GROUP ON EARTH OBSERVATIONS

Earth Observations Risk Toolkit:

Honduras and Haiti use cases

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About us

Group on Earth Observations (GEO)

- GEO is an international partnership working towards a future where decisions and actions for the benefit of humankind are informed by coordinated, comprehensive and sustained **Earth observations**
- Ever since its inception, GEO has been a strong advocate for broad **open knowledge** policies and practices

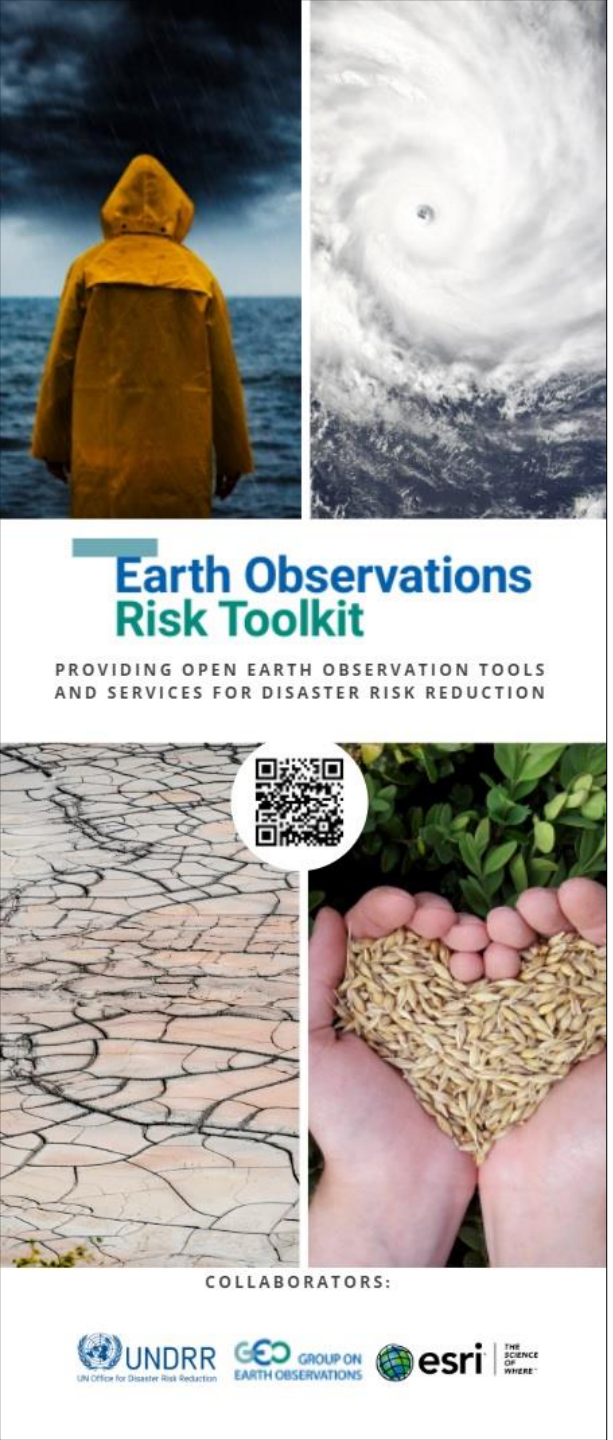
Example collaboration with UN-GGIM

Aguascalientes Declaration - Joint Action Plan 2021-2024:

Brought together by the Aguascalientes Declaration's call upon stakeholders to work together to further define joint work strategies and programs, the UN-GGIM WG-Disasters, ***UN-GGIM: Americas Disasters WG****,* ***GEO DRR WG*** *and* ***AmeriGEO Disasters WG*** *convened with the objective of mutually advancing regional integration of geospatial data and Earth observations for Disasters Risk Reduction (DRR) in the Americas. These global and regionally oriented working groups are committed to continued integration of work plan activities through quarterly coordination meetings.* ***Shared priorities*** *will include the improved uptake and use of geospatial, statistical and Earth observation insights by national DRR stakeholder and in particular capacity building, standards setting, awareness raising and making relevant data discoverable.*

EO Risk Toolkit as part of RiX

Risk Information Exchange (RiX)

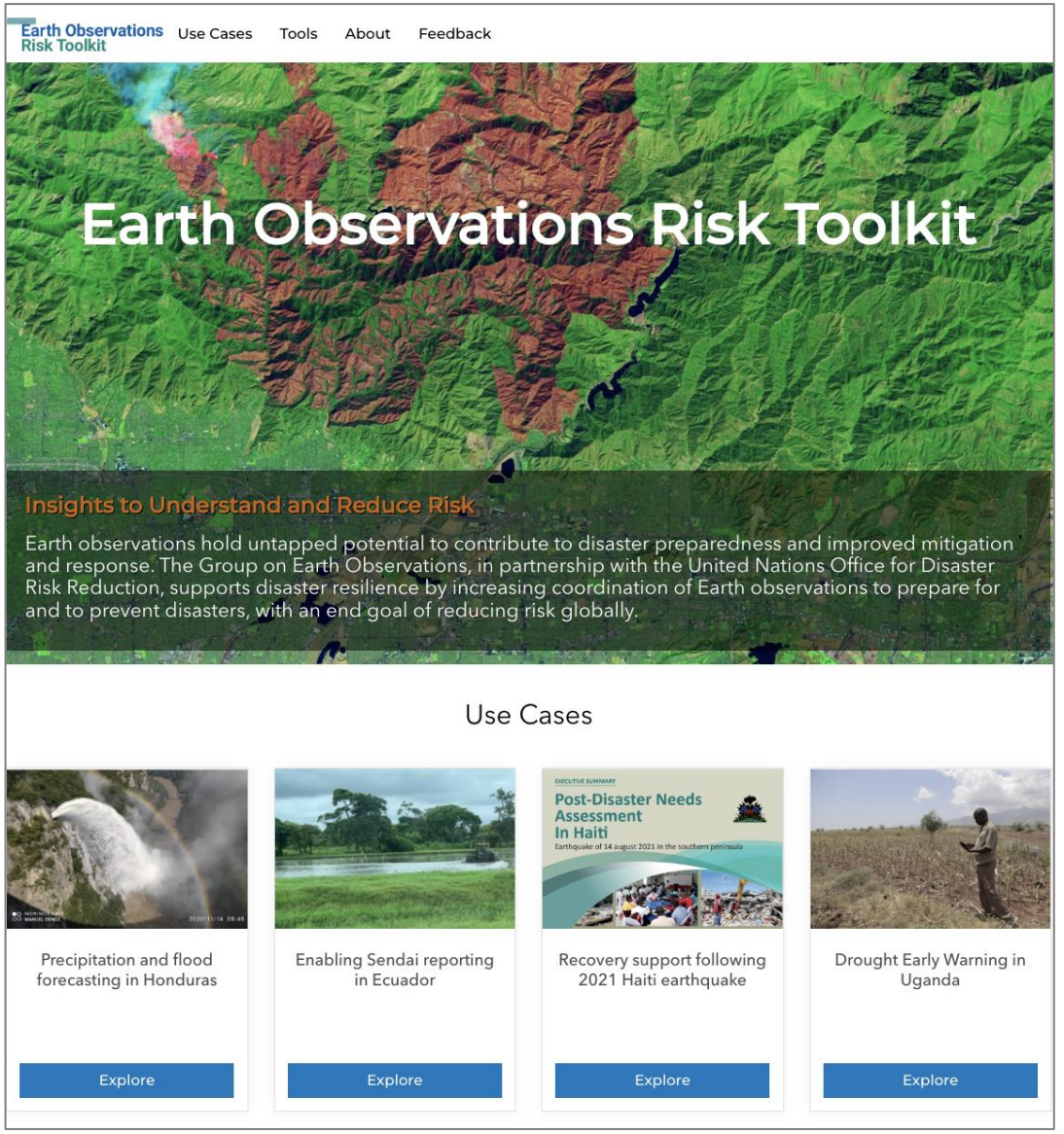


*RiX is a living repository of **open source** global and national **risk data**, designed to improve risk literacy and strengthen national **risk data ecosystems***

UNDRR
UN Office for Disaster Risk Reduction

Current contents:

- 2 early warning tools (flood/drought)
- 1 post-disaster data & info assessment service
- 1 Sendai reporting method



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Forecasting tool helps reduce storm loss and damage in Honduras

GEOGloWS ECMFW Streamflow Service helped Honduras' state-owned power company manage reservoir volumes before a major hurricane, reducing damage and economic losses.

Early Warning

Summary

In 2020, the National Electric Energy Company of Honduras (Empresa Nacional de Energía Eléctrica: ENEE) used a precipitation and flood forecasting Earth observation tool to reduce loss and damage in the Sulla Valley. Equipped with forecasts from the tool, ENEE made controlled water discharges from a reservoir in between two major hurricanes: category 4 Hurricane Eta on 2 November 2020 and Category 5 Hurricane Iota on 16 November 2020. The Earth observation-based analysis was also shared with the country's national disaster risk reduction agencies, informing decisions on community evacuations.

Results & impact: damage to Sula Valley vastly reduced

economic loss

$3,792 m

Hurricane Mitch (Category 5) in 1998

>

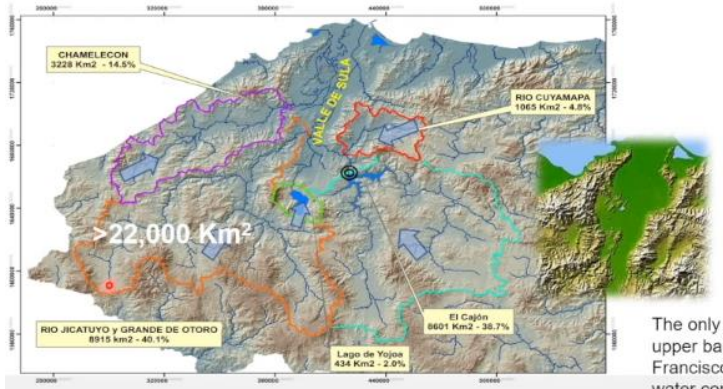
- 40%

$2,171 m

Hurricanes Eta & Iota

Note:

- ✓ Sula Valley: Honduras most vulnerable area
- ✓ El Cajón Dam: the only structure in place capable of controlling the massive volume of runoff (39% of total water discharge) to the Sula Valley



The valley receives water discharges from 4 rivers

The only major river control structure in the upper basin is the Central Hidroeléctrica Francisco Morazán, with about 39% of the water contribution to the valley.

Earth Observations Risk Toolkit

Use Cases Tools About Feedback

GEOGLAM Global Agricultural Monitoring

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Ugandan crop monitoring system enables early drought response

A national early warning system developed with GEOGLAM partners helped unlock millions of dollars in financing and benefit 90,405 households.

Early Warning

Summary

The Ugandan Office of the Prime Minister worked with partners to develop a system that can predict crop failure several months in advance and unlock disaster risk financing for vulnerable farming communities. The Global Agriculture Monitoring System (GLAM) provided objective indicators of crop damage and helped benefit 90,405 households under the Disaster Risk Financing Programme. Between 2017 and 2020, early financing release saved the government around US $11 million in reactive food aid costs.

Results and impacts:

Prediction of drought-induced crop failure enabled the government to take early action through Social Safety Net Program (Disaster Risk Financing)

Image Credits: C*atherine Nakalembe (GEOGLAM) (left) and* Phys.org (right)

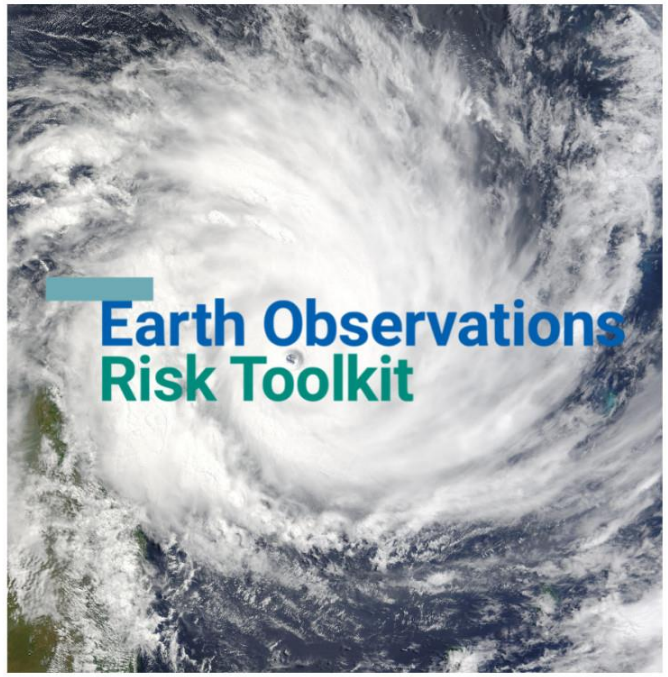
Financing benefitted 90,405 households through livelihood asset creation, building structures to mitigate against:

- floods
- erosion of fertile agricultural soil

economic saving (4 yrs)

$11 m

in reactive food aid costs



Contact us about EO and DRR

Extra slides

Disaster Risk Reduction Working Group

- *Develop and implement a coherent and crosscutting approach within GEO to advance the use of EO in support of countries' DRR and resilience efforts*
- *Serve as primary GEO liaison to UNDRR*
- *Promote the dissemination and use of EO to strengthen capabilities to reduce disaster risk according to the needs of countries in coordination with UNDRR*


- **GEO Secretariat:** Steven Ramage (Chief Engagement Officer) & Rui Kotani (DRR Coordinator)

- **Subgroup 1: Coordination across the GEO Work Programme** led by David Borges (NASA, United States)

- **Subgroup 2: UNDRR Coordination (Sendai Framework Monitoring & Global Assessments)** led by Nathaniel Newlands (Agriculture/Statistics Canada)

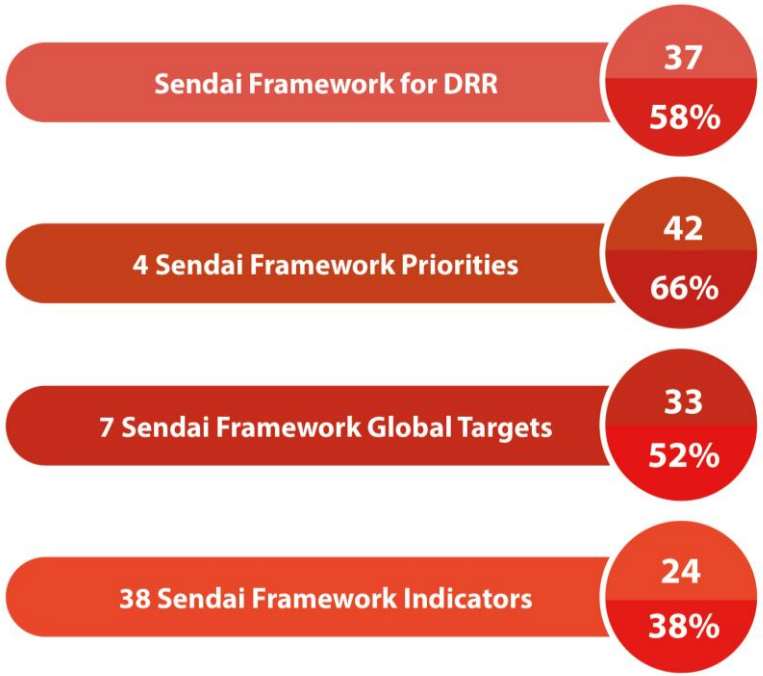
- **Subgroup 3: Climate Change, SDG, Urban Activities Coordination** led by Kene Onukwube (DEAR Africa, Nigeria)

GEO Work Programme is strongly aligned and supports the Sendai Framework,

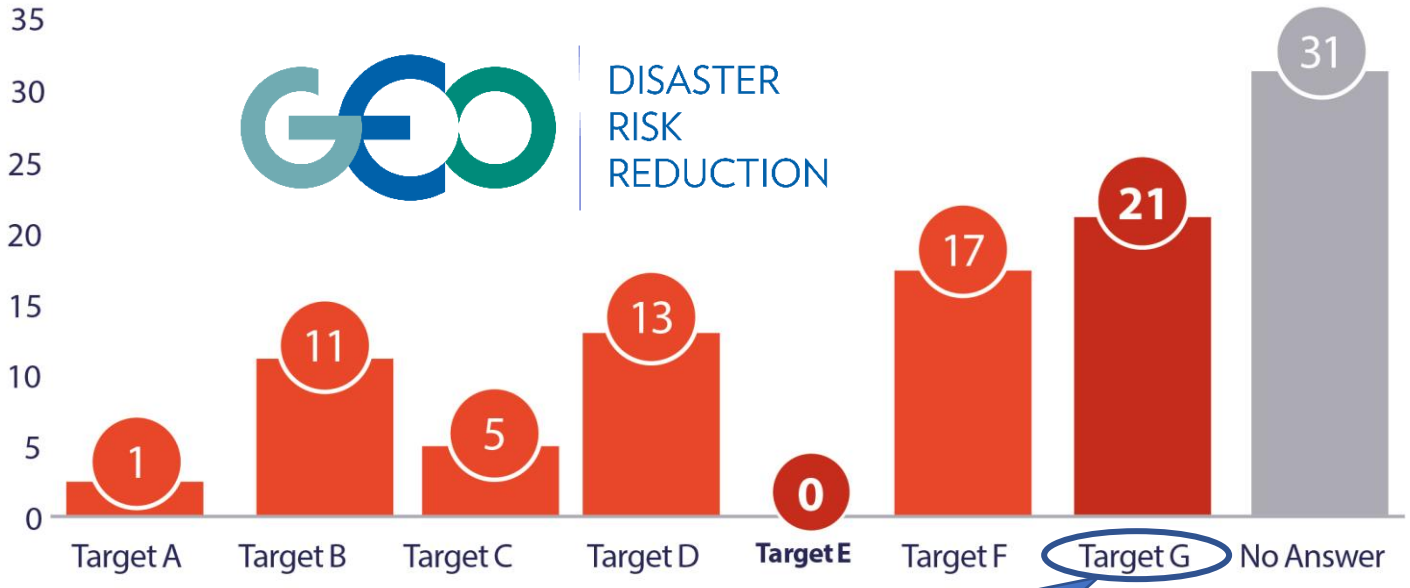
i.e. early warning and info assessment

UN World Conference on Disaster Risk Reduction
2015 Sendai Japan

Indicated relevance across key elements of the Sendai Framework by the GWP activities



GEO activities directly supporting one or more of the 7 Sendai Framework Global Target



Increasing availability of and access to Multi-Hazard ***Early Warning Systems*** *and* ***DRR info assessments***