cover data, 65% of the biome is still natural land cover used for livestock and game grazing, with 23% cultivated. Some 59% of the country's beef cattle, 58% of the country's sheep and 75% of its dairy farming are found within the grasslands biome. The strategic approach of the Grasslands Programme is mainstreaming biodiversity in production sectors including agriculture (rangeland and cultivation of grains and bio-fuels), forestry, coal mining and urban development in Gauteng.

The Grasslands Programme seeks to identify and promote biodiversity-compatible land uses. Grazing of cattle, sheep and indigenous game species has been identified as the most compatible agricultural activities in the biome. Market-related and other incentives will be investigated as means for promoting biodiversity-compatible land uses in the biome and these will be piloted during the implementation of this programme, which will run for five years commencing in 2007.²¹ The programme works to incorporate biodiversity priority areas into planning and decision-making; develop biodiversity management tools for cultivation and grazing; design demonstration projects, communications and advocacy; initiate range-fed red meat certification; and promote incentives, e.g. property rates exemption.

4.9 Retail sector

Major South African upmarket food, homeware and clothing retailer, Woolworths, has recently launched the marketing concept of the "good business journey". The company believes that the links between economic growth, transformation, poverty alleviation, the environment and climate change can either form a vicious or a virtuous circle. It aims to bring about a significant change in the way the company operates, driving the virtuous circle to benefit stakeholders. It is a five year plan, changing the way Woolworths does business, and incorporating a series of targets and commitments, centered on four key priorities: accelerating transformation, driving social development, enhancing our environmental focus, and addressing climate change.

The commitments to 2012 include those to:

- accelerate transformation
- drive social development
- enhance environmental focus
- address climate change

The third priority relates to Woolworths's impact on the environment, in particular the issue of diminishing biodiversity. Organic production, conservation and a new approach to packaging are the key areas of focus. Woolworths will continue to drive the organic food and clothing offering, aiming to increase organic food sales by a multiple of five

²¹ SANBI Biodiversity Series 1 (2006)

and to sell more than R1 billion of organic-content clothing by 2012. The resultant reduction in the use of potentially harmful pesticides and chemicals, especially in South Africa, will be of significant benefit to both consumers and water quality.

Water is one of South Africa's scarcest natural resources and Woolworths is targeting a 30% reduction in water consumption and will develop a programme to encourage our suppliers to do the same. A number of programmes are also being established to encourage and protect South Africa's biodiversity, including crop planning to address the impact of global warming, a strict policy of not selling products which might impact endangered species, and the adoption of more environmentally-sensitive farming practices throughout the company's supply chain. Woolworths also has a target to reduce packaging in clothing by one-third and food packaging by 20%, and will launch a recycling initiative for customers.

As a business with discerning customers who have a growing awareness of environmental issues, Woolworths is projecting itself as supporting the protection of scarce and unique natural resources, for example, through water conservation, predator-friendly lamb, fynbos-friendly potatoes, not selling any endangered species, encouraging good farming practices and ensuring that key raw materials only come from the most sustainable sources. Woolworths currently purchase organic range-fed beef from a producer called Earthfood in Cradock, and need more such beef to supply their demand, although biodiversity criteria are not specifically used in this case.

The fourth priority addresses climate change directly by focusing on reducing Woolworths's carbon footprint. Woolworths will reduce their relative carbon footprint by 30% – this will be achieved through energy efficiencies (reducing relative electricity usage by 30%), reducing product miles (reducing relative transport emissions by 20%), and reinvesting some of the savings in exploring more sustainable sources of energy and more efficient forms of transport. Woolworths will support carbon offsetting by planting more trees at their MySchool schools, Eduplant schools and Midrand campus grounds.

Woolworths's existing Supplier Code of Business Principles, against which all suppliers are regularly audited, will be amended to include goals and standards that align themselves with the "good business journey". Woolworths will also establish a best practice network to share and encourage initiatives across the supply chain in critical areas, and encourage customers to use their purchasing power where it can make a difference to South Africa as a whole."²²

4.10 Additional production sectors earmarked for collaboration

The National Biodiversity Framework highlights a number of areas of production in which biodiversity work has started or is planned by conservation initiatives. Wildlife industries have already been engaged through the establishment of the Wildlife Forum, involving a wide spectrum of role players such as game farmers, the hunting fraternity, taxidermists and organs of state. The Red Meat Producers Association has already been

²² <http://biophile.co.za/biofiles/woolworths-announces-the-good-business-journey>

engaged through the Grasslands Programme and work needs to continue on the concept of an “eco red meat” certification system.

Given that the biofuels sector has been identified as a top priority sector for economic growth by the government’s Accelerated and Shared Growth Initiative of South Africa (ASGISA), and that the sector has the potential to have serious negative effects on biodiversity, it is an urgent priority to explore this sector further and, if appropriate, to develop guidelines for biodiversity-friendly production of biofuels. Biofuels will only contribute to sustainable development if they are produced in a manner that avoids both loss of natural habitat in critical biodiversity areas and over-abstraction of water.

Existing work with the banking and financial sector, to encourage biodiversity-friendly lending practices should continue, and should work in the property development sectors, particularly coastal property development. The impact of marine and coastal mining on biodiversity remains largely unexplored, as does the aquaculture sector’s impact.

5. Conclusions

This report has provided an overview of business and biodiversity in South Africa, giving a sense of the context in which this work has intensified since around 2000. It has also provided a 2007 snapshot of existing initiatives in the wine, fishing, honey, indigenous cutflower and sugar industries, where to a large extent certification schemes are already in place and products are on the market; as well as emerging initiatives in the rooibos tea, potato, red meat and citrus industries, and the tourism, forestry, mining, agriculture and retail sectors. It is clear that there is significant momentum behind this work and that the launch of a continuous stream of new initiatives can be expected over the next few years.

Debates have occurred in the conservation sector as to what the criteria should be for choosing industries and sectors on which to focus business and biodiversity work. Criteria could include ease of making gains in order to have a demonstration effect. An example of a relatively easy influence over the majority of an industry is seen in the badger-friendly honey initiative, where the change required from producers was straightforward and not costly, and where the charismatic mammal species involved made it easy to attract consumer support. Another criterion could be the degree to which a particular industry's future depends directly on a sustained supply of natural resources. This applies in the case of fishing industry initiatives, where there is a clear motivation for all parties to become involved. On the other hand, some argue, a more systematic approach could be taken to prioritizing where to work – taking into account which industries and sectors are having the greatest negative impact on the most valuable biodiversity, where the potential gains to be made are much larger.

It is interesting to note that the NBF identifies livestock and game farming, and wildlife tourism and hunting, as production sectors whose activities have a relatively low impact on biodiversity and which can be compatible with biodiversity management objectives. Some of the economic sectors and industries the NBF identifies as contributing substantially to the major pressures on South Africa's biodiversity are cultivation, including biofuels; forestry; mining; commercial fishing; property development, especially coastal property development; energy production; construction and infrastructure development.

Although the impact on biodiversity of the initiatives covered in this report has not in all cases been systematically evaluated, it is clear that significant gains have been made. The South African companies and producers who are already working with conservationists to minimize their negative impacts on biodiversity and invest in biodiversity conservation measures have helped to establish a new direction for biodiversity conservation work in the country. At the same time, they are helping to guarantee the sustainability of their businesses. Not only are they conserving and potentially improving the supply of the resources and services on which they depend, but they are also increasing their ability to adapt to new conditions and remain competitive in both local and export markets.

It is hoped that this report, in giving a brief overview of established and emerging business and biodiversity initiatives, has demonstrated that this is an important area of

work in South Africa which is set to increase in size and impact over decades to come. Some of the major themes and questions which have emerged from this overview are as follows:

- In deciding on focus areas, spatial considerations are also important – using the increasingly effective geospatial information available in South Africa to analyze how business impacts on particular species and ecosystems in priority regions for biodiversity conservation. Systematic biodiversity planning information from SANBI and provincial conservation authorities, including bioregional plans with GIS maps identifying critical biodiversity areas like ecological corridors and important catchments, can enable wise decision-making and help shape business and biodiversity initiatives.
- Some of the established biodiversity initiatives, for example, in flowers and wine, are using certification and labelling in small niche markets, which have the advantage that customers (local and export) are prepared to pay a premium price which can offset the costs of biodiversity conservation measures. The large-scale local consumer markets for day-to-day items e.g. bread, maize meal, milk and beef, however, although more difficult to work in, can potentially have a much bigger total impact.
- In most cases, initiatives start out by working across a whole industry in a particular region, as is currently occurring in the Sandveld potato industry or the Gamtoos Valley citrus industry. Over time, however, different degrees of willingness / ability to participate may emerge amongst producers / companies, as has happened with the Biodiversity and Wine Initiative. The conditions may then be ripe for a certification scheme that recognizes compliance by dedicated participants, and, through labelling and marketing to consumers, enables these participants to win market share away from non-compliant producers. Schemes need to be set up, however, in such a way as to prevent this situation from causing a perverse incentive for producers to put more land under a particular crop!
- One of the lessons learnt by the Flower Valley initiative is the importance of resolving and publicizing the cost-benefit analysis of a certification scheme to the industry, for example, weighing up the benefits of obtaining higher prices and receiving more regular, appropriate orders against the costs – including the direct cost of joining the scheme and the indirect cost of compliance. A nett benefit to producers needs to be explicitly demonstrated in order to give them an incentive to participate.
- The practice of working directly with companies that lead their sector in managing their impacts on biodiversity, i.e. biodiversity “champions”, to promote voluntary conservation measures, for example, in the South African wine industry, has been successful in bringing about a ripple effect, and fostering a culture of active conservation stewardship.
- The practice of promoting a comprehensive sustainable farm management system, as developed in South Africa for the sugarcane industry, has proven effective and has influenced the development of best practice guidelines for the Sandveld potato

industry. Such a system is effective only when accompanied by thorough extension work with producers as well as auditing.

- There is a need for business and biodiversity initiatives to take into account the potential long-term impacts of global climate change on the production sectors in which they are working. This has been done effectively in the rooibos tea industry in South Africa through a climate modelling exercise.
- There is a need for more effective co-ordination and sharing of expertise between non-governmental organisations (e.g. WWF, EWT, CI, IUCN), bioregional programmes (CAPE, STEP, SKEP, Grasslands Programme) and existing industry initiatives. WWF-SA is currently exploring the potential of establishing a “Good Foods Alliance” which will address this need, as well as making co-ordinated interventions along the supply chain on behalf of member initiatives, but only in the food (and flower) industries. There is also a need for co-ordination between the specific initiatives outlined in this report and those exploring certification on a grand scale, for example, DEAT’s research through Indalo Yethu²³ on establishing a broad environmental product labelling mechanism.
- There is a need for biodiversity conservationists to engage with role-players at all points along the value chain, including consumers, retailers, industry product schemes and producers (as well as manufacturers whom producers supply, for example, with the sugar industry). In some industries, a focus on overcoming “bottlenecks” in the middle of the chain might be appropriate, but there will always be a need for focused work on the outer ends of the chain – with producers to ensure supply of good products, and with consumers to ensure demand.
- Both the direct footprint and the supply chain footprint of particular businesses on biodiversity must be taken into account, and it may be useful to develop guidelines on integrating sustainable use issues into supply chain management in South Africa, learning from groundwork done by, for example, the Flower Valley initiative and upmarket retailer Woolworths.
- A challenge facing existing and emerging business and biodiversity initiatives is to set in place effective monitoring and evaluation systems that enable the actual impact of industries and/or biodiversity initiatives to be measured over time. Some discussion has occurred about an assessment procedure using similar criteria for all biodiversity initiatives, that can be independently audited by one external body, providing more legitimacy than internal processes, but it remains to be seen whether this could be effective.
- Examples of the kinds of indicators that could be used to measure success include hectares under better management, hectares under better management and with secured conservation status, % stocks recovering, % of catchment under sustainable

²³ Fair Trade in Tourism South Africa, (2007) “Towards the Development of a National Environmental Endorsement Scheme: Analysis of Endorsement Processes, Challenges and Options”, report submitted to Indalo Yethu

management, % market share (retailer and outlet being compliant) and proxy measures (e.g. supermarket scoring, reduction of illegal activity).

- Public awareness about business and biodiversity issues in South Africa is currently lower than general environmental awareness, for example, about climate change. Awareness should be raised to encourage consumer and shareholder activism and build customer demand for “biodiversity-friendly” products from retailers, for example, through the government’s Indalo Yethu environmental awareness campaign through DEAT.
- Business and biodiversity initiatives should collaborate, where possible, with existing social initiatives in their regions and incorporate existing social and labour standards, as well as broader environmental standards, within their own schemes.
- Identifying and influencing the levers of change for business, such as the financial markets, can help create a long-term shift in the way that business manages its impact on biodiversity. Engagement of the banking, finance, and insurance industries could mainstream biodiversity within the private sector by making it a relevant issue to all companies seeking loans, investments or insurance.
- There is some scope in South Africa for the integration of biodiversity into existing reporting standards, indices and certification schemes and for the creation of linkages with other initiatives on corporate social responsibility for auditing and certification purposes. The potential complexities of multiple criteria should be borne in mind, however – for example, while the production of a product may not harm biodiversity, it may also not be carbon-neutral!
- Specifically, biodiversity should be incorporated into investment indices, to raise the profile of biodiversity within the business community and reward good biodiversity management. The Social Responsibility Index on the JSE Ltd does not currently use the word “biodiversity” in its sustainability criteria.

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