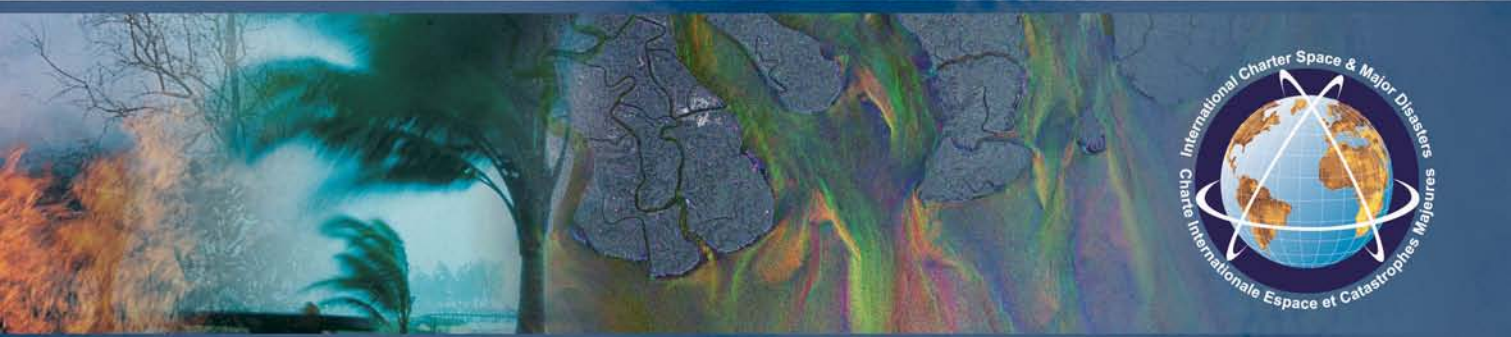


THE INTERNATIONAL CHARTER 'SPACE AND MAJOR DISASTERS'

Implementing Universal Access



1 WHAT IS THE INTERNATIONAL CHARTER?

The Charter is a worldwide collaboration among space agencies to make satellite data available for the benefit of disaster management authorities during the response phase of an emergency.

The Charter is unique in being able to mobilize agencies around the world and benefit from their know-how and satellites through a single access point that operates 24 hours a day, 7 days a week at no cost to the user.

Successfully operating since November 2000, the Charter has brought space assets into action for many natural and technological disasters including floods, hurricanes, tsunamis, earthquakes, landslides, forest fires, volcanic eruptions, ice jams, and oil spills. Since its inception, the Charter has been activated in response to over 330 major disasters in more than 120 countries, including the 2004 Asian tsunami, the 2008 cyclone Nargis in Myanmar, the 2010 earthquake in Haiti, the 2010 flooding in Pakistan, and the 2011 earthquake and tsunami in Japan.

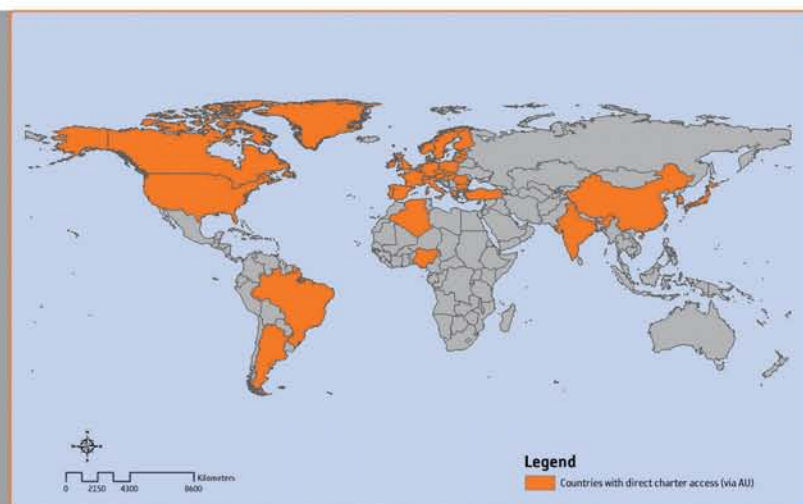
2 WHO USES THE CHARTER?

The Charter can be activated by a predefined 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 UNOOSA and UNITAR/UNOSAT, 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. Sentinel Asia's partner, the Asian Disaster Reduction Centre can submit activation requests on behalf of Sentinel Asia users. In addition, the Group on Earth Observations [GEO] made a formal request in 2007 to allow access for its GEO member states (88 as of September 2012). The GEO Secretariat and GEO principals have supported a formal user consultation conducted by the Charter in more than 15 African countries to increase user awareness and improve access to the Charter.

2012 ONWARDS: UNIVERSAL ACCESS

Building on a decade of success in making satellite data available to designated users for disaster response, the Charter is now opening its doors even wider. By adopting the principle of Universal Access, the Charter is further strengthening its contribution to disaster management worldwide.



Map showing Charter member countries (in orange) with direct access to the Charter. **Universal Access** will allow national users from other countries to directly submit emergency requests as Authorized Users.

3 WHAT DOES THE CHARTER PROVIDE?

Although the Charter's mandate is limited to supplying satellite data quickly and at no cost, the Charter members may also provide crisis mapping and damage assessment. For each disaster type, the Charter has identified the satellite sensors and their options to be used to obtain the most useful data. For instance, optical images are well suited for damage-mapping – medium-resolution* for a snapshot of overall effects, with higher-resolution acquisitions depicting damage to road networks or even individual buildings – while imaging radar has an all-weather capability and is particularly adapted to key hazards types, such as floods, oil spills and landslides, to name a few.

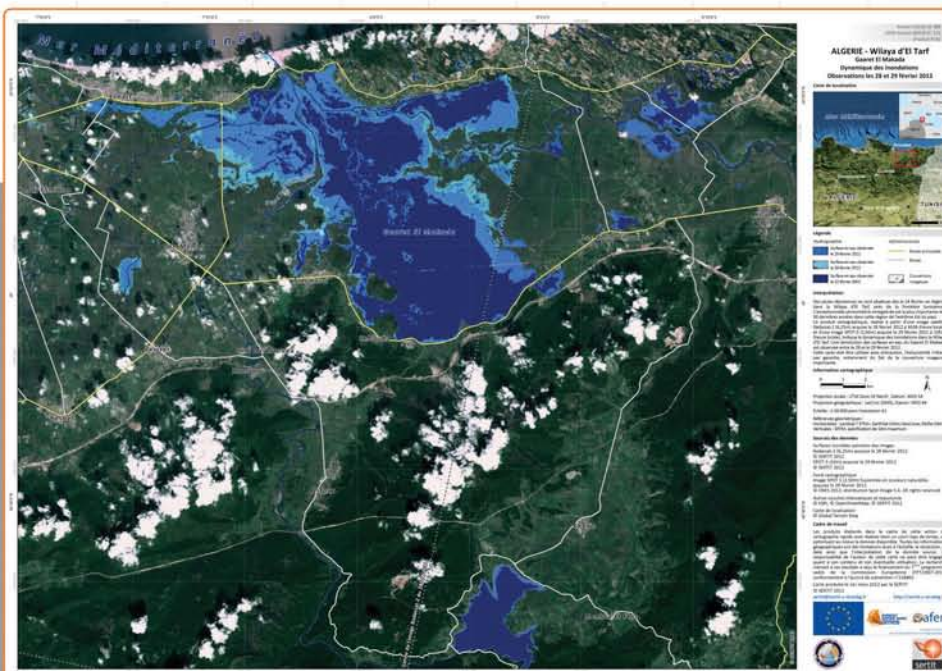
It is also possible to compare archived data with newly acquired data to prepare damage assessment products which offer further views of how the landscape and infrastructure have been affected. This information can be used to provide key mapping products for areas that are difficult to access, helping to identify zones where aid is most needed.

For each Charter activation, a Project Manager (PM) is designated by the Charter members to coordinate the production of satellite derived information. The PM regularly communicates with the end user to ensure adequate support and service.

*spatial resolution is defined as the pixel size of an image representing the size of the surface area (i.e. m²) being measured on the ground.

When a disaster strikes, timeliness is crucial.

Through the Charter, acquisition of satellite data over disaster areas can be prioritised, making sure that the necessary information is rapidly disseminated to the team responsible for emergency response.



2012 Algeria Flood.

Flood extension in the El Tarf region observed on the 28th and the 29th of February 2012.

Source: RADARSAT-2; SPOT 5; Landsat-7; SRTM. Acquired: RADARSAT-2: 06:36 - 28/02/2012; SPOT 5: 10:58 - 29/02/2012

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4 WHAT IS UNIVERSAL ACCESS?

Charter members, conscious of the need to improve Charter access globally, have adopted the principle of Universal Access: **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.**

A registration process is available for national authorities to express interest in participating in the Charter. In addition, procedures to activate the Charter in case of major disaster will be explained and tested with the new users.

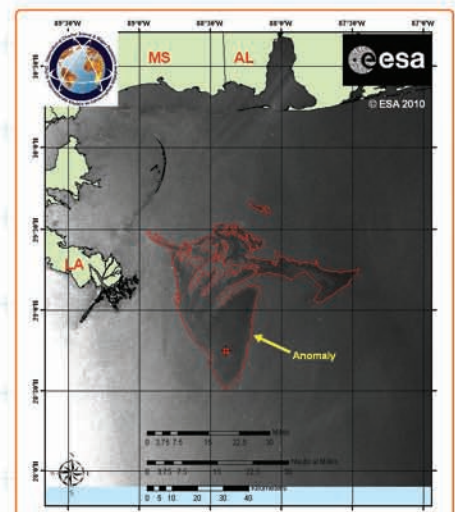
5 WHAT CONDITIONS APPLY?

The following criteria must be met by an entity requesting to become a new user:

- The entity must be a national disaster management authority or its delegated agency in that country
- The entity must have the capacity to download and utilize maps
- The entity must be able to submit and pursue its activation requests in English

The entity or its delegated agency should have a national mandate to coordinate emergency response measures in the respective country. The material provided by the Charter could be either remotely sensed imagery or derived information products such as crisis or damage assessment maps. The basic information to be provided during an activation request includes: date and time of disaster occurrence, affected area with geographic coordinates (Latitude/Longitude), type of hazard, and name of the contact person for any communication with the Charter.

Basic conditions have been established to ensure that all user organisations authorised to trigger the Charter are able to make effective use of the Charter's resources.



2010 Deepwater Horizon oil spill Gulf of Mexico.

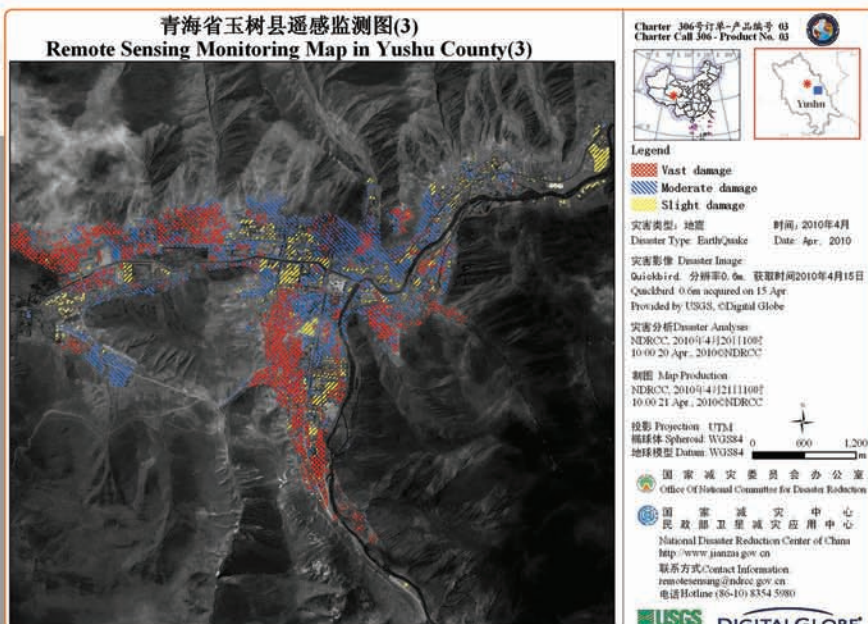
Oil spill slick location and shape.

Source: Envisat ASAR Wide Swath. © ESA. Analysis provided by NOAA/NESDIS.

2010 Earthquake in China.

Map shows high (red), moderate (blue) and slight (yellow) damages in Yuku county.

Source: Quickbird 0.6m (15/04/2010). Copyright Digital Globe 2010, Courtesy of USGS. Image processing, map created by NDRCC.



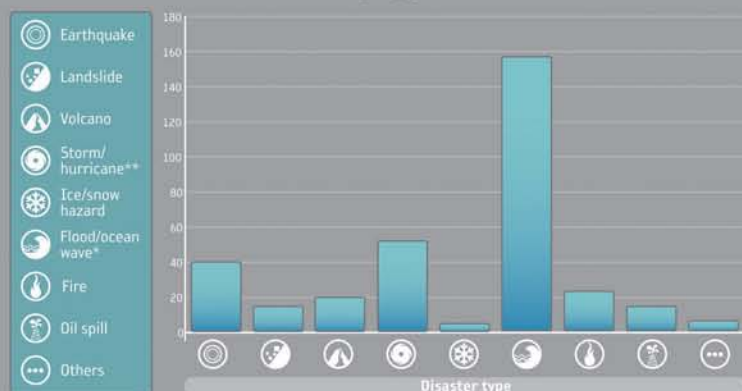
THE REGISTRATION PROCESS – NEW USERS

- ✓ The process starts by completing a **registration form** available on the Charter website. (www.disasterscharter.org).
- ✓ The registration form, together with a cover letter of the user organization, should be sent by e-mail to the Charter **Executive Secretariat** (ExecutiveSecretariat@disasterscharter.org), which coordinates Charter operations.
- ✓ The request is processed by the Charter members who may ask for additional clarification or information.
- ✓ The final acceptance of a national user is subject to approval and written notification via official letter by the Charter Board, the policy body of the Charter.
- ✓ New users are asked to sign a document specifying certain procedures and contacts for Charter activation requests. This is necessary to ensure adherence to Charter rules and to avoid loss of time and resources during emergencies.
- ✓ To complete the process, the candidate undergoes a simple exercise to simulate the steps of a Charter activation. This process will validate the ability of national authorities to access and use Charter assets for disaster response, in accordance with Charter operational procedures.

Charter members are also interested in learning about other organizations, in the same country as the national entity, with the capacity to analyze and exploit satellite data for emergency mapping. These organisations could become recipients of data in the instance of an activation in the country.

A country which does not have a disaster management authority equipped to meet the Charter's essential criteria given above, can receive help from the Charter using the mechanisms explained in p.2.

Activations by type [2000-2011]



The Charter is a worldwide collaboration among space agencies to make satellite data available for the benefit of disaster management authorities during the response phase of an emergency. Today, 14 agencies worldwide participate in the Charter:

- European Space Agency, ESA
- Centre national d'études spatiales, France, CNES
- Canadian Space Agency, CSA
- US National Oceanic and Atmospheric Administration, NOAA
- Comision Nacional de Actividades Espaciales, Argentina, CONAE
- Indian Space Research Organization, ISRO
- Japanese Aerospace Exploration Agency, JAXA
- United States Geological Survey, USGS
- UK Space Agency, UKSA and DMC International Imaging, DMCii
- China National Space Administration, CNSA
- German Aerospace Center, DLR
- Korea Aerospace Research Institute, KARI
- Instituto Nacional de Pesquisas Espaciais, Brazil, INPE
- European Organisation for the Exploitation of Meteorological Satellites, EUMETSAT

