



National Aeronautics and
Space Administration

Updates from the Satellite Needs Working Group

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What is SNWGW?

A coordinated approach to identify and communicate Federal satellite Earth observation needs...

...and develop solutions to help federal agencies use Earth-observing satellite data products in their decision-making

- Mandated through the White House National Science and Technology Council's U.S. Group on Earth Observations (USGEO)
- A biennial survey to document and communicate satellite Earth-observing needs by federal agencies to NASA, NOAA, and USGS
- NASA is funded to complete an assessment of the survey response, develop solutions, engage with stakeholders, provide training, and ensure impact

Status of SNWG Program of Record

Formulation

Implementation

Operational

SNWG-2016 Activities
Historical airborne data products
Harmonized Landsat Sentinel-2 product
Support for Maxar products
NISAR high-resolution North America
Support for agency data discovery

All SNWG solutions
on Earthdata



SNWG-2018 Activities
Global NISAR soil moisture product
Water quality products
OPERA Global surface water extent
OPERA Global land surface disturbance
OPERA North Amer. land surface deformation
Radiation & clouds – SatCORPS
Atmospheric composition using GEOS-5
Low latency freeboard & ice thickness products
Animal tracking (“Internet of Animals”)

SNWG-2020 Activities
TEMPO near real-time products
Global HLS-derived vegetation indices suite
Air quality forecasts and distributed Pandora sensors
Merged GNSS-RO/atmospheric sounder planetary boundary layer products
Sea surface salinity with sea ice mask
Commercial Data via CSDA
High-resolution DEMs from commercial data
Broader access to Planet data
Access to DESIS data
Broader access to Spire data
Enable discovery of commercial data



SNWG 2022 Solutions

#1 Vertical Land Motion Product. Leverages SNWG-2018 OPERA solution; tracks magnitude of vertical land surface motion using Sentinel-1 and NISAR (April 2024) data; annual, monthly.

#2 Low-Latency Harmonized Landsat Sentinel-2 (HLS). Leverages SNWG-2016 HLS solution; aims to achieve 6-hour latency.

#3 TEMPO Near Real-Time SO₂ and Enhanced Products. Complements the SNWG-2020 TEMPO solution with hourly SO₂ concentration. In addition, non-NRT TEMPO-based trace gas products.



SNWG 2022 Solutions

#4 Remote Sensing Training. Targeted training efforts for specific applications and agencies.

#5 Multi-Sensor Ocean Surface Winds Product. High temporal resolution (6 h) and gridded wind-speed data by combining data from a wide range of satellite missions.

#6 Harmful Algal Bloom (HAB) Hotspot Product. An algal bloom advisory system based on multiple ocean color sensors; builds on the current NASA CyAN effort.

Co-Designing Actionable Solutions

Incorporating co-design into the SNWG assessment and solution formulation process so that solutions are usable, accessible, and actionable upon completion.

Building blocks:

- **Understanding** US government agency partners, how they work, what decisions they make, how they use Earth observations
- **Defining** who our agency champions may be, engaging and building relationships with them
- **Ideating** with them to co-develop and **prototype** ideas
- **Testing** and iterating on solutions as they are developed, including sharing feedback early and often
- **Evaluating** solutions together with end users and incorporating necessary changes
- **Raising awareness** and offering **training** to build our user community within agencies
- Laying groundwork to sustainably **transition** solutions into users' hands and workflows



We seek to make SNWG solutions user-centered, actionable, accessible, and useful. We need YOU to make that happen!

Please let us know

- ...if you require changes to any SNWG solution in order to them!
- ...if you require any form of training or support in order to use an SNWG solution
- ...if you are interested in co-designing new solutions
- ...if you want to help raise awareness of solutions and their applications to your agency

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A satellite image of Earth showing a coastline with a large bay and surrounding land. The text "NASA earth" is overlaid in white. The word "NASA" is in a bold, sans-serif font, and "earth" is in a lowercase, sans-serif font.

NASA
earth