

**Review: *Nature's Services: Societal Dependence on Natural Ecosystems***

By Gretchen C. Daily

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Daily, Gretchen C. *Nature's Services: Societal Dependence on Natural Ecosystems*. Washington, DC: Island Press, 1997. 392 p. US\$24.95 paper ISBN: 1-55963-475-8. Recycled, acid-free paper.

Recently, I commented on the response made by the New Jersey chapter of a national conservation group to a state forestry plan. Fortunately, I had just finished reading *Nature's Services* and had a broadened understanding of the value of natural ecosystems to our state, and human society in general. Edited by Gretchen Daily, the Bing Interdisciplinary Research Scientist in the Department of Biological Sciences at Stanford University, *Nature's Services* includes 20 chapters by well-known scientists on a range of topics organized around the theme of the value of services provided by natural ecosystems to humanity.

Understandably, and usefully, contributors to *Nature's Services* make economic arguments for conservation and tend to downplay moral and aesthetic arguments. In general, the value of ecosystems can be divided into consumptive and nonconsumptive uses. For example, consumptive uses for forests include logging and hunting; nonconsumptive uses include bird watching, appreciation of the existence of an ecosystem, flood control, and soil conservation. While consumptive uses can be valued directly based on market prices, it is harder to assign value to nonconsumptive uses. It is difficult to present nonconsumptive uses objectively in arguments about conservation of ecosystems.

It is this difficulty that led to the contributors' "lament [of] the near total lack of public appreciation of societal dependence upon natural ecosystems (p. xv)." Given this, I was surprised that *Nature's Services* misses the mark, though not too widely, in its self-stated goal "...to characterize the ways in which earth's natural ecosystems confer benefits on humanity, to make a preliminary assessment of their value, and to report this in a manner widely accessible to an educated audience (p. 2)" Although the first two goals are admirably addressed, they are

written for a scientifically literate audience. Given the author's lament, a less technical, though scientifically rigorous, coffee-table style book might more effectively influence policy by reaching a larger audience.

Overall, Nature's Services raised an important question. Can life on earth truly be valued in dollars? At the extreme perspectives on this question, if one believes that the earth and its inhabitants are God's creation, then we should be shamed and embarrassed into protecting all forms of "Creation." On the other hand, if one believes in a Darwinian origin of life and the interconnectedness of the global ecosystem, we should be terrified of upsetting the delicate balance that allowed life to evolve and to continue to survive on earth (and, as far as we know, no where else in the universe).

A third perspective, capitalism, holds that the economic value of nature is paramount, regardless of its origin. For those of us who believe in the need to conserve ecosystems regardless of their (consumptive) services to humanity, our challenge is clear, we must present cogent economic arguments for conservation of ecosystems. It is the economic valuation that will convince policy makers and business leaders, and the one that needs to be made by conservationists, all of whom should read this informative volume to help form their arguments.

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