



Valuing Ecological Goods and Services

Agricultural producers and other landowners supply ecological goods and services (EGS) that all society enjoys. But they may do so at an economic loss. Since market forces sometimes reward producers who convert their land to traditional agricultural production, protecting natural capital necessitates determining the market value of EGS.

As the beneficiary of EGS, society should be responsible for fairly compensating producers for the benefits they provide. Society cannot reasonably expect agriculture producers and other landowners to continue producing public EGS without an economic benefit. This payment can occur through formal incentive programs or regulations, or through government subsidies to private sector producers. Incentives are not the only techniques for influencing land use change. Taxation, program and policy changes can also assist in the adoption of EGS-friendly practices.

In general, determining the market value of EGS is useful to:

- Establish the value of “non-market” EGS relative to other market goods, and provide an economic basis for decisions connected with ecosystem stewardship;
- Establish appropriate incentives.

Unfortunately, establishing value for EGS is complicated by several factors, including changes in availability of the good or service over time, consumer uncertainty regarding the benefits they will derive from purchasing EGS, and the impacts of present consumption on future availability of EGS.

Economists have utilized a variety of methods to place a value on non-market EGS. The key underlying concepts they’ve employed are based on determining what society would be willing and able to pay, or what it would be willing to accept to forego the service (see list in the Valuation Methods box to the right).

Each of these methods has inherent strengths and weaknesses, and may misrepresent the value of a given good or service. The establishment of price or exchange value is an essential step to including EGS in the market price of traditional commodities.



Source: AAFC-PFRA

Valuation Methods

Market Price Method

Estimates economic values for ecosystem products or services that are bought and sold in commercial markets.

Productivity Method

Estimates economic values for ecosystem products or services that contribute to the production of commercially marketed goods.

Damage Cost Avoided, Replacement Cost and Substitute Cost Methods

Estimates economic values based on costs of avoided damages resulting from lost ecosystem services, costs of replacing ecosystem services, or costs of providing substitute services.

Travel Cost Method

Estimates economic values associated with ecosystems or sites that are used for recreation. Assumes that the value of a site is reflected in how much people are willing to pay to travel to visit the site.

Contingent Valuation Method

Estimates economic values for virtually any ecosystem or environmental service. The most widely used method for estimating non-use, or “passive use” values. People are asked to directly state their willingness to pay for specific environmental services, based on a hypothetical scenario.

Contingent Choice Method

Estimates economic values for virtually any ecosystem or environmental service. Based on asking people to make tradeoffs among sets of ecosystem or environmental services or characteristics. Does not directly ask for willingness to pay—this is inferred from tradeoffs that include cost as an attribute.

While it is important to establish the value of non-market EGS, it is critical that decision-makers act on the knowledge that “zero is the incorrect price” and concentrate on trying to improve and implement policies that recognize the significant economic value of EGS.