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Ecosystem Services as a Common Language for Coastal Ecosystem-Based Management

1. ELISE F. GRANEK^{1,†,*},
2. STEPHEN POLASKY^{2,†},
3. CARRIE V. KAPPEL^{3,†},
4. DENISE J. REED⁴,
5. DAVID M. STOMS⁵,
6. EVAMARIA W. KOCH⁶,
7. CHRIS J. KENNEDY⁷,
8. LORI A. CRAMER⁸,
9. SALLY D. HACKER⁹,
10. EDWARD B. BARBIER⁷,
11. SHANKAR ASWANI¹⁰,
12. MARY RUCKELSHAUS¹¹,
13. GERARDO M. E. PERILLO¹²,
14. BRIAN R. SILLIMAN¹³,
15. NYAWIRA MUTHIGA¹⁴,
16. DAVID BAEL¹⁵,
17. ERIC WOLANSKI¹⁶

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Author Information

- 1 Environmental Science & Management, Portland State University, Portland, OR 97207, U.S.A.
- 2 Department of Applied Economics, Department of Ecology, Evolution and Behavior, University of Minnesota, St. Paul, MN 55108, U.S.A.
- 3 National Center for Ecological Analysis and Synthesis, University of California Santa Barbara, Santa Barbara, CA 93101, U.S.A.
- 4 Department of Earth and Environmental Sciences, University of New Orleans, New Orleans, LA 70148, U.S.A.
- 5 Bren School of Environmental Science and Management, University of California Santa Barbara, Santa Barbara, CA 93106, U.S.A.
- 6 Horn Point Laboratory, University of Maryland Center for Environmental Science, Cambridge, MD 21613, U.S.A.
- 7 Department of Economics and Finance, University of Wyoming, Laramie, WY 82071, U.S.A.
- 8 Department of Sociology, Oregon State University, Corvallis, OR 97331, U.S.A.
- 9 Department of Zoology, Oregon State University, Corvallis, OR 97331, U.S.A.
- 10 Department of Anthropology and IGP Marine Science, University of California Santa Barbara, Santa Barbara, CA 93106, U.S.A.
- 11 NOAA Fisheries Northwest Fisheries Science Center, Seattle, WA 98112, U.S.A.
- 12 CONICET—Instituto Argentino de Oceanografía, Bahía Blanca, Argentina & Departamento de Geología, Universidad Nacional del Sur, Bahía Blanca, Argentina
- 13 Zoology Department, University of Florida, Gainesville, FL 32611, U.S.A.
- 14 Wildlife Conservation Society, Mombasa, 80107, Kenya
- 15 Department of Applied Economics, University of Minnesota, St. Paul, MN 55108, U.S.A.
- 16 ACTFR, James Cook University & Australian Institute of Marine Science, Townsville,

Queensland 4810, Australia

† Authors contributed equally.

*[email_graneke@pdx.edu \(mailto:%0A_graneke@pdx.edu%0A \)](mailto:graneke@pdx.edu)

† Authors contributed equally.

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- Abstract
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coastal ecosystems; coastal management; communication; ecosystem-based management; ecosystem
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Abstract: *Ecosystem-based management is logistically and politically challenging because ecosystems are inherently complex and management decisions affect a multitude of groups. Coastal ecosystems, which lie at the interface between marine and terrestrial ecosystems and provide an array of ecosystem services to different groups, aptly illustrate these challenges. Successful ecosystem-based management of coastal ecosystems requires incorporating scientific information and the knowledge and views of interested parties into the decision-making process. Estimating the provision of ecosystem services under alternative management schemes offers a systematic way to incorporate biogeophysical and socioeconomic information and the views of individuals and groups in the policy and management process. Employing ecosystem services as a common language to improve the process of ecosystem-based management presents both benefits and difficulties. Benefits include a transparent method for assessing trade-offs associated with management alternatives, a common set of facts and common currency on which to base negotiations, and improved communication among groups with competing interests or differing worldviews. Yet challenges to this approach remain, including predicting how human interventions will affect ecosystems, how such changes will affect the provision of ecosystem services, and how changes in service provision will affect the welfare of different groups in society. In a case study from Puget Sound, Washington, we illustrate the potential of applying ecosystem services as a common*

language for ecosystem-based management.

Resumen: *El manejo basado en ecosistemas es un reto logístico y político porque los ecosistemas son inherentemente complejos y las decisiones de manejo afectan a una multitud de grupos. Los ecosistemas costeros, que se encuentran en la interfase entre ecosistemas marinos y terrestres y proporcionan una variedad de servicios a diferentes grupos, ilustran estos retos acertadamente. Para tener éxito, el manejo basado en ecosistemas de ecosistemas costeros requiere la incorporación de información científica y el conocimiento y opiniones de grupos de interés en el proceso de toma de decisiones. La estimación del suministro de servicios del ecosistema bajo esquemas alternativos de manejo ofrece una forma sistemática para incorporar información biogeofísica y socioeconómica y las opiniones de individuos y grupos en el proceso político y de manejo. El uso de servicios del ecosistema como un lenguaje común para mejorar el proceso de manejo basado en ecosistemas presenta tanto beneficios como dificultades. Los beneficios incluyen un método transparente para evaluar los pros y contras asociados con alternativas de manejo, un conjunto de hechos y moneda corrientes como base para las negociaciones y la mejora de la comunicación entre grupos con intereses opuestos o cosmovisiones diferentes. Sin embargo, existen retos para este método, incluyendo la predicción del efecto de intervenciones humanas sobre los ecosistemas, cómo afectarán esos cambios al suministro de servicios del ecosistema, y cómo afectarán los cambios en el suministro de servicios al bienestar de diferentes grupos de la sociedad. En un estudio de caso en Puget Sound, Washington, ilustramos el potencial de la aplicación de servicios del ecosistema como un lenguaje común para el manejo basado en ecosistemas.*

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 - [DAVID BAEL \(/advanced/search/results?searchRowCriteria\[0\].queryString="DAVID BAEL"&searchRowCriteria\[0\].fieldName=author&start=1&resultsPerPage=20\)](#)
 - [ERIC WOLANSKI \(/advanced/search/results?searchRowCriteria\[0\].queryString="ERIC WOLANSKI"&searchRowCriteria\[0\].fieldName=author&start=1&resultsPerPage=20\)](#)
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