

Scoping Guidance

Part of a series of Biodiversity Guidance to accompany the
Natural Capital Protocol

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Key messages

- Identifying the business application, and relevant stakeholders, can help articulate a clear objective for a biodiversity-inclusive natural capital assessment.
- Identifying biodiversity-related impact drivers and dependencies requires further technical considerations as part of setting baselines and the spatial, temporal and value-chain boundary of the assessment.
- Traditional approaches for defining materiality may not capture all biodiversity risks and opportunities – the values of biodiversity may be hidden when focusing solely on the flow of goods and services.

What is the Scope Stage?

This Guidance describes how to set and incorporate biodiversity-inclusive objectives and define the scope of your assessment. This includes aligning natural capital assessments with existing corporate biodiversity commitments or policies, and outlining key technical considerations when defining the scope of an assessment that considers biodiversity. The Guidance builds on the **Framing Guidance**, and relates to Steps 02 - 04 of the Natural Capital Protocol. This Guidance also introduces further guidance that has been developed as part of this series on measurement, valuation and application.

How does the Biodiversity Guidance map to the Protocol?

Table 1 provides an overview of the questions and actions of Steps 02 - 04 of the Scope Stage in the Protocol, and outlines the actions for which the Biodiversity Guidance provides additional information.

This Guidance has been developed to address questions related to setting the objectives and scope that specifically focus on biodiversity:

Step 02: How can [biodiversity] objectives be set as part of a natural capital assessment?

Step 03: What is an appropriate scope to meet my [biodiversity] objectives and what key technical issues need to be considered?

Step 04: How can the materiality of [biodiversity-related] impact drivers and dependencies be assessed?

Table 1

Key questions addressed and their relation to the Natural Capital Protocol

Protocol Step	Questions this Step will answer	Protocol Actions	Additional guidance included?
02 Define the objective	How can biodiversity objectives be set as part of my natural capital assessment?	2.2.1 Identify the target audience	No Please refer to Protocol page 26 for general guidance
		2.2.2 Identify stakeholders and the appropriate level of engagement	Yes See Action 2.2.2
		2.2.3 Articulate the objective of your assessment	Yes See Action 2.2.3
03 Scope the assessment	What is an appropriate scope to meet my biodiversity objectives and what key technical issues need to be considered?	3.2.1 Determine the organisational focus	No Please refer to the Protocol page 31 for general guidance
		3.2.2 Determine the value-chain boundary	Yes See Action 3.2.2

		3.2.3 Specify whose value perspective	Yes See Action 3.2.3
		3.2.4 Decide on assessing impacts and/or dependencies	Yes See Action 3.2.4
		3.2.5 Decide which types of value you will consider	Yes See Action 3.2.5
		3.2.6 Consider other technical issues (baselines, boundaries and time horizons)	Yes See Action 3.2.6
		3.2.7 Address key planning issues	No Please refer to the Protocol page 41
04 Determine the impacts/dependencies	How can the materiality of biodiversity-related impact drivers and dependencies be assessed?	4.2.1 List potentially material impacts/dependencies	Yes See Action 4.2.1
		4.2.2 Identify criteria for your materiality assessment	Yes See Action 4.2.2
		4.2.3 Gather relevant information	No Please refer to the Protocol page 49 for guidance
		4.2.4 Complete the materiality assessment	No Please refer to the Protocol page 50 for guidance

Additional notes



Table 2 provides a non-exhaustive list summarizing some additional resources to aid in setting the objectives and scope and illustrates how they may be useful for your assessment.

Table 2

Additional resources for setting the objective and scope of a biodiversity-inclusive assessment

Author	Title	Type	Description
EU Business @ Biodiversity Platform	Assessment of biodiversity accounting approaches for businesses and financial institutions. Update Report 1.	Report	The first of a series of update reports assessing biodiversity measurement approaches for businesses and financial institutions. Includes discussion on business applications for biodiversity-inclusive assessments.
Cross-Sector Biodiversity Initiative	A cross-sector guide for implementing the Mitigation Hierarchy	Report	Describes practical steps to implement the Mitigation Hierarchy at the site level, to achieve no net loss or net gain targets.
IUCN	Threats classification scheme	Database	Hierarchical breakdown detailing the drivers of species decline. Aids in articulating impact pathways.
UNEP-WCMC	ENCORE (Exploring natural capital opportunities and risk exposure)	Decision Support Tool	Online platform that aids in exploring the impacts and dependencies of businesses on natural capital and ecosystem services.

Step 02 Guidance: Define the objective

This section of the Guidance provides actions to answer the following question:

How can biodiversity objectives be set in preparation for an assessment?

2.2.1 Identify the target audience

For this action, revert to the Protocol page 26, for general guidance.

2.2.2 Identify stakeholders and the appropriate level of engagement

You should consider whether the relevant stakeholders vary when specifically including biodiversity. For example, certain external stakeholders may have specific dependencies on biodiversity (e.g. fishermen, farmers). Certain regulators may be responsible for managing biodiversity impacts, and financial institutions may be looking to understand the biodiversity-related impacts and dependencies of their loans or portfolios.

2.2.3 Articulate the objective of your assessment

Once the biodiversity-inclusive business application, target audience and relevant stakeholders have been identified, you should now be able to articulate the specific biodiversity objectives for the assessment. Some examples are provided in Table 3.

Table 3

Example objectives for a biodiversity-inclusive natural capital assessment which could be developed after selecting the business application and identifying the target audience.

Example Business Application	Example target audience	Example objective
BA1: Assessment of current biodiversity performance	Internal stakeholders (environment/sustainability manager) External regulators (e.g. statutory conservation body)	To assess site-based impacts on biodiversity.
BA3: Tracking progress to targets	Internal operations department External regulators	To demonstrate to stakeholders compliance with no net loss biodiversity objectives at the site level.
BA4: Comparing options	Internal procurement teams	To assess which procurement option has the highest dependence on biodiversity.
BA5: Assessment/rating of biodiversity performance by third parties, using external data	Certification body	To demonstrate whether the company meets certification requirements for acceptable biodiversity performance.
BA7: Screening and assessment of biodiversity risks and opportunities	Internal operations department	To assess risk exposure of business operations to risks associated with biodiversity loss

Step 03 Guidance: Scope the assessment

This section of the Guidance provides actions to answer the following question:

What is an appropriate scope to meet my biodiversity objectives and what key technical issues need to be considered?

3.2.1 Determine the Organisational Focus

For this action, revert to the Protocol page 31, for general guidance

3.2.2 Determine the value-chain boundary

When incorporating biodiversity as part of your natural capital assessment, you should note that many dependencies often lie in the supply chain, i.e. upstream in the value-chain. For example, crop production that supplies raw materials to make food products may be reliant on pollination and nutrient cycling – key ecosystem services supported through biodiverse ecosystems.

Impacts on biodiversity along the value chain may also be direct, indirect and cumulative, affecting the scope of the assessment. Cumulative impacts are 'incremental changes by other past, present or reasonable foreseeable actions together with the project'. For example, the construction of one road may not have a large impact in a landscape, but multiple roads over the wider landscape may reduce habitat connectivity. Similarly, impacts can accumulate over time, so that relatively small impacts of each subsequent activity can add up to a large overall impact.

3.2.3 Specify whose value perspective

The value perspective for a biodiversity-inclusive assessment may vary. It is important to note that the societal value of biodiversity is important to consider in natural capital assessments. Additional guidance on this is provided in the **Framing Guidance**. As outlined in Section 3.2.3 of the Protocol, you can carry out your natural capital assessments from a business value perspective, from a societal value perspective, or from both. Business and societal value perspectives focus on different aspects of biodiversity's value. Depending on the value perspective that you choose, you will be assessing different aspects of your relationship with biodiversity:

- By choosing a **business value perspective**, you will be primarily assessing:
 - 1) Consequences of your dependencies on biodiversity (e.g. financial implications on your business of decrease in pollination services);
 - 2) Consequences of your impacts on biodiversity for your own operations and performance (e.g. reputational damage due to your impacts on biodiversity).
- By choosing a **societal value perspective**, you will be primarily assessing:
 - 1) Consequences of your biodiversity impacts on society (e.g. loss of earning by fishermen affected by an oil spill of your company).

By choosing a societal value perspective, you can capture the majority of the values of biodiversity to business. Therefore, a societal perspective can often provide a more comprehensive assessment of biodiversity's total value than a business value

perspective (see Table 4 for more information on the values of biodiversity captured from different value perspectives).

Table 4

Values of biodiversity potentially captured in natural capital assessments carried out from a business value perspective and a societal value perspective

Consequences of:		Business value perspective		Societal value perspective
		Business dependencies on biodiversity	Impacts for business	Impacts across society*
Values of biodiversity to business	Direct			
	Underpinning			
	Insurance and options			
	Intrinsic			
Values of biodiversity to society	Direct			
	Underpinning			
	Insurance and options			
	Intrinsic			

*In a business' natural capital assessment, societal dependencies on biodiversity will be examined through business' impacts that affect delivery of goods and services to society.

Legend

	Most consequences captured		Some consequences captured		Consequences not captured
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When selecting the appropriate value perspective for your assessment, other considerations that you should take into account are:

- The consequences of your impacts on biodiversity are likely to pose important risks and opportunities linked to your societal relationships (see the **Framing Guidance** for more information).
- It is likely that there is some overlap between values of biodiversity to business and to society. By using a societal value perspective, you will be including all values and avoiding accounting problems in your assessment (e.g. double counting).
- The importance of biodiversity is increasingly recognised, and the consequences of your biodiversity impacts on society will become more important, and so increase your reputational, financial and regulatory risks and opportunities. Therefore, including a societal perspective, to some extent, can allow you to identify those biodiversity issues that may affect your business performance in the future.

- Even where many consequences related to a value are captured, you may still underestimate some values. The intrinsic value of biodiversity is not captured from either a business or a societal value perspective. It is therefore important to keep in mind that values are likely to be minimum estimates when examining the results of any valuation assessment.

[Click here to see how a sustainable landscape fund is enhancing biodiversity as a result of a valuation assessment.](#)

3.2.4 Decide on assessing impacts and/or dependencies

Due to the relationship between biodiversity and the quantity, quality and resilience of ecosystem services, it is recommended that the scope of a biodiversity-inclusive natural capital assessment seeks to evaluate business dependencies on biodiversity, as well as impacts.

3.2.5 Decide which types of value you will consider

The Protocol outlines how valuation involves a continuum of qualitative, quantitative and monetary approaches, and describes key features of each approach. It also suggests key considerations when determining which type of valuation is most appropriate to meet your objectives. Valuing natural capital in general often involves valuing the final benefits that people/businesses receive from natural capital. If biodiversity contributes to these final benefits however, but is not measured as part of them, its importance may not be visible in your assessment. It is important to value how the benefits rely on the underlying biodiversity stock, and ensure the ramifications for maintaining the condition of biodiversity are considered alongside valuation results.

You can use monetary values to understand the magnitude and relevance of costs and benefits associated with your impacts and dependencies on biodiversity. Monetary valuation summarises information in a common and tractable unit, making it easier for you to communicate with key stakeholders and assess trade-offs.

Before undertaking monetary valuation however, you should consider whether this is the correct approach. In the following circumstances you should not use monetary techniques (O'Connor and Frame 2008):

- 1) When you cannot estimate accurate values;
- 2) When it can be considered morally inappropriate;
- 3) When a large scale change in biodiversity is taking place (e.g. when a large proportion of a remaining population or habitat is affected);
- 4) When an irreversible change is expected.

Other factors that you should consider when deciding whether to use a monetary technique include the nature of your decision, the target audience, and the availability of data to support monetisation. Qualitative and quantitative techniques can be applied to values that cannot be assessed with monetary techniques.

You should also be aware of, and find ways to address, potential concerns that generate opposition to valuing biodiversity, especially in monetary units. Concerns may include, but will not be limited to, fears around the 'commodification' of nature and the risk that bringing nature closer to the economic system will detract from societal responsibilities to protect biodiversity. You should also recognise that it is both inappropriate and

impossible to accurately quantify the intrinsic worth of biodiversity in monetary units, and find alternative ways to consider biodiversity's intrinsic value in your decision-making. You must always present the approach taken, the aspects of biodiversity's value included, and the assumptions made, clearly alongside your results. This will help you to avoid a well-intended assessment from being taken out of context or otherwise misunderstood.

3.2.6 Consider other technical issues

a. Baselines

One key consideration for all natural capital assessment is **baselines** (defined in the Protocol as the starting point or benchmark against which changes in natural capital attributed to your business' activities can be compared). You can find here some additional indications to the ones in the Protocol, especially in relation to biodiversity:

- **Prevailing conditions:** where impacts in a year are compared to the average over previous years. A prevailing conditions baseline may be particularly appropriate if the objective is reducing the biodiversity impact of the whole business, so that the baseline is set as the last financial year. It is however, harder to take into consideration the impacts of activities already occurring in the land/sea scape.
- **Pristine baseline:** impacts are measured relative to biodiversity in its natural state. Pristine baselines have the advantage of making impacts easy to conceptualise, and encourage restorative actions. Most business activities, however, are likely to be negatively impacting biodiversity when comparing to a pristine state. Some measurement approaches use a pristine, undisturbed state as a baseline. Further guidance on measurement approaches is provided in the **Measuring and Valuing Guidance**.
- **Counterfactual scenario:** The counterfactual scenario describes changes relative to a plausible state of biodiversity that would occur if the business did not operate (referred to as a 'business as usual' scenario in the Protocol). The use of counterfactual scenarios can greatly affect the assessment of impacts during your assessment (Sonter et al. 2017). Biodiversity may change or decline over time independently of the business activity being assessed, and this state of decline used as the counterfactual scenario. Climate change, for example, may force species to shift their ranges. If a counterfactual scenario represents an area of substantial biodiversity loss, then business impacts may be assessed as relatively lower (i.e. less biodiversity loss is attributed to the business activity), or alternatively biodiversity affected by the business operation could be deemed more valuable with time. If the counterfactual scenario represents an area of stable, or increasing biodiversity, then business impacts may be assessed as relatively larger (i.e. more biodiversity loss is attributed to the business activity).

You can find more considerations regarding understanding and setting the scope for a natural capital assessment in the Protocol. There are, however, some areas where biodiversity may necessitate further considerations:

b. Spatial and temporal boundaries

Including biodiversity influences the spatial and temporal boundary of your assessment; it is likely that broader geographical and temporal boundaries will be needed for a biodiversity-inclusive assessment than when focusing on the non-living components of

natural capital. When considering biodiversity, the potential areas of influence can be large, due to, for example, impacts on migratory species. The timeframes over which the implications of impacts and dependencies are felt may be different to other elements of a natural capital assessment, hence careful thought must be given to the timing of impacts and the time horizon of decision making. When determining an appropriate timeframe for your assessment, you need to consider:

- The condition of biodiversity can change over time, influencing the benefits received by business and society in the future. It can be difficult to predict changes in benefits linked to changes in biodiversity, but it is risky to assume that benefits will persist without managing biodiversity. Information on trends in biodiversity, and the drivers of its condition, will help you to understand whether it is likely to change.
- Biodiversity management efforts can take time to achieve their desired outcomes. You need go beyond a single snapshot in time, and consider the consequences of changes in the state of biodiversity over time.
- The presence of potential thresholds and 'tipping points', where minor changes in biodiversity can result in larger changes to the way ecosystems function. Your timeframe should be appropriate to assess the consequences of your impacts on biodiversity, and its potential irreversibility.

3.2.7 Address key planning issues

For this action, revert to the Protocol page 41, for general guidance.

Step 04 Guidance: Determine the impacts/dependencies

This section of the Guidance provides actions to answer the following question:

How can the materiality of biodiversity-related impact drivers and dependencies be assessed?

4.2.1 List potentially material impacts/dependencies

Once you have set the objectives of your assessment, and you have completed your initial scoping steps, you should complete a materiality assessment. Throughout this process, it is important to remember that:

- i) The value of biodiversity in providing ecosystem services may appear hidden and so may not initially be identified as material to a business.
- ii) Impacts on biodiversity feedback on dependencies, i.e. impacts on biodiversity may also reduce the flow of ecosystem services supporting business operations.
- iii) Impacts may appear more material when focusing on societal value as growing concern over biodiversity loss may result in greater regulation and greater consumer pressure.

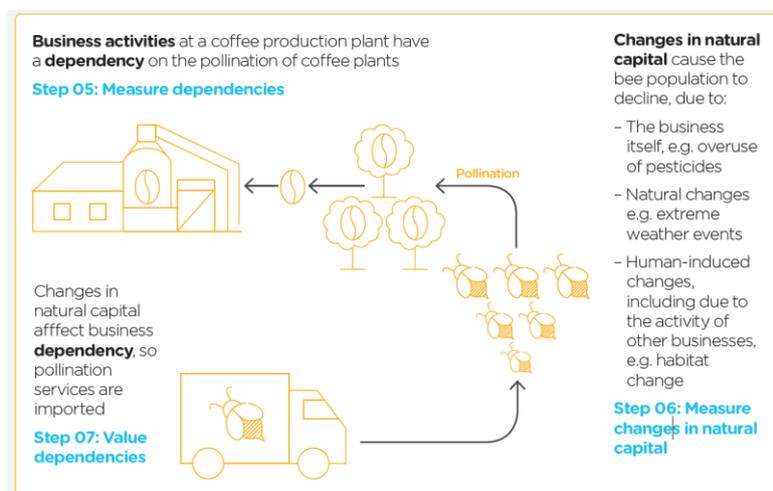
The first stage of a materiality assessment is to identify impact and dependency pathways, in order to later prioritize which are material. Impact pathways describe how, as a result of a specific business activity, a particular impact driver results in changes in natural capital and how these changes impact different stakeholders, whereas a dependency pathway shows how a particular business activity depends upon a specific component of natural capital.

As biodiversity is the variety of the living component of natural capital stocks, business inherently depend on biodiversity (ACCA Global, 2017). For example, a coffee farm will be dependent on the pollination of its coffee plants (see

Figure 1) to yield coffee beans. This pollination service is reliant on a variety of species and ecosystem processes (e.g. plants supplying nectar supporting the pollinators). In this way, the coffee production process is reliant on habitats rich in biodiversity.

Figure 1

Generic steps of a dependency pathway for a coffee plantation dependent on insect pollinators – figure 4.2 from the Natural Capital Protocol



Similarly, businesses may impact on biodiversity which feedback on these dependencies. Impact pathways begin with a specific impact driver. An impact driver is a measurable quantity of a natural resource that is used as an input to production, or a measurable non-product output of a business activity. Using the pollination example for coffee plantations as an example, clearing a measurable area of land (impact driver) for agricultural conversion can reduce the species richness (biodiversity impact) within pollinator supporting habitats, thereby increasing the risk of reduced crop productivity and disrupting the coffee production process (business value).

4.2.2 Identify criteria for your materiality assessment

After identifying your potential impact and dependency pathways, these should then be prioritized by screening against set criteria to determine materiality. The criteria for assessing materiality may vary when including biodiversity. For example:

- **Operational** – Business operations, in particular upstream operations, may be specifically dependent on biodiversity, as well as the non-living components of natural capital.
- **Legal and regulatory** – Biodiversity may be managed under a different set of regulations than the non-living components such as water resources.
- **Financing** – Many financial institutions are starting to quantify biodiversity impacts within their risk management processes. This means a company's biodiversity impacts can affect their access to capital.
- **Reputational and marketing** – These criteria may have higher materiality weighting for biodiversity due to the intrinsic value of biodiversity to many stakeholders or customers.

Examples of impact and dependency pathways specifically related to biodiversity are provided in Table 5, along with their associated materiality criteria. You should consider that multiple impact pathways may act together to cause a change in state of

biodiversity. For example, both vegetation clearing and pollution may act synergistically to reduce the quantity and quality of biodiversity in an area.

Table 5

Example material impact and dependency pathways specifically related to biodiversity

	Impact driver/ dependency	Changes to biodiversity	Value to business/ society	Materiality criteria
Impact-Input	Area of open cast mine	Reduction in total vegetation cover and structural complexity	Increased damage cost from flood or cost of setting artificial flood protection	Operational /societal
Impact-Output	Noise	Declining breeding success of protected species	Abatement costs of mitigation measures required through regulations	Legal and regulatory
Dependency	Pollination of crops	Declining biodiversity in pollinator-supporting habitats	Costs of reduced yields and unpredictable upstream supply	Operational/societal

By building up these impact and dependency pathways you can then map out the impacts and dependencies on biodiversity as part of your natural capital assessment.

Tools have been developed which can aid in the assessment of materiality of your business dependencies and impacts on biodiversity, however these are at present restricted to understanding species and habitats and do not represent the variety of species, ecosystems and genetic diversity, or the intrinsic value of biodiversity. For example, the [ENCORE](#) tool (Exploring Natural Capital Opportunities, Risk and Exposure) assesses the importance of the contribution an ecosystem service makes to a production process, and the materiality of the impact if this service is disrupted. Two materiality criteria were considered in this analysis: 1) How significant is the loss of functionality in the production process if the ecosystem service is disrupted? and 2) How significant is the financial loss due to the loss of functionality in the production process?

4.2.3 Gather relevant information

For this action, revert to the Protocol page 49, for general guidance.

4.2.4 Complete the materiality assessment

For this action, revert to the Protocol page 50, for general guidance.

Case studies

Company example: Finance

A banking group is participating in a finance facility to support projects that generate environmental and social benefits. Valuation of the costs and benefits of biodiversity enhancement has revealed the strong potential for positive impacts, particularly from a societal perspective. This is because of biodiversity's role in underpinning delivery of a broad and resilient range of goods and services to local communities, and its intrinsic and existence values across wider society.

The importance placed on biodiversity has been reflected in the finance facility's transactions. For example, it has provided a bond for a sustainable rubber plantation in a degraded forest. More than half of the concession area will be set aside for restoration and environmental conservation. This is expected to provide benefits for the livelihoods and local communities, and create a buffer zone for a national park with several large and charismatic species that are endangered on a global scale.

The private value of the sustainable rubber, combined with public, NGO and private willingness to invest to restore the wider ecosystem for biodiversity and other ecosystem benefits, allowed a finance instrument to be designed which brought forward finance to realise the investment (and deliver multiple values of biodiversity to different stakeholders at a landscape scale).

The scheme has received awards for financial innovation and environmental conservation. The bank's participation has supported its recognition as a leader in environmental, social and governance issues.

Having now set your objectives, scoped your assessment and identified a prioritized list of material impacts, dependencies and changes in biodiversity to include in your natural capital assessment, please continue to the **Measuring and Valuing Guidance** to explore how these can be measured.

References and resources

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