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NOAA CoastWatch/OceanWatch/PolarWatch makes the link from aquatic satellite data products to applications and information.

Abstract: Satellite ocean/water data products are being integrated into many operational applications for routine and event-driven environmental assessments, predictions, forecasts, research, and management decisions, providing tremendous societal and economic benefits. Much more can and should be done to ensure that these expensive-to-obtain satellite observations be exploited to their fullest potential in the observation to knowledge and decisions value chain. At NOAA, the NOAA CoastWatch/OceanWatch/PolarWatch Program (hereafter “CoastWatch, <https://coastwatch.noaa.gov>) is an essential link in the transition of ocean satellite data products into applications and information. For 30 years, CoastWatch, has been breaking down barriers, bridging gaps, and facilitating the transition from data to information in support of all NOAA mission services including National Weather Service, National Marine Fisheries Service and National Ocean Service, and the office of Oceanic and Atmospheric Research. For an insignificant fraction of the global costs of international earth-observing satellite missions (e.g., tens of billions of US dollars annually), CoastWatch provides a thousand-fold, 10,000-fold or greater, return on investment. Society benefits, lives are improved and even saved, and property is protected as a result of improvements in applications for warnings for harmful algae on beaches, or against consumption of infected shellfish, in the policies of managing protected species, in economic consequences of commercial fishing regulations, marine transportation and navigation safety and many other examples. CoastWatch connects users and applications with ocean and coastal satellite data through 1) the production of value-added and analysis-ready data products; 2) data portals, visualization software, and other tools for learning about and accessing data; 3) helpdesk and user forums 4) dedicated training courses and tutorials; 5) direct collaboration with stakeholders on application development; and 6) facilitation of the transition of products and applications into operations. This presentation highlights the updates of the products and services provided by NOAA CoastWatch that enable ocean satellite data to be exploited by NOAA missions along with beneficiaries outside of NOAA including other governmental agencies (US, local, international); non-profit organizations, the commercial sector, academia and the general public. Disclaimer: The views, opinions, and findings contained in this article are those of the authors and should not be construed as an official National Oceanic and Atmospheric Administration (NOAA) or U.S. Government position, policy, or decision.