“The Price of Everything and the Value of Nothing”: Is Ecosystem Valuation Worth It?

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Goals

• Review concept of ecosystem services
• Explore reasons for (and against) ecosystem service valuation
• Introduce (or re-introduce) methods for valuation
• Success (and failure) stories
• Lessons learned
Cecil Grahame: What is a cynic?

Lord Darlington: A man who knows the price of everything, and the value of nothing.

[And what did Cecil reply?]

-Oscar Wilde, Lady Windermere’s Fan
What are ecosystem services?

<table>
<thead>
<tr>
<th>Provisioning</th>
<th>Regulating</th>
<th>Cultural</th>
<th>Supporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>Carbon sequestration</td>
<td>Source of inspiration</td>
<td>Soil formation</td>
</tr>
<tr>
<td>Fresh water</td>
<td>Water filtration</td>
<td>Recreational opportunities</td>
<td>Nutrient cycling</td>
</tr>
<tr>
<td>Fiber and fuel</td>
<td>Soil stabilization</td>
<td>Opportunities for learning</td>
<td></td>
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<tr>
<td>Biochemical</td>
<td>Pollination</td>
<td>Sense of place</td>
<td></td>
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<tr>
<td>Genetic material</td>
<td>Flood control</td>
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Adapted from: (Millennium Ecosystem Assessment, 2003)
Service and goods

- Water filtration, nutrient cycling, carbon fixation, nutrient control, flood control, habitat

Impact / Effect

- Improve water quality, regulate global temperature, reduce risk from flooding, preserve species

Benefits to society

- Clean drinking water, recreation, avoided damage cost to property, non-use value, personal safety, increase livelihoods, increased health
Why ecosystem service valuation?

1. Make tradeoffs explicit.

2. Avoid the default value: zero.

3. Change the dialogue.
Ecosystem Structure and Function

Human Actions (Public/Private)

Values

Ecosystem Goods and Services
A Typology of Economic Value

- **Total Economic Value**
  - **Use Value**
    - Direct Use
    - Indirect Use
  - **Non-Use Value**
    - Existence
    - Option / Bequest
Management Success Stories

• What is successful management? Management for whom? What is success? Who judges success, and how is it measured or determined?

• Justifying conservation
• Prioritize areas for conservation
• Identifying impacts of alternative scenarios
• Establishing payment for environmental services
• Developing natural resource damage assessments
Conduct and Disseminate Research

Change Awareness and Understanding

Generate Evaluate Alternative Scenarios

Produce Outcomes

Adapted from: (Ruckelshaus, et al., 2015)
What policy mechanisms are available to protect and promote ecosystem services?

What services are produced by various ecosystems, and how can they be measured?

Who uses and produces ES? What is the spatial relationship between ES supply and consumption?

How can different components of ES be valued? What valuation approaches best capture these components?

Adapted from: (Brauman, Daily, Duarte, & Mooney, 2007)
Lessons for better results

1. Involve stakeholders.
2. Keep it simple.
3. It’s the process, not the outcome.
4. Communicate the results.
5. Clearly report the degree of uncertainty.
Cecil Grahame: What is a cynic?

Lord Darlington: A man who knows the price of everything, and the value of nothing.

Cecil Grahame: And a sentimentalist, my dear Darlington, is a man who sees an absurd value in everything and doesn’t know the market price of any single thing.

-Oscar Wilde, Lady Windermere’s Fan
References


Questions?

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Thanks!