

PMEL Ecosystem Research Overview

Ecosystem Mission Goal : Protect, Restore, and Manage Use of Coastal and Ocean Resources Through Ecosystem Approaches To Management

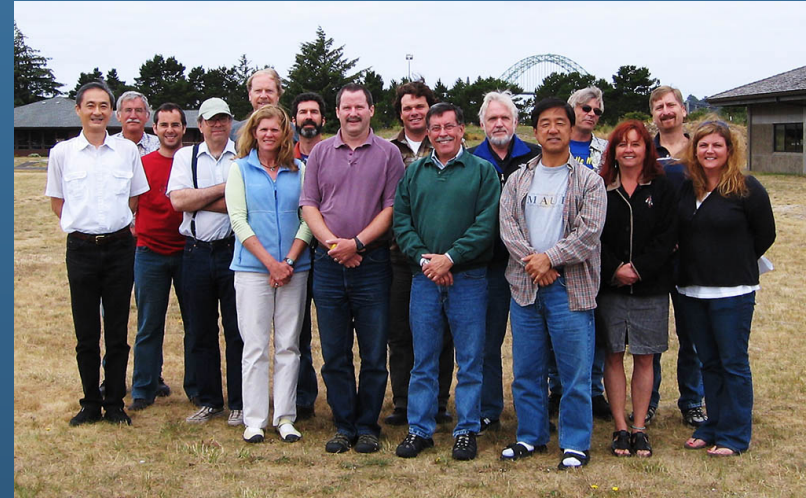
This Mission Goal is structured into 7 activities:

- Ecosystem Research
- Ecosystem Observations
- Aquaculture
- Coastal and Marine Resources
- Corals
- Fisheries Management
- Habitat



Ecosystem research at PMEL is focused in the...

Ocean Environment Research Division



65 Employees (23 Federal; 42 Cooperative Institute)
24 Principal Investigators (8 Federal; 16 Cooperative Institute)


OERD is home to three programs:
Ecosystems & Fisheries-Oceanography Coordinated Investigations (**EcoFOCI**)
VENTS
National Center for Tsunami Research (**NCTR**)

PMEL Ocean Environment Research Division

Research in Support of NOAA's Ecosystem and Weather/Water Goals

Accomplished through:

- Scientific leadership at the national and international levels
- Understanding and supporting NOAA's research objectives
- Effective planning and execution of ship/shore-based ops
- Long-term program planning and execution
- Investment and development of new technologies

Indicators of Performance and Quality, 2004-2007		NCTR	<u>Pubs</u>	<u>Proposals</u>
		EcoFOCI	34	8
		Vents	56	47
			86	30

Ecosystem Research - and - Ecosystem Observations

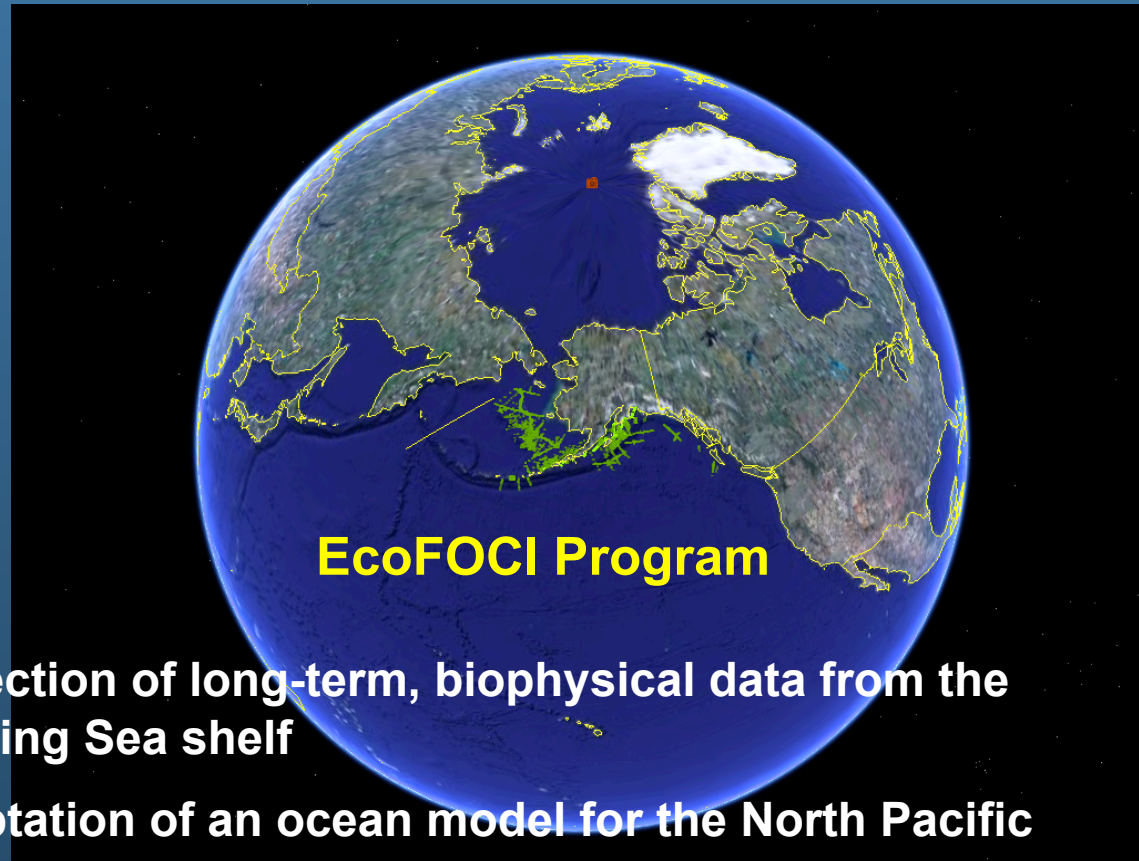
Outcomes:

- ▶ Healthy and productive coastal and marine ecosystems that benefit society
- ▶ A well-informed public that acts as a steward of coastal and marine ecosystems



Ecosystem Observations

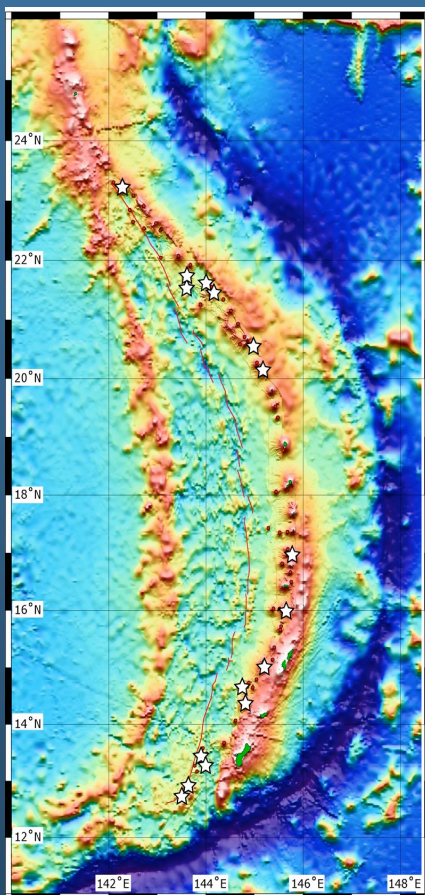
Provides observations, assessments, and ecological forecasts...



- ▶ **Collection of long-term, biophysical data from the Bering Sea shelf**
- ▶ **Adaptation of an ocean model for the North Pacific**
- ▶ **Evaluation and selection of climate model projections**
- ▶ **Completion of first ecosystem study of Aleutian Islands**
- ▶ **Pollock quota reduction for 2008**

Ecosystem Research

Provides scientific information and tools for ecosystem management...



Vents

- ▶ Detection and characterization of deep volcanic eruptions and hydrothermal events
- ▶ Understanding the ecosystem impacts of submarine volcanic and hydrothermal heat and chemical fluxes
- ▶ Exploration in the time domain using time-series based tools to forecast ephemeral volcanic events
- ▶ Develop sensor systems and arrays for the purpose of effectively making large-scale ocean physical and biological ecosystems observations

★ 's are locations of active submarine volcanoes along the Mariana Arc