BioOne COMPLETE

Sustainability for Here and Now

Author: Beardsley, Timothy M.

Source: BioScience, 60(6) : 403

Published By: American Institute of Biological Sciences

URL: https://doi.org/10.1525/bio.2010.60.6.1

BioOne Complete (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.

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.

Downloaded From: https://complete.bioone.org/journals/BioScience on 28 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use

PUBLISHER
Richard T. O'Grady

EDITOR IN CHIEF
Timothy M. Beardsley

MANAGING EDITOR
Laura C. Sullivan

PEER REVIEW / EXTERNAL RELATIONS
Jennifer A. Williams

EDITOR
James Verdier

Editors: Eye on Education: Cathy Lundmark (educationoffice@aibs.org); Feature articles: Cathy Lundmark (features@aibs.org); Washington Watch: Robert E. Gropp (publicpolicy@aibs.org).
Editorial Board: Agriculture: Sonny Ramaswamy; Animal Behavior: Janice Moore; Animal Development: Paula Mabee; Botany: Kathleen Donohue; Cell Biology: Randy Wayne; Ecology: Scott Collins, Daniel Simberloff; Ecotoxicology: Judith S. Weis; Education: Gordon E. Uno; Environmental Microbiology: Rita R. Colwell; Environmental Policy: Gordon Brown, J. Michael Scott; Evolutionary Biology: James Mallet; Genetics and Evolution: Martin Tracey; History and Philosophy: Richard M. Burian; Human Biology: David L. Evans; Invertebrate Biology: Kirk Fitzhugh; Landscape Ecology: Monica Turner; Mammalogy: David M. Leslie Jr.; Microbiology: Edna S. Kaneshiro; Molecular Biology: David Hillis; Molecular Evolution and Genomics: David Rand; Neurobiology: Cole Gilbert; Plant Development: Cynthia S. Jones; Policy Forum: Eric A. Fischer; Population Biology: Ben Pierce; Professional Biologist: Jean Wyld; Remote Sensing and Computation: Geoffrey M. Henebry; Statistics: Kent E. Holsinger; Vertebrate Biology: Harvey B. Lillywhite.
BioScience (ISSN 0006-3568; e-ISSN 1525-3244) is published 11 times a year (July/August combined) by the American Institute of Biological Sciences, 1444 I Street, NW, Suite 200, Washington, DC 20005, 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/individual-membership* 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* 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*.
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*. To reach the CCC's Customer Service Department, call 1-978-750-8400 or e-mail info@copyright.com. For permission to distribute electronically, republish, resell, or repurpose material, and to purchase article offprints, use the CCC's Rightslink service on Caliber at *http://caliber.ucpress.net*. Submit all other permissions and licensing inquiries through the University of California Press's Rights and Permissions Web site, *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*.
© 2010 American Institute of Biological Sciences. All rights reserved. Printed at Allen Press, Inc.

BioScience®
Organisms from Molecules to the Environment
American Institute of Biological Sciences

Sustainability for Here and Now

Two articles in this issue of *BioScience* address a perennial question in ecosystem management: how to trade off competing goals against one another. The article by Patricia A. Soranno and colleagues (p. 440) discusses new, hierarchical, predictive techniques for classifying—and ultimately managing—lakes, whereas Bruce E. Rieman and colleagues (p. 460) propose a framework to identify convergent solutions for the dilemmas that arise when attempting to simultaneously manage forests and fish populations.

Undeniably, some core management questions lie outside the scope of science, in the realm of politics. But it is unrealistic to expect political agreement on general, one-size-fits-all solutions to conservation or sustainable development decisions. For sure, ecological economists are spending much time and effort on quantifying the value of ecosystem services (just how much time and effort might itself be interesting to quantify). And dollar figures can shed light on the operation of important and nonobvious processes in a way that is valuable for policymakers, in particular. But imputed human valuations vary between individuals and change over time. They are by themselves unlikely to settle contentions between groups with different agendas. Indeed, numbers in general may be more illuminating for scientists than for many of their fellow citizens.

There is more hope for agreement on site-specific decisions, which is one reason the work described by Soranno is promising: It uses a sophisticated, landscape-sensitive approach that not only accounts for the predicted characteristics of individual lakes but also allows different goals to be considered explicitly. It thus provides useful ways to evaluate management approaches even when data for a specific lake are unavailable; ways that can acknowledge what has been learned about ecosystem complexity. Soranno and colleagues' approach could be used for systems other than lakes.

The scheme in principle can lead to choices and proposals relevant to political campaigns or evaluation by political leaders. For many major contentions, that must be a goal. The authors are realistic enough to recognize that not all lakes may be able to deliver all plausible ecosystem services.

Rieman and colleagues consider an arguably more difficult problem. Still, it is striking that their suggestion—that a choice between maintenance, restoration, and control is a key for resolving tensions between conservation and restoration philosophies—leads them to some of the same conclusions as Soranno. Of note, these authors believe that solutions to conflicts between people concerned about fish populations and those worried about forests are likely to be found only when disagreements are analyzed in a spatially explicit way. (Rieman also stresses the importance of paying attention to the time scales over which outcomes are desired—something to which forest managers responsible for fire policy have historically been blind).

Happily, the tools allowing the kinds of analyses discussed here are now widely available to researchers. Their application is demanding, and the necessary political dimension of using them may seem tedious to biologists. But decisionmakers need explanations they can relate to. These should preferably be informed by good science. *BioScience* looks forward to learning of more illustrative examples of successful implementations.

TIMOTHY M. BEARDSLEY
Editor in Chief

doi:10.1525/bio.2010.60.6.1

Downloaded From: https://complete.bioone.org/journals/BioScience on 28 Mar 2024
Terms of Use: https://complete.bioone.org/terms-of-use