

Halley E. Froehlich

Vice Chair of the Interdepartmental Graduate Program in Marine Science

Environmental Studies Program

Department Ecology, Evolution, and Marine Biology

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WEBSITES

<https://froehlichlab.eemb.ucsb.edu/>

RESEARCH EXPERTISE & INTEREST

Leading ocean sustainability and synthesis research scientist studying aquaculture, fisheries, and climate change. Nearly 20 years of education and experience developing and implementing applied research projects across multiple disciplines and countries around the world. Exceptional science communication skills and dedicated to diversity, equity, and inclusion in the sciences and beyond.

SKILLS

- Lead researcher, advisor, and project creator/manager
- Interdisciplinary sustainability science
- Complex data synthesis and analysis at multiple scales
- Research and communication development
- Expert in R programming and Excel

WORK HISTORY

2019 – Present Associate Professor – *Ecology, Evolution, & Marine Biology/Environmental Studies, University of California, Santa Barbara.*

- Created the Froehlich Lab and oversaw cutting edge sustainability research on aquatic food systems (aquaculture and wild capture fisheries) and climate change.
- Led and participated in multiple, large collaborative domestic and international projects around food sustainability and climate change, including as a contributing author on the 2022 Intergovernmental Panel on Climate Change (IPCC) Report and upcoming US National Climate Report.
- Collaborated with national and state government, native, NGO, and industry experts.
- Trained and mentored multiple Masters, PhD, and Postdoctoral researchers on ecological and food system theory, statistics, and data science methodologies.
- Created and taught several courses focused on sustainable resource management of aquatic food systems to 50-200 student classes.
- Published 60 scientific articles and several globally recognized reports, including IPCC.
- Involved in significant science communication, including podcasts and television (e.g., Bill Nye Saves the World) and giving over 50 scientific talks, many as an invited or keynote speaker.
- Co-chaired the Diversity, Equity and Inclusion department committee responsible for facilitating discussion, data collection, and implementation of new directives.

2015 – 2019 Postdoctoral Scholar – National Center for Ecological Analysis and Synthesis, University of California, Santa Barbara, Ben Halpern, PhD Laboratory.

- Lead researcher studying the sustainability of offshore aquaculture.
- Responsible for data collection, analysis, writing, and reporting of all research.
- Coordinated working groups composed of government, NGOs, and industry experts.
- Mentored several Masters, PhD and undergraduate students.
- Published numerous scientific articles and reports.

2010 – 2015 Ph.D. Candidate – School of Aquatic & Fishery Sciences, University of Washington, Timothy E. Essington, PhD Laboratory

- Primary researcher studying physiological, ecological, and management responses of wild capture species in the Pacific Northwest under climate threats.
- Responsible for data collection, analysis, writing, and reporting of all research.
- Mentored several undergraduate students.
- Published all four chapters of dissertation

2008 – 2010 Research technician & specialist –Wildlife, Fish, & Conservation Biology Department, Center for Aquatic Biology & Aquaculture, University of California, Davis, Joseph J. Cech, PhD, Nann Fangue, PhD, and Lisa Thompson, PhD Laboratories

- Junior technician and research studying the thermal response of white and green sturgeon (farmed and wild).
- Responsible for rearing spawned sturgeon in captivity in an inland flowthrough system.

EDUCATION

2015 Ph.D. (Marine Ecology and Fishery Sciences) – University of Washington, Seattle WA

2009 B.S. (Animal Biology) – University of California, Davis, Davis CA

2007 A.A. (Liberal Arts) – West Valley College, Saratoga, CA

LEADERSHIP & TEACHING

2024-present Vice Chair/Grad Advisor of Interdepartmental Graduate Program in Marine Science

2024-present Environmental Studies Manley Lecture Organizer

2024-present International Council for the Exploration of the Seas (ICES) Working Group on Offshore Aquaculture

2024-present Editorial Board of *Fish and Fisheries*

2023-present Editorial Board of *Reviews in Aquaculture*

2023-present Scientific advisor for Actea

2023-present Instructor for EEMB/IGPMS 595: Contentious Topics in Fisheries and Aquaculture

2020-present Instructor for ENVS/EEMB 130C: Aquatic Food and Resource Management

2020-present Co-instructor for EEMB/ENVS 142C and 142L: Conservation, Resource Management, and Food Production of Marine Systems

2019-present	Science communication - Podcasts (Aquademia , The Intertidal Podcast , Real Assets), shows (Netflix Bill Nye Saves the World Ep. 3, PBS Hope on the Water Ep. 2 & 3) and popular magazines (Scientific American , World Aquaculture Magazine , Time Magazine)
2021-2024	Contributing author to the 5th US National Climate Assessment, Southwest Chapter
2020-2024	Co-chair of EEMB Diversity, Equity, and Inclusion Ad hoc Committee/Working Group
2019-2021	AR6 Intergovernmental Panel on Climate Change (IPCC) – North America Ch 14 contributing author
2019	Expert participant in TNC Conservation Aquaculture in California planning group
2019	Expert request and submission of formal letter for US Senate briefing on AQUAA Act bill
2019-2022	Aquaculture Stewardship Council (ASC) Scientific Advisory Board
2018-2021	International Council for the Exploration of the Seas (ICES) Working Group on Scenario Planning on Aquaculture
2018	Future Aquaculture Network – WWF and Global Salmon Initiative working group
2018	Aquaculture Expert – Sea Legacy Green Aquaculture Initiative
2017-2022	Scientific expert – Collaborations with the Aquarium of the Pacific
2017	Seafood Summit Expert – science contributor for 2018 Planning Committee
2017-present	Co-founded CART – Conservation Aquaculture Research Team (CART) at NCEAS, UCSB
2016-2018	Undergrad Mentor – UCLA and UW undergraduate interns.
2016-2017	External Advisor – Bren School of Environmental Science & Management, UCSB
2015-2017	MSc and PhD Latin American Fisheries Fellow's Mentor – NCEAS, UCSB
2015	Organized & led modeling workshop – Washington Department of Fish & Wildlife
2014-2015	1 st Year Grad Peer Mentor – School of Aquatic Fishery Sciences, UW
2014	Created & Instructed 'Advance Marine Ecology' grad course – School of Aquatic Fishery Sciences, UW
2014	NSF Mentor – School of Aquatic Fishery Sciences, UW

AWARDS & FUNDING

Received 15 scientific awards over career totaling over \$6 million in funding.

COMPUTATIONAL EXPERTISE

R programming; ArcGIS; Microsoft Office

PROFESSIONAL SOCIETIES

American Fisheries Society
World Aquaculture Society (U.S. Chapter)