NATURAL CAPITAL RESOURCES

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Framing the Issue

Forests, wetlands, savannah, coral reefs and other natural ecosystems generate products like wood, fish, hide, and fibers, but also provide important services. Wetlands, for example, recharge groundwater, limit pollution into rivers and seas, lessen storm impacts on land, and are breeding grounds for fish, mollusks, and crustaceans consumed by people. Forests sequester carbon that otherwise would warm the Earth: No growth is "green" if it degrades these ecosystem functions.

Some economists consider natural ecosystems to be economic "capital"—durable goods that are used in the manufacture of products or services but not used up by production. Such "natural capital" is different from what is usually meant by economic capital because it is not man-made and it will not depreciate if its inherent regenerating capacity is uncompromised.

Natural capital is also different because the goods and services provided may be freely available rather than dedicated to the production of particular enterprises. Marine fish have been available to whoever could catch them, and groundwater recharge by a wetland may benefit distant populations and not the owner who drains the swamp for agriculture. The opportunities for tragedy of the commons and distorted markets pose a central question for policy on natural capital. Can the value of ecosystem goods and services be fully integrated into the economic planning of governments and the business plans of private enterprise?

Policy Considerations

Natural capital is currently more a concept for governments, development agencies, academics, and civil society than a mainstream element of economics or business. That ecosystems provide valuable goods and services is not in dispute, and various international initiatives include them in national asset measures. The World Bank determines national wealth based on ecology, education, and resource depletion as well as economics. The U.N. developed a system for comparing national environmental and economic statistics, the System of Environmental-Economic Accounts (SEEA) that builds on the System of National Accounts (SNA), an internationally agreed standard set of recommendations on how to compile measures of economic activity. The World Bank is currently advancing a partnership it calls "Wealth Accounting and Valuation of Ecosystem Services" or WAVES, and an entire new field of research has developed to elucidate the value of ecosystem services. These and private group initiatives, such as the "Natural Capital Declaration" are part of the discussion running up to the Rio+20 meeting.

However, the usual approach for conserving natural ecosystems has been regulation and land purchase through programs whose mandates do not include integrated economic planning. Most national environmental statutes were propelled by high-profile concerns over pollution (e.g. clean water, clean air), loss of biodiversity (e.g. endangered species protection), and general environmental quality (e.g. environmental impact assessments). The same can be said for multilateral conventions for climate change, biodiversity, endangered species, and waste shipments. Economic assessment and devices for economic efficiency are increasingly features of environmental regulation, such as tradable pollution rights, but these features are ancillary to the policies of the underlying enabling regimes.

Moreover, economic and business performance is not generally measured with reference to natural capital except when it is an auditable institutional asset or liability. Recent government actions to address fiscal crises, for example, paid little attention to the environment, treating its protection more as an impediment than a path to economic recovery. Commercial enterprises remain cemented to conventional measures of profit and loss. Indeed, investors in publicly traded companies are legally entitled to management that maximizes their returns. Businesses have made significant investments in environmental and social responsibility, but most business leaders in private would acknowledge that profit is the ultimate measure of success and of their own tenure.

Recommendations for Rio+20

The Rio+20 participant nations should mandate consideration of natural capital in national wealth accounting and economic planning. Implementation of SEEA is particularly significant because it has been approved by the U.N. for global use.

Those implementing the Rio+20 mandate should focus on the issues that lead international development advocates and mainstream economists and business-people disagree on, including:

- How might measures of natural capital be *integrated* into customary analyses and actions on monetary and fiscal policy, or rapid responses to recession or inflation?
- Can natural capital be addressed in business financial statements other than as currently addressed as auditable assets or liabilities of the enterprise, and can accounting standards be modified for this purpose?
- What would investors accept, and what are businesses required by law to seek?
- How does regulation, as a means to conserve natural capital, stand in the context of "green growth" and interests in non-regulatory integration into economic planning?