

Valuation of Environmental Services: Redefining 'Green' not 'Growth'

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ABSTRACT

Economic valuation of nature is not new. In fact, it has been a companion of capital accumulation for centuries. Yet, despite the long history of valuing select portions of nature economically, there seems to be a new quality to current approaches. Green accounting does this by supporting the notion that with the right kind of accounting and market-based instruments for environmental protection, economic exploitation will automatically better price in the value of nature. Such economic visibility would hence lead corporations to recognize the value of nature's capital stock. As a result, nature would be protected and growth would become "green". This paper will address why is economic valuation of "ecosystem services" needed, for example, if penalties or levels of remuneration e.g. in payment for environmental services programs are not based on the numbers calculated for ecosystem services, even where such numbers exist?By challenging some of the most commonly presented arguments in the debate, the paper builds a solid foundation for the argument that economic valuation will first and foremost help put a price on nature's destruction rather than contribute to nature's value being respected.

Introduction

Conventional approaches to environmental protection that focus on those parts of nature considered particularly rich in biodiversity or that set limits for particularly polluting or hazardous substances have run up against this dilemma, too: On the one hand, calls have been increasing that "old-style environmental protection is not working" because biodiversity is still being lost at a rate now approaching that of mass extinction. On the other hand, corporations and planners have been lobbying for more "flexibility" to the environmental regulatory framework that has been in place since Rachel Carson's book "Silent Spring" in the 1960s. Their business model is built on unrestricted access to minerals and land increasingly left only in those places that have been put off-limits under existing environmental legislation.

A key moment in the search for ways to resolve this impasse was the 2012 United Nations Conference on Sustainable Development, or Rio+20. In the lead-up to Rio+20, two initiatives – the Millennium Ecosystem Assessment (MEA) and The Economics of Ecosystems and Biodiversity (TEEB)II- helped pave the way for the "green economy" to emerge as the dominant policy approach to supposedly achieve both environmental protection and economic growth. These two initiatives helped frame the "green economy" as a flexible policy toolkit based on environmental regulation that sets national and/or international limits on resource extraction and pollution and relies for implementation of these legal limits on market-based and financial instruments rather than "old-fashioned command-and-control" measures. In the "green economy" approach to

environmental regulation, legal limits can be exceeded in any one location by compensating the excess pollution or destruction with additional investments in conservation or nature restoration elsewhere.

The "green economy" discourse also proves appealing to those looking to "green the GDP". A raft of initiatives now promotes inclusion of nature's wealth into national economic accounts. Two initiatives in particular, the World Bank's WAVES and the Natural Capital Declaration III link "natural wealth accounting" with the financial sector interest in creating new financial assets. For private banks and international agencies like the World Bank, the "green economy" discourse opens new possibilities for exploring how to integrate what they describe as "natural capital" into capital markets. Such integration, they hope, will create new financial assets and stimulate additional economic growth through trading of new financial products based on the novel nature assets.

Nature thus plays an important role for many that have gathered behind the promise of a "green economy". Those promoting it say that by ending "the invisibility of nature", a "green economy" will be more effective in protecting biodiversity than conventional environmental regulation.

Economic Valuation of Nature:

In recent times, various payments for environmental services (PES) programs have been using some form of economic valuation already. Yet there is something new about current approaches to the economic valuation of nature. This section will take a cursory look at previous stages of economic valuation and explore how these paved the way for the economic valuation of ecosystem services that characterizes present initiatives.

Different disciplines have been relied upon at different times to enable economic valuation of successive parts of nature. Such valuation always involved re-defining what "nature" is. Each such re-definition made a different set of the human and non-human relationships that create nature visible while others were made invisible by excluding them from the definition. Disciplines that played a key role in achieving economic visibility of nature at earlier times include western cartography and botanical classification. Western cartography made particular tracts of land visible, clearly identifiable, measurable in standardized units and thus tradable. Botanical classification laid the foundation for some tree species becoming abstracted from their complex relationships with the nature that had created them. It made them clearly identifiable and measurable in units of merchantable timber. Certain tree species thus became an economically valuable "natural resource" while others were not given such economic visibility.

Re-defining "green", not "growth"

Some advocates of economic valuation insist that economic valuation does not automatically lead to pricing and trading. However, for many proponents, price discovery through market transactions is an important objective of economic valuation. They argue that such price discovery mechanisms help efficient allocation of scarce resources. They claim that environmental legislation that limits the use of a particular "ecosystem service" and that allows market-based instruments for implementing the limit is the way to create such scarcity and at the same time establish a market in tradable units of the restricted substance or ecosystem service. The Kyoto Protocol and the EU Emissions Trading Scheme provided such limits for greenhouse gas emissions; the US Clean Air Act limited sulfur dioxide emissions and allowed trade in pollution

rights to achieve the mandated reductions; the 1972 US Clean Water Act and amendments in 1997 restrict filling up of wetlands while allowing continued destruction as long as compensation credits are bought and the destruction can be shown to have been compensated with improved wetland functionality elsewhere. By 1993 the transferable "wetland credit", backed up by physical wetland restoration or creation, had become common enough for the Chicago Board of Trade to allow the trading of such credits on the exchange.⁴ The EU is contemplating the use of market-based "no-net-loss" instruments to achieve its 2020 target of halting biodiversity loss after the previous target to halt biodiversity loss by 2010 through the existing set of environmental regulations had been missed.

In all of these instances, the assumption has been that existing regulation or non-market approaches had failed. The possibility that such market-based instruments are introduced precisely because the existing environmental regulation has been effective has rarely been considered. The far more plausible explanation for continued pollution or loss of biological diversity, however, is that existing environmental legislation is effective but not sufficient to halt destruction. Another common experience with these markets so far is that it has proven impossible to establish limits that would make the ecosystem service in question so expensive that unit prices would approach the level that challenges the actual core industrial business model. In the case of greenhouse gas emission trading schemes for example, the price level said to be required for permit prices to act as a "signal" for large energy users to make the sort of investments that are required to avoid runaway climate change is orders of magnitude higher than current carbon market prices, and even an order of magnitude higher than the €30 – €40 that carbon permits fetched at the height of the carbon market in 2008. Today, average prices in the EU Emissions Trading Scheme are around €7, and similar levels can be found in other regional carbon markets.

Economic valuation techniques are in the process of re-defining the previous conception of nature as a complex web of inter-related and ever-changing relationships into an image of nature as a provider of measurable services. Institutional changes are currently introducing commercial principles such as efficiency, methods such as accounting and cost-benefit assessment and the objective of profit maximization into environmental governance and resource management practices. In parallel, the economic value that has been attached to ecosystems is used as the basis for creating tradable instruments, such as carbon or biodiversity credits. These are then marketed as compensation credits and offsets. The units – or rather, the placeholders that represent the units – have become a bearer of economic value; they can now be banked, or traded for profit or for compliance with environmental legislation. *The "green economy" promise thus leads to a re-definition not of "growth" but of "green".*

Conclusion

Whether economic valuation of nature is seen as an opportunity to seize or a threat to oppose depends on what we consider a cause and what a symptom of current ecological crises, on motivations and values, and on the kinds of societies and economies we wish to construct. Do we really want to take away the sacred and mysterious and replace it with measurable service units that are swapped on trading screens and pretend the two are the same? Or is it our responsibility

towards future generations to resist the temptation of protecting nature by adopting the language and concepts of economists and corporations?

It seems more important than ever that, acknowledging that failures, obstacles and resistance will be certain, we must insist on reinserting the political into the environmental discourse. The alternative to economic valuation of nature is to talk about why nature is made invisible in our current economic system, and why it is so appealing to politicians and corporate leaders to re-define nature, not economy: The alternative is to talk about power and privilege, about injustice and ecological debt; to insist that the moment is long overdue to re-define "economy" so as to fit in with nature instead of retreating into an accountant's debate about where one unit of ecosystem service ends and the other begins and which ones can be destroyed because they are being re-created somewhere else.

That does not mean that money is never a useful incentive for protecting nature, or that there is no justification for paying those who guard rather than destroy nature. The point is that no accounting of ecosystem service units is needed to employ financial incentives to protect nature. The shortcomings of such incentives may certainly be addressed and their functioning improved. But they have shown that they can work because they have made it increasingly difficult for those places we commonly refer to as nature to be destroyed without conflict and opposition. It is this effectiveness of existing environmental legislation that the re-definition of nature as a collection of exchangeable service units threatens to eliminate.

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