PACE Applications

Water Resources
Marine Fisheries

How can we improve monitoring of our global **ocean resources** and their habitat, to ensure productive and sustainable **fisheries**, safe sources of seafood, the recovery and conservation of protected resources, and healthy ecosystems?

Who Cares and Why?

The international trade in coastal and marine fisheries contributes $70 billion annually to the United States economy. Yet, according to the Food and Agriculture Organization of the United Nations, 70% of the world's fish stocks for which assessment information is available are reported as fully exploited or overexploited and, thus, require effective and precautionary management.

A wide range of users from the private and public sectors, including National Oceanic and Atmospheric Adminstration, fisheries, regional Fishery Management Councils, local health departments, global conservation organizations, and private fish forecasting companies, are interested in assimilation of earth observation data into fisheries research and management. Among their major goals is to: provide services for safe and sustainable fisheries; assess the status of fish stocks; ensure compliance with fisheries regulations; and support conservation of protected species.

The NASA Response

PACE Ocean Color Instrument (OCI)

* *5 nm hyperspectral resolution*
* *UV (345 nm)- SWIR (2260 nm)*
* *1-2 day overpass*
* *24 hr data latency*
* *1 km at nadir*

PACE OCI will help refine measurements of primary productivity in coastal and open ocean environments, phytoplankton pigments and biological communities, and ecosystem structure to improve the way we use our global ocean resources.

Combined with ancillary data on ocean physical properties, PACE ocean color observations will aid in understanding essential fish habitats and the productivity dynamics of the phytoplankton that form the base of the global ocean food web.