Business training on natural capital

Scoping a natural capital assessment

Three-hour training session

DATE
We Value Nature – Who are we?

We Value Nature is a campaign supporting businesses and the natural capital community to make valuing nature the new normal for business across Europe, by:

1. Sharing research, resources & best practices;
2. Identifying barriers & opportunities for adopting a natural capital approach;
3. Providing practical support to help business improve their risk management, communication & stakeholder engagement;
4. Reinforcing & boosting the work of the Natural Capital Coalition.
Module 2 training development – Acknowledging contributors

We Value Nature’s module 2 training is based on the Natural Capital Protocol and WBCSD’s BET training material.

Module 2 training content and material was developed in collaboration with Little Blue Research Ltd.

The training material has been reviewed by and tested with a group of 10 businesses from a variety of sectors as well as delivered as a test trial to nearly 90 participants representing businesses, NGOs, consultancies as part of WBCSD’s virtual event series.

Finally, 12 experts from the Advisory Board have provided their input into the training material.
We Value Nature training is open

You are free to:

- **Share** — copy and redistribute the material in any medium or format
- **Adapt** — remix, transform, and build upon the material for any purpose, even commercial

Under the following terms:

- **Attribution** — You must give appropriate credit, link to the licence & indicate if changes were made (but not suggest endorsement).
- **No additional restrictions** — You may not legally restrict others from doing anything the license permits.

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A few “house rules” – virtual training

- Put yourself on mute when not taking part in discussions.
- Chatham house rules will apply.
- We will be using some polling and breakout rooms – be ready for some interaction!
- Please type any questions in chat and we will respond in chat, live or address during the feedback session – please note that the chat may be saved for future reference.
- Contribute and share your experiences – we can all learn from one another!
A few “house rules” – in person training

- Taking part in discussions but respect people’s views and session timings.
- Chatham house rules will apply.
- We will be using some quizzes during the session.
- Please ask any questions during the relevant points in presentations and exercises.
- Contribute and share your experiences – we can all learn from one another!
We Value Nature’s business training on natural capital – link to M1

Module 1
Understanding natural capital and the relationships with business decision-making & risk management

- Understand the concept of natural capital and related risks & opportunities
- Linkages with business decision-making & risk management
- Introduction to a few key approaches

Module 2
Acquiring the resources & understanding needed to scope a first natural capital assessment

- Identify and measure impact drivers and/or dependencies
- Practical considerations
- Introduction to valuation techniques

Today’s training
Learning objectives of module 2

The aim of We Value Nature’s module 2 training is:

❖ To understand how to **identify natural capital impacts and dependencies** that are **important** to your business,

❖ Acquire the necessary tools, resources and understanding to **scope your own assessment**, 

❖ To be introduced to the key **practical considerations and steps** to take when undertaking a first natural capital assessment as well as some **tools** to help undertake an assessment

❖ To understand **materiality assessments** in the context of **impacts and dependencies** and how to undertake them

❖ To **introduce valuation** following on from the brief overview provided in module one
<table>
<thead>
<tr>
<th>Time (XXX)</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Introductions</td>
</tr>
<tr>
<td>15</td>
<td>Setting the scene and a brief re-cap on natural capital</td>
</tr>
<tr>
<td>10</td>
<td>The business case for assessing natural capital &amp; common assessments</td>
</tr>
<tr>
<td>40</td>
<td>Identifying your natural capital impacts &amp; dependencies</td>
</tr>
<tr>
<td>15</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>25</td>
<td>Scoping an assessment</td>
</tr>
<tr>
<td>20</td>
<td>Materiality</td>
</tr>
<tr>
<td>20</td>
<td>Introduction to monetary valuation for scoping an assessment</td>
</tr>
<tr>
<td>20</td>
<td>Case study presentation</td>
</tr>
<tr>
<td>15</td>
<td>Wrap-up &amp; next steps</td>
</tr>
</tbody>
</table>
Introductions
Who is your support team for today?

1. Insert picture of trainer
   - Name
   - [insert logo of organisation]

2. Insert picture of trainer
   - Name
   - [insert logo of organisation]

3. Insert picture of trainer
   - Name
   - [insert logo of organisation]
### Who is in the room

<table>
<thead>
<tr>
<th>NAME</th>
<th>NAME</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Company</td>
<td>Company</td>
</tr>
</tbody>
</table>
Introductions

• Please tell us more by sharing:

• Any specific expectation(s) for today?
Introductions

• Ice breaker

• On your tables please introduce yourselves by sharing your name, company, role and why you are interested in scoping a natural capital assessment
Setting the scene and a brief re-cap on natural capital
Keeping up momentum during the COVID-19 crisis

- Institutions urging a green recovery from covid-19
- Christine Lagarde, President of ECB: "transition towards a greener economy is a crucial part of economic recovery"
- "Business as usual" is vulnerable to a range of outside influences, not just market forces
- The need for business to take into consideration all capitals
- The crisis shows why understanding stakeholder values is important for decision making
Optional videos to set the scene

• Pitch for nature video:  
  https://www.youtube.com/watch?v=lyL272Q1N0s
• WBCSD video – what’s you relationship with nature?  
  https://www.youtube.com/watch?v=3nLuyyFUnIk
• GSFA 2019, WBCSD video – Business is investing in nature  
  https://www.youtube.com/watch?v=LcVGH_UlqIE
Knowledge check

How do you define natural capital?
Knowledge check

What is NOT a form of natural capital?
How to use Mentimeter

1. Go to www.menti.com
2. Enter this code: XXXXXX
3. Submit your answer
Natural capital is the stock of renewable and non-renewable natural resources, (e.g. plants, animals, air water, soils, minerals) that combine to yield a flow of “services” to people. In turn, these flows provide value to business and society.

Source: Natural Capital Protocol
Ecosystems Services

Ecosystem services are the benefits to people from ecosystems (e.g. climate regulation, water purification, soil biodiversity, pollination, timber, recreation, mental health). These services can be categorised into:

- Provisioning,
- Regulating,
- Supporting and
- Cultural
Business depends on & impacts natural capital

1. All businesses impact and depend upon natural capital.

2. This relationship delivers costs and benefits back to themselves and to society.

3. These in turn lead to risks and opportunities to the business.

Source: Natural Capital Protocol

Refer to p.15 of the Natural Capital Protocol
Integrating approaches and building links between protocols

**Brundtland - Sustainable Development** is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Generally-accepted frameworks for business to identify, measure and value its impacts and dependencies on natural, social and human capital.
How do you define the Natural Capital Protocol?
How to use Mentimeter

1. Go to www.menti.com

2. Enter this code: XXXXXX

3. Submit your answer
What parts of the Natural Capital Protocol will we cover?

Module 1
Module 2
Introduction in module 2

Source: Natural Capital Protocol

PRINCIPLES: Relevance, Rigor, Replicability, Consistency
The business case for assessing natural capital & common assessments
Risks for business
Reflections, risks and opportunities

Individually reflect on whether each of these ecosystem services pose more of a risk or opportunity?

• Soil regulation:
• Pollination
• Water extraction
Why assess your impacts & dependencies? The business case…

Many natural capital risks and opportunities are becoming increasingly visible, and **business needs a way to understand and manage these.**

- Understand **relationships with nature** in a structured way
- Challenge your **business model**
- Mitigate **risks**
- Increased **competitive advantage**

- Create **opportunities**
- **Inform decisions** that are really important to your business
- Access to **finance**
- Recruitment & retention of staff

Source: Natural Capital Protocol
Assessments: **Measure & Value**

**To measure ≠ to value**

- **To measure:** determine the **amounts, extent and condition** in physical terms
  - e.g. m³, tons, number of injuries, number of jobs

- **To value:** estimate the **relative importance, worth, or usefulness** of natural / social / human capital to people (or to a business), in a particular context.

Refer to p.82 of the **Natural Capital Protocol**

**Qualitative**

**Quantitative**

**Monetary**

Costs and benefits to the business, and to society
Business application

Natural capital *information* can be used in plenty of ways. You need to decide what information you need and how it will be used.

<table>
<thead>
<tr>
<th>Potential Business Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess risks and opportunities for the company or a department (new options for ecological product development, the risk associated with increased water stress, etc.)</td>
</tr>
<tr>
<td>Compare options e.g. choosing between flood solutions</td>
</tr>
<tr>
<td>Assess impacts on stakeholders, how are nearby communities impacted by different factory policies</td>
</tr>
<tr>
<td>Estimate total value and/or net impact</td>
</tr>
<tr>
<td>Communicate internally or externally</td>
</tr>
</tbody>
</table>

Source: *Natural Capital Protocol*
Overview of current assessments

- **Natural capital only**: 61%
- **Natural, social and human**: 15%
- **Social and human only**: 6%
- **Unspecified**: 18%

**NC or SHC**

**Organization type**

- **Business**: 65%
- **Government**: 25%
- **Finance**: 10%
- **Unspecified**: 18%

Source: Capitals Coalition
1. Estimate total value and/or net impact, 34%
2. Assess risks and opportunities, 27%
3. Assess impacts on stakeholders, 13%
4. Integrate and mainstream natural capital into policy, 7%
5. Compare options, 5%
6. Create and support insights, 5%
7. Other, 9%

Source: Capitals Coalition
Sectors

1. Multi-sector, 17%
2. Forest products, 14%
3. Food and beverage, 13%
4. Energy and utilities, 9%
5. Chemicals, 8%
6. Other, 20%

Source: Capitals Coalition
Concrete steps to undertaking a 1st natural capital assessment

**Define** your objective (module1)

**Identify** your impacts and/or dependencies

**Scope** your assessment
- Organizational focus; value-chain boundary; value perspective; impacts and or dependencies; type of value

**Practicalities**
- Baseline, scenarios, spatial & temporal boundaries, etc.

**Measure and Value**
- Materiality assessments; identify changes in natural capital; assess trends; select valuation techniques; ecosystem valuation tools

**Iterative process**
- Timing
- Skills
- Data
- Resources
- Stakeholders
Re-cap of the learning objectives module 2

❖ To understand how to **identify natural capital impacts and dependencies** that are **important** to your business,

❖ Acquire the necessary tools, resources and understanding to **scope your own assessment**, 

❖ To be introduced to the key **practical considerations and steps** to take when undertaking a first natural capital assessment as well as some **tools** to help undertake an assessment 

❖ To understand **materiality assessments** in the context of **impacts and dependencies** and how to undertake them

❖ To **introduce valuation** following on from the brief overview provided in module one
Identifying your natural capital impacts & dependencies

Impact drivers and dependency pathways
Concrete steps to undertaking a 1st natural capital assessment

**Define** your objective (module 1)

**Identify** your impacts and/or dependencies

**Scope** your assessment
- Organizational focus; value-chain boundary; value perspective; impacts and or dependencies; type of value

**Practicalities**
- Baseline, scenarios, spatial & temporal boundaries, etc.

**Measure and Value**
- Materiality assessments; identify changes in natural capital; assess trends; select valuation techniques; ecosystem valuation tools

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**Next steps**

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**Iterative process**

- **Timing**
- **Skills**
- **Data**
- **Resources**
- **Stakeholders**
Optional video – practical example of impacts/dependencies

Source: example from Haagen-Dazs on their honey bees pollinator habitat project

https://www.youtube.com/watch?v=qtgm-3EQOU4
Natural capital dependencies

A business reliance on or use of natural capital

Climate regulation

- Energy
- Pollination
- Materials

Erosion and soil regulation

Recreation

Storm and flood protection

Water

Source: Natural Capital Protocol

Refer p.34 of the Natural Capital Protocol
Dependency pathways

- Business activities can be dependent on specific features of natural capital.

- A dependency pathway can identify how changes in specific features of natural capital can affect these activities.

- Knowing how changes affect business activities helps you identify the cost of doing business.

Refer to p.46 of the Natural Capital Protocol.

Source: Natural Capital Protocol
Natural capital impacts

The negative or positive effect of business activity on natural capital

Greenhouse gas emissions
Land management
Waste
Disturbances (noise, light)
Water extraction & management
Groundwater discharge
Discharges to soil

Source: Natural Capital Protocol

Refer to p.16 of the Natural Capital Protocol
Impact drivers

Impact drivers are:

- **Measurable quantities** of a natural resource used as an input to production (e.g. fresh water)

Or:

- **Measurable non-product output** of a business activity (e.g. water discharges)

Refer to pp.44-55 of the Natural Capital Protocol

Source: Natural Capital Protocol
Knowledge check

Impacts, dependencies, or both?

Are the following examples of impacts or dependencies, or both?

- Soil regulation
- Pollination
- Water extraction

Dependency / Impact

0 10
How to use Mentimeter

1. Go to www.menti.com
2. Enter this code: XXXXXX
3. Submit your answer
Case study example – Cementos Argos

- Cementos Argos is a leading **cement and ready-mix concrete producer & distributor**
- It is a **conglomerate operating in different countries**, including Colombia, the US, Central America and the Caribbean
- The cement production process **involves grinding, mixing and heating limestone and clay**
- **Water, sand and gravel** are added to the cement to form concrete

Source: [Cementos Argos](Cementos Argos)
Case study example – Cementos Argos (continued)

- The company is involved in both the **mining and processing stages** of cement, concrete and aggregate production
- The company operates in 15 countries **across the Americas**
- The company reaches over **34 destinations**
- It is the largest cement and concrete company in **Colombia**

Source: Cementos Argos
Examples of ecosystem services to consider

- **Provisioning services**: Goods produced or provided by ecosystems
  - Food
  - Raw materials
  - Fresh water
  - Medicinal resources

- **Cultural services**: cultural and social benefits obtained from ecosystems
  - Recreation/ mental and physical health
  - (Eco)tourism
  - Aesthetic appreciation
  - Spiritual experience

- **Regulating services**: natural processes regulated by ecosystems
  - Local climate and air quality
  - Moderation of extreme events
  - Waste-water treatment
  - Soil regulation/ erosion prevention
  - Pollination
  - Biological control

- **Habitat or supporting services**: functions that maintain all other services
  - Habitats for species
  - Maintenance of genetic diversity
Group exercise in breakout rooms

• We will now split into breakout rooms
  • Approx. 3 groups of 4

• You will work through a table of impacts & dependencies for Cementos Argos operations in Colombia

• You will have 10 minutes to discuss in your group

• You will be notified when you have 5’ of the time left

• Each group will have one of the support team member to take notes

• One member per group will be asked to feedback in plenary on the main points & reflections that came out
Group exercise at tables

- In your groups of 3-4 at your tables
- You will work through a cut-down table of impacts & dependencies and decide whether Cementos Argos has high, medium or low impacts and/or dependencies for its operations in Colombia
- You will have 10 minutes to discuss in your group
- You will be notified when you have 5’ of the time left
- Each group will have one of the support team member to take notes
- One member per group will be asked to feedback in plenary on the main points & reflections that came out
Case study example – Cementos Argos, Colombia

**Natural Capital Impact:**
The negative or positive effect of business activity on natural capital (e.g. water extraction)

**Natural Capital Dependency:**
Business reliance on or use of natural capital (e.g. pollination)

<table>
<thead>
<tr>
<th>Key ecosystem services</th>
<th>Dependency</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisioning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate regulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soli erosion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Case study example – Cementos Argos, Colombia

<table>
<thead>
<tr>
<th>Key ecosystem services</th>
<th>Dependency</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provisioning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>Med</td>
<td>Med</td>
</tr>
<tr>
<td>Water</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td><strong>Regulating</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate regulation</td>
<td>Med/High (depending on specific location)</td>
<td>Med</td>
</tr>
<tr>
<td>Air quality</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Soil erosion</td>
<td>High</td>
<td>Med</td>
</tr>
</tbody>
</table>

Cementos Argos key impacts and dependencies - Colombia
Cementos Argos’ Value Added Statement

- Grupo Argos has applied their assessments since 2016
- They assess 11 externalities whose contributions increase or reduce the value generated to their stakeholders
- The analysis includes information from all of their regions and across all their business lines
- The result of the total sum of their externalities is the net value generated to society

Source: Cementos Argos Value Added Statement
What may be the most material natural capital impact and dependency for your business?

Individually reflect on what would be your business’ natural capital impacts & dependencies

Write down 1 impact & 1 dependency that seem most material to your business at the moment.
Where we are in the learning objectives

- To understand how to identify natural capital impacts and dependencies that are *important* to your business,

  - Acquire the necessary tools, resources and understanding to *scope your own assessment*,

  - To be introduced to the key *practical considerations and steps* to take when undertaking a first natural capital assessment as well as some *tools* to help undertake an assessment

  - To understand *materiality assessments* in the context of *impacts and dependencies* and how to undertake them

  - To *introduce valuation* following on from the brief overview provided in module one
Scoping an assessment
Concrete steps to undertaking a 1\textsuperscript{st} natural capital assessment

Define your objective (module 1)

Identify your impacts and/or dependencies

Scope your assessment
- Organizational focus; value-chain boundary; value perspective; impacts and or dependencies; type of value

Practicalities
- Baseline, scenarios, spatial & temporal boundaries, etc.

Measure and Value
- Materiality assessments; identify changes in natural capital; assess trends; select valuation techniques; ecosystem valuation tools

Next steps

Iterative process
- Timing
- Skills
- Data
- Resources
- Stakeholders
**Project ambition: scoping an assessment**

<table>
<thead>
<tr>
<th>Determine the organizational focus</th>
<th>Corporate / product / project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the value-chain boundary</td>
<td>Upstream / direct operations / downstream</td>
</tr>
<tr>
<td>Specify whose value perspective</td>
<td>Business / society</td>
</tr>
<tr>
<td>Decide on assessing impacts and/or dependencies</td>
<td>Impacts / dependencies / both</td>
</tr>
<tr>
<td>Decide which types of value you will consider</td>
<td>Qualitative / quantitative / Monetary</td>
</tr>
</tbody>
</table>

Source: Natural Capital Protocol
## Identifying stakeholders

### Examples of Internal Stakeholders:

<table>
<thead>
<tr>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shareholders (if applicable)</td>
</tr>
<tr>
<td>Senior executives and directors</td>
</tr>
<tr>
<td>Heads of sustainability, environment etc.</td>
</tr>
<tr>
<td>Human resources or auditing and compliance</td>
</tr>
<tr>
<td>Employees and contractors</td>
</tr>
<tr>
<td>Departments like finance, strategy, procurement, marketing, communications, reporting, public affairs, investor relations etc.</td>
</tr>
</tbody>
</table>

### Examples of External Stakeholders:

<table>
<thead>
<tr>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shareholders (if applicable)</td>
</tr>
<tr>
<td>Investors</td>
</tr>
<tr>
<td>Suppliers</td>
</tr>
<tr>
<td>Government, regulators, customers etc.</td>
</tr>
<tr>
<td>Experts (e.g. academics, engineers etc.)</td>
</tr>
<tr>
<td>• Community and other affected stakeholders (local residents, schools, other businesses, special interest groups, farmers etc.)</td>
</tr>
<tr>
<td>• Civil society (NGO, labour unions etc.)</td>
</tr>
</tbody>
</table>

Source: Natural Capital Protocol

Refer to p.26-27 of the Natural Capital Protocol
Identifying target audience and obtaining buy-in

Why do you need to identify a target audience?

- In order to help define your objective, you need to identify the target audience and understand what drives them.
- The target audience is the main user of the assessment output, this means that outputs must be written with them in mind.

Creating buy-in

- In order to help drive your project forward you will need to get internal buy-in this can be achieved by:
  - Identifying individuals with an interest in the project and getting them involved.
  - Identifying where company operations may be vulnerable in terms of dependencies.
  - Identifying areas of opportunity that fit within the remit of department leaders in product development, etc.
  - Demonstrating how the outputs of an assessment can help with decision making where investment decisions are currently being discussed.
  - Knowing how to adapt your language for the relevant department, to make options easy to understand.


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Re-cap case study example – Cementos Argos

- Cementos Argos is a leading cement and ready-mix concrete producer & distributor
- It is a conglomerate operating in different countries, including Colombia, the US, Central America and the Caribbean
- The cement production process involves grinding, mixing and heating limestone and clay
- Water, sand and gravel are added to the cement to form concrete

Source: Cementos Argos
Target Audience: Stakeholders:

Target Audience = main user of the assessment output (i.e. those people that will read and use the output to make decisions)

Stakeholder = any individual, organisation, sector or community with an interest or stake in the outcome of a decision or process

Natural Capital Impact:
The negative or positive effect of business activity on natural capital (e.g. water extraction)

Natural Capital Dependency:
Business reliance on or use of natural capital (e.g. pollination)
Who could the stakeholders and target audience be for Cementos Argos?

<table>
<thead>
<tr>
<th>Target Audience:</th>
<th>Stakeholders:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO and Board of Directors</td>
<td>Departments of Finance, Communications, HR, Investor Relations, Operations and Environment</td>
</tr>
<tr>
<td>Shareholders Committee</td>
<td>External consultants</td>
</tr>
<tr>
<td>Steering Committee</td>
<td>Investors, partners, regulators, suppliers</td>
</tr>
<tr>
<td>Sustainability Team</td>
<td>Employees</td>
</tr>
<tr>
<td></td>
<td>Local communities (e.g. those who live near to the cement factories)</td>
</tr>
</tbody>
</table>

## Case Study Example – Cementos Argos, Colombia

<table>
<thead>
<tr>
<th>Determine the <strong>organizational focus</strong></th>
<th>Corporate / product / project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the <strong>value-chain boundary</strong></td>
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<tr>
<td>Specify whose <strong>value perspective</strong></td>
<td>Business / society</td>
</tr>
<tr>
<td>Decide on assessing <strong>impacts and/or dependencies</strong></td>
<td>Impacts / dependencies / both</td>
</tr>
<tr>
<td>Decide which <strong>types of value you will consider</strong></td>
<td>Qualitative / quantitative / Monetary</td>
</tr>
</tbody>
</table>

**Objective** = calculate the net value generated to society from their externalities to provide the company with a comprehensive view on how to retain, add or reduce value.

Refer to p.42 of the *Natural Capital Protocol*
So what could the scope of work look like for Cementos Argos based on the information we have?

<table>
<thead>
<tr>
<th>Determine the <strong>organizational focus</strong></th>
<th>Corporate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the <strong>value-chain boundary</strong></td>
<td>Upstream / direct operations / downstream – the entire value chain</td>
</tr>
<tr>
<td>Specify whose <strong>value perspective</strong></td>
<td>Value is a mix of business and societal</td>
</tr>
<tr>
<td>Decide on assessing <strong>impacts and/or dependencies</strong></td>
<td>Impacts</td>
</tr>
<tr>
<td>Decide which <strong>types of value you will consider</strong></td>
<td>Monetary</td>
</tr>
</tbody>
</table>
Case study example – Hugo Boss

• Hugo Boss is one of the leading companies in the premium segment of the **global apparel market**

• Around **17%** of Hugo Boss products in total are produced at their own factories in **Germany, Poland, Turkey, and Italy**

• 83% of their finished products and a majority of the refined raw materials are **sourced from suppliers all over the world**

Source: Hugo Boss, Natural Capital Evaluation
Case study example – Hugo Boss

• Started using the NCP in 2016 to conduct monetary valuation

• Overall responsibility for sustainability lies with the CEO of Hugo Boss, but the Managing Board handles sustainability topics along the value chain and approves the standards that apply Group-wide.

• The objective of the assessment is to provide the foundation for Hugo Boss to implement targeted measures to achieve more environmentally-friendly production and distribution of its products.

Source: Hugo Boss, Natural Capital Evaluation
HUGO BOSS’ Natural Capital evaluation

- They have conducted LCAs since 2009 to **determine the environmental impact** of their clothing products
- Allows Hugo Boss to **compare impacts**
- The **greatest environmental impacts** arise during **production**
- They have now set special **targets** in these areas to reduce their impact

Source: Hugo Boss, [Natural Capital Evaluation](https://example.com)
Case Study Example – Hugo Boss

<table>
<thead>
<tr>
<th>Determine the organizational focus</th>
<th>Corporate / product / project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the value-chain boundary</td>
<td>Upstream / direct operations / downstream</td>
</tr>
<tr>
<td>Specify whose value perspective</td>
<td>Business / society</td>
</tr>
<tr>
<td>Decide on assessing impacts and/or dependencies</td>
<td>Impacts / dependencies / both</td>
</tr>
<tr>
<td>Decide which types of value you will consider</td>
<td>Qualitative / quantitative / Monetary</td>
</tr>
</tbody>
</table>

**Objective** = provide the foundation for Hugo Boss to implement targeted measures to achieve more environmentally-friendly production and distribution of its products.
So what could the scope of work look like for Hugo Boss based on the information we have?

<table>
<thead>
<tr>
<th><strong>Determine the organizational focus</strong></th>
<th>Corporate but move to detailed analysis for products (latest silk ties and wool suits)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Determine the value-chain boundary</strong></td>
<td>Upstream / direct operations / downstream – the entire value chain</td>
</tr>
<tr>
<td><strong>Specify whose value perspective</strong></td>
<td>Value looks to be a mix of social and business value – hard to make out</td>
</tr>
<tr>
<td><strong>Decide on assessing impacts and/or dependencies</strong></td>
<td>Impacts</td>
</tr>
<tr>
<td><strong>Decide which types of value you will consider</strong></td>
<td>Monetary (making environmental impacts comparable)</td>
</tr>
</tbody>
</table>
Case Study Example – Hugo Boss

<table>
<thead>
<tr>
<th>Target Audience:</th>
<th>Stakeholders:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Target Audience** = main user of the assessment output (i.e. those people that will read and use the output to make decisions)

**Stakeholder** = any individual, organisation, sector or community with an interest or stake in the outcome of a decision or process

**Natural Capital Impact:**
The negative or positive effect of business activity on natural capital (e.g. water extraction)

**Natural Capital Dependency:**
Business reliance on or use of natural capital (e.g. pollination)
Who could the stakeholders and target audience be for Hugo Boss?

<table>
<thead>
<tr>
<th>Target Audience:</th>
<th>Stakeholders:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hugo Boss CEO and Managing Board</td>
<td>Farmers</td>
</tr>
<tr>
<td></td>
<td>Manufacturers</td>
</tr>
<tr>
<td></td>
<td>Retailers</td>
</tr>
<tr>
<td></td>
<td>Customers</td>
</tr>
</tbody>
</table>

Where we are in the learning objectives

To understand how to **identify natural capital impacts and dependencies** that are **important** to your business,

Acquire the necessary tools, resources and understanding to **scope your own assessment**,

- To be introduced to the key **practical considerations and steps** to take when undertaking a first natural capital assessment as well as some **tools** to help undertake an assessment
- To understand **materiality assessments** in the context of **impacts and dependencies** and how to undertake them
- To **introduce valuation** following on from the brief overview provided in module one
Concrete steps to undertaking a 1st natural capital assessment

Define your objective (module 1)

Identify your impacts and/or dependencies

Scope your assessment
- Organizational focus; value-chain boundary; value perspective; impacts and or dependencies; type of value

Practicalities
- Baseline, scenarios, spatial & temporal boundaries, etc.

Measure and Value
- Materiality assessments; identify changes in natural capital; assess trends; select valuation techniques; ecosystem valuation tools

Iterative process
- Timing
- Skills
- Data
- Resources
- Stakeholders

Next steps
Planning an assessment

• **Timescale**: How quickly does the assessment need to be completed

• **Funding/resources**: What budget and human resources are available?

• **Capacity**: What skills are available within the business to undertake an assessment?

• **Data availability and accessibility**: What constraints on data are anticipated?

• **Stakeholder relationships**: To what extent do you need to identify and establish relationships with stakeholders?

Source: Natural Capital Protocol
Other considerations

- **Baseline** e.g. current conditions
- **Scenarios** e.g. climate change based on published IPCC predictions
- **Spatial boundary** e.g. 3 largest manufacturing facilities, 3 largest plantations in Kenya
- What are the **corporate boundaries** (i.e. suppliers/contractors)
- **Temporal boundary** e.g. next 10 years

Refer to p.42 of the Natural Capital Protocol

Source: Natural Capital Protocol
Practical tips & success factors

• Define a clear **purpose**

• Engage stakeholders

• Address relevant issues, make your project **tailor-made**

• **Simple and accessible** results

• Develop clear **recommendations and action plan**

➔ Highlight **insights** rather than absolute numbers
SHIFT platform and the Natural Capital Toolkit

There are lots of useful tools out there. SHIFT.tools is a searchable repository of tools, including the Natural Capital Toolkit.
1. Mining company

2. Conduct a company-wide assessment on its use of water

3. Sustainability team
Tools to Determine Impacts and Dependencies

**ENCORE (Natural Capital Finance Alliance)**
- Impact and dependencies at economic sector level – qualitative

**SASB (Sustainability Accounting Standards Board)**
- Impacts at a sector level – qualitative

**Natural Capital Protocol Sector Guides**
- Impacts and dependencies but for limited sectors (food and beverage, apparel and forests)

**I360X (Impact 360)**
- Impacts across all natural, human, social and financial capital – quantitative and qualitative
Where we are in the learning objectives

- To understand how to identify natural capital impacts and dependencies that are material to your business,
- Acquire the necessary tools, resources and understanding to scope your own assessment,
- To be introduced to the key practical considerations and steps to take when undertaking a first natural capital assessment as well as some tools
  - To understand materiality assessments in the context of impacts and dependencies and how to undertake them
  - To introduce valuation following on from the brief overview provided in module one
Materiality
Concrete steps to undertaking a 1st natural capital assessment

**Define your objective (module1)**

**Identify your impacts and/or dependencies**

**Scope your assessment**
- Organizational focus; value-chain boundary; value perspective; impacts and or dependencies; type of value

**Practicalities**
- Baseline, scenarios, spatial & temporal boundaries, etc.

**Measure and Value**
- Materiality assessments; identify changes in natural capital; assess trends; select valuation techniques; ecosystem valuation tools

---

**Iterative process**
- **Timing**
- **Skills**
- **Data**
- **Resources**
- **Stakeholders**
**Materiality** –

an impact or dependency on natural capital is material if consideration of its value, as part of the set of information used for decision making, has the potential to alter that decision

**Materiality assessment** –

the process that involves identifying what is (or is potentially) material in relation to the natural capital assessment’s objective and application
How to measure and links to guidance

• Identify the **criteria** for your assessment to identify which **impacts and dependencies** are most significant

• Potential criteria may include: **operational; legal and regulatory; financing; reputational and marketing; and societal**

• Gather relevant information and use this to **assess which impacts and/or dependencies are most material** to include in your assessment

A matrix may be useful to plot potentially material impacts and dependencies

Source: Natural Capital Protocol
Based on the following points, which impacts, and dependencies would be material?

- A small seafood company based in Amsterdam undertook a materiality assessment to see where their biggest impacts and dependencies were.
- The company grows vegetables and herbs and is also involved in local fishing in the North Sea.
- The company also processes food and packages the food and is involved in transporting the food to and from storage.
# Food industry example - material impacts

<table>
<thead>
<tr>
<th>IMPACT</th>
<th>CLIMATE</th>
<th>WATER USE</th>
<th>AIR QUALITY</th>
<th>LAND USE CHANGE</th>
<th>SOIL QUALITY</th>
<th>WATER QUALITY</th>
<th>BIODIVERSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MODERATE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Nature Squared
Food industry example - material impacts

<table>
<thead>
<tr>
<th>MOST MATERIAL PRACTICES</th>
<th>ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FISHING</td>
<td>Qualitative research:</td>
</tr>
<tr>
<td></td>
<td>- Environmental impact of different species</td>
</tr>
<tr>
<td></td>
<td>- Design a sourcing list</td>
</tr>
<tr>
<td></td>
<td>- Investigate coalescence opportunities</td>
</tr>
<tr>
<td>GROWING VEGETABLES &amp; HERBS</td>
<td>Immediate action:</td>
</tr>
<tr>
<td></td>
<td>- Engage vegetable supplier on sustainable production methods</td>
</tr>
<tr>
<td></td>
<td>Qualitative research:</td>
</tr>
<tr>
<td></td>
<td>- Investigate certifications</td>
</tr>
<tr>
<td></td>
<td>- Qualitative research:</td>
</tr>
<tr>
<td></td>
<td>- Calculate volume &amp; area formed including cases of land restoration</td>
</tr>
<tr>
<td>PACKAGING</td>
<td>Immediate action:</td>
</tr>
<tr>
<td></td>
<td>- Require about packaging options with a packaging specialist</td>
</tr>
<tr>
<td></td>
<td>Qualitative research:</td>
</tr>
<tr>
<td></td>
<td>- Investigate opportunities for non-virgin and degradable materials</td>
</tr>
<tr>
<td></td>
<td>Qualitative research:</td>
</tr>
<tr>
<td></td>
<td>- Calculate impact differentials of recycling vs. degradable and plastic vs. cardboard</td>
</tr>
<tr>
<td>OUTBOUND LOGISTICS &amp; SALES</td>
<td>Immediate action:</td>
</tr>
<tr>
<td></td>
<td>- Less business travel by sea, Choose sustainable alternative</td>
</tr>
<tr>
<td></td>
<td>Qualitative research:</td>
</tr>
<tr>
<td></td>
<td>- Monitor registration, commuting and CO2 measurements</td>
</tr>
<tr>
<td>PRODUCT DEVELOPMENT</td>
<td>Qualitative research:</td>
</tr>
<tr>
<td></td>
<td>- Investigate opportunities for whole-life relevant vegetables</td>
</tr>
<tr>
<td></td>
<td>- Design a checklist with environmental indicators for introducing new products</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMPACT</th>
<th>Growing vegetables &amp; herbs</th>
<th>Fishing</th>
<th>Processing</th>
<th>Inbound logistics</th>
<th>Operations &amp; storage</th>
<th>Packaging</th>
<th>Outbound logistics &amp; sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIMATE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WATER USE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIR QUALITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAND USE CHANGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOIL QUALITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WATER QUALITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIODIVERSITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Nature Squared
Where we are in the learning objectives

- To understand how to **identify natural capital impacts and dependencies** that are **important** to your business,

- Acquire the necessary tools, resources and understanding to **scope your own assessment**,

- To be introduced to the key **practical considerations and steps** to take when undertaking a first natural capital assessment as well as some **tools**

- To understand **materiality assessments** in the context of **impacts and dependencies** and how to undertake them
  - To **introduce valuation** following on from the brief overview provided in module one
Introduction to monetary valuation for scoping an assessment
Concrete steps to undertaking a 1st natural capital assessment

**Define** your objective (module 1)

**Identify** your impacts and/or dependencies

**Scope** your assessment
- Organizational focus; value-chain boundary; value perspective; impacts and or dependencies; type of value

**Practicalities**
- Baseline, scenarios, spatial & temporal boundaries, etc.

**Measure and Value**
- Materiality assessments; identify changes in natural capital; assess trends; select valuation techniques; ecosystem valuation tools
Assessments: Measure & Value

To measure ≠ to value

- Before monetary valuation can occur impacts and/or dependencies must be measured i.e. the amount of change determined, extent and condition in physical terms e.g. m3, tons, number of injuries, number of jobs.

- It is worth noting that we do not detail the complications of measurement within this section i.e. data availability, accuracy and calculations. However, this can be a complex process in its own right.

- This section provides an introduction to monetary valuation so that those considering an assessment may consider whether they want to include this approach as part of their project ambition.

Refer to p.82 of the Natural Capital Protocol
Why is monetary valuation useful and/or contentious?

<table>
<thead>
<tr>
<th>Useful</th>
<th>Contentious</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Common unit of measure</td>
<td>• Not everything can be quantified in monetary terms (e.g. biodiversity)</td>
</tr>
<tr>
<td>• Can measure social preferences</td>
<td>• Can be time consuming/expensive depending on technique or approach used</td>
</tr>
<tr>
<td>• Used to determine overall value for money of a project (i.e. whether it should go ahead or not; do the benefits exceed the costs)</td>
<td>• Need to avoid double counting</td>
</tr>
<tr>
<td>• Can be used to measure risks and mitigate them before these are quantified by others</td>
<td>• Potential reputational impacts</td>
</tr>
</tbody>
</table>

Refer to p.35-38 of the Natural Capital Protocol
Intro to Total Economic Value (TEV)

- **Direct values**: Outputs that can be consumed directly, such as fish, medicines, wild foods, recreation, etc.
- **Indirect values**: Ecological services, such as catchment protection, flood control, carbon sequestration, climatic control, aesthetics, etc.
- **Option values**: The premium placed on maintaining resources and landscapes for future possible direct and indirect uses, some of which may not be known now.
- **Existence, altruistic and bequest values**: The intrinsic value of resources and landscapes, irrespective of their use.

Reflections, total economic value

Individually reflect on what value your business gets from different ecosystem goods or services

- **Direct value**
- **Indirect value**

**Direct value** = Outputs that can be consumed directly, such as fish, medicines, wild foods, recreation etc.

**Indirect value** = Ecological services, such as catchment protection, flood control, carbon sequestration, climatic control, aesthetics, etc.
### Overview of Valuation Approaches and Techniques (type, time and resources)

<table>
<thead>
<tr>
<th>Approach</th>
<th>Description</th>
<th>Time</th>
<th>Budget</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value Transfer</td>
<td>Involves transferring value estimates from existing economic valuation studies to the study site in question, making adjustments where appropriate.</td>
<td>Days</td>
<td>($100s-1000s; low budget)</td>
<td>Valuations from similar studies elsewhere. Data on key variables from different studies (e.g. GDP per person)</td>
</tr>
<tr>
<td>Technique</td>
<td>Description</td>
<td>Time</td>
<td>Budget</td>
<td>Resources</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>------</td>
<td>--------</td>
<td>-----------</td>
</tr>
<tr>
<td>Market Prices</td>
<td>How much it costs to buy an ecosystem good or service, or what it is worth to sell.</td>
<td>Days</td>
<td>($100s-1000s; low budget)</td>
<td>Market price of ecosystem goods or services e.g. timber Costs involved to bring the product to market</td>
</tr>
<tr>
<td>Effect on Production</td>
<td>Relates changes in the output of a marketed good or service to a measurable change in ecosystem goods.</td>
<td>Days</td>
<td>($100s-1000s; low budget)</td>
<td>Data on changes in output of a product Data on cause and effect relationship</td>
</tr>
<tr>
<td>Travel costs</td>
<td>Using the amount of time and money people spend visiting an ecosystem for recreation purposes to elicit a value per visit</td>
<td>Weeks - Months</td>
<td>($10,000s; high budget)</td>
<td>Data on time and money that people spend visiting ecosystems for leisure e.g. nature reserves Motivations for travel</td>
</tr>
<tr>
<td>Hedonic pricing</td>
<td>The difference in property prices or wage rates that can be ascribed to the different ecosystem qualities or values.</td>
<td>Weeks</td>
<td>($1000s-10,000s; medium budget)</td>
<td>Data on differences in property prices or wage rates that can be ascribed to the different ecosystem qualities</td>
</tr>
</tbody>
</table>

Refer to p.84-87 of the Natural Capital Protocol
## Overview of Valuation Techniques (type, time and resources)

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Time</th>
<th>Budget</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost Based Approach</strong></td>
<td>Replacement Costs</td>
<td>The cost of replacing an ecosystem good/service with artificial or man-made products etc., in terms of expenditures saved</td>
<td>Days - Weeks</td>
<td>($100s-1000s; low budget)</td>
</tr>
<tr>
<td></td>
<td>Damage costs avoided</td>
<td>The costs incurred to property, infrastructure, etc. when ecosystem services which protect valuable assets are lost (i.e., expenditures saved).</td>
<td>Weeks</td>
<td>($100s-1000s; low budget)</td>
</tr>
<tr>
<td><strong>Stated Preference Approach</strong></td>
<td>Contingent valuation</td>
<td>Infer ecosystem values by asking people directly what is their willingness to pay (WTP) for them or their willingness to accept (WTA) compensation for their loss saved.</td>
<td>Weeks - Months</td>
<td>($10,000s – 100,000s; high budget)</td>
</tr>
<tr>
<td></td>
<td>Choice experiments</td>
<td>Presents a series of alternative resource or ecosystem use options, each defined by various attributes set at different levels and asks respondents to select which option</td>
<td>Weeks - Months</td>
<td>($10,000 – 100,000s; high budget)</td>
</tr>
</tbody>
</table>

Refer to p.84-87 of the Natural Capital Protocol.
Hypothetical Case Study Examples – which valuation approaches or techniques would you use?

<table>
<thead>
<tr>
<th>Fashion Company</th>
<th>Cement Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Objective</strong>: provide the foundation to implement targeted measures to achieve more environmentally-friendly production and distribution of its products</td>
<td>• <strong>Objective</strong>: calculate the net value generated to society from their externalities to provide the company with a comprehensive view on how to retain, add or reduce value</td>
</tr>
<tr>
<td>• <strong>Material Impacts for Valuation</strong>: Ecosystem quality for raw materials (i.e. water, crops and soil for cotton, wool and leather)</td>
<td>• <strong>Material Impacts for Valuation</strong>: Water use across the entire company and biodiversity lost as a result of company operations</td>
</tr>
<tr>
<td>• <strong>Time</strong>: 3 months</td>
<td>• <strong>Time</strong>: 6 months</td>
</tr>
<tr>
<td>• <strong>Budget</strong>: £10,000</td>
<td>• <strong>Budget</strong>: £50,000</td>
</tr>
<tr>
<td>• <strong>Location</strong>: 1 country of operation</td>
<td>• <strong>Location</strong>: 5 countries of operation</td>
</tr>
<tr>
<td>• <strong>Expertise</strong>: no economist; hiring outside consultancy</td>
<td>• <strong>Expertise</strong>: external consultants and assurance provided</td>
</tr>
</tbody>
</table>
### Hypothetical Case Study Examples – which valuation techniques would you use?

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Data required</th>
<th>Indicative duration</th>
<th>Indicative budget</th>
<th>Skills required</th>
<th>Advantages</th>
<th>Disadvantages (including applicability to components)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Replacement costs</strong></td>
<td>The cost of replacing natural capital with an artificial substitute (product, infrastructure, technology). May be estimated, observed, or modeled.</td>
<td>The cost (at market prices) of replacing natural capital (or equivalent economic assets or services) with non-market services with non-market services equivalent to market services (e.g., reseeding flow regulation of habitat with fish and water quality).</td>
<td>Days - months</td>
<td>$</td>
<td>Basic economics, environmental analysis.</td>
<td>- Identifies surrogate measures of value for regulatory services (which are difficult to value by other means).</td>
<td>- Does not consider social or cultural values or behaviors in the absence of the services.</td>
</tr>
<tr>
<td><strong>Damage costs avoided</strong></td>
<td>The potential costs of property, infrastructure, and production losses due to natural capital degradation, treated as a “saving” or benefit foregone by conserving natural capital. May be estimated, observed, or modeled.</td>
<td>Damage costs incurred to property, infrastructure, or production as a result of damage to natural capital or the loss of associated environmental services.</td>
<td>Weeks</td>
<td>$$</td>
<td>Engineering and biological processes.</td>
<td>- Provides surrogate measures of value for regulatory services that are difficult to value by other means (e.g., storm, flood, and erosion control).</td>
<td>- The approach is largely limited to services related to property, assets, and economic activities.</td>
</tr>
<tr>
<td><strong>Hodgson pricing</strong></td>
<td>Based on the observation that environmental factors are one of the determinants at the market level of certain goods (e.g., the environmental quality of a neighborhood affects the price of properties located therein). This technique models variations in market prices, controlling for other variables to isolate the environmental factor of interest. The extent to which price varies with this factor reveals its value.</td>
<td>Data relating to differences in wholesale prices of goods that can be expressed to be different natural capital assets (e.g., quality of air, water, or soil).</td>
<td>Days - months</td>
<td>$$$</td>
<td>Econometrics.</td>
<td>- A readily transparent and defensible method since price data are market driven. Investment in natural capital enhances the environmental quality of the area.</td>
<td>- Approach is largely limited to costs and benefits related to property or assets.</td>
</tr>
<tr>
<td><strong>Travel costs</strong></td>
<td>Based on the observation that environmental and marketed goods or services are often complementary (i.e., you need to spend money and valuable time to travel to a site where you can enjoy nature). Measured travel and other costs incurred when visiting a natural area for recreation or leisure.</td>
<td>The amount of time and money people spend visiting a site for recreation or leisure purposes, for travel.</td>
<td>Weeks - months</td>
<td>$$$$</td>
<td>Questionnaire design, interview, econometrics.</td>
<td>- Based on actual behavior of people who do rather than a hypothetical stated WTP.</td>
<td>- Reckons are relatively easy to interpret.</td>
</tr>
<tr>
<td><strong>Contingent valuation (CV)</strong></td>
<td>Integrate ecosystem values by asking individuals their maximum willingness to pay (willingness to accept compensation) for a specified change in the relevant non-market good or service from natural capital.</td>
<td>Economic and demographic information on survey respondents.</td>
<td>Weeks - months</td>
<td>$$$</td>
<td>Questionnaire design, interview, econometrics.</td>
<td>- Captures both use and non-use values. - Economically feasible - can be used to estimate the economic value of virtually anything.</td>
<td>- Results are hypothetical in nature and subject to numerous different biases from respondents.</td>
</tr>
<tr>
<td><strong>Choice experiments (CE)</strong></td>
<td>Introduce questions with alternative good/ service with different characteristics (i.e., various attributes of levels, such as distance from the nearest coastal or mountainous area, or the current state of natural capital). They are asked to choose their preferred option from which the value for the relevant non-market good or service from natural capital can be inferred.</td>
<td>As for CV above. An appropriate set of levels is required for key parameters (e.g., price, option, size, and quality of water quality).</td>
<td>Weeks - months</td>
<td>$$$</td>
<td>Questionnaire design, interview, econometrics.</td>
<td>- Captures both use and non-use values. - Economically feasible - can be used to estimate the economic value of virtually anything.</td>
<td>- Results are subject to bias from respondents and are hypothetical in nature.</td>
</tr>
</tbody>
</table>

**Value Transfer**

**Valuation techniques applied to similar studies elsewhere.**

| Value transfer**        | Valuations based on above techniques applied to similar studies elsewhere. A very common starting point for most cases. | Data on key variables from different studies (e.g., GDP per person). | Days - weeks       | $                  | Knowledge of above techniques used in existing studies, and economic analysis if using functions. | - Low cost and rapid method for estimating values. | - Although simple to use, it needs to be applied carefully. |

---

**Refer to p.84-87 of the Natural Capital Protocol**
### Objective:
Implement targeted measures to achieve more environmentally-friendly production and distribution of products

### Other details:
- 3 months, £10,000, 1 country, no economist, hiring outside consultancy

#### Ecosystem quality for raw materials: water
- Cost based approach like replacement cost or benefit transfer approach using contingent valuation
- Days – Weeks; Low Budget

#### Ecosystem quality for raw materials: soil and crops
- Market price approach linked to effect on production
- Days; Low Budget

<table>
<thead>
<tr>
<th></th>
<th>RAW MATERIAL</th>
<th>WET PROCESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIMATE CHANGE</td>
<td></td>
<td>14%</td>
</tr>
<tr>
<td>HUMAN HEALTH</td>
<td></td>
<td>19%</td>
</tr>
<tr>
<td>ECOSYSTEM QUALITY</td>
<td>54%</td>
<td>21%</td>
</tr>
<tr>
<td>WATER WITHDRAWAL</td>
<td>67%</td>
<td>17%</td>
</tr>
</tbody>
</table>
Objective: calculate the net value generated to society from their externalities to provide the company with a comprehensive view on how to retain, add or reduce value

Other details: 6 months, £50,000, 5 countries of operation, external consultants and assurance provided

Water use across the entire company
• Cost based approach like replacement cost or applying shadow prices for water
• Days-Weeks; Low Budget

Biodiversity lost as a result of company operations
• Stated preference approach like contingent valuation
• Alternatively, value transfer using data on fragmented habitats
• Weeks-Months; High Budget
## Ecosystem Monetary Valuation Tools

<table>
<thead>
<tr>
<th>Function</th>
<th>ARIES</th>
<th>TESSA</th>
<th>EVL Tool*</th>
<th>CEV</th>
<th>InVEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying new investments, markets, prices and products</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Managing risks</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Articulating environmental performance and costing environmental impacts</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Tips for Valuation

• Test more than one value (sensitivity testing)
• Report a range
• Convert values to the same time period
• Consider local country context of values
• Understand where the tipping point leads to a change in a decision
• Consider using peer reviewers
Where we are in the learning objectives

To understand how to identify natural capital impacts and dependencies that are important to your business,

Acquire the necessary tools, resources and understanding to scope your own assessment,

To be introduced to the key practical considerations and steps to take when undertaking a first natural capital assessment as well as some tools to help undertake an assessment

To understand materiality assessments in the context of impacts and dependencies and how to undertake them

To introduce valuation following on from the brief overview provided in module one
Wrap-up & next steps
Reflections, scoping your assessment

Individually reflect on the following questions in the context of scoping your own assessment:

- What would the value-chain boundary be?
- Would you assess impacts and/or dependencies?
- Which types of value would you consider?

➔ The bottom line is that although carrying out a natural capital assessment is technical, it’s also achievable.
Mentimeter question

What is your key takeaway or learning point?
How to use Mentimeter

1. Go to www.menti.com
2. Enter this code: Xxxxxx
3. Submit your answer
Eager to get started?

Check out NCC’s interactive training videos

Natural Capital Protocol Training

Through this series of videos you will be asked to take the role of a sustainability or strategy representative and decide where your company should make its next acquisition. It will walk you through the stages of a natural capital assessment, asking the same questions that are relevant to any business decision: why, what, how, and what next.

Whatever your sector, the natural capital approach taken in this example, and the questions it raises, will be relevant to you.

Make use of WVN’s training resources
We are here to help!

- Deep-dive webinars
- In-person training
- Helpdesk calls
- Virtual office hour/Q&A
- Online training
- Train-the-trainer

Keep in touch & sign-up:
https://wevaluenature.eu/

Exchange with peers (Linkedin group):
We Value Nature - Natural Capital uptake support group

Provide your feedback: Survey

We want to learn too – how have we helped?
Disclaimer

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