

**Curriculum Vitae*

Deborah Brosnan Ph.D.

Contact Coordinates

Dr. Deborah Brosnan
Deborah Brosnan & Associates
1080 Wisconsin Ave #1003
Washington DC 20007
Tel (mobile) 503 869 5769 (office) 571.858.3180
brosnan@deborahbrosnan.com
www.deborahbrosnan.com
<https://www.linkedin.com/in/deborahbrosnan>

Appointments

Private and Civic Sector

President and Founder Deborah Brosnan & Associates
A company that finds smart solutions to environmental risks globally, with special expertise in disaster risk reduction and climate change, endangered species, land/sea use regulations and policies, intelligent development. Science based and strategically focused. 2011-present. Offices USA and St Barthelemy FWI.

Founder, CEO, Sustainable Ecosystems Institute
A non-profit organization that integrated science and carried out scientific research to address environmental problems throughout the USA 1994-2011. Established and grew organization, focused on endangered species, forestry, oceans, laws and policies & held several multi-million IDIQ government contracts.

Academic Appointments

Full Professor of Biology Virginia Tech adjunct and Affiliate Professor Global Change Institute and the Global Forum for Urban and Regional Resilience. 2012- Present.

Environment and Policy Faculty. One Health Institute, University of California Davis, 2011- Present.

Senior Visiting Researcher, Smithsonian Institution 2013-2016.

Visiting Scholar, Stanford University, Dept. of Biology 2009-2010 and 2002-2003.

Visiting Professor Northwestern School of Law. Developed and co-taught marine science and law, and curriculum on ecological science and law. 1999- 2002 and on occasional basis.

Assistant Professor of Biology Lewis and Clark College Portland Oregon. 1992-1995

Visiting Lecturer, University of Oregon 1987-1992.

Public Sector

Principle and Lead Scientist for NOAA and Brookhaven National Laboratory, New York. 1982-1986 Led the development of multi-disciplinary indicators of marine pollution. Convened 12 different teams to craft workable indices for identifying healthy and polluted systems. 1982-1986.

Summary of Key Skills and Expertise

Strong visionary, analytical and synthesis skills. Excellent communicator of technical information to address practical problems. Known for ability to work collegially, effectively engage all sides, and resolve problems.

Proven expertise in strategic analysis, negotiating successful solutions to environmental challenges and resolving conflicts involving endangered species, natural resources and land use, climate-change & development including in ports, urban, and rural-coastal landscapes. Extensive environmental law, policy and regulatory expertise.

Consistently delivered successful and lasting outcomes, have met expectations and achieved desired results in all project. Results have been independently verified and by all sides and sectors

Track record in advising and assisting private, government and civic sectors using my scientific, technical and policy expertise on global environmental issues and policies in environmental areas covering climate change, natural hazards and disasters, oceans, lands and species, energy, and building with nature solutions. Skilled in articulating and incorporating risk and uncertainty into effective decision-making.

Ability to rapidly assess situations, identify and mobilize the best team of experts, and leverage expertise to find answers. Experience in working effectively and building trust with government, private, civic, tribal, and academic communities. Extensive experience on a diversity of issues in the USA, Island Nations, and globally among different cultures.

Trusted advisor to national and international governments, private and other sectors during major events (e.g., SE Asia tsunami, Hurricanes, Oil spills) and in environmental regulatory crises. Hold MOU to act as advisor to USGS during disaster events. Delegate to major treaty negotiations e.g. Sendai Framework for DRR (signed

March 2015, Japan), UN Platform on Risk Reduction (Geneva, 2014).

Developed and implemented innovative scientific arbitration method that led to resolution of major national environmental disputes and was incorporated by Office of Management & Budget (OMB) into their guidelines.

Experience in providing expert testimony before US Senate and House Committees on science and environmental matters.

Highly respected credentials in academic domain, including in ecological, marine, disciplines and environmental science, law and policy fields.

Track record of creating cross-sector learning innovation, e.g., developed and taught “Science in the courtroom” to US Justices. Co-developed with environmental law school, “Ecosynthesis – science and law” taught to environmental lawyers and students.

Leadership, Organizational, and Communication

Strong record of board and organizational leadership.

Provided original vision, strategic planning and led organizational growth for several entities.

Built and deployed effective multi-sector and multi-disciplinary outcome orientated teams Recruited 1,000 credentialed scientists to affiliate to my organization as on-call experts.

Account executive and project management experience in a diversity of challenging situations.

Excellent public speaker on issues of science environment and solutions.

Regular Expert Contributor to Huffington Post on science environment and disasters. <http://www.huffingtonpost.com/author/brosnan-132>

Articles and OpEds published to Washington Post, New York Times

Boards of Directors and Advisory Boards

Board of Advisors, Angel Investing Group – Invests in mentors start-ups in technology focused on environment and health care sectors 2016-present.

President of the Board of Directors, Wild Geese Network of Irish Scientists-international diaspora of Irish scientists, engineers and technologists. 2014- present

Board of Trustees and Past Chair- University of California Davis, Wildlife Health Center, SeaDoc Society. 2000-present. A wildlife science and medicine program to restore and sustain ecosystem and human health.

American Society of Civil Engineers. Member of Committee on Sustainability. 2016-present

National Courts and Sciences Institute. Science Board Member 2014- Present. Education of justices in scientific practices and knowledge.

Global Risk Forum, Davos, Board of Advisors 2014- Present. Comprehensive Disaster Risk Reduction globally

Board of Directors, PADI Project AWARE a global SCUBA diving conservation organization offices in 8 Regions around the world.
Science Advisor to The Environmental Agency St Barthelemy FWI. 2013-Present.

Commissioner IUCN Commission on Ecosystems 2014- Present.

Conservation Committee, American Ornithological Society 2014-present.

Joint USA- Italy Commission on hazards and disasters 2015-present

BBC The World, Science Advisor 2006-2012 3BBC Radio Series.

Oregon Health and Sciences University, Board of Advisors, Coastal Oceans Monitoring Program 2005 to 2013. High-tech ocean observation and monitoring system for biological and physical aspects of the ocean including fisheries conditions and tsunami risks.

Public Trustee, Board of Directors, Oregon State University, College of Forestry, appointed by State as the Public Representative 1997-2005. State oversight and assistance for forestry research and practices.

Board Member of National Science Foundation Group to form the National Ecological Observatory Network (NEON) 2001-2004. Developed vision, organizational structure and legal entity, and set up the US NEON Observatory platform.

Chair, US Department of the Interior, Blue Ribbon Scientific Ethics Panel 2002. Led the effort to develop and review a code of scientific ethics adopted for the conduct of science by all the agencies under the US Dept. of Interior.

Co-Founder and Co-Chair with Governors Natural Resources Director for National Science and Policy Forum. Bringing together leaders in science, industry and civic sectors to tackle leading environmental challenges (Forum was highlighted for its innovation in AAAS Science Magazine).

Other Fellowships and Awards

Inducted into Ireland 100 for services to US higher education and learning. 2015
Science-artist in residence Cill Rialig Ireland August 2015.
Senior Whiteley Fellow, University of Washington 2010, 2005
Red Cross Hero's Award for saving lives in 747-plane crash.

Additional Community Work

Founded Tsunami Reef Fund (2005) linking international scientists, professional divers with local communities affected by the tsunami. Provided practical economic and scientific assistance locally in marine debris clean up and reef recovery, and re-engage communities with the ocean. Travelled throughout region to establish program and long-term linkages.

Environmental Problem Solving: Project Leadership and Implementation.

Examples- not an exhaustive list

Sustainable Development Private land use and development is often fraught with investment and regulatory risks. Private land owners, investors, and resort developers have sought my assistance on investment and development strategies in a diversity of environmental areas. Work has included sustainable forestry and crop practices under land management and compliance; Resort and private development covering topics such land suitability; cost-effective building with nature; environmental regulatory compliance; climate change risks and mitigation; biodiversity and sensitive habitats; risks and return on investment; environmental certification. Relationships between private and government sectors must often be brokered for solutions that benefit environment and enterprise, permission must be secured, and community concerns and benefits addressed- these are areas in which I have a proven track record. The scale of my projects has ranged from ownerships of 23.5sq miles (66 km²), properties and entire small islands up to 11sq miles (28 km²), to individual properties with complex developments.

Energy, Technology and Environmental Due Diligence. Investors and companies must evaluate their strategies and actions in the energy, environment and technology fields. For example, nuclear waste clean up is a major challenge in parts of the US and internationally. A group of major investors requested evaluation of the technology, company potentials, and regulatory landscape as part of their investment deliberations. I have conducted similar analyses including economic cost-benefits for companies and investors engaged in the expansion and delivery of energy to regions and islands, and which has resulted in strategic frameworks that have saved money and won acceptance. In carrying out environmental due diligence I have helped individuals and investors avoid costly errors, and helped to resolve existing ones.

Everglades Restoration: Despite >\$385 million/yr. earmarked to restore the 18,000 sq. mi S. Florida ecosystem the effort was stuck and mired in litigation. Competing interests, divergent stakeholder opinions, authority vested in multiple agencies and tribes converged on endangered species and with several lawsuits. The Dept. of Interior requested my assistance to resolve the impasse. I assessed the main and underlying issues, developed and managed a strategic process for resolution, including shepherding the different players through the process. Being able to build trust, I engaged all the stakeholders around the science and policy and their needs. Using a science arbitration process that I designed we successfully resolved the issues so that the restoration moved forward. When other issues emerged the Dept., again sought my assistance again and we were successful in our outcomes.

Columbia River Dredging The combined ports of the Columbia River in WA and OR States USA wished to deepen the river by 1m (3feet) in order to allow newer ships to navigate the river. Economic competitiveness depended on a deeper channel. But seven endangered salmon species and lucrative crab fisheries depended on the waters. Agencies refused dredging permission under the Endangered Species Act. Eleven years of litigation ensued. Trust and cooperation among parties had eroded. At the request of the parties (Ports USFWS, NOAA, Corps of Engineers) we were engaged to attempt to resolve the impasse. We evaluated the suite of issues, built trust, and developed a public science review/arbitration process to identify best available science and areas of risk and uncertainty. When questions that could be answered quickly and reliably by modeling arose we engaged the modelers to answer them. Scientists concluded that dredging would not further endangered fish and that in this case risks were low, and certainty was high. Results provided additional guidance for ongoing species and habitat recovery. All parties agreed to the solution. We fully resolved the situation in 9 months.

Missouri River Management of the Missouri River had become increasingly controversial. Issues with endangered species and compliance with Biological Opinions upped the stakes. The US Army Corps of Engineers (USACE) initially sought my review. Then at the combined request of the USACE, USFWS, Missouri Dept. of Conservation, Nebraska Game and Parks Commission, US Geological Survey and input from S, Dakota, Iowa and Kansas States I was engaged to help solve the issues and conducted several independent scientific evaluations. They included three programs in the USACE's efforts to restore the river ecosystem to comply with the Biological Opinion and other regulations including focusing on population assessment programs, adaptive management, habitat assessment and monitoring, hydrological models and the biological data linked to those models. I designed a panel process to find answers that would meet legal, policy and stakeholder needs. During the process it became apparent that statistical rigor was needed for agency decisions and I secured that help developing a rigorous program and training for federal and state agency staff. When it was clear that a population viability analysis

would resolve a key controversy, I arranged for its completion. The program relied on adaptive management as a central legal and policy requirement but it became apparent that there was no adaptive framework. With one of the panel scientists, we wrote an adaptive management framework which was adopted by all parties and provided a level of certainty to the user and regulated communities. Testimony to the value of the work, my assistance was sought in several subsequent Missouri River environmental issues and including a request from the USGS to review their biological research program.

Islands and Emerging Nations

Island and emerging nations face more intense challenges in building resilience and developing sustainable solutions and especially in areas of environment-economic stability. They also have unique opportunities. I maintain a specialized practice in islands.

Examples of work include:

Caribbean: Projects spanning several nations including:

Assessment of energy and environment needs and development of solutions for private and public sectors.

Land use planning and development for private and public sectors.

Resolution to natural resources, land/coastal use and permitting conflicts e.g., St Barthelemy and neighboring island states.

Design and implementation of ecosystem-based solutions for sustainable and cost-effective development. For instance clients have wanted to build with nature in a cost-effective way as part of their ethic and brand, as part of a solution to climate-change and hazard risks, as part of environmental compliance or other combined reasons. Project have spanned design to implementation and included e.g. entire beach length dune-restoration, coral reef restoration, site assessments e.g., hydrodynamic and biological analysis, building community relations, permitting etc. Numerous Islands include St Barthelemy, St Kitts and Nevis and adjacent states.

Designed and implemented the Marine Reserve, St Barthelemy

Integrated environment, natural resources and infrastructure for solutions in the Montserrat Volcanic crisis.

Capacity Building and training for 11 nation governments on how to integrate climate change and environmental solutions into national decisions, policies and regulations.

Asia: Post tsunami engagement on marine environment, economic assistance, and recovery. Several nations.

Hazards, Disasters and Climate Change

Science and Technology for Resilience. The eastern seaboard of USA is challenged by rising sea level and inundation from climate change. As part of the leadership team with NASA and The Nature Conservancy, we have designed a state of the science GIS based resilience tool that is web accessible and can be used by the community in their evaluation and decision-making. The issues around climate

change, and how to frame ecosystem-based versus infrastructure or relocation is challenging and emotionally charged for most. A key component of my work is engaging the scientific team, translating between science, policy makers, users, and engaging the community in understanding the issues, exploring solutions, and learning to use the tool through a series of workshops. (2014-Ongoing Project).

Tsunami Planning California. In the aftermath of the Tohoku earthquakes the US Government asked whether California and the national economy will someday face similar or worse consequences from other distant-sourced earthquakes and tsunamis. As part of the leadership team engaged to answer that question, I led the scenario effort on impacts on ports, fisheries, endangered species, protected lands and coasts, evaluating ecological, economic and social impacts. Working with 6 teams of scientists from disciplines including economics to engineering, we provided forecasting on direct and cascading impacts. The answer to the initial question is unfortunately yes. We identified consequences and potential solutions using the scenario method.

Extreme Geohazards. Low frequency-high impact events have disrupted societies throughout history. As a member of the Geo-hazard team we evaluated the likelihood of extreme volcanic eruptions and their potential impacts on communities, trade and policy (project at the request of European Science Foundation).

Design and Implementation of New Town and Port Facility to mitigate Montserrat Volcano: Led the environmental assessment and planning the engagement of government and community, and worked with the engineers and government to design an ecologically-sustainable new town and port facility that would provide necessary infrastructure, transportation, government and community services and natural resource and habitat basis for fisheries, tourism and farming. This proved vital when subsequently the eruption destroyed the existing city and lands and the natural resource base, and port transportation on which the community depends has been dually sustained as planned for in our work.

Capacity Building and Workshop Leadership

Developed and implemented innovative and cross cutting workshops and capacity building experiences including:

Science in the Courtroom: Workshop for State Supreme Justices and US Justices.

Science Arbitration: Using science to resolve complex environmental disputes (Lecture and Workshop series for professionals and graduate students)

Marine science and Law: Course for environmental lawyers and students and practitioners.

Several CLE lectures and lectures to Judicial meetings on environmental science related to laws and policies.

Innovations in ecosystem-engineering for disasters and climate Change (Workshop U.N. Bonn 2016)

In the heat of the moment effective use of science and scientists during crises and hazard events (Workshop San Francisco Dec 2016)

Integrating science into decision-making for hazards and disasters (Global Risk Forum, Symposium/workshop Davos 2014)

Solutions using Ecosystems and the Built Environment (Global Risk Forum Davos Symposium/workshop 2014)

Integrating the built and natural environments in solutions to disasters and climate change (International workshop at Virginia Tech 2014).

Building a framework for integrating ecosystems and natural resources into disaster planning and response. Special symposium and multi-sector workshop (NCSE Washington D.C. 2014)

Academic Credentials

Ph.D. Oregon State University. Effect of extreme events on marine community dynamics. 1994

M.S. National University of Ireland Fisheries Science: Thesis Experimental Fishery for Spider Crab *Maia squinado* 1982

B.S. honors in Zoology and Botany, University College Galway 1978

Languages (Fluent)

English French and Gaelic

Selected Relevant and Peer Reviewed Publications

In Press

Book. The Resilience Challenge: Editors Jim. Bohland, John Harrold and Deborah Brosnan. Charles Thomas USA publishers. December 2016.

Resilience in Time and Space: Illusions in Scale, Deborah Brosnan
Chapter 3 Resilience Challenge

Resilience in the Extreme Deborah Brosnan Chapter 5 in The Resilience
Challenge.

Small is Beautiful is Big Better? Resilience and Small Island Nations, Deborah
Brosnan Chapter 8 in The Resilience Challenge.

Top three global challenges to resilience, J Bohland, J, Harrold and D.
Brosnan Chapter 1 Resilience Challenge

Invited Guest Editor, Resilience, Sustainability and Extreme Events. Special Volume of Global and Planetary Change journal, Edited by Deborah Brosnan and Sierd Cloetingh publication date Spring 2017. (Several contributions)

Published

Book: *Extreme geohazards: reducing the disaster risk and increasing resilience*. Hans-Peter Plag, Sean Brocklebank, Deborah Brosnan, Paola Campus, Sierd Cloetingh, Jules Plag Shelley, Seth Stein, Published by European Science Foundation [ESF] with GEO & GHCP] (2015)

Working together: A call for inclusive conservation *Nature* 515, 27–28 2015 A community paper by Tallis H. et al 149 original co-authors

Managing Risks: The Sendai Disaster Risk Reduction Framework. Analysis Paper Deborah Brosnan Report Published March 2015 9pp

A vision for an expanded role of ornithological societies in conservation. Jeffrey R. Walters, Deborah M. Brosnan, J. Michael Reed, and J. Michael Scott (2014) *The Condor*: May 2014, Vol. 116, No. 2, pp. 278-289.

Life on the Rebound: Resilience Science, Extreme Events, and Coastal Resilience” Deborah M Brosnan, *Marine Biology & Oceanography* 2012 (2014).

California’s coastal and marine ecosystems, natural resources and endangered species in the SAFRR tsunami scenario: Overview by Deborah M Brosnan P1-3 Chapter C in S. Ross and L. Jones ed. SAFRR Tsunami Scenario USGS Peer-Reviewed Open File 2013-1179

Impacts of SAFRR Tsunami Scenario on California’s Coastal Habitats and Resources and Endangered Species by Deborah M Brosnan pp13-38 In Ch.C S. Ross and L. Jones ed SAFRR Tsunami Scenario USGS Peer-Reviewed Open File 2013-1179

Tsunami Impacts on the Commercial Fisheries and Fishing Fleet in San Pedro, Ports of Los Angeles/Long Beach in the SAFRR Tsunami Scenario Deborah M Brosnan, Deborah M Brosnan pp39-64 In Ch. C S. Ross and L. Jones ed SAFRR Tsunami Scenario USGS Peer-Reviewed Open File 2013-1179

The SAFRR Tsunami Scenario—Improving Resilience for California by Ross Stephanie L., Lucile M. Jones, Kevin Miller, Keith A. Porter, Anne Wein, Rick I. Wilson, Bohyun Bahng, Aggeliki Barberopoulou, Jose C. Borrero, Deborah M. Brosnan, John T. Bwarie, Eric L. Geist, Laurie A. Johnson, Stephen H. Kirby, William R. Knight, Kate Long, Patrick Lynett, Carl E. Mortensen, Dmitry J. Nicolsky, Suzanne C. Perry, Geoffrey S. Plumlee, Charles R. Real, Kenneth Ryan, Elena Suleimani, Hong

Kie Thio, Vasily V. Titov, Paul M. Whitmore, and Nathan J. Wood 2013 USGS Peer-Reviewed Open File p1-5 <http://pubs.usgs.gov/fs/2013/3081/pdf/fs2013-3081.pdf>

Evaluation and Recommendations for Reefs, Seagrass and Beaches Nevis Deborah M Brosnan Report Published 2014 36pp

Integrating Natural Hazards, Ecosystems and Human Communities in Disaster Management: Colorado Floods September 2013 Deborah M Brosnan, Jenny M Garmendia, For *NCAR Colorado*, 25 pages

Deepwater Horizon Oil spill: Strategic Science Response Deborah M. Brosnan For Ocean Studies Board, National Academy of Sciences Meeting 2010

Top 10 Principles for Designing Healthy Coastal Ecosystems Like the Salish Sea J.K. Gaydos, L. Dierauf, G. Kirby, D. Brosnan, K. Gilardi, G. Davis. *Original Contribution Ecohealth* 2009 (5) 460-471.

Lessons for minimizing impacts to coral reef and other ecosystems from the 2004 tsunami Dwayne Meadows & Deborah Brosnan - *American Fisheries Society* 2008 pp. 1-18

"Science, Law, and the Environment: The Making of a Modern Discipline." Deborah M Brosnan *Environmental Law* 37.4 (2007): 987-1006

Designing the Future: For St Barthelemy FWI Deborah M. Brosnan published 2009. 132 pp. 5 chapters

Book. "The integration of conservation science and policy." Deborah Brosnan & Martha Groom. *Principles of Conservation Biology*, Sinauer Associates Inc., USA (2006): 625-658.

Should the Southern Resident population of orcas be listed as threatened or endangered? A scientific, legal, or policy decision? Deborah M. Brosnan in *Principles of Conservation Biology*, Sinauer Associates Inc., USA (2006): 17.4

Conflict in the Courts: Conservation of the Hawaiian Monk Seal Scientific uncertainty, risks, and the role of adaptive management 17.1 *Principles of Conservation Biology*, Sinauer Associates Inc., USA (2006)

A Marine Protected Area (MPA) Planning Process: California Channel Islands Marine Reserves Satie Airame and Deborah M. Brosnan *Principles of Conservation Biology*, Sinauer Associates Inc., USA (2006): Chapter 14.3

"Endangered Species Act Turns 30, The." *Environmental Law* Special Symposium convened by Daniel Rohlf and Deborah Brosnan NW School of Law Environmental Law 2004

Can Peer Review Help Resolve Natural Resource Conflicts? Deborah M. Brosnan. *Issues in Science and Technology. Journal of National Academies*. Vol. 16, No. 3 (Spring 2000), pp. 32-36

El Nino Southern Oscillations (ENSO) and their Impacts on Marine Populations Deborah M Brosnan, Chris Becker 2000 66 pages (Available PALCO SYP/HCP VOLUME IV Section 6. Part B)

Biological Surveys and Recommendations Telluride Valley Floor Volumes 1 and 2 Deborah M Brosnan et al (34 member team) SEI Peer-Reviewed Publications 2000.

The Role of Recruitment Dynamics in Rocky Shore and Coral Reef Fish Communities. David J Booth and Deborah Brosnan. *Advances in Ecological Research* 1995 309-385

"The effect of trampling on marine rocky shores in southern California." Deborah M. Brosnan, John Elliott, and Ingri Quon. (1996). Sea Grant Report

Ecosystem management: an ecological perspective for environmental lawyers." Deborah M. Brosnan *University of Baltimore Journal of Environmental Law* (1994) 4(2) 135 (*Reprinted Anthology of Law* and used as readings in several environmental law courses)

Effects of human trampling on marine rocky shore communities. Deborah Brosnan & Lana. Crumrine. *Journal of Experimental Marine Biology and Ecology*. 1994 79-97.

Book: Ecology of tropical rocky shores: plant-animal interactions in tropical and temperate latitudes 1992 *Plant Animal Interactions in the Marine Environment* Deborah Brosnan Clarendon Press Oxford 46 (1992): 101-131.

A Study of Human Impact on Four Shores on the Oregon Coast: Results and Recommendations for Management and Development: Deborah Brosnan and Lana Crumrine a *Report to the Oregon Dept. of Land Conservation and Development*. Oregon Department of Land Conservation and Development, 1992.

Human Impact and a Management Plan for the Shore at YHONA. Deborah Brosnan and Lana Crumrine *Oregon State University*, 1992.

"Experimental fishing for the spider crab, *Maia squinado*: sea and laboratory trials." D Brosnan *Journal of the marine biological Association of the United Kingdom* 64.02 (1984): 251-259.

Invited Keynote and Guest Speaker (Recent Examples)

Expert Lecturer. South Pacific Voyage MS Paul Gauguin, to 300 audience traveling through French Polynesia and Cook Islands Oct 2016

Practical and Legal Incentives to Sustainable Development, GreenTrends Conference Miami Oct 2016

World Oceans Conference 2016 Rotterdam.

St Barthelemy International Leaders (SBIPOA). Changing times and solutions to oceans and nations. April 2016.

Speaker at American Geophysical Union San Francisco 2015 (and 2014) invited by AGU and USGS for Special Session on Lessons Learned from using science to solve climate change and hazard challenges.

GeoRisk, Madrid Spain Invited to Speak on Using Science in Real World Problems hazards and climate change

First International Scientific Diaspora Conference. "A Scientist Abroad" Challenges and Opportunities for scientific diaspora. Nov 2015.

Joint USA- Italy. Keynote International Crisis- Inter-nation cooperation D.C. March 2015.

Normative Aspects of Resilience Special Symposium Virginia. 2014

European Geophysical Union, Vienna Austria. Invited speaker and panelist on Geohazards and Resilience. April 2015

Earthday Guest Speaker NY Aquarium

Professional Society Memberships

American Association for the Advancement of Science, American Geophysical Union, European Geophysics Society.

Editorial Boards

Member of the Editorial Board: Journal of Marine Biology and Oceanography 2011-Present