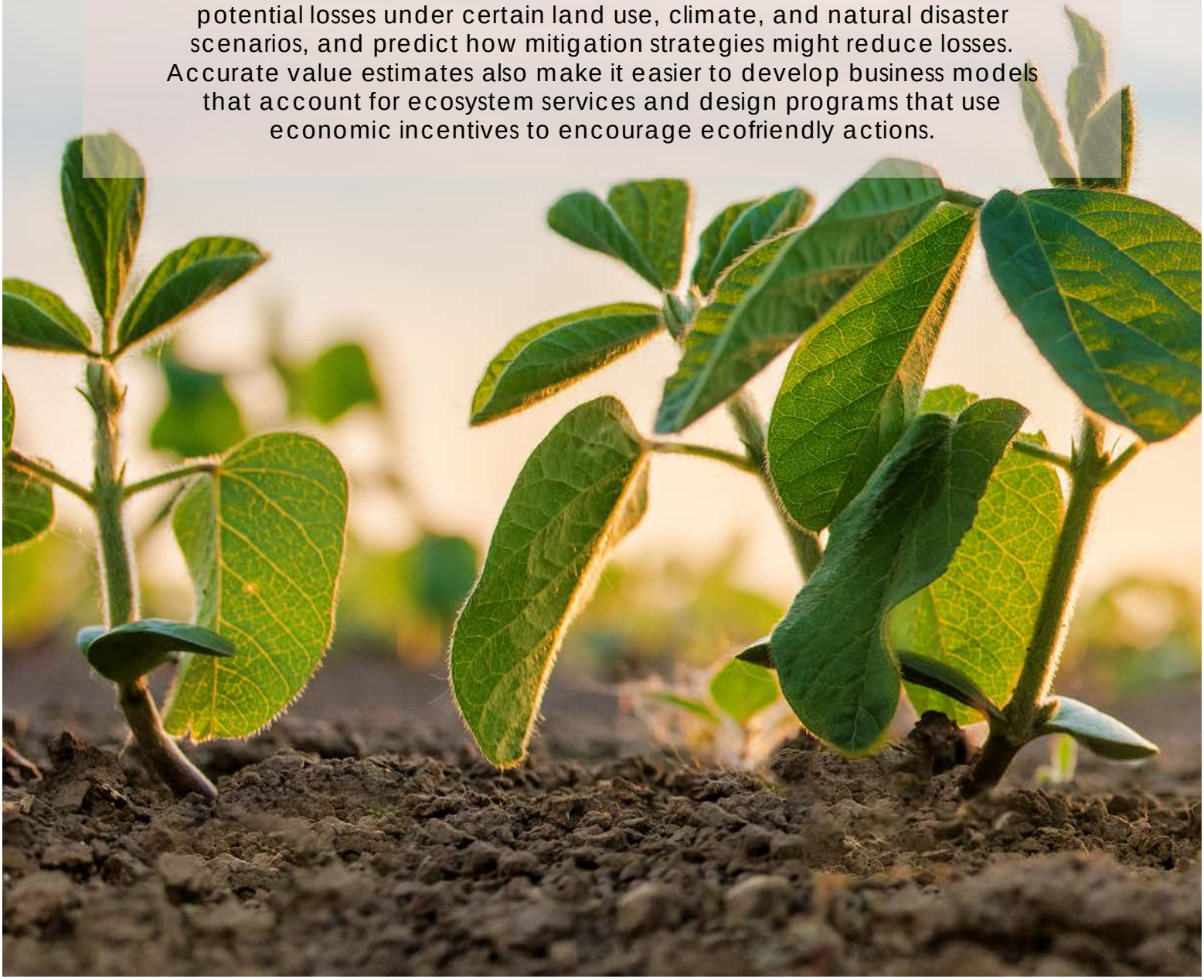
THE ECONOMIC VALUE OF ECOSYSTEM SERVICES

In addition to resources, such as timber, food, oil, and minerals, ecosystems provide goods and services like fresh air, clean water, biodiversity, open space, and recreation, which are harder to assign monetary value. Land managers and policymakers need to know the value of these goods and services so they can make decisions that balance economic growth, environmental quality, resource use, and conservation.

Researchers at land-grant universities across the U.S. are using new and improved methods to measure the economic value of ecosystem goods and services. With this information, government agencies, nonprofit organizations, land managers, and private landowners are able to weigh the costs and benefits of different management options, estimate potential losses under certain land use, climate, and natural disaster scenarios, and predict how mitigation strategies might reduce losses. Accurate value estimates also make it easier to develop business models that account for ecosystem services and design programs that use economic incentives to encourage ecofriendly actions.

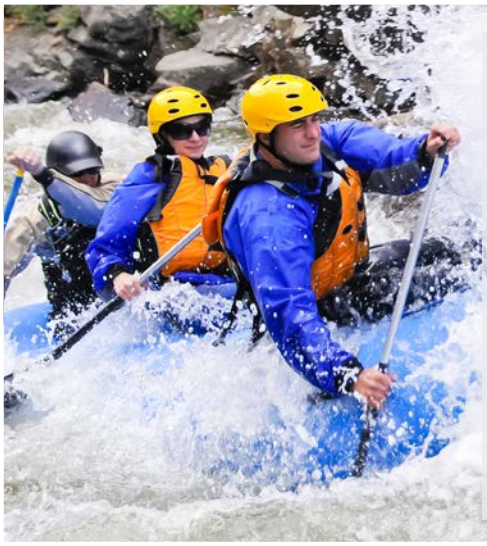


Researchers:

- estimated the value of biodiversity's contributions to carbon storage and pest control
- created tools to help farmers assess the economic risk of practices and equipment that reduce runoff
- surveyed willingness to pay for farmers to use practices that enhance ecosystem services
- found that reading about potential future scenarios makes people more willing to engage in land use planning

In recent years, members of this group:

- measured shoreline property owners' and boaters' willingness to pay to prevent invasive species in Wisconsin lakes
- measured consumers' willingness to pay more for oysters to account for ecosystem services they provide
- analyzed the costs and benefits of coastal restoration methods in Louisiana, recycling fracking wastewater in South Dakota, and selling water from plentiful rural sources to undersupplied urban areas in the western U.S.
- determined the 2010 Deepwater Horizon Oil Spill caused about $700 million in recreational damage

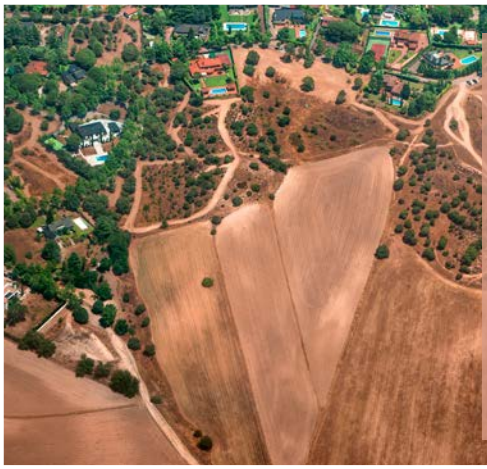


Scientists and economists:

- measured the value of fish stocking on public and private lands, public access to hunting areas, and agrotourism and whitewater boating in Colorado
- are tracing the impacts of water quality on visits to and recreation on Iowa lakes
- found that better water quality in the Narrangansett Bay boosts the sale prices of surrounding housing
- quantified the economic benefits that Utah households and visitors experience from better water quality, helping communities decide how much to clean up certain bodies of water

Recent studies:

- examined how wildfire size, fuel type, and distance affect smoke-related hospital visits and costs
- measured residents' willingness to pay for homeowner versus community fire risk reductions and showed how land use planning can reduce wildfire suppression costs



Newly developed models and studies:

- predict how land use and climate change will affect rural migration and population growth
- demonstrate the effects of sprawl and fragmented landscapes on availability and cost of public services in rural areas
- assessed the public and private costs and benefits of reforestation in Appalachia
- showed how to mitigate the harm protected areas have on local people who forage and hunt for food

Multistate Research Fund
IMPACTS

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