

Earth Economics has been a leader in place-based, applied economic analysis of the benefits provided by nature for over two decades. Our goal has always been to provide comprehensive, actionable information about the importance of the natural world in supporting human wellbeing, from nature-dependent industries (e.g. agriculture, fisheries, forestry) to both urban and rural community resilience.

We are greatly encouraged by recent efforts by the federal government to move towards the inclusion of natural capital and ecosystem goods and services in decision making. We also applaud allowances for the inclusion of quantitative biophysical metrics in benefit-cost analyses (BCA), as well as qualitative reporting of factors that are less well-documented (more on this below). We appreciate the recognition that selecting appropriate time horizons and baseline data are challenging tasks, and agree that it is valuable to develop conceptual maps of critical relationships between regulation and anticipated effects on land use decisions. Any movement towards systems thinking is likely to improve understanding of the complex interdependencies between human welfare and the natural world.

We are also strong advocates of place-based analysis. Pages 27-28 acknowledge that non-market benefits are location-specific and that care must be used when inferring value for other locations—a critical factor in the appropriate use of Benefit Transfer Methods (BTM). We strongly agree that locally derived estimates must be used wherever possible when conducting point transfer, and agree with the recommendation to consider meta-analysis and function transfer (page 30) as preferred alternatives to point-based value transfer. Earth Economics strives to these ideals in our own work, wherever feasible.

The guidance details several limitations of BTM, for good reason: it is very easily misused. However, while the best practices citations are helpful, they can also be vague on specific threshold conditions for precision or accuracy needed for a “proper” application of BTM. For instance, on page 30, it is argued that area-based BTM may not be robust enough for regulatory impact analysis, yet there are ecosystem services where benefits accrue on-site. We recommend that OMB specify best practices for areal transfers, in general.

Because many services (and disservices) may accrue off-site (e.g. downstream or downwind impacts), we are also strongly supportive of the concept of “servicesheds” (page 19). For the past several years, we have been developing a variety of techniques to map beneficiary populations, from walksheds and viewsheds to downstream communities. While the increased availability of geospatial data and tools has greatly facilitated such methods, we believe there is considerable room for innovation, as well as a need for guidance on emerging best practices. Challenges such as the modifiable areal unit problem are especially important to address in the context of equity and fairness concerns, where the spatial units of sociodemographic data for affected populations rarely match the distribution of environmental services. Tools such as dasymetric mapping may provide a more realistic understanding of where people reside, but properly associating sociodemographic attributes with these communities is still a challenge.

While we agree that it is important to always consider whether estimates are plausible (i.e. the “rationality check” discussed on pages 34-35), we find that the example offered—the use of market returns as a ceiling to the value of supporting services—is less useful. Indeed, this directly contradicts the underlying motive for identifying and valuing ecosystem services in the first place—market failures. This is especially problematic in the context of agriculture, where price volatility is largely exogenous to farm- or landscape-level factors. We agree that it is important to produce reasonable valuation estimates, but argue that commodity prices serve as exceedingly poor benchmarks for assessing the value of positive or negative externalities—indeed, that is the point of this entire endeavor.

This raises additional considerations. More detail is needed on how non-monetary factors ought to be considered in the context of benefit-cost analyses: will such factors be considered “tie-breakers” (*ceteris paribus*) or will there be forthcoming guidance on how biophysical impacts be weighed against monetary costs? Similarly, at what point are plausible-yet imperfect estimates of nonmarket value (e.g. point transfer) acceptable alternatives to “zero” monetized value, including biophysical or qualitative impacts? In what contexts is it preferable to have a precise altimeter rather than an effective parachute?

In our experience, it is almost never the case that there is capacity to generate new primary valuations across multiple ecosystem service-landcover combinations in a timely and cost-effective manner. In this regard, more-specific guidance for BTM would be helpful. During the NESP webinar on this Guidance, Dr. Robert Johnston called for more operationalized methods for BTM, as well as additional research to fill gaps and support improved BTM analyses. We concur on both points. We also believe more guidance on establishing appropriate baselines is needed. We agree that baselines are dynamic—selection of appropriate environmental baselines is both critical and difficult—but would also argue that sociocultural baselines are also important. The growing availability of contemporary and historic remote sensing data is changing our ability to identify environmental baselines, but the best practices for establishing relevant baselines—ecological, social, and economic—still need to be identified.

We are very supportive of any effort to include ecosystem services (and natural capital) in decision making. Overall, we are excited to see significant movement towards these ends, and look forward to the day when these concepts and frameworks and methods are part of mainstream policy making, planning, and investment decision making processes. While our commitment to this mission may heighten our attention to detail, we are greatly encouraged to see these conversations spreading to broader audiences, especially from such a prominent voice as the Office of Management and Budget. We actively seek engagement with others on these questions, and are looking forward to further federal guidance to ensure that the benefits provided by nature are a consideration in every relevant regulatory decision.

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