

Edwin A. Hernández-Delgado, PhD, Senior Scientist, Sociedad Ambiente Marino, Inc.



APPOINTMENTS

Assistant Professor – Joint Appointment, Interdisciplinary Program & Department of Environmental Sciences, Faculty of Natural Sciences, UPR-RP 2015-present

Affiliate Researcher, Center for Applied Tropical Ecology and Conservation, UPR-RP, 2007-present

Affiliate Researcher, Caribbean Coral Reef Institute, UPR-M, 2005-2010

Post-Doctoral Researcher, PR-NSF-EPSCoR Program, Resource Center for Science & Engineering, UPR, 2004-05

Senior Scientist, Sociedad Ambiente Marino, San Juan, PR 2002-present

Assistant Professor. Department of Biology, UPR-RP, 2001-2003

Contractor, U.S. Coral Reef Initiative, Dept. Natural and Environmental Resources, San Juan, PR, 2000-2003

Research Associate/Lecturer. Department of Biology, UPR-RP, 1999-2000

Lecturer, Universidad del Turabo, Department of Science and Technology, Gurabo, PR, 1997-2000

Qualifications

B.Sc. – Marine Biology, University of Puerto Rico-Humacao (1988)

M.Sc. – Environmental Microbiology, University of Puerto Rico-Río Piedras (1992)

Ph.D. – Tropical Biology (Coral Reef Ecology), University of Puerto Rico-Río Piedras (2000)

Post-Doc. – Diseased Coral Molecular Microbiology, University of Puerto Rico-Río Piedras (2004-2005)

Social-Behavioral Human Research Certification – Collaborative Institutional Training Initiative (CITI) – 2018-2021

25+ years of experience conducting coral transplanting activities

17+ years of experience conducting coral farming and reef rehabilitation activities

Contact information: Sociedad Ambiente Marino, PO Box 22158, San Juan, PR 00931-2158; TEL: 787-449-0566

edwin.hernandezdelgado@gmail.com

Expertise and experience:

Dr. Edwin A. Hernández Delgado has a B.Sc. in Marine Biology, a M.Sc. in Environmental Microbiology of Tropical Waters, a Ph.D. in Tropical Biology, with a specialization in Coral Reef Ecology; and a Post-Doc in Molecular Microbiology of Coral Diseases. He is currently an Assistant Professor (2017-present) in a joint appointment at the Faculty of Natural Sciences Interdisciplinary Program and at the Department of Environmental Sciences, at the University of Puerto Rico-Río Piedras campus (UPRRP). He is also an Affiliate Researcher at the Center for Applied Tropical Ecology and Conservation (CATEC) at UPRRP (2007-present), where he coordinates the Coral Reef Research Group of the Ecosystems Processes and Functions Cluster. He has also been the Senior Researcher of the Marine Environment Society (“Sociedad Ambiente Marino”, SAM) since 2002, coordinating many of its marine conservation projects, research activities and the scientific component of SAM’s coral reef rehabilitation program. He is co-founder and co-director of SAM’s *Community-Based Coral Aquaculture and Reef Rehabilitation Program* since 2003, the most extensive and continuous coral farming and reef rehabilitation program of the eastern Caribbean, and recently renamed “*Esperanza para el Arrecife*”. Dr. Hernández has an extensive experience participating or leading coastal and marine environmental impact studies, benthic and essential fish habitat assessments, biological characterization studies, species inventories, marine compensatory mitigations, and benthic habitat restoration activities.

Dr. Hernández leads multiple projects regarding coral farming, coral reef rehabilitation, marine mitigation of environmental impacts, and coral reef cross-scale research activities associated to: 1) Coral demographic dynamics; 2) Local anthropogenic and climate change long-term impacts on coral reef cross-scale transitional dynamics; 3) Impacts of land-based source pollution in coral reef and seagrass community trajectories; 4) Coral farming and reef ecological rehabilitation; 5) Invasive and nuisance species impacts on benthic community trajectories; 6) Connectivity dynamics between terrestrial and marine ecosystems; 7) Fish community dynamics and marine reserves design and effectiveness; 8) Wave numerical modeling applied to reef restoration efficiency; and 9) Sclerochronological tools as indicators of paleo-climate changes across the Caribbean region.

Edwin has been a member of the Habitat Advisory Panel of the Caribbean Fishery Management Council and member of Working Group Number 2 of the Puerto Rico Climate Change Council. He has also belonged to the expert review panel of Working Group Number 2 of the Intergovernmental Panel on Climate Change, AR5. Since 2012 he has been a member by invitation of several commissions of the International Union for Conservation of Nature (IUCN), including the World Commission on Protected Areas, the Committee for the Management of Ecosystems for Region North America and the Caribbean, the Commission on Environmental Economics and Social Policy, and the Commission on the Theme on Indigenous and Local Communities Equity and Protected Areas. He is the Coordinator of the Puerto Rican Coral Reef Restoration Consortium, the Interim Director of Scientific Affairs of the Latin American Coral Reef Restoration Consortium, and the Interim Coordinator of the Latin American Chapter of the International Coral Reef Society (ICRS), as well as ICRS’s council member. He has also served as Associate Editor or Reviewer of multiple scientific journals. His publication record is available at: <http://upr.academia.edu/EdwinHernandez>; http://www.researchgate.net/profile/Edwin_Hernandez2; <https://scholar.google.com/citations?user=sz-iRkAAAAJ&hl=>; <https://eahernandezdelgado.weebly.com>.

Key skills:

- Highly accomplished and results-driven Marine Scientist and Environmental Microbiologist with 30 years of successful academic research, coral reef conservation and ecosystem rehabilitation leadership, with strong collaborations with multiple institutions and stakeholders
- Leverages finely-honed interpersonal and time management skills to successfully manage academic research activities, community-based entrepreneurship, and small environmental consulting business development
- Energetic and goal-oriented, with a genuine passion for applying science-based solutions to environmental problems
- Successful grants writer and astute communicator and presenter
- Over 30 years of experience mentoring students in research
- Planning, design and development of coral farming, reef rehabilitation, marine mitigation, long-term monitoring projects for large-scale application to mitigation and rehabilitation programs
- Expertise in coral reef, seagrass, invertebrate and fish community dynamics
- Expertise leading multiple long-term ecological monitoring studies
- Parametric, Non-Parametric, and Multivariate Statistical Analysis tools
- Demographic modelling
- Advanced GIS Spatial Analysis
- Advanced expertise in multiple methods for evaluation of coral reefs, seagrass, and estuarine ecosystems, and of fish, invertebrate and algal assemblages
- Experienced scientific SCUBA diver, >5,000 dives, >35 years of involvement in SCUBA diving, marine field surveys, monitoring and ecosystem rehabilitation programs, including reef, coral and seagrass monitoring projects, vessel grounding emergency restoration efforts, environmental impact assessments, Biological Opinion documents, Section 7 consulting and related skills