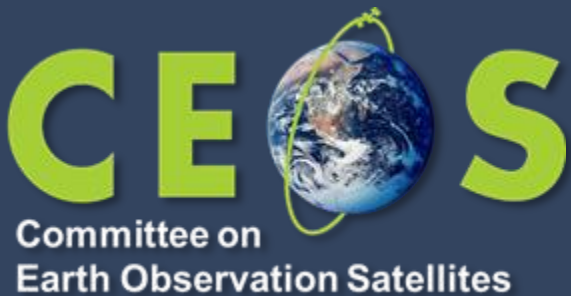


LSI-VC-18

CONAE Report



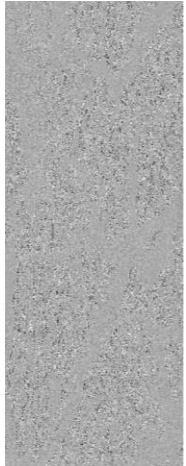
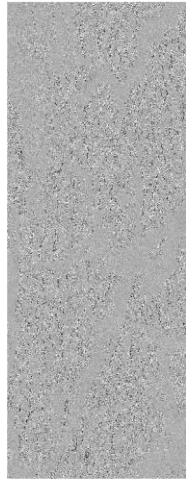
D. Dadamia, CONAE
H. Lozza, CONAE
Agenda Item 3.2
LSI-VC-18
Ispra, Italy
2-5 September, 2025

SAOCOM CEOS-ARD: seeking compliance

Inputs

q

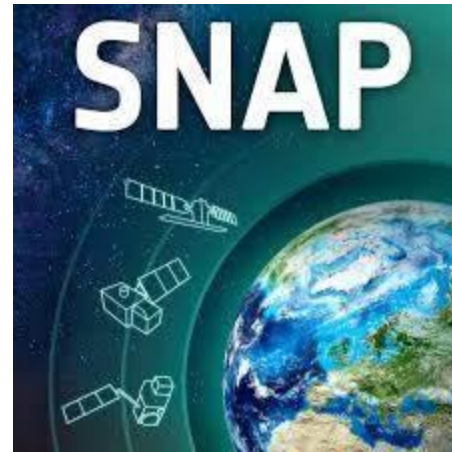
i



StripMap
SAOCOM
L1: SLC



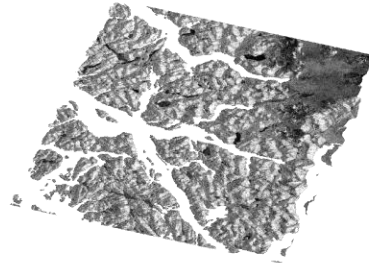
+



Outputs Images



SIGMA0
Corrected by
Local Incidence
Angle



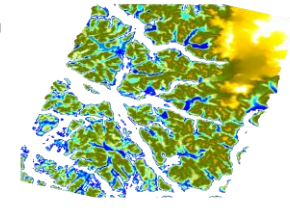
GAMMA0



Outputs Auxiliary Data



Projected Local
Incidence Map



DEM



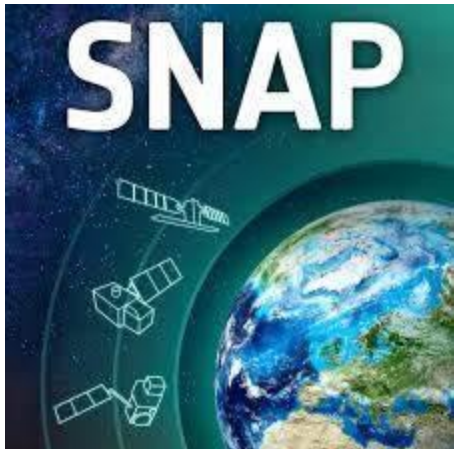
Layover
Shadow
Mask

ARD SOFTWARE



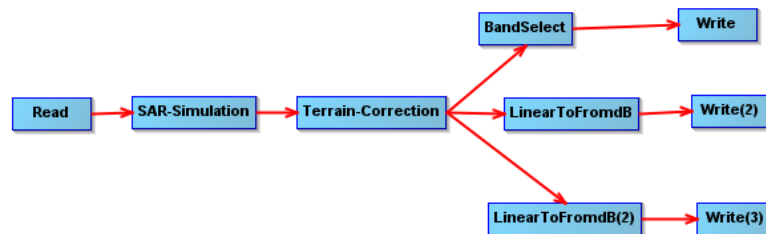
We use Python to:

- Create the software that run on bash SNAP
- Process masks and build XML ARD format

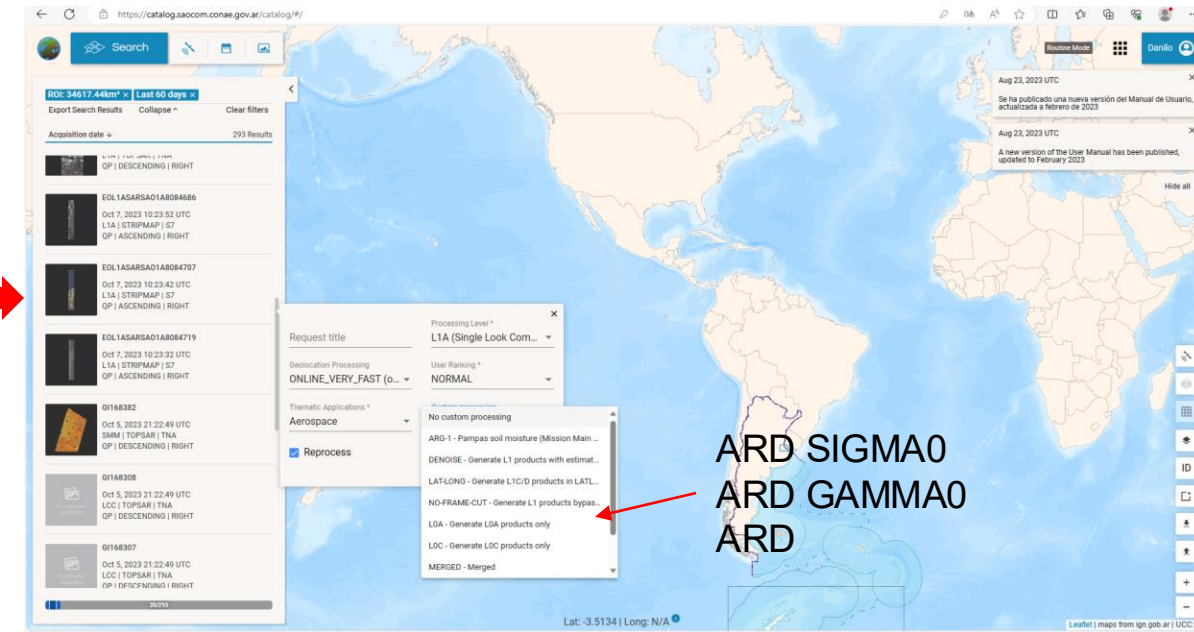


We use SNAP to:

Process SAOCOM images using SNAP tools



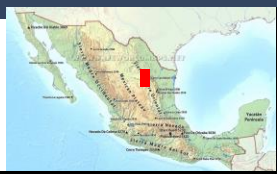
SAOCOM CATALOG



XML Files SIGMA0

XML Files Gamma0

SAOCOM ARD Outputs Example



SAOCOM 1A
CONAE L-Band
StripMap
Mexico
April 18, 2021



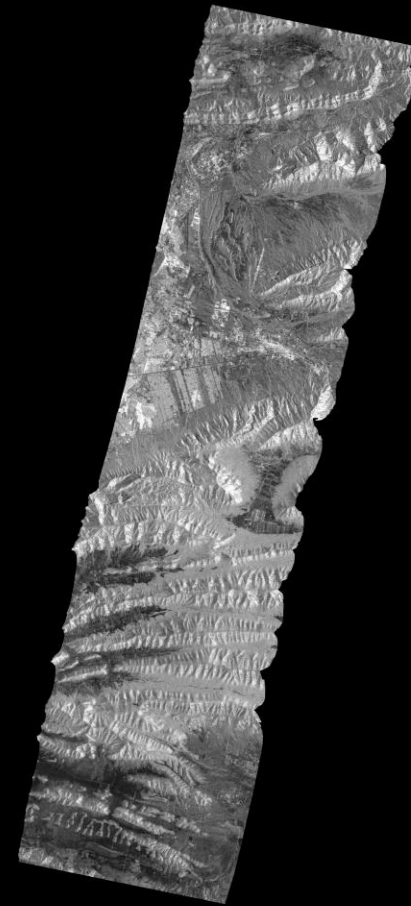
SIGMA0_HH



SIGMA0_HV



SIGMA0_VH



SIGMA0_VV



R:SIGMA0_HH
B:SIGMA0_HV
G:SIGMA0_VV

SAOCOM ARD Outputs Example



SAOCOM 1A
CONAE.L-Band
StripMap
Mexico
April 18, 2021



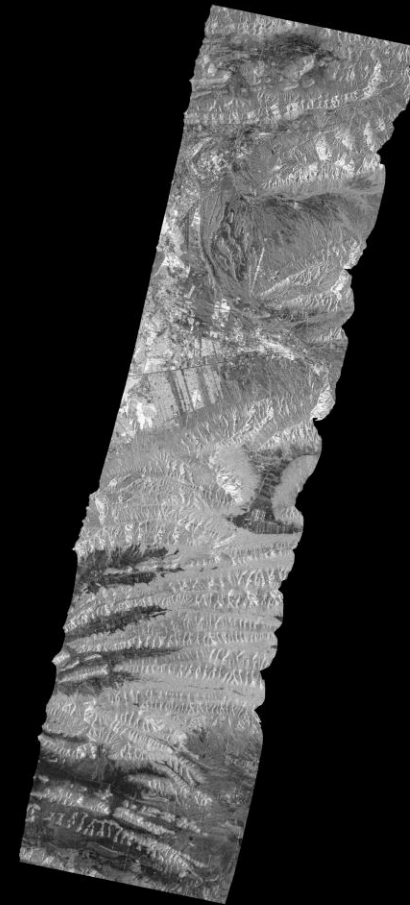
GAMMA0_HH



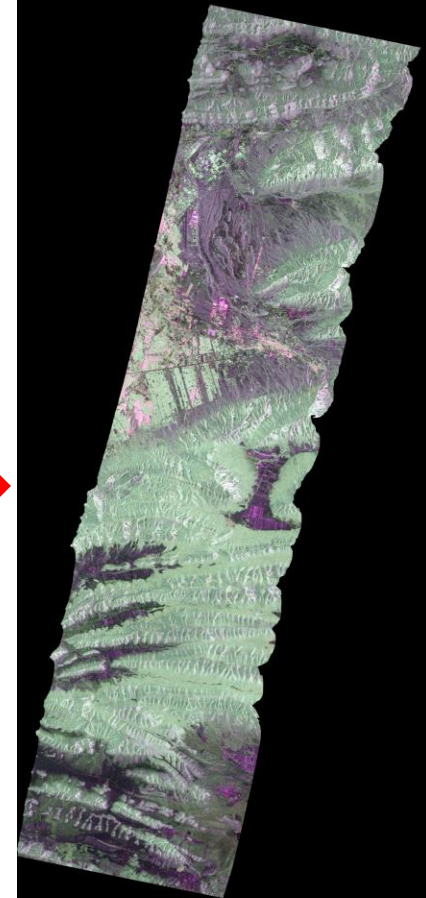
GAMMA0_HV



GAMMA0_VH

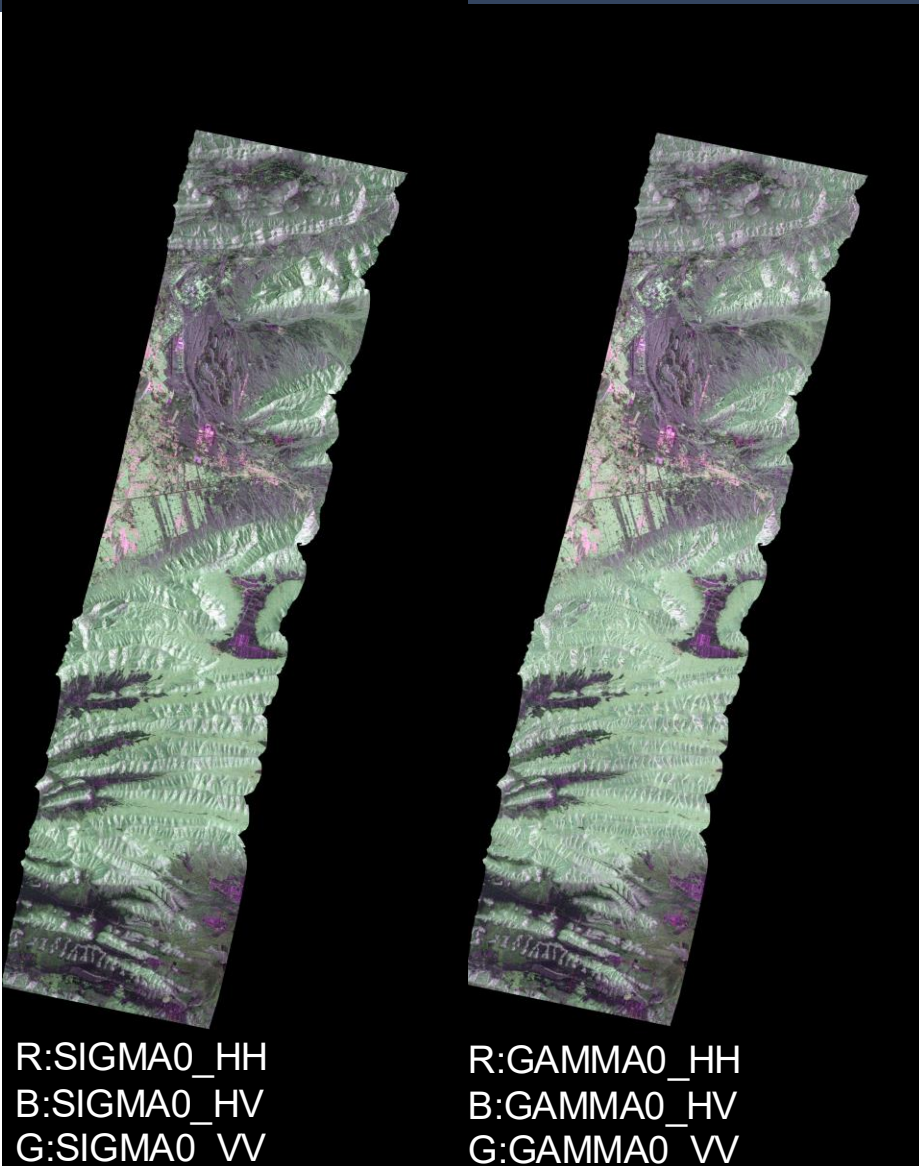


GAMMA0_VV

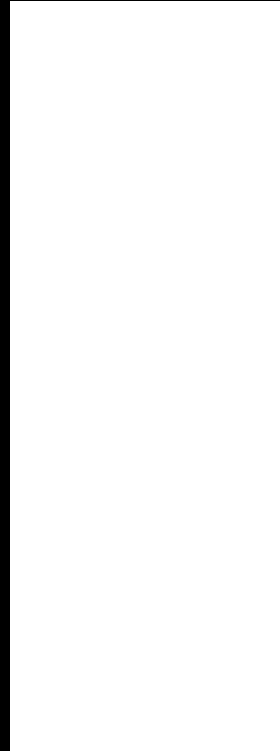


R: GAMMA0_HH
B: GAMMA0_HV
G: GAMMA0_VV

SAOCOM ARD Outputs Example

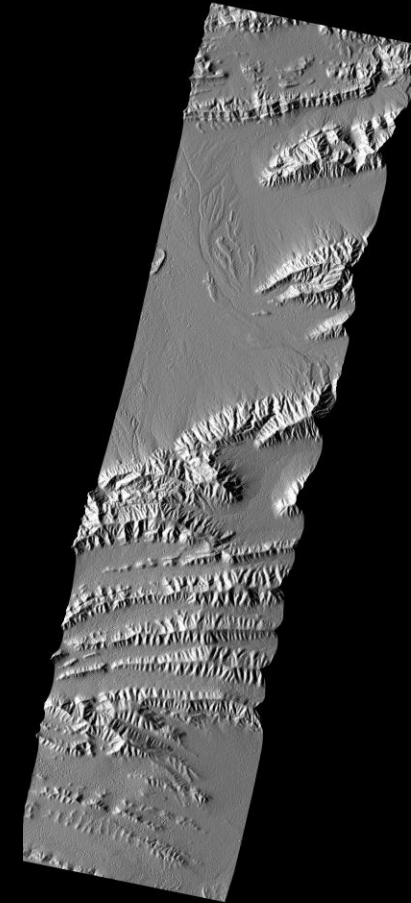


SAOCOM 1A
CONAE.L-Band
StripMap
Mexico
April 18, 2021

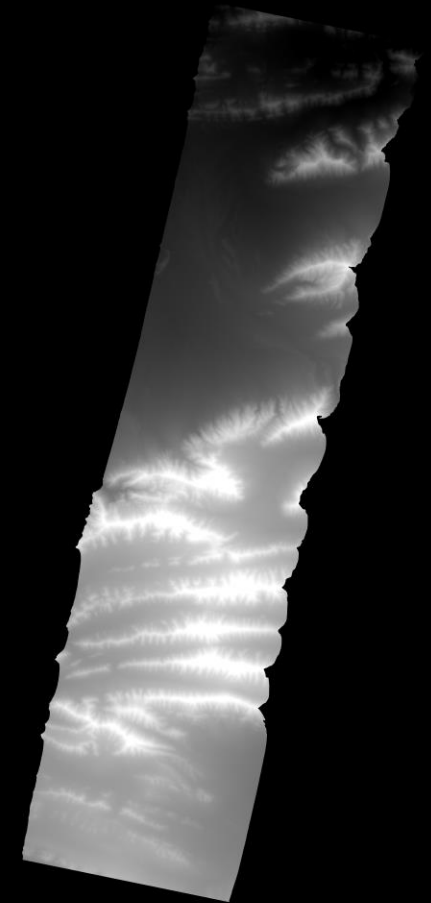


Layover
Shadow Mask

Auxiliary Data



Projected Local
Incidence Map



DEM

SAOCOM Data Access and CONAE's Updates

2 possibilities:

1. Catalogues

- SAOCOM Catalogue can be navigated freely to identify already existing data. Upon registration, quicklooks can be seen:

<https://catalogos.conae.gov.ar/catalogo/catalogoSat.html>

- To access the data:

✓ agreement
✓ project

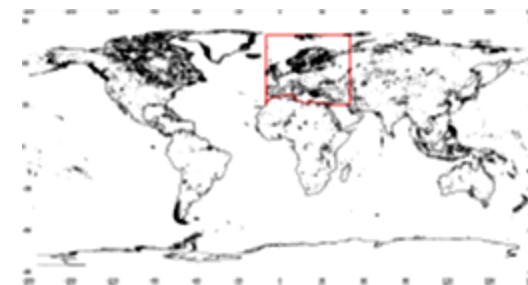
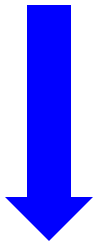


Licence to Use



u_inter@conae.gov.ar

(outside ASI exclusivity area)



- Send letter to: u_inter@conae.gov.ar
- Direct the letter to CONAE's CEOS Principal (Eng. Raul Kulichevsky) describing the overall project, its objectives, duration, participants, the area of interest (including, if possible, files in KML or Shapefile formats).
- Sign the License of Use by all project participants who will work with the images.
- Require the images to u_inter@conae.gov.ar (archived/new).

Data will be transferred through FTP

SAOCOM Data Access^(3/3)



2. One click possibility

PERMISSIONS	REGIONS	non-commercial users		commercial users	
		argentinians and residents	foreigners	argentinians and residents	foreigners
archived: - L1, L2 download - L1 reprocess - interferometric products	Argentina	via One-click, checking that the area is within Argentina			
- L1, L2 download - L1 reprocessing - interferometric products - acquisition request	abroad (ASI AoE excluded)	atencion.usuario@conae.gov.ar (under some cooperation type)	atencion.usuario@conae.gov.ar (under some cooperation type)	via VENG www.saocom.com.ar (free access)	via VENG www.saocom.com.ar (comercial agreement)

✓ <https://registro.conae.gov.ar/registracion/view/>

CONAE's Future Missions

- ❖ **VIS-NIR:** (412-865nm), 200m (regional) and 800m (global) spatial resolution at nadir, swath 1495km.
- ❖ **NIR-SWIR:** (750-1640nm), 400m spatial resolution at nadir (only regional), swath 1495km.
- ❖ **HSC:** pancromatic High Sensitivity Camera for night lights detection.

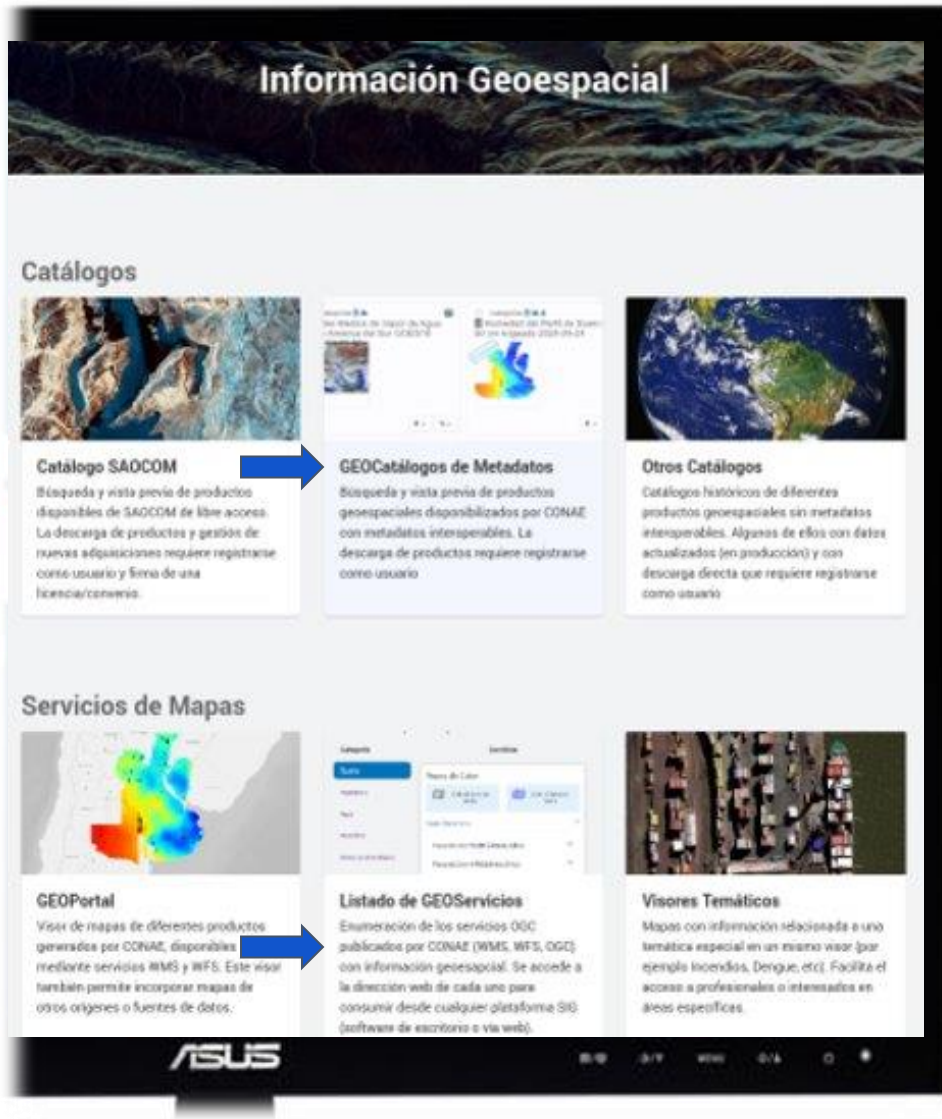


Launch
2027, Q2

The idea is to generate Analysis Ready Data (ARD) products for surface reflectance.

CONAE's Spatial Data Infrastructure (SDI)

Access by means of Geoservices



The goal is to make geospatial data accessible to everyone in open and interoperable formats.

<https://catalogos.conae.gov.ar/catalogo/catalogo.html>

GeoServices enabled:

- GeoPortal
- GeoCatalog of metadata
- GeoServices OGC/WMS

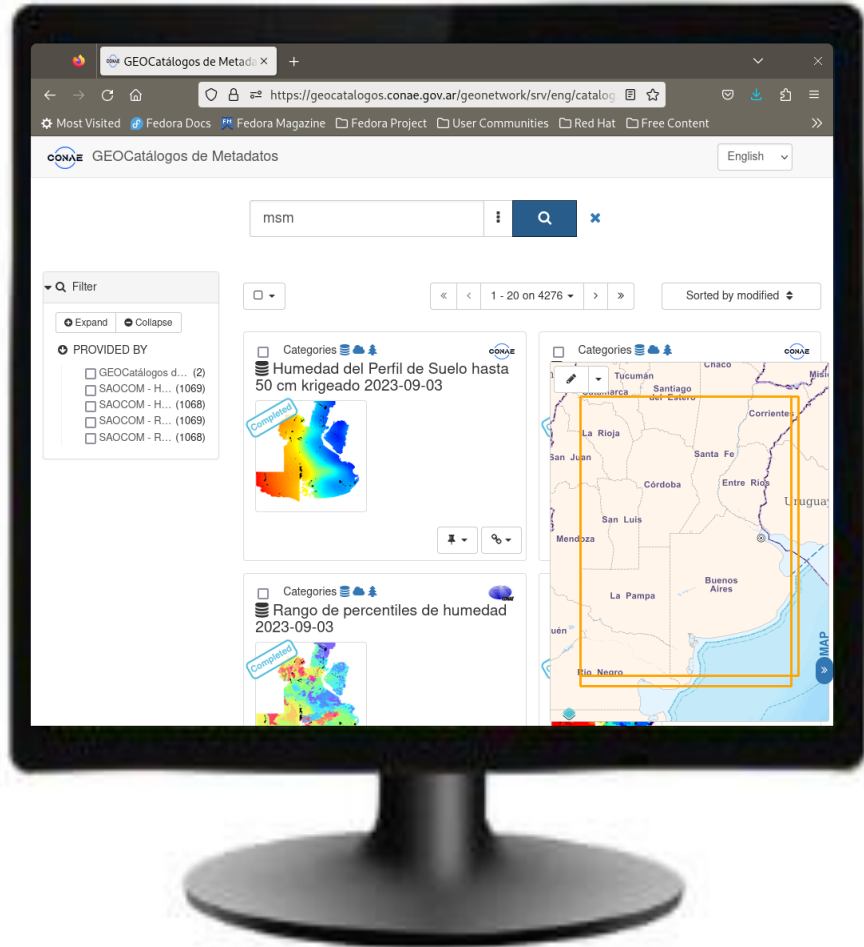
Metadata schema under ISO 19115-3

+ Visualizers and data exploitation platforms

Geocatalog of metadata



<https://geocatalogos.conae.gov.ar/>



- Example for soil moisture profile
- Spatial filters and quick access.
- Requires software GIS.

Humedad del Perfil de Suelo hasta 50 cm krigado 2023-09-03

Perfil de humedad integrado en los primeros 50cm de suelo generado a partir de los datos SAOCOM y sus productos derivados de humedad de suelo superficial. Las estimaciones combinan de manera óptima las observaciones satelitales y los valores calculados con modelos de cultivos. Finalmente, se aplica Ordinary Kriging a los valores por ZH.

Completed

Download and links

La información se puede obtener mediante la descarga directa de internet. [Open link](#)

Recurso para Descargar
https://geodescargas.conae.gov.ar/descargas/productos/CONAE_MOD_MHS_DSS_MSMKR_20230903_v0.01.zip

Acceso a documentos
Documentación asociada a humedad del perfil de suelo integrado hasta 50 cm krigado
https://documentoside.conae.gov.ar/productos/CONAE_MOD_MHS_DSS_MSMKR_20230903_v0.01.zip [Open link](#)

Overview

Spatial extent
Spatial extent

Temporal extent
Temporal extent

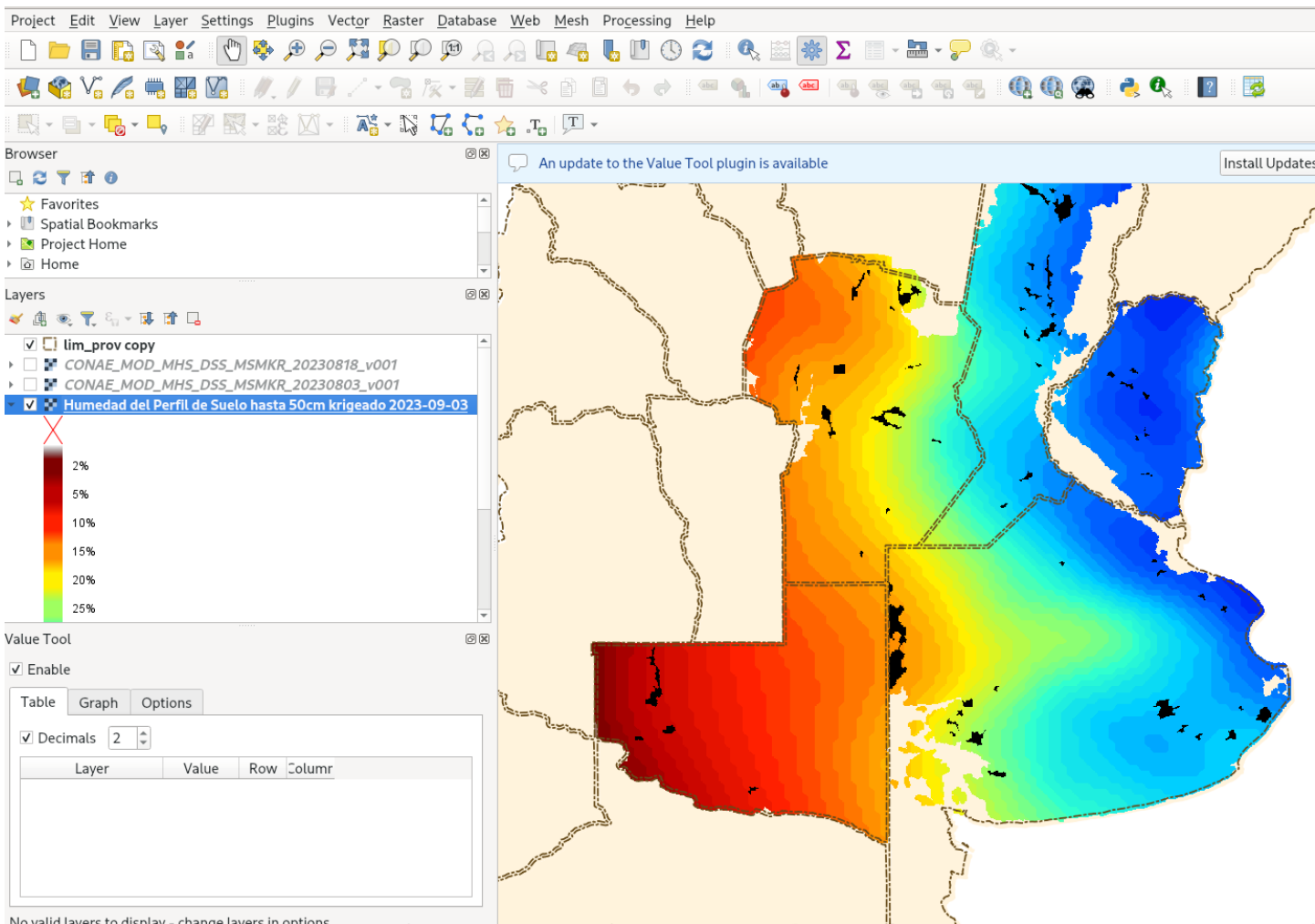
Creation date
2023-09-03

- The arrow signals the download link

Geoservices OGC-WMS



<https://geoservicios3.conae.gov.ar/geoserver/HumedadDeSuelos/wms>



New **WMS** connection:
Layer -> Add Layer ->
Add WMS/WMTS Layer

Data Source Manager | WMS/WMTS

Layers Layer Order Tilesets Server Search

msm

Connect New Edit Remove Load Save Add Defa

ID	Name	Title	Abstract
0		Geoservicio...	Servicios WMS de CONAE
1	DSS_MSM_1	Humedad d...	Humedad del Perfil de Suelo hasta 50cm cor
3	DSS_MSM_2	Humedad d...	Humedad del Perfil de Suelo hasta 50cm cor
5	DSS_MSM_3	Humedad d...	Humedad del Perfil de Suelo hasta 50cm cor
7	DSS_MSM_4	Humedad d...	Humedad del Perfil de Suelo hasta 50cm cor
9	DSS_MSM_5	Humedad d...	Humedad del Perfil de Suelo hasta 50cm cor
11	DSS_MSM_6	Humedad d...	Humedad del Perfil de Suelo hasta 50cm cor
13	DSS_MSM_7	Humedad d...	Humedad del Perfil de Suelo hasta 50cm cor

Image Encoding

☒ PNG ☐ PNG8 ☐ JPEG ☐ GIF ☐ TIFF ☐ SVG

Options (0 coordinate reference systems available)

Tile size

Request step size

Feature limit for GetFeatureInfo

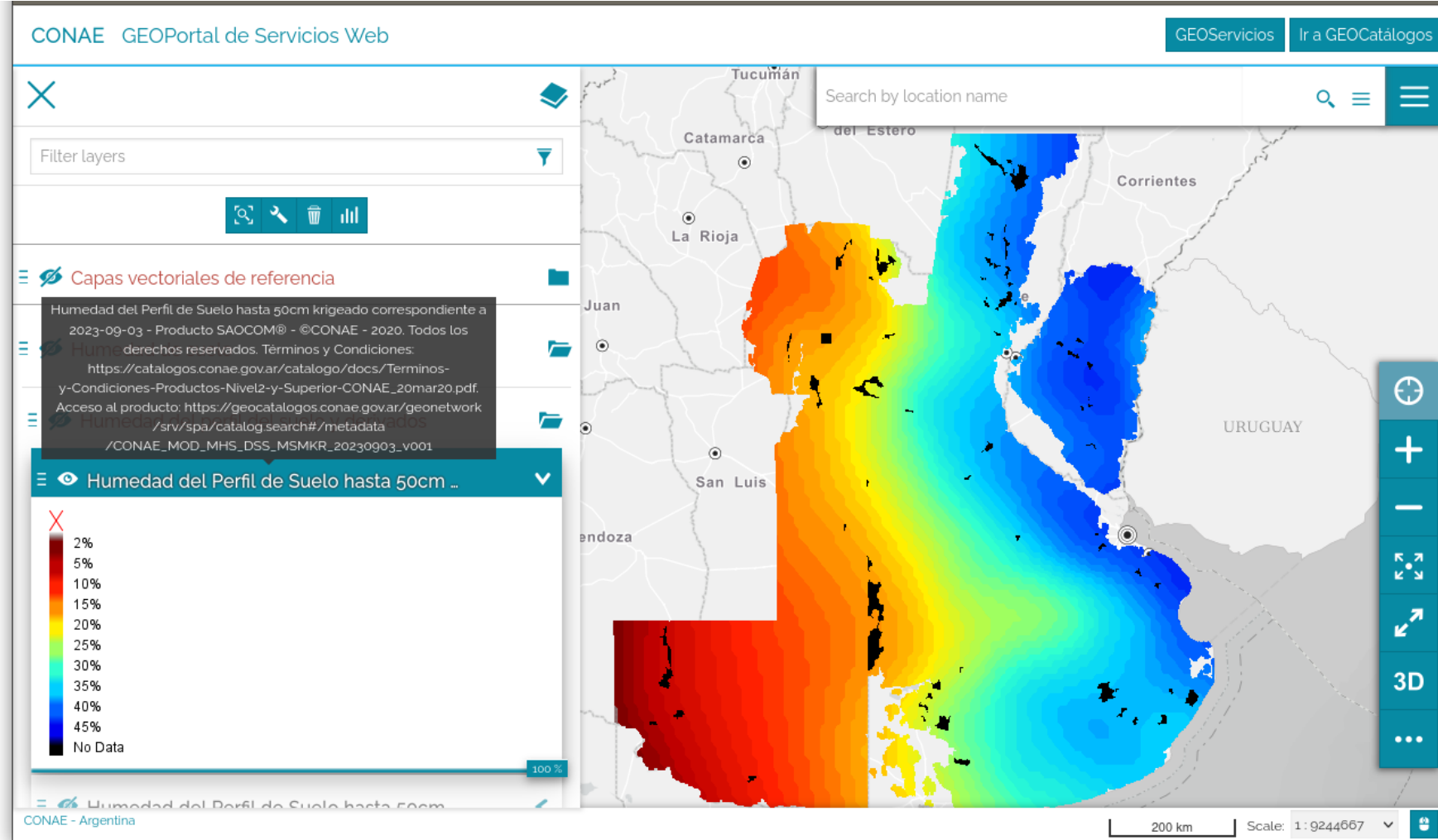
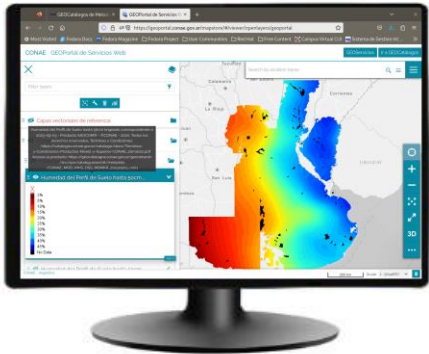
Change...

Using QGIS software for the soil moisture profile

Rolling the last 7 products

- For non-expert users
- Easy and quick access to valuable information

<https://geoportal.conae.gov.ar/>



Thank you