Mainstreaming Ecosystem Services in Policy and Decision Making: Practical Guidance

Susan M. Preston, PhD
Environment and Climate Change Canada
Government of Canada
December 2016
A Community on Ecosystem Services
Susan.Preston@canada.ca
Ecosystem Services Version 2.0: Mainstreaming in Practice

• Since pre-MA much attention to methods and approaches for ES assessment
  – i.e., how to measure, map, interpret, value, analyse, and assess ES

• After 2010/CBD COP10 increasing government commitments globally,
  – e.g. EU commitments for 2020 Biodiversity Goals and Targets; US Presidential Directive October 2015

• ...creating demands for how to move from assessment to implementation in real policy/decision contexts
  – and making key insights from real applications very important, e.g. the Ruckelshaus et. al article
But what does it mean to “mainstream ecosystem services” in decision making?

• Consideration of many things, requiring broadly interdisciplinary information and analytical skills:

• The question is HOW?
Existing government protocols: barriers or opportunities?

• Protocols / procedures are typically standardized
  – e.g. for designating candidate protected areas, regulatory impact analysis statements, framing environmental impact assessments, etc.
  – Entirely new processes would not be feasible for various reasons, e.g. authorization, costs, workload/capacity

• The key is to show analysts and managers how they can incorporate ES considerations, assessments, and/or results into their existing practices
  …and demonstrating the benefits of doing so!
Canada’s *Ecosystem Services Toolkit*: a new technical interdisciplinary guide

- Federal-Provincial-Territorial governments collaboration
  - Mandated by Assistant Deputy Ministers and Deputy Ministers to provide specific practical advice and tools for ES assessment and for integrating into decision processes

- Addresses “mainstreaming” in:
  - Regional Strategic Environmental Assessment & Land Use Planning
  - Environmental Impact Assessment
  - Strategic Environmental Assessment
  - Regulatory and Policy Development
  - Environmental Damages Assessment
  - Establishing and Managing Protected Areas
  - Managing Species and Ecosystems
  - Managing Invasive Alien Species
  - Conservation Incentive Programs
  - Conservation Offsets
Why, when, how to incorporate ES: Justification, Entry points, Examples

• For each policy area:
  – Relevance of ES to analysis and decisions in this policy area
  – **Entry points:**
    • Where/when
    • What/how
  – Examples of how this has been done
  – Other considerations; Selected sources for further information
Entry Points: ES can be factored into analysis and decision processes at multiple stages

...for example (generally):

• Early stages
  – scoping to show all potential connections between the decision and ES

• Data gathering stages
  – adapt to include ES-related information

• Decision support analysis stages
  – integration of ES-related information

• Implementation, mitigation, or compensation stages
  – defining what to optimize to ensure ES are in the field of options
  – condition and trend analysis at decision site could inform performance objectives criteria or requirements for restoration or mitigation
An example: Environmental Impact Assessment

• Project design phase:
  – ES assessment could inform design by proponent to minimize negative impacts to ecosystem structures and processes that underpin ES flows, and will identify ES benefits to proponent

• Environmental Impact Statement (EIS) prep phase:
  – Proponents could be encouraged/required to consider ES in EIS to gov’t, including scoping, baseline data, and anticipated changes to ES resulting from project. ES assessment could become a standard requirement, and gov’t could provide guidelines for consistency.

• Government review phase:
  – Intervenors & proponents increasingly using ES evidence, gov’ts need ability to evaluate, may need to do own assessment
  – Independent ES assessment helps identify cumulative effects of environmental change
• **Decision/mitigation phase:**
  – ES analyses could support mitigation strategies by identifying ecosystem ‘structures and processes’ that society depends on (in combination with conventional environmental analyses)

• **Decision/compensation phase:**
  – ES analyses could inform criteria/measures for proponent/developer to compensate gov’t/society/property owners for unavoidable damages, e.g. monetary penalties or offsets for biodiversity, habitat, or ES

---

**Enabling language** is a key for ‘entry’ into existing protocols
  – e.g. natural capital, nature’s benefits to society, use values and non-use values, ecosystem services, public interest, human well-being, etc.
Another example:
Entry points for Conservation Incentives

- identifying target landscapes
- establishing criteria for behaviour
- identifying specific outcomes
- selecting optimal incentive mechanism
- establishing criteria for monitoring and evaluation of outcomes
- determining the extent of the incentive using performance criteria
- justifying renewed investments based on practices or outcomes
- projecting anticipated outcomes of potential investments
Institutional Strategy for Actioning ES

• Collaboration within and across agencies to develop a strategy for actioning ES could expedite mainstreaming

• A ready-access resource kit could support time-sensitive (aren’t they all!) and cost-effective analyses. It includes:
  – A Toolkit for step-by-step advice and tools to complete ES analyses and assessment (in Canada, the ES Toolkit)
  – A list with the name, area of expertise, and contact info for all potentially relevant subject-matter experts in ES (biophysical, socio-cultural, economic) starting with “front line” contacts in your department or agency
  – A list with the name, content, holder, and access requirements for all potentially relevant data sets (biophysical, socio-cultural, economic) to support ES analyses
Questions?
Toolkit Contents pt. 1

What’s Inside This Toolkit

CHAPTER 1: Foundations

CHAPTER 2: Completing an Ecosystem Service Assessment

CHAPTER 3: Addressing Ecosystem Services in Different Policy and Decision Contexts

Ecosystem Service Assessment in Six Steps:

1. Defining the issue and context
2. Identifying priority ES and beneficiaries for assessment
3. Identifying what needs to be evaluated to answer assessment questions
4. Identifying and using indicators, data sources, and analysis methods
5. Synthesizing results to answer assessment questions
6. Communicating assessment outcomes
Toolkit Contents pt.2

**TOOLS**

- Tab 1: ES Descriptions
- Tab 2: Cross-cutting Issues & Key Considerations
- Tab 3: ES Assessment Involving Indigenous Communities
- Tab 4: Worksheets for Completing ES Assessment
- Tab 5: Indicators of Natural Capital, ES & Benefits from ES
- Tab 6: Values & Valuation: Economic & Socio-cultural
- Tab 7: Compendium of Data Sources, Analysis Methods & Tools
- Tab 8: Answers to Frequently Asked Questions (FAQs)
- Tab 9: Glossary
- Tab 10: Canadian ES Reference List

**Nine Practical Worksheets:**

1. Define the issue and context
2. ES Priority Screening Tool
3. Summarize Screening/Confirm Priority ES
4. Characterize the Priority ES
5. ES Cascade Tool
6. Develop Detailed ES Assessment Plan
7. Select Relevant Indicators to Assess ES
8. Determine Approach to Analysis Methods & Tools
9. Synthesize Analysis Results

**Other features**
- Tip boxes, examples, step overviews, progress tracker, internal and external links, footnotes and complete list of sources cited