

Using Copernicus for disaster management in Africa

The „Sentinels-4-African-DRR“ Project

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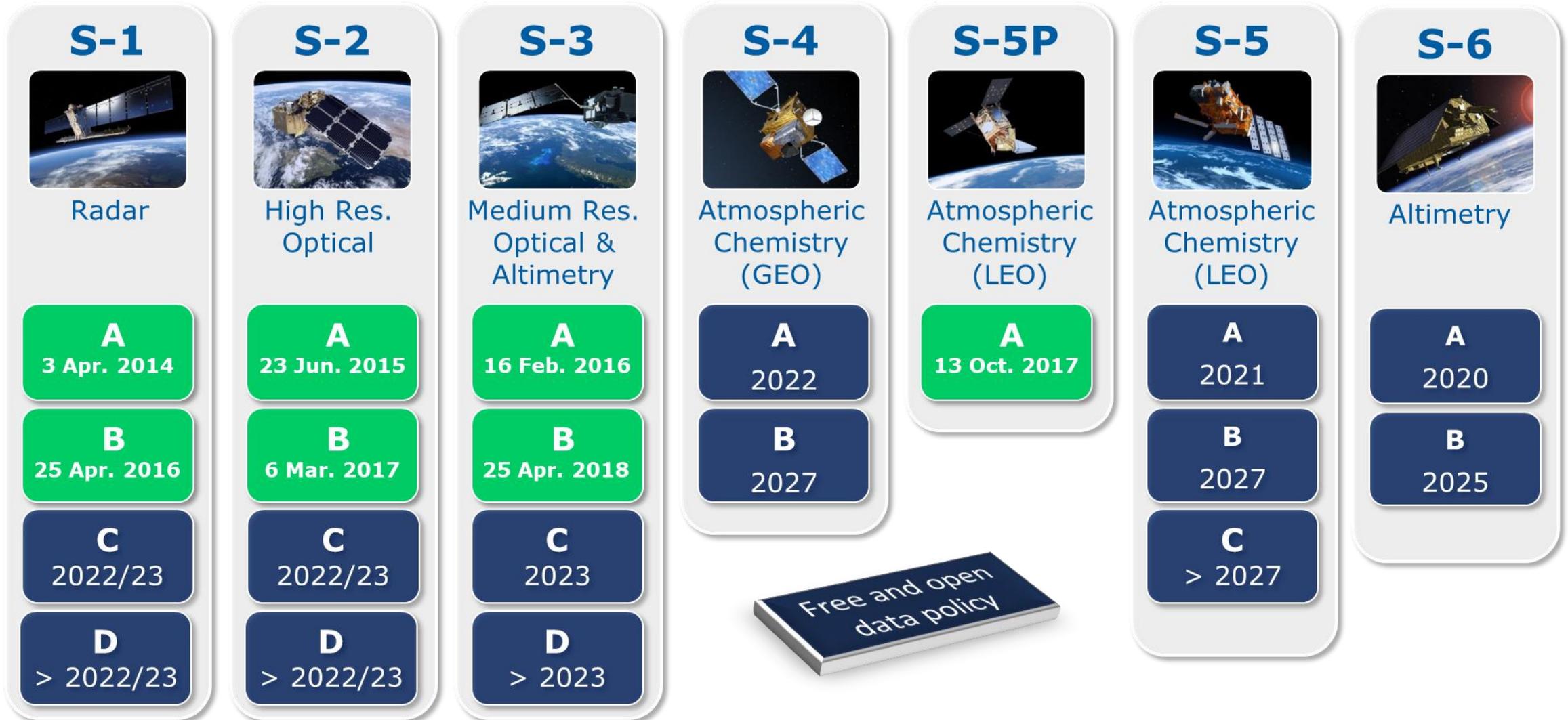
The Copernicus Programme

- Copernicus is the European Union's Earth observation programme
- It provides many different datasets, services and products based on its satellite missions and other data (e.g. in-situ)
- These data, services and products are made available freely and openly

Copernicus (Core) Services



The Copernicus Sentinel satellites



Data availability



Copernicus Open Access Hub



scihub.copernicus.eu

- Free and open access to Sentinel data with global coverage (incl. all of Africa)
- Online user interface with easy-to-use map
- Radar data, optical data

The screenshot shows the Copernicus Open Access Hub interface. At the top, there are logos for ESA and Copernicus. The main header reads "Copernicus Open Access Hub". Below this is a search bar with the text "Insert search criteria...". A dropdown menu is open, showing "Display 1 to 25 of 174 products." and "Order By: Ingestion Date ↓". Below the dropdown, there are four product listings, each with a small thumbnail image and a download URL. The first listing is for a Sentinel-1 SAR-C product with the footprint "Intersects(POLYGON((39.47832203774397 9.16983027945409,35.19495979133415...))". The map on the right shows East Africa with a red polygon highlighting a specific area in Ethiopia and Eritrea.

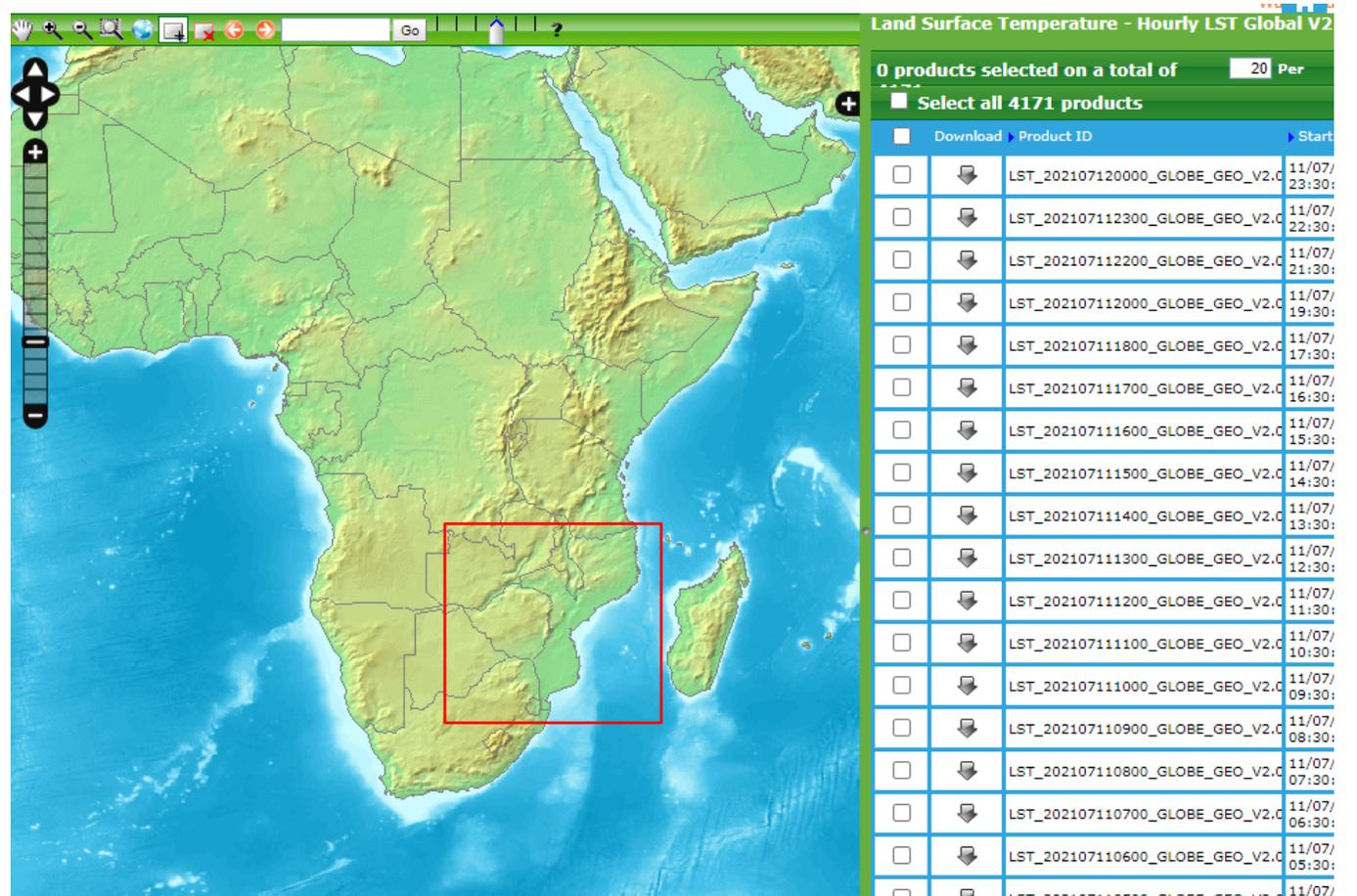
Data availability

Copernicus Global Land Service

Providing bio-geophysical products of global land surface

<https://land.copernicus.eu/global/>

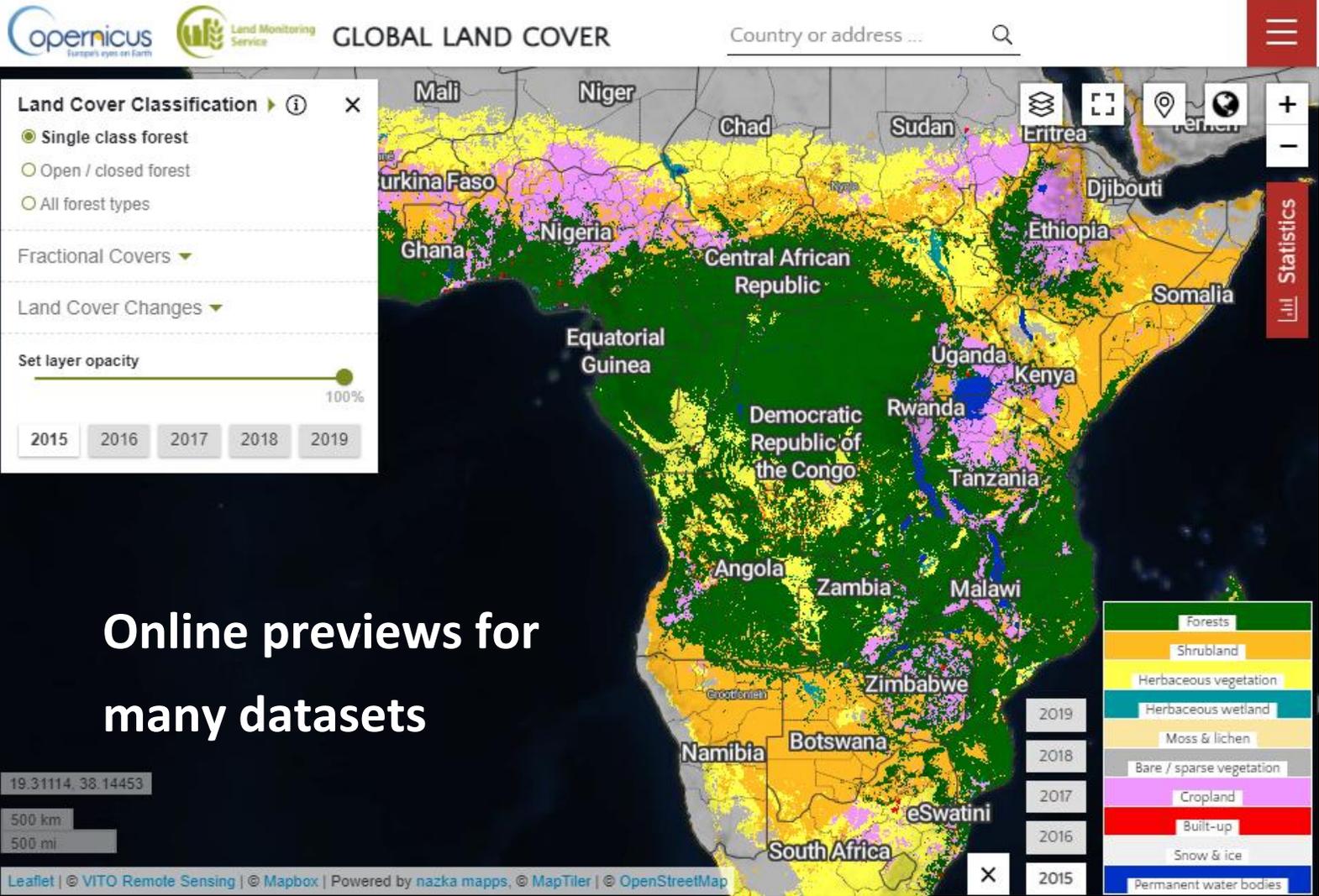
- Open Copernicus data on vegetation, energy, water and land
- Products include surface temperature, land cover amongst others
- Online map interface with download-list
- Global coverage / all of Africa for most products



The screenshot displays the Copernicus Global Land Service interface. On the left, a map of Africa is shown with a red rectangular box highlighting a specific region in East Africa. On the right, a panel titled "Land Surface Temperature - Hourly LST Global V2" is visible. This panel shows a selection of 0 products out of a total of 20 per page, with a button to "Select all 4171 products". Below this, a table lists individual LST products with columns for "Download", "Product ID", and "Start" time.

<input type="checkbox"/>	Download	Product ID	Start
<input type="checkbox"/>	↓	LST_202107120000_GLOBE_GEO_V2.0	11/07/23:30:
<input type="checkbox"/>	↓	LST_202107112300_GLOBE_GEO_V2.0	11/07/22:30:
<input type="checkbox"/>	↓	LST_202107112200_GLOBE_GEO_V2.0	11/07/21:30:
<input type="checkbox"/>	↓	LST_202107112000_GLOBE_GEO_V2.0	11/07/19:30:
<input type="checkbox"/>	↓	LST_202107111800_GLOBE_GEO_V2.0	11/07/17:30:
<input type="checkbox"/>	↓	LST_202107111700_GLOBE_GEO_V2.0	11/07/16:30:
<input type="checkbox"/>	↓	LST_202107111600_GLOBE_GEO_V2.0	11/07/15:30:
<input type="checkbox"/>	↓	LST_202107111500_GLOBE_GEO_V2.0	11/07/14:30:
<input type="checkbox"/>	↓	LST_202107111400_GLOBE_GEO_V2.0	11/07/13:30:
<input type="checkbox"/>	↓	LST_202107111300_GLOBE_GEO_V2.0	11/07/12:30:
<input type="checkbox"/>	↓	LST_202107111200_GLOBE_GEO_V2.0	11/07/11:30:
<input type="checkbox"/>	↓	LST_202107111100_GLOBE_GEO_V2.0	11/07/10:30:
<input type="checkbox"/>	↓	LST_202107111000_GLOBE_GEO_V2.0	11/07/09:30:
<input type="checkbox"/>	↓	LST_202107110900_GLOBE_GEO_V2.0	11/07/08:30:
<input type="checkbox"/>	↓	LST_202107110800_GLOBE_GEO_V2.0	11/07/07:30:
<input type="checkbox"/>	↓	LST_202107110700_GLOBE_GEO_V2.0	11/07/06:30:
<input type="checkbox"/>	↓	LST_202107110600_GLOBE_GEO_V2.0	11/07/05:30:
<input type="checkbox"/>	↓	LST_202107110500_GLOBE_GEO_V2.0	11/07/04:30:

Data availability



Online previews for many datasets

<https://land.copernicus.eu/global/>

How can African users benefit from Copernicus?

- While Copernicus is a European programme, many of its offers are available globally and can be used by actors outside of Europe
- Some services are restricted to Europe, others are available as global versions as well
- It might still be challenging for (potential) users to find out what is available and accessible for them, and how they might be able to use it

Sentinels-4-African-DRR

Project goal and objectives



- Overall goal:

To strengthen the benefit from Copernicus in African countries, specifically for Disaster Risk Reduction and Management, through...

- Development of tailored training material
 - Organization of targeted training events
 - Collection and evaluation of user-requirements and user-feedback
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- Related objectives:
 - To establish continuous communication with African Copernicus users
 - To work closely with UN-SPIDER and support UN-SPIDER events and the UN-SPIDER community in Africa
 - To develop freely available training and guiding material on the use of Copernicus for DRR/DRM, specifically designed with African users in mind

Foreseen Project Outputs

- 2-3 Trainings per year, ideally connected to UN-SPIDER activities and events
- Development of Training material:
 - Guidelines for the use of Copernicus satellite data and derived information products and services in the context of different disaster types
 - Online material for specific disaster- and user types
 - Tutorials for the use of Copernicus data for disaster management and risk reduction
 - Dissemination of the material through the use of different media

Project context and cooperations

- The Sentinels-4-African-DRR project is closely embedded in ongoing collaborative efforts between DLR, UN-SPIDER and ZFL / Uni Bonn
- The SPEAR project provides the collaborative framework and sets the regional focus (Africa) for Sentinels-4-African-DRR
 - strong synergy between both efforts is expected
- Sentinels-4-African-DRR will add to UN-SPIDER & SPEAR activities
- Sentinels-4-African-DRR will benefit from events and networks organized and established in the SPEAR context and through UN-SPIDER activities in general

Possibilities for participation

- Get in touch with us and support us by participating in interviews and/or surveys
- Discuss your specific Copernicus experiences with us, including challenges and requirements for increasing your use of the Copernicus portfolio
- Make use of developed material and attend training courses etc.

Discussion

- What do you already know about Copernicus and what are your experiences using it?
- What are the major challenges you are facing regarding the use of Copernicus?
- What would be requirements and needs on your side that need to be met to make it easier for you?