

# News Release



## New Studies Show How Valuing Nature is Transforming Decisions

### New PNAS Special Feature shows impact of factoring nature into decisions

In the decade since publication of the landmark U.N. Millennium Ecosystem Assessment, scientists, policymakers, nonprofit organizations, and corporations have worked together to incorporate the value of nature in economic and social development plans.

A new series of papers highlights striking accomplishments of these partnerships and shows how the science and practice of ecosystem services - the benefits nature provides - has matured.

The papers will be published today as a special feature, "[Nature as Capital](#)," in the *Proceedings of the National Academy of Sciences*. Many of the authors work in collaboration with The Natural Capital Project, a joint initiative of The Nature Conservancy, the Stanford Woods Institute for the Environment, the University of Minnesota Institute on the Environment, and World Wildlife Fund. The Special Feature was led and edited by University of Minnesota economist Steve Polasky and Oregon State University ecologist Jane Lubchenco.

"Valuing nature means understanding the myriad ways in which our communities, health and economies depend on ecosystems," Lubchenco said. "There is now broad appreciation of nature's values and we are learning how to incorporate that knowledge into policy and management decisions by governments, financial institutions, and businesses. In ten years, we've gone from very little specific understanding to powerful examples where working with nature is benefitting people now and in the future."

The studies present a sophisticated and useful vision of ecosystem services that highlights how measuring and mapping even the most basic benefits of nature can help us make better choices and keep those benefits intact.

For example, advances in computer science, hydrology, ecology and other fields make it possible to identify how vegetation in a particular watershed contributes to downstream water quality. It's also possible to map an investment strategy to achieve goals such as erosion control, increased carbon sequestration, and harvesting of forest products.

Some examples from the special feature:

- China is in a period of intense policy innovation to achieve sustainable development by harmonizing economic development with nature, and transforming itself into the "ecological civilization of the 21st century." A major new policy involves zoning the country to protect and restore the most vital natural capital assets-spanning 28% of the nation's land area, and likely to increase soon to 49%-which are crucial contributors to flood mitigation, sandstorm control, water resources, soil fertility, climate stability, and biodiversity. China is paying over 200 million people to perform restoration and conservation activities to achieve this dream and to secure human well-being.
- The government of Belize used natural capital information to craft an integrated coastal management plan that protects key habitats like mangroves, seagrasses, and corals, which protect the shoreline and sustain fisheries. The plan improves expected coastal protection by 25% over a previous version, more than doubles revenue from lobster fishing, and allows for careful development and increasing tourism revenues.

- In a rare empirical demonstration of human health benefits of nature, areas under strict environmental protection in the Brazilian Amazon show reduced incidence of malaria, acute respiratory infection, and diarrhea.
- The U.S. government is incorporating knowledge of ecosystem services and natural capital to use tax-payer dollars more wisely and achieve both economic and environmental benefits.

"We have succeeded in raising awareness of nature's benefits, and that economic systems often fail to reward stewardship of natural capital necessary for long-term well-being," said Polasky. "We've seen some impressive successes as leaders begin to use the science of ecosystem services to make decisions with better outcomes for people and the planet. The next steps are to learn from these successes, to reform institutions so that we provide incentives for the stewardship of natural capital, and encourage widespread adoption of these ideas."

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#### *About The Natural Capital Project:*

At The Natural Capital Project, we envision a world in which people, governments, and other institutions recognize the values of nature embodied in Earth's lands, waters, and biodiversity in supporting human well-being, and routinely incorporate these values into decision-making.

To get there, we develop simple, use-driven approaches to valuing nature, work closely with decision makers, and provide free, open source ecosystem service software tools to a broad community of users. We work with leaders around the world to test and demonstrate how accounting for nature's benefits can support more sustainable investment and policy decisions.

More information is available at [naturalcapitalproject.org](http://naturalcapitalproject.org). Photos can be accessed through this link: <https://www.flickr.com/photos/95796114@N03/sets/72157654059391208>

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