2015

Why Money Matters in Ecological Valuation

Peter Calow
University of Nebraska-Lincoln, pcalow2@unl.edu

Published in *Integrated Environmental Assessment and Management* — Volume 11, Number 2—pp. 331–332
doi 10.1002/ieam.1621

Submitted May 20, 2015.

Why Money Matters in Ecological Valuation

Peter Calow

University of Nebraska–Lincoln, Lincoln, Nebraska, USA
pcalow2@unl.edu

The ecosystem services movement was a reaction against nature being taken for granted in decision making. Put a value on the services that we enjoy from ecosystems and there is a better chance of showing their importance in economic and social development (Norgaard 2010). Yet there are still concerns that the monetization of these services is at best inappropriate and at worst flawed on ethical grounds and in terms of basic principles (Kapustka and McCormick 2015). Here, I argue that these views are missing the point about the need for a transparent approach to valuation.

The first argument for monetization arises directly from the desire to show the worth of ecosystems. Putting constraints on the ways we use ecosystems in the economy, for raw materials and as a repository for wastes, by definition involves extra costs for producers and consumers alike. These are easily monetized and often appear as large costs for industry and society. Stating the benefits of protecting ecosystems in terms of money provides a convincing way of showing the importance of ecosystem services in the comparison of these costs and benefits.

A second argument for monetization arises from the need to capture public preferences in a transparent way—this follows from a basic proposition of welfare (neoclassical) economics that what matters in policy making is finding ways to enhance the welfare (sometimes called utility) of individuals within society. There are other possible policy aspirations that are sometimes confused with this focus on the individual. One is that there are societal values that can sometimes override individual values. These are the kinds of values that governments are supposed to take into account when making policy. However, in the human health context for example, the obvious difference between society putting a value on our lives as compared with capturing the value that we put on our own lives draws attention to the possible dangers with this kind of approach. Another assertion is that policies ought to take into account the intrinsic values that reside in nature. However, these values often turn out to be the values of those promoting the approach or are intended to make nature so valuable that no development would ever be possible.

Preferences and values are made most transparent when we trade in markets and the presumption from economics is that those trades will lead to a better state in terms of welfare. Some environmental goods are traded in markets such as commodities that include lumber and fish. However, most are not (they are so-called externalities) and the many techniques for capturing the way that we value these are aimed at making explicit our preferences transparently, in a way that can be used effectively in weighing the costs and benefits of environmental policy interventions (Hanley and Barbier 2009). Money is the index of utility and provides a common currency for the trade-off arguments. Methods are developing for capturing utility directly, but these techniques are at an early stage and the results cannot easily be used in cost-benefit comparisons (Krueger and Stone 2014).

There are well known challenges for capturing nonmarket values and using them as a better basis for environmental policy (Hanley and Barbier 2009). For example, valuation techniques, especially those that ask about willingness to pay for ecosystem services, make the presumption that those asked know enough ecology to provide rational responses. This is why ecosystem service approaches are increasingly framed in terms of final outcomes (e.g., clean drinking water, ability to fish and swim) rather than the complex ecological properties and processes that are behind them. Alternatively, when asked about hypothetical willingness to pay, which does not involve a hard cash transaction, people seem to overvalue ecological goods and services, and this certainly needs more research.

Kapustka and McCormick (this issue) raise even more fundamental concerns about the market model: that markets often fail to deliver because of externalities and this leads to the overexploitation of nature, that we do not operate as rationally as we should in making decisions based on preferences, and that

aggregating across the people affected misses the point that some of these will be winners and some losers thus leading to increased inequality. However, the whole aim of the ecosystem services approach is to internalize ecological externalities so that they are not forgotten in policy development; this should have the effect of reducing not enhancing exploitation. Although behavioral economics is demonstrating deviations from some of the core assumptions of the neoclassical model, it is unclear how significant these are in terms of magnitude and pervasiveness (Robinson and Hammitt 2011). Finally, on inequality the presumption is that accumulating wealth is good because in principle the winners can compensate losers thus raising overall welfare; but, as noted by Piketty (2014), addressing this distributional challenge has to be a matter for governments.

Not all will want to accept a form of decision making that is based on the preferences of the individuals affected, even though it is fundamentally empowering. There are alternative models that seek to emphasize the limits that nature puts on economic development and this includes economic ecology (Kapustka and McCormick this issue). However, decisions still have to be made about what those limits mean for the economy and on balancing the inevitable tradeoffs between our activities and the environment. This begs the questions of who makes those decisions and how. Some might say let the ecologists decide, but as they move from the science (what is) to policy (what ought to be), value judgments will be exercised that need not coincide with those of the public at large. Others might argue for more government, but this inevitably involves politics that can cloud decisions. Yet others argue for a more spiritual approach, but intrinsic values are elusive. If the aim is to base decisions on what people want from ecosystems, in a way that can be weighed transparently against the costs of protecting ecosystem services, then monetization is something that should be embraced rather than avoided in taking the ecosystem services approach forward.

References

Hanley N, Barbier EB. 2009. Pricing nature. Cheltenham, UK: Edward Elgar. 353 p.

Kapustka LA, McCormick RG. 2015. The rationale for moving beyond monetization in valuing ecosystem services. Integr Environ Assess Manag 11:329–331.

Krueger AB, Stone AA. 2014. Progress in measuring subjective well-being. Science 346:42–43.

Norgaard RB. 2010. Ecosystem services; from eye-opening metaphor to complexity blinder. Ecol Econ 69:1219–1227.

Piketty T. 2014. Capital in the Twenty First Century. Cambridge (MA): Harvard Univ Press. 671 p.

Robinson LA, Hammitt JK. 2011. Behavioral economics and the conduct of benefit-cost analysis: Towards principles and standards. J Benefit Cost Anal 2:Article5.