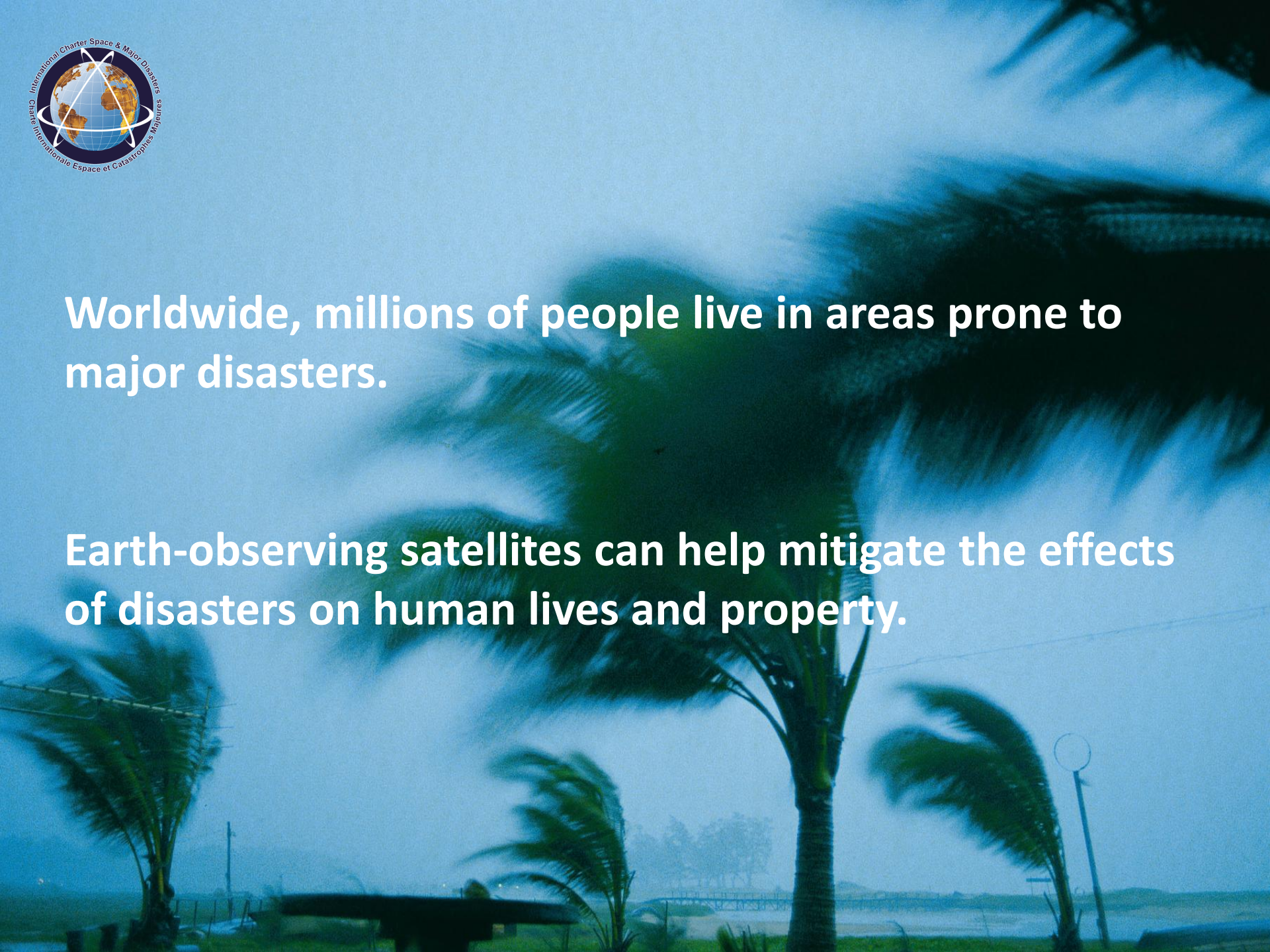
International Charter ‘Space and Major Disasters’

space-based information in support of relief efforts after major disasters.

Jean-Claude Courteille
CNES



Worldwide, millions of people live in areas prone to major disasters.

Earth-observing satellites can help mitigate the effects of disasters on human lives and property.

History

Following UNISPACE III, the **Centre National d'Études Spatiales** (CNES) and the **European Space Agency** (ESA) initiated the International Charter.

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The **Canadian Space Agency** CSA signed the Charter on October 20, 2000.

Charter declared operational as of November 1, 2000

Now composed of **15 member agencies** from 12 countries + Europe.

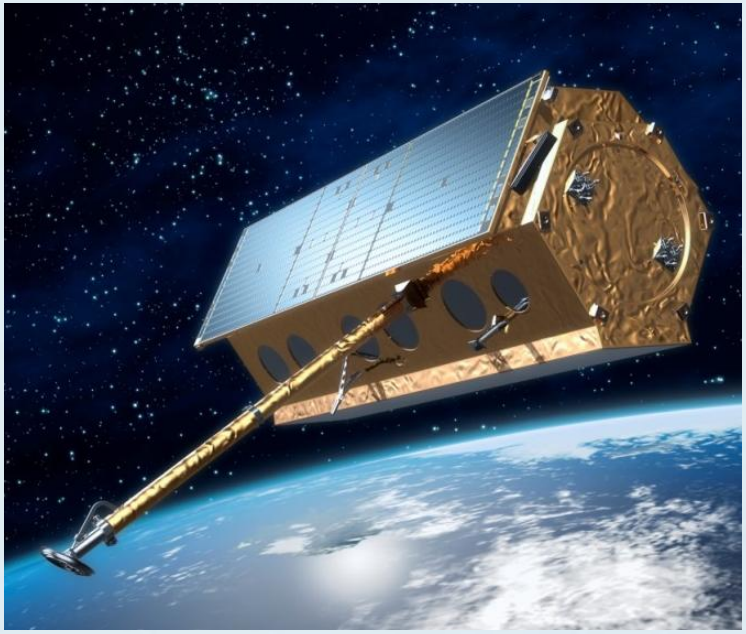
Charter Members

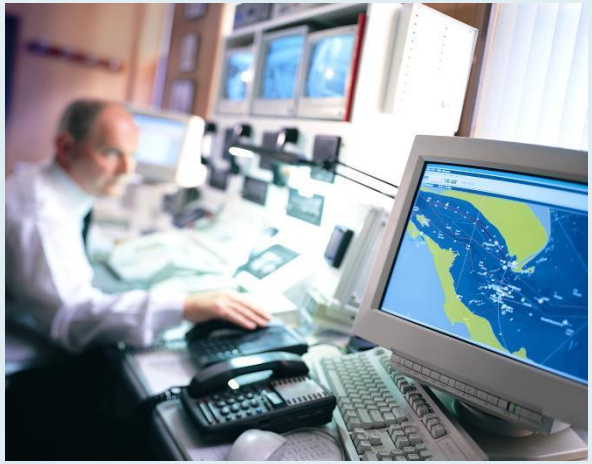
What is the Charter?

An International agreement among participating Agencies to provide space-based data and information in support of relief efforts during emergencies caused by major disasters.

What is the Charter?

The Charter brings together new and efficient space-based technologies to support disaster management.





Space agencies contribute

- **Priority satellite tasking**
- Archive retrievals
- Organisation of map production

Disaster Types Supported

Natural events

- Earthquakes
- Fires
- Floods
- Ice jams
- Landslides
- Tsunamis
- Ocean storms
- Volcanic eruptions

Man-made events

- Oil spills
- Industrial accidents

A major disaster is a large, often sudden event with high impact in terms of lives and/or infrastructure & environment.

(slow-onset disasters, such as droughts, are not covered by the Charter)





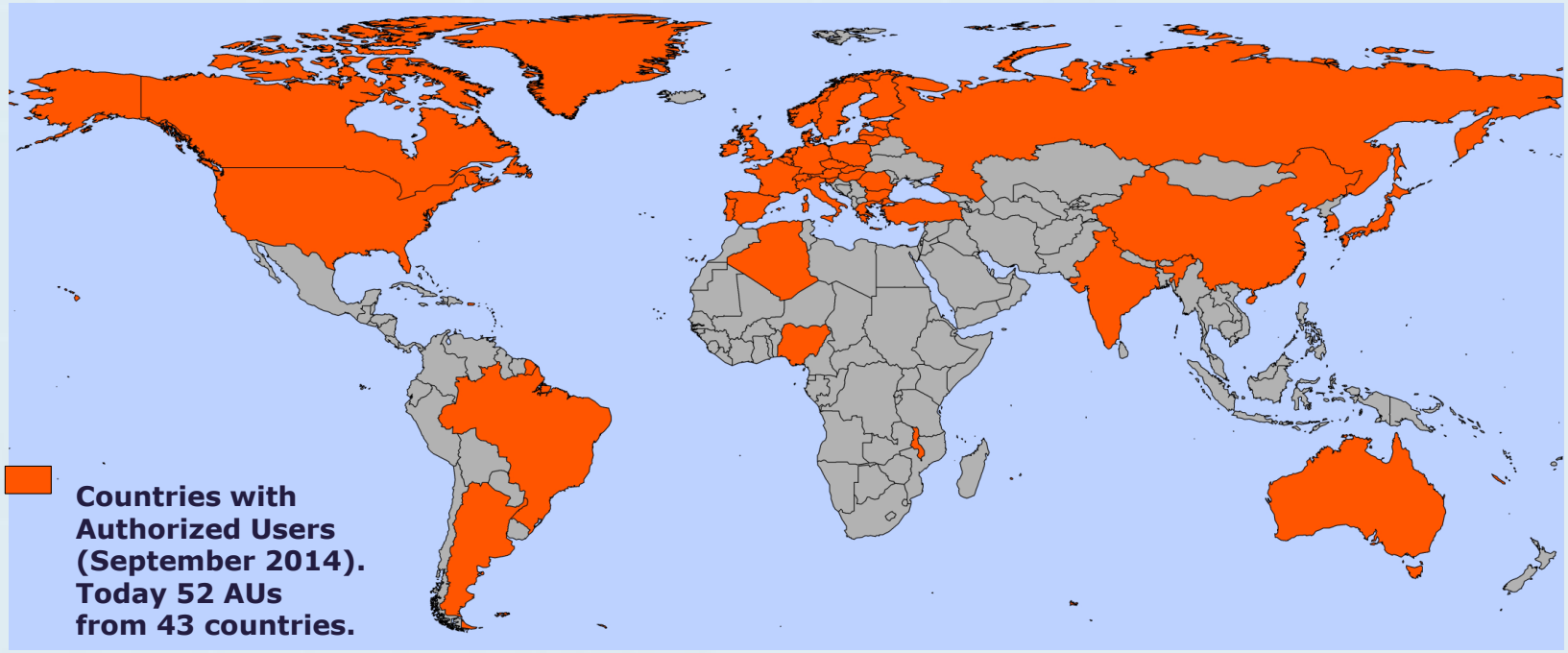
Limited mandate of the Charter

The Charter only supports the **phase of immediate response** to a disaster.

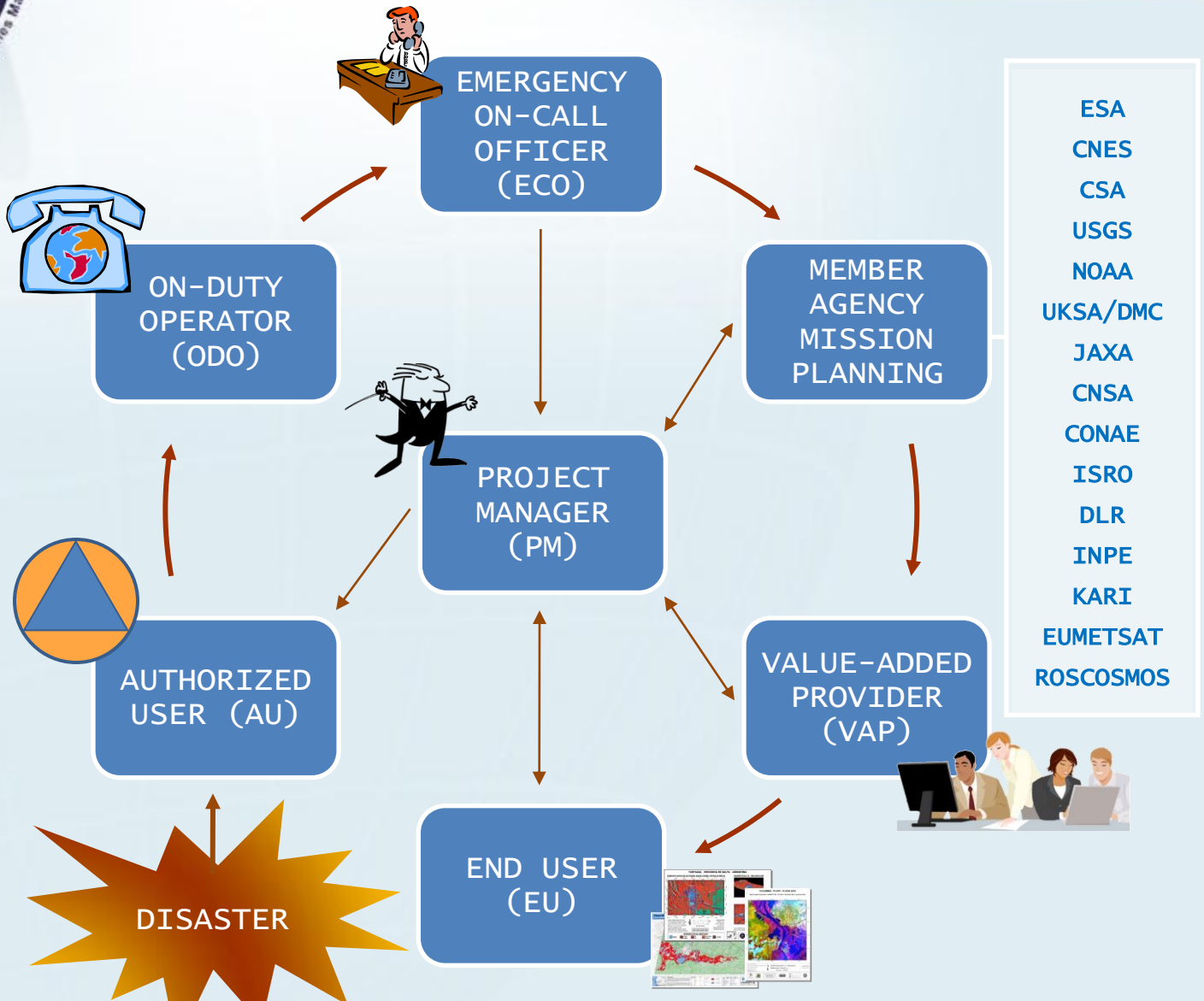
Charter activations generally last for about **1-4 weeks**.

Mechanisms to Activate the Charter

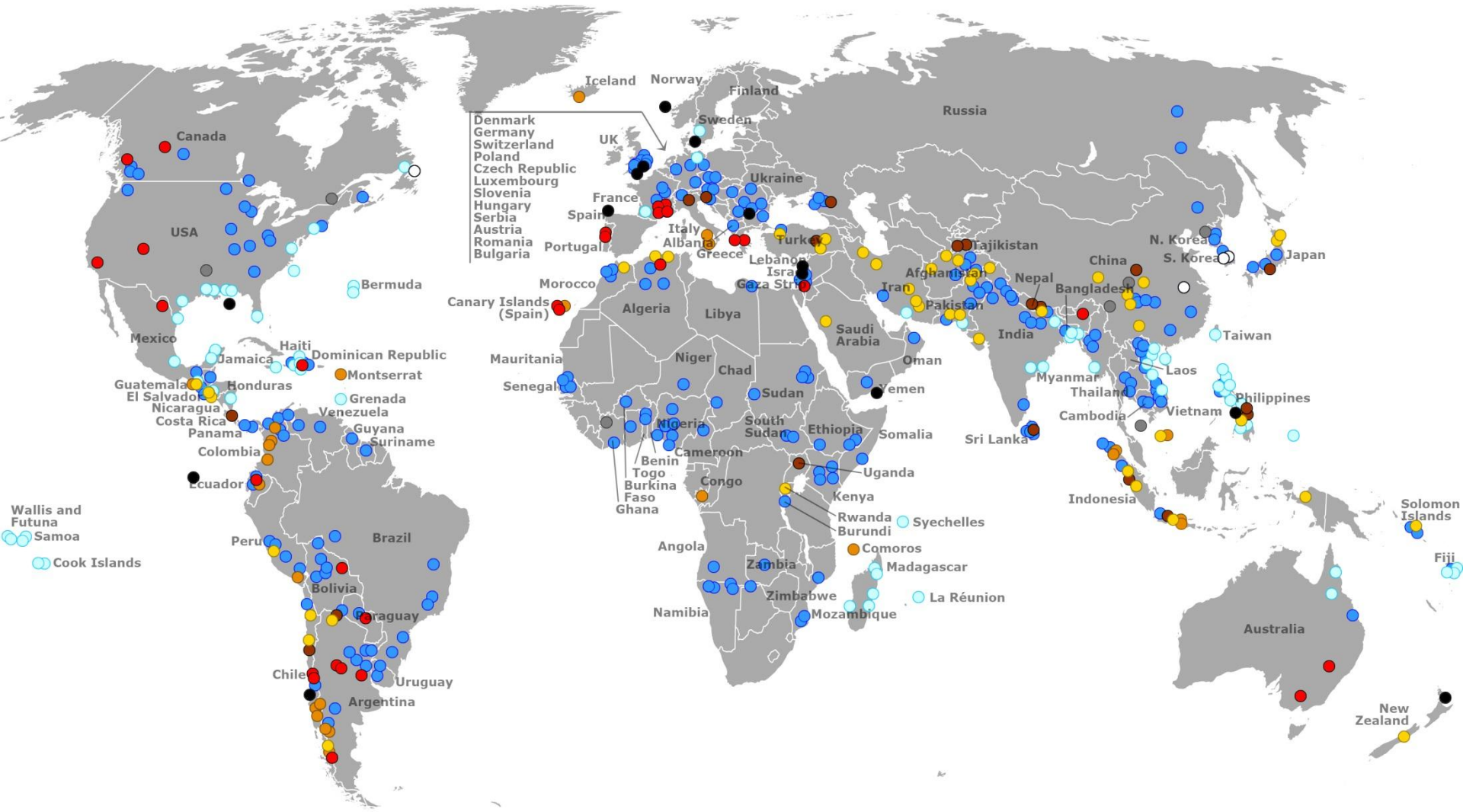
- **Direct activation (by the Authorized Users)**
- **Activation via an Authorized User on behalf of a user from another country without AU**
- **Activation via the UN for UN users**
- **Activation for Asia Pacific users via Sentinel Asia:**



Charter Operational Loop



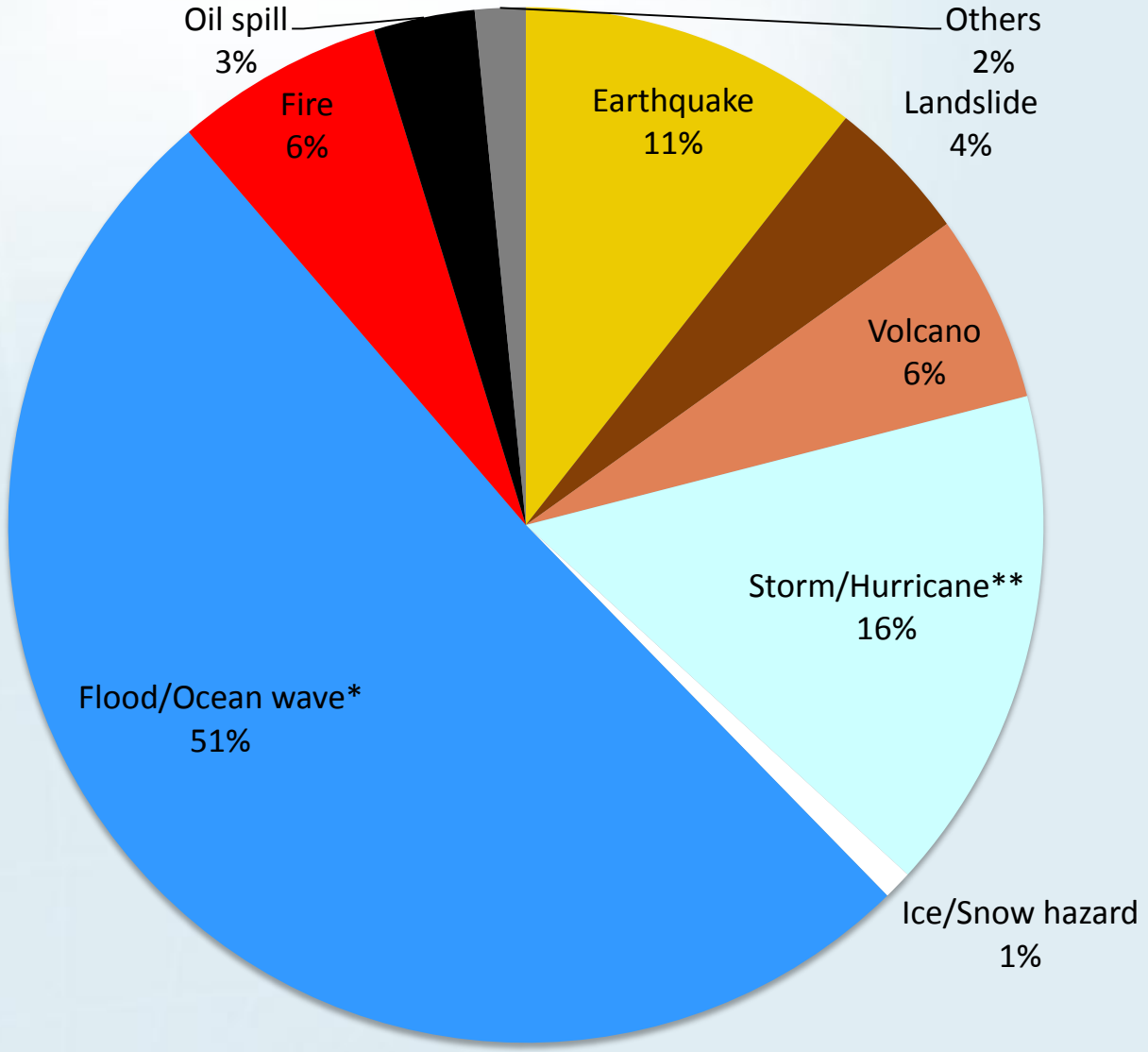
Activation Distribution



***Legend*:** Earthquake · Landslide · Volcano · Storm/hurricane · Flood/ocean wave · Ice/snow hazard · Fire · Oil spill · Other

As of January 2, 2015 – 443 Activations

Activations by Disaster Type

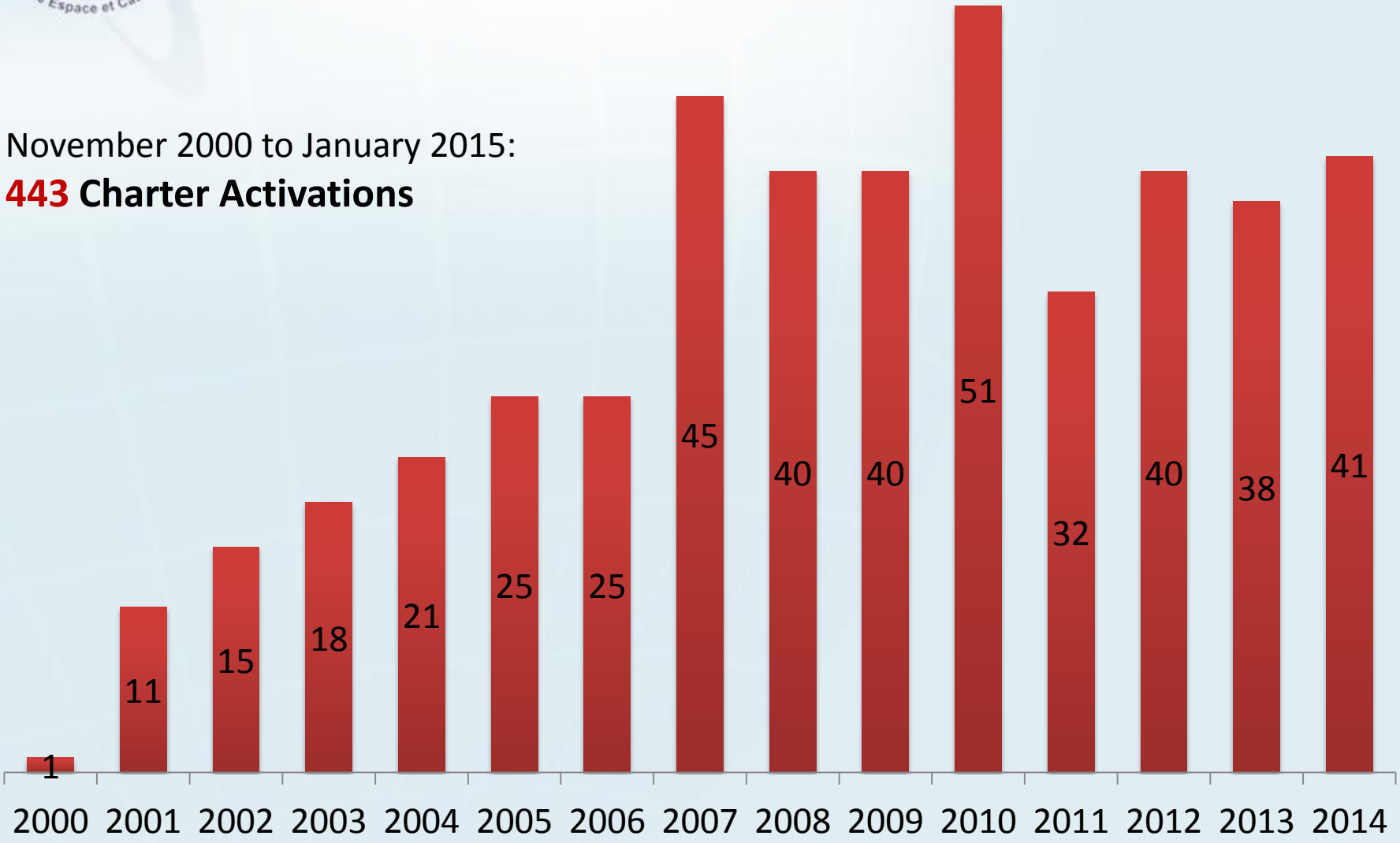


As of January 2, 2015 – 443 Activations

Number of Activations

November 2000 to January 2015:

443 Charter Activations



Universal Access

launched in September 2012

Any **national disaster management authority** can apply to become a Charter Authorised User

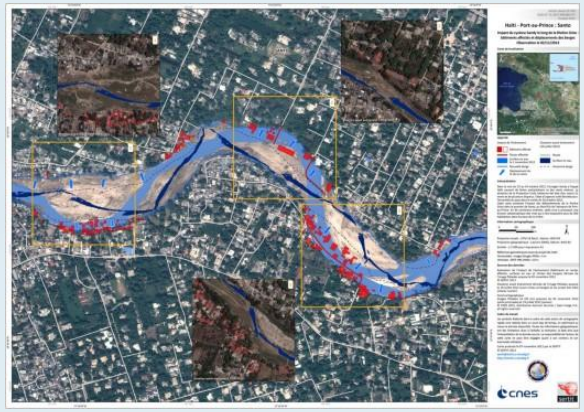
International Charter Space & Major Disasters
Charte Internationale Espace et Catastrophes Majeures

Conditions for becoming an Authorised User

1. be a **national disaster management authority** or its delegated agency in that country

2. have the **capacity to download and use maps**

3. be able to **submit and pursue an activation request in English**



Registration

A registration form* is available for national authorities to express interest in becoming a Charter Authorised User.

1. The candidate fills in the questionnaire providing all required information.
2. The questionnaire, *with an official cover letter from the organisation,* must be sent to: ExecutiveSecretariat@disasterscharter.org
3. The request is assessed by the Charter members.

*The form **may be downloaded** together with the **UA Information brochure** from the Charter website: **https://www.disasterscharter.org/web/guest/activating-the-charter**

Charter Website: UA Documents

https://www.disasterscharter.org/web/guest/activating-the-charter

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Activating the Charter

There are several mechanisms to activate the Charter. It is based on a pre-defined list of appointed users, known as 'Authorized Users' (AUs). Until now AUs are typically disaster management authorities, from countries of Charter member agencies, able to request Charter support for emergencies in their own country, or in a country with which they cooperate for disaster relief.

Since its inception, the Charter has demonstrated a strong commitment to expanding its number of users. Initiatives include collaboration with UNITAR/UNOSAT and UN OOSA, active in many countries and who can submit requests to support in-country UN relief agencies, and Sentinel Asia, a regional network for Earth observation-based Emergency Response in 32 countries.

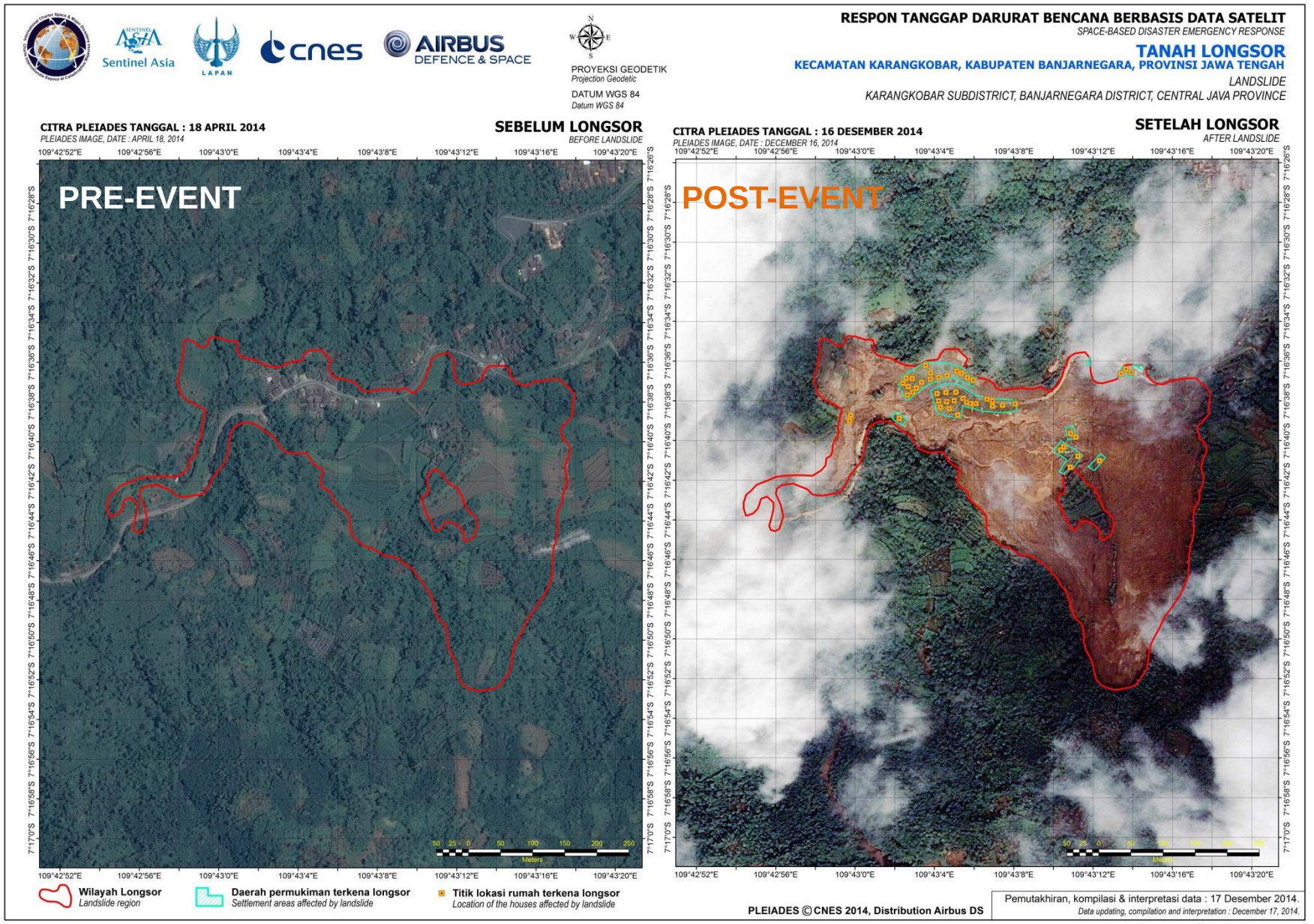
Universal Access

Building on a decade of success in making satellite data available for disaster response, the International Charter is now opening its doors even wider. The Charter Members have adopted the principle of Universal Access to further strengthen the Charter's contribution to disaster management worldwide. Any national disaster management authority will be able to submit requests to the Charter for emergency response. Proper procedures will have to be followed, but the affected country will not have to be a Charter member.

Universal Access benefits national disaster management authorities in countries beyond those of the Charter members, previously unable to make direct requests to the Charter.

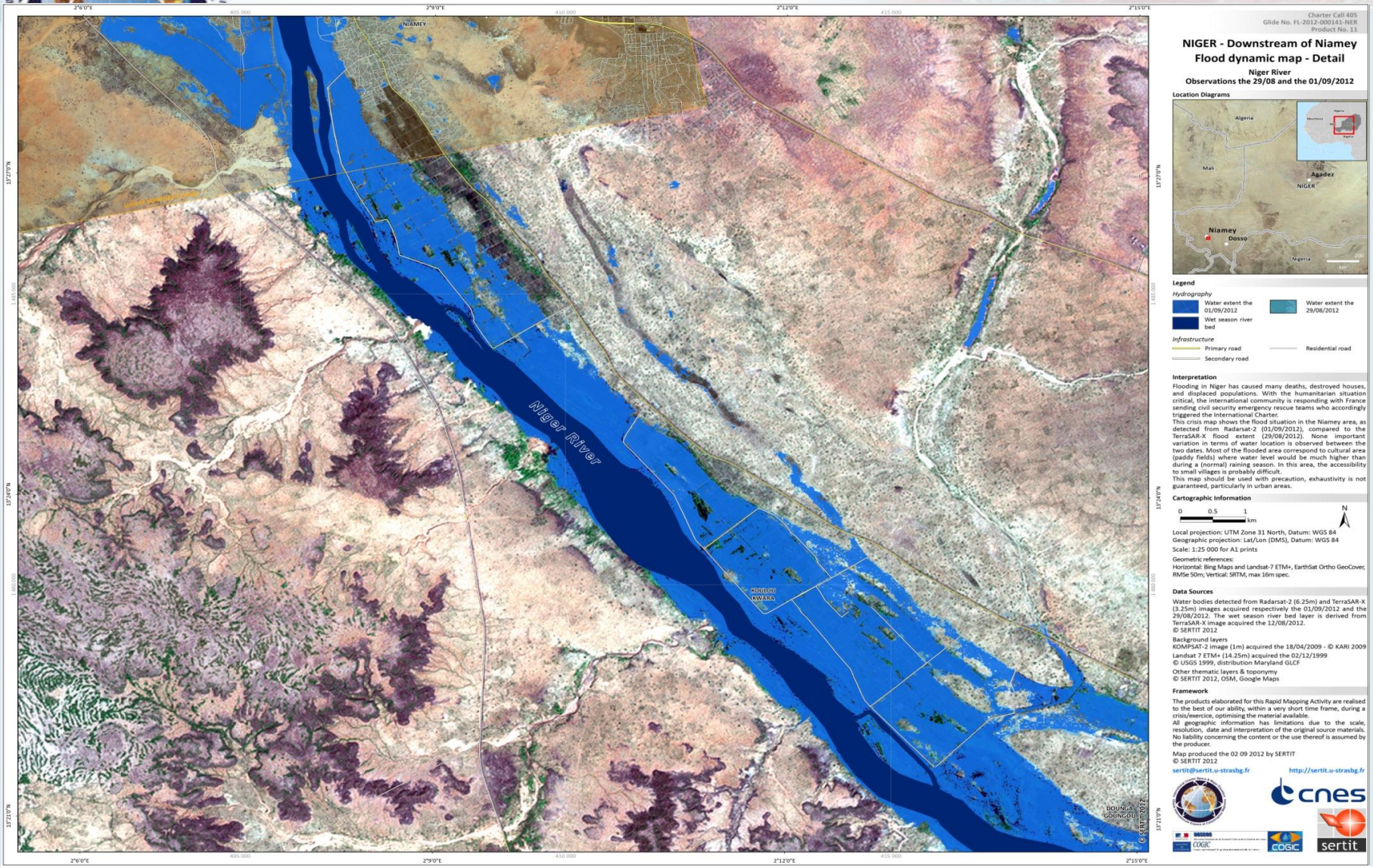
A registration process is in place for national authorities interested in participating in the Charter as an "Authorized User". This process will validate the ability of national authorities to access and use Charter assets for disaster response, in accordance with Charter operational procedures. Steps and applicable conditions are explained in the Charter's Universal Access Information Brochure available together with its Registration form.

Landslide in Indonesia, December 2014



Product created by LAPAN based on French very high res. Optical Satellite Pléiades

Niger. Floods. September 2012. Map produced based on radar data (Radarsat-2 and TSX)



Product created by SERTIT based on radar data (Radarsat-2 and Terrasar-X)

Super typhoon Haiyan, Philippines November 2013

Daanbantayan, affected individual housing detected via Pléiades data

Philippines - Daanbantayan Maya area

Potentially affected building structures Observed the 14/11/2013

Location Diagrams

Legend

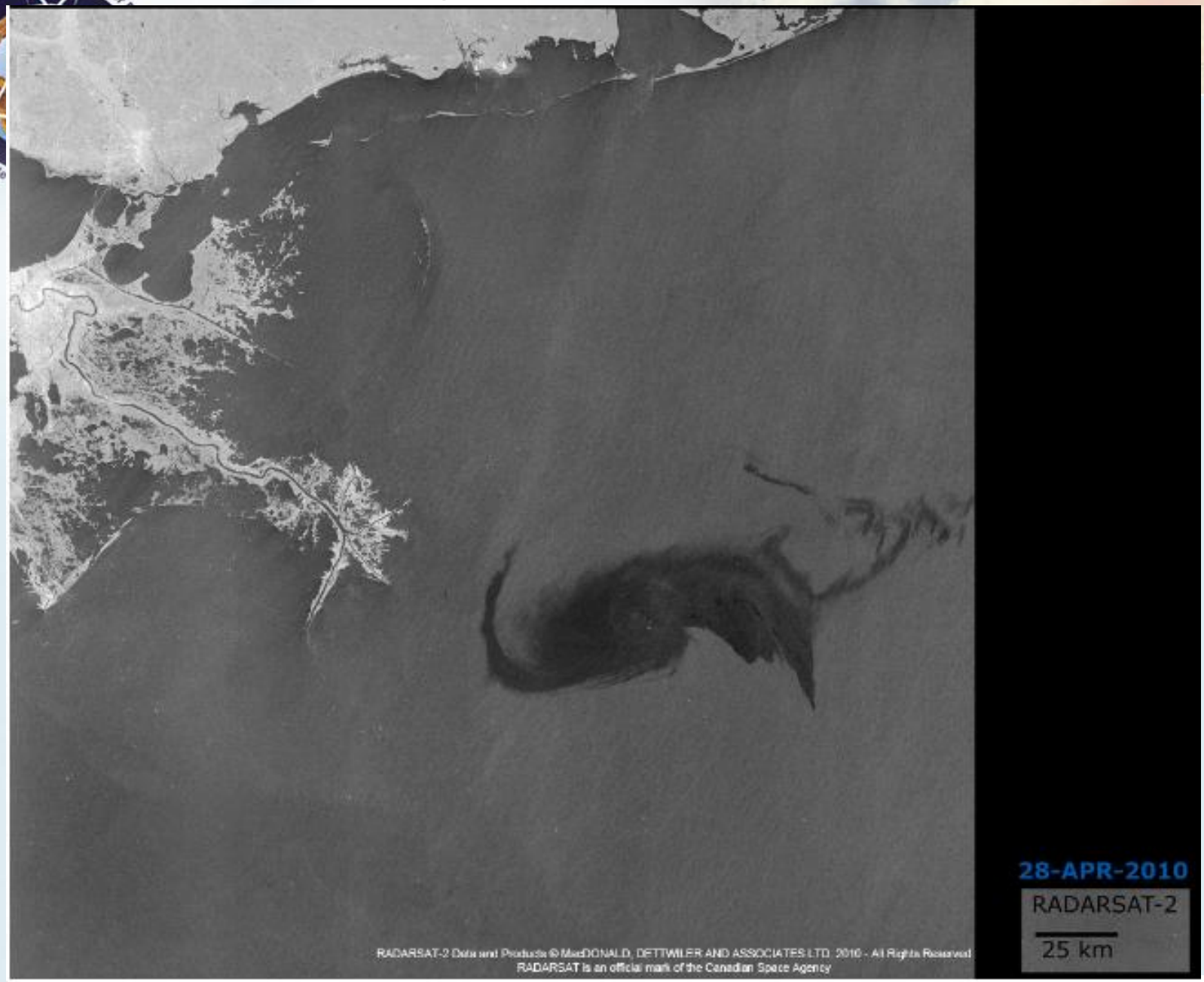
Interpretation

Cartographic Information

Data Sources

Framework

Oil Spill in Mexico, April 2010



Product based on RADARSAT Satellite

Conclusion

- The Charter is an **agreement** among participating space agencies.
- Its “satellite constellation” can deliver **key information** that brings benefit to **disaster relief operations**.
- The Charter is focused on the immediate response phase.
- It is growing: **443** disasters have been covered since 2000 in over **110** countries worldwide.
- Building on a decade of success in making satellite data available to users for disaster response, the Charter is now opening its doors even wider with **Universal Access**.
- **The Universal Access initiative benefits national users, that were previously unable to make direct requests to the Charter during emergency situations.**