



STEP 4:

BIODIVERSITY MAINSTREAMING INTO BUSINESS IN SOUTH AFRICA



Key questions to consider

For shareholders:

Are the financial and social/stakeholder biodiversity values inherent to your investment well managed or at risk?

For the CEO and the board:

Are values associated to the biodiversity dependencies and impacts of your business and its value chain well understood and managed? For your business and its stakeholders? Do you have monitoring mechanisms in place?

For environmental and sustainability managers:

Are you monitoring the values associated to the biodiversity dependencies and impacts of your business and its value chain? For your business and its stakeholders?

For the financial sector:

Has your client assessed the financial and social/stakeholder values of its material biodiversity impacts and dependencies?

VALUE THE MATERIAL BIODIVERSITY DEPENDENCIES AND IMPACTS OF YOUR BUSINESS

Key:
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for more information



Key messages

- Biodiversity and the associated services have multiple values for business and its stakeholders;
- Biodiversity valuation is the process of estimating the relative importance, worth, or usefulness of biodiversity components to business or people;
- Valuation provides the evidence needed to inform decision making;
- Understanding your target audience(s) and the appropriate value perspective is critical to effective valuation;
- Valuation may involve qualitative, quantitative or monetary approaches, or a combination of these;
- Various valuation techniques exist, but the choice best suited for your business content will vary depending on your objectives, target audiences, value perspective and biodiversity aspect assessed.

Once you have identified and measured the potentially material biodiversity dependencies and impact drivers of your business across its value chain (see Steps 2 and 3 of the Biodiversity Mainstreaming guidelines), it is important to ask yourself about the associated business and social values.

This step introduces you to the key concepts and approaches to value the material biodiversity dependencies and impacts of your business. It precedes Step 5, which deals with how to make an informed decision, using all information gathered in the previous four steps.

What is biodiversity dependency and impact valuation?

We define biodiversity valuation as the process of estimating the relative importance, worth, or usefulness of biodiversity components to business or people, in a particular context. Biodiversity measurement and valuation go hand in hand, with measurement being a critical step towards informed valuation for improved decision-making (see Step 3 of our biodiversity mainstreaming guidelines). In other words, you need to assess how much biodiversity you use and/or impact on before you can value its importance in a specific context.

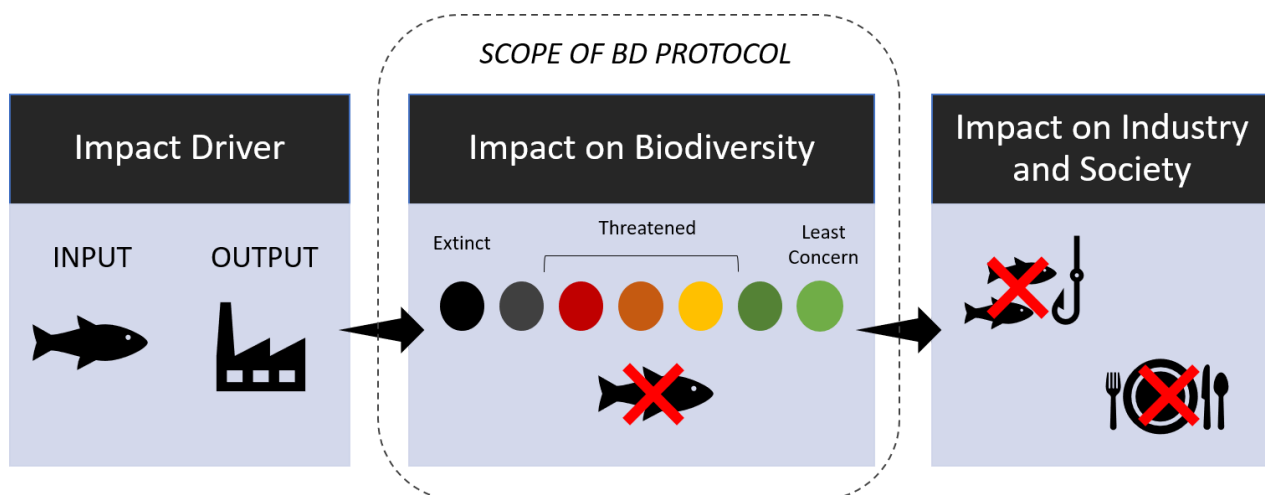


Figure 4.1:
The biodiversity impact pathway: impact drivers, impacts on/changes in biodiversity and impacts on industry and society.

Valuation concerns the last component of the biodiversity impact pathway (Figure 4.1): i.e. estimating the relative importance of impacts on business and/or its stakeholders. Impact drivers – that is business inputs and outputs – lead to changes in biodiversity (i.e. actual biodiversity impacts) which further cause business and stakeholder impacts. Valuation provides the evidence needed to inform decision-making in various business contexts, such as product design, comparing options, or assessing portfolio exposure.

Choosing the value perspective according to your target audience(s)

To choose which valuation approach is best for your assessment, you should consider:

- Your target audience: i.e. who you want to convince for improved decision-making; and
- The value perspective that would best fit your target audience:
 - **Business value:** The costs and benefits to the business – also referred to as internal, private, financial, or shareholder value.
 - **Societal or social values:** The costs and benefits to wider society, also referred to as external, public, or stakeholder value.

Choosing the value perspective according to your target audience(s)

There are many approaches, methodologies and tools available for valuation. The Natural Capital Protocol, developed by the Natural Capital Coalition, provides in-depth guidance on how to value natural capital dependencies and impacts.

The Natural Capital Coalition, of which the Endangered Wildlife Trust (EWT) is a regional partner, is now working actively towards providing guidance on how and why to include biodiversity in broader natural capital assessments.

Valuation may involve qualitative, quantitative or monetary approaches, or a combination of these, as described by the Natural Capital Protocol:

- **Qualitative valuation:** Valuation that describes impacts or dependencies and may rank them into categories such as high, medium, or low.
- **Quantitative valuation:** Valuation that uses non-monetary units such as numbers (e.g. in a composite index), areas, mass, or volume to assess the magnitude of impacts or dependencies.
- **Monetary valuation:** Valuation that uses money (e.g. ZAR) as the common unit to assess the values of impacts and/or dependencies.

Choosing the appropriate valuation perspective will depend again on the target audience(s) you want to convince. This would likely require speaking their language and hence using the same value perspective.

For instance, monetary valuation would be useful to help the board decide on the best course of action with regards to an investment, while qualitative and quantitative valuation may be more useful to engage NGOs which are interested in the conservation of species impacted by operations.

Valuing biodiversity from a private/ business perspective

From a business perspective, the most useful biodiversity valuation approach is financial valuation – i.e. assessing the importance of actual money spent/due, or earned, by making use of internal accounting information:

- **Dependencies:** revenues/receivables and expenses/ liabilities linked to the management (e.g. biodiversity-based tourism destination) or harvesting of various biodiversity elements (e.g. wild fish harvesting, agriculture);
- **Impacts:** Expenses, liabilities and (potentially) savings related to the implementation of the mitigation hierarchy, such as the full costs of reaching biodiversity targets related to mining closure (including habitat and species restoration costs) and mandatory biodiversity offsets (e.g. land purchase and management costs).
- **Production function:** Empirical modelling approach that relates change in the output of marketed goods or services to a measurable change in biodiversity-related inputs (e.g. the quality or quantity of ecosystem services); which is particularly useful in agriculture and fisheries.
- **Replacement costs:** The cost of replacing ecological infrastructure with an artificial substitute (product, infrastructure, or technology), which may be estimated, observed, or modelled (e.g. costs of replacing wetlands by a wastewater treatment plant or mangroves by artificial sea walls for coastal protection).
- **Damage costs avoided:** The potential costs of property, infrastructure, and production losses due to biodiversity degradation.

This is treated as a “saving” or benefit from conserving biodiversity and may also be estimated, observed, or modelled.

In case where financial values are not available, other approaches may be used from a business perspective such as:

- **Market prices:** Prices paid for goods and services traded in markets;



Valuing biodiversity from an external stakeholder/social perspective

Furthermore, from the perspective of external stakeholders interested in biodiversity conservation, mixed qualitative and quantitative valuation approaches are often preferred:

- The ranking of habitats and species according to the level of threat they face, which involves assessing quantitatively the viability of population of species or habitats and then rating their threat level according to various criteria (e.g. using the IUCN Red List of Species and Ecosystems);
- The assessment of the share of remaining habitat (e.g. 100 ha of wetlands impacted, which constitutes 15% of total remaining similar wetlands in the catchment) or species population (e.g. loss of a population of 100 individuals of a plant species, which constitutes 50% of total remaining population in the country) that is being impacted or on which the business depends.

Finally, from the perspective of external stakeholders interested in social equity and sustainable use, mixed qualitative, quantitative

and monetary approaches should be used to explore the social benefits and costs attached to the biodiversity elements your company interacts with. The focus here would typically be on valuing the ecosystem goods and services lost or gained through business activities.

For instance, mining operations in northern Zambia may negatively impact on access to/the stock of construction materials (e.g. termite mounds) and food resources (e.g. wild meat and fish). In such cases, market prices and replacement cost methods would be appropriate to assess the importance of these ecosystem goods to the local community.

Making sure their opportunity costs (e.g. in terms of purchasing power) is considered in the process would be critical as it would take little to directly compare mining revenues with the values of such ecosystem goods.

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

