EUMETSAT NWC SAF
SUPPORT TO NOWCASTING AND VERY SHORT RANGE FORECASTING

Nowcasting Satellite Application Facility (NWC SAF) in the European Weather Cloud (EWC)

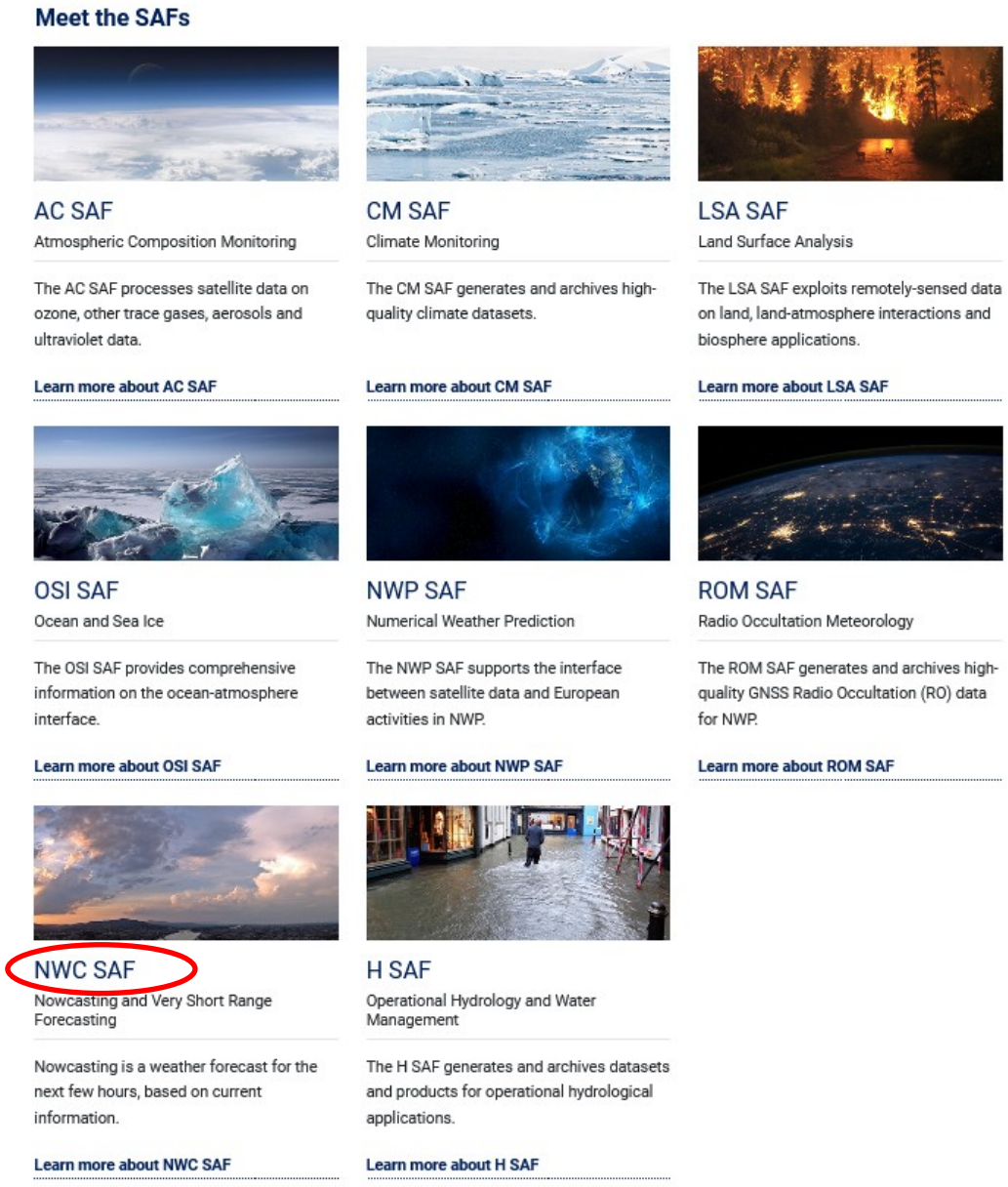
Xavier Calbet

NWC SAF Scientific Coordinator

EWC Workshop

26 Sep 2023

EUMETSAT SAF Network



The eight EUMETSAT SAFs provide users with operational data and software products, each one for a dedicated user community and application area.

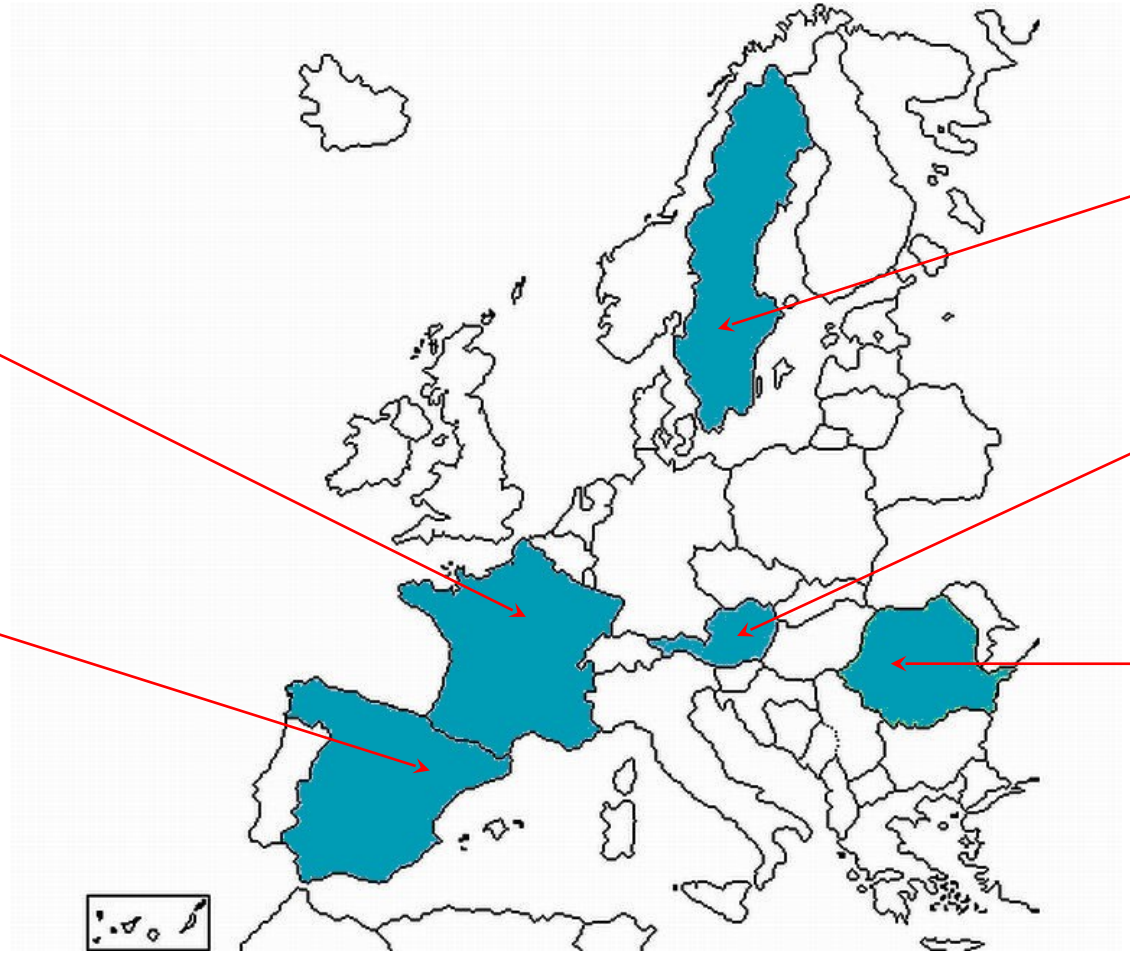
The SAFs are located within the National Meteorological Services (NMS) of EUMETSAT Member States, or other agreed entities linked to a user community.

https://www.eumetsat.int/about-us/satellite-application-facilities-safs

NWC SAF concept

- ✓ To ensure the optimum use of meteorological satellite data in Nowcasting and Very Short Range Forecasting
- ✓ The NWC SAF develops and maintains SW Packages (for GEOstationary and POLAR Satellites) freely distributed to registered users to generate satellite derived products with a direct application in Nowcasting
- ✓ IMPORTANT UPDATES to be seen today
- ✓ User support
- ✓ Training

NWC SAF Consortium



METEO FRANCE

AEMet
Agencia Estatal de Meteorología

SMHI

GeoSphere Austria

METEO ROMANIA

NWC SAF SW packages (delivered 2023)

Geostationary satellites

NWC SAF GEO v2021.2

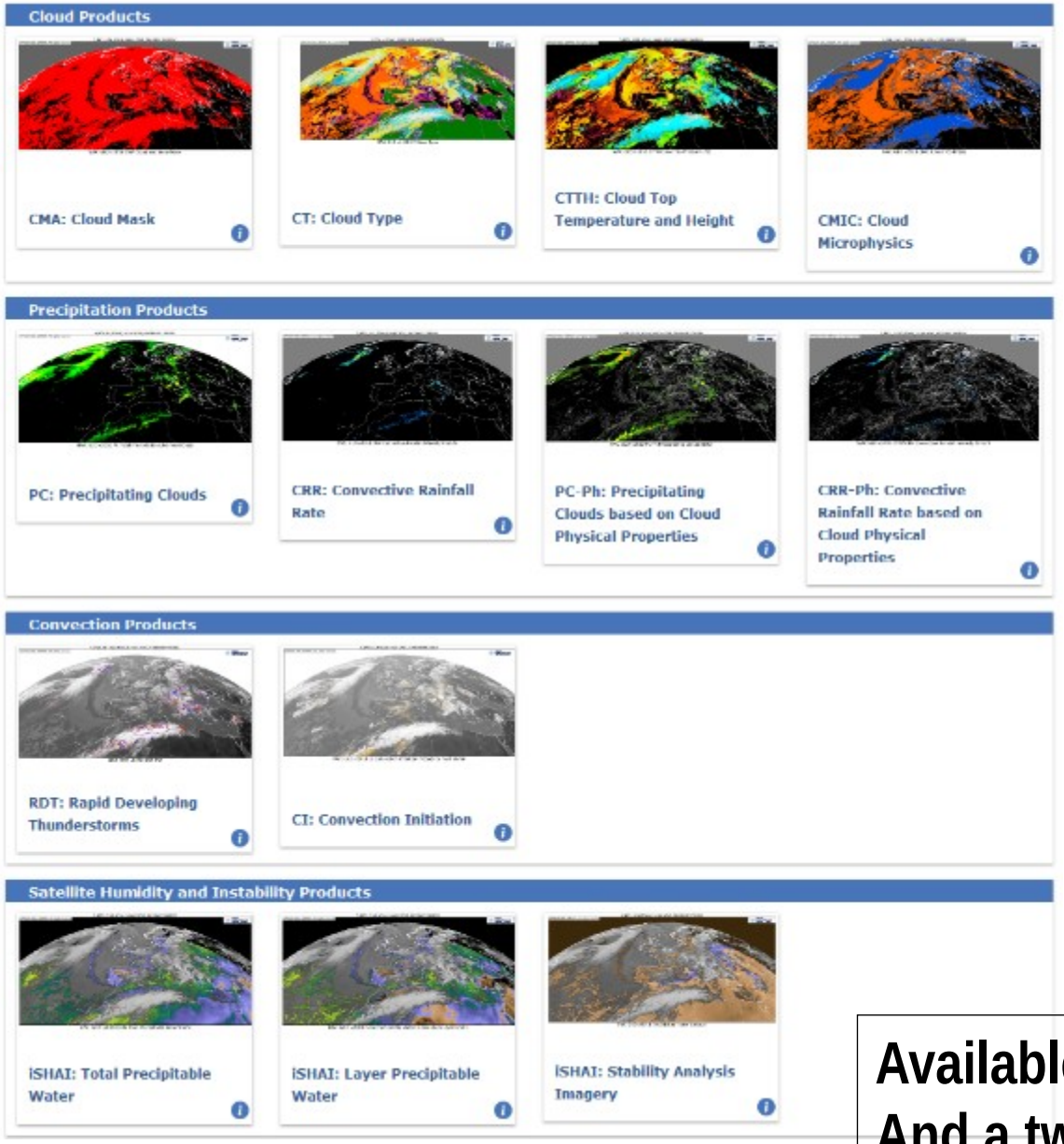
- **MSG primary satellite**
- **MSG Rapid Scan Service** (Latitudes **15 N** - 70 N)
- **MSG IODC**
- Other satellites (Himawari 9, GOES-16 and GOES-18)

Polar satellites

NWC SAF PPS v2021.3

- Metop
- NOAA
- NPP
- JPSS
- EOS
- FY-3D

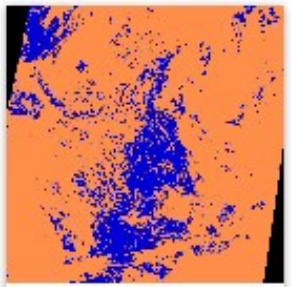
NWC SAF GEO



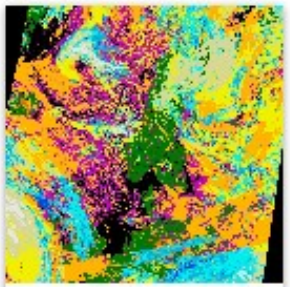
Available in NRT at nwc-saf.eumetsat.int
And a two years rolling archive

NWC SAF PPS Products

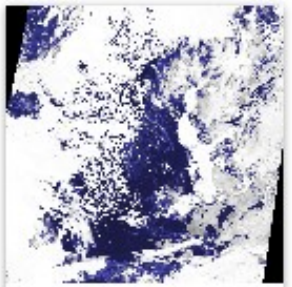
Cloud Products



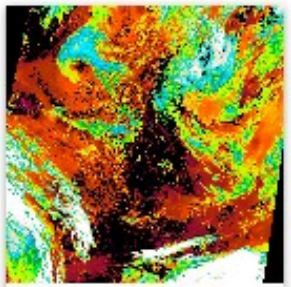
CMA: Cloud Mask



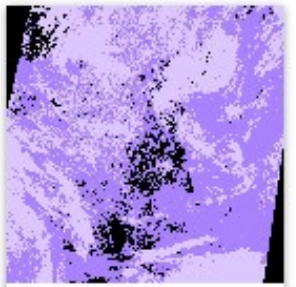
CT: Cloud Type



CMa-prob: Cloud Probability

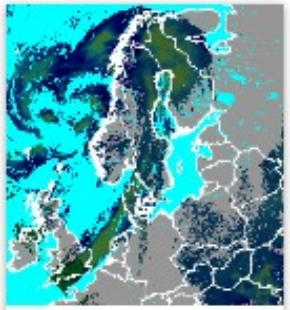


CTTH: Cloud Top Temperature and Height



CPP: Cloud Physical Properties

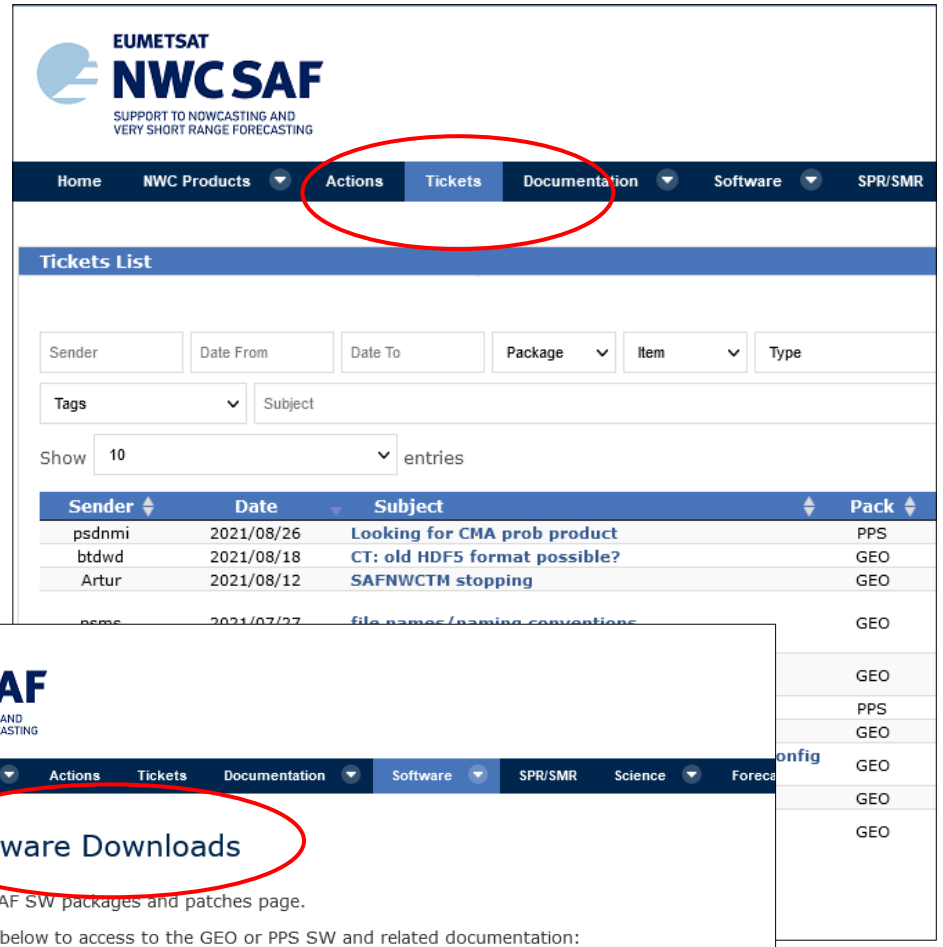
Precipitation Products

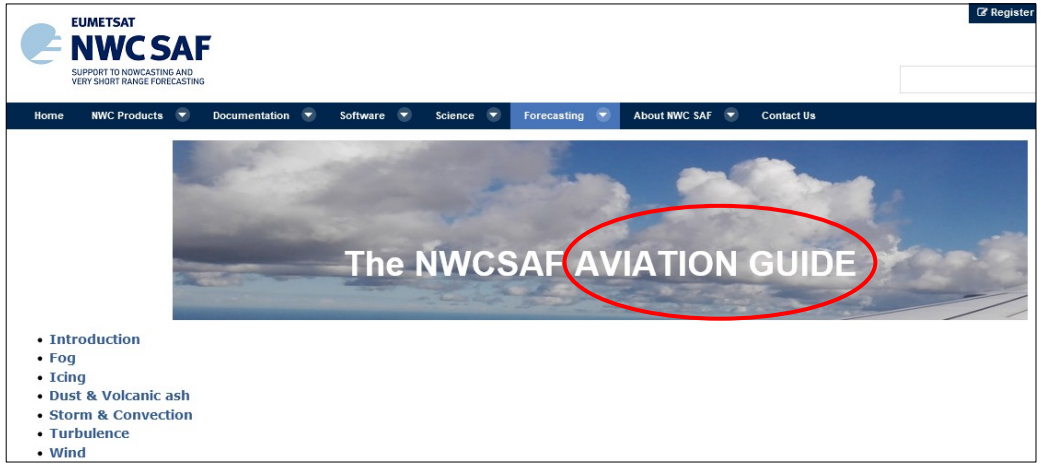


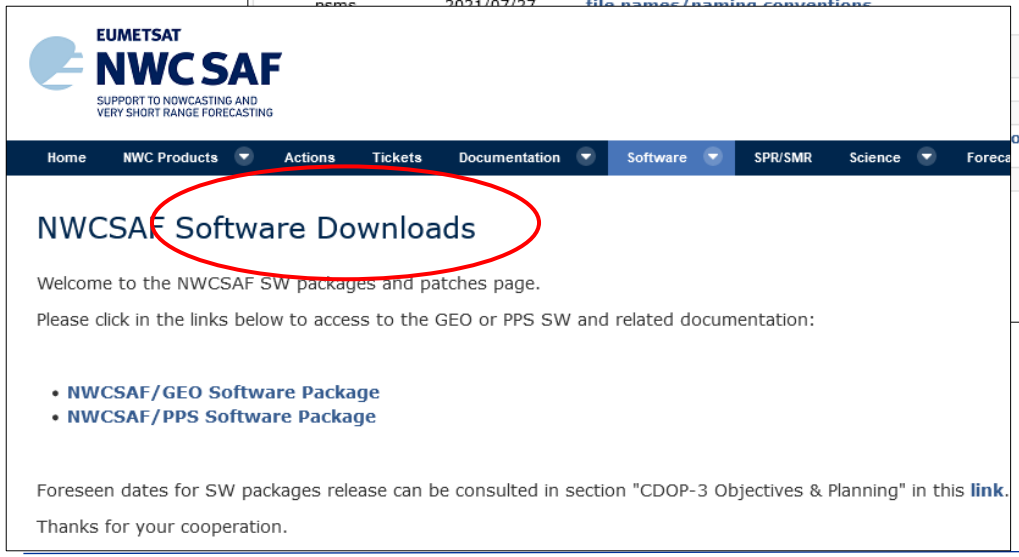
PC: Precipitating Clouds

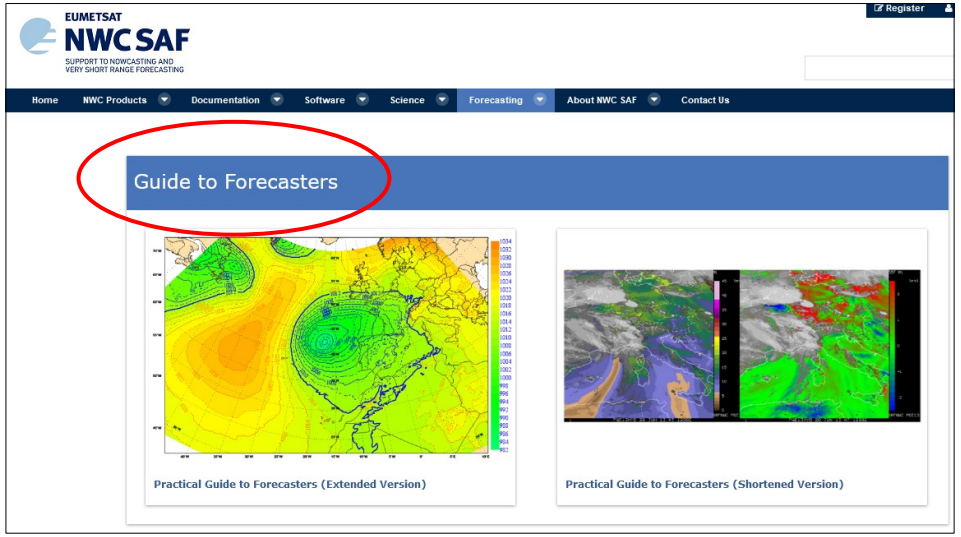
Available in NRT at nwc-saf.eumetsat.int

NWC SAF services. (nwc-saf.eumetsat.int)



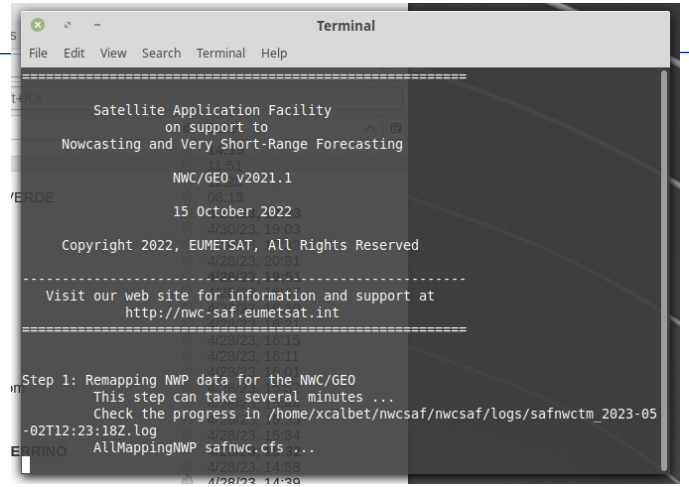


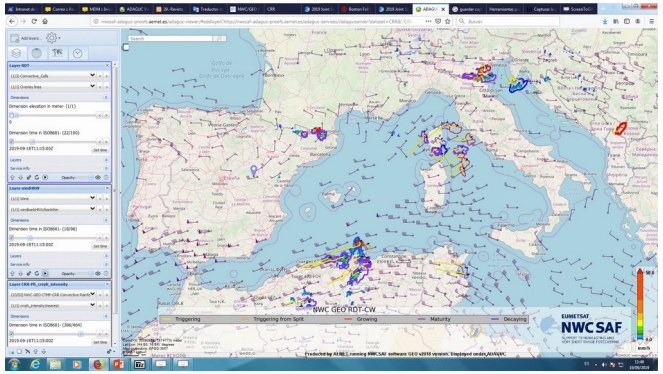




Two ways to use NWC SAF GEO products

1) Traditional: Download and run locally the NWC SAF GEO software

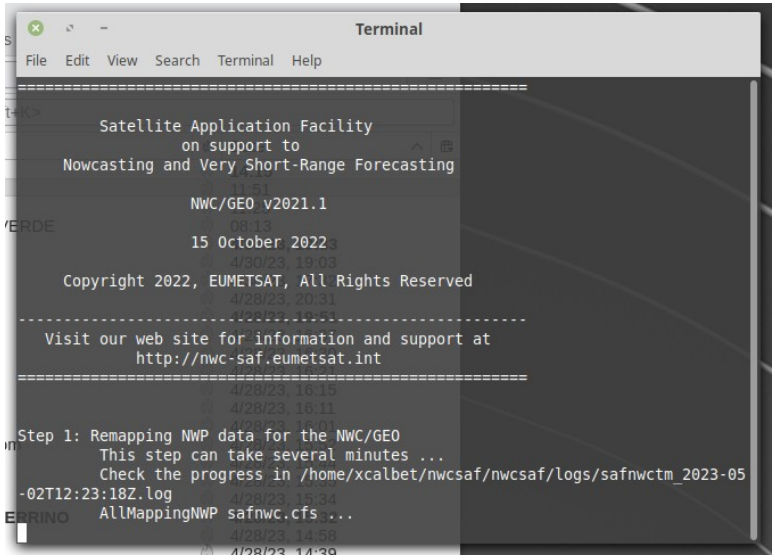




2) NEW!: View the NWC SAF GEO products in ADAGUC server in EWC

How to run NWC SAF GEO SW at your site

- Register as a user (it is free and can be done online)
- Download the software from the web site (nwc-saf.eumetsat.int)
- Install the software
- Set the configuration of your interest
  - Satellite to be used
  - Products to be generated
  - Geographical area where to generate the products
- Set up the Input data needed
  - Satellite data (HRIT MSG files)
  - A numerical model (ECMWF or GFS for example)
  - This is by far the most difficult step



For MTG, EUMETCast High Volume will be needed!

The NWC SAF Team offers support if you encounter any problem

The software is meant to be run in NRT operationally but also allows the generation of products in offline mode.

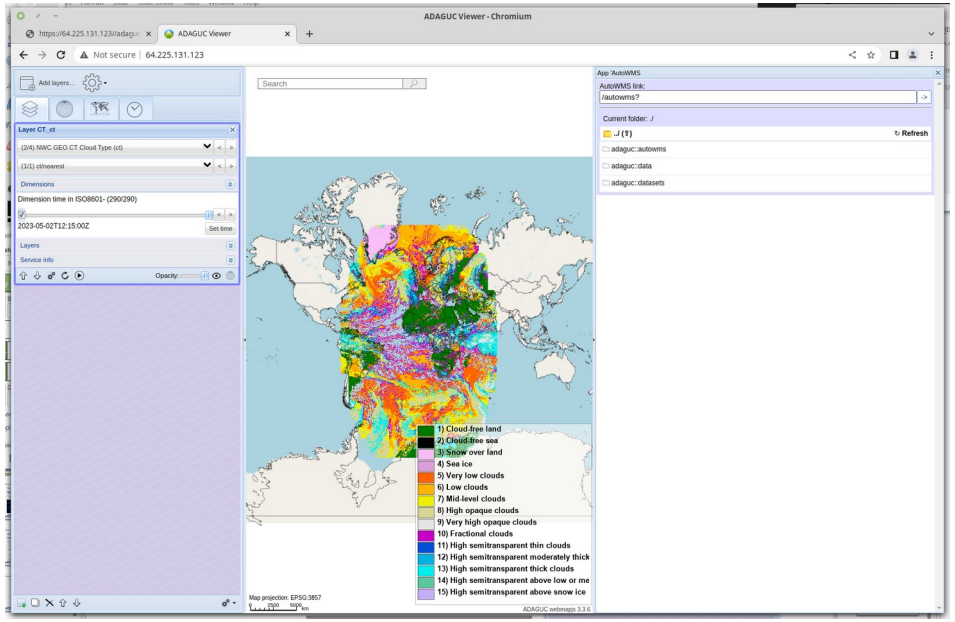
NWC SAF via ADAGUC in EWC

- NWC SAF products are generated in EWC:
  - Full Disc
  - MSG Zero Longitude
  - ECMWF as NWP

- Go to https://adaguc.nwcsaf.eumetsat.ewcloud.host/
  (Good Internet Connection)

- Do one of the following:
  - More user friendly: Click on “Add Layers” on the top left → Select a product
  - More products: Click on adaguc::datasets → Select a product

- Future:
  - Nowcasting Experimental Platform. New products will be tested (your product welcome!). Please contact: xcalbeta@aemet.es or safnwchd@aemet.es
  - Integrate with EUMETView
  - Include NWC SAF PPPS (Polar) products
  - To be used for training courses in Africa



You can:

- Zoom in/out: scroll button
- Move: click and drag
- Play animation: click on “play” icon
- Change opacity: “Opacity” slide bar
- Hide layer: click on the “Eye” button
- Update to latest data: click on the round arrow

Other considerations

- ADAGUC (KNMI) and all the utilities to ingest the data, ADAGUC-utilities (AEMET), are all open source
- Therefore you can install the NWC SAF GEO software and ADAGUC server in your institution and serve the data to other nearby countries
- This regional solution or the ADAGUC server in the EWC (https://adaguc.nwcsaf.eumetsat.ewcloud.host/)can constitute a Nowcasting environment to be used by the community
- If you want to add more products or services in the ADAGUC server in the EWC please let us know

Thank you very much for your attention!

More information in www.nwcsaf.org

You can contact us at

xcalbeta@aemet.es

safnwchd@aemet.es