

NOAA and Earth Observations

The 21st Century presents complex challenges for the National Oceanic and Atmospheric Administration (NOAA). Every aspect of NOAA's mission—ranging from managing coastal and marine resources to predicting changes in Earth's environment—faces a new urgency, given intensifying national needs related to the economy, the environment, and public safety. As the new century unfolds, new priorities for NOAA action are emerging in the areas of climate change, freshwater supply, ecosystem management, and homeland security.

Observations of the environment are intrinsic to NOAA's mission. NOAA envisions an integrated, global observing system that will bring together all aspects of environmental monitoring on common platforms, to ensure data quality, to manage data efficiently for the long-term, and to make these data easily and readily accessible. NOAA will continue to work with our national and international partners to develop these global-to-local environmental observations, continually monitoring the coupled ocean/atmosphere/land systems. This activity will maximize the mutual benefits of national and international data exchange.

NOAA has been working with national and international partners to strengthen cooperation in Earth observations. NOAA's vision, and the vision of many nations, is of an Integrated Global Observation and Data Management System. Recent political initiatives, building on decades of technical work and successes, demonstrate the unique opportunity now available to build this Integrated Global Observation and Data Management System. These political initiatives, with an Earth observation system focus, include:

- International Global Ocean Observing System Office established under the auspices of the Intergovernmental Oceanographic Commission, World Meteorological Organization, United Nations Environment Programme and International Council for Science (1991)
- U.S. GOOS Steering Committee established (regional component facilitator of the international Global Ocean Observing System (GOOS); initiated assessment of users and products needed by U.S. regional coastal observing systems (1998)
- World Summit on Sustainable Development (August 2002)
- G-8 agreement on Cooperative Action on Science and Technology for Sustainable Development (June 2003)
- National Strategic Plan for Climate Change (June 2003)
- Earth Observation (EO) Summit (first ever held), joining 33 other nations and the European Union in adopting a declaration (**Appendix 2**) for the development of a “comprehensive, coordinated, and sustained Earth Observation system or systems” (July 2003)

-
- In association with the EO Summit, an *ad hoc*, intergovernmental Group on Earth Observations (GEO) was formed to develop a 10-Year Implementation Plan for this comprehensive Earth observation system or systems (August 2003)
 - National Science and Technology Council, Committee on Environment and Natural Resources established an Interagency Working Group on Earth Observations (IWGEO) to develop a U.S. 10-year plan and to coordinate U.S. input into the intergovernmental process (August 2003)

NOAA will play an active role in the development of these GEO and IWGEO activities while continuing to build its Information Service Enterprise, in itself a formidable task. We will benefit from our engagement in the development of our corporate processes while becoming knowledgeable and contributing knowledge in these national and international processes. NOAA is working with National Teams and International Sub-groups in the following areas:

- User Requirements and Outreach
- Architecture
- Data Utilization
- Capacity Building
- International Cooperation

NOAA is also working with our partners to develop a prioritization process that will be critical to the success of the operations of our future systems within the GEO and IWGEO architectures.

NOAA's primary mechanism for developing an integrated ocean observing system (IOOS) is through the NORL-established Ocean.US office (2002). Ocean.US is an interagency office facilitating the design and implementation of the IOOS. IOOS is the name given to the U.S. contribution to the Global Ocean Observing System and consists of a global component and a coastal component. By collaborating with other Federal agencies through the NORLC and Ocean.US, NOAA is working to implement a sustained and integrated system.

The initial design of the IOOS has been completed and endorsed by the NORLC. The IOOS will develop as a partnership among Federal and State agencies and regional associations that represent both users and operators of the system. Recognizing that IOOS activities should be represented by one Federal agency for administrative purposes, NOAA will perform this function, including the preparation of a consolidated multi-agency annual budget request for the IOOS.