

Biodiversity Indicators for Monitoring Impacts and Conservation Actions

BP, ChevronTexaco, Conservation International, Fauna & Flora International, IUCN, The Nature Conservancy, Shell, Smithsonian Institution, Statoil



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Publication year: 2003

Version of tool: 1

Overview

The Energy & Biodiversity Initiative's "Biodiversity Indicators for Monitoring Impacts and Conservation Actions" guide provides guidance for integrating biodiversity conservation into upstream oil and gas development. In particular this document outlines a methodology for developing site-level indicators to monitor significant positive and negative biodiversity impacts and company-level indicators to inform and report on the approach taken to biodiversity conservation at a strategic level. It is not the intention of this document to provide a prescriptive list of indicators to be used in every circumstance: the diverse nature of biodiversity and of oil and gas operations makes this an unrealistic expectation. Therefore, the emphasis is on the method of deriving indicators rather than the indicators themselves.

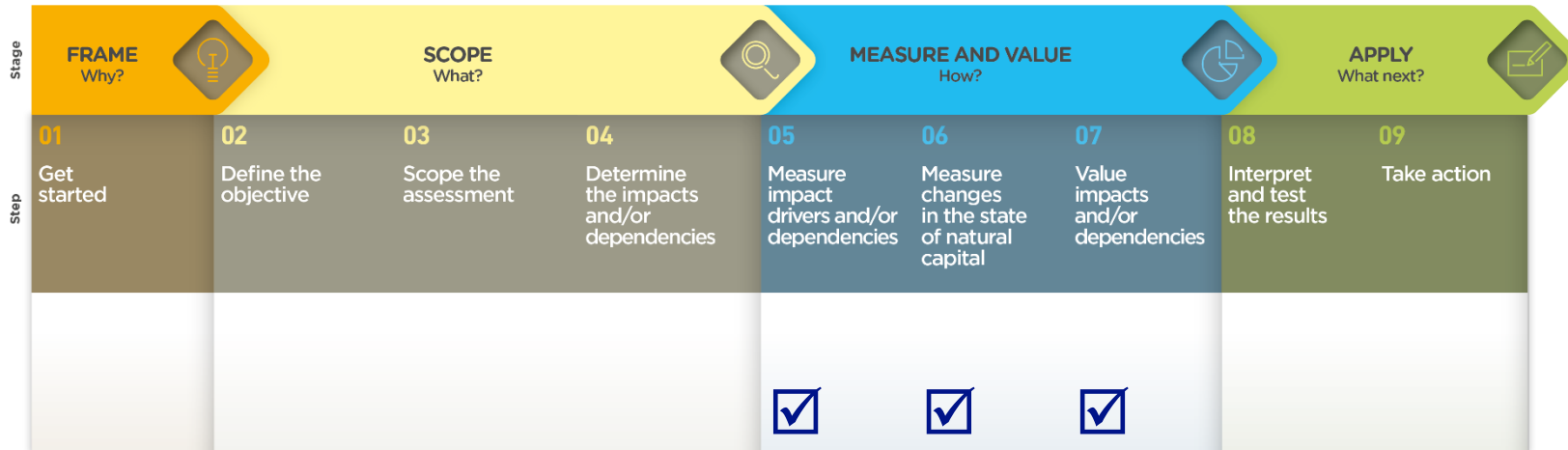
Section 1: Relationship to the Natural Capital Protocol

Impact drivers

Water use <input checked="" type="checkbox"/>	Terrestrial ecosystem use <input checked="" type="checkbox"/>	GHG emissions <input checked="" type="checkbox"/>
Water pollutants <input checked="" type="checkbox"/>	Fresh water ecosystem use <input checked="" type="checkbox"/>	Non-GHG air pollutants <input checked="" type="checkbox"/>
Soil pollutants <input checked="" type="checkbox"/>	Marine ecosystem use <input checked="" type="checkbox"/>	Disturbances <input checked="" type="checkbox"/>
Solid waste <input checked="" type="checkbox"/>	Other resource use <input checked="" type="checkbox"/>	Impact on Biodiversity <input checked="" type="checkbox"/>

Dependencies

Energy <input type="checkbox"/>	Regulation of physical environment <input checked="" type="checkbox"/>	Knowledge <input checked="" type="checkbox"/>
Materials <input checked="" type="checkbox"/>	Regulation of biological environment <input checked="" type="checkbox"/>	Well-being and spiritual/ethical values <input checked="" type="checkbox"/>
Nutrition <input checked="" type="checkbox"/>	Regulation of waste and emissions <input checked="" type="checkbox"/>	Dependency on biodiversity <input checked="" type="checkbox"/>
Water <input checked="" type="checkbox"/>	Experience <input checked="" type="checkbox"/>	



Details on valuation if applicable:

- Qualitative
- Quantitative
- Monetary
- Value to business
- Value to society

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Section 2: Details for business users

Organizational Focus:

The part or parts of the business to be included in a natural capital assessment.

- Corporate:** Assessment of a corporation or group, including all subsidiaries, business units, divisions, different geographies or markets, etc.
- Project:** Assessment of a planned undertaking or initiative for a specific purpose. NOTE this includes assessments of sites, activities, processes, and incidents.
- Product:** Assessment of particular goods and/or services, including the materials and services used to produce these products

Value Chain Boundary

The part or parts of the business value chain to be included in a natural capital assessment.

- Upstream** (or cradle-to-gate): covers the activities of suppliers, including purchased energy
- Direct operations** (or gate-to-gate): covers activities over which the business has direct operational control Including majority-owned subsidiaries.
- Downstream** (or gate-to-grave): covers activities linked to the purchase, use, reuse, recovery, recycling, and final disposal of the business' products and services.

Geographical scope

- | | | | |
|---|---------------|------------|---------------|
| <input checked="" type="checkbox"/> All | Africa | Antarctica | Asia |
| Europe | North America | Oceania | South America |

Sectoral Scope

- | | |
|---|---|
| All sectors | Agriculture |
| Apparel | Banks, finance and insurance |
| Capital goods (including electrical equipment and machinery) | Chemicals |
| Commercial and professional services | Construction and engineering services |
| Construction materials | Consumer services (including hotels, restaurants and leisure) |
| <input checked="" type="checkbox"/> Energy: non-renewables (including oil, gas and consumable fuel) | Energy: renewables |
| Environmental and ecological management services | Fisheries |
| Food and beverage (including tobacco) | Healthcare and pharmaceutical |
| Household and personal | Information and communication technology |
| Media | Metals and mining |
| Paper and forest products | Real estate |
| Retailing | Transportation |
| Utilities (including electricity, gas and water) | |

Type of tool and key features

- | | |
|---|--|
| Equations, formulae, methods used for computations | Spatial mapping or modelling, GIS data or files of measurements/values |
| <input checked="" type="checkbox"/> General framework or guidelines | Specially designed to compare multiple options/scenarios/strategies |
| List of references and sources to find measurements/values | Spreadsheet that already includes background measurements/values |
| List of measurements/values | Spreadsheet that does not include any background measurements/values |
| Mechanism to collect ecological data | Survey or questionnaire |
| On-line calculator or model | |
| Other: N/A | |

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Section 3: Requirements of use

Intended User:

<input checked="" type="checkbox"/> Business	<input type="checkbox"/> General public	<input checked="" type="checkbox"/> Conservation organization
<input type="checkbox"/> Policy / government	<input type="checkbox"/> Science / academia	
Other: N/A		

Skills required:

<input checked="" type="checkbox"/> No specific skills are required	<input type="checkbox"/> Modelling expertise
<input checked="" type="checkbox"/> Some environmental background needed	<input type="checkbox"/> LCA (Life Cycle Assessment) expertise
<input type="checkbox"/> Environmental economics	<input type="checkbox"/> Ecology expertise
<input type="checkbox"/> GIS (Geographic Information Systems) expertise	<input type="checkbox"/> Computing expertise
Other: N/A	

Data required:

No Yes

If yes, details: The amount of information depends on the project but it entails compiling information from a desktop assessment of biodiversity values and potential biodiversity impacts. These sources can range from peer-reviewed journals to grey literature. Also consultation by way of interviews with stakeholder is required.

Average time required:

Hours Days Weeks Months Years

Variables that may affect the time required:

In order to determine appropriate indicators it may require consultation with stakeholders which can be time consuming. Simpler assessments, where stakeholders are not involved may take less time.

Software requirements if applicable:

No. the "tool" is a framework and methodology that can be done without specific software. However a Microsoft Word or Excel document is a good place to store the finding of your assessment

Cost to access:

<input checked="" type="checkbox"/> Free to access	Indefinitely (pay once, permanent access)
<input type="checkbox"/> \$1 – 1,000	Per use
<input type="checkbox"/> \$1,001 – 5,000	Per license
<input type="checkbox"/> \$5,001 – 10,000	Per year
<input type="checkbox"/> >\$10,000	
Other: It is available online for free at http://www.theebi.org/pdfs/indicators.pdf	

Other information regarding the cost to access:

N/A

Other conditions of use:

No other than proper citation of source material

Planned updates:

No

Links to pilots, case studies or reviews (max 3)

N/A

N/A

N/A