prairie habitat
joint venture

Market Failure and Ecological Goods and Services

Market failure refers to the inability of markets to reflect the full social costs or benefits of a good or service. As a consequence, markets do not result in the most efficient or beneficial allocation of resources.

The absence of natural capital – the basis for ecological goods and services (EGS) – in estimates of wealth is a form of market failure. In these estimates, neither the negative nor positive externalities of commodity production and growth are included in the price of market goods such as food, fuel, and housing.

An externality occurs when an activity or transaction causes an unintended loss or gain in welfare to another party with no compensation taking place for the change in welfare.

Negative externalities, such as pollution, have been recognized by the public as a problem and tend to be addressed through environmental laws and regulations.

Positive externalities, such as the provision of wildlife habitat, are not widely recognized, nor rewarded, on a broad-scale basis.

Producers and other landowners who provide positive externalities often receive no financial benefit. For example, landowners on the Canadian prairies seldom receive an economic gain for retaining wetlands, which provide essential services such as flood control, water purification and wildlife habitat. The EGS themselves are externalities and are not factored into the price of agricultural commodities and other goods the landscape provides. Many producers convert natural capital such as wetlands to produce goods that are more profitable in the current market system.

In order to protect natural capital and therefore increase the provision of EGS, instruments must be developed to link demand (willingness to pay) with supply (willingness to provide).

If the market failures caused by externalities are not somehow corrected, the production of many EGS (and the associated natural capital such as wetlands and native uplands) can be expected to decline.

Source: Allen Tyrchniewicz

Main Causes of Market Failures

Missing Markets
EGS are externalities because they are unintentional by-products of other (usually agricultural) production decisions and the values they provide are not reflected in the price of the products. The producer has no market incentive/signal to produce EGS. Yet society gets EGS for free and has no impetus to pay for it.

Property Rights
Private producers cannot readily package and sell EGS like other commodities and services, since they are not transferable or excludable (the benefits received from the EGS are not limited to the producer's property and the producer can limit the use of the benefits). EGS are under-supplied because the producer has no ready means to control and negotiate transfer of the EGS produced on their land.

Incomplete Information
Producers and consumers of EGS often lack adequate information about the social, economic and environmental impacts of their production and consumption decisions. For example, they may fail to recognize the cumulative effects of relatively small incremental changes to an ecosystem. Similarly, their capacity to measure the value of EGS is constrained by a limited scientific understanding of the ecological functioning of ecosystems.

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