



PROGRAMME OF THE
EUROPEAN UNION



European
Commission



The Copernicus Emergency Management Service (EMS) On-demand Mapping

31 March 2023

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COPERNICUS
EMERGENCY
MANAGEMENT
SERVICE



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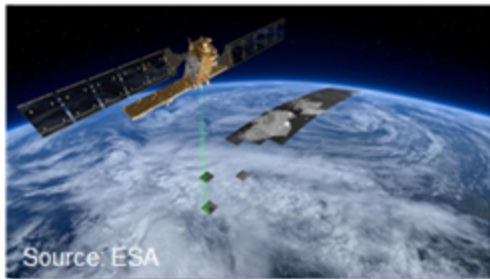
CEMS: On-demand Mapping

EU'S EARTH OBSERVATION PROGRAMME

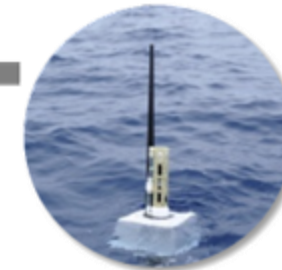


6 services use Earth Observation
data to deliver ...

Satellites: Sentinels &
Contributing Missions



In-situ
measurements



... added value products

Copernicus Emergency Management Service



- CEMS is operational since **2012**
- Supports all actors involved in the management of natural or manmade disasters
- Addresses all phases of the disaster management cycle from preparedness, response to recovery and prevention

- Preparedness: forecasts
- Prevention: risk assessment and reduction
- Response: rapid maps and monitoring of events
- Recovery: post-disaster recovery analyses

Complementary to national efforts

Supporting the EU's **Emergency Response & Coordination Centre (ERCC)** in Brussels

Jointly coordinated by three Commission DGs:

- **DG DEFIS**: overall governance, budget implementation
- **DG JRC**: operational implementation, technical coordination, contractual management, monitoring & quality assurance of deliverables
- **DG ECHO**: operational coordination including interface with the users & authorisation of activations

THE COPERNICUS EMERGENCY MANAGEMENT SERVICE

On-demand
mapping



Rapid
Mapping



Risk & Recovery
Mapping

Early warning
and monitoring



Floods



Fires



Droughts

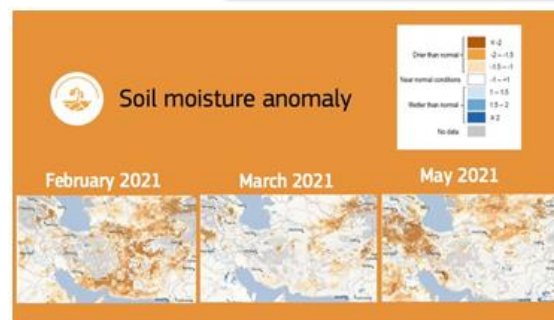
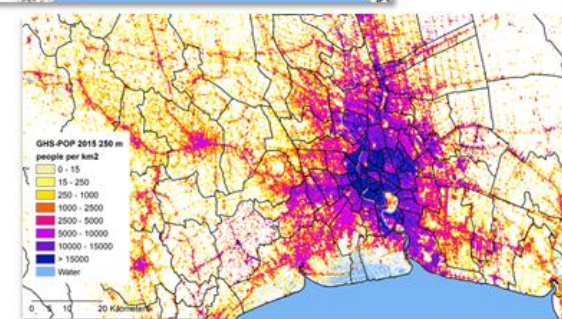
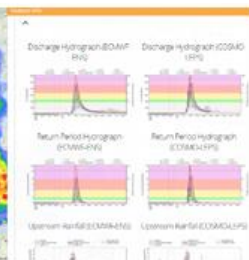
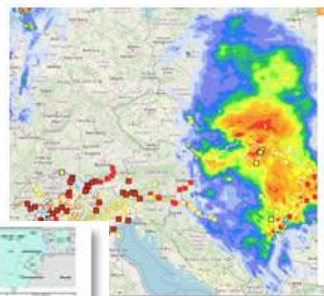
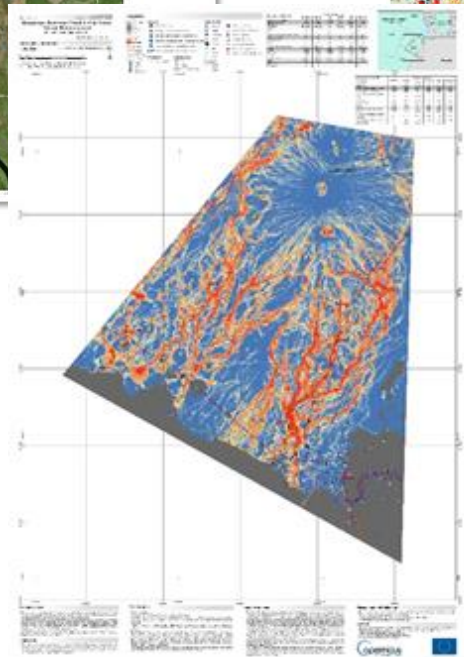
Exposure
Mapping



Population



Built-up
areas



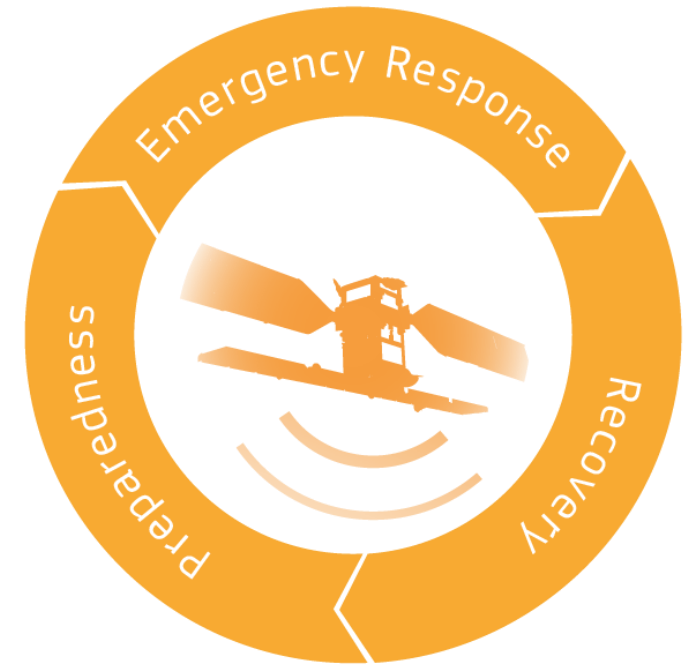
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Copernicus
Europe's eyes on Earth

CEMS ON-DEMAND MAPPING



- Worldwide coverage service implemented by the European Commission's JRC, supervised by DG ERCC and DG DEFIS
- Provides satellite-based maps and data for Civil Protection Authorities and authorised users since 2012.
- Delivers digital geodata and printed map outputs
- Covers all the phases of disaster management cycle of **prevention/preparedness, response and recovery**



Start rotation

Center globe

EU Focus

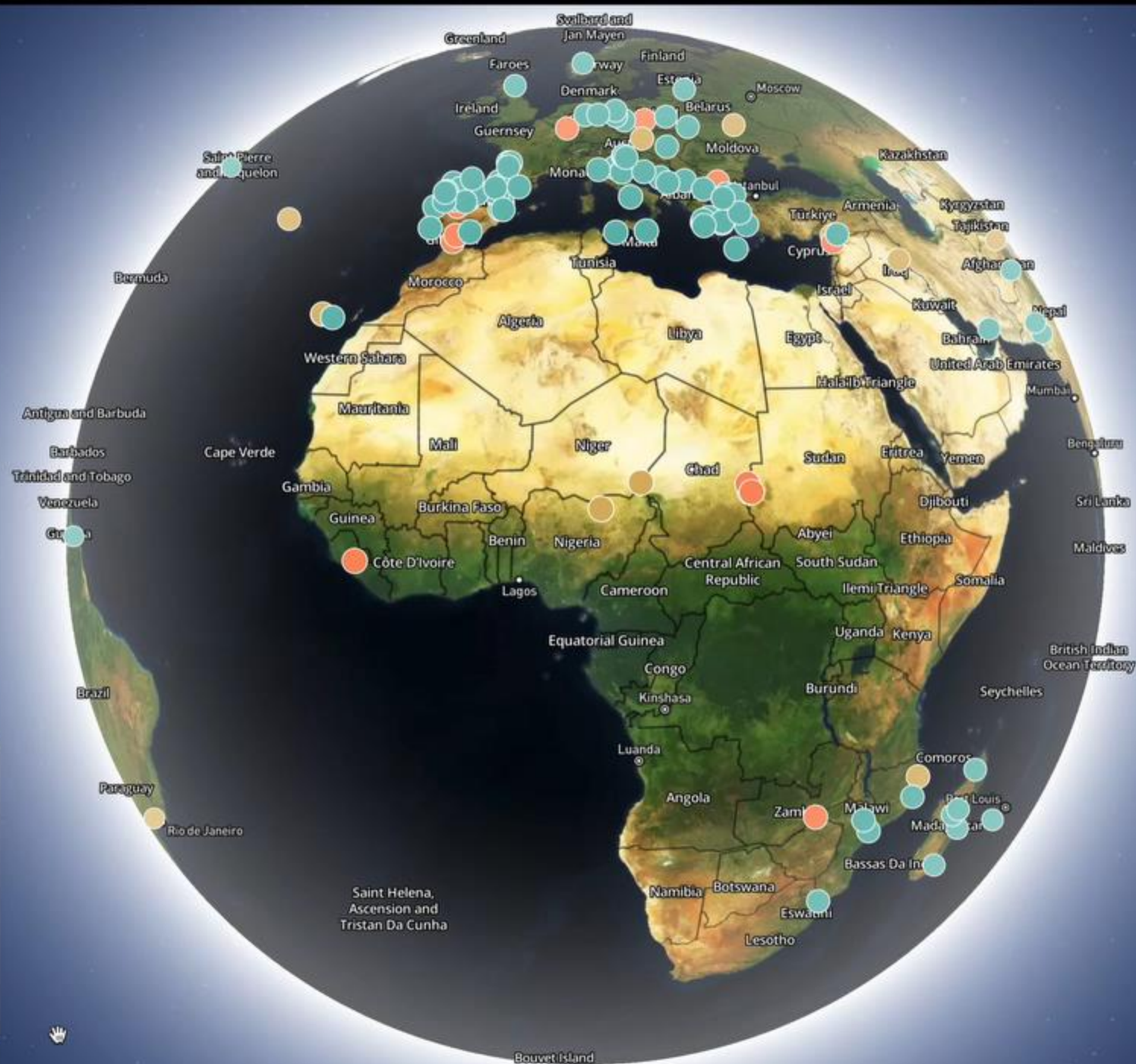
CEMS: 2022 - 2023

Rapid mapping:

100 activations so far

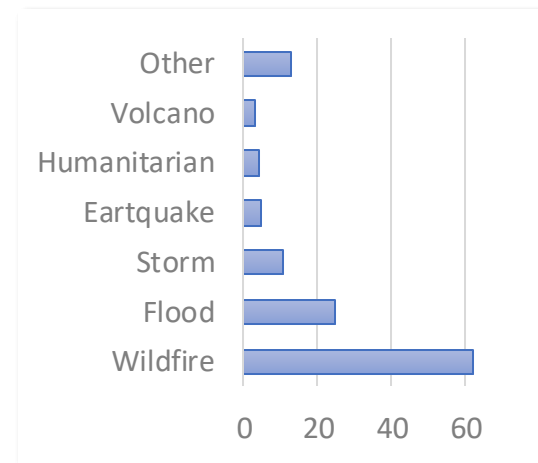
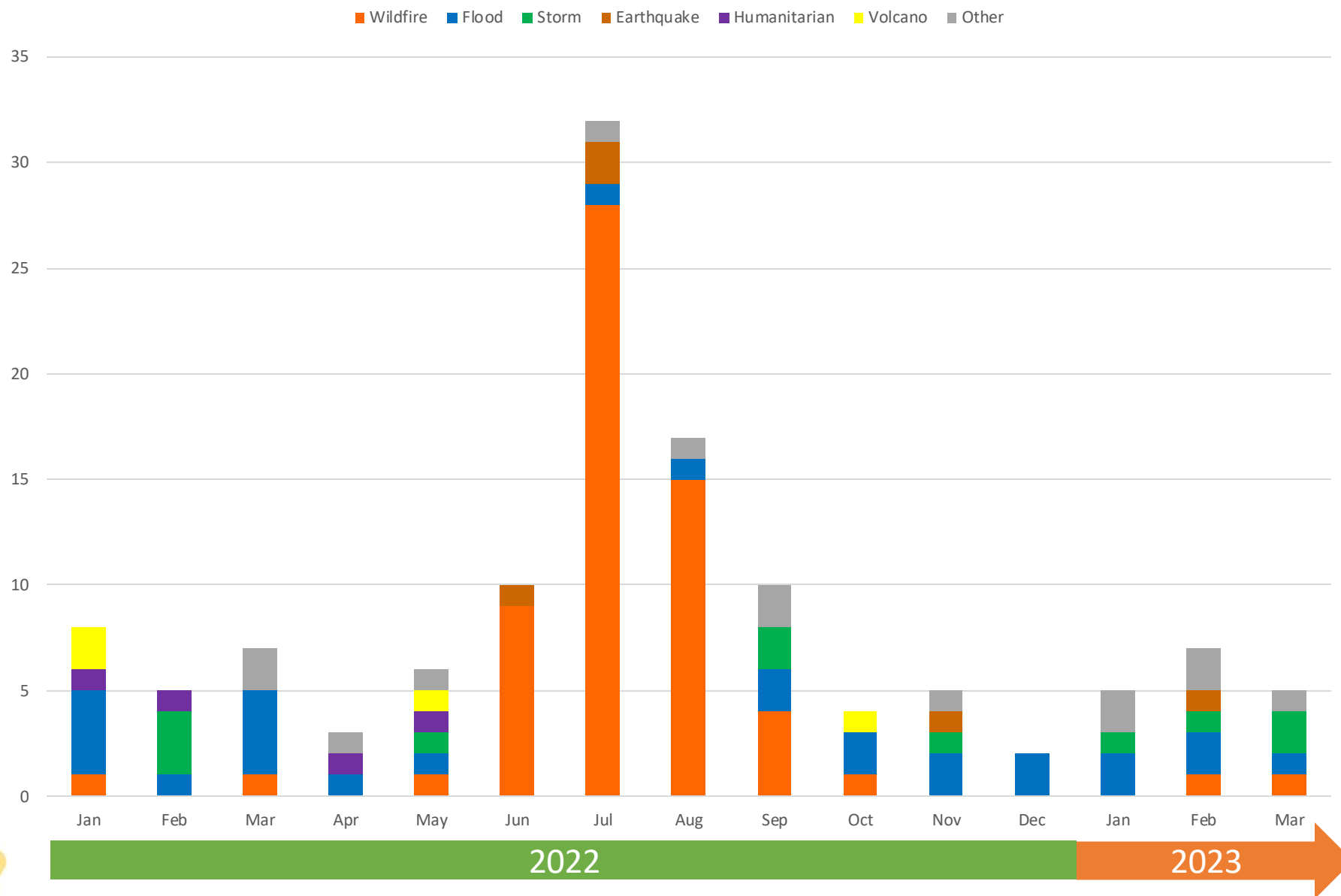
Risk and Recovery mapping:

29 activations so far
Over 200 products delivered



Activations: DRM phase

- Preparedness
- Response
- Recovery





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**CEMS On-
demand mapping:**

**2023 Earthquake in
Turkiye and Syria**

#EMSR648: EARTHQUAKE IN TÜRKİYE

- Date: 6 February 2023
- Magnitude: 7.8
- Location: 23 km east of Nurdağı, Gaziantep Province

Copernicus Emergency Management Service (CEMS) Rapid Mapping:

- Activated within 4 hours
 - 20 Areas of Interest (Aols)
 - Potentially affected population: 3,950,866
- First Grading Product delivered for Afşin after 40 hours
 - By 10 February: 53 maps delivered

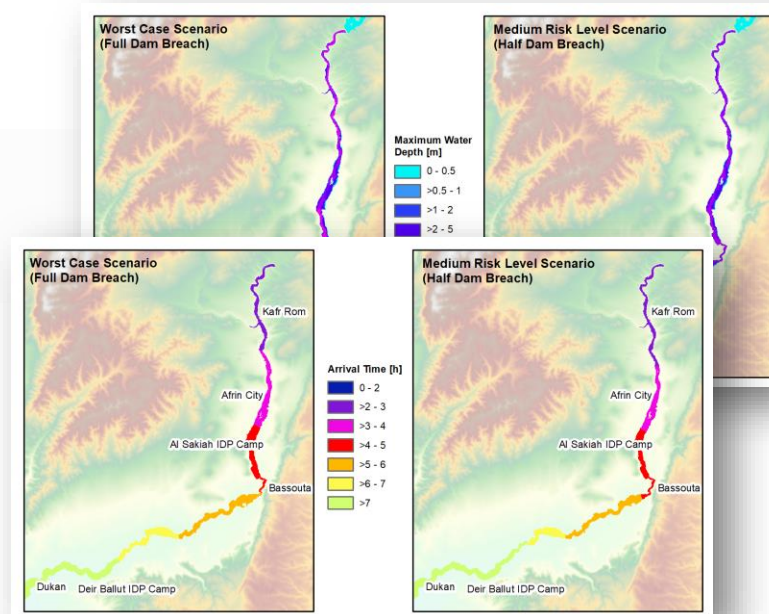
Area of Interest	Latest Satellite Imagery	Built-up Affected	Population Affected
Adiyaman	9 February	82.6	209,250
Antiochia	7 February	220.1 ha	385,430
Afsin	7 February	42	33,720
Bahce	9 February	2	12,460
Cumhuriyet	7 February	7.6 ha	16,650
Diyarbarkir	9 February	48 ha	562,480
Duzici	9 February	5	33,550
Elbistan	9 February	289	97,650
Erdemoglu	9 February	144	12,050
Gaziantep	8 February	26	1,191,030
Golbasi	8 February	57	31,430
Islahiye	9 February	33.5 ha	16,030
Kahramanmaraş	8 February	927	384,400
Kirikhan	8 February	1,593	63,530
Malatya	9 February	229.1 ha	423,290
Nurdağı	8 February	63.9 ha	12,250
Osmaniye	7 February	107.4 ha	231,120
Pazarcik	9 February	79	25,470
Sanliurfa	8 February	2.7 ha	501,660
Turkoglu	8 February	59.7 ha	36,090



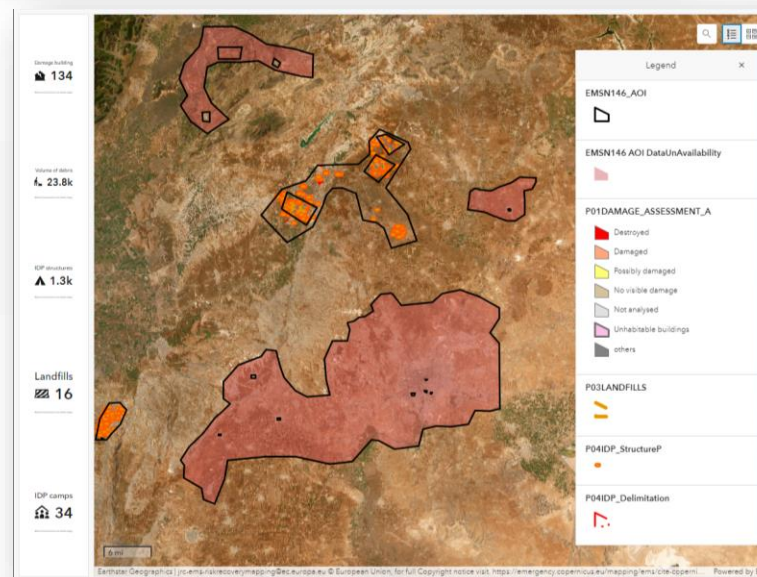
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Risk and Recovery mapping delivered dam break scenario for Maydanki Dam, Syria 2 days of production (Fast FLEX)



Risk and Recovery mapping is producing detailed damage assessment, debris quantification and internal refugee camps monitoring



STAY CONNECTED



@CopernicusEMS



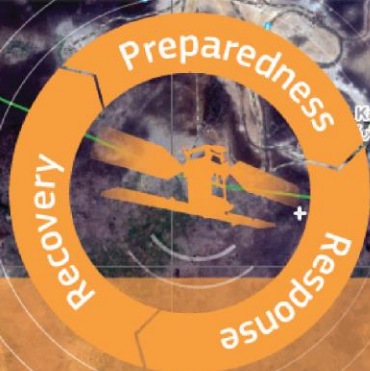
emergency.copernicus.eu



activations.emergency.copernicus.eu (Activations Viewer)



JRC-LIST-E1-MAPPING@ec.europa.eu



**Rapid
Mapping**



**Risk & Recovery
Mapping**



Floods



Fires



Droughts



Population



**Built-up
areas**



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