National Aeronautics and Space Administration

Advancing Science for Disaster Resilience

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Earth Science to Action Strategy

NASA DISASTERS PROGRAM

Co-develop operational tools to scale disaster management decisions that reduce impacts to communities

Provide near-real time science and technological support to operational responders during active disasters

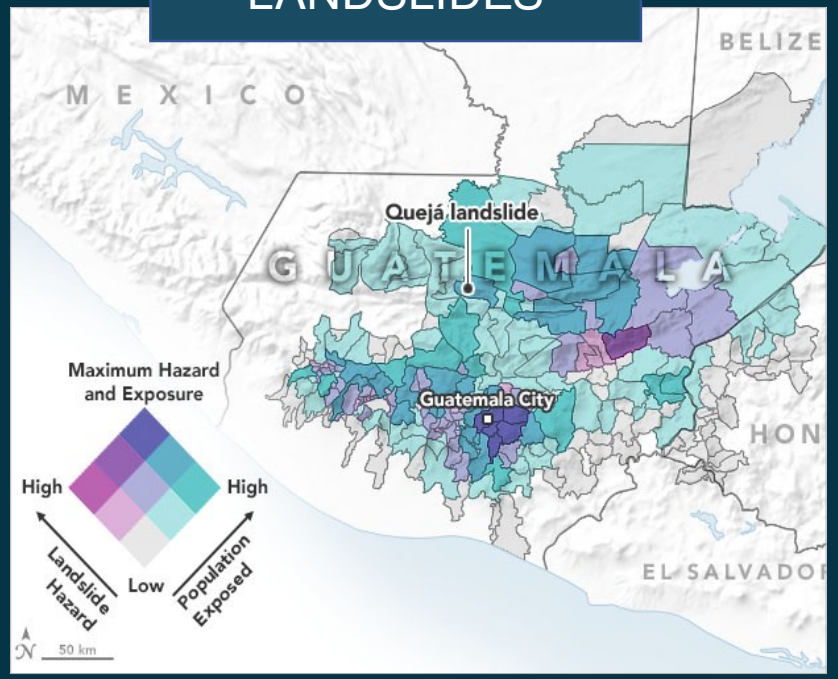
Foster partnerships and build collective knowledge and capabilities for strengthening global disaster resilience

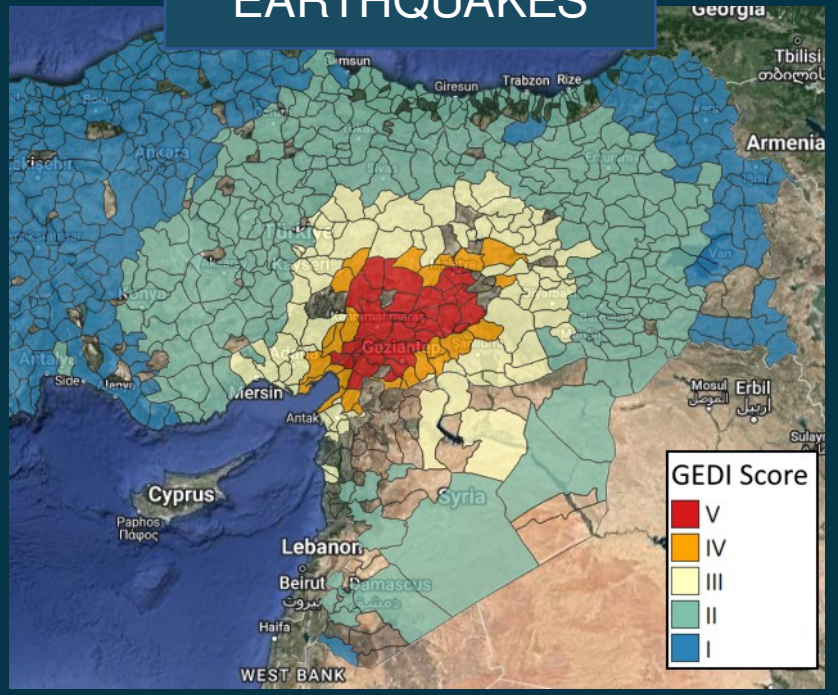
DISASTER SCIENCE TO ACTION PORTFOLIO

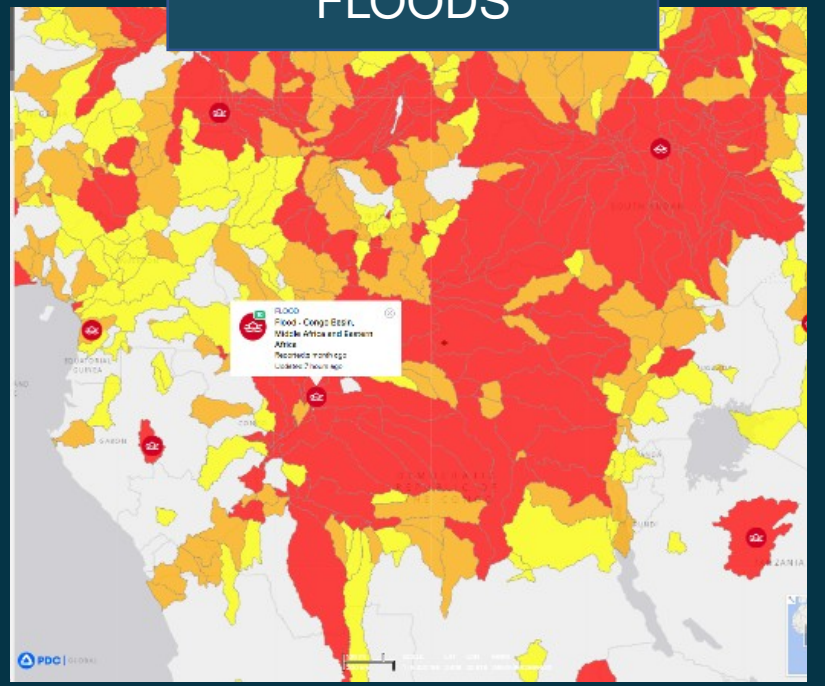
LANDSLIDES

EARTHQUAKES

FLOODS







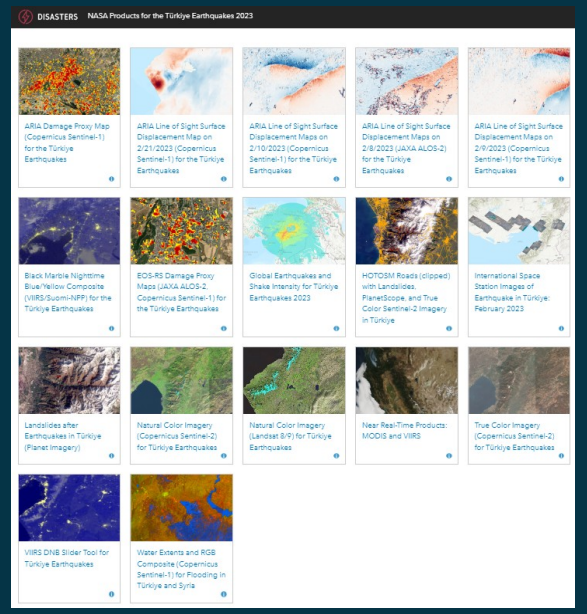
DISASTER RESPONSE COORDINATION SYSTEM (DRCS)

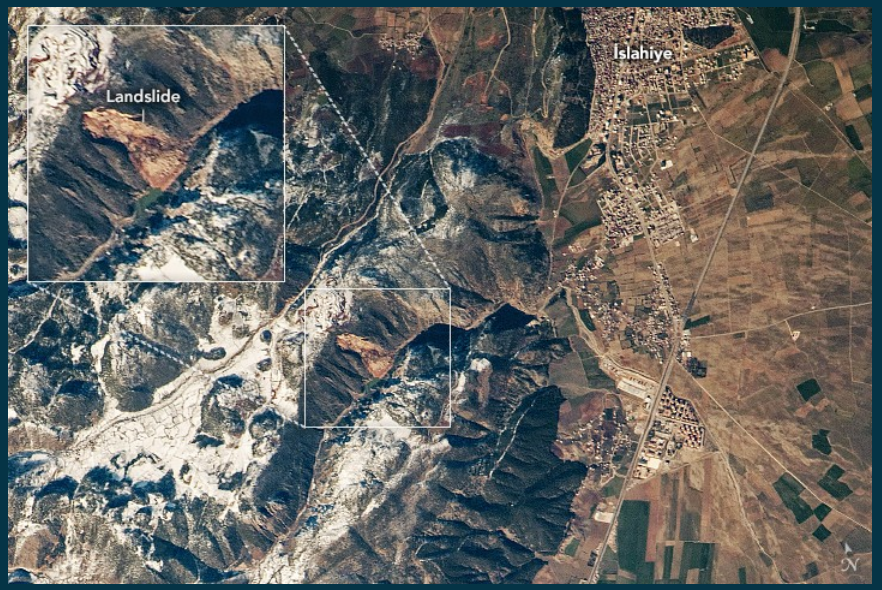
TÜRKIYE & SYRIA EARTHQUAKES 2023

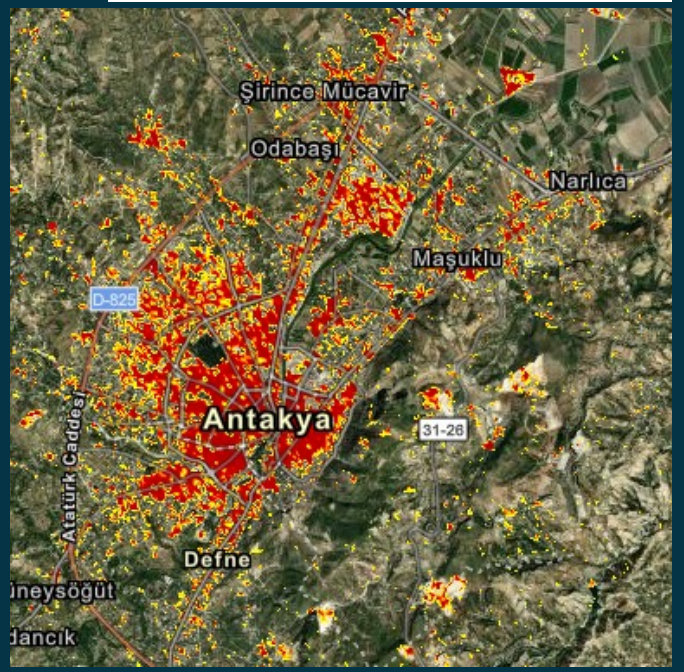
M7.3 earthquake and hundreds of aftershocks, caused over 50,000 casualties.

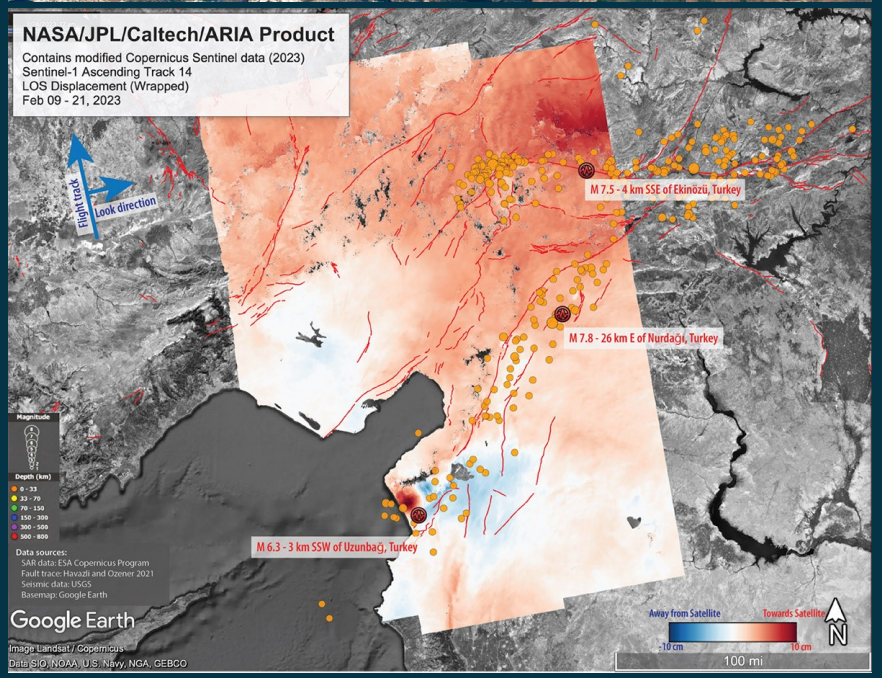
Stakeholders included USAID, US State Dept., USGS, NIST, California Seismic Safety Commission, the World Central Kitchen, Miyamoto Global Disaster Relief, and others

Provided over 17-event based tailored products and services based on partner needs.









DISASTER RESPONSE COORDINATION SYSTEM (DRCS)

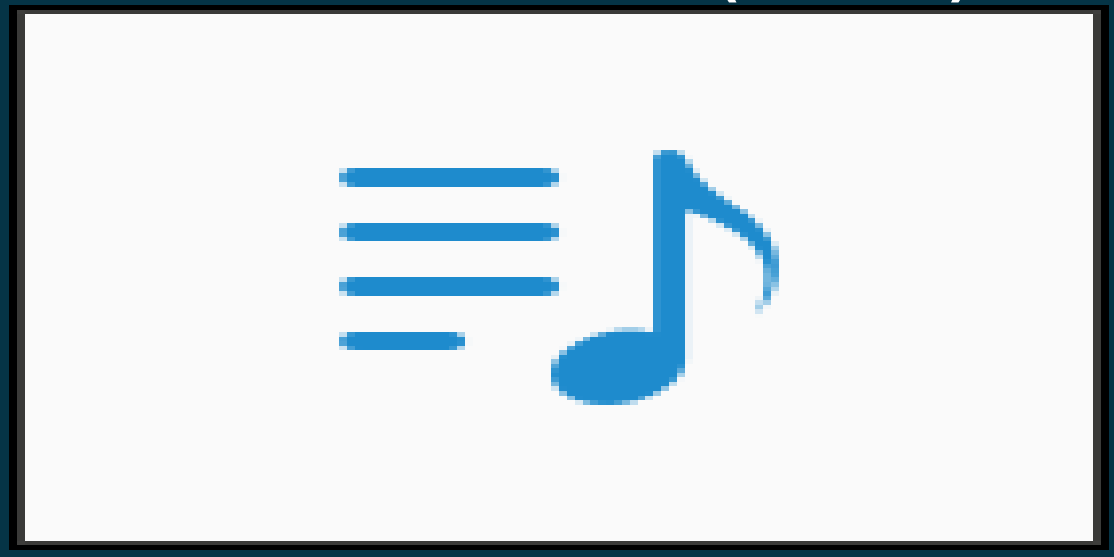
Hunga Tonga Hunga Ha'Pai Submarine Volcano

In January 2022 an explosive eruption of the underwater volcano with the power of 10-15 megatons and a ~36-mile-high plume. Most powerful eruption of the satellite era.

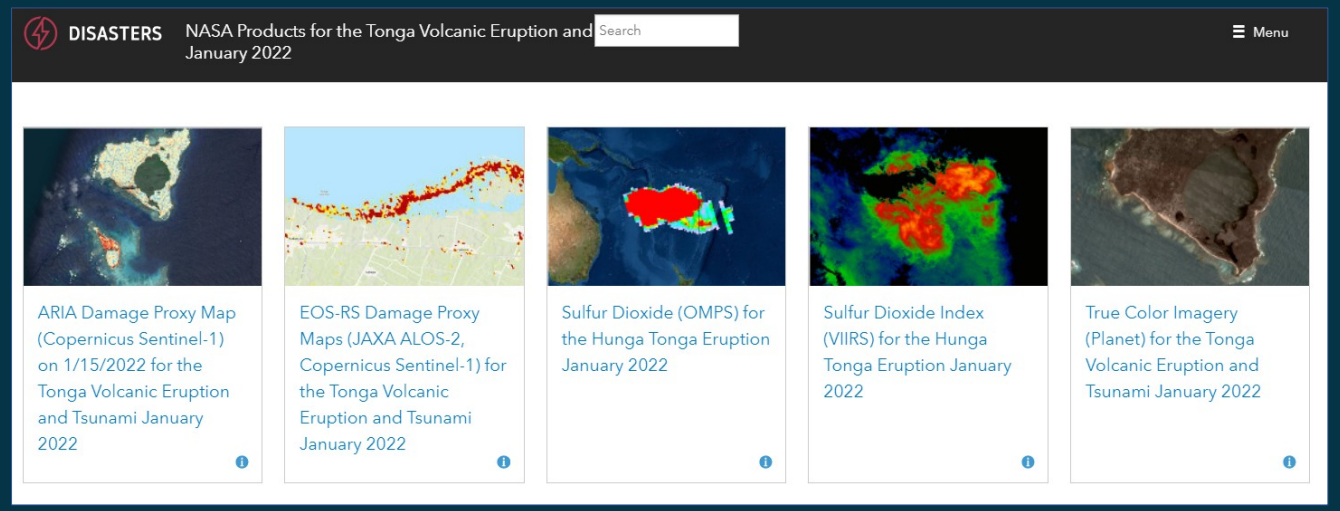
Lofted volcanic ash and gas launched into the atmosphere causing heavy ashfall and sever lightning storms in Tonga, while global impacts included the triggering of tsunamis, meteotsunamis, and atmospheric gravity waves across the globe.

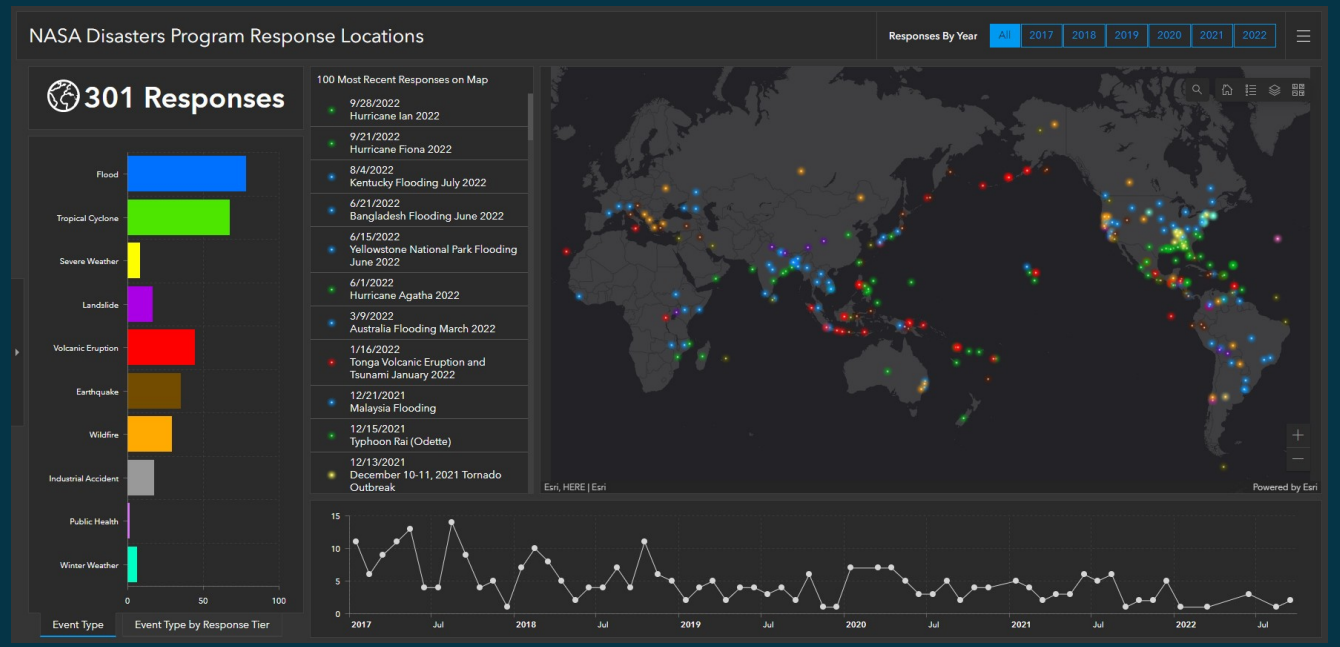
11 event-based services

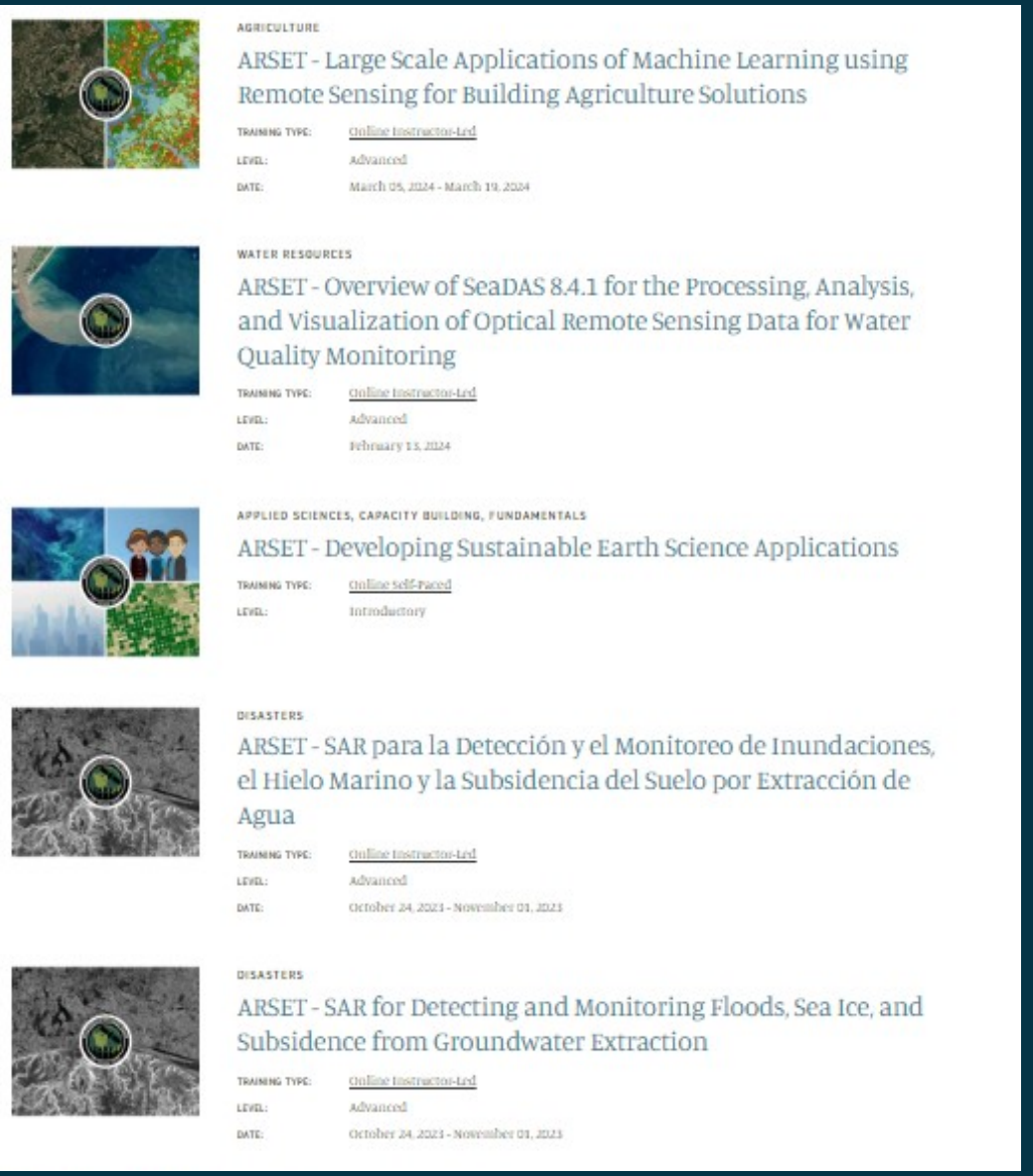
- SAR-derived damage proxy maps
- Surface Disturbance Maps
- SO2 emissions data



PARTNERSHIP & LEARNING PLATFORM







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