

Ecosystem Approach Quick Start Guide #4

Ecosystem Service Values and Valuation

Summary

- A healthy natural environment can provide a range of ecosystem goods and services from which people benefit (see Ecosystem Services Quick Start Guide #2)
- Some of these benefits such as food and timber have a market price and are traded.
- Other benefits, important to human wellbeing, do not have a market value and are not traded. These public benefits are missing in prices and are often missing in decision making – enjoyed for ‘free’.
- These benefits are therefore ‘external’ to the market and are invisible.
- This tends to create an uneven playing field between environmental conservation and market driven uses of the natural environment.
- Economic valuation of changes in ecosystem services, seeks to address this inequality and bring all ecosystem goods and services into decision making.
- Values can be monetary or non-monetary.
- To understand how valuation fits into the ecosystem approach see Quick Start Guide #1 How to adopt an ecosystem approach.

The Total Economic Value Framework

The Total Economic Value (TEV) Framework helps decision makers to consider the full implications of changes in ecosystem services by identifying the different values people place on the environment. These values are illustrated overleaf.

Valuing change

Without nature and the benefits it provides to us, we could not survive. Therefore putting a value on nature globally at \$33 trillion a year (Costanza, 1997) has led to criticism that this is ‘a significant underestimate of infinity’ (Toman 1998).

But, economic theory does allow us to value *changes* in the provision of ecosystem services – ‘marginal valuation’. These values express the additional welfare that we gain from an improvement in ecosystem services. Valuation can be both monetary and non-monetary. Valuation of benefits can enable decision makers to:

- place values on changes in services that are not captured in markets
- understand the contribution that an ecosystem makes to an area
- determine whether an intervention is justified and what are the losses or gains in the ecosystem service benefits
- determine the winners and losers in the ecosystem service benefits
- justify investment in managing the ecosystems to restore or enhance ecosystem services.

The [MEBIE review](#) provides useful information on economic evidence for a number of ecosystem services.

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Forms of value in the Total Economic Value Framework

Use values

- Wood for timber, pulp and fuel (extractive use)
- Place to visit, have a picnic (non-extractive use)

Indirect Use values

- Ecological processes that give rise to ecosystem services and benefits. For example, prevent loss of soil, nutrients, reduce flooding and improve water quality.

A tree in a park



Non-use values

- Altruistic values knowing others can enjoy the tree.
- Bequest values knowing that the tree will be there for future generations.
- Existence values knowing the tree and the services continue to exist.

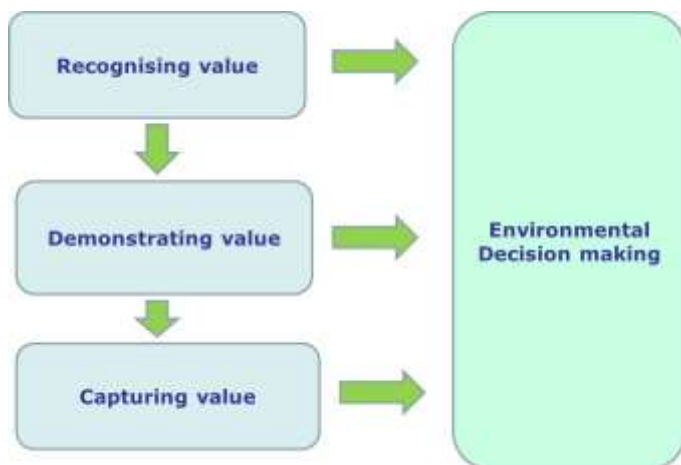
Option values

- The tree is preserved for some form of use in the future.

Values are not just about money

[The Economics of Ecosystems and Biodiversity report \(TEEB\)](#) identifies values into three tiers. This can be a helpful way of thinking about appropriate valuation when working in partnerships. The three tiers are:

The three TEEB tiers



1. Recognising value. This is where people acknowledge and express their values for a place or the ecosystem services without putting monetary values on it. They can be expressed verbally or as a narrative. These values can sometimes be sufficient to ensure conservation and sustainable use.

2. Demonstrating value involves using economic tools such as TEV and Cost Benefit Analysis to assess the value of ecosystem service changes and tend to be presented in monetary form or in the form of ratios over a given time period. For example, £1 invested in management will result in £4 worth of benefit over 25 years. No actual money has changed hands. Demonstrating economic value needs to follow best practice guidance.

3. Capturing value incorporates the values of ecosystems into decision making through regulation, and incentives and price signals – market based solutions. This includes [payments for ecosystem services](#) (PES), reforming harmful subsidies, introducing tax breaks for conservation or creating new markets for sustainable goods.

In reality a partnership may only consider one tier in their valuation work or may consider all three. It is worth reiterating though that non-monetary values and those expressed verbally or through a narrative can be extremely useful in informing decision making. Valuation is not the decision in itself, but information to inform the decision making process.

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