NOAA Releases Expanded World Ocean Database

NOAA have released the World Ocean Database 2009, the largest, most comprehensive collection of scientific information about the oceans with records dating as far back as 1800. This product is part of the climate services provided by NOAA.

The 2009 database, updated from the 2005 edition, is significantly larger providing approximately 9.1 million temperature profiles and 3.5 million salinity reports. The 2009 database also captures 29 categories of scientific information from the oceans, including oxygen levels and chemical tracers, plus information on gases and isotopes that can be used to trace the movement of ocean currents.

"There is now more data about the global oceans than ever before," said Sydney Levitus, director of the World Data Center for Oceanography, which is part of NOAA's National Oceanographic Data Center. "Previous databases have shown the world ocean has warmed during the last 53 years, and it's crucial we have reliable, accurate monitoring of our oceans into the future."

Climate scientists use the World Ocean Database to track changing conditions which adds to the international science community's understanding of global climate change. Forecast centres, such as NOAA's Ocean Prediction Center, also use the information for quality control of real-time oceanographic information.

The database is a crucial part of the Integrated Ocean Observing System and the Global Earth Observation System of Systems, or GEOSS, as a reliable source of oceanic information. The information was compiled by scientists at the Ocean Climate Laboratory, part of the NOAA Satellite and Information Service.

NOAA understands and predicts changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and conserves and manages our coastal and marine resources.