

Business guide to natural capital valuation

PwC

Publication year: 2015

Version of tool: 1



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Overview

"The guide describes how to value the environmental impacts typically associated with business activities: air pollution, greenhouse gases, land use, solid waste, water consumption, and water pollution.

Developed by PwC's Total Impact Measurement and Management (TIMM) team the guide is based on PwC's extensive experience measuring and valuing natural capital. It is consistent with the Natural Capital Protocol recommendations for monetary valuation and ISO 14008.

PwC was part of the core team that developed the Natural Capital Protocol. The guide itself and Kering's pioneering Environmental Profit & Loss (EP&L) account (supported by PwC) were two of the four proprietary methodologies selected by the Coalition's Methodological Review Panel to inform the development of the Protocol. PwC were also central to The Economics of Ecosystems and Biodiversity (TEEB), the WBCSD's Guide to Corporate Ecosystem Valuation and the UK government's Framework for Corporate Natural Capital Accounting."

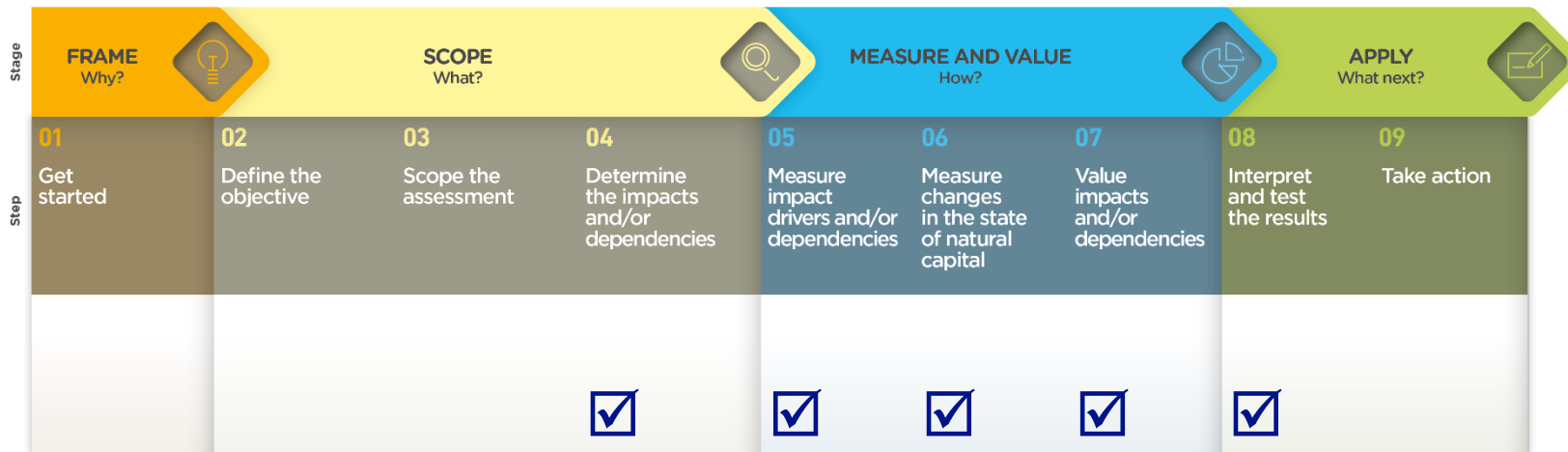
Section 1: Relationship to the Natural Capital Protocol

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	Disturbances
Solid waste <input checked="" type="checkbox"/>	Other resource use	Impact on Biodiversity <input checked="" type="checkbox"/>

Dependencies

Energy	Regulation of physical environment	Knowledge
Materials	Regulation of biological environment	Well-being and spiritual/ethical values
Nutrition	Regulation of waste and emissions	Dependency on biodiversity
Water	Experience	



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

- | | |
|---|---|
| <input checked="" type="checkbox"/> 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) |
| 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

- | | |
|--|--|
| <input checked="" type="checkbox"/> 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 |
| <input checked="" type="checkbox"/> 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 type="checkbox"/> Conservation organization
<input type="checkbox"/> Policy / government	<input type="checkbox"/> Science / academia	
<input type="checkbox"/> Other: N/A		

Skills required:

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

Data required:

No Yes

If yes, details: Environmental metric data (e.g. quantity of GHG emissions in tonnes CO2e)

Average time required:

Hours Days Weeks Months Years

Variables that may affect the time required:

The availability of data, the geographical scope of the analysis, the purpose of the analysis and the accuracy required for the results.

Software requirements if applicable:

No

Cost to access:

<input checked="" type="checkbox"/> Free to access	<input checked="" type="checkbox"/> Indefinitely (pay once, permanent access)
<input type="checkbox"/> \$1 – 1,000	<input type="checkbox"/> Per use
<input type="checkbox"/> \$1,001 – 5,000	<input type="checkbox"/> Per license
<input type="checkbox"/> \$5,001 – 10,000	<input type="checkbox"/> Per year
<input type="checkbox"/> >\$10,000	
<input type="checkbox"/> Other: N/A	

Other information regarding the cost to access:

N/A

Other conditions of use:

N/A

Planned updates:

Ad hoc updates.

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

pwc.com/totalimpact

<http://www.pwc.com/gx/en/services/sustainability/publications/total-impact-measurement-management/impact-examples.html>

N/A