



CURRICULUM VITAE

PORTER HOAGLAND

Public Policy
Senior Research Specialist
Marine Policy Center, MS#41
Woods Hole Oceanographic Institution
Woods Hole, MA 02543

Telephone: 508-289-2867
Cellphone: 508-292-5263
Fax: 508-457-2184
Email: phoagland@whoi.edu

Date of Birth: October 9, 1955
Place of Birth: Red Bank, New Jersey
Nationality: United States of America

EDUCATION:

Ph.D., Marine Policy, University of Delaware, January 2000
M.P.A., Public Administration, Harvard University, May 1993
M.M.P., Marine Policy, University of Delaware, June 1982
B.S., Biology, Hobart College, June 1977

RESEARCH INTERESTS:

Economics and public policy of marine resources and the ocean environment; optimal management of ocean and coastal resources and their uses; distribution and allocation of property rights in ocean and coastal resources; economic impacts of marine natural hazards; technology transfer and intellectual property problems; marine science and technology policy; underwater archaeological resource management.

PROFESSIONAL EXPERIENCE:

Senior Research Specialist, Woods Hole Oceanographic Institution, 2008 to present
Research Specialist, Woods Hole Oceanographic Institution, 2000-08
Research Associate, Woods Hole Oceanographic Institution, 1985-2000
Research Assistant, Woods Hole Oceanographic Institution, 1983-84
Conservation Intern, National Wildlife Federation, 1982
Research Intern, Environmental Law Institute, 1981
Research Assistant, College of Marine Studies, University of Delaware, 1981-82
Administrative Legal Assistant, Howrey and Simon, 1979-80
Paralegal, Howrey and Simon, 1977-79

AWARDS:

Frances Severance Award for Dissertation in Public Policy, University of Delaware, 2000
Marine Policy Program Fellow, College of Marine Studies, University of Delaware, 1993-94
Crump Fellow, Center for Business and Government, Harvard University, 1992
E. Sam Fitz Professional Development Award, University of Delaware, 1983
Academic Council Award for Master's Thesis in Marine Policy, University of Delaware, 1982

PROFESSIONAL ACTIVITIES:

Editorial Advisory Board, *Encyclopedia of Ocean Sciences*, Academic Press, 2001 to present
Advisor, Institute Advisory Committee, WHOI Coastal Ocean Institute, 2001 to present
Advisor, WHOI Office for Applied Oceanography, 2009 to present
Member, National Harmful Algal Bloom Committee, 2006 to present
Adjunct Professor, Intercampus Graduate School of Marine Sciences and Technology, University of Massachusetts, 2000 to present
Adjunct Professor, The Union Institute, Cincinnati, Ohio, 2001 to present
Lecturer, Department of Marine Affairs, University of Rhode Island, 2012
Research Associate, Center for Maritime & Underwater Resource Management, East Lansing, Michigan, 1995 to present
Advisor, Stellwagen Bank National Marine Sanctuary Advisory Committee, 2007-2010
(Alternate Advisor 2001-2007)
Member, Steering Committee, National Scientific Research, Development, Demonstration, and Technology Transfer Plan on Reducing Impacts from Harmful Algal Blooms, 2006-2007
Director, Board of Directors, Council on Ocean Law, 1995-2005
Chairman, Marine Resources Division, Marine Technology Society, 1996 to 2004
Chairman, Ecosystem Alteration Working Group, Stellwagen Bank National Marine Sanctuary, 2004
Chairman, Site Characterization Working Group, Stellwagen Bank National Marine Sanctuary, 2003-2004
Member, Panel on Peer Review, Committee to Assess the US Army Corps of Engineers Methods of Analysis and Peer Review for Water Resources Project Planning, National Research Council, 2001-2002
Member, International Institute of Fisheries Economics and Trade, 2007 to present
Member, International Association of Aquaculture Economics and Management, 2005 to present
Member, Marine Technology Society, 1996 to present
Member, Working Group on the Economic Aspects of Marine Mammal-Fisheries Interactions, North Atlantic Marine Mammal Commission, 2000
Member, Steering Committee, Massachusetts Ocean Resources Roundtable, Massachusetts Office of Coastal Zone Management, 1997-98
Member, Massachusetts Governor's Task Force on Aquaculture Development and Marketing, 1995
Advisor, Plymouth Beaches Advisory Committee (Vice-Chairman 1992-93), Town of Plymouth, Massachusetts, 1990-93

REFEREE:

Biodiversity and Conservation; Coastal Management; Conservation Biology; Ecological Economics; Environment and Development Economics; Environmental Conservation; Environmental Management; Environmental Modeling and Software; Fisheries; Harmful Algae; International Institute for Fisheries Economics and Trade; Journal of Environment and Development; Journal of Environmental Economics and Management; Journal of Environmental management; Journal of the Ocean University of China; Marine Policy; Marine Pollution Bulletin; Marine Resource Economics; Marine Technology Society Journal; Ocean & Coastal Management; Ocean Development and International Law; Ocean Yearbook; Resources Policy; ScienceNOW.

PAPERS IN REFEREED JOURNALS:

- Jin, D., P. Hoagland, T.M. Dalton and E.M. Thunberg. 2012. Development of an integrated economic and ecological framework for ecosystem-based fisheries management in New England. *Prog. Oceanog.* (forthcoming).
- Jin, D., H.L. Kite-Powell, P. Hoagland and A.R. Solow. 2012. A bioeconomic analysis of traditional fisheries in the Red Sea off the coast of the Kingdom of Saudi Arabia. *Mar. Res. Econ.* (forthcoming).
- Hoagland, P., D. Jin and H.L. Kite-Powell. 2011. The costs of beach replenishment along the US Atlantic coast. *Journal of Coastal Research* (published online: <http://dx.doi.org/10.2112/JCOASTRES-D-11-00066.1>).
- Fleming, L.E., B. Kirkpatrick, L.C. Backer, C.J. Walsh, K. Nierenberg, J. Clark, A. Reich, J. Hollenbeck, J. Benson, Y.S. Cheng, J. Naar, R. Pierce, A.J. Bourdelais, W.M. Abraham, G. Kirkpatrick, Julia Zaias, A. Wanner, E. Mendes, S. Shalat, P. Hoagland, W. Stephan, J. Bean, S. Watkins, T. Clarke, M. Byrne and D.G. Baden. 2010. Literature review of Florida red tide: implications for human health effects. *Harm. Alg.* 3:99-115.
- Hoagland, P. 2010. A (social) scientific look at ecosystem-based management. *Ocean & Coastal Law Journal* 15:167-175.
- Hoagland, P., S. Beaulieu, M.A. Tivey, R.G. Eggert, C. German, L. Glowka and J. Lin. 2010. Deep-sea mining of seafloor massive sulfides. *Mar. Pol'y* 34:728-732.
- Nierenberg, K., K. Kirner, P. Hoagland, S. Ullmann, W.G. LeBlanc, G. Kirkpatrick, L.E. Fleming and B. Kirkpatrick. 2010. Changes in work habits of lifeguards in relation to Florida red tide. *Harm. Alg.* 9:419-425. [Corrigendum: *Harm. Alg.* 9:647.]
- Bauer, M., P. Hoagland, T.M. Leschine, B.G. Blount, C.M. Pomeroy, L.L. Lampl, C.W. Scherer, D.L. Ayres, P.A. Tester, M.R. Sengco, K.G. Sellner, and J. Shumacker. 2009. The importance of human dimensions research in managing harmful algal blooms. *Front. Ecol. Environ.* doi:10.1890/070181. <<http://www.esajournals.org/doi/pdf/10.1890/070181>>
- Hoagland, P., D. Jin, L.Y. Polansky, B. Kirkpatrick, G. Kirkpatrick, L.E. Fleming, A. Reich, S.M. Watkins, S.G. Ullmann and L.C. Backer. 2009. The costs of respiratory illnesses arising from Florida Gulf Coast *Karenia brevis* blooms. *Environ. Health Persp.* 117:1239-1243. <<http://ehp.niehs.nih.gov/docs/2009/0900645/abstract.html>>
- Kite-Powell, H.L., L.E. Fleming, L.C. Backer, E.M. Faustman, P. Hoagland, A. Tsuchiya, L.R. Younglove, B.A. Wilcox and R.J. Gast. 2008. Linking the oceans to public health: current efforts and future directions. *Environ. Health.* 7(Supp. 2):S6. <<http://www.ehjournal.net/supplements/7/S2>>
- Jin, D. and P. Hoagland. 2008. The value of HAB predictions to the commercial shellfish fishery in the Gulf of Maine. *Harm. Alg.* 7(6):772-781.
- Jin, D., E. Thunberg and P. Hoagland. 2008. Economic impact of the 2005 red tide event on commercial shellfish fisheries in New England. *Oc. & Coast. Mgmt.* 51(5):420-429.
- Hoagland, P. and D. Jin. 2007. Accounting for marine economic activities in large marine ecosystems. *Oc. & Coast. Mgmt.* 51(3):246-258. <<http://www.sciencedirect.com/science/journal/09645691>>

- Jin, D., H.L. Kite-Powell and P. Hoagland. 2007. Anticipating the growth of an open-ocean aquaculture industry. *Aquacult. Econ. & Manag.* 11:225-242.
- Hoagland, P. and D. Jin. 2006. Science and economics in the management of an invasive species. *BioSci.* 56(11):931-935. <<http://hdl.handle.net/1912/1363>>
- Herrera, G. and P. Hoagland. 2006. Commercial whaling, tourism, and boycotts: an economic perspective. *Mar. Pol'y* 30(3):261-269.
- Jin, D., P. Hoagland and A.R. Solow. 2006. The economic value of environmental research in understanding the relative contributions of sources of nutrients to coastal waters. *Nat. Res. Model.* 19(2):201-220. [WHOI Contrib. No. 11,296.]
- Jin, D., P. Hoagland and E. Thunberg. 2006. An analysis of the relationship between the fish harvesting and processing sectors in New England. *Mar. Res. Econ.* 21(1):47-62.
- Hoagland, P. and A.R. Solow. 2005. Regional ocean governance: a critique of two recent proposals. *Mar. Tech. Soc. J.* 38(4):61-67. [WHOI Contrib. No. 11,301.]
- Jin, D., H.L. Kite-Powell and P. Hoagland. 2005. Risk assessment in open-ocean aquaculture: a firm-level investment-production model. *Aquacult. Econ. & Manag.* 9(3):369-387. [WHOI Contrib. No. 11,394.]
- Hoagland, P., D. Jin and H.L. Kite-Powell. 2003. The optimal allocation of ocean space: aquaculture and wild harvest fisheries. *Mar. Res. Econ.* 18(2):129-147. [WHOI Contrib. No. 10,932.]
- Jin, D., P. Hoagland and T.M. Dalton. 2003. Linking economic and ecological models for a marine ecosystem. *Ecol. Econ.* 46(3):367-385. [WHOI Contrib. No. 10,705.]
- Steele, J.H. and P. Hoagland. 2003. Are fisheries “sustainable”? *Fish. Res.* 64:1-3. [WHOI Contrib. No. 11,004.]
- Hoagland, P., D.M. Anderson, Y. Kaoru and A.W. White. 2002. The economic effects of harmful algal blooms in the United States: estimates, assessment issues, and information needs. *Estuaries* 25(4b):677-695. [WHOI Contrib. No. 10,637.]
- Kite-Powell, H.L., P. Hoagland and D. Jin. 1998. Policy, law, and public opposition: the prospects for abyssal ocean waste disposal in the United States. *J. Mar. Sys.* 14:377-396. [WHOI Contrib. No. 9053.]
- Hoagland, P. 1997. Managing the underwater cultural resources of the China Seas: a comparison of public policies in Mainland China and Taiwan. *Int'l J. Mar. & Coastal L.* 12(2):265-283. [WHOI Contrib. No. 9148.]
- Hoagland, P. and D. Jin. 1997. A model of bycatch involving a passive use stock. *Mar. Res. Econ.* 12:11-28. [WHOI Contrib. No. 9370.]
- Hoagland, P., H.L. Kite-Powell and M.E. Schumacher. 1996. Regulating marine toxic pollution under the London Convention. *Int'l Iss.* 39(6):25-43. [WHOI Contrib. No. 9324.]
- Schumacher, M., P. Hoagland and A.G. Gaines. 1996. Land-based marine pollution in the Caribbean: incentives and prospects for an effective regional protocol. *Mar. Pol'y* 20(2):99-121. [WHOI Contrib. No. 9002.]

- Kaoru, Y. and P. Hoagland. 1994. The value of historic shipwrecks: conflicts and management. *Coastal Manag.* 22:195-213. [WHOI Contrib. No. 8384.]
- Hoagland, P. and H.L. Kite-Powell. 1994. Technology transfer and scientific relevance. *Oceanog.* 6(3):68-77. [WHOI Contrib. No. 8230.]
- Hoagland, P. 1993. Manganese nodule price trends: dim prospects for the commercialization of deep seabed mining. *Res. Pol'y* (December):287-298. [WHOI Contrib. No. 8435.]
- LaMourie, M.J. and P. Hoagland. 1993. Government support of marine science and technology in Japan: the case of marine electronic instrumentation. *Mar. Tech. Soc. J.* 27(3):21-33. [WHOI Contrib. No. 8280.]
- Hoagland, P. 1992. Measuring voting power on the Council of the International Seabed Authority. *Oc. Pol'y Res.* 7(2):251-276. [WHOI Contrib. No. 8124.]
- Hoagland, P. and H.L. Kite-Powell. 1991. European advanced marine electronic instrumentation: A U.S. perspective. *Mar. Pol'y* 15(6):431-454. [WHOI Contrib. No. 7785.]
- Broadus, J.M. and P. Hoagland. 1990. Marine nonfuel minerals in the U.S. Exclusive Economic Zone: managing information as a resource. *Oc. & Shoreline Manag.* 13:275-294. [WHOI Contrib. No. 7144.]
- Hoagland, P. 1988. The conservation and disposal of ocean hard minerals: a comparison of ocean mining codes in the United States. *Nat. Res. J.* 28(3):451-508. [WHOI Contrib. No. 6714.]
- Hoagland, P. 1987. Performance requirements in ocean mineral development. *Mar. Pol'y Rep.* 9(3):5-10. [WHOI Contrib. No. 6399.]
- Hoagland, P. 1986. Seabed mining patent activity: some first steps toward an understanding of strategic behavior. *J. Res. Manag. & Tech.* 14(3):211-222. [WHOI Contrib. No. 6346.]
- Broadus, J.M. and P. Hoagland. 1984. Conflict resolution in the assignment of area entitlements for seabed mining. *San Diego L. Rev.* 21(3):541-576.
- Hoagland, P. 1983. Federal ocean resource management: interagency conflict and the need for a balanced approach to resource management. *Virginia J. Nat. Res. L.* 3(1):1-33.
- Einbender, G., A. Bakalian, T. Wall, P. Hoagland and K. Kamlet. 1982. The case for immediate controls on acid rain. *Mat. & Soc.* 6(3):251-282.
- Hoagland, P. 1981. The United States Coast Guard: Semper Paratus? *Mar. Pol'y Rep.* 3:1-4. [Reprinted in: U.S. Congress, House, Committee on Merchant Marine and Fisheries, Subcommittee on Coast Guard and Navigation, *Hearings on Coast Guard Authorization and Oversight*. 97th Cong., 2d sess., 1982, pp. 249-53.]

CHAPTERS IN BOOKS:

- Hoagland, P., ed. 2010. *Marine Policy and Economics*. New York: Academic Press, 618pp.
- MacLeod, M.S., M. Lynch and P. Hoagland. 2009. Ocean zoning. In J.H. Steele, S.A. Thorpe and K.K. Turekian, eds., *Encyclopedia of Ocean Sciences*. 2nd edition. Cambridge, UK: Elsevier. Online at: <http://www.sciencedirect.com/science/referenceworks/9780123744739>.
- Sherman, K., I. Belkin, S. Seitzinger, P. Hoagland, D. Jin, M-C. Aquarone and S. Adams. 2009. Indicators of changing states of large marine ecosystems. In K. Sherman, M-C. Aquarone

- and S. Adams, eds., *Sustaining the World's Large Marine Ecosystems*. Gland, Switz.: International Union for the Conservation of Nature and Natural Resources, pp. 13-49.
- Hoagland, P. 2008 From jubilees to halos: clarifying the economic effects of harmful algal blooms on commercial fisheries. *Am. Fish. Soc. Symp.* 64:233-243.
- Hoagland, P. and S. Scatasta. 2006. The economic effects of harmful algal blooms. In E. Granéli and J.T. Turner, eds., *Ecology of Harmful Algae*. Ecological Studies, Vol. 189. Berlin: Springer-Verlag, Chap. 30, pp. 391-402. [WHOI Contrib. No. 11,414.]
- Hoagland, P., D. Jin, E. Thunberg and S. Steinback. 2005. Economic activity associated with the northeast shelf large marine ecosystem: application of an input-output approach. In T.M. Hennessey and J.G. Sutinen, eds., *Sustaining Large Marine Ecosystems: The Human Dimension*. Large Marine Ecosystem Series Vol. 13. Oxford, U.K.: Elsevier Science B.V., pp. 157-179. [WHOI Contrib. No. 9,936.]
- Stone, G., L. Madin, K. Stocks, G. Hovermale, P. Hoagland, M. Schumacher, C. Steve-Sotka, H. Tausig, P. Etnoyer. 2004. Seamount biodiversity, exploitation and conservation. In L.K. Glover and S.A. Earle, eds., *Defying Ocean's End*. Washington: Island Press, pp. 43-70.
- Hoagland, P., K.M. Riaf, D. Jin and H.L. Kite-Powell. 2003. A comparison of access systems for natural resources: drawing lessons for ocean aquaculture in the US Exclusive Economic Zone. In Bridger, C.J. and B.A. Costa-Pierce, eds., *Open-Ocean Aquaculture: From Research to Commercial Reality*. Baton Rouge, LA: World Aquaculture Society, pp. 23-44.
- Kite-Powell, H.L., P. Hoagland, D. Jin and K. Murray. 2003a. Economics of open ocean growout of shellfish in New England: sea scallops and blue mussels. In Bridger, C.J. and B.A. Costa-Pierce, eds., *Open-Ocean Aquaculture: From Research to Commercial Reality*. Baton Rouge, LA: World Aquaculture Society, pp. 293-306.
- Kite-Powell, H.L., P. Hoagland, D. Jin and K. Murray. 2003b. Open ocean growout of finfish in New England: a bioeconomic model. In Bridger, C.J. and B.A. Costa-Pierce, eds., *Open-Ocean Aquaculture: From Research to Commercial Reality*. Baton Rouge, LA: World Aquaculture Society, pp. 319-324.
- Jin, D., P. Hoagland and H.L. Kite-Powell. 2003. A Model of the optimal scale of open-ocean aquaculture. In Bridger, C.J. and B.A. Costa-Pierce, eds., *Open-Ocean Aquaculture: From Research to Commercial Reality*. Baton Rouge, LA: World Aquaculture Society, pp. 55-64.
- Schumacher, M.E. and P. Hoagland. 2002. The protocol concerning pollution from land-based sources and activities in the wider Caribbean region: a breakthrough for the Caribbean, but how closely should others follow their lead? In E.M. Borgese, A. Chircop, and M. McConnell, eds., *Ocean Yearbook 16*. Chicago: University of Chicago Press, pp. 496-532. [WHOI Contrib. No. 10,289.]
- Hoagland, P., J. Jacoby and M.E. Schumacher. 2001. Law of the sea overview. In J.H. Steele, S.A. Thorpe and K.K. Turekian, eds., *Encyclopedia of Ocean Sciences*. London: Academic Press, pp. 1481-1492. [WHOI Contribution No. 10,363.]
- Hoagland, P., U.R. Sumaila and S. Farrow. 2001. Marine protected areas. In J.H. Steele, S.A. Thorpe and K.K. Turekian, eds., *Encyclopedia of Ocean Sciences*. London: Academic Press, pp. 1654-1659. [WHOI Contribution No. 10,364.]

- Hoagland, P. and P.C. Ticco. 2001. Marine policy overview. In J.H. Steele, S.A. Thorpe and K.K. Turekian, eds., *Encyclopedia of Ocean Sciences*. London: Academic Press, pp. 1646-1654. [WHOI Contribution No. 10,365.]
- Hoagland, P. 1999. Historic shipwreck policy in China. In S. Dromgoole, ed., *Legal Protection of the Underwater Cultural Heritage: National, Regional and International Perspectives*. London: Kluwer Law International, pp. 19-41. [WHOI Contrib. No. 9693.]
- Hoagland, P. and S. Farrow. 1996. Planning versus reality: an economic analysis of an environmental decision. In S. Congleton, ed., *The Political Economy of the Environment*. Ann Arbor: University of Michigan Press, pp. 145-168.
- Hoagland, P., J. Yang, J.M. Broadus and D.K.Y. Chu. 1992. China Sea coastal and marine nonfuel minerals: investigation and development. In J.B. Marsh, ed., *Resources and Environment in Asia's Marine Sector*. Washington: Taylor & Francis, pp. 219-276.
- Hoagland, P. 1990. Administrative discretion in the management of outer continental shelf minerals. In T.L. Horton, ed., *Ocean Mining Development and American Industry*. Charlottesville, Va.: Center for Oceans Law and Policy, University of Virginia School of Law. [WHOI Contrib. No. 6831.]
- TECHNICAL REPORTS AND MONOGRAPHS:**
- Hoagland, P. and D. Jin. 2009. Report on the potential economic effects on commercial fishing from the Safe Harbor Energy Deepwater Port and Pipeline. New York: Atlantic Sea Island Group LLC (January).
- Hoagland, P. and D. Jin. 2008. Report on the potential economic effects on commercial lobstering in Western Passamaquoddy bay from transits of LNG carriers supplying the Downeast LNG liquefied natural gas facility. Robbinston, ME: Downeast LNG (November).
- Hoagland, P., D. Jin and H.L. Kite-Powell. 2008. Regional economic analysis of the Northwest Atlantic marine eco-region. Boston, Mass. The Nature Conservancy (9 September).
- Hoagland, P., H.L. Kite-Powell, M.E. Schumacher, L. Katz and D. Klinger. 2007. Economic sustainability of marine aquaculture: a report to the Marine Aquaculture Task Force. Woods Hole, Mass.: National Marine Aquaculture Task Force, Woods Hole Oceanographic Institution (February).
- Kite-Powell, H.L., P. Hoagland and D. Jin. 2007. US Gulf of Maine herring fisheries and markets, 1990-2006. Prospect Harbor, ME: Bumble Bee Foods LLC (April).
- Hoagland, P. and D. Jin. 2006. Accounting for economic activities in Large Marine Ecosystems (LMEs) and Regional Seas (RS). Regional Seas Reports and Studies No.181. Amsterdam: United Nations Environment Programme (July).
- Hoagland, P., M.E. Schumacher, H.L. Kite-Powell and J.A. Duff. 2006. Legal and regulatory framework for siting offshore wind energy facilities. Project No. 2004-OWEC-01. Westborough, Mass.: Offshore Wind Energy Collaborative Pilot Projects Grant Program, Massachusetts Technology Collaborative (30 June).
- Jin, D. and P. Hoagland. 2005. Report on the potential economic effects on commercial fishing from the Northeast Gateway Deepwater Port. The Woodlands, Tex.: Northeast Gateway Energy Bridge, L.L.C. (June).

- Jin, D. and P. Hoagland. 2005. Report on the potential economic effects on commercial fishing from the Northeast Gateway Pipeline Lateral construction corridor. Waltham, Mass.: Algonquin Gas Transmission, LLC (June).
- Hoagland, P. 2004. Southgate coastal reserve financial planning analysis. Coast & Harbor SCR Tech. Rep. No. 10. Woods Hole, Mass.: The Coast & Harbor Institute (February).
- Duff, J.A., T.S. Getchis and P. Hoagland. 2003. A review of legal and policy constraints to aquaculture in the US northeast. Aquaculture White Paper No. 5. NRAC Pub. No. 03-005. South Dartmouth, Mass.: Northeastern Regional Aquaculture Center, US Department of Agriculture (September).
- Hoagland, P., H.L. Kite-Powell and D. Jin. 2003. Business planning handbook for the ocean aquaculture of blue mussels. Woods Hole, Mass.: Marine Policy Center, WHOI (June).
- Marine Policy Center [P. Hoagland, H.L. Kite-Powell, D. Jin, A. Mulligan and M.E. Schumacher.] 2003. Review of the implementation status of recommendations from NRC and NAPA studies in coastal and ocean science and management: 1990-2002. Washington: US Commission on Ocean Policy (31 March).
- Kite-Powell, H.L. and P. Hoagland. 2002. Economic aspects of right whale ship strike management measures. NOAA Order No. 40EMNF100235. Woods Hole, Mass.: Northeast Fisheries Science Center, NMFS (April).
- Anderson, D.M., P. Hoagland, Y. Kaoru and A.W. White. 2000. Estimated annual economic impacts resulting from harmful algae blooms (HABs) in the United States. WHOI Tech. Rept. No. 2000-11. Woods Hole, Mass.: Department of Biology and Marine Policy Center, WHOI.
- Hoagland, P. and D. Jin. 2000. Characterizing annual potential net economic value in selected U.S. fisheries: a literature review. Washington: SeaWeb.
- Hoagland, P. and T. Morin. 2000. Information and data needs for socio-economic studies of proposed management actions at the Stellwagen Bank National Marine Sanctuary. Scituate, Mass.: Stellwagen Bank National Marine Sanctuary.
- Hoagland, P. and A.E. Meeks. 2000. The demand for whalewatching at Stellwagen Bank National Marine Sanctuary. Marine Sanctuaries Conservation Series MSD-00-2. Silver Spring, Md.: Marine Sanctuaries Division, National Oceanic and Atmospheric Administration, U.S. Department of Commerce (July), pp. 52-87.
- Marine Policy Center [P. Hoagland, D. Jarvinen, D. Jin, H.L. Kite-Powell and M.E. Schumacher.] 2000. Cost-Effective reduction of PCB contamination in the Hudson River and Estuary. Woods Hole, Mass.: Marine Policy Center, WHOI (February).
- Gaines, A.G., E.H. Gladfelter, P. Hoagland and H.L. Kite-Powell. 1999. An earth sciences observatory at St. Croix: economic analysis for a new scientific facility on the U.S. Virgin Islands. Columbia, S.C.: Belle W. Baruch Institute for Marine Biology and Coastal Research, University of South Carolina (30 April).
- Hoagland, P., A.G. Gaines and M.E. Schumacher. 1999. AUV applications in Massachusetts Bay: an assessment of current and potential opportunities. Cambridge, Mass: MIT Sea Grant Program (November).

- Hoagland, P., H.L. Kite-Powell, W. Paul and G. Hampson. 1998. Biological assessment for a blue mussel ocean aquaculture experiment in Rhode Island Sound. Concord, Mass.: New England Region, U.S. Army Corps of Engineers (11 May).
- Smolowitz, R., C. Goudey, S. Henrikson, E. Welch, K. Riaf, P. Hoagland, H.L. Kite-Powell, R. Smolowitz, and D. Leavitt. 1998. Sea scallop enhancement and sustainable harvesting: the Seastead Project. Westport, Mass.: Westport Scalloping Corporation (1 December). [NOAA Award No. NA66FD0027.]
- Hoagland, P. and H.L. Kite-Powell. 1997. Characterization and mitigation of marine debris in the Gulf of Maine. Boston, Mass.: Gulf of Maine Council on the Marine Environment. [<http://ekman.sr.unh.edu/edims/documents/Debris/gomdeb.html>.]
- Hoagland, P., H.L. Kite-Powell and M.E. Schumacher. 1996. Marine area governance and management in the Gulf of Maine: a case study. Washington: Committee on Marine Area Governance and Management, Marine Board, National Research Council, National Academy of Sciences (1 August). [Agr. No. DOT-3830-96-002.]
- Hoagland, P., D. Jin, P. Lee, C. Croft, L. Davidson and S. Wallis. 1996. Market-based incentives to reduce fisheries bycatch. Silver Spring, Md.: National Marine Fisheries Service, NOAA, U.S. Department of Commerce (29 February). [NOAA Contr. No. 50-DGNF-5-00172.]
- Hoagland, P., Y. Kaoru and J.M. Broadus. 1995. A methodological review of net benefit evaluation for marine reserves. Environment Department paper no. 027. Washington: Environment Department, The World Bank (October).
- Willauer, C.S., H.L. Kite-Powell, P. Hoagland, R.D. McNeil and R. Miele. 1995. Massachusetts marine sector white paper. South Dartmouth, Mass.: Committee on Marine Science and Technology, Governor's Council on Economic Growth and Technology.
- Hoagland, P., M.E. Schumacher and A.G. Gaines. 1995. Toward an effective land-based marine pollution protocol in the wider Caribbean region. WHOI-95-10. Woods Hole, Mass.: Marine Policy Center, WHOI.
- Hoagland, P., ed. 1993. Historic shipwreck management: meeting of experts II. Woods Hole, Mass.: Marine Policy Center, WHOI (August).
- Hoagland, P., ed. 1992. Historic shipwreck management: meeting of experts. Woods Hole, Mass.: Marine Policy Center, WHOI (24 March).
- Hoagland, P. 1992. Status of technology, recent patent activity and technology transfer issues in the field of deep seabed mining (with recommendations for the Republic of Korea). Seoul, Korea: Korea Ocean Research and Development Institute.
- Hoagland, P. and H.L. Kite-Powell. 1989. Technology transfer and intellectual property management in the field of oceanography: an overview of research institution/industry relations. Woods Hole, Mass.: Marine Policy Center, WHOI.
- Broadus, J.M., P. Hoagland and H.L. Kite-Powell. 1988. Determining the structure of the United States marine instrumentation industry and its position in the world industry. WHOI-88-55. Woods Hole, Mass.: Marine Policy Center, WHOI.

Hoagland, P. and J.M. Broadus. 1987. Seabed material commodity and resource summaries. WHOI-87-43. Woods Hole, Mass.: Marine Policy Center, WHOI.

Hoagland, P. 1985. Patent activity in the seabed mining industry. WHOI-85-20. Woods Hole, Mass.: Marine Policy Center, WHOI.

PUBLISHED ABSTRACTS:

Hoagland, P. 2006. The public policy of harmful algal blooms. *Proc. 12th International Conference on Harmful Algae*. Copenhagen, Denmark (4 September), p. 32.

Dalton, T.M., D. Jin and P. Hoagland. 2004. Development of an integrated economic-ecological model to estimate impacts of proposed policies. *Proc. The Coastal Society 2004 Conference*. Newport, RI (25 May).

Duff, J.A., T.S. Getchis and P. Hoagland. 2004. A review of legal and policy constraints to aquaculture in the US Northeast. *J. Shellfish Res.* 23(2):634-636.

Kite-Powell, H.L. and P. Hoagland. 2004. Economics of offshore culture of blue mussels (*Mytilus edulis*). *Proc. Aquaculture 2004: Aquaculture—An Ecologically Sustainable and Profitable Venture*. Honolulu: World Aquaculture Society, p. 314.

Hoagland, P. and D. Jin. 2001. A decision framework for the economically efficient control of harmful algal blooms. *Proc. 2nd Int'l Conf. on Harmful Algae Management and Mitigation*. Qingdao, China (12-16 November). <<http://vm.cfsan.fda.gov/~frf/ha01hoag.html>>

Kite-Powell, H.L. and P. Hoagland. 2001. The economics of New England finfish growout: aquaculture at an offshore site. *J. Shellfish Res.* 20(1):521.

Anderson, D., P. Hoagland, Y. Kaoru and A.W. White. 2000. Harmful algae blooms in the United States: estimates of economic impacts and policy responses. *Symp. On Nutrient Over-Enrichment of Coastal Waters: Global Patterns of Cause and Effect*. Washington: U.S. National Committee for SCOR, ASL&O, and the Estuarine Research Federation (11-13 October), p. 9.

Hoagland, P. and H.L. Kite-Powell. 2000. The economics of blue mussel growout: aquaculture at an offshore site. *J. Shellfish Res.* 19(1): 573-574.

Hoagland, P. 1999. Harmful algae blooms in the United States: estimates of economic impacts and policy responses. *Proc. 1st Int'l Conf. On Harmful Algae Management and Mitigation*. Subic Bay, Philippines (10-14 May).

Hoagland, P., H.L. Kite-Powell and D. Jin. 1999. The economics of sea scallop growout: aquaculture at an offshore site. *J. Shellfish Res.* 18(1): 267.

Elliott, M. and P. Hoagland. 1998. Exposed longline aquaculture of *Mytilus edulis*—a risk analysis. *Proc. Northeast Aquaculture Conference and Expo*. Rockport, Maine (18 November): 16.

Hoagland, P., D. Jin and H.L. Kite-Powell. 1998. Understanding the potential of offshore marine aquaculture: a bioeconomic approach. *J. Shellfish Res.* 17(1): 356.

- Paul, W., J. Gobat, M. Grosenbaugh, G. Hampson, P. Hoagland, H. Kite-Powell and L. Murray. 1998. Demonstrating the feasibility of the open-ocean aquaculture of blue mussels (*Mytilus edulis*) in Rhode Island Sound. *Proc. Northeast Aquaculture Conference and Expo* Rockport, Maine (18 November): 15.
- Hoagland, P. and D. Jin. 1997. Governance of access to public natural resources: a comparison of federal systems. *J. Shellfish Res.* 16(1): 288.
- Hoagland, P., H.L. Kite-Powell and M. Schumacher. 1997. Ocean governance in the Gulf of Maine. *Proc. AAAS Annual Meeting and Science Innovation Exposition (AMSIE '97)*, Seattle (13-18 February).
- Hoagland, P. and D. Jin. 1996. Designing an access system for ocean mariculture. *J. Shellfish Res.* 15(2): 455.
- OTHER PUBLICATIONS:**
- Hoagland, P. and D. Jin. 2011. Decision-support for the economic analysis of trade-offs in coastal and marine spatial planning (CMSP) for the US Northeast Shelf Large Marine Ecosystem. ICES CM 2011/M:14. *Proc. ICES 2005 Ann. Sci. Conf.* Gdansk, Poland (19-23 September).
- Eberbach, S. and P. Hoagland. 2011. Estimating the economic effects of shoreline change on assessed property values in Sandwich, Massachusetts. *ASCE Conf. Proc.* doi:10.1061/41185(417)21.
- Hoagland, P. 2007. Testimony before the Joint Hearing on *Renewable Energy Opportunities and Issues on the Outer Continental Shelf*. Joint Hearing of the Subcommittee on Fisheries, Wildlife and Oceans and the Subcommittee on Energy and Mineral Resources. Washington: Committee on Natural Resources, House of Representatives, US Congress (24 April).
- Sherman, K., P. Hoagland and D. Jin. 2005. Driving forces affecting resource sustainability in large marine ecosystems. ICES CM 2005/M:07. *Proc. ICES 2005 Ann. Sci. Conf.* Aberdeen (20-24 September).
- Hoagland, P. 2004. An overview of the economics of deep-sea fisheries. *Proc. Deep-sea Fisheries: Ecology, Economics and Conservation*. Woods Hole, Mass.: Ocean Life Institute, Woods Hole Oceanographic Institution and the New England Aquarium (12-14 September). <http://www.whoi.edu/institutes/oli/activities/symposia_deepsea_program.htm>
- Herrera, G. and P. Hoagland. 2004. Whaling in the presence of ecological and market linkages and the threat of boycotts. *Proc. IIFET 2004 Japan*. Tokyo: International Institute for Fisheries Economics and Trade (26-29 July).
- Hoagland, P. 2004. Which way will the wind blow? Marine scientists have a key role to play in the debate over wind farms in the coastal ocean. *Oceanus* 42(3):56-59. <<http://oceanusmag.whoi.edu/v42n3/hoagland.html>>
- Steele, J.H. and P. Hoagland. 2004. Reply to Zeller and Russ. *Fish. Res.* 67:247-248.
- Hoagland, P. 2003. Exploring sea-floor resources. *Science* 300:1093 (26 May) [letter to the editor concerning P.A. Rona's perspective on "Resources of the sea floor"].

- Hoagland, P. 2001. Recent US policy developments affecting the use of analytical approaches for estimating the economic effects of fisheries conservation and management. In P. Failler, ed., *Research Orientations for the Development of New Tools and Models to Evaluate the Contribution of Aquaculture and Fishing Activities to the Development of Coastal Areas and their Socio-Economic Interactions with Other Sectors*. CEMARE Rep. No. 56. Portsmouth, UK: Centre for the Economics and Management of Aquatic Resources, University of Portsmouth, pp. 75-84.
- Hoagland, P., P. Fell, J.F. Bash, R.K. Mohan, R. Smolowitz, J.C. Wiltshire and D. Haven. 2000. State of Technology Report—Marine Resources Division. *Mar. Tech.. Soc. J.* 34(2): 46-61.
- Jin, D. and P. Hoagland. 2000. Economic activities associated with the northeast shelf large marine ecosystem. In T. Grigalunas and M. Mazzotta, eds., *NESLME Economic Valuation Handbook* (forthcoming).
- Hoagland, P. 1999. Economic impacts of water quality on marine fisheries. Presented at: *Agriculture and Coastal Resources: Issues in Measuring the Economic Dimensions of Problems and Policies*. Mimeo. Washington: Economic Research Service, US Department of Agriculture (3 June).
- Hoagland, P. 1999. *Toward the Practicable Control of Marine Fisheries Bycatch: A Public Policy Analysis*. Ph.D. Dissertation. Newark, Del.: College of Marine Studies, University of Delaware.
- Hoagland, P. and N. Tongring. 1997. Antiquities markets: where do they come from? *Bibl. Arch. Rev.* 23(1) [letter to the editor].
- Hoagland, P. 1996. Meeting summary. In K. Vrana and E.M. Mahoney, eds., *Proc. Deep-Water Shipwreck Assessment: Partnerships and Technologies*, East Lansing, Mich. (in press).
- Kite-Powell, H.L. and P. Hoagland. 1994. Dimensions of competitiveness—marine instrumentation firms. *Sea Tech.* 35(1): 60-62.
- Broadus, J.M. and P. Hoagland. 1992. Joint development of nonfuel marine minerals in Asian seas. In T.H. Hyung, I.Z. Chang and M.J. Valencia, eds., *Proc. Int'l Conf. On East Asian Seas: Cooperative Solutions to Transnational Issues*. Seoul (21-23 September): 87-90.
- Broadus, J.M., P. Hoagland and H.L. Kite-Powell. 1989. Defining a key industry: marine electronics instrumentation. *Sea Tech.* 30(8): 59-64.
- Hoagland, P. 1989. Review of: G.J. Mangone, *Marine Policy for America*, Taylor & Francis, New York, 1988. *Oceanus* 32(2): 92-93.
- Hoagland, P. and T.K. Eichenberg. 1988. The Channel Islands National Marine Sanctuary. *Oceanus* 31(1): 66-74.
- Hoagland, P. 1985. The role of the United States Coast Guard. *Oceanus* 28(2): 67-73.
- Broadus, J.M. and P. Hoagland. 1984. Rivalry and coordination in marine hard minerals regulation. In Marine Technology Society and Institute for Electrical and Electronics Engineers, eds., *Proc. Oceans '84*, Washington: 415-420.
- Hoagland, P. 1982. *Marine Sanctuaries: Coordination in Federal Ocean Management*. Master's Thesis. Newark, Del.: College of Marine Studies, University of Delaware.

Hoagland, P. 1982. Maritime law and the U.S. Marine Protection, Research, and Sanctuaries Act. In G.J. Mangone, ed., *Marine Policy Issues*, Newark, Del.: Center for the Study of Marine Policy, University of Delaware, pp. 1-60.

DRAFT WORKING PAPERS:

Davidson, K., R.J. Gowen, P.J. Harrison, L.E. Fleming and P. Hoagland. 2011. Harmful algae: a growing threat? *Trends in Ecol. & Evol.* (submitted).

Hoagland, P., D. Jin, L.M. Flores and E. Ralston. 2011. Do red tides affect tourism on Cape Cod, Massachusetts? Mimeo. Woods Hole, Mass.: Marine Policy Center, Woods Hole Oceanographic Institution.

Jin, D., A. Ashton and P. Hoagland. 2012. Optimal responses to shoreline change: an integrated economic and geological model. *Nat. Res. J.* (submitted).