

Published on *Marine Ecosystems and Management (MEAM)* (<https://meam.openchannels.org>)

## Are ecosystem services valuations actually being used in policy-making?

Ecosystem services valuation applies an economic value to environmental goods and services. The valuation of a healthy mangrove forest, for example, might calculate the monetary value of the protection it provides against storm surges, or its role as nursery habitat for commercially targeted fish. Such valuations are generally promoted as a way to put the environment on an equal footing as other considerations in policy-making and decision-making. The monetary value of the mangrove forest, for instance, can be compared to the monetary value of a coastal development plan that seeks to chop down the forest.

The literature on ecosystem services valuation is growing rapidly: there are now more than 700 references in the scientific and gray literature. But are these valuation results actually being used in real decision- and policy-making? Raphaël Billé, Biodiversity Programme Director at the Institute for Sustainable Development and International Relations (IDDRI, Paris), recently coordinated a project examining this issue. His team's main finding: there is very little evidence that ecosystem services valuations are finding their way into actual policies.

Billé discusses the findings below. The project results are described in detail in two policy briefs - <http://www.iddri.org/Publications/Valuation-without-action-On-the-use-of-economic-valuations-of-ecosystem-services> and <http://bit.ly/Catskills> (the latter is in French) - and two journal articles. See the full list of project outputs [here](#).

**MEAM: Your project's literature review of hundreds of journal articles on ecosystem services valuation (ESV) found that cases of such valuations being used in actual decision-making are very rare, at least in the literature. Were you surprised by this?**

**Raphaël Billé:** We started our research on whether economic valuations of biodiversity and ecosystem services are actually used for decision-making by looking for specific cases, marine or terrestrial, local or global. Informally, we asked our colleagues if they had a case in mind where they thought an ESV had made a difference. Most of them smiled and said that was a good question. Those most familiar with the current fashion for economic valuation usually came up with a few cases. But these were almost always the same half-dozen.

So we looked into those few cases, and what we found was our first surprise. A typical example: the case that came up most often was New York City paying to protect the Catskills watershed. As the story goes, this was done after an economic valuation showed that it would be cheaper than letting the watershed degrade and building a sophisticated water-treatment plant. There is evidence, however, that the decision was made first, and that an economic valuation was commissioned later to strengthen its legitimacy.

Then we conducted a systematic, quantitative review of peer-reviewed scientific literature - the first of its kind - and we were really stunned by its results. Of the several hundred papers we selected based on a keyword search, a mere 2% described, through a case study, how a specific ESV had played a role in a decision.

**MEAM: In your study, you provide several hypotheses for what is going on. These range from, basically, "ESVs are not being used in policy-making" to "Perhaps they are being used but researchers are not studying that use yet." In your opinion, which of your hypotheses seem the most likely to be true?**

**Billé:** The hypotheses we developed to explain the discrepancy between expectations and available information on the use of ESV are all potentially valid in some cases. Two hypotheses about a potential bias in the selected literature are important for researchers: 1) Use of ESVs may be difficult to observe, and 2) Use may not yet be on the research agenda.

Other hypotheses revolve around the idea that use of ESV falls short of expectations in practice. Four hypotheses in particular pertain to how the use of ESV may be hampered: 1) ESV may contain fundamental inadequacies; 2) The cost of ESVs may restrict their use; 3) Regulatory frameworks may not be conducive to ESV; and 4) ESV, by enhancing transparency, may hamper political strategies that require a certain opacity or ambiguity.

**MEAM: Are you willing to conclude that there simply are not many real-life instances of ESV being a decisive element in decision-making?**

**Billé:** Certainly. What we confirm is that decision-making is hardly ever the result of a calculation. It is a complex socio-political process in which economic valuations may play a role, together with many other considerations.

**MEAM: Along that line, you propose a distinction in the ways in which how ESVs can be used in policy-making. Can you explain?**

**Billé:** Another result of our literature review was to propose three clusters of ESV use:

- "Decisive" use of ESV (for a specific decision): Here ESV, incorporated into a cost-benefit analysis, informs decision-makers on the opportunity of a project/policy and its economic consequences with regard to ecosystem services.
- "Technical" use of ESV: Here ESV is applied after the choice of a policy or project, to adjust the economic instrument that will implement the decision (e.g., a Payment for Ecosystem Services scheme).
- "Informative" use of ESV: Here ESV's influence on decision-making is indirect. It contributes to discussions, progressively modifies viewpoints, or makes some arguments impossible to hold.

While the "decisive use" appears more often in the literature, it may be less important in practice than "informative use". This has several implications:

One, it is more difficult to trace informative use than decisive use. Hence precautions are needed before concluding that ESVs are not used just because their use is not reported.

Two, since we do not need the same ESV for different uses, it is essential that those who commission ESVs know how they want to use them, and demand methodologies

that are in accordance. It is time to have a demand-driven approach to ESV.

Three, if informative use of ESV is the most widespread, this limits both the practical potential of ESVs (e.g., to change the course of key policies, to generate market-based mechanisms) and its risks (e.g., commodification of nature).

**For more information:**

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**Source URL:** <https://meam.openchannels.org/news/meam/are-ecosystem-services-valuations-actually-being-used-policy-making>