Bringing the ecosystem services concept into forestry

Practical barriers may be hampering the application of an ecosystem services approach to forests. A new analysis has outlined three strategies to overcome these barriers: fostering private markets, managing public land and raising awareness of ecosystem services.

Forests provide a number of ecosystem services that support human wellbeing, for example, timber production, wildlife habitat, water quantity and quality, air quality, soil protection, carbon storage and recreation. Applying the concept of ecosystem services can help to both protect forests and benefit humans. The study analysed three main strategies for doing this:

Fostering private markets and payment for ecosystem services. This works by placing an economic value on the ecosystem services of privately-owned forests. There are several ways this can be achieved. Government agencies or conservation organisations can pay landowners to retain their land as forest rather than convert it to pasture or urban development. Another option is to provide compensation to landowners for managing the forest in environmentally-friendly ways, such as planting buffer strips around streams to support biodiversity.

The value of forest products such as timber, mushrooms and berries, could also be increased, perhaps through environmental certification schemes. Finally, projects to protect forest ecosystem services could be set up with the financial support of carbon trading schemes where CO₂ emissions are offset through the creation of projects that lessen the impact of fossil fuels.

Managing public land and providing common ecosystem services. It is more difficult to involve forest ecosystem services on publicly owned or common land in an economic exchange. Due to the multiple stakeholders and multiple benefits derived from the services it can be difficult to decide on who should pay and which system to use, but this depends on the context and the management. In some cases it may be best to locate vulnerable ecosystem services so they can be overseen by designating them as protected areas or species and communicating their value to the public who use these forests for recreation or other purposes.

Raising awareness of ecosystem services. Increased public awareness of forest ecosystem services can lead to better funding and policy support. This can be achieved through understanding and improving accounting methods, such as ecological footprints and carbon calculators, which can also feed into decision making. Another way to raise awareness is through the valuation of ecosystem services. A number of tools have been designed to do this for forests, such as UFORE (the Urban Forest Effects Model)¹, in the USA, that raises awareness of the benefits of urban forests and street tree networks.

To ensure the concept of ecosystem services is used to protect forests, suitable indicators of success are needed. It is possible that revenue from ecosystem services could grow whilst actual services are declining. Care must be taken to align both of these objectives and measure their success.

¹ See: [www.ufore.org](http://www.ufore.org)


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