

Marine Debris

NATIONWIDE

Assessing the Socio-economic Costs of Marine Debris and the Benefits of Abatement

Marine debris can have significant economic impacts to coastal communities and the fishing industry. Among a wide host of potential economic impacts are the cost of removal off beaches and reefs and at sea, lost tourism revenues, the cost of repairing boats and ships damaged by marine debris, and the cost to human health.

The study has four outcomes over four phases. The first was to create a database of all available information and data on local, state and federal spending on marine debris cleanup programs. The second was to design a socio-economic model that will estimate the economic costs and benefits of marine debris prevention. The third was the implementation of a survey to obtain information for the economic model and to fill data gaps identified in the literature review and database. The fourth was a Web-based application that will combine the information of the database and survey results that can be marketed to decision makers. The effort for 2007 concentrated on phase two – the design of an estimation model.



NOAA diver carefully removes derelict fishing net from a coral reef in the Northwestern Hawaiian Islands. Photo courtesy of NOAA Pacific Islands Fisheries Science Center.

WHAT IS MARINE DEBRIS?

Marine debris is any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes.

MARINE DEBRIS SOURCES

Sources of marine debris include land-based sources, such as littering, dumping, and industrial losses. Ocean-based debris can come from fishing vessels, cargo ships, stationary platforms, and other vessels.

MARINE DEBRIS PROGRAM

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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MANDATES

Mandates supporting NOAA's marine debris efforts include the following:

- Marine Debris Research, Prevention, and Reduction Act of 2006, 33 U.S.C. §§ 1951 et seq.
- U.S. Ocean Action Plan
- Coral Reef Conservation Act
- Marine Plastic Pollution Research and Control Act, 33 U.S.C. §§ 1901 et seq.
- Marine Protection, Research, and Sanctuaries Act, (Title II) 33 U.S.C. §§ 1401 et seq.
- Clean Water Act, 33 U.S.C. §§ 1251 et seq.

PARTNERS

- NOAA Center for Coastal Monitoring and Assessment - Biogeography Team
- NOAA Pacific Islands Fisheries Science Center
- The Oceanic Institute
- NOAA Central Library

BENEFITS OF THE PROJECT

This project pulls together all available information on marine debris into one database that can be queried for summary statistics. This tool will enable decision makers to view synthesized information on marine debris and highlight the full impact of the problem.

This information will lead to the construction of a model that will demonstrate the costs and benefits of reducing marine debris.

CONTACTS

Rod Ehler
National Marine Sanctuary Program
Rod.Ehler@noaa.gov
(301) 713-7246

Jordan Parrillo
National Marine Sanctuary Program
Jordan.Parrillo@noaa.gov
(301) 713-7266



Derelict fishing net recovered at sea by longline fishermen. These large net conglomerations are navigational hazards to fishermen. *Photo courtesy of Schnitzer Steel HI Corp.*

This project is funded through NOAA's National Ocean Service, Office of Response & Restoration, Marine Debris Program. The NOAA Marine Debris Program works with other NOAA offices, as well as other federal, state, and local agencies and private sector partners to support national, state, local and international efforts to protect and conserve our nation's natural resources, oceans, and coastal waterways from the impacts of marine debris.