



## Ready for Data!

### This is Getting Real, Folks!

As images and stories emerge illustrating some truly remarkable data products from SWOT, the NASA and CNES data centers are ramping up their efforts and outreach to ready our communities to receive it! Pre-validated SWOT data products may be available as early as Fall 2023. Below we include some recently released info from NASA's PO.DAAC & the CNES Hydroweb.next data centers, along with some links that may both interest you and help your project. As you peruse the information here, keep in mind that we are very interested to learn about progress and status in your SWOT Early Adopter projects, and of any publications you produce which include work on your projects. Please send us any links or citations we can share!

The SWOT Project teams in both the U.S. and France, along with Project and Science Team members from many other countries are completing the calibration and validation phase of the mission, and readying the spacecraft to move to the science orbit. Read about some of this work being done [here](#).

Visit the [PO.DAAC](#) and the [Hydroweb.Next](#) SWOT pages for the latest information on data products. See updates from the data centers below.

### SWOT Applications at a Glance

- 8** Application Workshops
- 3** Virtual Hackathons
- 30** SWOT Early Adopters
- 18** Articles & peer-reviewed papers on SWOT Applications

See: <https://depts.washington.edu/saswe/swot/ea-publications.html>

### Applications Goals

- Produce maximal societal impact
- Provide available & accessible data for broad user communities
- Support SWOT Mission goals
- Build awareness & literacy of SWOT measurement capabilities

# Where in the world are the SWOT Early Adopters?

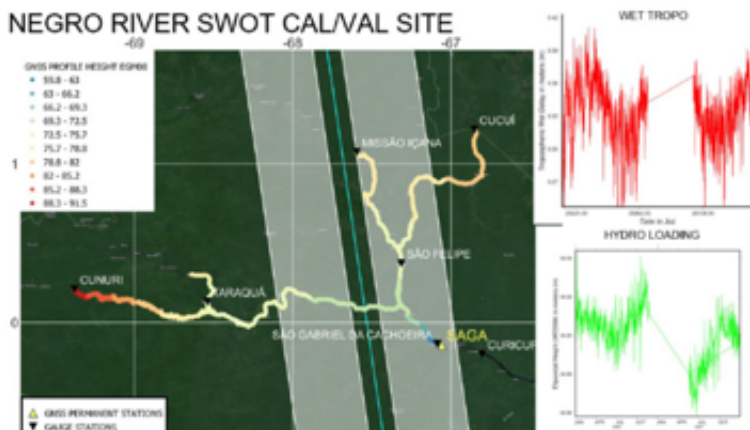


WELCOME to our newest SWOT Early Adopters! **Water in Sight** (Stockholm, Sweden); **Cleveland Water Alliance** (Ohio, USA).

Below, we share the work, below, of four more SWOT Early Adopters who have built literacy and user preparedness for SWOT data: Collecte Localisation Satellites (CLS), Toulouse, France; Environnenta and Climate Change Canada (ECCC), Quebec, Canada; Geological Survey of Brazil (SGB), Brasilia, Brazil; French National Research Institute (IRD), Toulouse, France. We expect these agencies will yield highly-visible success stories on SWOT applications by addressing critical societal needs at local, regional or global scales.

Our SWOT Early Adopters will be able to validate the return on public investment of the SWOT mission by demonstrating the value of SWOT data and information.

## SWOT Early Adopter Highlights



### SGB & IRD - A Partnership for Brazil

**Title:**  
SWOT for support to monitoring extreme hydrological events

**Leads:**  
Daniel Medeiros Moreira (SGB and GET-France), Fabrice Papa (IRD/LEGOS), Jefferson Melo (SGB), Stéphane Calmant (IRD/LEGOS), Adrien

Paris (HydroMatters and LEGOS), Marcus Suassuna Santos (SGB), Luna Gripp Alves (SGB) and Artur Mattos (SGB)

Check the 'Current Progress' link in the link below for exciting updates on joint Geological Society of Brazil (SGB) and French National Research Institute (IRD) field work recently completed on the Upper Negro River for the calibration and validation (CalVal) phase of SWOT. The field work took place in June 2023 near to city of São Gabriel da Cachoeira in the state of Amazonas in Brazil, which is a zone covered by the SWOT CalVal one-day orbit. The team was composed of experts from Legos, GET, IRD in French Guyana, SGB/CPRM and had the support of Brazilian Army.

Over 15 days, the experts navigated more than one thousand kilometers on the Upper Negro River, in the Amazon forest, collecting data with several instruments installed on two boats, including a GNSS receiver, radar, ADCP to measure flow and the special "Calnageo" floating device that collects unprecedented water level surface observations. The team also retrieved water level data from ANA/SGB permanent gauge stations and leveled these gauges in the same altimetric reference of SWOT data.

[Read More >](#)

## Environment and Climate Change Canada (ECCC)

### Title:

Using SWOT data/products to enhance lake hydrology research in central Canada

### Leads:

Jean Bergeron, Yonas Dibike



Focused on the Redberry Lake in the North Saskatchewan River Basin, a key SWOT research sites in Canada, the project goals include: a) to integrate SWOT data/products in regional lake hydrometric database; and b) to test/apply SWOT data (including AirSWOT data) for lake water balance analysis and modeling.

[Read More >](#)

## Collecte Localization



## Satellites (CLS)

**Title:**

SWOT data to be included in a Water Resources database

**Leads:**

Alice Andrew, Yanice Faugere

CLS collects, analyses and disseminates satellite hydrological parameters to provide databases and services monitoring surface water and natural resources based today on remote sensing observations and in situ data. It works also on numerical modelling data and develops management tools and databases for hydrological parameters, hydrological monitoring and plans future forecasting services.

CLS will integrate SWOT data in the Hydroweb database and plans to use SWOT data for validation and calibration of numerical models.

[Read More >](#)

## News from the Data Centers

### PO.DAAC -- NASA

In late June 2023 the NASA Physical Oceanography Distributed Active Archive (PO.DAAC) announced the public release of SWOT Level 2 science data products. The release includes the Operational Geophysical Data Record (OGDR) and Interim Geophysical Data Record (IGDR) from the Poseidon-3C Nadir Altimeter (NALT), a Jason-class dual-frequency (Ku/C) radar altimeter that operates at 1- and 20-Hz and the Advanced Microwave Radiometer (AMR), a two-beam passive radiometer that measures sea surface brightness temperatures for three microwave frequencies (18.7, 23.8 and 34 GHz) which are used to correct for altimeter range delays caused by water vapor and liquid water content in the atmosphere. See the tentative schedule for SWOT data product releases below.

**The SWOT mission launched successfully on December 16, 2022.** Please visit this page with latest updates on dataset release timelines.

The table below provides the tentative schedule for SWOT data product releases at the PO.DAAC.

Datasets	Initial Pre-Validated Product Release <sup>1</sup>	Initial Validated Product Release <sup>2</sup>
Level 1 (Nadir Altimeter, Radiometer, GPS, DORIS)	No sooner than July 2023 (Launch +7 months)	Expected in December 2023 (Launch +12 months)
Level 1 (KaRIn)	No sooner than October 2023 (Launch +10 months)	Expected in April 2024 (Launch +16 months)
Level 2	No sooner than October 2023 (Launch +10 months)	Expected in April 2024 (Launch +16 months)

<sup>1</sup> Pre-validated products have not completed validation and may contain known anomalies and limitations. Products may not cover all available data since launch and/or may be affected by some evolution of science data processing algorithms and instrument calibrations based upon incoming in-flight data. Products may include partial coverage of river discharge and lake storage change, due to limited temporal sampling.

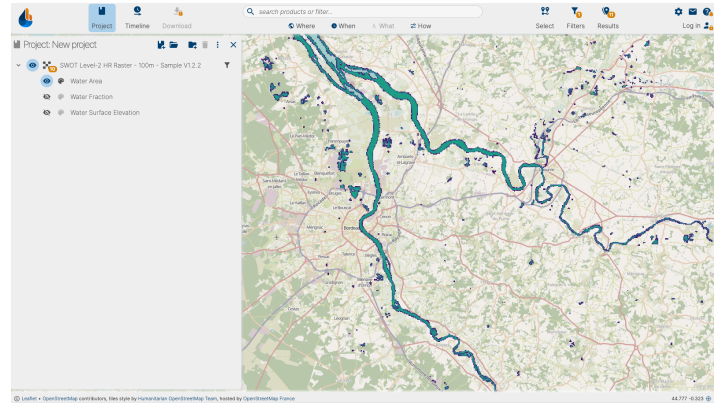
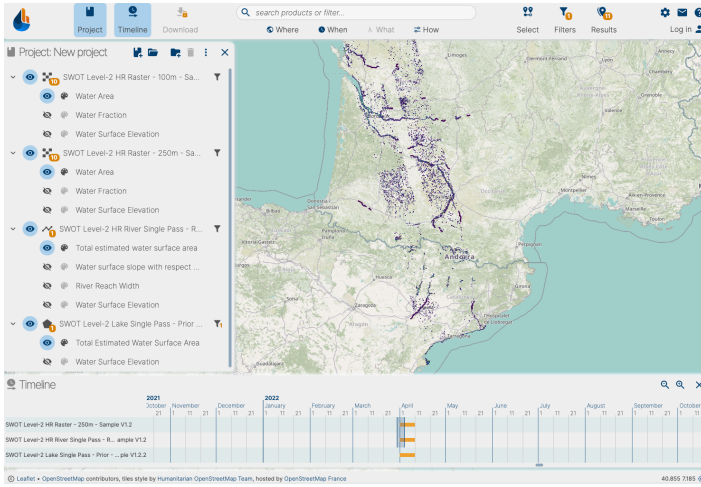
<sup>2</sup> Validated products have completed validation by the SWOT science team. Products include river discharge and lake storage change for water bodies covered by more than one year of validated products. One seasonal cycle of observations is expected to provide scientifically useful algorithm input parameters.

## Hydroweb.next -- CNES

The new THEIA portal for hydrology, **hydroweb.next**, is getting ready. The THEIA team has released several demo datasets based on SWOT simulations over one cycle over France. It allows visualization and download of SWOT HR Level-2 products such as Pixel Cloud, River Single Pass - Node, Lake Single Pass- Prior/Unassigned/Observed, HR Raster 100/250m, Pixel Cloud Vector and the SWOT Prior River Database – SWORD. Note that only raster and polygon products are visible on the portal's map. Pixel Cloud and River node products shall be downloaded to visualize them.

Quite soon and before the first official SWOT Dataset release, new hydrological products will be also available at this site: Water extents (Surfwater product), Snow extent (LIS product) and Water quality (Obs2co).

Check out this exciting demo of SWOT datasets at: <https://hydroweb.next.theia-land.fr/>

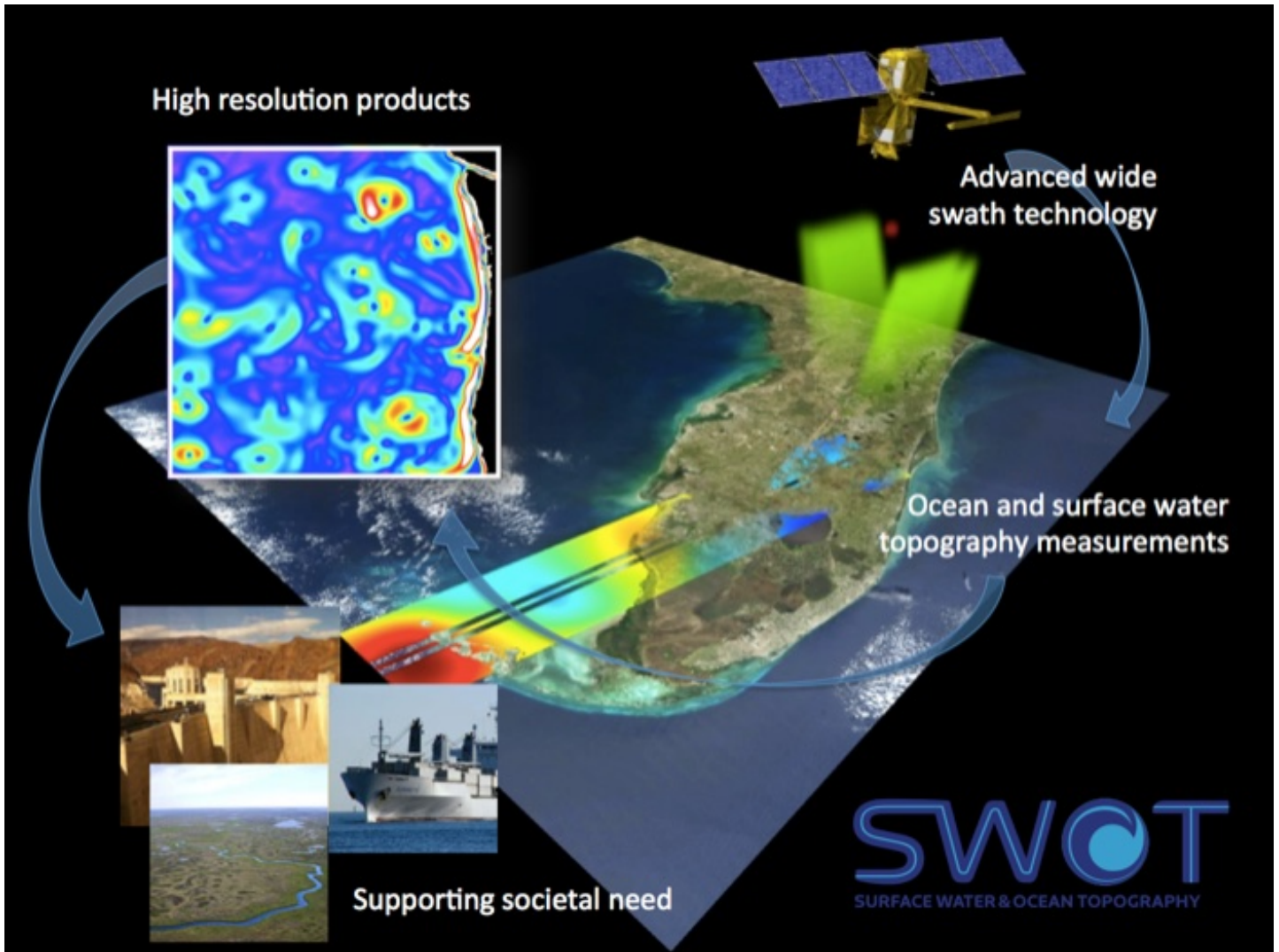


## Upcoming Meetings:

SWOT EA Quarterly Telecon, 9 August 2023 - Details will be shared soon!

2023 SWOT Applications Workshop, 7-8 December 2023, Pasadena, California & Online

## SWOT Media Galleries



**Visit links below for more information:**

- [swot.jpl.nasa.gov/applications](https://swot.jpl.nasa.gov/applications)
- [www.aviso.altimetry.fr/en/applications.html](https://www.aviso.altimetry.fr/en/applications.html)
- [depts.washington.edu/saswe/swot](https://depts.washington.edu/saswe/swot)