

NOAA Preliminary Reaction to the Science Advisory Board (SAB) Ecosystem Sciences and Management Working Group (ESMWG) Report: “An Assessment of the Use and Potential of Ecosystem Service Valuation (ESV) within NOAA”

The National Oceanic and Atmospheric Administration (NOAA) thanks the Science Advisory Board for its thoughtful review of NOAA’s Ecosystem Service Valuation (ESV) efforts and applications throughout the Agency. The ESMWG report is thorough and demonstrates the meticulous work carried out by this group. Herein is the Agency’s initial reaction to the report which is intended to begin a dialog with the SAB on this topic.

NOAA’s view is that the ability to conduct high-quality ecosystem service valuation that adhere to the best practices presented in the report is essential to meeting the Agency’s mission to conserve and manage coastal and marine ecosystems and resources. This need is reflected in the *Social Science Vision and Strategy* (SSV) which states that NOAA’s strategy is to integrate social, behavioral, and economic science into the Agency’s mission and priorities. One of the goals in the SSV states that NOAA’s product and services will strengthen societal decision making, and more specifically, that NOAA will “estimate and apply ecosystem service valuation to demonstrate connections between ecological well-being and community well-being.” Additionally, in 2013 NOAA formed an Ecosystem Services Working Group as a forum for issues related to the use and application of ecosystem services in the Agency. We believe that the tasks of this Working Group are consistent with the report recommendations. Given the importance of this topic to NOAA, we will carefully consider the comments and recommendations from this external review as we continue to strive to achieve the goals of the SSV and the Ecosystem Services Working Group.

The ESMWG report brought to light some of NOAA’s limitations to sustain the production of high-quality ESV studies and their effective use in the decision-making process to support the Agency’s mission in general. Development of guidance linking particular types and applications of ESV to particular Agency needs would greatly benefit NOAA. This guidance would not just contribute to the production of improved and consistent studies; it would also serve to promote internal and external engagement of ESV practitioners. The suggestion of targeting specific areas of investment is especially important given the limitation of internal capacity to conduct high-quality ESV analyses across all major topical areas and geographic regions. Development of this guidance would involve closer interaction between ESV practitioners and NOAA leadership to identify the major priority areas and lead to a consensus approach.

In addition to the guidance, the ESMWG report recommended the creation of a community of practice to disseminate and leverage cross-Agency expertise to maximize the use of NOAA ESV capacity. This community of practice along with the proposed guidance would facilitate the exchange of information and strengthen institutional learning. In collaboration with the NOAA Ecosystem Services Working Group, an ESV community of practice will be implemented to identify internal capacity and eventually expand participation to include practitioners from other Federal agencies and the academic community. For that expansion, NOAA would look to

including Sea Grant economists at various institutions and the use of Cooperative Institutes to include expertise in valuation. We believe that the community of practice would not just contribute to mitigating the ESV capacity limitations, but also facilitate the integration of ESV into the early planning and design phases of NOAA initiatives, as appropriate. An example of this proactive approach is the integration of economics in the NOAA Integrated Ecosystem Assessment (IEA) Program. Under the IEA Program, a Human Dimensions Working Group has been created and its chair is a member of the IEA Steering Committee. Another example of early integration is the recently released request for proposals from the NOAA Ocean Acidification Program which clearly seeks to focus efforts on ecosystem services and allows for primary socioeconomic data collection, recognizing the unique socioeconomic data needs not normally met by NOAA's routine data collection. It is more challenging to integrate ecosystem service valuation studies in extant studies and programs that were not initially designed with ecosystem service valuation in mind, so emulating these examples of early integration in other identified high priority areas is essential to effective use of ecosystem service valuation.

The ESMWG report also recommended active engagement with the Office of Management and Budget (OMB) and other agencies to manage expectations, discuss methodologies, and promote an effective approval process. Since the transmittal of the joint OMB, Council on Environmental Quality (CEQ), and Office of Science and Technology Policy (OSTP) Memorandum on "Incorporating Ecosystem Services into Federal Decision Making" (October 2015), NOAA has engaged with CEQ by providing information on NOAA's current ecosystem services and ESV efforts and drivers. In March 2016, NOAA completed a document in response to the OMB/CEQ/OSTP memo proposing a phased-in ecosystem services integration plan which included the integration of ecosystems services to support Federal statutes and programs, a comprehensive review of the policies and programs once the forthcoming Implementation Guidance from CEQ is published, and senior-level direction to strengthen the use of ecosystem services. ESV is included in the plan inherently as a component of the broader ecosystem services considerations. NOAA is fully committed to implementing the work plan and to effective engagement of OMB, Federal and State agencies, and other institutions that can contribute to successful ecosystem services and ESV application.

The report makes several other key recommendations such as taking care in the use of "off-the-shelf" valuation approaches, the limitations of benefits transfer of ecosystem values, and the continuing need to educate users of economic information on the difference between economic value and impacts. These touch on issues that are important in the broader context of the incorporation of economics across the Agency, and will be part of our deliberations as we move forward with improving the development and use of ecosystem service valuation.