Scientific Stewardship of VIIRS Ocean Satellite Data

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ABSTRACT

NOAA NESDIS National Centers for Environmental Information (NCEI) provides scientific stewardship **(Figure 1)** of remotely sensed oceanographic data. Scientific data stewardship consists of the application of an integrated suite of functions designed to preserve and exploit the full scientific value of environmental data and information over the long-term (decades). NCEI develops satellite data products and provides authoritative records. The reprocessed Suomi-NPP Visible Infrared Imaging Radiometer Suite (VIIRS) Ocean Color Reprocessed **(Figure 2)** and VIIRS Sea Surface Temperature **(Figure 3)** derived using NOAA heritage Advanced Clear-Sky Processor for Oceans (ACSPO) products from STAR (Center for Satellite Applications and Research) will be archived through NCEI, which provides enhanced access, data discovery and user services **(Figure 4)** .

Figure 1. NCEI Data Stewardship Tiers (T1-T6) are continuous from bottom to top. T6 represents data stewarded through tiers 1-6.

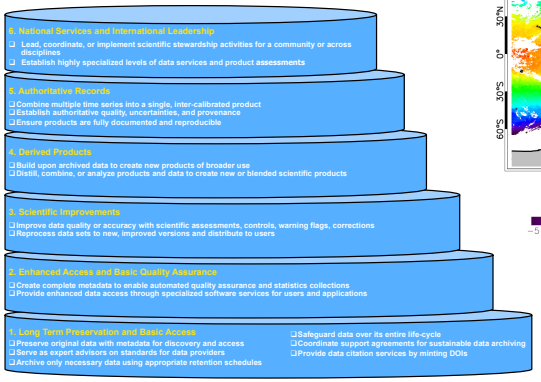


Figure 2. VIIRS ocean color chlorophyll-a composite Image , 2012/04 - 2012/10 (Menghua Wang, NOAA/NESDIS/STAR, Sherwin Ladner, NRL) used to estimate phytoplankton pigment concentration and whale distribution.

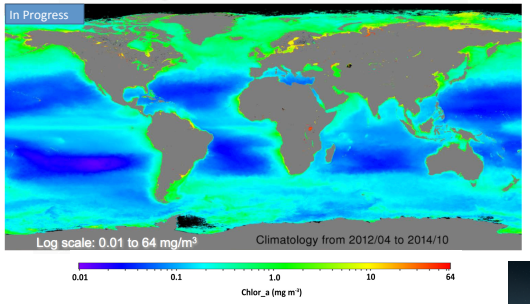


Figure 3. VIIRS global ACSPO Version 2.4 Level 3 Sea Surface Temperature from NOAA/NESDIS/STAR. Image shows a combination of 10 minute nighttime granules for one day.

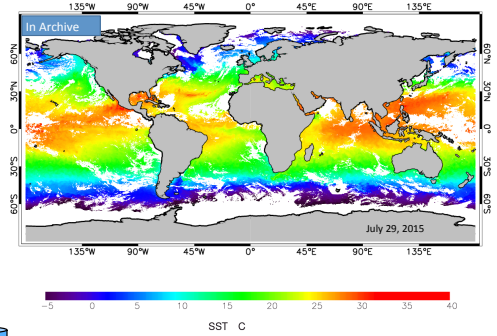
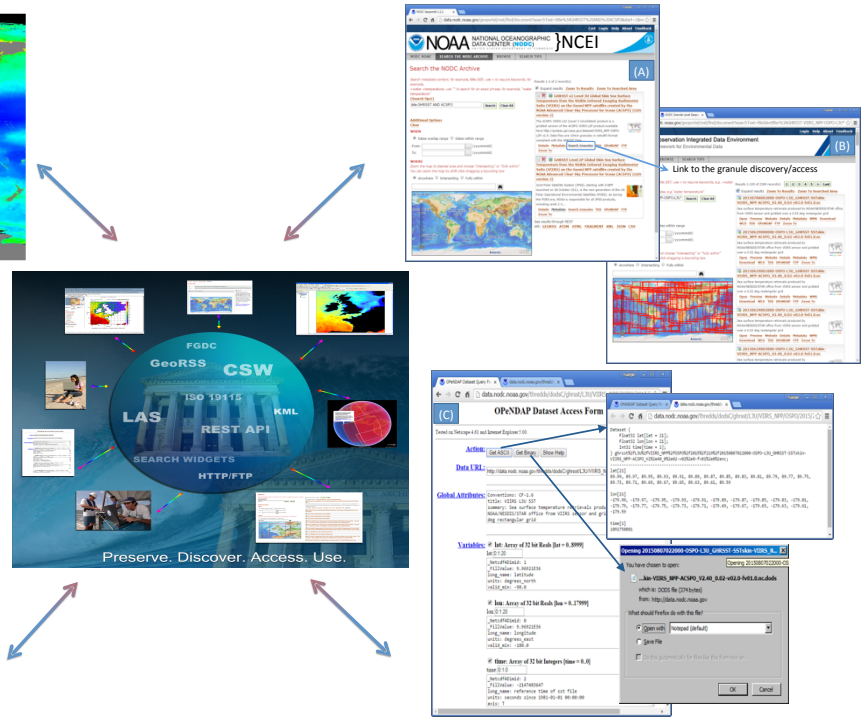


Figure 4. Data can be discovered and accessed at the collection level and granule level using HTTP, FTP, Live Access Server, THREDDS server, OPeNDAP server, and other services (see A through C).



Summary

The NCEI team works together to

- provide timely, relevant and authoritative satellite-based data products to the oceanographic community with a focus on Climate Data Records and Essential Ocean and Climate Variables,
- help plan archive requirements for future NOAA satellite missions and lead NCEI efforts relating to satellite data and metadata, and
- improve visibility of NCEI satellite products and establish strategic partnerships for better stewardship and an increased number of satellite-derived data products for users.

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