

Moderator



Miguel Angel
Exposito Verdejo



Fabio Venuti



Vincent Gabaglio



Mashauri Muliro

SHOW CASE

What does the Earth tell us in terms of hazards and vulnerabilities?

7 NOV / 11h30-12h00 GMT/ UTC



AGENDA

- 1** Introduction by moderator (2-3 min)

- 2** Panel Discussion (17 min)

- 3** Q&A (10 min)



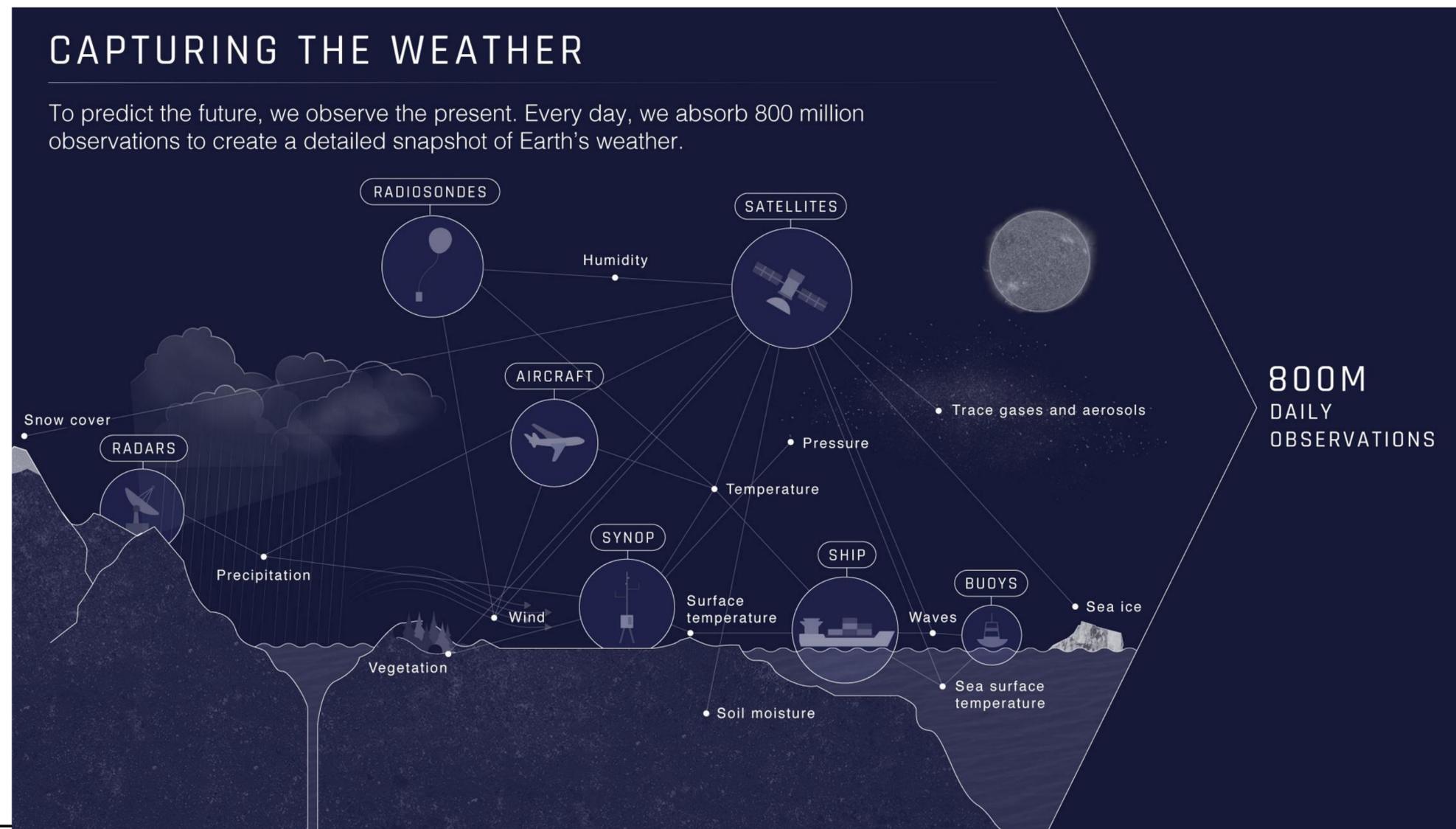
**Long-lasting experience
in supporting the
development of Early
Warning system by
ingesting observations to
produce analyses and
forecasts**

6 NOV / 1100h GMT/ UTC



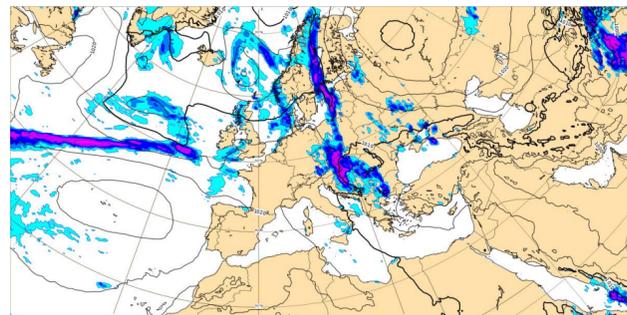
Fabio Venuti, Head of Cabinet of ECMWF

From observations to weather and environmental monitoring and forecasting

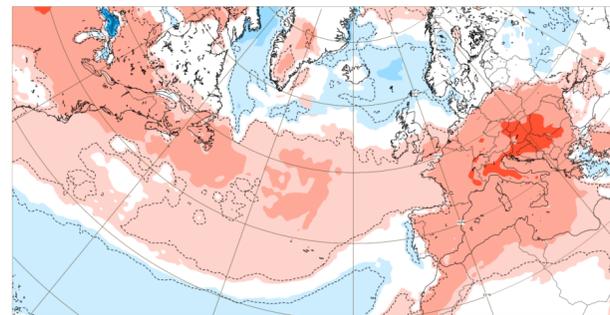


ECMWF products and Copernicus services

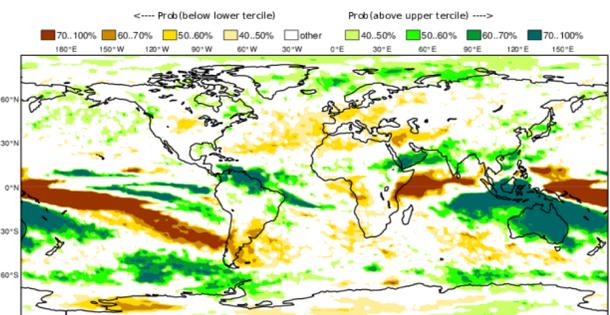
Medium-range weather forecasts



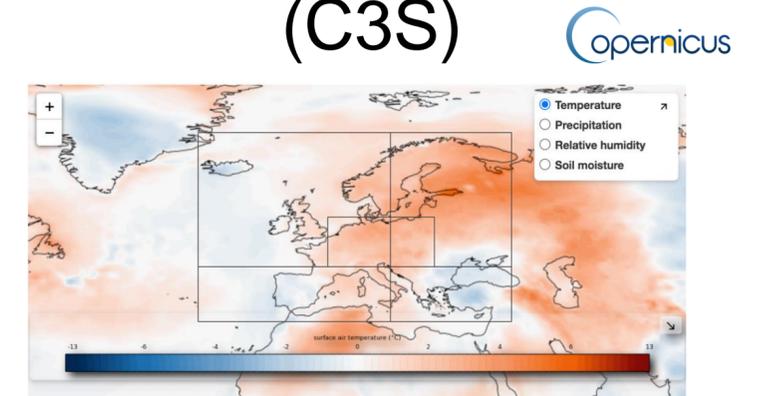
Extended-range weather forecasts



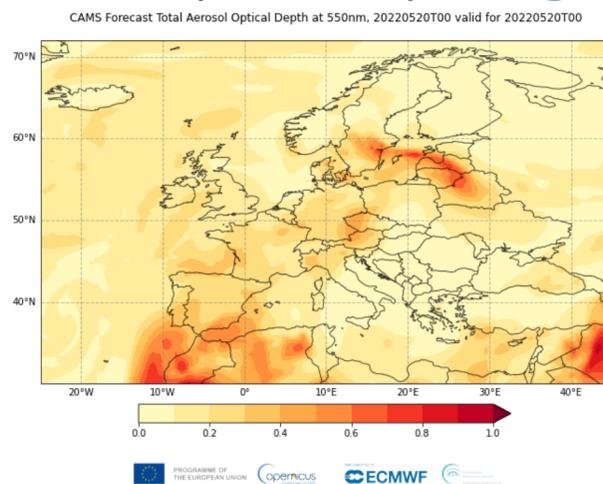
Long-range weather forecasts



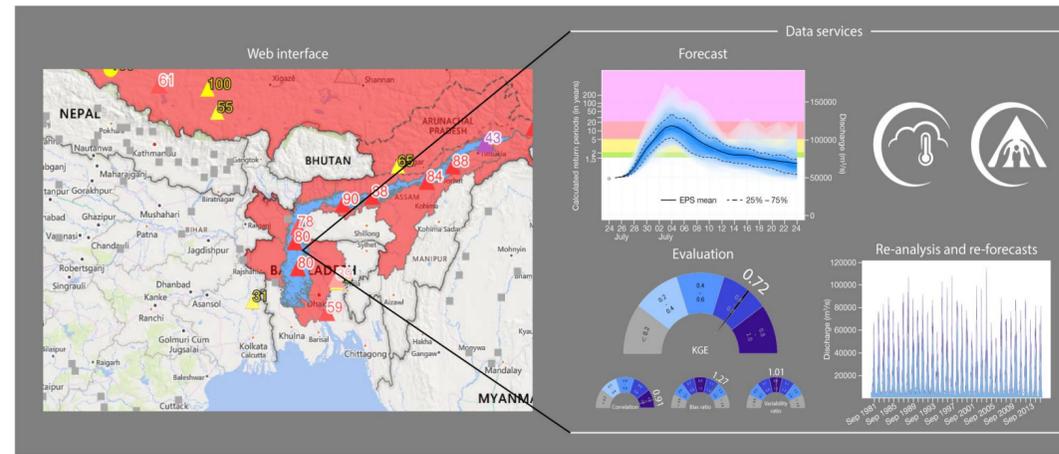
Climate Change Services (C3S)



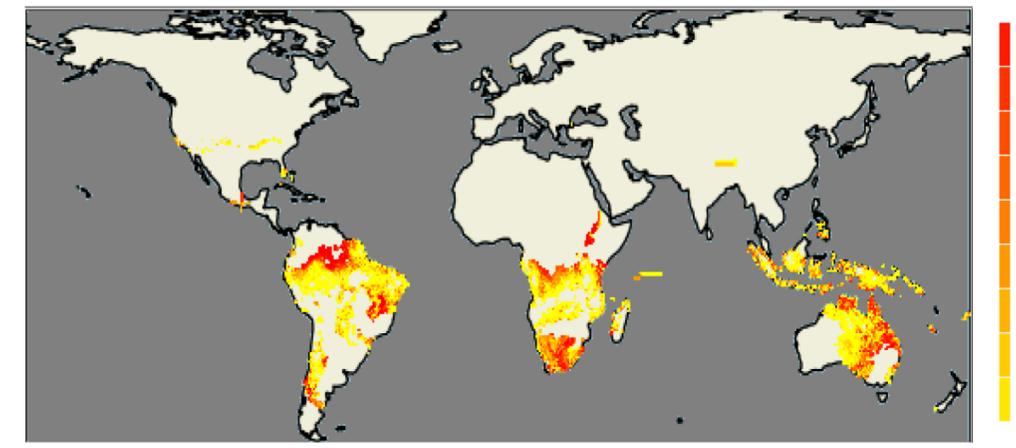
Atmospheric Monitoring Service (CAMS)



Global Flood Awareness System (GloFAS)



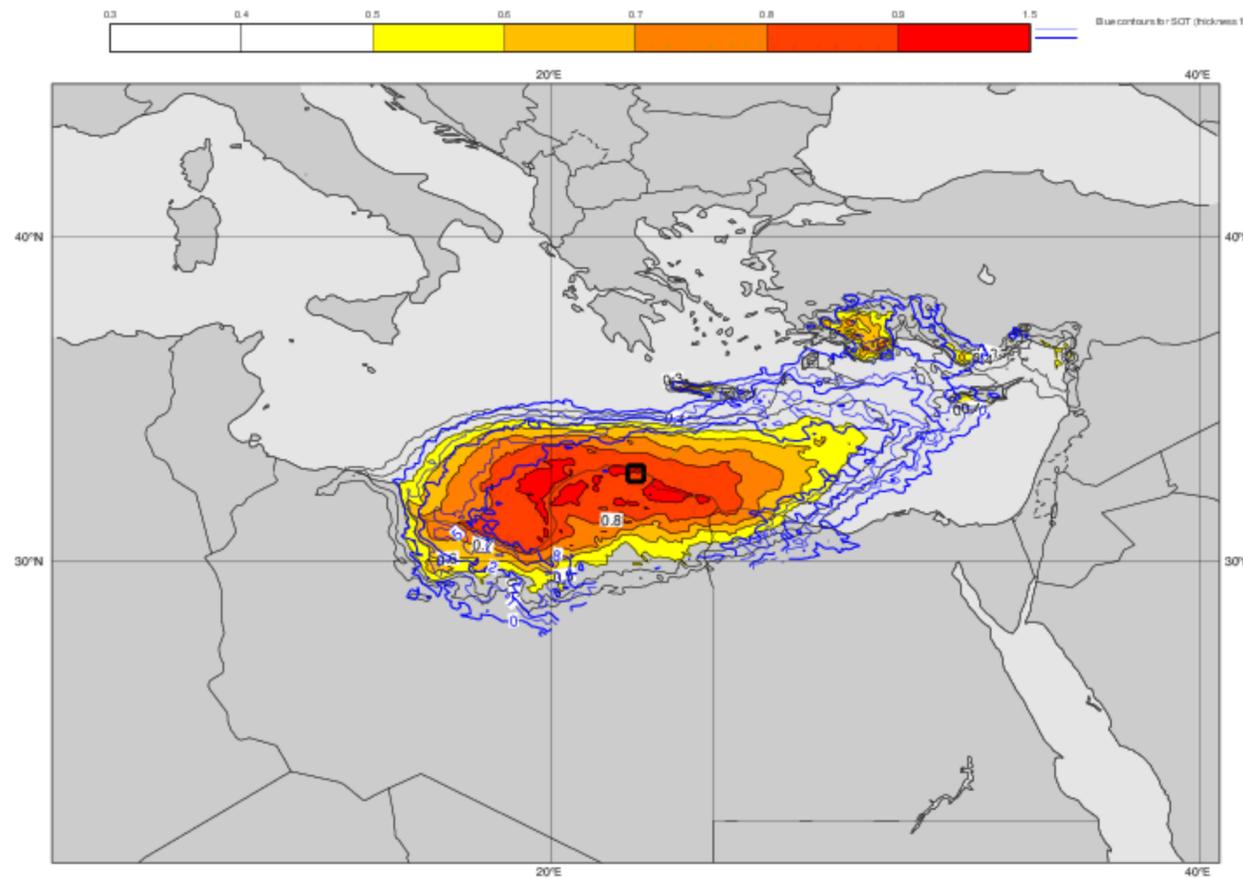
Global Wildfire Information System (GWIS)



Visualizing extreme weather: the floods in Libya

ECMWF's Extreme Forecast Index (EFI) indicating extreme precipitation 5 days in advance (via ecCharts service)

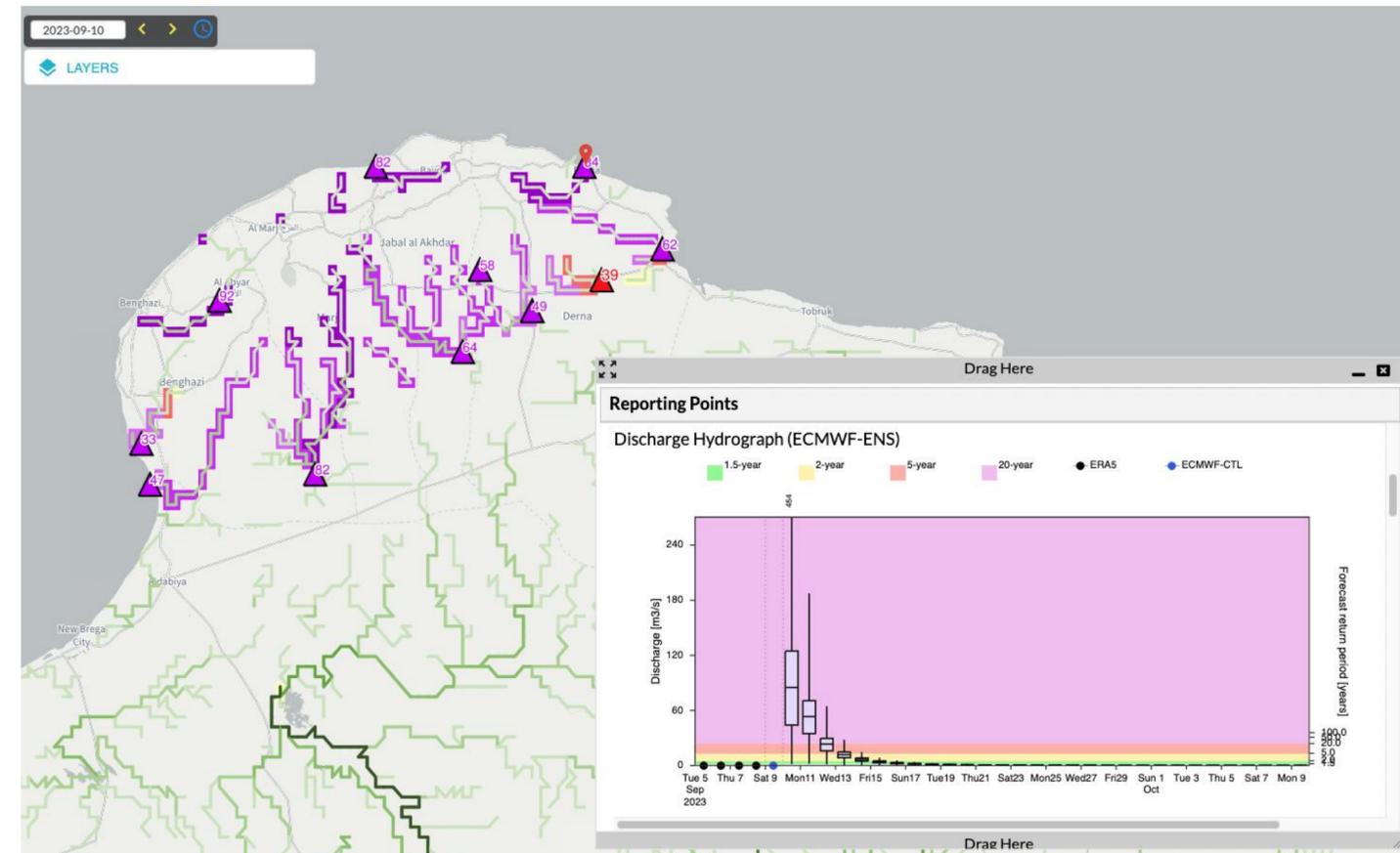
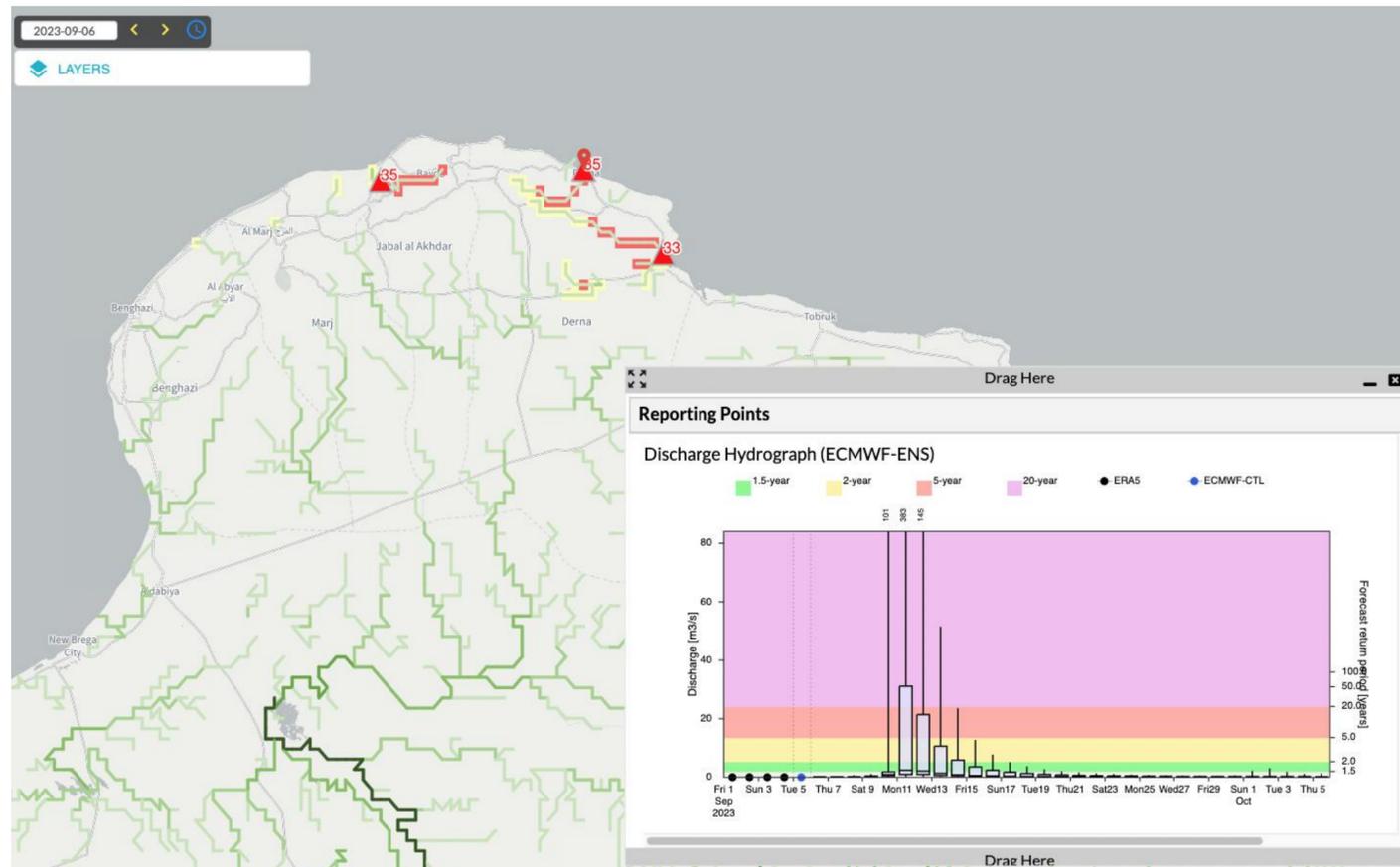
efi tp, sot tp, 2023090600 96-168



Map of precipitation observations constructed from media reports (few internationally shared observations)



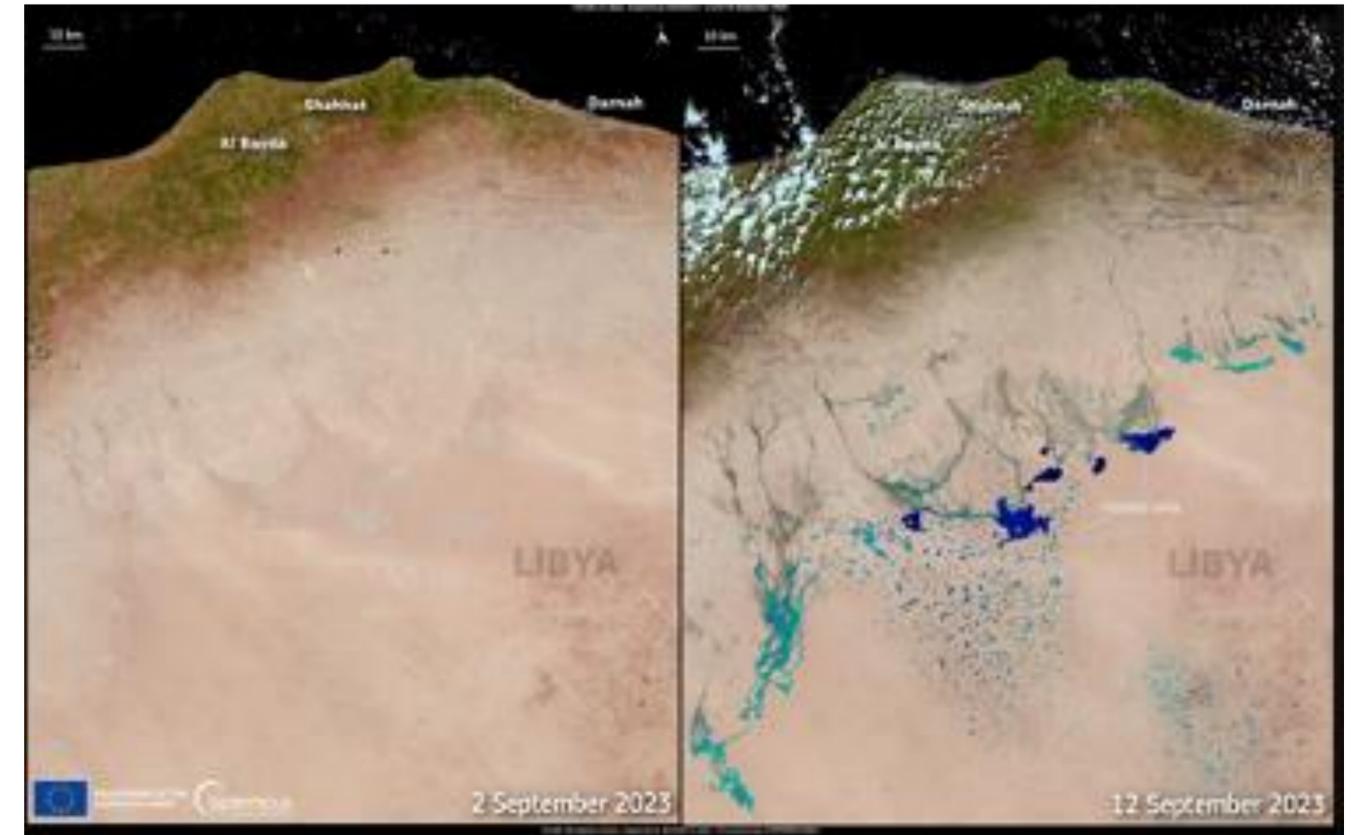
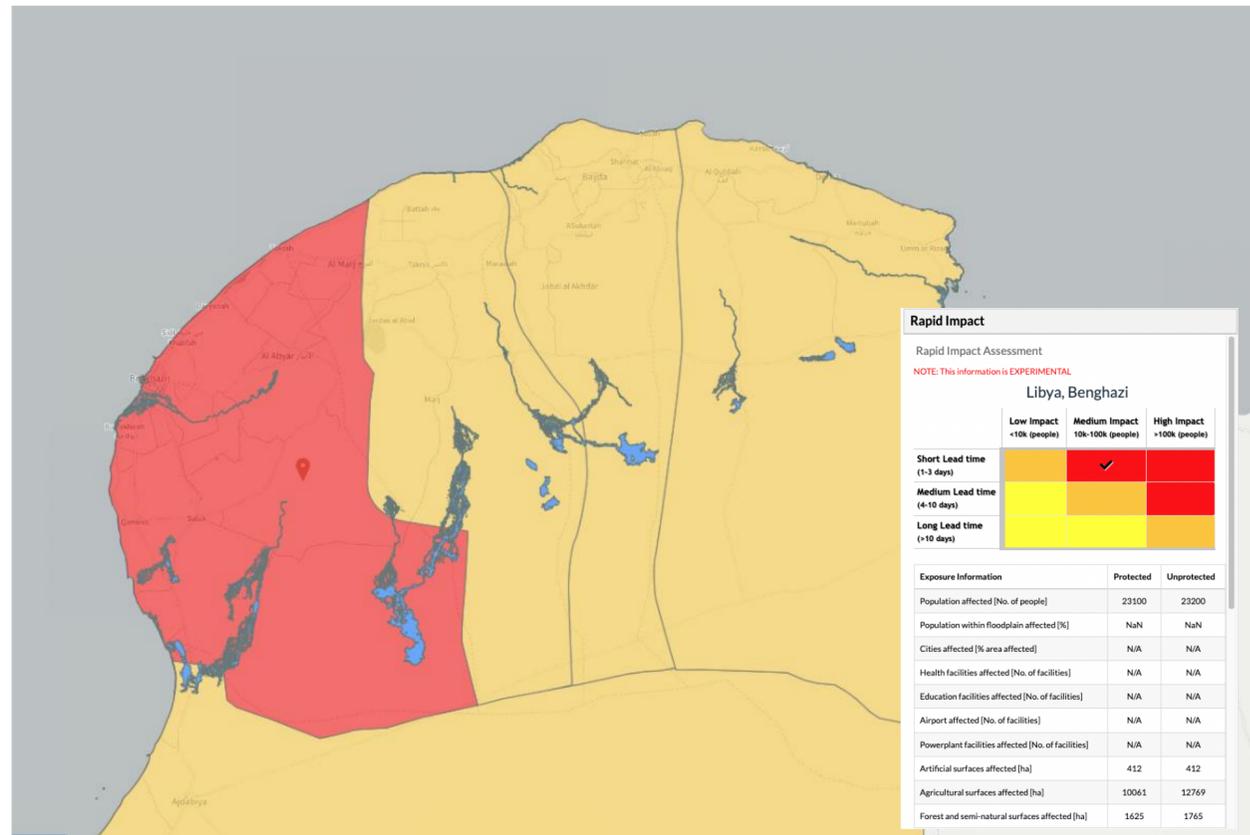
GloFAS in action: flood forecasts in Libya



GloFAS shows first indication on 6 September

GloFAS in action: comparing with satellite observations

Satellite flood extent estimate 2 and 12 Sep



Very good indication of the flooded areas in GloFAS

Availability of ECMWF and Copernicus products and services

All Copernicus data free (including GloFAS)

ECMWF's ecCharts free for all National Meteorological Services from 2024

25 countries supported by the WMO Systematic Observations Financing Facility (SOFF) will receive ECMWF high-res data by the end of 2023, more countries in 2024

Possible training programme under development with WMO SOFF

Other ECMWF support to EU initiatives in Africa being investigated



**How the recent launch of
MTG third generation
provides incredible
resources for data more
and more accurate and
precise**

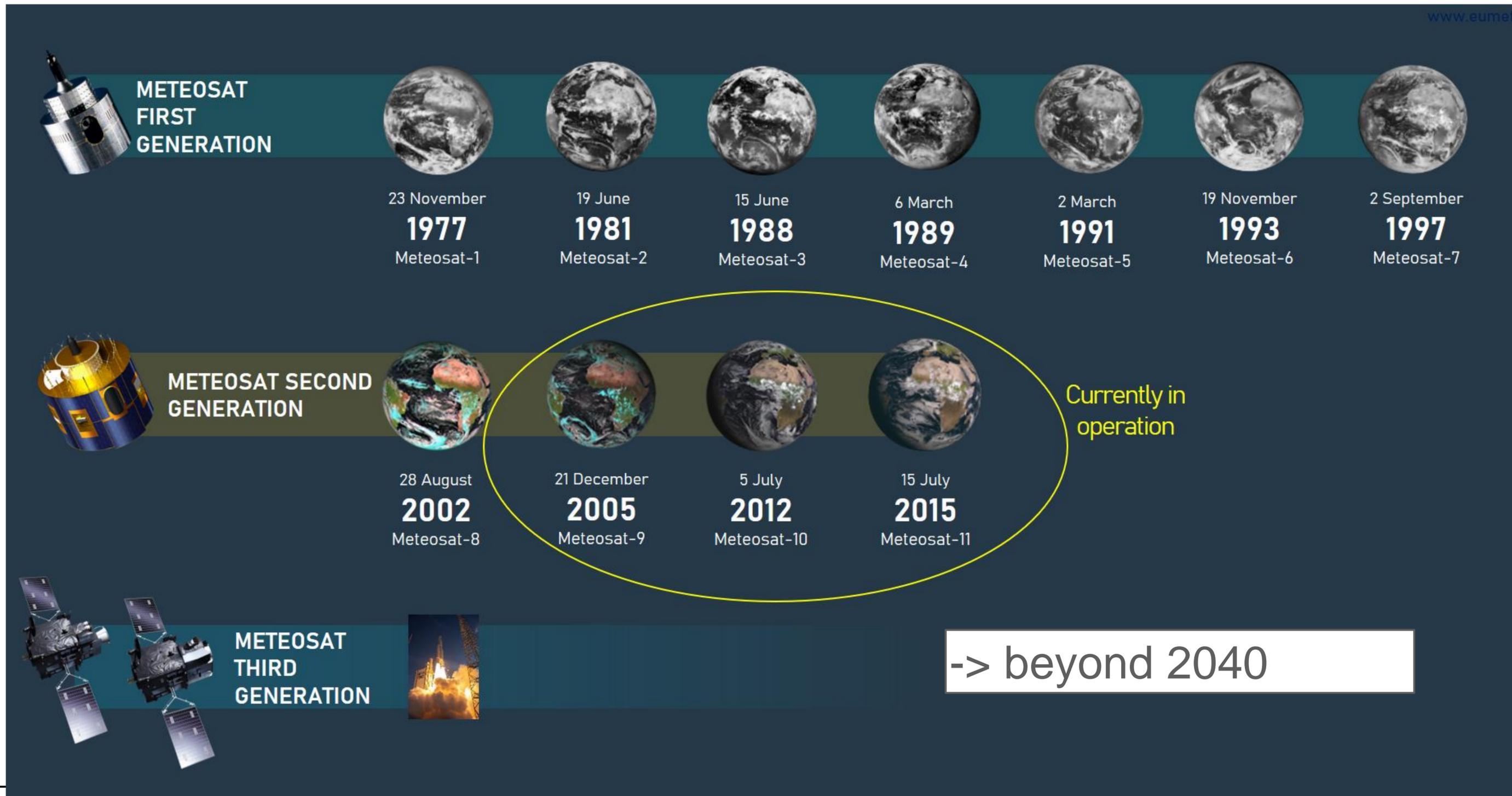
6 NOV / 1100h GMT/ UTC

Vincent Gabaglio, International relations officer, EUMETSAT

40+ years of Meteosat

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www.eumet



Meteosat Third Generation

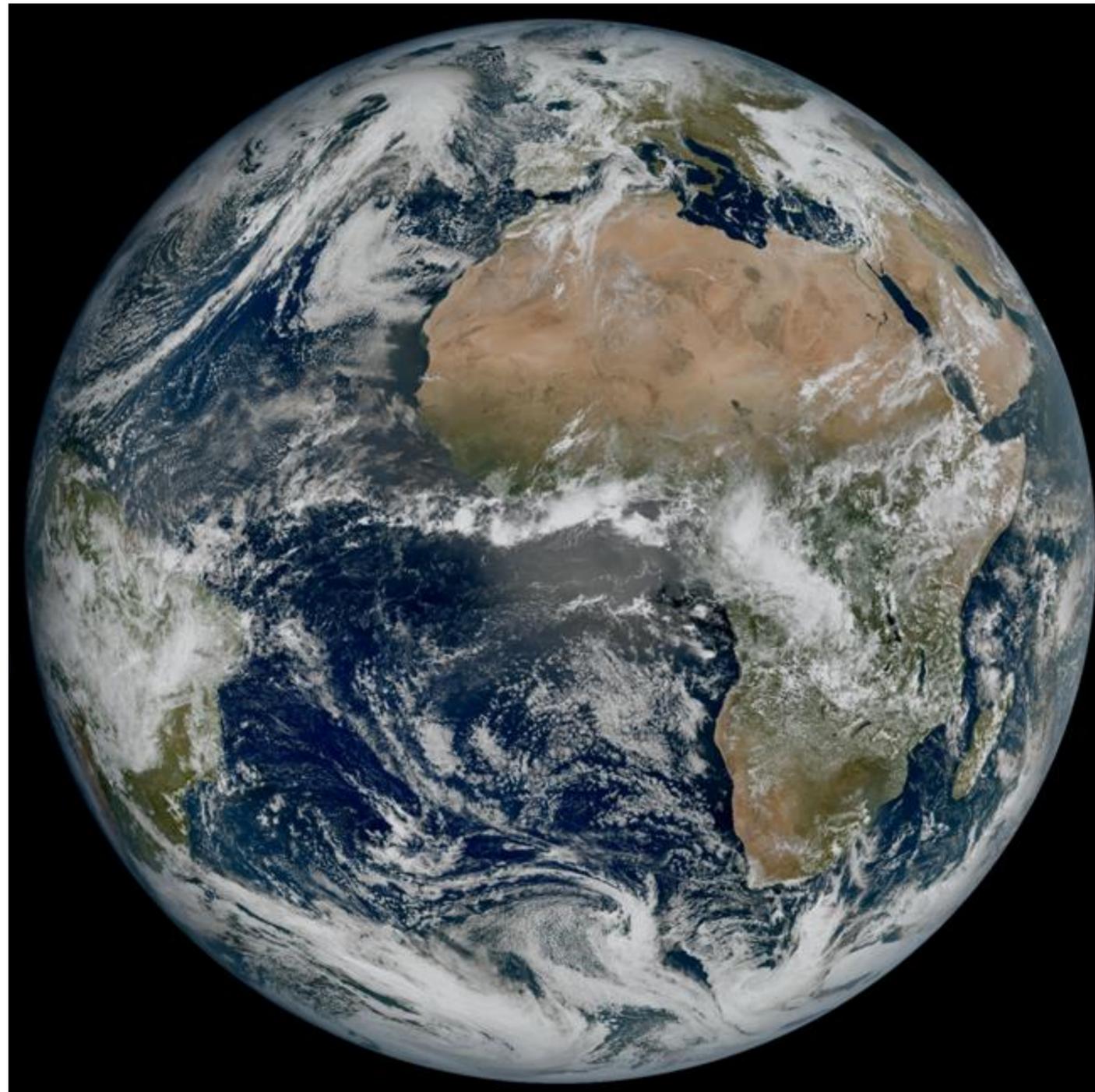
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- First MTG launched on 13 December 2022
- 2 types of MTG satellites:
 - MTG-I Imager (FCI and Lightning imager)
 - MTG-S Sounder



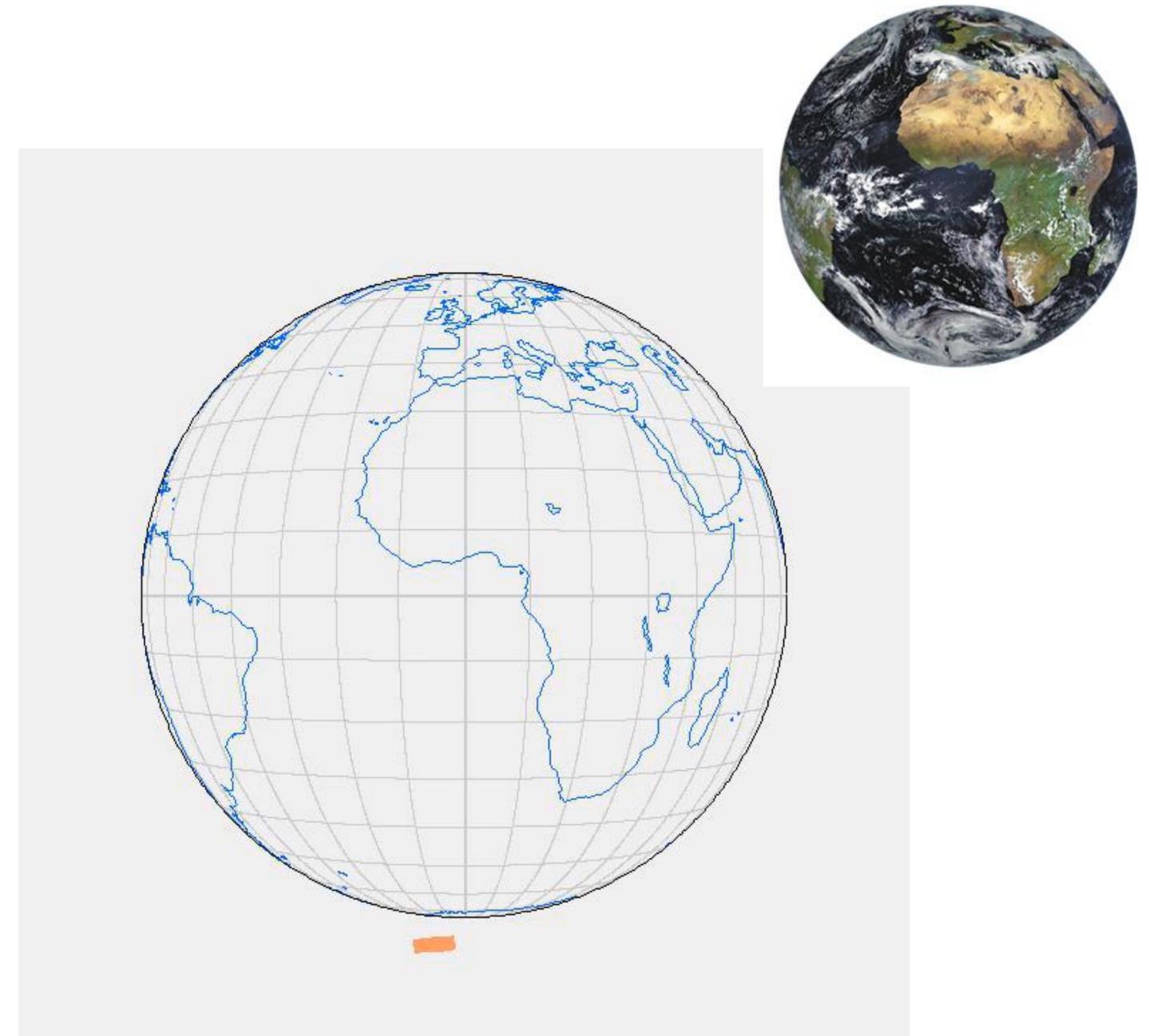
First MTG image - 18 March 2023

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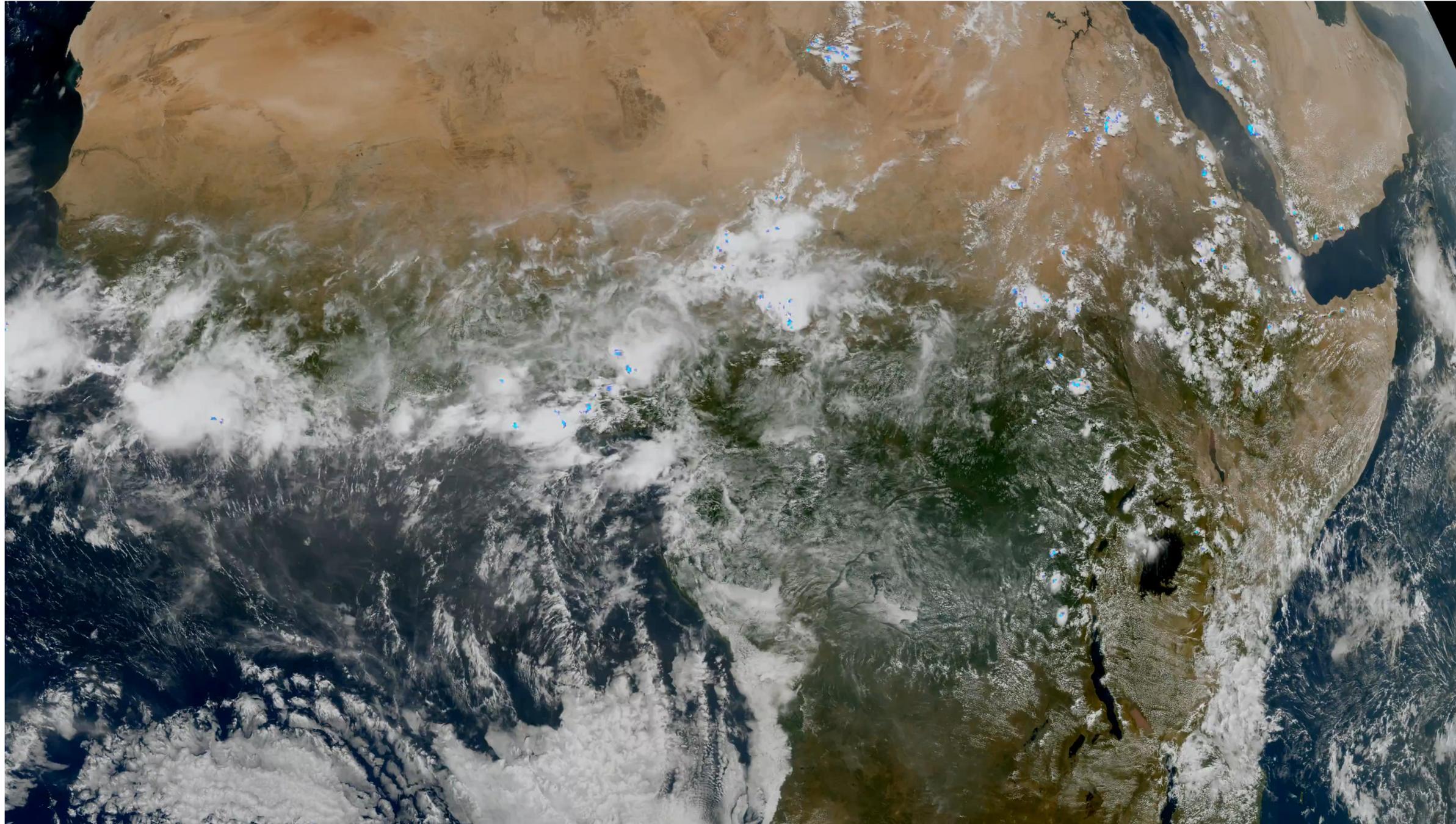
MTG-I improvement

- Better spectral resolution:
from 11/12 to 16 channels
- More frequent observations:
10 min instead of 15 min
- Better spatial resolution:
from 3x3km to 1x1km visible & 2x2km infrared
- Increased dynamic:
12 bits instead of 10



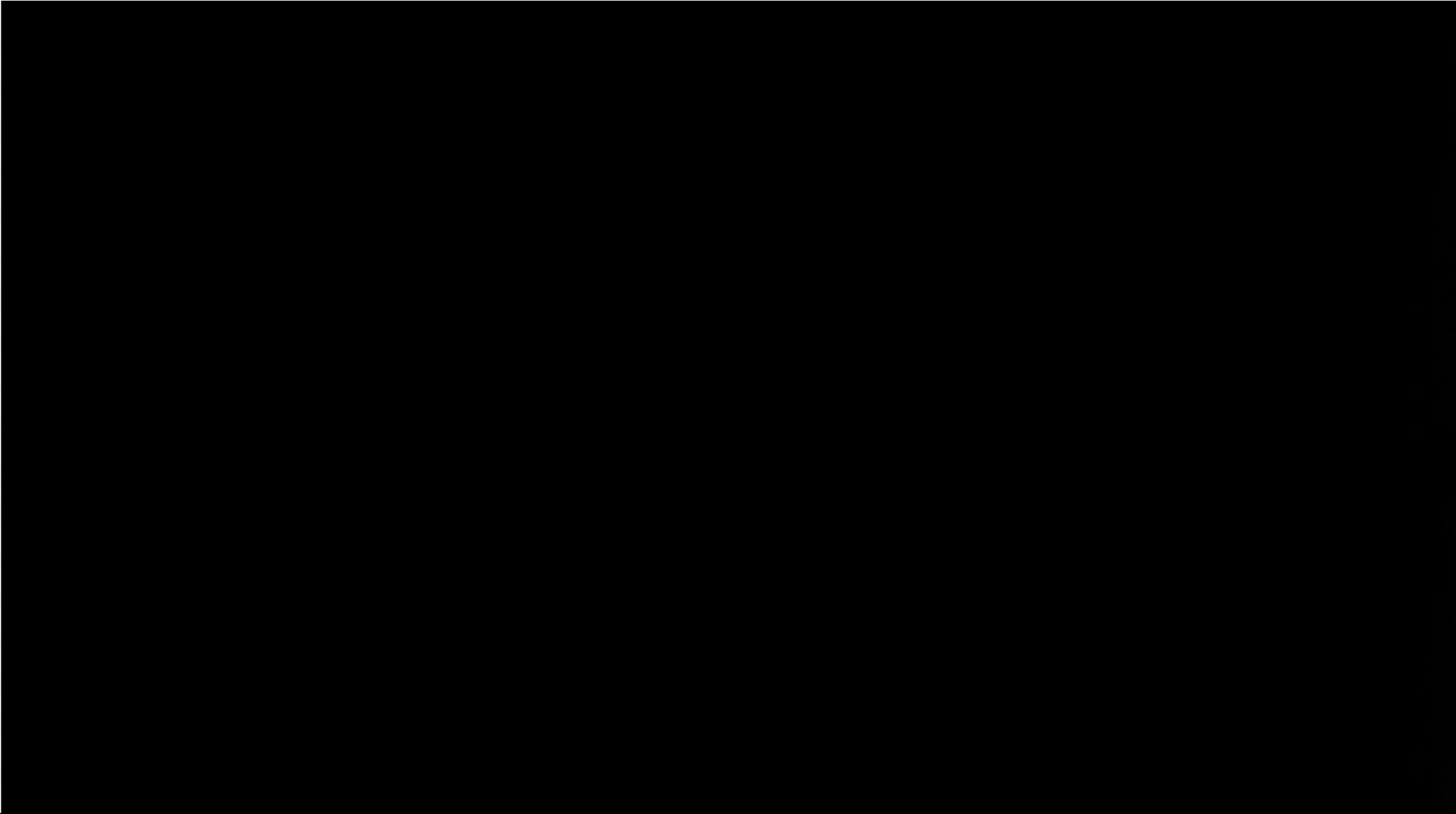
MTG FCI and LI over Africa

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Thunderstorm with MTG

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Fire monitoring with MTG

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SEVIRI Natural color 3km
Fire Temperature 3km
(3.8 μ m)
18.03.2023 15:45 UTC

Demonstrating FCI's capabilities
Observing fires in the sub-Saharan region
Preliminary results

FCI True Color 1km
Fire Temperature 0.5km
(3.8 and 2.2 μ m)
18.03.2023 15:40 UTC

Demonstrating FCI's capabilities
Observing fires in the sub-Saharan region
Preliminary results

Fire monitoring with MTG

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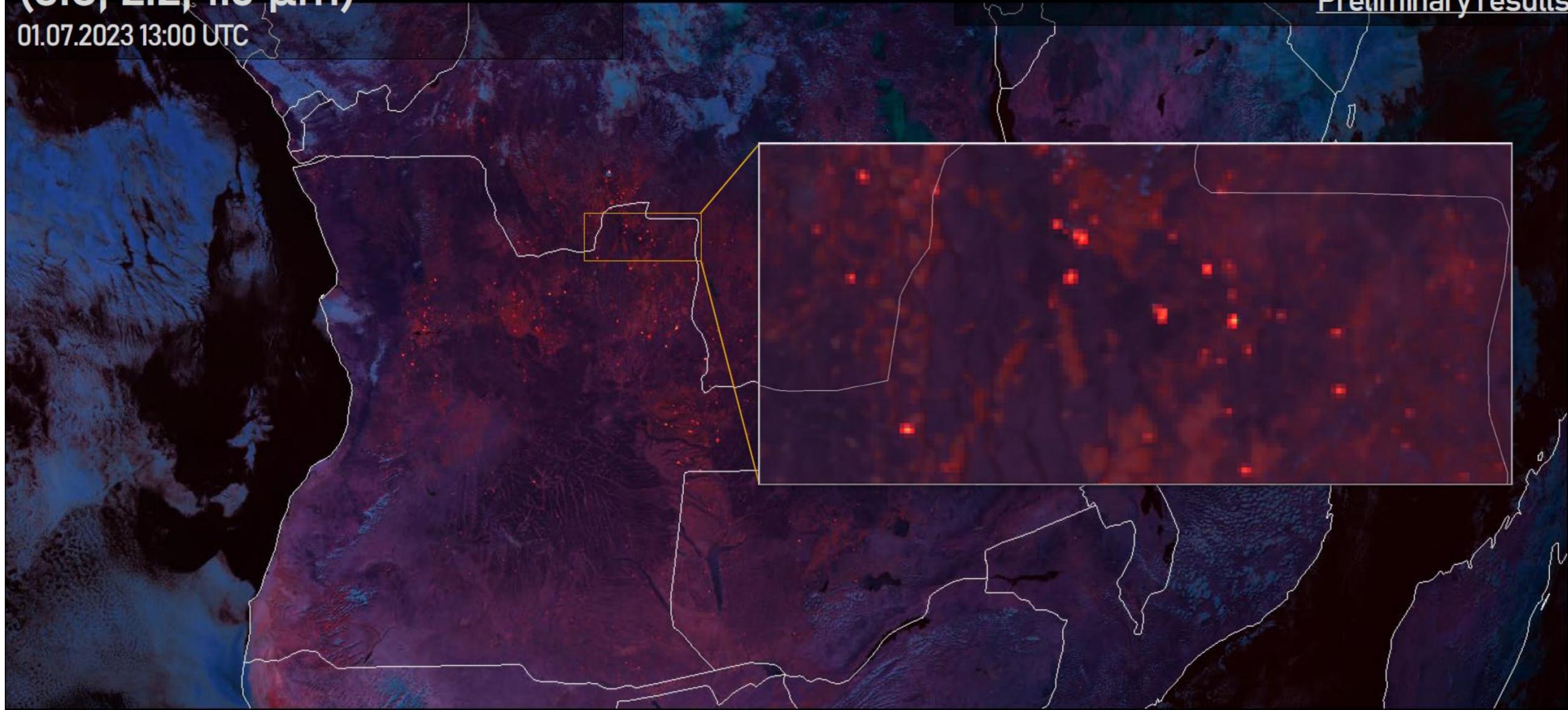
Fire Temperature RGB 1km
(3.8, 2.2, 1.6 μm)

01.07.2023 13:00 UTC

Demonstrating FCI's capabilities

Observing fires in Southern Africa

Preliminary results





How data and information flows into operational value chain (e.g. UNDRR Africa situational room) allowing local institutional actor to be able to act and react in due time

6 NOV / 1100h GMT/ UTC

Mashauri Muliro, Programme Management Office, UNDRR

Operational network linking AUC, ACMAD, ICPAC & MS

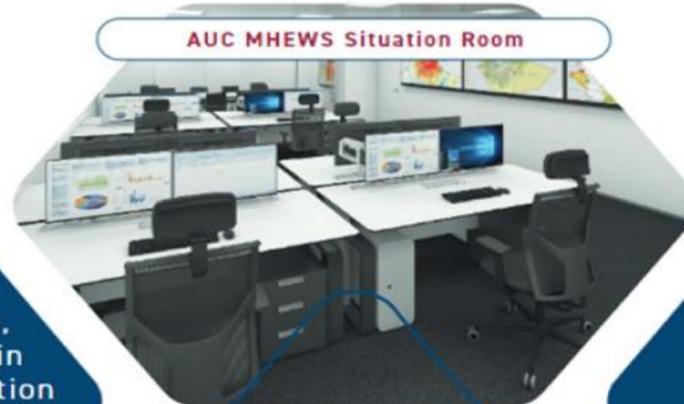
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Africa Multi-hazard Early Warning and Action System for Disaster Risk Reduction



Coordinates the other rooms, acting as the main hub of risk information

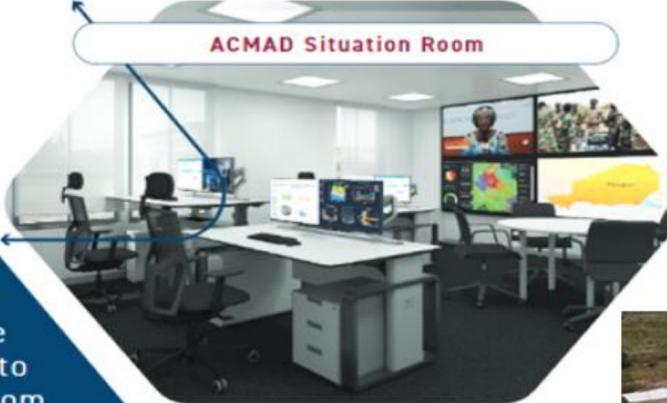


Shares relevant forecast and info

IGAD Climate Prediction and Applications Centre



ACMAD Situation Room



Inject all the relevant info to the 24/7 Sit room



The DRM community as End-user of earth observation facilities

Impact-based EWS (Exposure and Vulnerability),

The Spatial temporal dimension very relevant for EWS (Meteosat 3rd Gen.: Better spatial resolution and frequent observations)

Lack of in-situ observation network across Africa=> Strong reliance on Earth Observation

Key challenges

- Interoperability
- Transboundary Risk Management

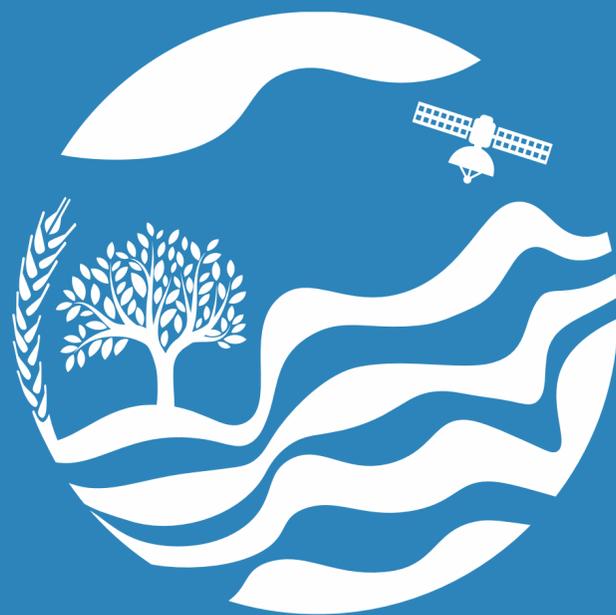
Proof of concept and Prototypes





Q & A

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**GEO
WEEK
2023
MINISTERIAL
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6-10 NOVEMBER
CAPE TOWN, SOUTH AFRICA



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