



The UNOSAT Emergency Mapping Service (UNOSAT-EMS) provides geospatial and satellite image analysis during humanitarian emergencies related to rapid on-set disasters, complex emergencies, and conflict situations to support evidence-based decision-making.



24/7 service providing maps, reports and data



Free of charge for emergency response, and can be activated by UN agencies and humanitarian entities operating in line with UN policies.



### Midterm Evaluation (2022-2023)

#### Evaluation purpose

Assess progress for accountability and learning



#### Data collection instruments



33% stakeholders are female

Key Informant Interviews

Survey responses

27

Case studies

97

4

Theory of change & after action review sessions

2

Evaluation period  
Evaluation Criteria

2022- 2023  
OECD- DAC



### KEY EVALUATION FINDINGS

#### RELEVANCE



Supports UNITAR's strategic objectives and SDG implementation, including countries in special situations



Provides relevant, quality, timely products

Relevant to support people affected by emergencies including women, children and other groups made vulnerable



GEO Award in recognition of its use of Earth observations to support sustainable development

Could strengthen gender-sensitive humanitarian assistance approach

#### COHERENCE



Enhances UNOSAT/UNITAR recognition and funding (served as seed funding for other projects)

Contributes to synergies (e.g. with NORAD-project) and reduces potential duplication within its unique niche in UN emergency response, particularly in disaster response, contributing to "One UN"

Aligns with Norwegian Humanitarian Strategy by contributing to the protection of civilians



14 Corporate and academic partnerships MOUs



Limited interaction between the activations managed by the UNOSAT-EMS' two main pillars on disaster response and on human rights

#### EFFECTIVENESS



Surpassed most output and outcome targets in its first year

59 disaster activations

13 conflict-related activations

AI and data innovation are being pursued through partnerships such as the Disha Initiative

Co-location with other UN entities, CERN hosting, close partnerships and coordination with Copernicus enable effectiveness

Sufficient M&E system and recommendations from 2018 independent evaluation sufficiently addressed

Need for a more ambitious R&D strategy to leverage new technologies, particularly AI

#### EFFICIENCY



Cost-effective with stable cost per request



Expenditure coherent with budget planning with some small variations

Budget execution (2022-2025)

29%



Timeliness in achieving its outputs



It is important to attract additional funding to address staffing needs and maintain its cost-effectiveness

#### LIKELIHOOD SUSTAINABILITY



Largely funded by Norway; seeking to broaden funding base



Awareness and visibility of the project should be elevated, especially among potential donors.

Threats to its future: funding, analyst retention in the work area of peace, security and human rights.

#### LIKELIHOOD IMPACT



The greatest impact is short-term, informing critical decisions and saving lives through timely situational awareness

e.g. Pakistan Floods (2022)  
A complex emergency in South Sudan  
Flooding in Thailand (2021)  
Syria-Turkey earthquake 2023



Limited cumulative impact due to time-bound products. M&E should focus on short-term impacts and contribution made to other organizations' mandates as part of global technology collaboration.

### Recommendations:

- 1 Improve visibility and relevance
- 2 Broaden funding base
- 3 Develop AI research and development strategy
- 4 Provide guidance about gender-sensitive GIS data analysis
- 5 Define a partnership strategy
- 6 Capture capacity development as an unintended outcome in the theory of change



### Lessons Learned

- Recognizing and value substantial short-term impacts of disaster response products is important
- Identifying a unique niche or service that complements and adds value to the work of partners
- Cultivating strong partnerships and relationships with key stakeholders and user organizations is important
- Recognizing capacity building and transfer of knowledge as an indirect outcome and impact
- Raising awareness and visibility to ensure sustained funding and effective utilization of services
- Diversifying funding sources to ensure long-term sustainability

e.g.

e.g.



### Pakistan Floods

In the 2022 Pakistan floods, UNOSAT's timely and frequent mapping services played a crucial role in providing situational awareness and informing critical decisions that saved lives. The satellite-based flood extent maps and population exposure estimates provided a comprehensive overview of the evolving situation, enabling OCHA, the Pakistani government, and humanitarian partners to prioritize response efforts and target vulnerable groups effectively. UNOSAT's products were vital in structuring UN decisions, shaping government response plans, and guiding provincial-level actions. The maps also supported public health interventions, resource mobilization, and advocacy efforts. By overcoming challenges such as unanticipated flash floods, inadequate donor funding, and limitations around population data, UNOSAT's services demonstrated the immense value of satellite imagery in humanitarian assistance, ultimately contributing to a more effective and coordinated response that saved lives in the face of a devastating disaster.

**27** products were delivered including maps, vector/image among others

**+33** million people were affected by the floods in 116 districts.

### A complex emergency in Sudan

In the 2023 Sudan crisis, UNOSAT's satellite imagery-derived analysis played a crucial role in providing reliable information to identify damage to houses during an outbreak of ethnic violence as well as assessing the security situation and aiding in the evacuation of personnel. This helped OCHA to understand and gain hard evidence of what was happening, which informed their assessment response, involving sending teams out to areas where satellite images had identified damage. UNOSAT's multifaceted response encompassed crisis mapping, damage assessments, and support for various UN entities such as UNOCC, OCHA, and UNHCR. The satellite imagery analysis provided by UNOSAT was essential in assisting OCHA to comprehend the situation on the ground and make informed decisions regarding their assessment and response efforts. The close collaboration between UNOSAT and UNOCC facilitated seamless coordination and access to expertise, enabling the timely provision of analyses and graphics for high-level briefings, while UNOSAT's ability to handle sensitive and confidential information effectively further strengthened the trust placed in its services by the UN entities involved in the crisis response.

**20** geospatial-derived products delivered, including security and damage assessment

**7** million internally displaced people, asylum seekers, and refugees.

### Thailand Floods

In the 2021 Thailand floods, UNOSAT flood maps analysis played a vital role in providing rapid and reliable information to support the humanitarian response efforts of UN agencies and government authorities. The flood extent maps, exposure statistics, and a collaborative monitoring dashboard created by UNOSAT and GISTDA helped responders plan their emergency response and target aid more effectively. The daily updates provided by UNOSAT enabled the provincial government to map agricultural damage for forecasting and preparedness, while also allowing comparison with the 2010 floods to understand the scope of the required response. UNOSAT's close collaboration with GISTDA and the support from the UNRCO facilitated the dissemination and visibility of the products generated for the disaster, ensuring that the information reached key decision-makers at government level and UN agencies.

**28** satellite-derived products, including flood assessments and water extents

**409 K** square kilometers monitored

### Syria-Turkey earthquake

UNOSAT's EMS played a vital role in the humanitarian response to the devastating February 2023 earthquake in southern Turkey and northern Syria. Within hours of the disaster, UNOSAT provided timely and relevant satellite imagery analysis, including damage assessments and live map platforms, to a large network of disaster responders, including UN agencies, NGOs, and the Red Cross/Crescent. UNOSAT's products were essential for humanitarian responses, considering that in the case of some regions their personnel did not have the capacity to do the analysis on their own. Effective coordination between UNOSAT and Copernicus EMS ensured comprehensive coverage of the vast affected region, with UNOSAT focusing on Syria and Copernicus on Turkey. This timely situational awareness informed critical decisions and helped save lives by enabling OCHA and other humanitarian organizations to prioritize needs, guide relief efforts, and effectively coordinate the response.

**25** products, including damage assessments, live map platform, and an assessment of UNESCO heritage site damage.

**3** million people were reached with humanitarian assistance