Exploring the use and application of natural capital tools for valuation

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CIEEM CONFERENCE, AUGUST 2017
Background to presentation

- Introduction to valuation
- Uses of valuation in natural capital decision-making
- General approach to valuing natural capital
- Examples of natural capital valuation tools and resources
- Key issues and challenges
Links between assets, services and final benefits

Natural Capital Committee,
Valuation a key foundational building block for natural capital

Why is valuation important?

- Valuing nature is necessary so that is it no longer ignored in decision making;
- Better to be explicit about the trade-offs and valuations inherent in decisions made;
- Help to prioritise investment in the natural environment and improve value for money for scarce public funds;
- Not all environmental benefits can be monetised. A valuation approach should be part of a holistic assessment of the natural capital impacts of a policy or project.
Decision contexts for valuing natural capital

**Government & local partnerships**

- Policy appraisal (cost-benefit analysis) to inform case for investment in natural capital and benefits and trade-offs of decisions
- Natural Capital Accounts - to “shine a light”:
  - monitoring losses & gains in natural capital over time
  - identifying priority areas for investment
  - informing resourcing and management decisions
  - highlighting links with economic activity and pressures on natural capital

**Business**

- Identify impacts and dependencies on natural capital that can inform management of business risks and opportunities.
- Help corporations to value their environmental assets and to recognise and protect the benefits they get from their natural capital
Application to catchments of valuing and accounting for natural assets

**Drivers/pressures**
Analysis of drivers and pressures will inform and provide context for the natural capital accounts (e.g. on risks to natural capital, degradation) as well as inform potential responses.

**Natural capital accounts**
High level account of key natural assets in catchment
Priority ecosystem services and analysis of values associated with services

**Responses**
Can inform high level response picture
A general approach to valuing natural capital

Qualitative assessment

Understand what Ecosystem Services are provided by natural assets

Quantitative assessment

Measure the change in the provision of Ecosystem Services

Monetary assessment of economic values (market & non-market)

Apply valuation methods (market prices, revealed preference, stated preference, value transfer)

Ecosystem Services Assessment

Input to decision making
Total Economic Value framework helps to inform the types of economic value and valuation methods.
TEV framework can be used to inform valuing natural capital.
Examples of practical natural capital tools and resources for valuation
Natural capital valuation tools:

Valuing social and environmental contribution of woodlands and trees

Source: Forestry Commission Research, Exeter University, 2017
Examples of natural capital valuation models
Applying valuation to investment in natural capital

**Beneficial Impacts**
- Hazard Regulation.
- Recreation.
- Existence value of biodiversity.
- Carbon Sequestration & Storage.
- Increase in juvenile fish.

**Beneficiaries**
- Local communities. People with non-use values. Taxpayers.

**Potential Funders**
- Local and Central Government.
- Environment Agency (flood protection budget).

**Saltmarsh Protection and improvement**
(e.g. managed realignment, tidal exchange)

**Opportunity Costs:**
Loss of agricultural output, but given vulnerability to flooding, this is arguably low.
Applying valuation to natural capital accounting

Table 10: UK woodland ecosystem asset values (2015 prices), 2015

<table>
<thead>
<tr>
<th>Service</th>
<th>2015 (£million)</th>
<th>2015 (£million)</th>
<th>Total Value £m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass for timber</td>
<td>6,582.9</td>
<td>12.3</td>
<td>26.4</td>
</tr>
<tr>
<td>Carbon sequestration</td>
<td>42,857.3</td>
<td>3.4</td>
<td>6.1</td>
</tr>
<tr>
<td>Pollution removal</td>
<td>24,951.3</td>
<td>1.0</td>
<td>1.7</td>
</tr>
<tr>
<td>Time spent at habitat</td>
<td>13,193.2</td>
<td>1.6</td>
<td>3.4</td>
</tr>
<tr>
<td>Total</td>
<td>87,584.7</td>
<td>18.4</td>
<td>35.8</td>
</tr>
</tbody>
</table>

Source: Office for National Statistics

CNCA pilot examining implications of conventional arable management to organic farming under HLS

Developing corporate natural capital accounts [2015], eftec, RSPB, PWC for Natural Capital Committee,
Key issues and challenges for natural capital valuation tools

- Valuation evidence needs to link to underlying science base and the impact pathways need to be clearly specified and quantified.
- Some aspects of natural capital such as the underpinning role of biodiversity are challenging to value and economic valuation not always appropriate – need to look for ways to make visible.
- Recognition that non-monetary valuation, tools and methods have important role to play.
- Role of standardisation, accessible data, making it more affordable to take forward through practical tools.
- Filling key gaps in valuation evidence and tools.
Demystifying economic valuation

- How to communicate economic value evidence
  - Be clear about what’s included in the economic value estimate and what’s not.
  - Engage with decision makers and stakeholders.
  - Be specific about what types of decisions economic value evidence can be used for.
  - Use language everyone can understand
  - Do not aim for a single number that claims to answer all questions
  - Choose the appropriate economic valuation method.
  - Agree the appropriate level of effort.
  - Present economic value evidence as part of the three-stage process, together with qualitative and quantitative assessments of change.