
UN Approaches to Disaster Risk Management



UNITED NATIONS
Office for Outer Space Affairs

Brindisi, UN-Space Open Day, 19th October 2023
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UNOOSA was initially created as a small expert unit within the UN Secretariat. Over the years it has evolved to a hub for space science and technology, space law and policy. Today we work to **advance international cooperation** in the peaceful uses of outer space & **bring space benefits to everyone.**

- ❑ Secretariat to COPUOS
- ❑ Works with Member States, IGOs, NGOs (space-related)
- ❑ Programme on Space Applications
- ❑ UN-wide coordination - UN-Space
- ❑ UN Register of Space Objects
- ❑ UN-SPIDER – with Offices in Austria, China & Germany
- ❑ International Committee on Global Navigation Satellite Systems (ICG)
- ❑ Space Mission Planning Advisory Group (SMPAG)



www.unoosa.org

UNISPACE III – 1999 (July 1999)

Foundation for several
space support initiatives,
such as:

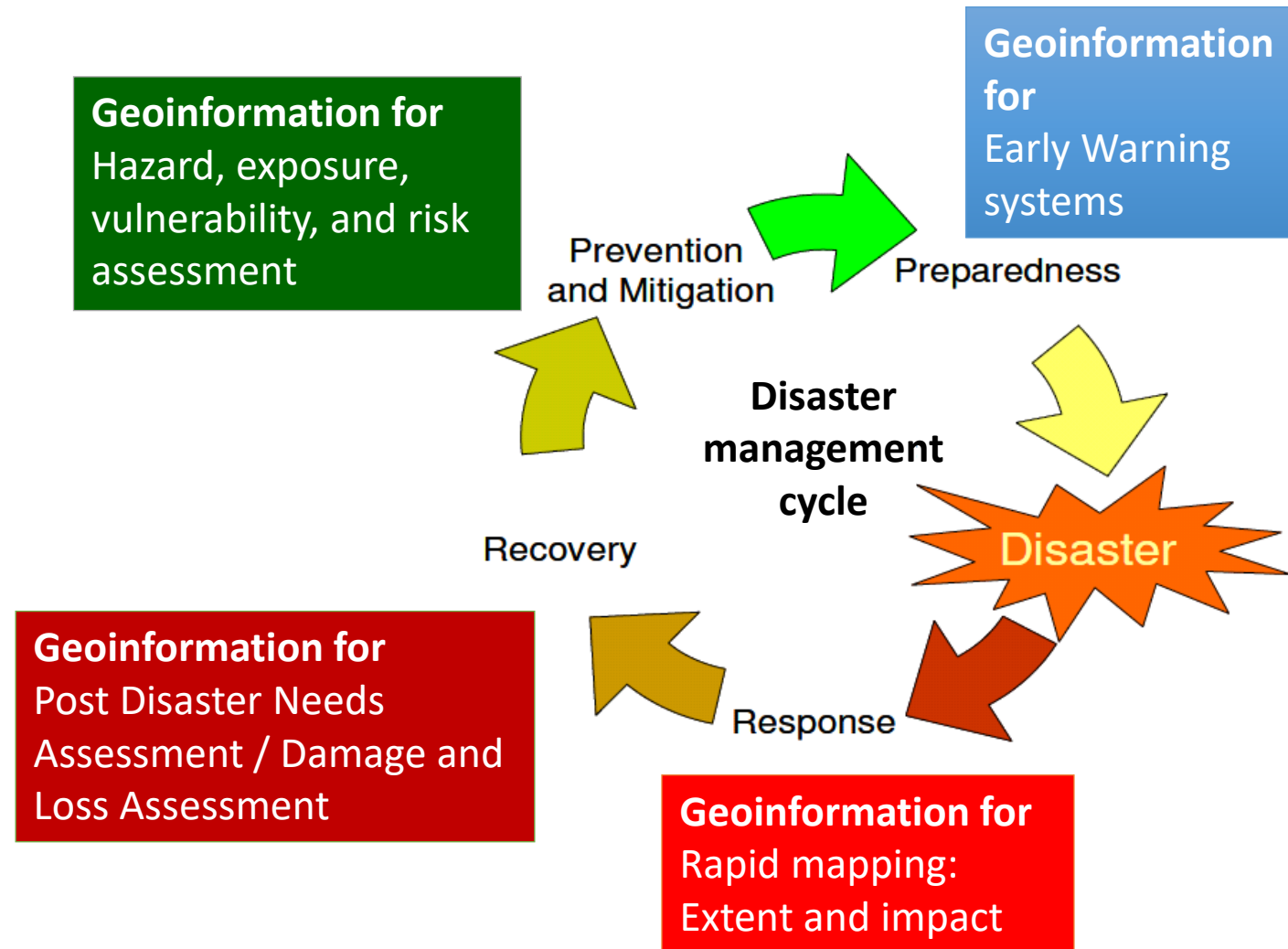
- UN-SPIDER
- International Charter
Space and Major Disasters



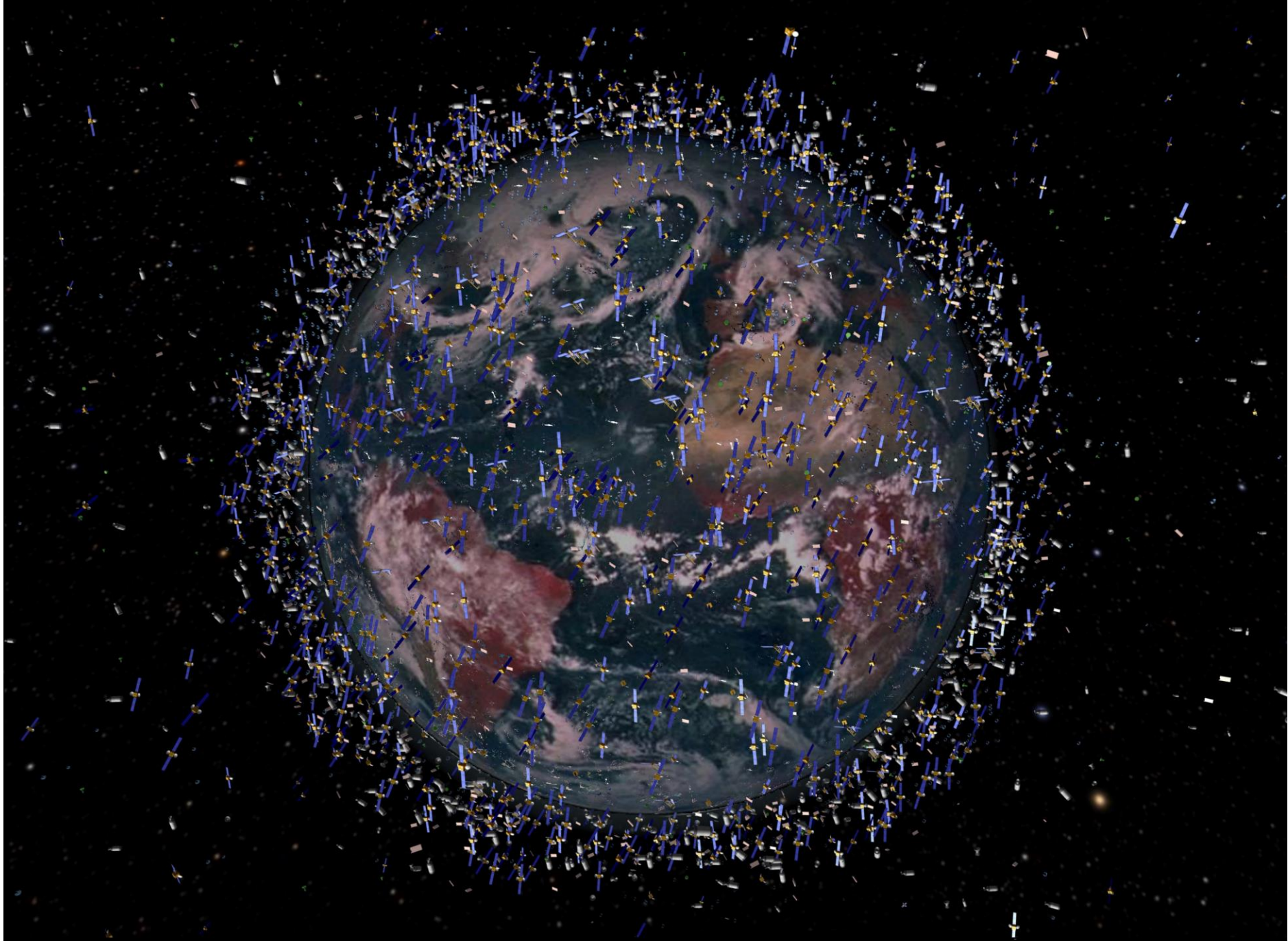
Today, several UN entities play key roles in bringing space based technologies and applications to the user:

- UNOOSA/UN-SPIDER**
- UNITAR's UN Satellite Centre**
- World Bank GFDRR**
- ESCAP**
- OCHA (HDX)**
- WFP Emergency Team**
- UNDP**
- FAO**
- Peacekeeping**
- and many others...**

- United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER)
- Ensure that all countries have access to and develop the capacity to use all types of space-based information (EO, GNSS, SatComms) to support the full disaster management cycle
- United Nations Resolution 61/110, Dec. 2006



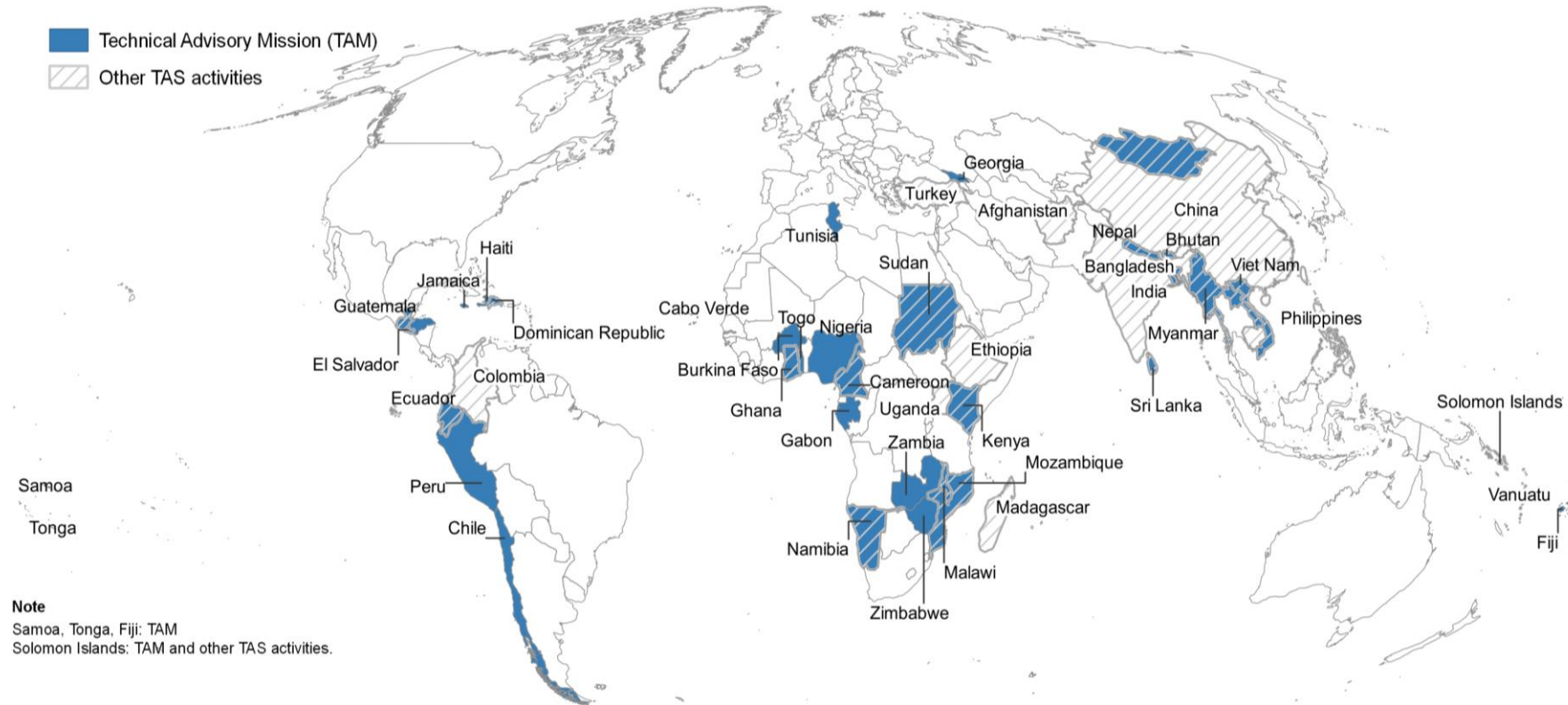




Images NASA Clementine mosaic, ESA beehive adapted ASB (2017 – not included: China ~300+, no StarLink 3500, Planet 200, One-Web 650, etc.)

UN-SPIDER

- 55 (LMI/SID) States benefited from technical advisory services
- 40 formal Technical Advisory Missions and follow up support
- Over 100 technical support and expert missions
- ON DEMAND only!
- Countries sponsored with data support, attendance at training workshops and relevant conferences
- Emergency Response support with satellite data/mapping in over 30 countries



Knowledge Portal

Fostering Cooperation

Strengthening Capacity

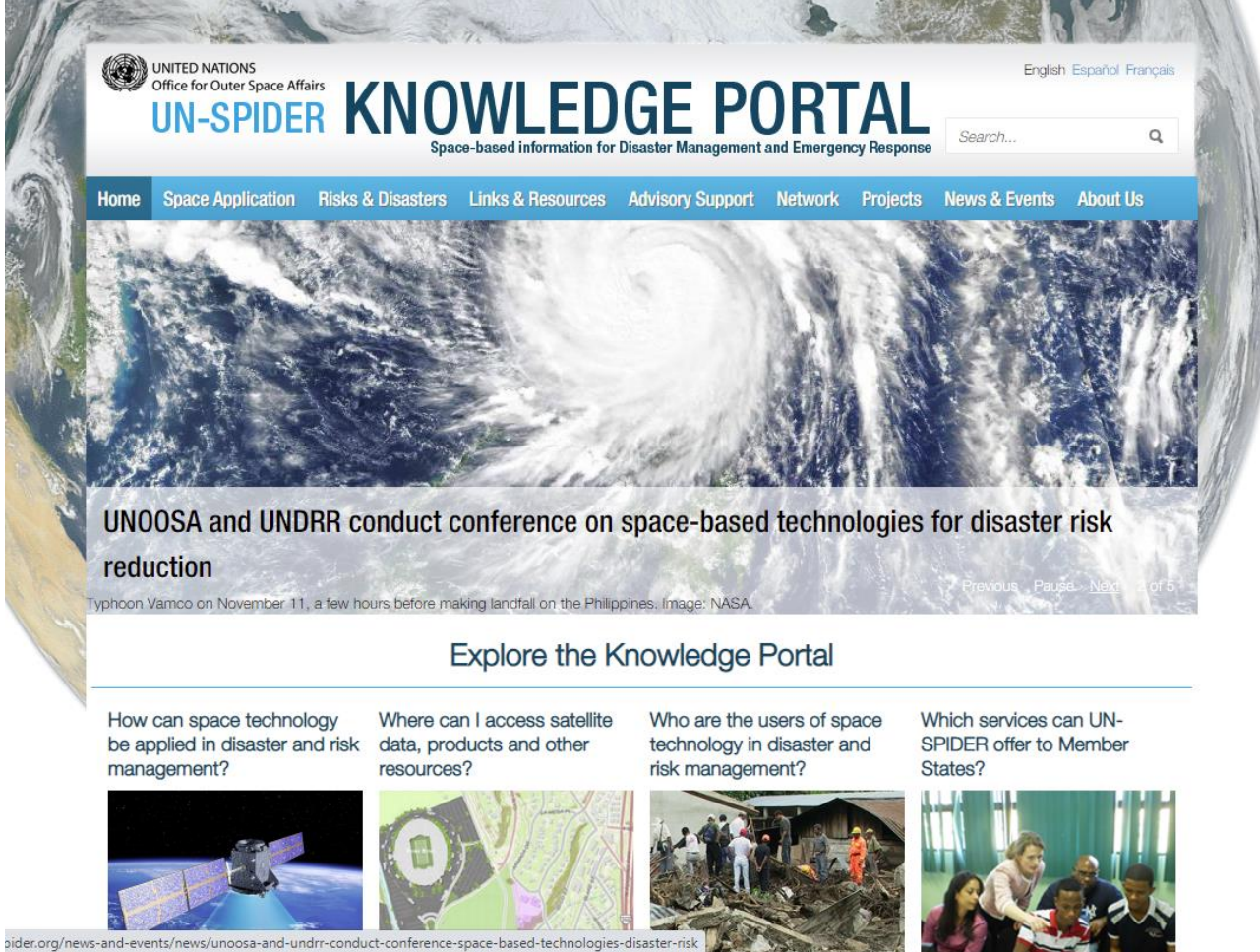
Technical Advisory Support

UN-SPIDER

(voluntary)
Regional Support
Offices
to
UN-SPIDER



- Gateway to space-based information
- Available in English, Spanish and French
- More than 9,100 content items as of 2022
- 45,000 visitors per month on average currently
- Step-by-step procedures to process satellite imagery
- Recommended Practices for working with satellite data



The screenshot shows the UN-SPIDER Knowledge Portal website. At the top, there is a header with the United Nations logo and the text "UNITED NATIONS Office for Outer Space Affairs". The main title is "UN-SPIDER KNOWLEDGE PORTAL" with the subtitle "Space-based information for Disaster Management and Emergency Response". There are language options for English, Español, and Français, and a search bar. A navigation menu includes Home, Space Application, Risks & Disasters, Links & Resources, Advisory Support, Network, Projects, News & Events, and About Us. The main content area features a large satellite image of a typhoon with the headline "UNOOSA and UNDRR conduct conference on space-based technologies for disaster risk reduction". Below the headline is a sub-headline "Typhoon Vamoo on November 11, a few hours before making landfall on the Philippines. Image: NASA." and navigation links "Previous", "Pause", "Next", and "1 of 5". A section titled "Explore the Knowledge Portal" contains four columns of text and images:

- How can space technology be applied in disaster and risk management? (Image: Satellite in space)
- Where can I access satellite data, products and other resources? (Image: Satellite map)
- Who are the users of space technology in disaster and risk management? (Image: People at a disaster site)
- Which services can UN-SPIDER offer to Member States? (Image: People in a meeting)

At the bottom, there is a URL: spider.org/news-and-events/news/unoosa-and-undrr-conduct-conference-space-based-technologies-disaster-risk

- > Authorized user for the International Charter Space and Major Disasters since 2003, UNOSAT too
- > Authorized user for activation of the EU Copernicus EMS in international context (response and risk mapping services too)
- > Authorized user for activation of Sentinel Asia
- > Associate membership in **Committee on Earth Observing Satellites (CEOS)**, WG Disasters (Chair from 2023 Nov.), WGISS and WGCapD, observers in **Group on Earth Observations (GEO)** and **U.N. Committee on Global Geospatial Information Management (GGIM)**
- > **UN Geospatial Network** (since 2000), and **UN-Space** coordination

Very High Resolution (commercial) Resources

- > UNOOSA is a partner of Maxar Open Data Programme (UNOOSA)
- > UNOOSA MoU with Airbus in place for access to VHR imagery and DEMs for major disasters
- > Other MoU's in discussion with ICEYE, BlackSky, SatelliteVU, Planet etc.
- > UN System Contracts (MDA, Airbus etc.) for satellite imagery purchase
- > UNOOSA in discussions through CNSA to increase access to Chinese Government- and private satellite imaging providers, an untapped new resource



- UNOOSA and UNITAR/UNOSAT lead this workstream, one of main data themes
- Strengthening and coordinating UN System cooperation with government space agencies and specialized bodies (such as GEO, CEOS) for improved access to satellite technologies and in-situ observations in crisis
- Build on and continue to develop long-term agreements with all commercial satellite imagery providers and many other commercial and national space agencies
- Expanding open and free access to commercial data from the same providers in times of crisis, with clear licensing conditions negotiated
- Improve infrastructure and develop online services to the above data for automating real-time or near-real-time feeds into the situation room as implemented
- Dedicated capacity strengthening track offered for use of satellite-based information, geospatial technologies and rapid mapping for all UN entities and Member States

- Led by UNDRR and WMO
- A number of “implementing entities” from UN System
- 3.1 Billion in Funds sought

Types of support from EO, UNOOSA possible engagement:

- GNSS – seismicity, landslides, earthquakes
- SatComms – IOT, data transfer, RT data access, Weather Stations
- EO – Meteo, monitoring, forest fires, floods, landslides etc.

Sendai Framework - Towards EW4All

GP-STAR: A Global partnership on Space Technology Applications for Risk Reduction - a voluntary commitment -



Sendai Framework - Towards EW4All

International Network on Multi-Hazard Early Warning Systems (IN-MHEWS)





UNITED NATIONS
Office for Outer Space Affairs



Thank you

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