<Previous Article

Volume 132, SPECIAL ISSUE: Economic-Engineering Analysis of Water Resource Systems

Next Article >

A+ A- A= Print

- Abstract
- References
- Full-text
- Complete PDF (320 KB)
- Cited By

Ringler, C. and Cai, X. (2006). "Valuing Fisheries and Wetlands Using Integrated Economic-Hydrologic Modeling—Mekong River Basin." *J. Water Resour. Plann. Manage.* 132, SPECIAL ISSUE: Economic-Engineering Analysis of Water Resource Systems, 480–487.

TECHNICAL PAPERS

Valuing Fisheries and Wetlands Using Integrated Economic-Hydrologic Modeling—Mekong River Basin

Article History

Submitted: 15 November 2004
Accepted: 18 May 2005

Publication Data

ISSN (print): 0733-9496
ISSN (online): 1943-5452
Publisher: American Society of Civil Engineers

Claudia Ringler[1] **and Ximing Cai**[2]

[1]Research Fellow, International Food Policy Research Institute, Washington, DC 20006. E-mail: c.ringler@cgiar.org

[2]Assistant Professor, Dept. of Civil and Environmental Engineering, Univ. of Illinois at Urbana-Champaign, Urbana, IL 61801. E-mail: xmcai@uiuc.edu

A healthy water ecosystem is particularly important in the Mekong River Basin, home to 75 million people who depend on its water for rice and fish production. Sound water policies will be needed to sustain current basin ecosystem services, balancing complex and often competing demands for water, including the instream uses of hydropower, navigation, wetlands, and fisheries, maintenance of ecosystems versus the offstream uses of irrigation, and domestic and industrial uses. The paper presents a simplified method and application to incorporate water values for fisheries and wetlands into an integrated economic-hydrologic river basin model to analyze alternative water-using strategies and their implications for riparian countries.

Permalink: http://dx.doi.org/10.1061/(ASCE)0733-9496(2006)132:6(480)

ASCE Subject Headings: Water management, River basins, Instream flow, Wetlands, Fish habitats, Asia

Cited by

Alireza Nikouei, Mansour Zibaei, and Frank A. Ward. (2012) Incentives to adopt irrigation water saving measures for wetlands preservation: An integrated basin scale analysis. *Journal of Hydrology* **464-465**, 216-232
Online publication date: 1-Sep-2012.
CrossRef
Malte Grossmann and Ottfried Dietrich. (2012) Integrated Economic-Hydrologic Assessment of Water Management Options for Regulated Wetlands Under Conditions of Climate Change: A Case Study from the Spreewald (Germany). *Water Resources Management* **26**:7, 2081-2108
Online publication date: 1-May-2012.
CrossRef
Matthew J. Deitch and G. Mathias Kondolf. (2012) Consequences of variations in magnitude and duration of an instream environmental flow threshold across a longitudinal gradient. *Journal of Hydrology* **420-421**, 17-24
Online publication date: 1-Feb-2012.
CrossRef
Robyn Johnston and Matti Kummu. (2012) Water Resource Models in the Mekong Basin: A Review. *Water Resources Management* **26**:2, 429-455
Online publication date: 1-Jan-2012.
CrossRef
Andrea Munoz-Hernandez, Alex S. Mayer, and David W. Watkins Jr.. (2011) Integrated Hydrologic-Economic-Institutional Model of Environmental Flow Strategies for Rio Yaqui Basin, Sonora, Mexico. *Journal of Water Resources Planning and Management* **137**:2, 227-237
Online publication date: 1-Mar-2011.
Abstract | Full Text | PDF (643 KB) | Permissions
Julien J. Harou, Manuel Pulido-Velazquez, David E. Rosenberg, Josué Medellín-Azuara, Jay R. Lund, and Richard E. Howitt. (2009) Hydro-economic models: Concepts, design, applications, and future prospects. *Journal of Hydrology* **375**:3-4, 627-643
Online publication date: 1-Sep-2009.
CrossRef
Yi-Chen E. Yang, Ximing Cai, and Dušan M. Stipanović. (2009) A decentralized optimization algorithm for multiagent system-based watershed management. *Water Resources Research* **45**:8, n/a-n/a
Online publication date: 1-Aug-2009.
CrossRef
Maja Schlüter, Heather Leslie, and Simon Levin. (2009) Managing water-use trade-offs in a semi-arid river delta to sustain multiple ecosystem services: a modeling approach. *Ecological Research* **24**:3, 491-503
Online publication date: 1-May-2009.
CrossRef
Alex Mayer and Andrea Muñoz-Hernandez. (2009) Integrated Water Resources Optimization Models: An Assessment of a Multidisciplinary Tool for Sustainable Water Resources Management Strategies. *Geography Compass* **3**:3, 1176-1195
Online publication date: 1-May-2009.
CrossRef
A. Tilmant, D. Pinte, and Q. Goor. (2008) Assessing marginal water values in multipurpose multireservoir

A. Yilmaz, D. Pike, and Q. Cui. (2008) Assessing marginal water values in multipurpose multireservoir systems via stochastic programming. *Water Resources Research* **44**:12, n/a-n/a
Online publication date: 1-Dec-2008.
CrossRef
Ximing Cai, Claudia Ringler, and Jiing-Yun You. (2008) Substitution between water and other agricultural inputs: Implications for water conservation in a River Basin context. *Ecological Economics* **66**:1, 38-50
Online publication date: 1-May-2008.
CrossRef
Roy Brouwer and Marjan Hofkes. (2008) Integrated hydro-economic modelling: Approaches, key issues and future research directions. *Ecological Economics* **66**:1, 16-22
Online publication date: 1-May-2008.
CrossRef
Ximing Cai. (2008) Implementation of holistic water resources-economic optimization models for river basin management – Reflective experiences. *Environmental Modelling & Software* **23**:1, 2-18
Online publication date: 1-Jan-2008.
CrossRef