

Fagatele Bay National Marine Sanctuary

Resource Threats

Management Issue

Fagatele Bay National Marine Sanctuary (FBNMS or Sanctuary) has been subject to disturbance and stressors, both anthropogenic and natural. New threats may develop over time as land or ocean use changes. Managers need an ongoing assessment of resource threats and endangered species in order to manage for these issues.

Description

Some resource threats can be planned for and others cannot. Natural threats such as disease or coral predation outbreaks may not be predictable, but they can be monitored and contingency plans can be developed to mitigate them. Anthropogenic threats such as destructive fishing practices, marine debris, alien introductions and sedimentation can be identified and efforts to plan to avoid, mitigate or respond to these issues can be undertaken.



*Marine debris in American Samoa following the 2009 tsunami.
Photo credit: NOAA Marine Debris Program*

Questions and Information Needs

- 1) Is local or travelling marine debris a threat to the Sanctuary?
- 2) What is the status of the threatened species in the Sanctuary?
- 3) What is the status of destructive fishing practices?
- 4) Are there fishing pressure threats to large fish?
- 5) Have introduced species impacted native species in the Sanctuary?
- 6) Is sedimentation in nearshore areas a concern?
- 7) What are the physical characteristics associated with those habitats?

Scientific Approach and Actions

- Complete a comprehensive marine debris survey within the Sanctuary
- Draft a report on the current status of threatened species in the Sanctuary
- Execute monitoring surveys to inspect for physical damage to the reef due to destructive fishing activities
- Assess the changes in distribution, abundance and biomass of introduced species in the Sanctuary
- Analyze changes in ecological parameters of introduced species with changes in ecological parameters of native species
- Execute a coastal erosion study to determine the threat of sedimentation

Key Partners and Information Sources

Hawai'i Institute of Marine Biology; NOAA Marine Debris Program, NOAA/NMFS/PIFSC/Coral Reef Ecosystems Division; NOAA/NMFS/PIFSC/CRED/Pacific Benthic Habitat Mapping Program; NOAA/NMFS/Pacific Islands Fisheries Center; NOAA/NOS/National Center for Coastal Ocean Science; NOAA/NMFS/PIRO, US Fish and Wildlife Service; US Geological Survey/Biological Resources Division; USGS/BRD/National Biological Information Infrastructure/Pacific Basin Information Node; Territorial Government of American Samoa, American Samoa Department of Marine and Wildlife Resources, The National Park Service of American Samoa

Updated: 5/26/2011

For More Information -- <http://www.sanctuaries.noaa.gov/science/assessment>

Management Support Products

- A report describing non-disturbance event marine debris threats
- A report on the current status of threatened species in the sanctuary
- Maps of impacted areas of the reef for protection and restoration efforts
- An analysis of impacts of introduced species to native species
- Maps of areas sensitive to coastal erosion and sedimentation

Planned Use of Products and Actions

- Management decision to plan for handling marine debris in the sanctuary
- Understanding the status of threatened species in the sanctuary
- Studies on reef resilience can be performed on sites that are identified
- Management decision to decide if management of wild introduced species is necessary
- Managers can work with land-owners to reduce the risk of coastal sedimentation



*Damage to the reef from dynamite fishing in Fagatele Bay.
Photo credit: Nancy Daschbach.*

Program References

FBNMS Management Plan

- Action Plan 4.1 Marine Conservation Science
 - Strategy MCS-5: Continue and expand research, characterization and monitoring of marine ecosystems for the life of the plan.
 - Activity MCS-5.1: Continue long term monitoring efforts and target new monitoring to assess recovery and resilience from natural disasters and coral reef health throughout the life of the plan
 - Activity MCS-5.2: Enhance water quality monitoring to identify point source pollution within one year
 - Activity MCS-5.3: Monitor watershed and land use adjacent to sanctuary resources to assess potential for land based impacts within two years

FBNMS Condition Report

- These activities will support all questions of the FBNMS Condition Report

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