



STEP 1:

BIODIVERSITY MAINSTREAMING INTO BUSINESS IN SOUTH AFRICA



Key questions to consider

For shareholders:

Do you know the biodiversity risks and opportunities of your investment?

For the CEO and the board:

Do you have a biodiversity blind-spot from a governance, compliance, financial or stakeholder perspective? Do you understand your reputational risk?

For environmental and sustainability managers:

Have you built a comprehensive biodiversity business case for your company?

For the financial sector:

Does your client understand its biodiversity risks/ opportunities and responsibilities?

WHY BIODIVERSITY MATTERS TO YOUR COMPANY

Key:
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for more information



Key messages

- Business both depends and impacts on biodiversity;
- Biodiversity supplies clean water and air among many other ecosystem services;
- Companies use many resources derived from biodiversity, such as foods, renewable raw materials or genetic resources;
- Biodiversity is threatened globally and in South Africa;
- Business is key driver of biodiversity loss;
- There is an international call for business to help reduce biodiversity loss;
- There is a relatively comprehensive biodiversity policy and legislative framework in South Africa;
- Building a business case for biodiversity should be a priority for your company – from a governance, compliance, financial and stakeholder engagement perspective.

This step precedes:

- Step 2, which helps you identify the biodiversity dependencies and impacts that are potentially material for your business and its stakeholders;
- Step 3, which introduces biodiversity measurement – the process of assessing the scale of the biodiversity dependencies and impact of your business across its value chain; and;
- Step 4, which introduces biodiversity valuation – the process of assessing the importance of biodiversity dependencies and impact to your business and its stakeholders.

All these steps lead to Step 5, which deals with how to make an informed decision, using all information gathered in the previous four steps. The following four steps deal with biodiversity mainstreaming implementation considering your decision.



The Business and Biodiversity nexus

Business both relies and impacts on biodiversity. Biodiversity produces a wide variety of services on which businesses depend. Examples include raw material supply, crop pollination, genetic resources, water filtration, flood attenuation, erosion control and many others. As such, business is critically dependent on ecosystem services to produce the goods and services it sells. Companies would not be able to operate without biodiversity.

However, biodiversity is under severe threat globally, including in South Africa, and the private sector is one of the primary drivers of its degradation and loss. IPBES, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, an independent intergovernmental body established in 2012 with over 130 member states around the world, recently confirmed that around 1 million animal and plant species are now threatened with extinction, many within decades, more than ever before in human history. More information is available in its 2019 Global Assessment Report on Biodiversity and Ecosystem Services.



International recognition and call for action

Healthy ecosystems are at the foundation of sustainable development and poverty elimination. Therefore, biodiversity is recognised internationally and nationally as a key part of sustainable development.

The Sustainable Development Goals (SDGs) prioritise the connection between environment and development by integrating sustainability in all 17 SDGs. More specifically, SDG 14 “life below water” and SDG 15 “life on land” make biodiversity a top priority on the international development agenda.



On November 18, 2018, the Convention on Biological Diversity (CBD), Egypt and China launched the ‘Sharm El-Sheikh to Beijing Action Agenda for Nature and People’ to catalyse actions in support of biodiversity conservation and its sustainable use. This action agenda supports the CBD’s Vision of Living in Harmony with Nature by 2050.

What is biodiversity mainstreaming in business?

Integrating biodiversity into your business strategies and activities is a process called biodiversity mainstreaming. Your biodiversity mainstreaming journey will raise several questions and challenges for your business and its stakeholders. Answering these will require strategic thinking, time, action and resources.

What is biodiversity?

Biodiversity or biological diversity refers to the living components of natural capital, as opposed to non-living elements such as water, air or minerals. The international Convention on Biological Diversity (CBD) defines “biodiversity” as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. This includes diversity within species (i.e. genetic diversity), between species, and of ecosystems.

What is a species?

A species is often defined as a group of individuals that actually or potentially interbreed in nature. Species have been classified in various taxonomic groups, such as insects, plants and mammals.

Why do the habitats of species matter?

Habitat refers to the place where an organism or a community of organisms lives, including all living and non-living factors or conditions of the surrounding environment. Every species requires habitats to live, reproduce and adapt to change, including climate change.

What are ecosystems and their services?

An ecosystem is a community of living organisms, in conjunction with the non-living components of their environment, interacting as a system (e.g. linked together through nutrient cycles and energy flows). These interactions generate many goods and services for people and business. The main categories of ecosystem services are:

- **Provisioning services:** Material outputs from nature (e.g. seafood, water, fibre, genetic material).
- **Regulating services:** Indirect benefits from nature generated through regulation of ecosystem processes (e.g. water filtration by wetlands, erosion control and protection from storm surges by vegetation, crop pollination by insects).
- **Cultural services:** Non-material benefits from nature (e.g. spiritual, aesthetic, recreational, and others).

Ecological infrastructure

Ecological infrastructure refers to naturally functioning ecosystems that deliver valuable services to people and business, such as water and climate regulation, soil formation and disaster risk reduction (for more information.)



It is the nature-based equivalent of built or hard infrastructure and can be just as important for providing services and underpinning socio-economic development. Ecological infrastructure does this by providing cost effective, long-term solutions to service delivery that can supplement, and sometimes even substitute, built infrastructure solutions.

Ecological infrastructure includes healthy mountain catchments, rivers, wetlands, coastal dunes, and nodes and corridors of natural habitat, which together form a network of interconnected structural elements in the landscape.

Biodiversity and climate change

Climate change refers to the long-term changes in the weather patterns. Change in weather patterns directly impacts the behaviour and habitats of species and, hence, their spatial distribution. For instance:

- Warming ocean temperatures are increasing the frequency of coral reef bleaching;
- Drier mountain areas in the Western Cape are becoming inhospitable for many Fynbos plant species that only occur there.

Besides, many ecosystems act as carbon storage and sinks (e.g. virgin tropical forests, mangroves, peatlands) and should be actively protected and restored as part of ecosystem-based climate adaptation strategies.

Biodiversity and freshwater

Freshwater is crucial for all species and their habitats. Freshwater biodiversity is extremely threatened, possibly more so than that of marine and terrestrial ecosystems. Both freshwater use and pollution impact biodiversity. For instance, unsustainable water abstraction by farmers, cities and industries can significantly alter freshwater ecosystems (e.g. dry riverbeds and estuaries for longer periods of time) and lead to biodiversity loss (e.g. pollution-sensitive species disappear).

Biodiversity and oceans

Marine and coastal ecosystems greatly contribute to the economic, social and cultural aspects of communities around the world. Fisheries and aquaculture are entirely dependent on marine species and their habitats (e.g. feeding, spawning and nursery sites). However, activities such as overfishing/destructive fishing practices (e.g. trawling), laying gas pipelines, drilling for oil, and even burying internet cables in the deep sea, are destroying marine ecosystems. Yet, the conservation of marine and coastal biodiversity represents an important strategy for cost-effective climate change adaptation. Many ecosystems, such as coral reefs, seagrasses, salt marshes and mangroves store carbon and provide coastal protection against natural disasters.

The business case for biodiversity

You may build the business case for biodiversity by identifying the biodiversity risks and opportunities specific to your company.

These may be framed from various complementary perspectives, such as:

- The company's reliance on biodiversity and its services for production (e.g. foods) or service delivery (e.g. wild ecosystems for tourism), directly and/or through its supply chains;
- The bottom-line implications of biodiversity-related revenues, expenses, assets and/or liabilities;
- The relevant policies, laws and regulations applicable to your business;
- The interests and concerns of its stakeholders (e.g. impact of reputational risks on sales, loss of social license to operate), including clients, local communities, business partners, governmental and non-governmental organisations.

Biodiversity, environmental inequality and poverty

Biodiversity conservation, environmental inequality and poverty reduction/elimination are inextricably linked. As we recognise poverty to be the pronounced deprivation of well-being, it is critical to understand that biodiversity underpins the delivery of a range of ecosystem services essential to all. Yet, access to natural capital is not the same for all members of society.

Poor communities often depend heavily on ecosystem services for their livelihoods and immediate survival, and yet they often:

- Struggle to secure access to natural capital and the associated ecosystem services (e.g. no rights of access and use, forced historical removals or resettlements);
- Suffer from deteriorating natural capital stocks (e.g. overharvesting) and environmental conditions (e.g. waste, poor air and water quality).

Because economic and social development and poverty eradication are the first and overriding priorities of disadvantaged areas and developing countries, public and private sector strategies and action plans for the conservation and sustainable use of biodiversity need to address poverty and inequality at their core.

Biodiversity mainstreaming needs to benefit both humans and nature.



South Africa's policy and legislative framework for biodiversity is comprehensive and includes notably:

- The National Environmental Management Act (NEMA) (Act 107 of 1998) which deals with various environmental restrictions, impact assessment and permitting processes;
- The National Environmental Management: Biodiversity Act (NEMBA) (Act 10 of 2004), which deals notably with various aspects relevant to business, including:
 - Bioprospecting, access and benefit-sharing;
 - Restrictions with respect to listed threatened or protected species;
 - Duty of care and restrictions with regards to alien species;
 - The regulation of permits with respect to restricted activities related to all of the above.
- The National Environmental Management: Protected Areas Act (Act 57 of 2003), which notably outlines restrictions regarding the type of activities which are allowed within the different categories of protected areas, including on private land;
- The National Biodiversity Strategy and Action Plan (NBSAP) (2015), which outlines the various national biodiversity objectives and targets and the importance of public-private partnerships and cooperative efforts in striving to achieve them, including that of the National Biodiversity and Business Network of South Africa housed by the Endangered Wildlife Trust;
- The National Spatial Biodiversity Assessment (NSBA) (2004, currently being reviewed and updated), which highlights key biodiversity areas throughout the country;
- The National Protected Area Expansion Strategy (NPAES) (2008), which has direct implications for business activities in targeted areas for protected area expansion.

Biodiversity as a source of new products

As explained by the Union for Ethical Biotrade (UEBT), a growing consumer interest in natural products means that companies increasingly prefer to use plant-based ingredients in their products, rather than synthetics. Various herbs, flowers, roots and bark are used in beauty, food and health products, often as active ingredients, oils, fragrances or other types of enhancing ingredients.

This means that the private sector increasingly recognises that its capacity to innovate and sell these products depends on the conservation status of target species and their associated ecosystems (especially if harvested in the wild). Many companies have thus started undertaking efforts to reduce their impacts

on biodiversity along their supply chains not only because it is a consumer expectation, but because there is a strong business case for sourcing with respect for both people and nature.

This coincides with new international and national regulations (such as rules on Access and Benefit Sharing, or ABS) on the use of biodiversity for research and development. These rules require companies to obtain prior authorisation before researching biodiversity for product innovation, and to share the benefits resulting from this research with countries and local stakeholders who have used the target biodiversity elements for generations.



In addition to national legislation, some of South Africa's nine provinces have their own provincial biodiversity legislation, as nature conservation is a concurrent function of national and provincial government in terms of the Constitution (Act 108 of 1996). This includes provincial regulations regarding environmental permitting processes which may involve biodiversity no-net-loss targets and thus the full implementation of the mitigation hierarchy, from avoidance to offset measures.

Biodiversity-inspired innovation

Biomimetics or biomimicry is the imitation of the models, systems, and elements of nature for the purpose of solving complex human problems. Emulating nature's time-tested patterns and strategies has given rise to new technologies inspired by biological solutions at macro and nanoscales, for instance learning from termites how to create sustainable buildings or learning from kingfishers how to travel fast without causing too much noise (e.g. for rapid train systems).

Biodiversity no-net-loss: Why impact avoidance will help your business save money

There is always residual damage to biodiversity as a result of any development, even following impact avoidance and mitigation. In such cases, if the development is socially and economically sustainable, ecological sustainability may be achieved through a biodiversity offset.

Biodiversity offsets are conservation measures designed to remedy the residual negative impacts of development on biodiversity and ecological infrastructure, once the first three groups of measures in the mitigation sequence have been adequately and explicitly considered (i.e. to avoid, minimize and rehabilitate/restore impacts). Offsets are the 'last resort' form of mitigation, only to be implemented if nothing else can mitigate the impact.

A biodiversity offset typically involves setting aside land in the same or a similar ecosystem elsewhere, at the cost of the applicant, to ensure no-net-loss of important biodiversity. Biodiversity offsets are particularly important in securing threatened ecosystems and critical biodiversity areas.

Biodiversity offsets are already being implemented to some extent in South Africa, but with little consistency, in the absence of a legal or policy framework.

The draft "National Biodiversity Offset Policy" has been produced to help address these gaps. Its purported aim "is to ensure that significant residual impacts of developments are remedied as required by NEMA, thereby ensuring sustainable development as required by section 24 of the Constitution of the Republic of South Africa, 1996."

Because biodiversity offsets involve both capital and operational expenses to secure (e.g. land purchase, legal proclamation as a protected area) and manage (e.g. fencing, invasive alien species control) those areas in perpetuity, it is often less costly to avoid or minimise impacts than to offset residual impacts on significant biodiversity components.

Biodiversity and your social license to operate

As explained by the International Finance Corporation (IFC), a proactive approach to biodiversity management can help a company establish positive relationships with regulators and other shareholders and improve its chances of securing and maintaining government operating licenses. In addition to formal approvals and permits, many industries are also finding that they need to secure and maintain a "local license to operate" from local communities and civil society groups. This is because these local stakeholders may:

- Use various components of biodiversity, such as wild foods (e.g. hunting, fishing) and building materials;
- Depend on various ecosystem services from the development area, such as access to clean water or arable lands;
- Have significant interests in specific species and their habitats, for instance globally threatened mammals or important bird areas.

This local license to operate is often an informal agreement between a company and local communities and stakeholders that allows the company to operate, provided it does not breach local customs or negatively impact local resource uses and needs. The IFC defines this local license as Broad Community Support. Local licenses to operate are particularly important in sectors that use or extract natural resources.



National Biodiversity and Business Network

The National Biodiversity and Business Network (NBBN) recognises the importance of biodiversity to business and builds the capacity of business to act as a positive force for the conservation of biodiversity in South Africa. The natural environment plays an important role in the value chain of any business. We work with innovative business leaders to identify and manage the business risks and opportunities that result from their interactions with the natural world.

We provide a platform for businesses to proactively engage with each other and discover solutions that lead to sustainable business growth and many exciting business opportunities such as new sources of revenue and the opportunity to reduce production costs.

We achieve this through the following projects:

- Biodiversity Disclosure Project
- Biological Diversity Protocol
- Mainstreaming Biodiversity into Business Toolkit

