



EARTH OBSERVATIONS

Research and Development Funding in the President's FY 2008 Budget

The U.S. supports a large number of space-based, airborne and ground-based instruments to observe, monitor and measure a multitude of the Earth's characteristics around the globe. The President is committed to optimizing these scientific efforts by developing sustained and integrated Earth Observation systems for the Nation and by making these systems an integral part of a global system.

Global Earth Observations support research in a wide range of scientific disciplines aimed at answering questions of importance to society. The *U.S. Strategic Plan for an Integrated Earth Observations System* (IEOS) provides guidance for agencies contributing to these efforts. Seventeen federal agencies, with primary leadership from OSTP, the National Oceanic and Atmospheric Administration (NOAA), and NASA, have been actively planning an integrated Earth Observations System under the National Science and Technology Council's U.S. Group on Earth Observations (USGEO).

The FY 2008 Budget includes funding for a number of Earth Observations programs, including:

- Ocean Observing Systems – the Budget includes an additional \$16.4 million to support the NOAA-led Integrated Ocean Observing System and a total of \$31 million for the National Science Foundation's (NSF) Ocean Observatories Initiative.
- Earthquake Monitoring and Prediction – NSF and the U.S. Geological Survey are improving U.S. earthquake monitoring capabilities through EarthScope at \$21 million and the Advanced National Seismic System at \$8 million.
- Tsunami Warnings – to strengthen tsunami response capabilities, an additional \$2 million is included in the 2008 Budget for the Tsunami Warning and Mitigation System.
- LandSat - critical to Earth Observations data continuity is the ability to inventory the land's surface from space. The 2008 Budget includes \$160 million for NASA to procure a next-generation LandSat instrument to continue the 30-year record of land imagery. The Administration is also preparing to release a report from the Interagency Working Group on the Future of Land Imaging that will make recommendations for ensuring long-term continuity of multi-spectral imaging of the Earth's surface.
- GPM – The 2008 Budget includes funding for NASA's Global Precipitation Measurement Mission to meet a launch date of the Core spacecraft no later than FY2013.

The USGEO has recently released plans for addressing three of six Near-Term Opportunities (NTO's), with three additional plans in progress, that integrate the nation's Earth Observations capabilities to address specific national and global needs. These plans address multiple societal benefit areas, ranging from reducing loss of life and property due to disasters, to supporting sustainable agriculture, to improving public health. The NTO's are:

- 1) Air Quality Assessment and Forecast System (plan released)
- 2) Improved Observations for Disaster Reduction (plan released)
- 3) Global Land Observation System (plan in progress)
- 4) Improved Observations for a National Integrated Drought Information System (NIDIS) (plan released; NIDIS authorized by the 109th Congress and 2008 Budget includes \$4.4 million.)
- 5) Sea Level Observation System (plan in progress)
- 6) Architecture and Data Management System (plan in progress)

The U.S. national strategy is being developed in parallel to the international Global Earth Observation System of Systems (GEOSS). The U.S. plan was submitted at the third Earth Observation Summit in 2005 as the U.S. contribution to GEOSS. The intergovernmental Group on Earth Observations, now 66 countries strong, is working to integrate energy and environmental research initiatives that are critical for achieving sustained global economic growth while ensuring a healthy environment.