

Renato Molina

Assistant Professor in Environmental and Resource Economics
Rosenstiel School & Business School · University of Miami

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EMPLOYMENT, ACADEMIC POSITIONS AND AFFILIATIONS

Rosenstiel School of Marine, Atmospheric, and Earth Science & Miami Herbert Business School, University of Miami <i>Assistant Professor in Environmental and Resource Economics</i>	August 2018 - Present Miami, FL, USA
Abess Center for Ecosystem Science & Policy, University of Miami <i>Abess Center Faculty Scholar</i>	May 2019 - Present Miami, FL, USA
Facultad de Recursos Naturales, PUCV <i>Visiting Scholar</i>	April 2018 - Present Valparaíso, Chile
Sustainable Fisheries Group, UC Santa Barbara <i>Project Researcher</i>	October 2013 - June 2018 Santa Barbara, CA, USA
Facultad de Recursos Naturales, PUCV <i>Lecturer</i>	March 2010 - August 2016 Valparaíso, Chile
Bren School, UC Santa Barbara <i>Graduate Research Assistant</i>	November 2012 - August 2013 Santa Barbara, CA, USA
School of Marine Science, PUCV <i>Research Assistant</i>	July 2007 - December 2009 Valparaíso, Chile
Private Consultant <i>Freelance Industrial Operations Modeler</i>	July 2007 - December 2009 Valparaíso, Chile

EDUCATION

University of California, Santa Barbara Doctor of Philosophy in Economics	2018
University of California, Santa Barbara Master of Arts in Economics	2015
University of California, Santa Barbara Master of Environmental Science and Management	2013
Pontificia Universidad Católica de Valparaíso Professional Degree of Aquaculture Engineering	2010
Pontificia Universidad Católica de Valparaíso Bachelor of Sciences in Fisheries Science	2009

TEACHING

Economics and Politics of the Environment Instructor - <i>Undergraduate-Graduate</i>	2021 - To date University of Miami, USA
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Data Analysis for Environmental Science and Policy Instructor - <i>Graduate</i>	2019 - To date University of Miami, USA
Applied Environmental Economics Instructor - <i>Graduate</i>	2019 - 2020 University of Miami, USA
Economics of Fisheries Management Instructor - <i>Graduate and Government Officials</i>	2017 - 2018 UC Santa Barbara, USA
Economics of Environmental Management Teaching Assistant - <i>Graduate</i>	2017 UC Santa Barbara, USA
Intermediate Macroeconomic Theory Teaching Assistant - <i>Undergraduate</i>	2016 UC Santa Barbara, USA
Operations Research Instructor - <i>Undergraduate</i>	2010 - 2011 PUCV, Chile
Production and Operations Management Instructor - <i>Undergraduate</i>	2010 - 2011 PUCV, Chile
Operations Research Teaching Assistant - <i>Undergraduate</i>	2007 - 2009 PUCV, Chile

RESEARCH

Working papers

Global Effects of MPAs on Food are Unknown
[R&R at Nature Matters Arising]
(with D. Ovando, O. Liu, A. Parma and C. Szuwalski)

The Social Value of Predicting Hurricanes
[Under review]
(with I. Rudik)

Sharing and Expanding the Co-Benefits of Conservation
[R&R at Ecological Economics]
(with C. Costello and D. Kaffine)

The Economic Impact of Modern Piracy on Global Shipping
(with G. McDermott and G. McDonald)

Peer-reviewed

Adaptation Infrastructure and its Effects in Property Values in the Face of Climate Impacts
[Conditionally Accepted at JAERE]
(with D. Kelly)

Pearson, H.C., Savoca, M.S., Costa, D.P., Lomas, M.W., **Molina, R.**, Pershing, A.J., Smith, C.R., Villaseñor-Derbez, J.C., Wing, S.R. and Roman, J., 2022. Whales in the carbon cycle: can recovery remove carbon dioxide?. *Trends in Ecology & Evolution* [in Press].

Wintergalen, E.W., Oyanedel, R., Villaseñor-Derbez, J.C., Fulton, S. and **Molina, R.**, 2022. Opportunities and challenges for livelihood resilience in urban and rural Mexican small-scale fisheries. *Ecology and Society*, 27(3), p.46.

Molina, R., 2022. The lack of property rights can make natural disasters worse: The case of small-scale fisheries in Chile. *Ecological Economics*, 200, p.107540.

Liu, O.R. and **Molina, R.**, 2021. The persistent transboundary problem in marine natural resource management. *Frontiers in Marine Science*, p.1292.

Molina, R., Letson, D., McNoldy, B., Mozumder, P. and Varkony, M., 2021. Striving for Improvement: The Perceived Value of Improving Hurricane Forecast Accuracy. *Bulletin of the American Meteorological Society*, 102(7), pp.E1408-E1423.

Ovando, D., Liu, O., **Molina, R.** and Szuwalski, C., 2021. Models of marine protected areas must explicitly address spatial dynamics. *Proceedings of the National Academy of Sciences*, 118(23), p.e2025958118.

Costello, C. and **Molina, R.**, 2021. Transboundary marine protected areas. *Resource and Energy Economics*, 65, p.101239.

Palacios-Abrantes, J., Herrera-Correal, J., Rodríguez, S., Brunkow, J. and **Molina, R.**, 2018. Evaluating the bio-economic performance of a Callo de hacha (*Atrina maura*, *Atrina tuberculosa* & *Pinna rugosa*) fishery restoration plan in La Paz, Mexico. *PloS one*, 13(12), p.e0209431.

Liu, O.R., **Molina, R.**, Wilson, M. and Halpern, B.S., 2018. Global opportunities for mariculture development to promote human nutrition. *PeerJ*, 6, p.e4733.

Molina, R., Cerda, R., González, E. and Hurtado, F., 2012. Simulation model of the scallop (*Argopecten purpuratus*) farming in northern Chile: some applications in the decision making process. *Latin American Journal of Aquatic Research*, 40(3), pp.679-693.

Book chapters

Norambuena, R., González, E., **Molina, R.** & Gomez, A. 2017. Impacts of Climate Change on Marine Fisheries and Aquaculture in Chile (Chapter 10 - Aquaculture). In: Phillips, B. & Pérez, M. (eds) *The Impacts of Climate Change on Fisheries and Aquaculture*. John Wiley & Sons, Inc., Hoboken, NJ, USA.

González, E., Norambuena, R., **Molina, R.** & Thomas, F. 2013. Evaluación de Potenciales Impactos y Reducción de la Vulnerabilidad de la Acuicultura al Cambio Climático en Chile [Potential Impacts and Reduction of the Aquaculture Vulnerability to Climate Change in Chile]. In: *Cambio climático, pesca y acuicultura en América Latina: Potenciales impactos y desafíos para la adaptación*. Taller FAO/Centro de investigación Oceanográfica en el Pacífico Sur Oriental (CO-PAS), Universidad de Concepción, Concepción, Chile. FAO Actas de Pesca y Acuicultura. No. 29. Roma, FAO, 275-335p.

AWARDS

Lone Mountain Fellowship 2023

Property and Environment Research Center

Received funding to undertake research that advances our understanding of the role of markets, public policy, property rights, and governance in affecting environmental resources.

Early-Career Research Fellowship 2022

Gulf Research Program, National Academy of Sciences, Engineering, and Medicine

Recognized for emerging scientific leadership related to work on coastal resilience in the Gulf of Mexico.

Provost Research Award	2021
<i>University of Miami, Miami</i>	
Received financial support to perform independent research.	
Provost Research Award	2019
<i>University of Miami, Miami</i>	
Received financial support to perform independent research.	
White Family Fellowship	2017
<i>University of California, Santa Barbara</i>	
Recognized for outstanding academic achievement in the Department of Economics.	
Lindau Nobel Laureate Meetings Fellowship	2017
<i>Lindau Nobel Laureate Meetings Foundation</i>	
Nominated and selected to attend the 6th Lindau Meeting on Economic Sciences at Lindau, Germany.	
Honorable Mention	2017
<i>North American Association of Fisheries Economists</i>	
Runner-up for Best Student Paper in the 2017 NAAFE forum held in La Paz, Mexico.	
Ronald Coase Fellowship	2017
<i>Ronald Coase Institute</i>	
Received financial support to attend to the Ronald Coase Workshop on institutional analysis in Xiamen, China.	
Graduate Student Fellowship	2016
<i>Property and Environment Research Center</i>	
Received financial support to conduct research on the performance of property rights for common pool resources under natural disasters.	
H. William Kuni Bren Fellowship	2016
<i>University of California, Santa Barbara</i>	
Received financial support to conduct interdisciplinary research on the future development of aquaculture when contrasted with environmental, economic and human health guidelines.	
Becas Chile	2014
<i>Chilean Government</i>	
Received full funding for a four-year Ph.D. in Economics program.	
Latin American Fisheries Fellowship	2011
<i>University of California, Santa Barbara / Walton Foundation</i>	
Received full-funding for a two-year Master in Environmental Science and Management program.	
Becas Chile	2011
<i>Chilean Government</i>	
Received supplemental funding for a two-year Master in Environmental Science and Management program.	
Best Graduate	2010
<i>Pontificia Universidad Católica de Valparaíso</i>	
Recognized for the best academic performance of the 2010 Aquaculture Engineering graduation class.	

APROPECH Best Thesis Award

2010

Pontificia Universidad Católica de Valparaíso

Recognized for the best thesis project of the 2010 Aquaculture Engineering graduation class.

Best Academic Performance

2009

Pontificia Universidad Católica de Valparaíso

Ranked 1st in academic performance for the overall 2009 Aquaculture Engineering class.

GRANTS

National Academy of Sciences, Engineering, and Medicine - USA, 2022. Early-Career Research Fellowship of the Gulf Research Program.

(\$76,000 - PI)

University of Miami, Florida - USA, 2021. U-LINK (Phase I). Developing resiliency tools and metrics and co-designing an expert and stakeholder coalition to sustain predictions on the health of South Florida's Biome through a human, urban, and environmental transect.

(\$86,000 - Co-PI)

University of Miami, Florida - USA, 2021. Provost Research Award. Climate Resilience Infrastructure and Gentrification.

(\$10,500 - PI)

National Oceanic and Atmospheric Administration, Florida - USA, 2020. The Social Value of Hurricane Forecasts.

(\$400,000 - PI)

University of Miami, Florida - USA, 2020. U-LINK (Phase II - Year 2). Next Generation of Coastal Structures: Incorporating Ecology, Engineering, Economics, and Aesthetics for a Changing Ocean.

(\$150,000 - Co-PI)

University of Miami, Florida - USA, 2019. U-LINK (Phase II - Year 1). Next Generation of Coastal Structures: Incorporating Ecology, Engineering, Economics, and Aesthetics for a Changing Ocean.

(\$150,000 - Co-PI)

University of Miami, Florida - USA, 2019. Provost Research Award. The Impact of Piracy on Global Shipping.

(\$17,000 - PI)

University of Miami, Florida - USA, 2018. U-LINK (Phase I). Next Generation of Coastal Structures: Incorporating Ecology, Engineering, Economics, and Aesthetic for a Changing Ocean.

(\$75,000 - Co-PI)

National Oceanic and Atmospheric Administration, Florida - USA, 2018. A Web-based Survey to Estimate the Economic Value of Improved Hurricane Forecasts.

(\$400,000 - PI)

The Nature Conservancy, Mexico - Peru, 2017. Technical Training in the Economics of Fisheries Management for Decision Makers

(\$47,000 - PI)

The Nature Conservancy, Peru 2017 Technical Training in the Economics of Fisheries Management for Decision Makers.

(\$35,000 - PI)

The Nature Conservancy, Peru, 2016. Improving the Management of Peru's Anchoveta Fishery: Understanding the Socio-Economic Impacts of Management Strategies.
(\$55,000 - Co-PI)

Undersecretariat for Fisheries and Aquaculture, Chile, 2009. Methodology for the Calculation of User Fees in the Chilean Territorial User Fishery Rights System (TURF) for Benthic Fisheries.
(\$50,000 - Co-PI)

Asia-Pacific Economic Cooperation, Chile, 2009. Development of an APEC Strategy on Sustainable Aquaculture.
(\$30,000 - Co-PI)

Fund for Fisheries Research, Chile, 2008. Technical basis for the Fisheries Management Plan in the Southern Chilean Groundfish Fishery.
(\$200,000 - Co-PI)

PRESENTATIONS

2022

AERE Summer Conference, Miami, Florida; Pontificia Universidad Catolica de Valparaiso, Valparaiso, Chile; International Atmospheric Rivers Conference, Santiago, Chile; University of California, San Diego.

2021

AERE Summer Conference, Miami, Florida (Virtual); National Oceanic and Atmospheric Administration Seminar.

2020 - Virtual

Workshop in Environmental Economics and Data Science, University of Oregon; Triangle Resource and Environmental Economics Seminar, Duke University, North Carolina State University, RTI International; Climate Adaptation Research Symposium, University of California, Los Angeles; National Oceanic and Atmospheric Administration Seminar.

2019

Southern Economic Association Annual Meetings, Fort Lauderdale, Florida; Occasional Workshop in Environmental and Resource Economics, Santa Barbara, California; Camp Resources, North Carolina State University; AERE Summer Conference, Tahoe, California; Workshop in Environmental Economics and Data Science, University of Oregon.

2018

Occasional Workshop in Environmental and Resource Economics, University of California, Santa Barbara; University of California, Berkeley; University of Miami; Resources for the Future.

2017

North American Association of Fisheries Economists, La Paz, Mexico; Ministry of Production, Lima, Peru.

2015

World Bank, Latin American Regional Office, Lima, Peru; Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile.

2014

International Conference of the International Institute of Fisheries Economics & Trade, Brisbane, Australia; Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile; The Nature Conservancy, Valdivia, Chile.

SKILLS & INTERESTS

Languages

Spanish (native) - English (fluent).

Peer-review

American Journal of Agricultural Economics - Advances in Econometrics - Conservation Biology - Energy and Resource Economics - Environment and Resource Economics - Journal of Environmental Economics and Management - Journal of the Association of Environmental and Resource Economists - Land Economics - Natural Hazards - Nature - Nature Climate Change - Real Estate Economics.

Research Interests

Environmental and Resource Economics - Dynamic Optimization - Game Theory - Political Economy.

Miscellaneous Interests

Music - Photography - Aviation.