

## Scientific Collaboration and Partnerships 2014-2019

### National Oceanic and Atmospheric Administration

- National Weather Service (NWS)
  - National Centers for Environmental Prediction (NCEP)
  - National Tsunami Warning Center
  - Pacific Tsunami Warning Center
  - Caribbean Tsunami Warning Program
  - National Data Buoy Center
  - Climate Prediction Center
- National Ocean Science (NOS)
  - Office of National Marine Sanctuaries
    - National Marine Sanctuary of American Samoa
    - Olympic Coast National Marine Sanctuary
  - Pacific Hydrographic Branch
  - Office of Coast Survey
  - U.S. Integrated Ocean Observing System
    - Northwest Association of Networked Ocean Observing Systems (NANOOS)
    - Alaska Ocean Observing System (AOOS)
  - National Centers for Coastal Ocean Science
- National Marine Fisheries Service (NMFS)
  - Alaska Fisheries Science Center
  - Northeast Fisheries Science Center
  - Northwest Fisheries Science Center
  - Pacific Island Fisheries Science Center
    - Coral Reef Ecosystem Division
  - Southeast Fisheries Science Center
  - Southwest Fisheries Science Center
  - Office of Science and Technology
- National Environmental Satellite, Data, and Information Service (NESDIS)
  - National Center for Environmental Information

- Office of Oceanic and Atmospheric Research
  - Atlantic Oceanographic and Meteorological Laboratory (AOML)
  - Earth System Research Laboratory (ESRL)
  - Geophysical Fluid Dynamics Laboratory (GFDL)
  - Great Lakes Environmental Research Laboratory (GLERL)
  - NOAA Climate Program Office
    - Arctic Research Program
    - Ocean Observing and Monitoring Division
  - NOAA Ocean Acidification Program
  - NOAA Office of Ocean Exploration and Research
  - NOAA Technology Partnership Office
  - NOAA Unmanned Aircraft Systems Program
  - National Sea Grant Program
- Office of Marine and Aviation Operations
- NOAA's Western Region Team
- Office of Education

## NOAA Cooperative Institutes

- Cooperative Institute for Alaska Research (CIFAR)
- Cooperative Institute for Marine and Atmospheric Studies (CIMAS)
- Cooperative Institute for Marine Resources Studies (CIMRS)
- Cooperative Institute for Research in Environmental Sciences (CIRES)
- Joint Institute for Marine and Atmospheric Research (JIMAR)
- Joint Institute for the Study of the Atmosphere and Ocean (JISAO)

## U.S. Government Agencies

- Coral Reef Advisory Group of American Samoa
- Department of Energy
- Department of Energy - Los Alamos National Lab
- Department of Energy - Pacific Northwest National Laboratory
- Department of Energy - Water Power Office
- National Aeronautics and Space Administration (NASA)
- NASA - Goddard Space Flight Center
- NASA - Jet Propulsion Laboratory
- NASA - Disasters Program
- National Institute of Standards and Technology
- National Park Service
- National Science Foundation



# PMEL

Pacific Marine Environmental Laboratory

- National Science Foundation - National Center for Atmospheric Research
- National Science Foundation – Ocean Observatories Initiative (OOI)
- National Tsunami Hazard Mitigation Program (Federal and State Program)
- North Pacific Research Board
- U.S. Coast Guard
- U.S. Fish and Wildlife Service
- US Forest Service Pacific Northwest Research Station
- U.S. Geological Survey
- U.S. Geological Survey - Alaska Volcano Observatory
- U.S. National Ice Center
- U.S. Naval Research Laboratory- Marine Meteorology Division
- U.S. Navy
- U.S. Navy - Office of Naval Research
- U.S. Navy - Commander Undersea Surveillance
- U.S. Navy - Living Marine Resources
- U.S. Navy - US Naval Undersea Warfare Center

## U.S. State and Local Government Organizations

- Department of Marine and Wildlife Resources of American Samoa
- Oregon State Department of Fish and Wildlife
- Washington State Military Department Emergency Management Division
- Washington State Department of Natural Resources
- Washington State Department of Ecology

## Sovereign Indian Nations

- Hoh Tribe
- Makah Tribe
- Quileute Tribe
- Quinault Indian Nation

## International Collaborations

- Argo Program
- Global Carbon Project
- Global Ocean Ship-based Hydrographic Investigations Program (GO-SHIP)
- UNESCO Intergovernmental Oceanographic Commission (IOC)
- Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM)

- Surface Ocean CO2 Atlas (SOCAT)
- World Meteorological Organization
- WCRP's Climate Variability and Predictability Experiment (CLIVAR)

## International Government Organizations

- Australian Bureau of Meteorology
- Brazil Navy (Directorate of Hydrography and Navigation; DHN)
- Bureau of Meteorology (Australia)
- Centre for Southern Hemisphere Oceans Research (Australia)
- Centro Nacional de Monitoramento e Alertas de Desastres Naturais (Brazil)
- China Meteorology Administration - Chinese Academy of Meteorological Sciences
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Environment and Climate Change Canada
- European Centre for Medium-Range Weather Forecasts (ECMWF)
- First Institute of Oceanography, State Oceanic Administration (China)
- Fisheries and Oceans Canada
  - Pacific Biological Station
- Geological Survey of Denmark and Greenland (GEUS)
- Hellenic Center for Marine Research, Greece
- India Ministry of Earth Sciences - Indian National Centre for Ocean Information Services (INCOIS)
- Indian Ministry of Earth Sciences - Indian Institute of Tropical Meteorology (IITM)
- Indian Ministry of Earth Science (MoES)
- Indonesian Agency for the Assessment and Application of Technology (BPPT)
- Indonesian Meteorology, Climatology, and Geophysical Agency (BMKG)
- Institut de recherche pour le développement (France)
- Institute of Marine Research, Tromsø Norway
- Institute of Oceanology, Chinese Academy of Sciences
- Instituto de Investigaciones Marinas
- Instituto Espanol de Oceanografia (Spain)
- Instituto Nacional de Pesquisas Espaciais (INPE/Brazil)
- IOC Caribe Tsunami Early Warning System
- IOC Pacific Tsunami Warning System
- IOC International Tsunami Information Center
- Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
- Korean Polar Research Institute (KOPRI)
- Korea Institute of Ocean Science and Technology (KIOST)
- Laboratoire d'Etudes en Géophysique et Océanographie Spatiales (France)
- Observatoire Oceanologique de Villefranche (France)



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- Météo-France
- Meteorological Service of Canada - Canadian Ice Service
- Meteorological Research Institute (Japan)
- National Institute of Ocean Technology (India)
- National Institute of Water and Atmospheric Research (New Zealand)
- Qingdao National Laboratory for Marine Science and Technology
- Russian Federal Research Institute of Fisheries and Oceanography (VNIRO)
- Servicio Nacional de Meteorología e Hidrología del Perú (SENAMHI/Peru)
- UK Met Office

## Private Companies

- Aerodyne
- Atmospheric and Environmental Research (AER)
- Battelle
- Climate Corporation
- Customized Animal Tracking Solutions (CATS)
- DNV GL
- Embedded Ocean System
- Google
- Greeneridge Sciences, Inc.
- Hydroid, Inc.
- Institute for Geological and Nuclear Sciences Limited (GNS Science), New Zealand
- Kongsberg
- L3Harris Latitude
- LI-COR
- Liquid Robotics
- McLane Research Laboratories, Inc.
- MRV Systems, LLC
- Opto-Knowledge Systems, Inc.
- Paroscientific, Inc.
- Peregrine Engineering Consulting
- Sairdron, Inc.
- Science Applications International Corporation (SAIC)
- Science Systems and Applications, Inc. (SSAI)
- Sea-Bird Scientific
- Seascan, Inc

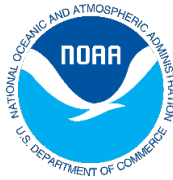
- Sequoia
- Sunburst Sensors
- Taylor Shellfish Farms
- Teledyne Benthos
- WeWork

## Non-Profits

- Antarctica Climate and Ecosystem Cooperative Research Centre
- Battelle
- Bay of Bengal Large Marine Ecosystem Project
- Bigelow Laboratory for Ocean Sciences
- Bjerknes Centre for Climate Research (Norway)
- Cascadia Research
- Consiglio Nazionale delle Ricerche (Italy)
- Exploratorium
- Foundation Cearense for Meteorology and Water Resources (FUNCEME) - Brazil
- GEOMAR Helmholtz Centre for Ocean Research Kiel
  - Integrated Carbon Observation System
- Huntington Consulting
- Iceland Marine and Freshwater Research Institute
- Jupiter Research Foundation
- Monterey Bay Aquarium Research Institute (MBARI)
- Nansen Environmental and Remote Sensing Center (Norway)
- National Marine Mammal Foundation
- National Oceanography Centre (UK)
- National Research Council
- Norwegian Geophysical Institute
- Ocean Explorations Trust
- Paul G. Allen Family Foundation
- Plymouth Marine Laboratory
- Puget Sound Restoration Fund
- Southern California Coastal Water Research Project
- University Corporation for Atmospheric Research (UCAR)

## Academic Institutions

- Alaska Sea Grant
- Alfred Wegener Institute (Germany)
- Andhra University (India)
- Australian National University, Canberra



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Pacific Marine Environmental Laboratory

- Center for Climate Physics, Pusan National University (Korea)
- Central Washington University
- Colorado State University
- Columbia University
- Cornell University
- Dalhousie University (Canada)
  - Ocean Tracking Network
- ETH – Zurich
  - Institute of Biogeochemistry and Pollutant
- Finnish Meteorological Institute
- Florida Atlantic University
- Florida State University
- Hakai Institute (Canada)
- Hokkaido University (Japan)
- Howard University
- Institute of Atmospheric Sciences (China)
- Institute of Marine Science and Technology, Shandong University (China)
- Institute of Oceanology of the Polish Academy of Sciences
- Institute Pierre Simon Laplace - Laboratoire des Sciences du Climat et l'Environnement (France)
- Kyushu University (Japan)
- Lamont-Doherty Earth Observatory
- Lincoln University (UK)
- Louisiana State University
- Massachusetts Institute of Technology
- Monash University (Australia)
- National Institute of Oceanography (India)
- National University of Ireland
- North Carolina State University
  - North Carolina Institute for Climate Studies
- Norwegian Institute for Air Research (NILU)
- Ocean University of China
- Old Dominion University
- Oregon State University
  - Marine Mammal Institute
  - PacWave
- Pacific Marine Energy Center

- Penn State University
- Pohang University of Science and Technology (Korea)
- Portland State University
- Princeton University
- Pusan National University (Korea)
- Rio de Janeiro State University (Brazil)
- Rutgers University
- Scripps Institution of Oceanography
- Seoul National University
- South China Sea Institute of Oceanology
- Stanford University
- State University of New York
- Stony Brook University
- Texas A&M Galveston
- Texas A&M University
- The University of Southern Mississippi
- Tsinghua University (China)
- Universidad Autonoma de Baja California, Mexico
- Universidad de Granada (Spain)
- Universidade Federal de Pernambuco (Brazil)
- Universidade Federal de Santa Catarina (Brazil)
- Universidade Federal do Paraná (Brazil)
- Université de Bretagne Occidentale (France)
- Universite Pierre and Marie Curie (France)
- University Ca' Foscari of Venice (Italy)
- University College London (England)
- University New Hampshire
- University of Alaska, Fairbanks
  - International Arctic Research Center (IARC)
- University of Bergen (Norway)
- University of Buenos Aires (Argentina)
- University of California Berkeley
- University of California Davis
- University of California Irvine
- University of California San Diego
- University of California Santa Barbara
- University of Cape Town (South Africa)
- University of Chile
- University of Colorado





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Pacific Marine Environmental Laboratory

- University of Connecticut
- University of Delaware
- University of Exeter (England)
- University of Georgia
- University of Groningen - Centre for Isotope Research (Netherlands)
- University of Guelph (Canada)
- University of Hawaii
- University of Madrid (Spain)
- University of Malaga (Spain)
- University of Maryland
- University of Maryland Baltimore County
- University of Massachusetts, Amherst
- University of Massachusetts, Dartmouth
- University of Miami
- University of Michigan
- University of New Hampshire
- University of New Hampshire (UK)
- University of New South Wales (UL)
- University of North Carolina
- University of Oldenburg (Germany)
- University of Oregon
- University of Ottawa (Canada)
- University of Paris (France)
- University of Puerto Rico
- University of Rhode Island
- University of Sao Paulo (Brazil)
- University of South Carolina
- University of South Florida
- University of Southern Mississippi
- University of Tasmania
- University of Tokyo
- University of Utah
- University of Victoria (Canada)
- University of Virginia
- University of Washington
  - Applied Physics Lab

- School of Oceanography
  - Seaglider Fabrication Unit
- University of Wisconsin Madison
- University St Andrews
- Utah State University
- Washington Sea Grant
- Western Washington University
- Wilkes University
- Woods Hole Oceanographic Institution (WHOI)
- Yale University
- Younsei University (Korea)