

## Protecting and Restoring Natural Resources in Guam

### Issues

The landmass of Guam is 560km<sup>2</sup>, surrounded by fringing, patch, and submerged and barrier coral reefs. Lagoonal habitats occur near Cocos Island and Apra Harbor. Past military and other activities resulted in areas of chronic pollution of marine waters, sediments, corals, and fish, resulting in fish consumption advisories in some areas of Guam.

### What we do

NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP) acts as a trustee of the public's natural resources. DARRP collaborates with federal, state, and tribal entities and also works with cleanup agencies, local organizations, the public, and those responsible for an incident to—

- Protect coastal and marine natural resources
- Respond to discharges of oil and hazardous substances
- Assess risks and injuries to natural resources
- Restore injured natural resources and related socioeconomic benefits

### How we do it

DARRP acts as a trustee for natural resources to—

- Work cooperatively with those responsible for the incident
- Develop innovative approaches and techniques for remediation and restoration
- Work with the public to select restoration options to compensate for injuries to natural resources
- Design and implement or oversee natural resource restoration projects and monitor their success



*Photo, above: Guam coastline.*

*Photo, right: Initial stage of sea wall construction at Orote landfill. (US Navy)*



### DARRP Accomplishments

NOAA ARD worked with Guam EPA, US EPA, the Department of the Navy, and the Coast Guard to assess PCB contamination in fish near Orote Landfill and Cocos Island. As a result, the agencies have achieved source control and cleanup of other significant PCB sources at the Navy Base and are working on PCB source cleanup at Cocos Island.



In partnership with Guam EPA and US EPA, NOAA DARRP conducted an assessment of fish contamination in Apra Harbor in 2005. This preliminary study is the first to examine fish contamination throughout Apra Harbor (including inner and outer Apra Harbor) and will help guide decisions on future fish advisories and help prioritize areas that may need further cleanup.

NOAA DARRP provided advice to Federal and Guam regulatory agencies on using NRDA tools to quantify mitigation for destruction of coral reefs from new military construction projects in Apra Harbor. We have also provided a series of workshops to help Guam resource agencies develop programs of natural resource damage assessments and restoration for corals reefs and other natural resources impacted by vessel groundings, oil spills, and chemical discharges.

In 2003, OR&R's Abandoned Vessel Program partnered with local agencies and the USCG to survey more than 30 derelict and abandoned vessels on Guam. The work identified and prioritized all the vessels that threatened coral reefs, mangroves, and sea grass beds. The work also provides a basis for NOAA support for derelict vessel removal in Guam.

Recently, DARRP provided technical support and advice to the Government of Guam on options for removing the vessel grounded at Uranao Beach.

### Future Threats

Guam is in the midst of a military expansion that is expected to increase both population and vessel traffic to service that population and the construction needs. This is expected to increase the potential for damage to coral reef habitats and other valuable marine resources. One concern is that increased vessel traffic may increase the likelihood of vessel groundings, which can physically harm coral and result in the release of oil and other chemicals to the marine environment.



Photo: Debris near former LORAN station at Cocos Island.

**For further information about DARRP, please visit**

<http://www.darrp.noaa.gov>

