United Nations Institute for Training and Research

UNOSAT – Transforming the Humanitarian Response through Satellite Imagery & Geospatial Technology

UNOSAT

22 February 2019

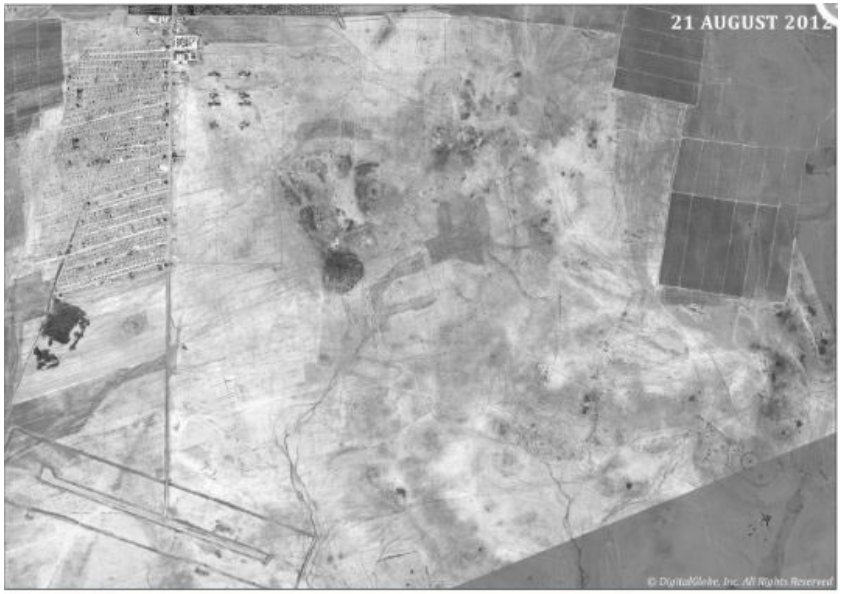
unitar
United Nations Institute for Training and Research

Introduction to UNOSAT

- Operational Satellite Applications Program of the United Nations Institute for Training and Research (UNITAR).
- Created in 2001, with more than 3,000 analytical products.
- Serves the UN, governments and others.
- Provides satellite imagery analysis and capacity development.
- Based at the European Organization for Nuclear Research (CERN).

Introduction to UNOSAT

Why Satellite Imagery?



Benefits

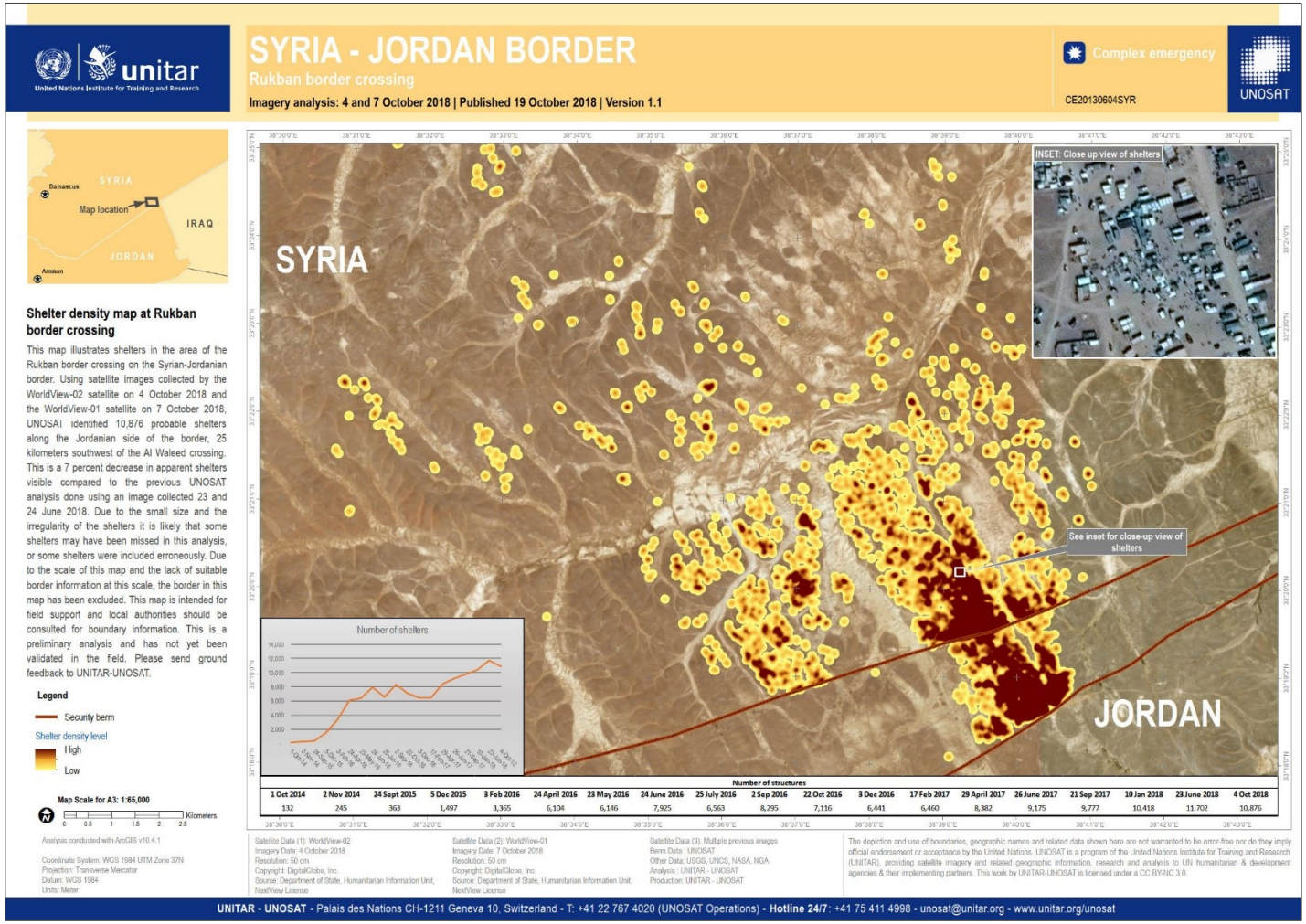
- Objective
- Quantifiable
- Accessible
- Safe

Limitations

- Weather / Time of Day
- Revisit Time
- Costly
- Need for Field Validation

Satellite-Based Maps (Static)

- Assessment and Monitoring of Refugees and Internally Displaced Persons



Satellite-Based Maps (Dynamic)

➢ Monitoring of Informal Settlements of Syrian Refugees in Lebanon

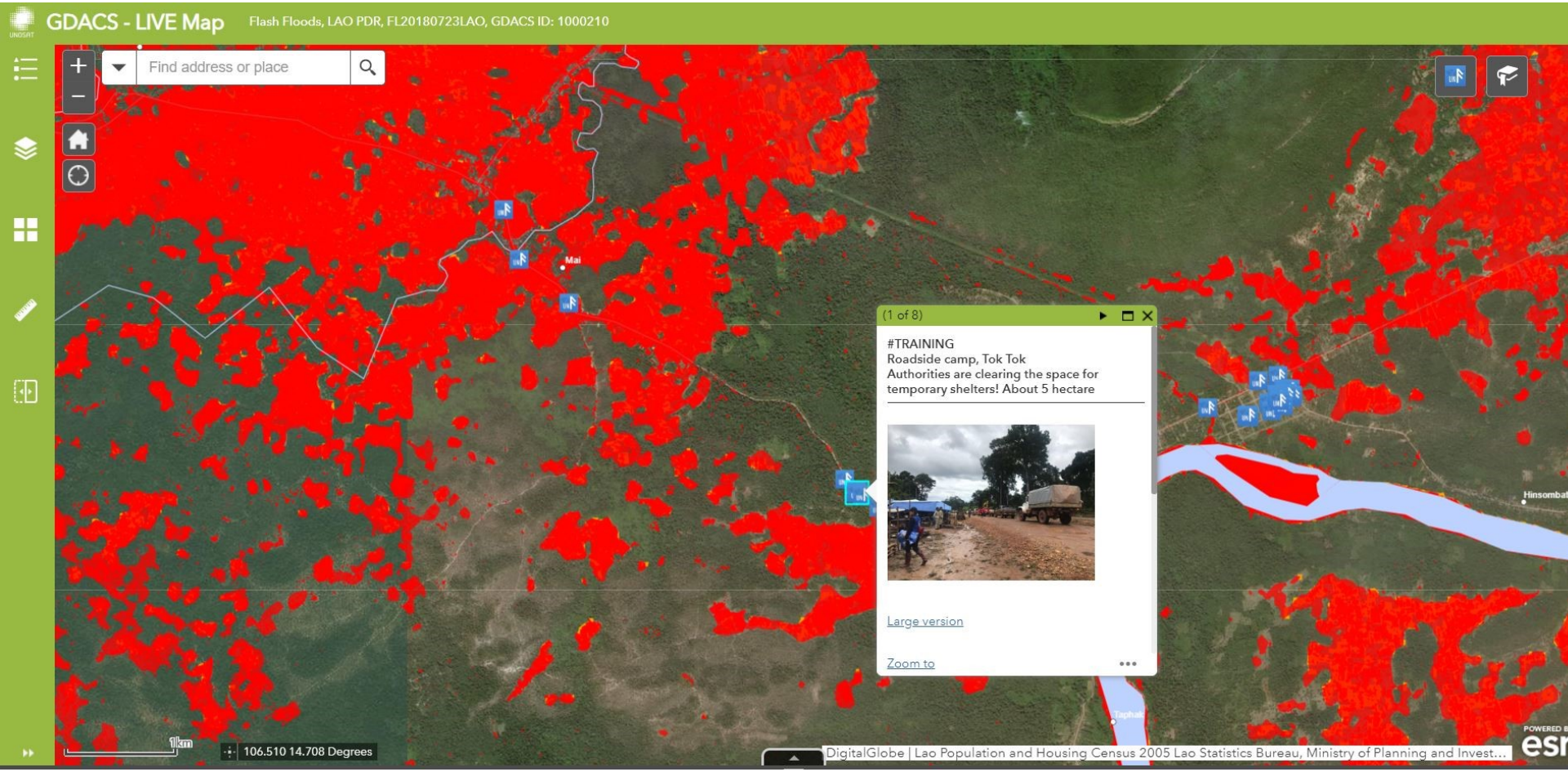
Crowdsourcing

UN-ASIGN (https://asign.cern.ch/)

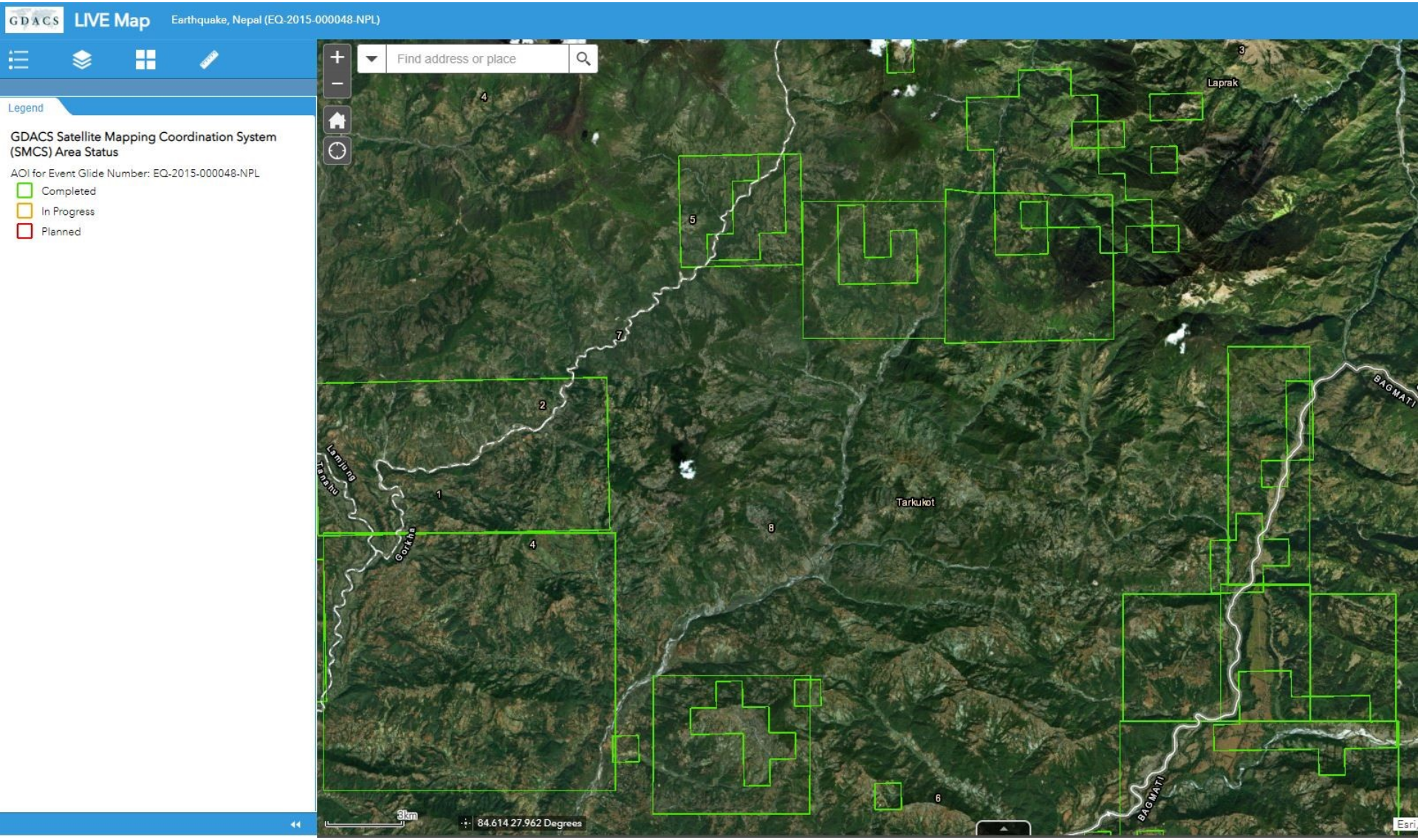
- Open source application for smartphones.
- Work in areas with low bandwidth.
- Supports emergency response with geo-referenced photos and text.
- Integrated into UNOSAT live web maps.
- Successfully used since 2014 during operations in Vanuatu, Haiti, Gaza, Nepal, etc.

Crowdsourcing in Live Maps

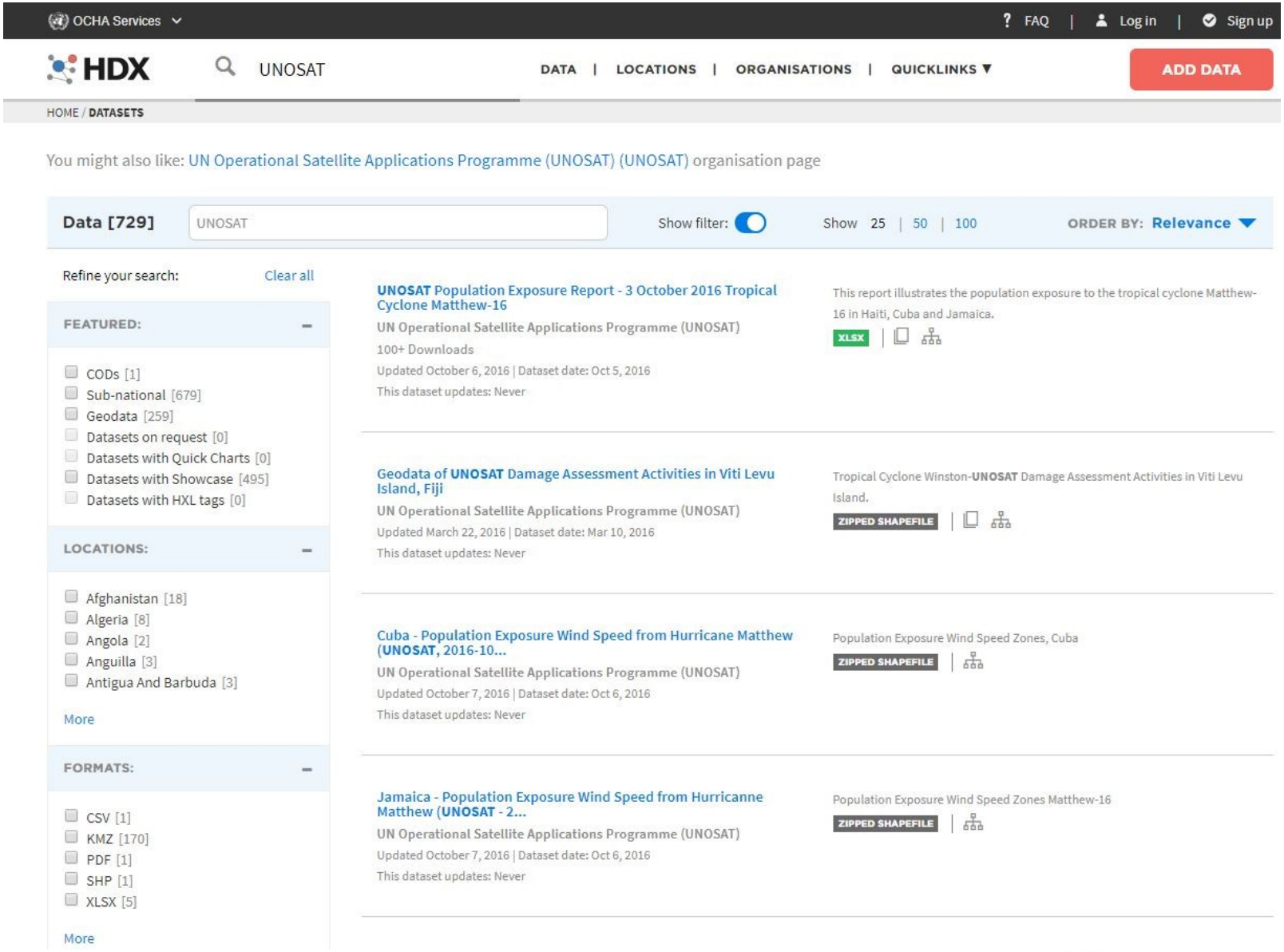
- 2018 Dam Collapse Flash Floods in Lao People's Democratic Republic



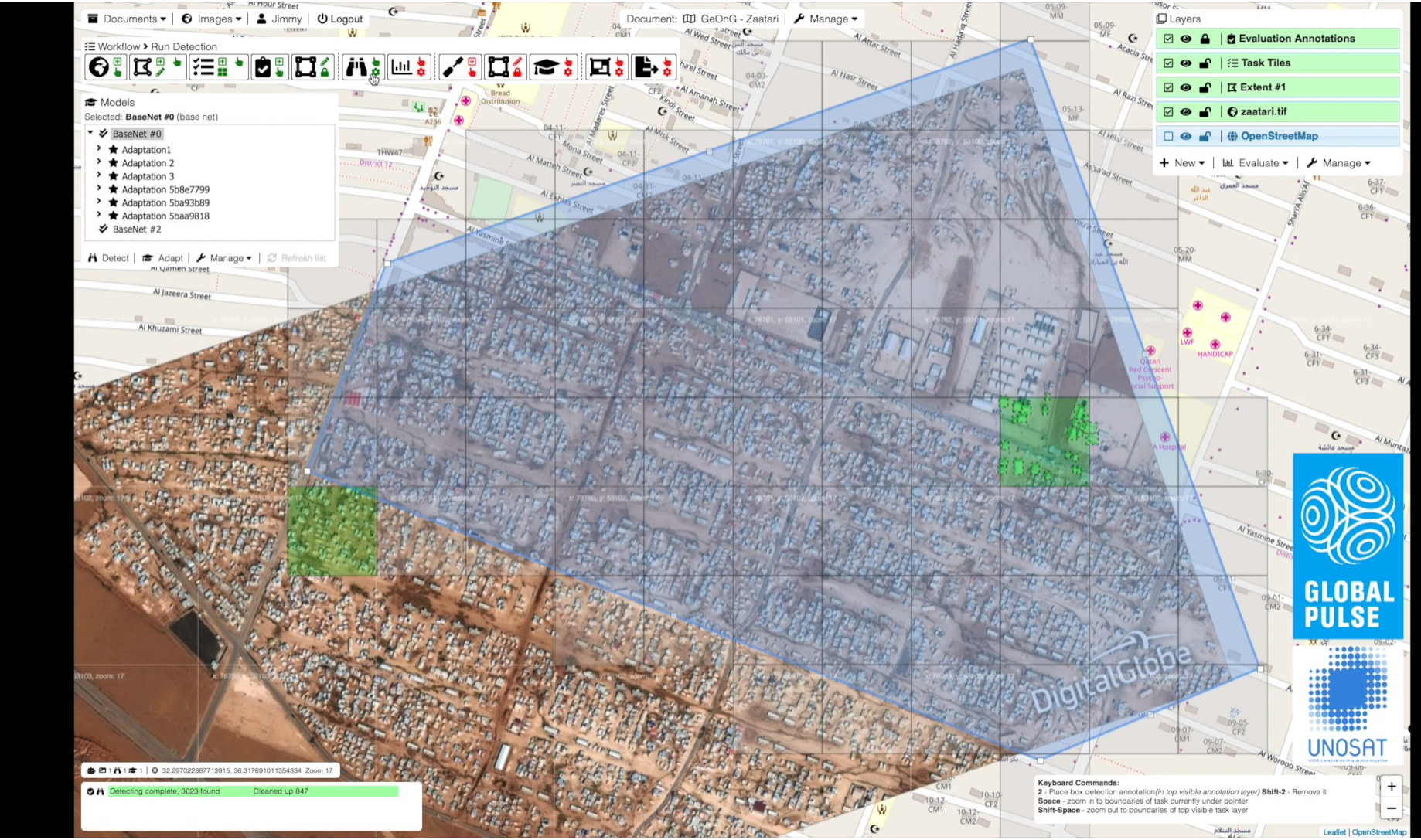
GDACS Satellite Mapping Coordin



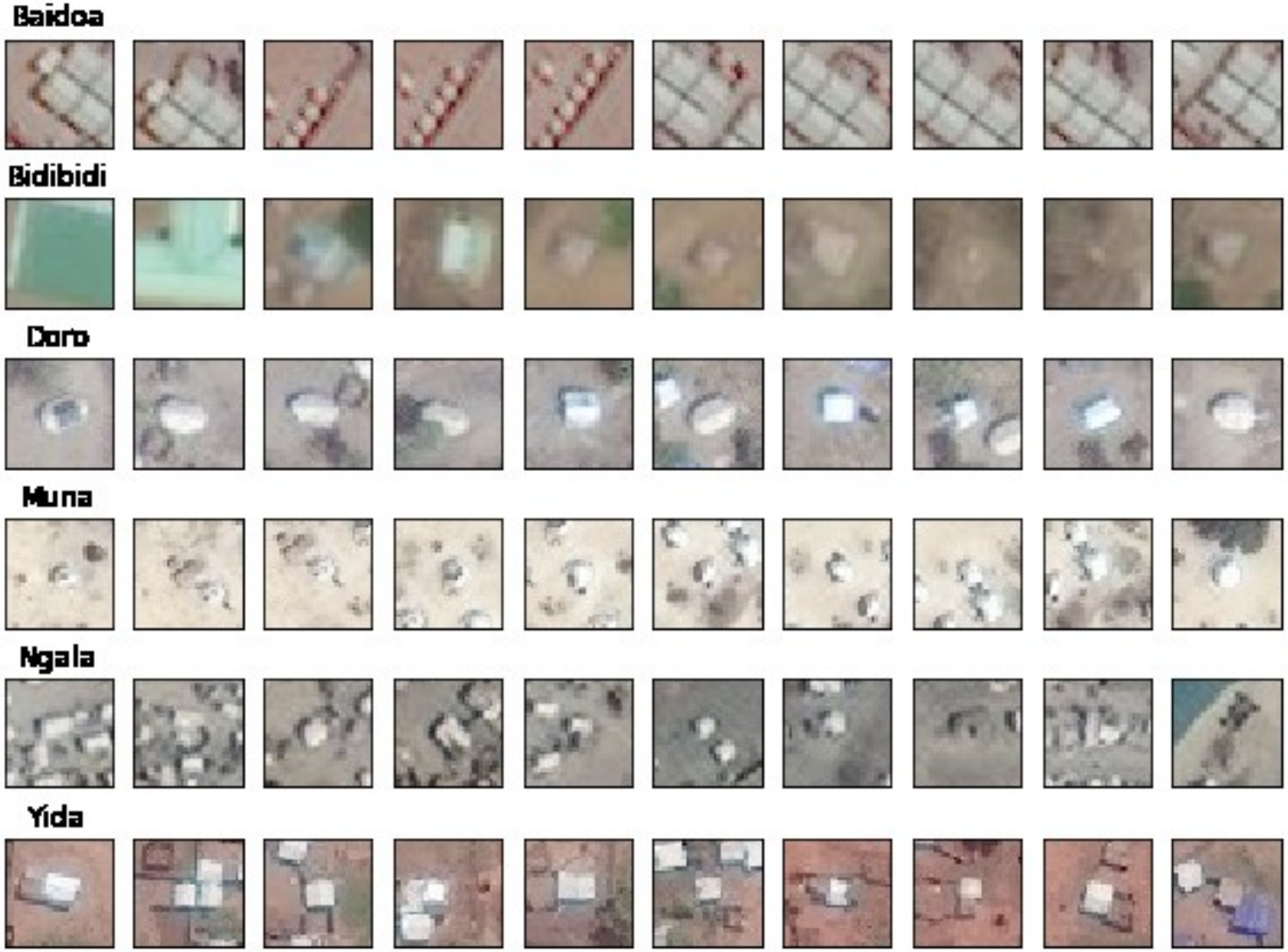
Humanitarian Data Exchange (HDX



R&D: Artificial Intelligence and Sate



R&D: Artificial Intelligence and Sate



Platforms

- UNITAR-UNOSAT Website:

  https://www.unitar.org/unosat/maps
- International Charter on Space and Major Disasters:

  https://www.disasterscharter.org
- Humanitarian Data Exchange (HDX):

  https://data.humdata.org/
- ReliefWeb:

  http://reliefweb.int/
- Global Disaster Alert and Coordination System (GDACS):

  http://www.gdacs.org/
- GDACS Satellite Mapping and Coordination System (SMCS):

  https://gdacs-smcs.unosat.org/

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