

## Seeing the Big Picture

Author: Beardsley, Timothy M.

Source: BioScience, 62(11) : 935

Published By: American Institute of Biological Sciences

URL: <https://doi.org/10.1525/bio.2012.62.11.1>

---

BioOne Complete ([complete.BioOne.org](http://complete.BioOne.org)) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at [www.bioone.org/terms-of-use](http://www.bioone.org/terms-of-use).

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

---

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

**PUBLISHER**  
Richard T. O'Grady

**EDITOR IN CHIEF**  
Timothy M. Beardsley

**MANAGING EDITOR**  
James M. Verdier

**BOOK REVIEW EDITOR**  
**PEER REVIEW / PRODUCTION COORDINATION**  
Jennifer A. Williams

**MANUSCRIPT EDITOR**  
Nathan N. True

**Editors:** Eye on Education: Beth Baker (educationoffice@aibs.org); Feature articles: Beth Baker (features@aibs.org); Washington Watch: Robert E. Gropp (publicpolicy@aibs.org).

**Editorial Board:** Rick Bonney, Gordon Brown, Richard M. Burian, Catherine E. Carr, Joseph Cloud, Scott Collins, Rita R. Colwell, Charlene D'Avanzo, Kathleen Donohue, David L. Evans, Cassandra G. Extavour, Eric A. Fischer, Kirk Fitzhugh, Nick Haddad, Geoffrey M. Henebry, Cynthia S. Jones, Linda A. Joyce, Edna S. Kaneshiro, David M. Leslie Jr., Harvey B. Lillywhite, Alan C. Love, Paula Mabree, Marshall A. Martin, Janice Moore, Peter B. Moyle, Ben Pierce, Jason Podrabsky, J. Michael Scott, Daniel Simberloff, Martin Tracey, Monica Turner, Randy Wayne, Judith S. Weis, David S. Wilcove, Jean A. Wyld.

**BioScience** (ISSN 0006-3568; e-ISSN 1525-3244) is published 12 times a year by the American Institute of Biological Sciences, 1900 Campus Commons Dr., Suite 200, Reston, VA 20191, in collaboration with the University of California Press. Periodicals postage paid at Berkeley, CA, and additional mailing offices. **POSTMASTER:** Send address changes to *BioScience*, University of California Press, Journals and Digital Publishing, 2000 Center Street, Suite 303, Berkeley, CA 94704-1223, or e-mail customerservice@ucpressjournals.com.

**Membership and subscription:** Individual members, go to [www.aibs.org/aibs-membership/index.html](http://www.aibs.org/aibs-membership/index.html) for benefits and services, membership rates, and back issue claims. Subscription renewal month is shown in the four-digit year-month code in the upper right corner of the mailing label. Institutional subscribers, go to [www.ucpressjournals.com](http://www.ucpressjournals.com) or e-mail customerservice@ucpressjournals.com. Out-of-print issues and volumes are available from Periodicals Service Company, 11 Main Street, Germantown, NY 12526-5635; telephone: 518-537-4700; fax: 518-537-5899; Web site: [www.periodicals.com](http://www.periodicals.com).

**Advertising:** For information about display and online advertisements and deadlines, e-mail adsales@ucpressjournals.com. For information about classified placements and deadlines, contact Jennifer A. Williams, AIBS (jwilliams@aibs.org).

**Copying and permissions notice:** Authorization to copy article content beyond fair use (as specified in sections 107 and 108 of the US Copyright Law) for internal or personal use, or the internal or personal use of specific clients, is granted by the Regents of the University of California on behalf of AIBS for libraries and other users, provided that they are registered with and pay the specified fee through the Copyright Clearance Center (CCC), [www.copyright.com](http://www.copyright.com). To reach the CCC's Customer Service Department, call 978-750-8400 or e-mail info@copyright.com. For permission to distribute electronically, republish, resell, or repurpose material, use the CCC's Rightslink service on JSTOR at <http://www.jstor.org/r/ucal/bio>. Submit all other permissions and licensing inquiries through the University of California Press's Rights and Permissions Web site, [www.ucpressjournals.com/reprintInfo.asp](http://www.ucpressjournals.com/reprintInfo.asp), or e-mail journalspermissions@ucpress.edu.

**Abstracting and indexing:** For complete abstracting and indexing information, please visit [www.ucpressjournals.com](http://www.ucpressjournals.com).  
© 2012 American Institute of Biological Sciences. All rights reserved. Printed at Allen Press, Inc.

# BioScience®

**A Forum for Integrating the Life Sciences**  
American Institute of Biological Sciences

## Seeing the Big Picture

**E**ven before the Millennium Ecosystem Assessment (MA) was published some seven years ago, forward-thinking governments and scientists recognized the importance of worldwide monitoring of ecosystem services. Yet, the MA served as an important wake-up call, because its global scope and clearly reported results made evident to governments of all stripes that degradation of the planet's ability to provide many key services was real and widespread. At the same time, the MA demonstrated that on many essential topics, the available data were insufficient for a complete understanding of the trends and their likely implications.

Despite its importance, the MA was a one-off effort—a snapshot of a complex process with many unknowns. As soon as its results became known, questions about what could follow it became hard to ignore. The complexities of international negotiations involving a plethora of organizations with an interest in environmental issues, not to mention the different perspectives of developing and developed nations, meant that progress has been slow. Yet, structures to coordinate scientific observations have been created, one of the most important being the Global Earth Observation System of Systems (GEOSS). GEOSS is a multipart entity that will develop data services for disasters, health, energy, climate, water, weather, ecosystems, and biodiversity. It is being designed by the Group on Earth Observations, an organization founded a decade ago that now includes about 90 governments.

A key network established under GEOSS is the Group on Earth Observations Biodiversity Observation Network (GEO BON), some of whose activities were described in *BioScience* last year (see Ferrier 2011; doi:10.1525/bio.2011.61.2.2). It has the principal goal of integrating satellite-derived and *in situ* biodiversity observations. GEO BON in turn consists of multiple working groups, one of which will focus on ecosystem services.

In the article that starts on p. 977 of this issue, Heather Tallis and her colleagues lay out an ambitious scheme for a global, multiscale effort to monitor ecosystem service change that will operate under the auspices of GEO BON. The vision is uplifting—some might say “breathhtaking”—but the article usefully identifies key distinctions that must be observed in trying to analyze ecosystem services. It also points out some of the crucial gaps in available data and difficulties in combining them. If it cannot indicate solutions to the many difficulties that can be anticipated, it serves a useful purpose in laying out what they (now) appear to be. There are enough to occupy more than a few productive careers.

The difficulties will not all be technical. Questions about priorities will inevitably arise, and in order to earn continuing support from international sponsors, the initiative will have to play nicely with other international efforts that sit in the same space. Notable among these is the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), established earlier this year. IPBES, which compares itself to the Intergovernmental Panel on Climate Change and will have its first plenary meeting in Bonn next year, may have its own ideas about priorities. Still, Tallis and her coauthors indicate a readiness to collaborate with IPBES and other programs, as well as with the scientific community in general. There is hope that a fuller understanding of trends in ecosystem services will emerge and start to answer the burning questions that the MA raised.

TIMOTHY M. BEARDSLEY  
Editor in Chief

doi:10.1525/bio.2012.62.11.1