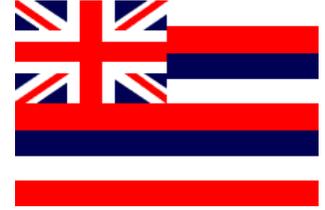




## NOAA Research in Hawaii



### HI-1 and 2 (Based in Honolulu - serves entire state)

#### **National Sea Grant College Program Hawai'i Sea Grant College Program**

The Hawai'i Sea Grant College Program, part of the National Sea Grant College Program, is a regional program of research, education, and extension services that works to promote the wise use of marine resources. Current research projects are targeting sustainable aquaculture development, commercial biotechnology, coral reefs, and coastal erosion. The public, industry, and policy makers are kept informed on issues related to economic development, coastal ecosystem health and public safety, and education and human resources through Hawaii Sea Grant's extension service and its monthly newsletter, "Makai." In FY 2001, Hawaii Sea Grant projects received approximately \$1.97 million from the National Sea Grant College Program. For more information, please visit <http://www.soest.hawaii.edu/SEAGRANT/>

### HI-1 and 2 (Statewide)

#### **Climate and Global Change Program**

NOAA is responsible for providing climate information to the nation in order to prepare and protect climate sensitive sectors of society and the economy. To carry out this mission, NOAA's Climate and Global Change Program conducts focused scientific research to understand and predict variations of climate. The program is comprised of a number of research elements, each focusing on a specific aspect of climate variability. Taken together, this research contributes to improved predictions and assessments of the effects of climate variability and change on different environments over a continuum of time scales from season to season, year to year, and over the course of a decade and beyond. This research is accomplished through the strong support of the academic and private sectors, as well as NOAA and other federal laboratories. In FY 2001, NOAA's Climate and Global Change Program provided approximately \$500,000 in support of climate research in the State of Hawaii. For more information please visit <http://www.ogp.noaa.gov>

### HI-1 and 2 (coastal communities)

#### **Pacific Marine Environmental Laboratory Tsunami Research Program**

The Tsunami Research Program at the Pacific Marine Environmental Laboratory (PMEL) seeks to mitigate tsunami hazards to Hawaii, Washington, Oregon, California, and Alaska. A tsunami is a series of very large ocean waves caused by underwater earthquakes, landslides, volcanic eruptions, explosions, and even meteor impacts. Capable of flooding hundreds of meters inland past the typical

high-water level, the fast-moving water associated with an inundating tsunami can crush homes and other coastal structures. Research and development activities focus on improved tsunami inundation maps for coastal communities and advanced technology to increase the speed and accuracy of tsunami forecasts and warnings. PMEL has developed and deployed an array of early warning buoys in the Pacific to increase the reliability of tsunami warnings. This array consists of six moored buoys located at key deep water sites to improve risk assessment from tsunamis associated with major earthquake hazard areas around the Pacific Basin. One of the primary aspects of this work is the National Tsunami Hazard Mitigation Program, a state/federal partnership created to reduce the risks of tsunamis to U.S. coastal areas. This program was funded at \$2.3 million in FY 2001. For more information please visit <http://www.pmel.noaa.gov/tsunami>

### **HI-1 (Honolulu)**

#### **Joint Institute for Marine and Atmospheric Research**

The Joint Institute for Marine and Atmospheric Research (JIMAR) in Honolulu is a cooperative venture between NOAA and the University of Hawai'i that was established in 1977. The purpose of JIMAR is to increase effectiveness of oceanic, atmospheric, and geophysical research of mutual interest to NOAA and the University of Hawaii. Major research themes and special topics at JIMAR include tsunamis, climate, equatorial oceanography, fisheries oceanography, tropical meteorology, and coastal research. Climate research at JIMAR has benefitted from climate initiatives within the School of Ocean and Earth Science and Technology (SOEST). The interdisciplinary nature of SOEST has fostered interactions among biologists, chemists, and physical oceanographers leading to fundamental discoveries concerning the role of the ocean in global climate. JIMAR also houses the Wyrski Center which studies the predictability of the coupled ocean-atmosphere-land system and is developing methods for predicting its evolution. In addition, JIMAR has helped facilitate the creation of the International Pacific Research Center (IPRC), a United States-Japan cooperative center focused on Asia-Pacific Climate. Finally, in addition to close cooperation with the Honolulu Laboratory of the National Marine Fisheries Service, JIMAR manages a Pacific Pelagic Fisheries Research Program in support of the Western Pacific Regional Fisheries Management Council. The goals are to conduct research in support of the management of important pelagic fish species in the vicinity of Hawaii and the central and western Pacific Ocean and recovery of protected marine species in Hawaii and the central North Pacific. In FY 2001, JIMAR received approximately \$3.5 million in NOAA funding. For more information please visit <http://ilikai.soest.hawaii.edu/JIMAR/>

### **HI-1 (Honolulu)**

#### **National Undersea Research Program**

#### **National Undersea Research Center for Hawaii and the Western Pacific Region**

The National Undersea Research Center for Hawaii and the Western Pacific Region is located at the University of Hawai'i in Honolulu. The undersea research program is conducted at the University's Hawaii Undersea Research Laboratory (HURL). It is one of six regional centers supported by the National Undersea Research Program. HURL supports undersea research primarily around the Hawaiian Islands but includes work elsewhere in the Pacific. Center facilities include the Pisces V, a 2000-meter capable, 3-person, 1-atmosphere submersible; RCV-150, a 1000-meter remotely

operated vehicle being upgraded to 2000 meters; and R/V Ka'imikai-O-Kanaloa, a 220-foot dedicated support vessel with facilities for 19 scientists. During the next few years, HURL's Pacific-wide research projects will focus on deep-sea geology and ecosystems and their contribution to global climatic and ecosystem changes. Projects will include the geology and biology of emerging and subsiding islands, marine product and fishery assessments, and processes of submarine mineral accumulations on seamounts, volcanoes, and islands. Baseline information will be gathered on deep-sea marine ecosystems influenced by natural and human-induced processes. The FY 2001 funding for HURL totaled \$2.69 million. For more information please visit <http://www.soest.hawaii.edu/HURL/>

### **HI-1 (Honolulu)**

#### **Climate and Global Change Program University of Hawai'i Sea Level Center**

NOAA's Climate and Global Change Program provides support for the University of Hawai'i Sea Level Center (UHSLC). UHSLC is a research facility of the University of Hawai'i/NOAA Joint Institute for Marine and Atmospheric Research (JIMAR) within the School of Ocean and Earth Science and Technology. The mission of the Center is to collect, process, distribute, and analyze in-situ tide gauge data from around the world in support of climate research. For more information please visit <http://uhslc.soest.hawaii.edu>

### **HI-1 (Manoa)**

#### **Climate and Global Change Program International Pacific Research Center**

NOAA's Climate and Global Change Program provides support for the International Pacific Research Center (IPRC) located at the University of Hawai'i at Manoa. It is the mission of the IPRC to provide an international, state-of-the-art research environment to improve understanding of the nature and predictability of climate variability and regional aspects of global environmental change in the Asia-Pacific sector. For more information please visit <http://iprc.soest.hawaii.edu>

### **HI-2 (Mauna Loa)**

#### **Climate Monitoring and Diagnostics Laboratory Mauna Loa Observatory**

The Mauna Loa Observatory is part of a global network of observatories monitoring atmospheric constituents that are capable of forcing climate change such as greenhouse gases and those that cause depletion of the global ozone layer. The observatory is operated by the Climate Monitoring and Diagnostics Laboratory (CMDL). Over 250 different atmospheric and solar radiation properties are monitored at the observatory with the 43 year record of continuous atmospheric carbon dioxide concentrations being one of the longest atmospheric constituent records on earth. The observatory is a key facility in the international Network for the Detection of Stratospheric Change which monitors the healing of the ozone layer following the global agreement to reduce ozone destroying

fluorocarbons (the Montreal Protocol) initiated a decade ago. Weekly balloonborne ozonesondes are released from Hilo to monitor the vertical distribution of ozone and the associated ultraviolet (UV) radiation reaching the surface is measured with a world standard UV instrument. Mauna Loa Observatory is host to 20 cooperative programs from around the world, a major lidar installation supported by NASA, and a national solar monitoring facility operated by the National Center for Atmospheric Research. The Mauna Loa Observatory is also the base for re-transmission of many local government radio signals and is a testbed for the Federal Aviation Administration GPS global air traffic control system. Expenditures were approximately \$1.6 million in 2001. In addition, Mauna Loa Observatory is host to the University of New Hampshire Wind Lidar program, the NASA stratospheric ozone lidar, the Associated Universities solar observatory, and the National Center for Atmospheric Research High Altitude Observatory, supported by the National Science Foundation. These programs support an additional 6 staff and have combined yearly budget expenditures of approximately \$1 million. For more information please visit <http://www.cmdl.noaa.gov/obop/index.html>

For further information about these and other NOAA programs, please contact NOAA's Office of Legislative Affairs at (202) 482-4981.

February 2002