Phone: +1 (305) 421-4160
Email: jc_villasenor@miami.edu
Web: villasenor-derbez.com

Juan Carlos Villaseñor-Derbez

EDUCATION

2022 Ph.D. Environmental Science and Management. University of California, Santa Barbara

2017 Master of Environmental Science and Management. University of California, Santa Barbara

2015 B.Sc. Oceanography, *Honors.* Universidad Autónoma de Baja California (Mexico)

ACADEMIC APPOINTMENTS

2024 – Assistant Professor. Department of Environmental Science and Policy, Rosenstiel School of Marine, Atmospheric and Earth Science, University of Miami
Core Faculty, Frost Institute for Data Science & Computing, University of Miami

2022 - 2024 Postdoctoral Scholar. Oceans Department, Doerr School of Sustainability, Stanford University

2020 - 2022 Graduate Student Researcher. Environmental Markets Lab, University of California, Santa Barbara

2019 - 2020 Graduate Student Researcher. National Center for Ecological Analysis and Synthesis

AREAS OF INTEREST

Social-ecological marine systems; Human dimensions of marine conservation; Coastal resilience; Climate change adaptation; Environmental markets; Marine policy design and evaluation; Spatial environmental economics

GRANTS & AWARDS

Research Grants

2026 Provost's Research Awards ($19,748). Big Protections for Big Fish: Do Large-scale Marine Protected Areas Benefit Highly Migratory Fish?

Pew Charitable Trusts ($54,977). Ecological and Economic Implications of Large-Scale Marine Protected Areas

2024 PADI Foundation Research Grant ($7,000). Economic impacts of *Sargassum* blooms on the diving industry.

2021 Environmental Solutions Research Grant ($20,000). Schmidt Family Foundation. Incentives for Equitable and Cost-effective Marine Conservation

Dissertation Fellowship ($25,000). UC Institute on Global Conflict and Cooperation. Designing Conservation Markets for International Cooperation

2020 H. William Kuni Research Award ($14,950). Economic and Ecological responses to global economic shutdowns in coral reef communities. With Erin Winslow and Nathaniel Grimes

2019 Mohamed bin Zayed Species Conservation Fund ($11,500). Unveiling the Ecology of Giant Sea Bass (*Stereolepis gigas*). With Arturo Ramírez-Valdez and Kyla Blincow

2018 H. William Kuni Research Award ($15,000). The proliferation of Fish Aggregating Devices (FADs) in the Caribbean Sea. With Molly Wilson, Julia Lawson, and Ignacia Rivera

2017 PADI Foundation Research Grant ($6,600). Natural history of the giant sea bass (*Stereolepis gigas*) in Mexican waters. With Arturo Ramírez-Valdez and Paula Sgarlatta.

Fellowships and scholarships

2017 Doctoral Fellowship ($61,194). UC Mexus.

Latin American Fisheries Fellowship ($57,400). University of California, Santa Barbara

International Student's Doctoral Fellowship ($146,619). Consejo Nacional de Ciencia y Tecnología (CONACyT).

2015 Latin American Fisheries Fellowship ($42,000). University of California, Santa Barbara

CONACyT International Student's Master's Fellowship ($64,946). Consejo Nacional de Ciencia y Tecnología (CONACyT).

Awards and recognitions

2026 Lone Mountain Fellow. Property and Environment Research Center ($6,000)

2014 Pedro Mercado Sánchez National Oceanography Award. Asosiación Mexicana de Oceanólogos.

Distinguished Student of the Oceanography program. Facultad de Ciencias Marinas, Universidad Autónoma de Baja California. Ranked first in academic performance for the overall major in 2014

2012 Distinguished Student of the Oceanography program. Facultad de Ciencias Marinas, Universidad Autónoma de Baja California. Ranked first in academic performance for the overall major in 2012

PEER-REVIEWED PUBLICATIONS

Published (*co-first authorship; •student author)

2026 **Villaseñor-Derbez, J. C.**, Burfoot, A. W., & Molina, R. (2026). Competitiveness in American Seafood Requires Climate-Resilient Fisheries. *Fish and Fisheries*. DOI: 10.1111/faf.70108

Schiller L., **Villaseñor-Derbez J.C.**, Lynham J., and Worm B. (2026). Global impacts of drifting fish aggregating devices on marine protected areas. *Science Advances*. 12:25. DOI: 10.1126/sciadv.aee6998

Villaseñor-Derbez, J. C., Fernández, R., Fulton, S., Hernández-Velasco, A., Hernández, T., Woodson, C. B., ... & Micheli, F. (2026). Digital technologies and the study of adaptation in small-scale fisheries. Ocean & Coastal Management, 275, 108071. DOI: 10.1016/j.ocecoaman.2025.108071

2025 **Villaseñor-Derbez J.C.**, Lynham J, Garibay-Tousant I, Narchi. N.E., O'Connor R., Olguín-Jacobson C., DeLeo G.A., Torre J., Arafeh-Dalmau N., Fulton S., Woodson C.B., Micheli F. Climate-resilient fisheries are more resilient in general. *npj Ocean Sustain* 4, 56 (2025). DOI: 10.1038/s44183-025-00154-1

Arafeh-Dalmau N. , **Villaseñor-Derbez J.C.**, Schoeman D.S., Mora-Soto A., Bell T.W. , Butler C.L. , Costa M., Dunga L.V. , Houskeeper H.F., Lagger C., Pantano C., Laínez del Pozo D. , Sink K.J., Micheli F., Cavanaugh K.C. (2025). Global floating kelp forests have limited protection despite intensifying marine heatwave threats. *Nature Communications* 16 (1), 3173. DOI: 10.1038/s41467-025-58054-4

Englander G, Zhang , **Villaseñor-Derbez J.C.**, Jiang Q, Hu M, Deschenes O and Costello C. (2025). Input subsidies and the depletion of natural capital: Chinese distant water fishing. *Journal of Environmental Economics and Management*. DOI: 10.1016/j.jeem.2025.103127

2024 *Lynham J. & **Villaseñor-Derbez, J.C.** (2024). Evidence of spillover benefits from large-scale marine protected areas to purse seine fisheries. *Science*, Vol 386, Issue 6727, DOI: 10.1126/science.adn1146

•Kumagai J., Goodman M.C., **Villaseñor-Derbez J.C.**, Schoeman D.S., Cavanuagh K.C., Bell T.W., Micheli F., De Leo G. & Arafeh-Dalmau N. (2024). Marine protected areas that preserve trophic cascades promote resilience of kelp forests to marine heatwaves. *Global Change Biology*. DOI: 10.1111/gcb.17620

Villaseñor-Derbez, J.C. Arafeh-Dalmau, N, & Micheli F. (2024). Past and future impacts of marine heatwaves on small-scale fisheries in Baja California, Mexico. *Communications in Earth and the Environment.* Vol 5, Issue 623, DOI: 10.1038/s43247-024-01696-x

Villaseñor-Derbez, J.C., Costello C. & Plantinga A. (2024). A Market for 30x30 in the Ocean. *Science*, Vol 384, Issue 6701 DOI: 10.1126/science.adl4019

2023 Arafeh-Dalmau *et al.,* (2023). Integrating climate adaptation and transboundary management: guidelines for designing climate-smart marine protected areas. *One Earth.* DOI: 10.1016/j.oneear.2023.10.002

Villaseñor-Derbez, J. C., Fulton, S., Hernández-Velasco, A., & Amador, I. (2023). Biomass accrual benefits of community-based marine protected areas outweigh their operational costs. *Frontiers in Marine Science*, *10*, 1180920. DOI: 10.3389/fmars.2023.1180920

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., Roman J. (2023).Whales in the Carbon Cycle: Can Recovery Remove Carbon Dioxide? *Trends in Ecology and Evolution.* DOI: 10.1016/j.tree.2022.10.012

2022 Wintergalen E., Oyanedel R., **Villaseñor-Derbez, J.C.**, Fulton S., Molina R. (2022).Opportunities and challenges for livelihood resilience in urban and rural Mexican small-scale fisheries. *Ecology and Society*. DOI: 10.5751/ES-13471-270346

Villaseñor-Derbez, J.C. Amador-Castro, I., Hernández-Velasco, A., Torre, J., & Fulton S. (2022).Two decades of community-based marine conservation provide the foundations for future action. *Frontiers in Marine Science.* DOI: 10.3389/fmars.2022.893104

Wilson M. W., Lawson J. M., Rivera-Hechem M. I., **Villaseñor-Derbez J. C.**, Gaines, S. D. (2022).Evaluating Conditions for Moored Fish Aggregating Device Fisheries Development in the Caribbean and Bermuda. (In Press). *Frontiers in Marine Science.* DOI: 10.3389/fmars.2022.827068

2021 *Millage K.D., **Villaseñor-Derbez, J.C.**, Bradley D., Burguess M., Lenihan H., Costello C. (*2021*). Self-Financed Marine Protected Areas. *Environmental Research Letters* DOI: 10.1088/1748-9326/ac3439

Tuholske C., Halpern B., Blasco G., **Villaseñor-Derbez J.C.**, Frazier M., Caylor K.K. (*2021).* Mapping global inputs and impacts from human sewage in coastal ecosystems. *PLoS ONE* DOI: 10.1371/journal.pone.0258898

Ramírez-Valdez A., Rowell T. J., Dale K., Craig M., Allen L., **Villaseñor-Derbez** J.C., Cisneros-Montemayor A., Hernández-Velasco A., Torre J., Hofmeister J., Erisman B. (2021) Asymmetry across international borders: Research, fishery and management trends and economic value of the giant sea bass (*Stereolepis gigas*). *Fish & Fisheries*. DOI: 10.1111/faf.12594

Lynham J., Nikolaev A., Raynor, J., Vilela T., **Villaseñor-Derbez J.C.** (2021). Reply to "Catch rate composition affects assessment of protected area impacts". *Nature Communications*. DOI: 10.1038/s41467-021-21608-3

2020 Wilson M. W., Lawson J. M., Rivera-Hechem M. I., **Villaseñor-Derbez J. C.**, Gaines, S. D. (2020). Status and trends of moored fish aggregating device (MFAD) fisheries in the Caribbean and Bermuda. *Marine Policy*. DOI: 10.1016/j.marpol.2020.104148

Lynham J., Nikolaev A., Raynor, J., Vilela T., **Villaseñor-Derbez J.C.** (*2020*). Impact of two of the world's largest protected areas on longline fishery catch rates. *Nature Communications*. DOI: 10.1038/s41467-020-14588-3

Villasenñor-Derbez J.C., Lynham J., Costello C. (2020). Environmental Market Design for Large-Scale Marine Conservation. *Nature Sustainability*. DOI: 10.1038/s41893-019-0459-z

2019 **Villaseñor-Derbez J.C.**, Aceves-Bueno E., Fulton S., Suarez-Castillo A., Hernández-Velasco A., Torre J., Micheli F. (2019.). An interdisciplinary evaluation of community-based TURF-reserves. *PLoS ONE*. DOI: 10.1371/journal.pone.0221660

O'Hara C. **Villaseñor-Derbez., J.C.,** Ralph G., Halpern B. (2019). Mapping status and conservation of global at-risk marine biodiversity. *Conservation Letters*. DOI: 10.1111/conl.12651

Villaseñor-Derbez J.C., and Fitzgerald S. (2019). Spatial variation in allometric growth of invasive lionfish has management implications. *PeerJ*. DOI: 10.7717/peerj.6667

2018 •Reulbach, A. and **Villaseñor-Derbez J.C** (2018). Local Variation in the Diet of Invasive Lionfish. Journal of Environmental Science and Sustainable Design, 2

Peake, J., Bogdanoff A.K., Layman C.A., Castillo B., Chapman J., Dahl K., Patterson W., Eddy C., Ellis R., Faletti M., Higgs N., Johnston M., Muñoz R., Sandel V., **Villaseñor-Derbez J.C.**, Morris Jr. J.A. (*2018*). Feeding ecology of invasive lionfish (*Pterois volitans* and *Pterois miles*) in the temperate and tropical western Atlantic. *Biological Invasions*. DOI: 10.1007/s10530-018-1720-5

Villaseñor-Derbez J.C. Faro C., Wright M., Martínez J., Fitzgerald S., Fulton S., Mancha-Cisneros M.M., McDonald G., Micheli F., Suárez A., Torre J., Costello C. (2018). A user-friendly tool to evaluate the effectiveness of no-take marine reserves. *PLoS ONE*. DOI: 10.1371/journal.pone.0191821

2016 Hernández-Velasco A.J., Fernández-Rivera Melo F.J., Melo-Merino, S.M. **Villaseñor-Derbez, J.C.** (2016). Occurrence of *Holacanthus clarionensis* (Pomacanthidae), *Stegastes leucorus*, and *S. acapulcoensis* (Pomacentridae) at Isla Magdalena B.C.S., Mexico. *Marine Biodiversity Records*. DOI: 10.1186/s41200-016-0062-1

2015 Ramírez-Valdez A., Dominguez-Guerrero I., Palacios-Salgado D.S., Cota-Nieto J.J., Hinojosa-Arango G., Correa-Sandoval F., Reyes-Bonilla H., **Villaseñor-Derbez J.C**., Hernandez A., Aburto-Oropeza, O. (2015). The nearshore fishes of the Cedros archipelago (Northeastern Pacific) and their biogeographic affinities. *CalCOFI Reports*

Dreyfus M., Mejía-Trejo A., **Villaseñor-Derbez J.C.** (2015). Analysis of null sets (no catch) made by the Mexican tuna seine fleet (2000-2013). *Ciencias Marinas*. DOI: 10.7773/cm.v41i2.2471

2014 **Villaseñor-Derbez J.C.** & Herrera-Pérez R. (2014). Brief description of prey selectivity and ontogenetic changes in the diet of the invasive lionfish *Pterois volitans* (Actinopterygii, Scorpaenidae) in the Mexican Caribbean. *Pan-American Journal of Aquatic Sciences*, 8(2):131-135

In progress

In Review

Engist D. Englander G., Costello C., Noack F., Raynor J. and **Villaseñor-Derbez J.C**. When Does Better Information Reduce Crime? *Journal of Political Economy Microeconomics* (In Review)

Villaseñor-Derbez J.C. and Lynham J. Limited Conservation Benefits From the First Marine Protected Area on the High Seas. *Nature Sustainability* (In Review: NATSUSTAIN-26108047)

Molina R., **Villaseñor-Derbez J.C.** and Agar J. Hurricanes on Fisheries in the United States. *Journal of the Association of Environmental and Resource Economists.* (In Review)

Molina R., **Villaseñor-Derbez J.C.,** McDonald G., and McDermott. The Economic and Environmental Cost of Pirate Avoidance. Revise and resubmit at *Nature Communications* (R&R requested June 8, 2026: NCOMMS-25-93345A)

Villaseñor-Derbez J.C. et al., Towards Assessing Generalizability of Adaptive Responses in Small-Scale Fisheries. *npj Ocean Sustainability* (R&R Requested August 27, 2026: 5fc3f864-31e2-4569-8f8f-25f06f4e2a44)

In preparation

•Rhodes, A and **Villaseñor-Derbez J.C.** An *impromptu* fuel subsidy reform decreases effort by tuna longliners in the Gulf of Mexico.

Villaseñor-Derbez J.C., Costello C., Deschenes O. Subsidizing the tragedy of the commons: Fuel subsidies modify fishing behavior and drive overfishing

Villaseñor-Derbez, J.C., Reigrut J.D., Fulton, S., López-Ercilla, L., Torre, J., De Leo, G.A., Hernández-Velasco, A., Quintana A., Aceves-Bueno E., Micheli F. Having your cake and eating it too: limited harvesting in marine reserves allows fishers to stay afloat

Villaseñor-Derbez J.C., Torre J., Micheli F. Vessel monitoring systems reveal the unequal economic and environmental impacts of COVID-19 lockdown on fisheries.

Villaseñor-Derbez, J.C. Molina R. and Savoca M. The implied carbon costs of human-induced whale mortality.

Ferraro, D., Burnes, E., Thomas, L., Bone, J., **Villaseñor-Derbez, J.C.**, Granados-Dieseldorff, P.. Costello C., High seas fishing closures to reduce the opportunity costs of 30x30.

Villaseñor-Derbez J.C., Millage K.D., Bordignon M. First report of total albinism in *Rhamdia guatemalensis* (Günther, 1864) from a cenote in the Yucatan Peninsula, Mexico.

OTHER PRODUCTS

Datasets

2025 Mexican Fisheries Data: A universe of standardized and interoperable datasets. Available at: github.com/mex-fisheries. Individual datasets available below:

- A geospatial dataset of Mexican ports. DOI: 10.5281/zenodo.15778574
- Vessel Tracking Data from Mexico's Vessel Monitoring System (VMS). DOI: 10.5281/zenodo.17592444
- A registry of Mexican fishing vessels. DOI: 10.5281/zenodo.17592461
- High resolution landings for Mexican industrial and small-scale fisheries DOI: 10.5281/zenodo.17592475

Software

2025 EVR628tools: a series of datasets, palettes, and functions to help in the instruction of EVR 528 / 628. Available at: jcvdav.github.io/EVR628tools

EventHorizon: An R package to build panels for event-study models based on a user-specified time horizon for repeated interventions. Available at: jcvdav.github.io/EventHorizon

2024 La Pesca Cambiante. A Web-based app to study adaptation under climate change. https://jcvd.shinyapps.io/FishCatchR/

startR: An R-package for internal workflow management: emlab-ucsb.github.io/startR/

2022 CostApp V2.0: A web-based app to estimate costs of marine conservation interventions: innovacionazul.shinyapps.io/AppCosteo/

2017 MAREA: The Marine Reserve Evaluation App; A web-based app to evaluate conservation interventions: innovacionazul.shinyapps.io/MAREA

2016 GPSelector: A web-based tool to optimize the allocation of students to group projects at the Bren School of Environmental Science & Management: jcvd.shinyapps.io/GPSelector/

MENTORING (*Chair, °Co-chair)

PhD Students

- *Julia (JD) Reigrut, Environmental Science and Policy
- °Gabriella Berman, Environmental Science and Policy / Law degree
- °Katie Geddes, Environmental Science and Policy
- *Macey Hartman, Environmental Science and Policy

MSc Students

- Jennifer Norcross, 2025
- Wendy Miyazaki
- Sabirah Carfagna

MPS Students

- Anton Pham, 2025

- Emily Rodriguez

Master's Group Theses Mentored (Client in parentheses)

2020 Students: Peyton Moore, Ruben Sanchez-Ramirez, Dylan Glave, Elliott Matthews
Project: Marine Extractive Reserve performance in Brazil
Client: World Wildlife Fund Brazil
Faculty Advisor: Steve Gaines

2019 Students: Caio Della Colleta Vianna, Eva Marrero, Kirby Bartlett, Anna Calle, Sandra Fogg
Project: Assessing Brazil's Marine Aquaculture Potential
Client: World Wildlife Fund Brazil
Faculty Advisor: Hunter Lenihan

2018 Students: Edaysi Bucio, Seleni Cruz, Vienna Saccomanno, Juliette Verstaen, Valeria Tamayo
Project: Economic quantification of delaying management in the Midriff Islands, Mexico
Client: Comunidad y Biodiversidad A.C.
Faculty Advisor: Hunter Lenihan

Students: Mario Colon, Daniel Elkin, Lauren Kaapcke, Madison Meltzer, Casey Moorhead
Project: Insurance instruments to leverage natural infrastructure for climate change resilience
Client: The Nature Conservancy
Faculty Advisor: Ashley Larsen & Samantha Stevenson

2017 Students: Fabio Castagnino, Roxanne Diaz, Denise Garcia, Sarah Salem, Camila Vargas
Project: Creating Effective Marine Reserves
Client: Fundación Claudia y Roberto Hernández
Faculty Advisor: Steve Gaines

Undergraduate Students

- Morgan Whaley (2026), Marine Affairs, University of Miami
- Maggie Smith – 2026, Marine Affairs, University of Miami
- Nina Adrineda (2025), Marine Biology and Ecology, University of Miami
- Aubriana Rhodes – 2025, Marine Affairs, University of Miami
- *Isabella Morledge – 2025, Marine Affairs, University of Miami
- *Emma Zgonena – Summer intern visiting from McGill University

High school students (Placement)

2026 *Alexandra Papp

2024 *Kush Gulati

2018 *Alex Reulbach. Small-scale variation in the diet of invasive lionfish. (Marine Biology, UNC)

*Alisha Naidu. Ontogenetic habitat shifts in invasive lionfish. (Computer Science, Williams College)

*Joseph Sausville. Examining trade-offs in economic output and conservation in fishing communities (Claremont McKenna College)

TEACHING

Instructor of record

2026 Fall EVR 628/528 - Introduction to Data Management and Visualization for Environmental Scientists

2025 Fall EVR 628/528 - Introduction to Data Management and Visualization for Environmental Scientists

Spring EVR 774 - Advanced Studies in Environmental Science and Management

Guest Lecturer

2025 Marine Conservation and Environmental Economics. MSC 311 - Economics and Politics of the Environment. University of Miami.

2024 Economic Incentives and Marine Protected Areas. SIO295S - Introduction to Marine Biodiversity and Conservation. Scripps Institution of Oceanography. UC San Diego.

2022 The Economics of Marine Conservation. BIO 301 - Frontiers in Marine Biology. Stanford. (67 students)

2020 "Package-less" coding: Coding in base R. ESM 206 - Data Analysis and Statistics. Bren School of Environmental Science & Management. UC Santa Barbara (100+ students)

Marine Conservation in Practice. EEMB 168 - Conservation Ecology. UC Santa Barbara (100+ students)

2018 The development cycle of web-based apps. ESM 244 - Adv. Data Analysis and Statistics. Bren School of Environmental Science & Management. UC Santa Barbara (~70 students)

Teaching Assistant for graduate-level courses

2020 ESM 206 – Introduction to Environmental Data Science & Statistics with Dr. Allison Horst (100+ students)

ESM 201 – Ecology of Managed Ecosystems with Dr. David Tilman (86 students)

2019 ESM 201 – Ecology of Managed Ecosystems with Dr. David Tilman (82 students)

Data Science Workshops

2025 Geocomputation in R

2021 EcoDataScience Workshop: GNU make and Makefiles for continuous development (and reproducibility)

2019 EcoDataScience Workshop: Collaborative workflows with git and GitHub

LAFF workshop: Coding ecological models in R

2017 EcoDataScience Workshop: Introduction to R Markdown

Other Workshops

2022 Use of the CostApp to budget for marine conservation interventions

2019 Evaluation and budgeting of Marine Reserves in Mexico

2018 Empirical valuation of Marine Reserves effectiveness

2017 A general approach and tool to evaluate the effectiveness of no-take marine reserves

Empirical valuation of Marine Reserves effectiveness

2015 REEFCheck California monitoring techniques

Other teaching and mentoring activities

2019 Instructor. Family Ultimate Science Exploration, UCSB

Guest Lecturer. Laguna Blanca high school. How can economics help conserve the environment?

2017 Instructor. Colegio Puerto Aventuras (Mexico). Introduction to computer programming in R

ACADEMIC SERVICE

Committees

2026 Chair - Hybrid Marine Conservation Leturer Search Committe

Presenter representing EVR, 411/412 Research Seminar, 2026

Member, Abess-EVR PhD Admissions Committee, 2026

2025 Panelist, Rosenstiel "Flight school"

Member, Lecturer search. GIS / Marine Policy lecturer. Rosenstiel School of Marine, Atmospheric, and Earth Science. University of Miami.

2020 Student representative, Faculty Search. Assistant Professor in Environmental Data Science. Bren School of Environmental Science & Management, UCSB

2019 Dean's Advisory Council. Bren School of Environmental Science & Management, UCSB

2018 PhD Symposium organization committee. Bren School of Environmental Science & Management, UCSB

2014 Student Conference Organizer. Facultad de Ciencias Marinas, UABC

2013 Student Council. Facultad de Ciencias Marinas, UABC

Working groups and panels

2026 Identification of indicators and monitoring framework for the Azores Marine Protected Area Network, Oceano Azul Foundation

2025 An Ocean Health Index for the Gulf of California. NCEAS

2024 Ocean Capital Workshop: Designing the Latin American Ocean Capital Collective. Innovación Azul

2021 Data Science communities in Santa Barbara. Master of Environmental Data Science Program, UCSB

2019 Palau's National Marine Sanctuary: Managing Ocean Change and Supporting Food Security. NCEAS

2017 Marine Spatial Planning in Baja California: Connecting MPA networks in a transboundary context. COBI

Defining Socioeconomic indicators for to evaluate marine protected areas. COBI / TNC

2016 Defining Ecological indicators for to evaluate marine protected areas. COBI / TNC

Referee Activity

Bulletin of Marine Science (1), Ecological Modeling (2), Frontiers in Marine Science (6), Gulf and Caribbean Research (1), Nature Sustainability (2), Marine Policy (1), Earth System Governance (1), Ecology & Society (1), Science Advances (1), Environmental Research Letters (1), One Earth (1)

PRESENTATIONS (*****awarded ⁺invited) _____

2026 Extreme Weather Alters Fishing Effort and Recovery Dynamics in the Gulf of Mexico. International Institute for Fisheries Economics and Trade Conference

Environmental Markets Enable Large-scale Marine Conservation in the High Seas. International Institute for Fisheries Economics and Trade Conference

Subsidizing the tragedy of the commons: Fuel subsidies modify fishing behavior and drive overfishing. World Conference on Environmental and Resource Economics

⁺An Environmental Market for "Florida Man" Predatory Release Quotas for Invasive Python Management. Lone Mountain Fellow Seminar

Extreme Weather Alters Fishing Effort and Recovery Dynamics in the Gulf of Mexico. Gulf Conference

Big Data at Sea: A Data Ecosystem for Studying Human Behavior and Policy Impacts at Sea. Rosenstiel Research Day. 2026

2025 ⁺Subsidizing the tragedy of the commons: Fuel subsidies modify fishing behavior and drive overfishing. Seminar at the Department of Economics, University of Hawaii at Manoa

⁺Evidence of Spillover Benefits from Large-scale Marine Protected Areas to Purse Seine Fisheries. Measuring Development / The World Bank

Empirical evidence that fuel subsidies modify fishing behavior and drive overfishing. *NAAFE 2025*

⁺A market for 30x30 in the ocean. 30x30 Marine Conservation Virtual Workshop. Earth Journalism Network

⁺A global market for 30 X 30. Biodiversity Credits: Opportunities for Coastal Conservation and Restoration. Coastal Quest

2023 Economic impacts of marine heatwaves in small-scale fisheries. *Latin America & Caribbean Fisheries Congress*

2022 Distributional impacts of marine protected areas. *Harnessing Data and Tech for Ocean Health and Sustainability Conference*

Economic impacts of environmental variation in small-scale fisheries. *HMS seminar series*

2019 Status and trends of moored fish aggregating device (MFAD) fisheries in the Caribbean and Bermuda. *72nd GCFI*

*****Change in behavior and effort redistribution after implementation of Large Scale Marine Protected Areas. *Future Oceans2*

2018 Effectiveness of community-based marine reserves in small-scale fisheries. *3rd World Small-Scale Fisheries Conference*

2017 A general approach and tool to evaluate the effectiveness of no take marine reserves. *28th International Congress for Conservation Biology.*

2014 Because size matters: Differences in size structure of exploited and unexploited fish populations along the coasts of Baja California, Mexico. *XIV National Ichthyology Meeting and III Latin-American Ichthyology Symposium.*

Biogeographic relationships of fish communities associated to Kelp Forests off the coasts of Baja California, Mexico. *XIV National Ichthyology Meeting and III Latin-American Ichthyology Symposium.*

*****Effects of recreational fisheries over sizes and biomasses of fish associated to Kelp Forests. *2nd State Meeting of Young Researchers.*

*****Latitudinal distribution of sizes of fish associated to Kelp Forests off the coasts of Baja California, Mexico. *XVIII National Oceanography Conference.*

*****Latitudinal distribution of sizes of fish associated to Kelp Forests off the coasts of Baja California, Mexico. *XXII Student Conference at the Marine Sciences School and 1st National Student Conference on Marine and Environmental Sciences.*

Description of feeding habits and ontogenetic changes in the invasive lionfish *Pterois volitans* (Linnaeus, 1758) diet off the coasts of Playa del Carmen, Quintana Roo. *1st Student Conference of Biological Sciences.*

2013 Community relationships of fish associated to Kelp Forests off the coasts of Baja California, Mexico. *1st State Meeting of Young Researchers*

Community relationships of fish associated to Kelp Forests off the coasts of Baja California, Mexico. *XXI Student Conference at the Marine Sciences School*

2012 Contribution to knowledge of diet and biometrics of the invasive lionfish [*Pterois volitans* (Linnaeus 1758)] off the coasts of Playa del Carmen, Quintana Roo, Mexico. *XIII National Ichthyology Meeting and 1st Latin-American Ichthyology Symposium*

*****Contribution to knowledge of diet and biometrics of the invasive lionfish [*Pterois volitans* (Linnaeus 1758)] off the coasts of Playa del Carmen, Quintana Roo, Mexico**.** *XX Student Conference at the Marine Sciences School*

COMMENTARIES, POPULAR WRITING & SCIENCE COMMUNICATION

(Not all peer-reviewed; All written or available in Spanish)

2021 Sumaila U.R. et al. WTO must ban harmful fisheries subsidies. (2021) Letter to *Science*. 374(6567):544 DOI: 10.1126/science.abm1680

2020 **Villasenñor-Derbez, J.C.** El Pez León invasor en el Caribe Mexicano. (2020). *Biodiversitas* 149: 2- 6

2018 Hernández-Velasco A., Beas-Luna, R., **Villaseñor-Derbez, J.C.**, Domínguez-Guerrero I., Precoma de la Mora, M., Gómez, A. (2018). Los Bosques Sumergidos de México. *Biodiversitas* 137: 2 - 6

2017 Ramírez-Valdez A., Sgarlatta M.P., **Villaseñor-Derbez J.C**., Rowell T.J., Erisman B., Hernández A. (2017). Buscando al gigante de los bosques de kelp en las aguas de Baja California: el mero gigante. *Mediterranews*. DOI 10.13140/RG.2.2.17855.82082

2016 Dreyfus, M., Robles, H., **Villaseñor-Derbez, J.C.** (2016). Distribución espacial de tallas del atún aleta amarilla (*Thunnus albacares*) capturado por la flota atunera mexicana durante el 2001 y 2014. *El Vigía*, 20(43), 5:8.

2015 **Villaseñor-Derbez J.C.,** Hernández-Velasco, A, Erauskin, M., Fulton, S., Cota-Nieto, J.J., Torre-Cosio, J., Herzka-Llona, S., Aburto-Oropeza, A. (2015). Effects of short-term marine reserves on grouper and bass populations. *DataMares*. DOI: 10.13022/M33K52

Hernández-Velasco, A., **Villaseñor-Derbez, J.C**., Suárez Castillo, A., Torre Cosío, A., Espinoza, A. (2015). Isla Natividad en la Reserva del Vizcaíno. *Espacio Profundo*, 136: 34-40.

Robles H., Dreyfus M., **Villaseñor-Derbez J.C.** (2015). Descargas de la flota atunera mexicana en el Pacífico Oriental en 2014 y su comparación con el período 1992-2013. *El Vigía*, 19(42), 3:5.

2014 Ramírez Valdez A., Montaño Moctezuma G., Torres Moye G., **Villaseñor Derbez J.C**., Aburto-Oropeza O. (2014). Counting fish in the Kelp forests of Baja California. *DataMares*. http://dx.doi.org/10.13022/M3BC7X

NON-ACADEMIC APPOINTMNETS

2021-2022 - Independent Consultant
- Bioeconomic estimation and simulation of costs and benefits of select community-based marine reserves
- Review of 20 year of community-based marine conservation in Mexico
- Evaluation of fisheries subsidies in small-scale fisheries

2018-2019 - Independent Consultant
- Web-app development to calculate operational costs of implementing community-based marine reserves.
- Prepared materials and taught a course on app functionality to environmental managers, NGO members, and government officials.

2018-2019 - Independent Consultant
- Prepared materials and taught three courses on marine reserve evaluation methods to environmental managers and NGO members.

2017-2018 - Independent Consultant
- Performed a national evaluation of marine reserves in Mexico with case studies from the Gulf of California, Pacific and Caribbean.

2015 - 2016 - Data analyst. Mexican Tuna Purse Seine Fleet Research Trust
- Assembled and maintained a spatio-temporal database of landings by the Mexican tuna purse seine fleet
- Conducted spatiotemporal analysis of catch and length distributions to inform management

2015 - 2015 - Field Assistant & Data Manager. Comunidad y Biodiversidad (COBI)
- Coordinated fieldwork to evaluate voluntarily established marine reserves along Baja California
- Produced 3 brochures, 1 interactive visualization and a peer-reviewed article on occurrences of tropical fish in temperate regions

2013 - 2013 - Research Intern. Fundación para el Estudio y Conservación de Condrictios, SQUALUS
- Performed stomach content analysis, trophic ecology, and age-and-growth analysis of sharks and rays
- Produced two reports highlighting main findings

2013 - 2013 - On-board scientific observer. Fisheries Ecology Lab, CICESE
- Performed research on white shark and caged diving interactions in Guadalupe Island, Mexico
- Used standardized etology charts to record white shark behavior

2012 - 2012 - Oceanographic Cruise Research Intern. Oceanography Department, CICESE
- Responsible for performing midwater zooplankton trawls and CTD / ADCP casts

2011 – 2015 - Research Assistant. Kelp Forest Ecology Research Group, UABC
- Underwater ecological surveys to identify fish species in Kelp forests
- Developed software to standardize the input of information
- Analyzed data to produce reports and publications of main findings

DATA SCIENCE SKILLS

Leadership activities

EcoDataScience: Organize workshops and maintain website; Group of 250+ members: eco-data-science.github.io

ERRE – A blog about "Rstats", in Spanish: erre-esp.org

R and RStudio - Numerical simulation, Geocomputation, Machine learning, Big Data pipelines, Package development, Shiny framework, R Markdown, Unit Testing, Continuous Development and Integration

Git & GitHub - See: https://github.com/jcvdav/

Google Cloud Platform - BigQuery (Standard SQL), ComputeEngine, CloudStorage

OTHER SKILLS & TRAINING

Languages
- Spanish (Native)
- English (Fluent; TOEFL iBT: 102; graduate school completed in English)
- French (Basic; DELF A2 certification)

SCUBA certifications
- AAWS Scientific Diver
- PADI Open Water Diver
- PADI Advanced Open Water Diver

- PADI Rescue Diver
- FCM-UABC Scientific Diver
- TDI Side mount Diver
- GUE Fundamentals (Tec pass)

PROFESSIONAL REFERENCES

Dr. Christopher Costello (PhD Advisor)
costello@ucsb.edu
Bren School of Environmental Science and Management, UC Santa Barbara

Dr. Steven D. Gaines
gaines@ucsb.edu
Bren School of Environmental Science and Management, UC Santa Barbara

Dr. Fiorenza Micheli (Postdoc Advisor)
micheli@stanford.edu
Doerr School of Sustainability. Stanford University

Dr. John Lynham
lynham@hawaii.edu
Department of Economics. University of Hawai'i at Manoa