

SERVES: SIMPLE AND EFFECTIVE RESOURCE FOR VALUING ECOSYSTEM SERVICES

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Abstract:

Economic advancement is driven by investment and an economy is the physical product of previous decades of investment. When committing resources to the building of our green economy, we must act with wisdom and responsibility to build robust infrastructure. From high-quality education for our children to transportation, emphasis should be placed on developing structures that are sustainable and just. And now more than ever, it is imperative to look at the retention or restoration of natural systems as a key component to investment in our future economy as we work toward the development of a greener infrastructure.

Natural capital produces critical ecosystem services for our economy, but they are too often excluded from decision making and given a default value of zero. Since 1998, Earth Economics has provided science-based economic analysis for watershed policy and infrastructure planning efforts. Building on our experience developing an Ecosystem Service Database (ESD) with the University of Vermont's Gund Institute of Ecological Economics in 2006, Earth Economics has been constantly innovating how we store, retrieve and report valuation data.

Our global project partners, including governments, indigenous peoples, NGOs and the private sector, have expressed the need for a simple support tool that non-economists can use to measure ecosystem service impacts in dollar terms. Responding to this need, in 2010 Earth Economics began development of a web-based valuation tool called SERVES (Simple and Effective Resource for Valuing Ecosystem Services), which will allow policy makers, urban planners and others to use ecosystem service valuation (ESV) to rapidly "appraise" the costs and benefits of their programs or specific projects. Pilot projects began in November 2011. Federal government agencies in the United States and Peru have also shown interest in adopting SERVES.

Web-based SERVES has practical versatility and functionality for decision makers, urban planners, watershed managers and the conservation community. Innovations include an intuitive user interface, downloadable calculation tables, inflation adjustments, currency conversion and the ability to create and save scenarios by each logged-in user. The database itself draws on a reservoir of studies that economists can comment on and add to. Using basic GIS data, users are able to create tables that identify the ecosystem services present at various scales – including site, regional, watershed, biome, and sectoral scales – and calculate the annual economic value of those services to the community.

While many tools have been developed to measure impacts and returns on built capital investments, few exist for natural capital. **SERVES** presents results in a standard economic (appraisal) format to bring natural capital into the center of overall economic planning. **SERVES** will help drive investments towards sustainability and create a green economy on a global and local scale. Until new non-monetary methods for valuing ecosystem services are broadly adopted, a “simple and effective tool for valuing ecosystem services” is essential for including natural capital and ecosystem services into decision making.