

RÓGER MADRIGAL-BALLESTERO

Ph.D, Professor/Researcher/Consultant

WORKING ADDRESS

Tropical Agricultural Research and Higher Education Center (CATIE)

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EDUCATION

Ph.D. (Dr.phil). Institutional Economics. Freiburg University, Germany

M.Sc. Environmental Economics. CATIE, Costa Rica

Licentiate. Economics. University of Costa Rica

B.A. Economics. University of Costa Rica

PROFESSIONAL EXPERIENCE

2017-to date. Director, Environment for Development (EfD) at CATIE.
<http://www.efdinitiative.org/central-america/firstpage>

2017-to date. Director, Latin-American Chair on Environmental Decisions for Global Change

2010-to date. Academic coordinator, M.Sc. Program in Economics, Development and Climate Change at CATIE

2007-to date. Senior Research Fellow. Environment for Development Center (EfD-CATIE)

2004-to date. Senior Researcher. CATIE

2007. Visiting scholar. Workshop in Political Theory and Policy Analysis, Indiana University

RECENT PROJECTS (Last 5 years, non-exhaustive list)

- i. Sustainable Management of Coastal Marine Resources (CMaR)
[Sustainable Management of Coastal Marine Resources \(CMaR\) | EfD - Initiative \(efdinitiative.org\)](#)
- ii. Mangroves for Development. Design of a financial mechanism to sustain ecosystem services from mangroves in Dominican Republic.

- Role: Team leader
- iii. Design of Payments for Ecosystem Services program in Kingston, Jamaica. The main objective is to protect water resources, and reduce effect of landslides through investments in green infrastructure. The technical design of PES includes economic valuation tools, GIS and modelling, stakeholder consultation and legal considerations.
 - Role: Team leader
- iv. Viability of water infrastructure project for the Tempisque Watershed and coastal communities (PAACUME). Costa Rica. SENARA/BCIE. 2017.
 - Role: Team leader and responsible of component on water fees and environmental investments.
- v. Water, communities and climate change (AC3). Nicaragua, Guatemala y Costa Rica. IDRC. 2013-2016
 - Team leader and technical coordinator for the collection of 7,000 household surveys in 300 rural communities in the 3 countries.
- vi. Financial mechanism for the compensation of ecosystem services provision in the Apanás y Asturias Watersheds, Nicaragua.
 - Team leader for designing a PES for reducing sedimentation and enhancing water availability for different uses.
- vii. Socioeconomic dimension of climate change and water in Latin America and the Caribbean.
 - Team leader for the design and implementation of research grants.

TEACHING EXPERIENCE

Graduate MSc Level:

- 2020. At Universidad de Costa Rica: Coastal-Marine Governance
- 2019-to date. At CATIE: Climate Change Economics.
- 2004-to date. At CATIE: Introduction to Environmental Economics and Natural Resource Economics.

Undergraduate level:

- 2017. At Universidad de Costa Rica. International Trade.

On the job training:

- 2004-to date. At CATIE: Annual course on Economic Valuation and Management of Ecosystem Services.
- 2007 & 2013. INFOR, Chile & Universidad Nacional, Paraguay. Economic Valuation of Ecosystem Services
- 2019. At CATIE: Annual course on Water Economics
- 2019. Forestry Department, Jamaica. Natural Resources Valuation

Invited lecturer: Universidad de la Punta, Argentina; National Technological University, Argentina.

PUBLICATIONS (Refereed)

2020. Amaechina, E., et al. Policy Note: Policy Responses to Ensure Access to Water and Sanitation Services During COVID-19: Snapshots from the Environment for Development (EfD) Network. *Water Economics and Policy* 2020 06:04

2020. Albers, H.J., Preonas, L., Capitán, T. Robinson, E., Madrigal, R. Optimal Siting, Sizing, and Enforcement of Marine Protected Areas. *Environmental & Resource Economics*. <https://doi.org/10.1007/s10640-020-00472-7>

2019. Madrigal, R; Capitán, T; Salas, A; Córdoba, D. Household and community responses to seasonal droughts in rural areas of Costa Rica. *Waterlines* 38(4):297-315

2019. Chávez, I; Partelow, S; Madrigal-Ballesteros, R; Schlüter, A; Gutierrez, I. Do responsible fishing areas work? Comparing collective action challenges in three small-scale fisheries in Costa Rica. *International Journal of the Commons*. 13.

2017. Madrigal, R; Albers, J; Capitán, T, Salas, A. Spatial decisions, livelihoods and perceptions in small-scale fishing grounds of Costa Rica. *AMBIO A Journal of the Human Environment* 46(4):1-10.

2017. Madrigal, R; Jurado, D. Livelihoods, attitudes towards regulation and the participation in performance-based payments for protecting turtles: Empirical evidence from Nicaragua. *Conservation and Society* 15(1): 74-86.

2015. Madrigal, R; Naranjo, M. Adaptive capacity, drought and the performance of community-based drinking water organizations in Costa Rica. *Journal of Water and Climate Change* 6(4).

2013. Madrigal, R; Alpizar, F; Schlüter, A. Public perceptions of the performance of community-based drinking water organizations in Costa Rica, *Water Resources and Rural Development*, 1–2, 43-56.

2013. Madrigal, R; Schlüter, A; López, M C. What makes them follow the rules? Empirical evidence from turtle egg harvesters in Costa Rica. *Marine Policy*, 37, 270–277.

2012. Schlüter, A; Madrigal, R. The SES Framework in a marine setting: methodological lessons. *Rationality, Markets and Morals*, 3: 158-179.

2011. Madrigal, R; Alpizar, F; Schlüter, A. Determinants of performance in rural water community organizations in Costa Rica. *World Development*, 39 (9): 1663-1675.

2009. Madrigal, R; Alpizar, F. ¿Existen posibilidades de cooperar?: Los experimentos económicos como herramienta de diagnóstico de campo rural. *Revista Centroamericana de Ciencias Sociales*. V (1): 205-234.

2008. Madrigal, R; Alpizar, F. Diseño y gestión adaptativa de un esquema de pagos por servicios ecosistémicos en Copán Ruinas, Honduras. *Revista Investigación Agraria: Sistemas y Recursos Forestales*. 17(1): 79-90. España.

BOOK CHAPTERS

2011. Madrigal, R. Estimating the cost and benefits of supplying hydrological ecosystem services: an application for small-scale rural drinking water organizations In: B. Rapidel, F. DeClerck, J.F. Le Coq and J. Beer (Editors), *Ecosystem Services from Agriculture and Agroforestry: Measurement and Payment*. Earthscan, London, UK, pp. 161-178.

OTHER PUBLICATIONS AND REPORTS

2020. Alpizar, F., Madrigal, R., Alvarado, I., Brenes Vega, E., Camhi, A., Maldonado, J. H., Marco, J., Martínez, A., Pacay, E., and G. Watson (2020), 'Mainstreaming of Natural Capital and Biodiversity into Planning and Decision-Making: Cases from Latin America and the Caribbean', IDB Working Paper Series, No. IDB-WP-01193.

2020. Madrigal, R; Viguera, B; Marin, R. Agua y saneamiento frente a la COVID-19: desafíos y respuestas en Centroamérica. EfD Policy Brief. CATIE, Costa Rica.

2019. Rivera, D; Madrigal, R; Alpizar, F; Robalino, J. ¿Conviene comprar un vehículo eléctrico en Costa Rica? EfD Policy brief. CATIE, Costa Rica.

2018. Alpizar, F; Madrigal, R; Salas, A. Environmental challenges in Costa Rica. Technical Note IDB-TN-1531. Interamerican Development Bank.

2018. Alpizar, F; Salas, A; Madrigal, R. Plan de inversión para las NDC de Costa Rica. Dirección de Cambio Climático, MINAE.

2017. Alpizar, F; Madrigal, R. Conditional cash transfers and payments for ecosystem services. *Revista Integración y Comercio*, 41: 100-114.

2016. Kim, J; Madrigal, R; Alpizar, F; Rojas, S. Learning from Costa Rican Experience and Roads Ahead: Bridging the Policy and Investment Gap for Payment for Ecosystem Services. GGGI, Seoul, Corea.
2012. Madrigal, R. Managing rural water systems: keys to success. *Resources*, 180:18-19.
2009. Madrigal, R; Alpizar, F. Algo más que construir acueductos rurales. Periódico La Nación, Enero 18.
2009. Madrigal, R. Rendición de cuentas y la provisión de agua potable. EfD Policy Brief.
2009. Gentes, I; Madrigal, R. Temas pendientes en la gobernabilidad hídrica. EfD Policy Brief.
2009. Boscolo, M; Eckelmann, C; Madrigal, R; Mendez, B; Paveri, M; Zapata, J. Experiences on the implementation of mechanisms for the compensation of hydrological environmental services from forests in Central America and the Caribbean. FAO-Roma.
2008. Madrigal, R; Alpizar, F. El pago por servicios ambientales dentro del contexto de la acción colectiva en cuencas hidrográficas. FOCUENCAS II-CATIE. Turrialba, CR. 17 p.
2008. Retamal, R; Madrigal, R; Alpizar, F; Jiménez, F. Oferta de servicios ecosistémicos hídricos en el municipio de Copán Ruinas: ¿dónde se generan? ¿cómo protegerlos? ¿cuánto pagar por la protección?. FOCUENCAS II-CATIE, Turrialba, CR. 40 p.
2008. Cisneros, J; Alpizar, F; Madrigal, R. Estimación de la demanda por servicios ambientales hídricos en Copán Ruinas, Honduras. *Revista Recursos Naturales y Ambiente*, 51:143-152.
2008. Benites, A; Campos, JJ; Faustino, J; Villalobos, R; Madrigal, R. Identificación de servicios ecosistémicos como base para el manejo participativo de los recursos naturales en la cuenca del río Otún, Colombia. *Recursos Naturales y Ambiente*, 55:83-90.
2007. Angulo, O; Prins, C; Faustino, J; Madrigal, R. Elementos claves para el manejo y gestión del agua en el municipio de Valle de Ángeles, Honduras. *Recursos Naturales y Ambiente*, 51-52: 124-134.
2007. Alpizar, F; Madrigal, R. "Bienes y servicios ecosistémicos en América Latina y el Caribe: buenas prácticas, mecanismos de financiamiento y rol del Estado". BID-CATIE. 198 p.
2007. Madrigal, R; Alpizar, F. Principios de diseño e implementación de esquemas de pagos por servicios ecosistémicos. CCAD-Iniciativa Corredor Biológico Mesoamericano. 55 p.

2006. Campos, J.J., Alpízar F., Louman, B., Parrotta, J., Madrigal, R. Enfoque integral para esquemas de pago por servicios ecosistémicos forestales. Paper presented at Segundo Congreso Latinoamericano IUFRO-LAT. 26 p.

2005. Harvey, C; Alpízar, F; Chacón, M; Madrigal, R. Characterization of the impact of agriculture on biodiversity conservation in Central America. The Nature Conservancy, San José, CR. 140 p.

2005. Alpízar, F; Madrigal, R. "Propuesta metodológica para el establecimiento de tarifas de entrada en las Áreas Silvestres Protegidas de Costa Rica: Casos de estudio en Parque Nacional Braulio Carrillo, Parque Nacional Manuel Antonio y Parque Nacional Corcovado". The Nature Conservancy, Costa Rica.

2001. Hall, L; Madrigal, R. Diseño de un modelo de credit scoring. Instituto de Investigaciones en Ciencias Económicas, Universidad de Costa Rica.

SUPERVISION OF DISSERTATIONS

Main advisor: 25 MSc students at CATIE and the Universidad de Costa Rica.

SELECTED CONFERENCES (Presenting-since 2010)

2020. European Association of Environmental and Resource Economists.

2020. Association of Environmental and Resource Economists.

2019. International Association for the Study of the Commons (IASC), Lima, Perú.

2018. EfD Annual Conference, Hanoi, Vietnam.

2018. Scotland's Biennial Land Use and the Environment Conference XII

2018. World Water Week, Sweeden

2017. International Association for the Study of the Commons (IASC), The Netherlands

2016. World Water Week, Sweeden

2015. LACEEP +10, Mexico

2015. World Water Conference, Scotland

2014. Workshop on the Ostrom Workshop, Indiana University, U.S.

2014. Environment for Development Meeting. Tanzania

2013. Environment for Development Meeting. South Africa

2011. 13th Biennial Conference of the International Association for the Study of the Commons (IASC), India

OTHER TRAINING ATTENDED

2007. Institutional Analysis and Development Course. Workshop in Political Theory and Policy Analysis. Taught by Elinor Ostrom, Indiana University, U.S.

2007. International Forestry and Resources Institutions. Workshop in Political Theory and Policy Analysis. Taught by Burnell Fisher, Catherine Tucker and Elinor Ostrom, IU, U.S.

2006. I International Conference on Commons and Citizenship. DF, México.

2006. Welfare and public economics course. Latin American and Caribbean Environmental Economics Program. Taught by David Shogren, Wyoming University, U.S.

2006. Environmental Economics and Policy Course. Latin American and Caribbean Environmental Economics Program. Taught by David Zilberman, Berkeley University, U.S.

FELLOWSHIPS AND AWARDS

2008. German Academic Exchange Program (DAAD) Fellowship

2007. Norman Borlaug Fellowship

2003. Best Student Award 2002-2003 Class, CATIE

2003. Distinguished MSc. dissertation. 2003. CATIE

2002. Fellowship. KOICA (Korean International Cooperation Agency)

2001. Fellowship. Göteborg University and the Swedish International Development Cooperation Agency

2001. Fellowship. National Council of Science and Technology, Costa Rican Ministry of Technology

PEER REVIEWER

Journal of Environment and Development; Revista Biología Tropical; Global Health Action; Journal of Water, Sanitation and Hygiene for Development; World Development; Water Resources Research; International Journal of the Commons; Revista de Ciencias Económicas-UCR; Conservation Biology; Ecology and Society; Ecosystem Services; Journal of Agricultural and Resource Economics; Journal of Rural Studies.

RESEARCH INTERESTS

Water economics, climate change adaptation, design of policy instruments, institutional economics, common-pool resources management, economic valuation of ecosystem services, marine economics.

LANGUAGES

Spanish - mother tongue; English - fluent (speaking, reading, writing)