

National Aeronautics and Space Administration

Commission on Ocean Policy

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[Http://Earth.NASA.Gov](http://Earth.NASA.Gov)

A Space Agency and the Oceans

- ~10% of NASA is the Earth Science Enterprise
- ~10% of ESE is Oceanography
- ~10-20% of Oceanography is devoted to research
- Active participant in National Oceanographic Partnership Program
- Engaged with NOAA and DOD in converged, polar orbiting, operational satellite system (NPOESS)
- R&D investment to understand and predict, weather, climate and natural hazards.

NASA Needs in Ocean Research, Operations, Education and Governance

National recognition of the need for a **global ocean observing system**

- An integrated system combining the best aspects of *in situ* and space-based sub-systems with ocean models and data assimilation techniques [*End-to-end, observations-to-products*]
- An integrated system allowing long-term data collection for research quality products AND infusion of system design and technological change [*Using strengths of various agencies*]
- An integrated system across disciplines (physics, chemistry, biology) [*Enabling interdisciplinary science and applications*]

NASA Needs in Ocean Research, Operations, Education and Governance

NASA Oceanography envisions national guidelines for **ocean literacy**

- The vision: Knowledge of the ocean by all citizens will protect the health and welfare of the ocean ecosystem and the American way of life. An understanding of our oceans will facilitate the development, enhancement and utilization of an operational ocean observing system as both a research and educational tool.
- Ocean science will be a part of teaching and learning in our educational institutions and will be addressed with energy and vigor. Teachers will bring ocean knowledge and learning to their classrooms such that it meets the variety of requirements for science aptitude among students of all ages.
- NASA Oceanography, in partnership with others, will champion the establishment of ocean literacy guidelines for educators.

Summary

- In part, NASA is an ocean technology agency.
Enabling the development of global oceanography through observations from space [**Champion for a Global Ocean Observing System**]
- In part, NASA is an ocean science agency.
Investigating variability of the ocean and “mining” predictable patterns for the benefit of society [**Champion for the Global Ocean Data Assimilation Experiment**]
- In part, NASA is an ocean education agency.
Using the excitement of exploration to develop public awareness of ocean issues. [**Motivating the next generation of ocean explorers**]