



ILMATIETEEN LAITOS
METEOROLOGISKA INSTITUTET
FINNISH METEOROLOGICAL INSTITUTE

Access to Copernicus data from the Finnish Data Hub (FINHUB)

Mwaba Hiltunen

Finnish Meteorological Institute
Space and Earth Observation
Centre

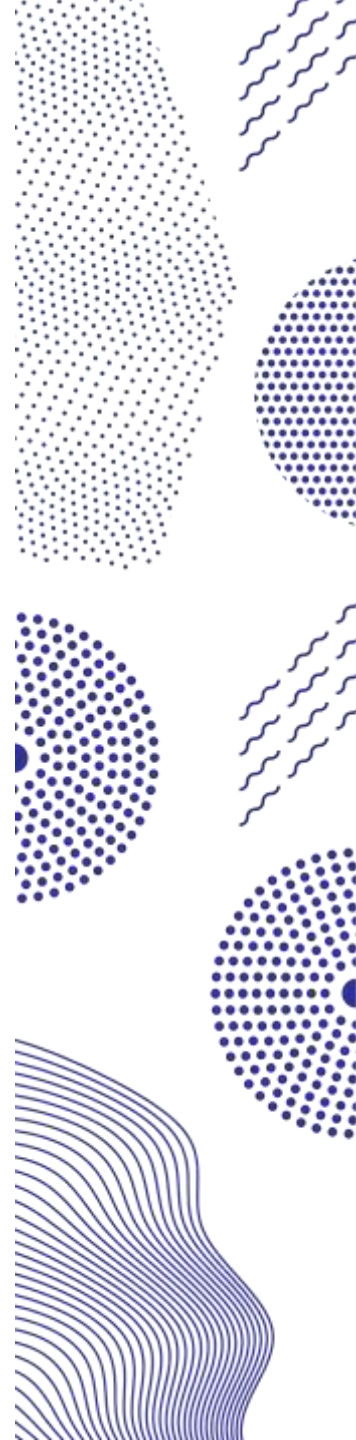
Email: finhub-support@nsdc.fmi.fi

9.6.2022



Content

- An overview of FINHUB
- Available datasets
- Data Access
- Web Portal
- Questions and Answers



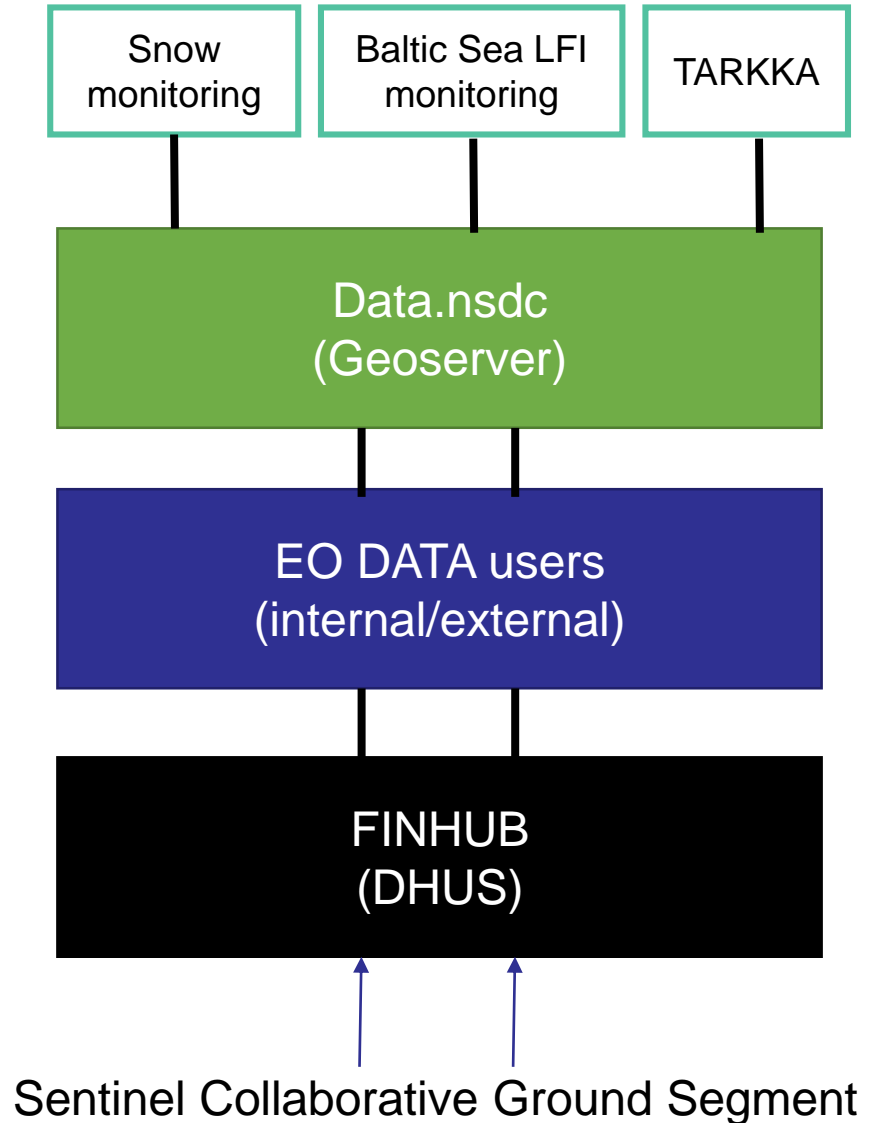
An Overview of FINHUB

- The Finnish Data Hub FINHUB is hosted by the National Satellite Data Centre NSDC at the FMI Arctic Space Centre.
- It provides unlimited free and open access to Sentinel-1, Sentinel-2, Sentinel-3 and Sentinel 5p products.
- As part of the Copernicus Sentinel Collaborative Ground Station, the NSDC serves national and international partners with Copernicus Sentinel data, by hosting long-term archive of Sentinels' data.
- For example data is being used in the one of the GlobLand monitoring service, tuulituhokaukka service (<https://tuulituhohaukka.out.ocp.fmi.fi/>)
- Processed Sentinel data mosaics are available from data.nsdc and <https://pta.fmi.fi/>



Overview of FINHUB...

- Data.nsdc.fmi.fi is a service for disseminating geospatial data eg satellite products using open source geoserver.
- Services exposed by data.nsdc are being used in other platforms for monitoring purposes. For example Baltic Sea: Baltic Sea landfast ice extent and thickness (balfi.nsdc.fmi.fi), Snow monitoring (Snow.nsdc.fmi.fi), TARKKA service by SYKE, sentinel and landsat products are hosted on data.nsdc



Available Datasets

Sentinel 1

- **Instruments:** Sentinel-1A and Sentinel-1B;
- **Number of products** on FinHub: 220299
- **Data archive on FinHub:** 20160101 – today
- **Product Type:** Single Look Complex and Ground Range Detected
 - sensor modes: IW and EW
- Level: 1;
- **Area:** Scandinavia and Baltic, Iceland, Tazdikistan, Bolshevik island, Tiksi, Velikiy Ustuyg + Kotlas river, GTK Kirgisia

Sentinel 2

- **Instruments:** MSI Sentinel-2A and Sentinel-2B and level-1C product level
- **Number of products on FinHub:** 264356
- **Data archive on FinHub:** 20160101 - today
- **Area:** Scandinavia and Baltic, Tazdikistan, Bolshevik island, Tiksi, Velikiy Ustuyg + Kotlas river, GTK Kirgisia



Available Datasets....

Sentinel 3

- **Instruments:** OLCI and SLSTR
- **Number of products on FinHub:** 410928
- **Data archive on FinHub:** 20170201 - today
- **Product Type:** Level 1 OLCI_1_EFR
- **Product Type:** Level 1 SL_1_RBT
- **Area:** Northern Hemisphere

Sentinel 5p

- **Instruments:**
- **Number of products on FinHub:** 264356
- **Data archive on FinHub:** 20171101 - 20220514 today
- **Area:** Global

Data Access

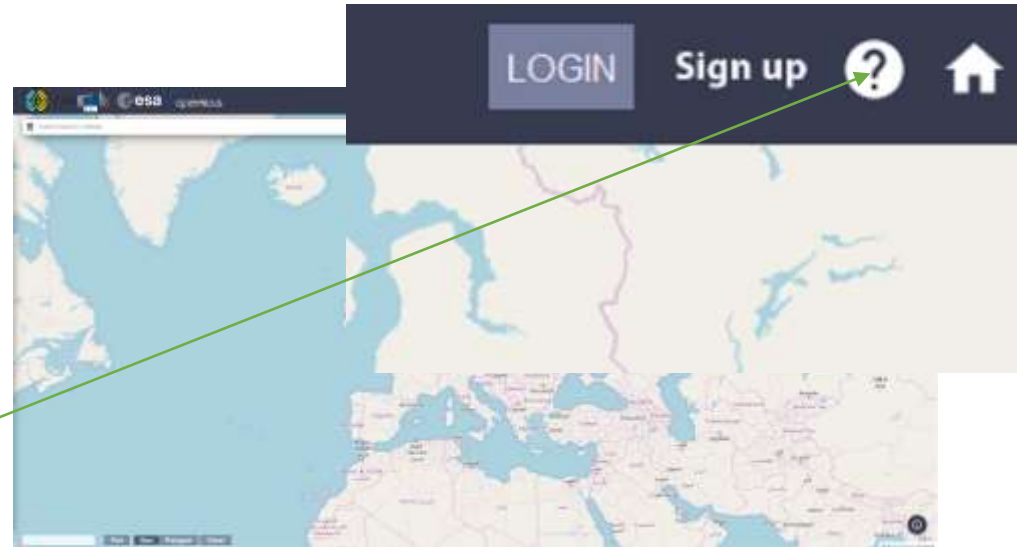
- Data can be accessed from a web portal, FINHUB or using APIs.

URL: <https://finhub.nsdci.fmi.fi>

- The Data Hub exposes two dedicated Application Program Interfaces (API) for browsing and accessing data stored on FINHUB. The APIs are:
 - Open Data Protocol (OData)
 - Open Search (Solr)
- Guidelines on how to use the web portal, ODATA and open search protocols are available from http://nsdc.fmi.fi/services/service_finhub_overview

OData is built on top of http protocol, you can use clients such as your web browser, curl and wget to query FINHUB.

The guidelines also include an example script, examples of using curl and wget.



Registration

USER GUIDE

FinHub Portal (link)

Overview

Areas of Interest

How to Register

Graphical User Interface

Full Text Search

Advanced Search

APIs And Batch Scripting

Registration

FAQ

For more details or help support please contact with Support Team finhub-support@nsdc.fmi.fi

REGISTER A NEW ACCOUNT

FINNISH DATA HUB SYSTEM

Sentinel data access is free and open to all.

On completion of the registration form below you will receive an e-mail with a link to validate your e-mail address. Following this you can start to download the data.

If you have a problem with the registration, please, contact with our Support Team finhub-support@nsdc.fmi.fi

Firstname

Lastname

E-mail

Organization

Select Domain

Select Usage

Select Country

REGISTER



Graphical interface usage

http://nsdc.fmi.fi/services/service_finhub_interface



Search Results

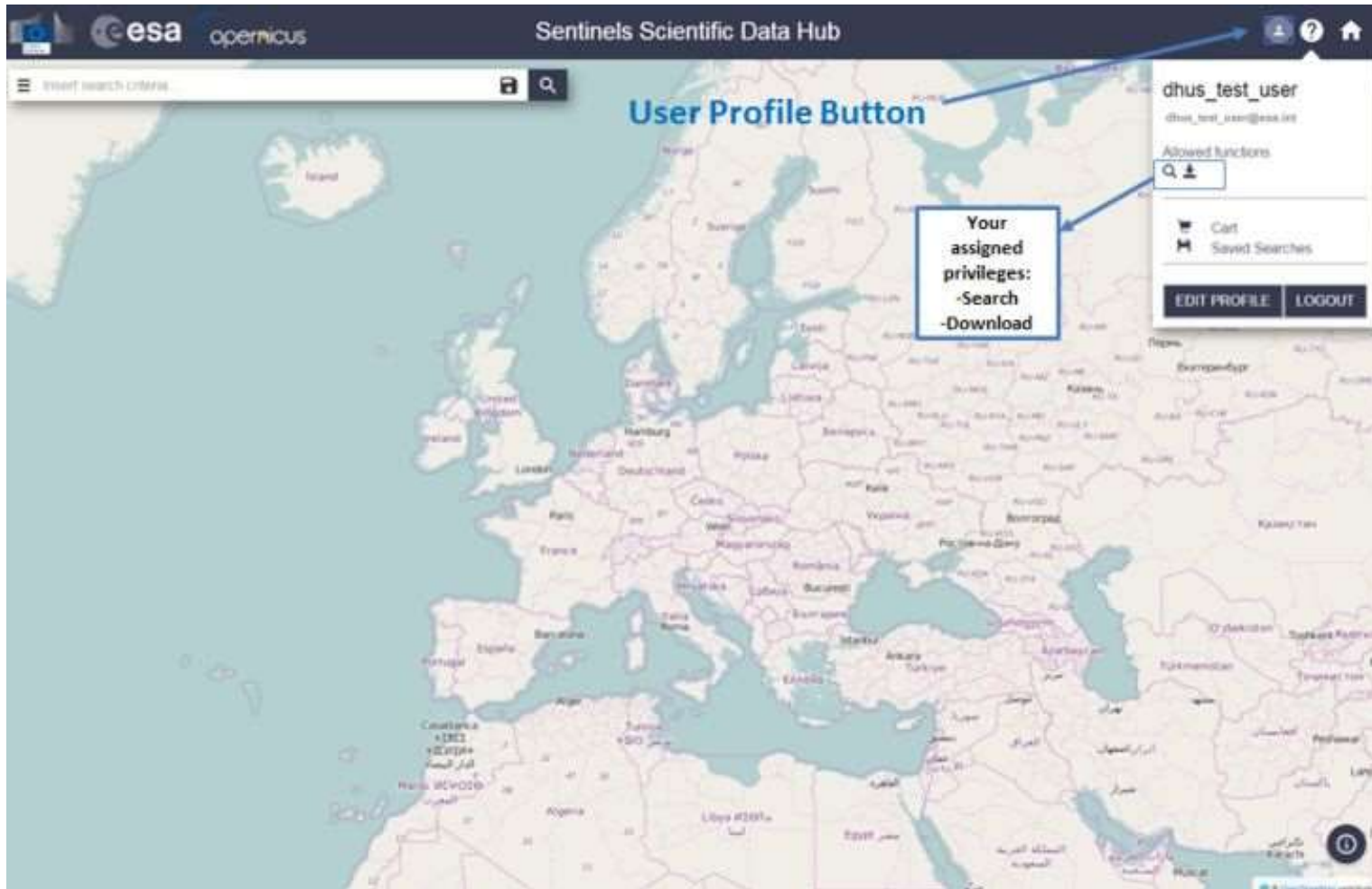
http://nsdc.fmi.fi/services/service_finhub_interface

The screenshot displays the 'Sentinels Scientific Data Hub' interface. At the top, it shows the ESA and Copernicus logos. The main content area is divided into a left sidebar and a right map. The sidebar displays a list of search results for Sentinel-2 products, with the first five items highlighted in green. Each item includes a thumbnail, a product ID, a download URL, the mission name (Sentinel-2), the instrument (MSI), the serving date, and the size. The map on the right shows a geographical view of the region, with search results highlighted in red and green. A blue callout box labeled 'Search Results' points to the list of products, and another blue callout box labeled 'Results Page' points to the pagination controls at the bottom of the sidebar.



User Profile

http://nsdc.fmi.fi/services/service_finhub_interface



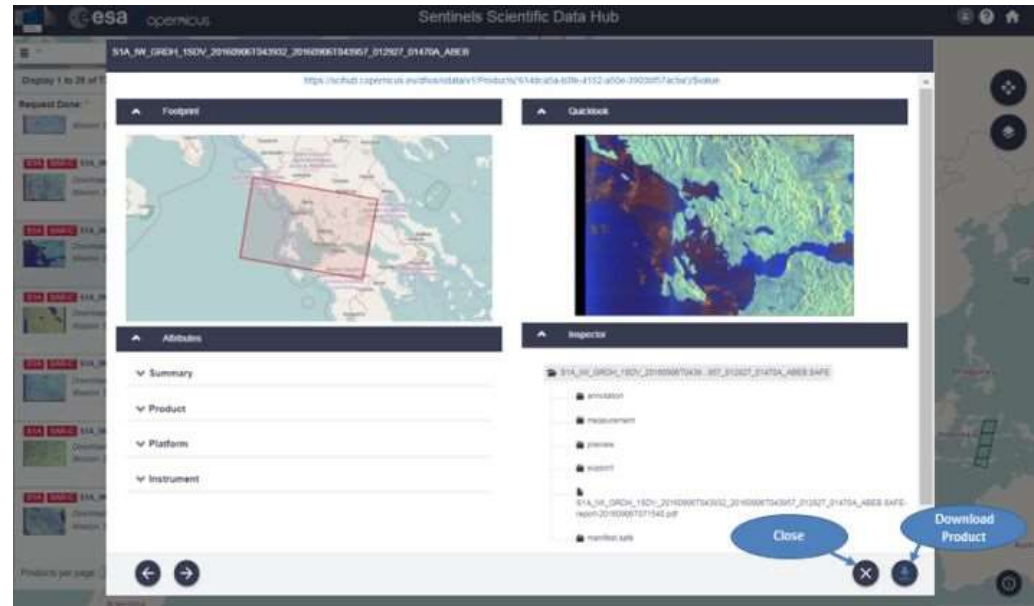
Search Results

- Select product
- Zoom to product
- View Product Details
- Add product to Cart
- Download Product



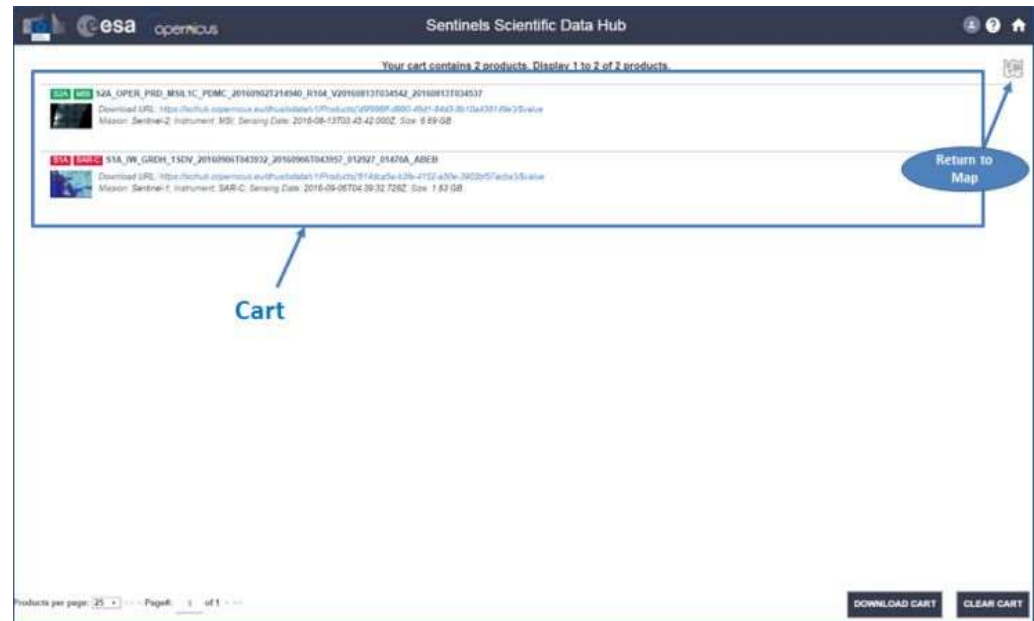
View Product Details icon

- Product name
- Product URL
- Footprint
- Quicklook
- Attributes(Summary, Product, Platform, Instrument)
- Inspection(Annotation, Measurement, Preview, Support, Manifest.safe)



Cart Pannel

The cart panel shows the products added to the cart. It's possible to download the single product or all the products in the cart as a bulk download or clear it. To return to map click on "Map icon" in the upper right-hand corner.



Thank you! Any Questions?

For more information contact finhub-support@nsdc.fmi.fi

Visting address: Finnish Meteorological Institute, Space and Earth
Observation Centre, Erik Palménin aukio 1, FI-00560 Helsinki



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