OPEN DAY: "Earth observation and integrated applications for disaster risk management and sustainable development"

UN Maps Response to Emergency Relief

Client Solutions Delivery Services – CSDS
19 - October 2023

UN-SPACE

DEPARTMENT OF **OPERATIONAL SUPPORT** | United Nations Global Service Centre

UNITED NATIONS Office for Outer Space Affairs
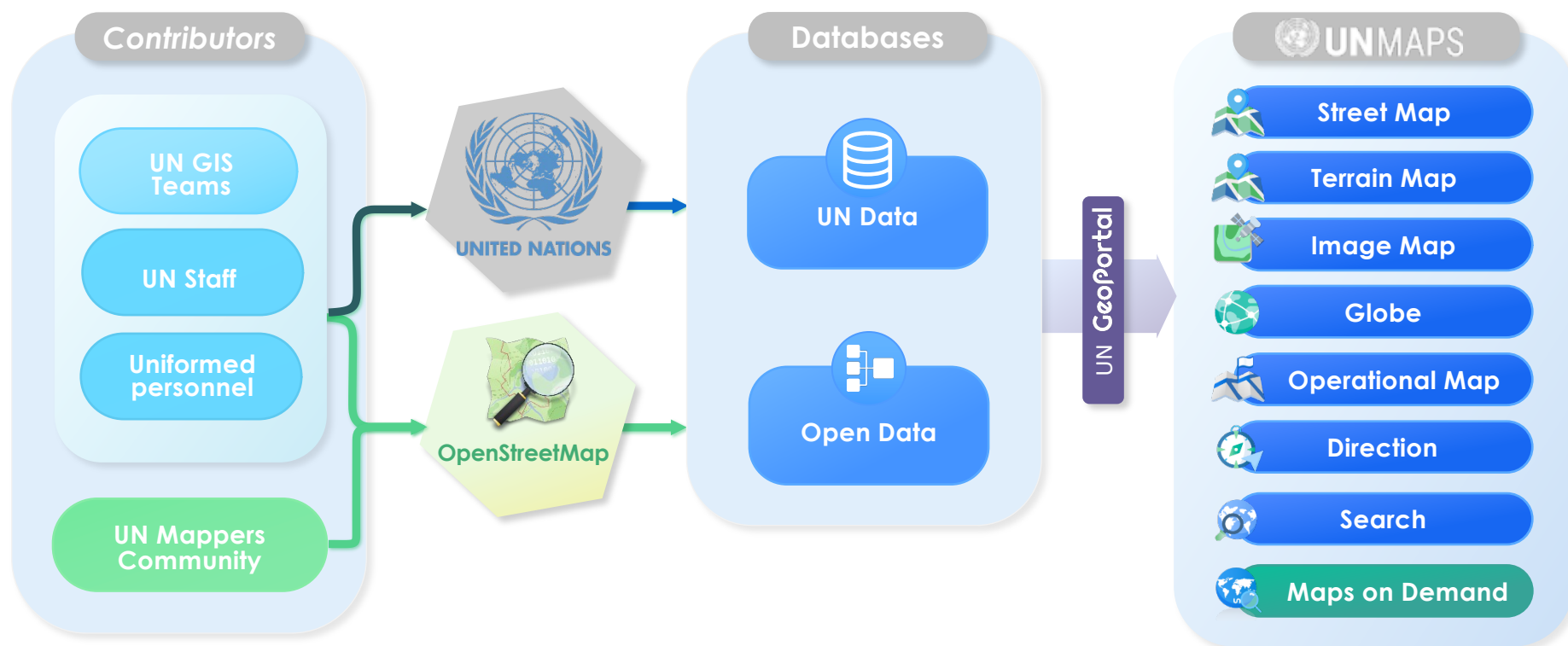
UNITED NATIONS
Office for Outer Space Affairs

UNMAPS

MAPPING THE WORLD, SUPPORTING PEACE, SERVING HUMANITY

Geospatial services and maps tailored
to support United Nations mandate and operations

Data workflow in UN Maps

Earthquake in Morocco

Source: [image]

Source: UNESCO Maghreb / [text]

Source: Anfas

- 6.8 magnitude on Richter scale, damaging the area around Marrakech

- 2,900 deaths
- ~300,000 displaced people

- 840,000 collapsed buildings

Floods in Libya

Source: VIIRS, NOAA-20, NASA

Source: UNHCR / Ahmed Al Houdiri

Source: UNICEF / Mostafa Alatrib
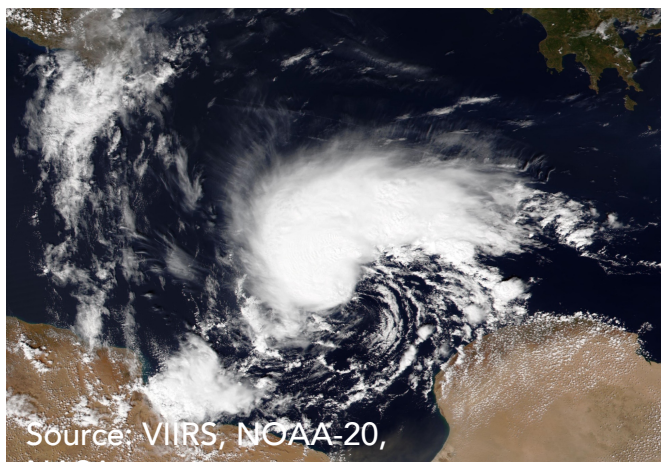
- Caused by Storm Daniel, the biggest storm in North Africa ever recorded

- More than 4000 deaths
- ~10,000 displaced people

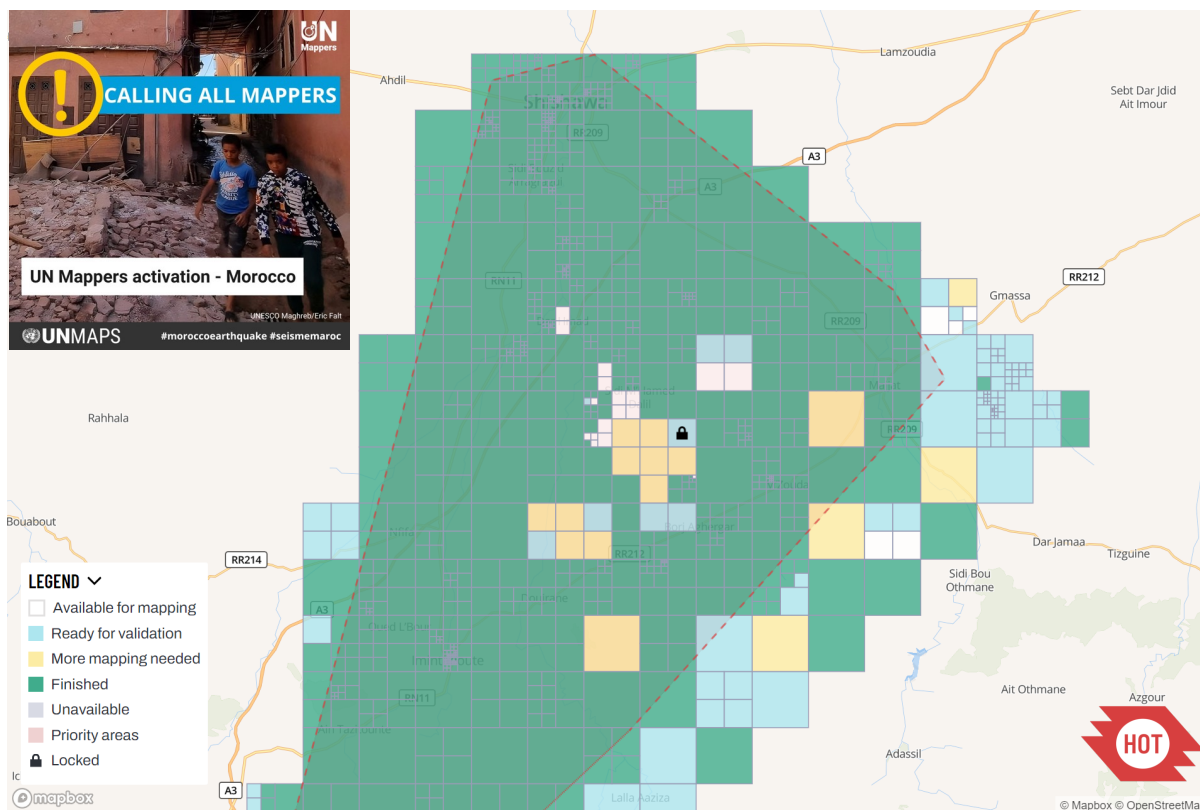- 2 dams destroyed in the city of Derna, Libya

Quick data production for disaster response

Step 1.
Remote volunteers trace satellite imagery into OpenStreetMap

Step 2.
Community volunteers add local detail such as neighborhoods, street names, and evacuation centers

Step 3.
Humanitarian organizations use mapped information to plan risk reduction and disaster response activities that save lives

Mapping contribution in Morocco

CALLING ALL MAPPERS

UN Mappers activation - Morocco

UNESCO Maghreb/Eric Falt

#moroccoearthquake #seismemaroc

LEGEND ⌄
- ☐ Available for mapping
- ☐ Ready for validation
- ☐ More mapping needed
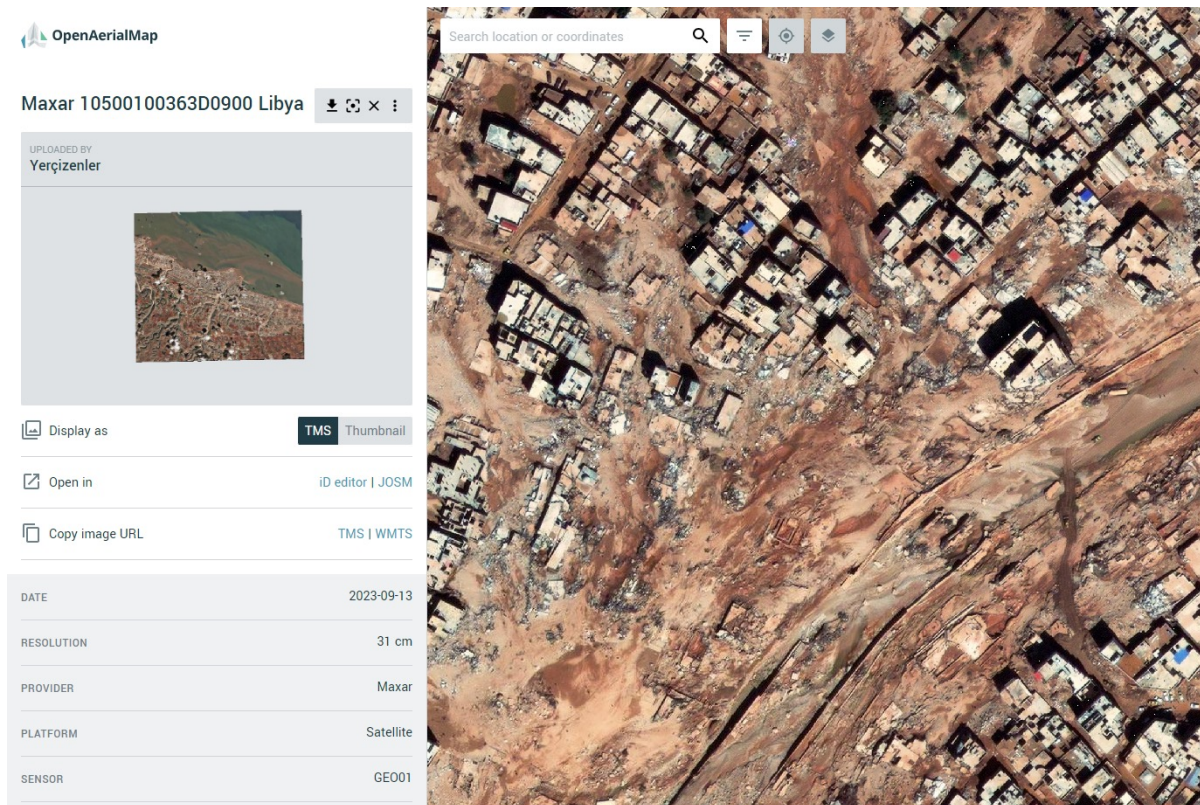- ☐ Finished
- ☐ Unavailable
- ☐ Priority areas
- 🔒 Locked

© Mapbox © OpenStreetMap

- Volunteers are activated via social media and edit collaboratively on OpenStreetMap (OSM)

Mapping contribution in Morocco (training)

- Training of 15 GIS students from the Instituts Supérieurs des Professions Infimières et Techniques de Santé (ISPITS)
- Delivered online and in French
- Including topographic mapping techniques and field data collection through smartphones
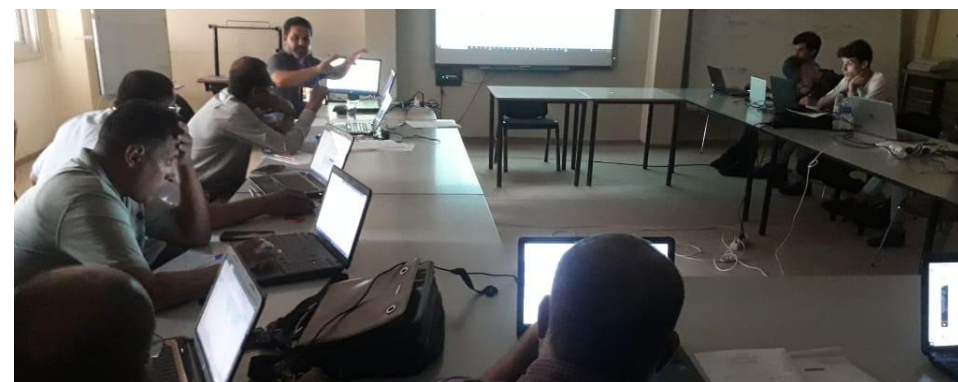
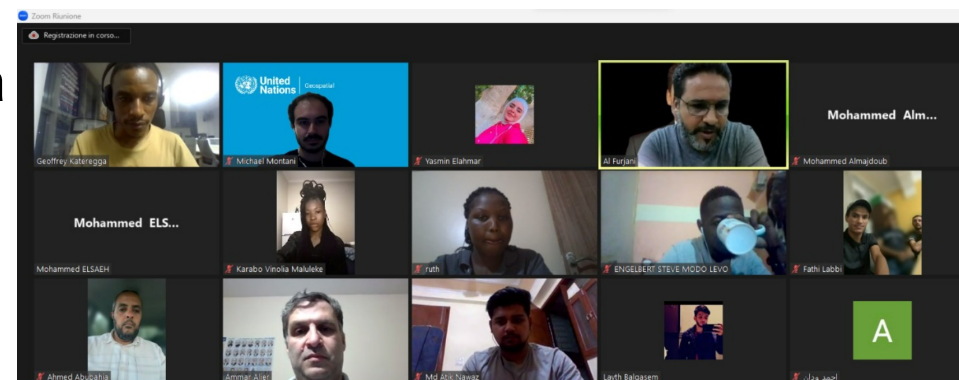# Mapping contribution in Libya
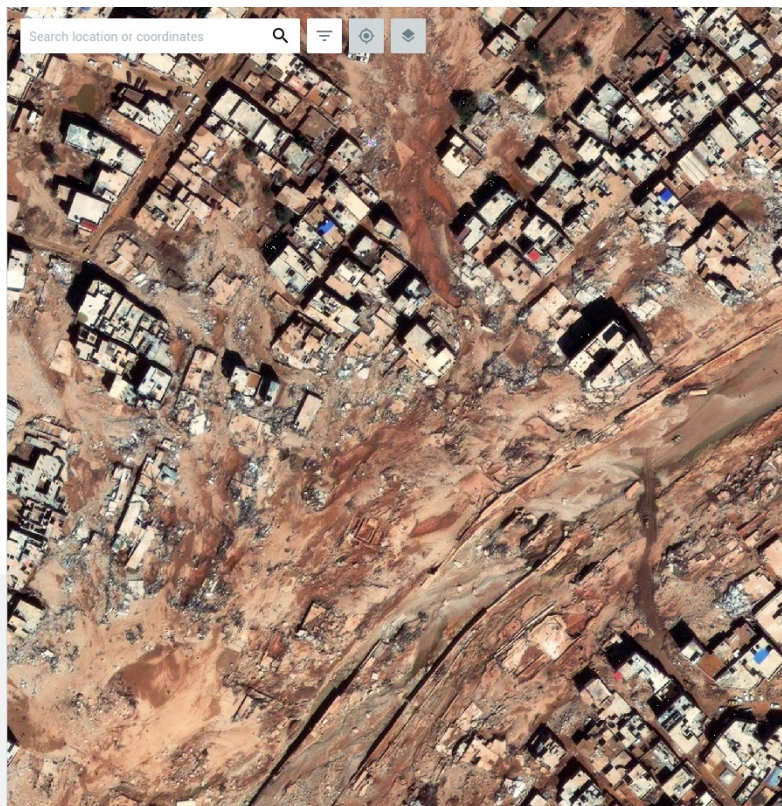
- National OSM community coordinated the response

- Provided support on collaborative mapping projects

- Release of imagery by Maxar Open Data program and upload to OpenAerialMap

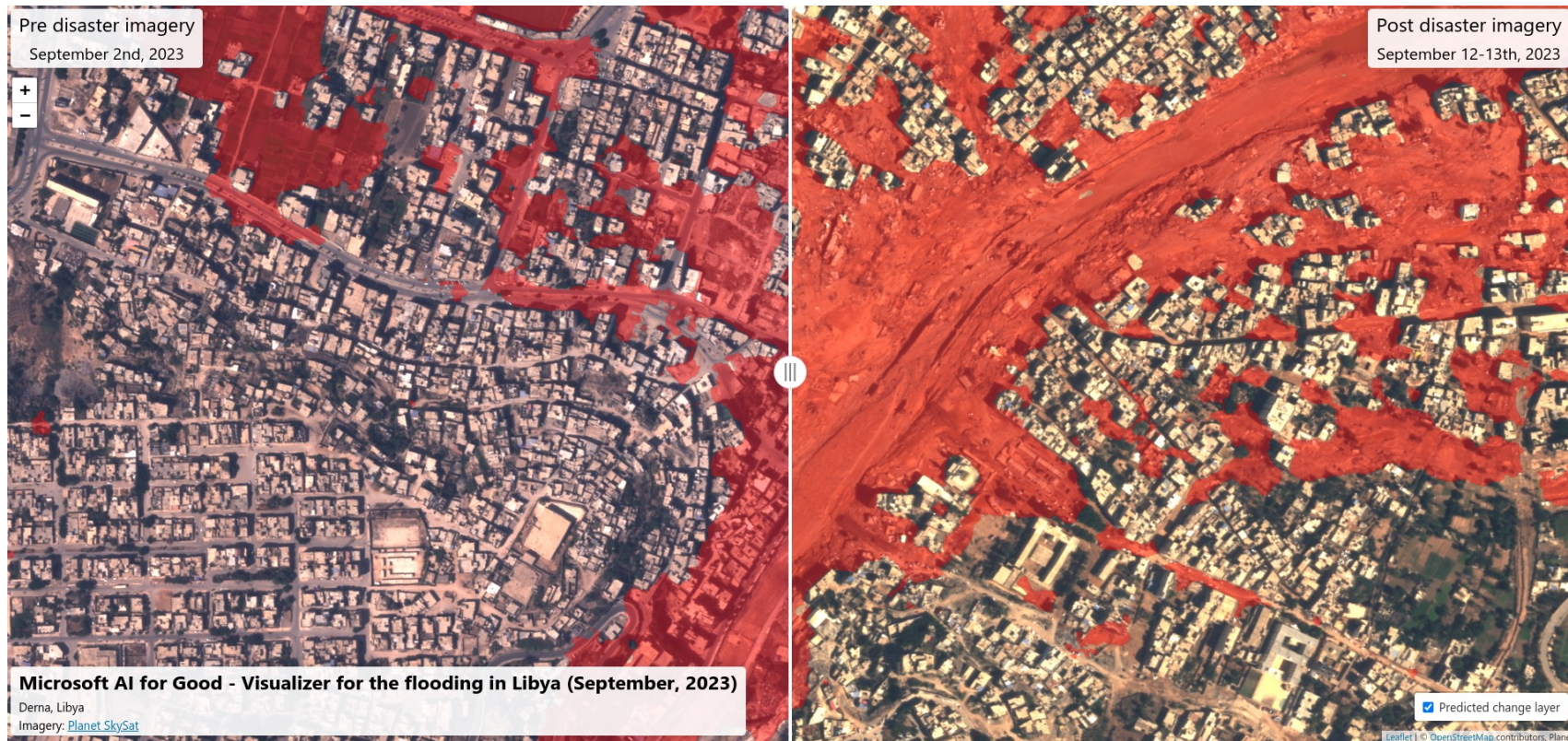- Quick feedback loop with local rescuers to prioritize areas

Mapping contribution in Libya (mapathon)

- 50 people online, 30 in Derna

# Artificial Intelligence to detect flooded area

Microsoft AI for Good - Visualizer for the flooding in Libya (September, 2023)

How UN Maps contributed

- Immediately activated over 2600 volunteers to edit data in the affected areas
- Coordinated response with local mappers
- Built capacities of local rescuers in using open data in emergency
- Mapped, alongside with other organizations:
  - Buildings: 390,000 (Morocco) – 55,000 (Libya)
  - Roads: 8,300 km (Morocco) – 1,550 km (Libya)
  - Waterways: N.A. (Morocco) – 3,800 km (Libya)
- Data available to any humanitarian actor for quick, actionable decisions

Previous activities: Türkiye-Syria Earthquake Response
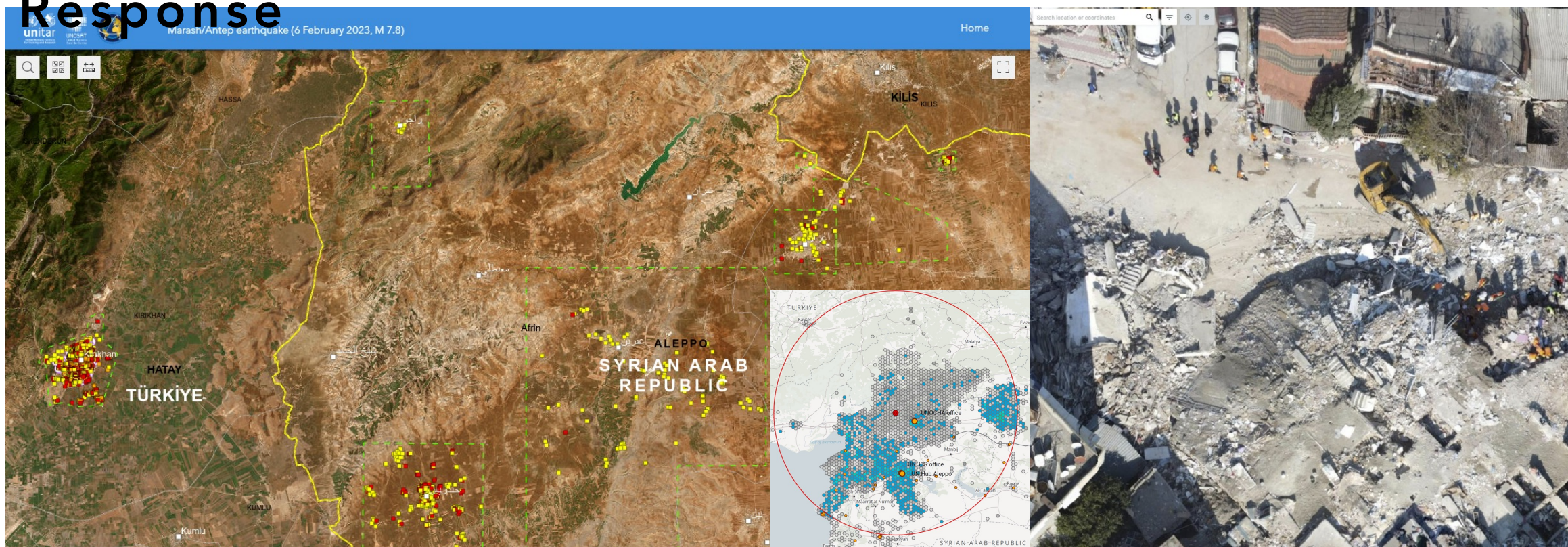
THANK YOU

UNITED NATIONS

DEPARTMENT OF
OPERATIONAL
SUPPORT | United Nations
Global
Service Centre

UNITED NATIONS
Office for Outer Space Affairs