



31 December 2015

Issue 12

## USGS assumes chairmanship of the International Charter 'Space and Major Disasters'

On the 22nd of October, the United States Geological Survey (USGS) took over the rotating chair of the International Charter 'Space and Major Disasters', succeeding the Indian Space Research Organisation (ISRO). USGS will be leading the Charter for six months until mid-April 2016.

In the same week, more than 32 delegates of the Charter Member agencies came together in Sioux Falls, South Dakota for the 34th meeting of the International Charter. Participants in the 34th meeting of the Charter meet at the USGS Earth Resources Observation and Science (EROS) Center to discuss operational matters and other items.



### 34<sup>th</sup> Meeting of International Charter 'Space and Major Disasters' October 20-23, 2015



#### Recent Activation

- [Earthquake in Tajikistan](#)
- [Flood in India](#)
- [Flood in Iraq](#)
- [Dam collapse in Brazil](#)
- [Cyclone Chapala in Yemen](#)
- [Aircraft crash in Egypt](#)
- [Earthquake in Afghanistan](#)
- [Landslide in Guatemala](#)
- [Hurricane Joaquin in Bahamas](#)

#### Charter Members

- [European Space Agency \(ESA\)](#)
- [Centre national d'études spatiales \(CNES\)](#)
- [Canadian Space Agency \(CSA\)](#)
- [Indian Space Research Organisation \(ISRO\)](#)
- [National Oceanic and Atmospheric Administration \(NOAA\)](#)
- [Argentina's Comision Nacional de Actividades Espaciales \(CONAE\)](#)
- [Japan Aerospace Exploration Agency \(JAXA\)](#)
- [US Geological Survey \(USGS\)](#)
- [DMC International Imaging \(DMC\)](#)
- [China National Space Administration \(CNSA\)](#)
- [German Aerospace Center \(DLR\)](#)
- [Korea Aerospace Research Institute \(KARI\)](#)
- [National Institute for Space Research \(INPE\)](#)
- [European Organisation for the Exploitation of Meteorological Satellites \(EUMETSAT\)](#)
- [The Russian Federal Space Agency \(ROSCOSMOS\)](#)

Bringing together new and efficient space technologies to support disaster management



## 15 Years of International Cooperation on Disaster Response

Natural and manmade disasters cause loss of life and widespread destruction all over the world. An international collaboration called the International Charter “Space and Major Disasters” provides a unified system of space data acquisition and delivery to those affected by these disasters. The Charter draws on the capabilities and resources of 15 space agencies to quickly provide emergency response satellite data at no cost.

Brenda Jones, USGS Charter Executive Secretariat member and Disaster Response Coordinator, comments on the unique makeup of the Charter: “What I think is quite amazing about the Charter is that there is no actual binding agreement in place. It’s really just fifteen countries working together to help when disaster strikes somewhere in the world.”

The Charter formed in November 2000, and over the last 15 years, space technologies have become even more vital to modern-day disaster management activities. Satellites can tell responders what damage disasters have done, providing timely insight into flood extents, fire boundaries, lava flow directions, road traversability, and oil slick movements.

The Charter coordinates data from dozens of international satellites at resolutions ranging from 8 km per pixel to about 0.3048 m to provide a quick response to disaster-afflicted areas. Over the last 15 years, the Charter has brought space assets into action in over 115 countries for over 450 natural and technological disasters, including flooding, hurricanes, tsunamis, earthquakes, forest fires, and oil spills.

Fifteen years of the Charter’s service to the world is proof that multiple nations can cooperate when help is needed quickly. USGS Acting Deputy Director David Applegate remarked that “the International Charter is truly a unique gift from the space agencies to humanity.” To commemorate this special anniversary the European Space Agency (ESA) coordinated the production of this scribble video -

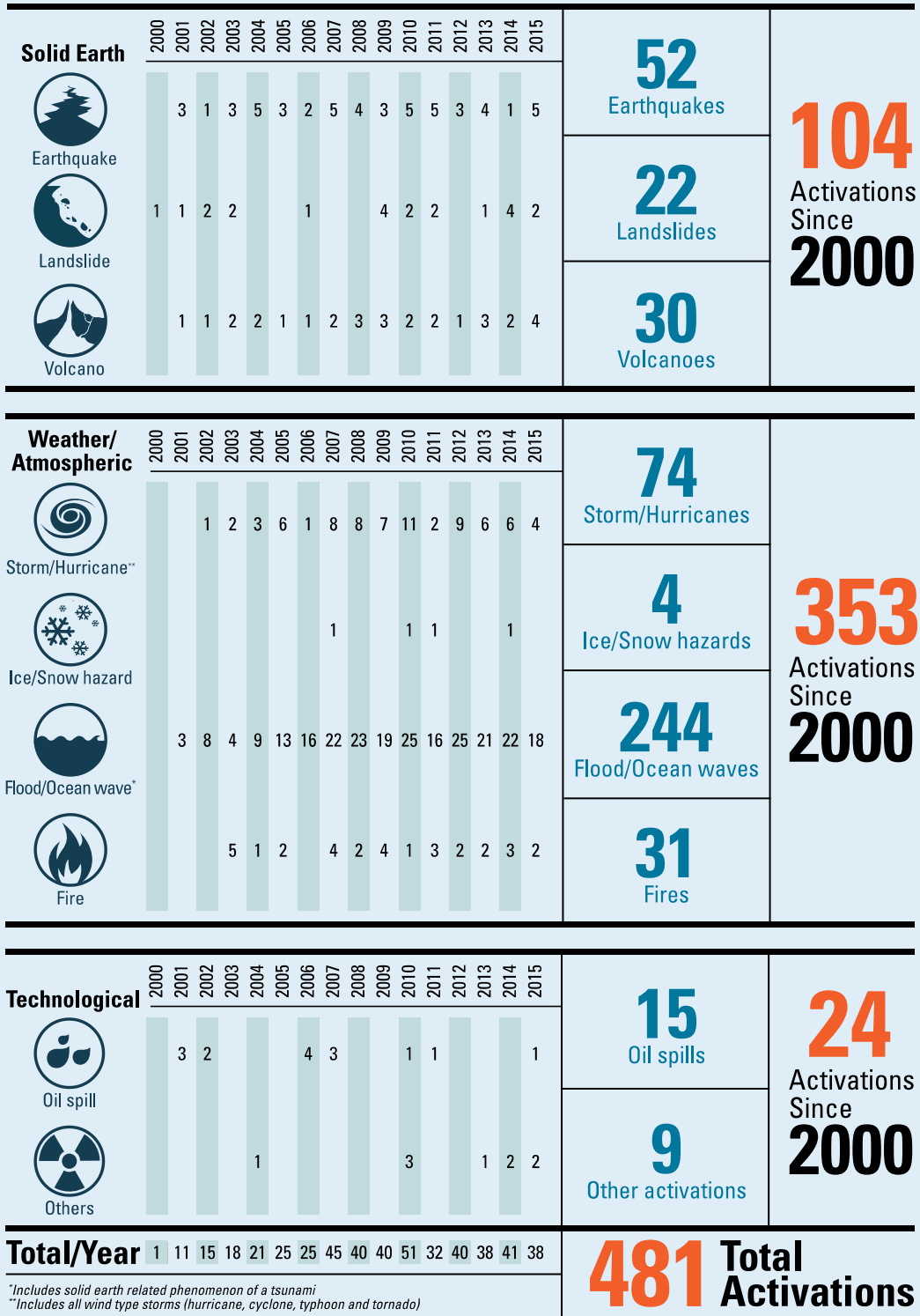
<https://www.youtube.com/watch?v=vif1kqwCEc> - highlighting the organization and the Indian Space Research Organisation (ISRO) produced a booklet documenting the first 15 years of the International Charter activities - *International Charter - A Journey of 15 Years* -

<https://www.disasterscharter.org/web/quest/charter-publications>.





## Charter Activations 2000 – 2015 (Disaster types)





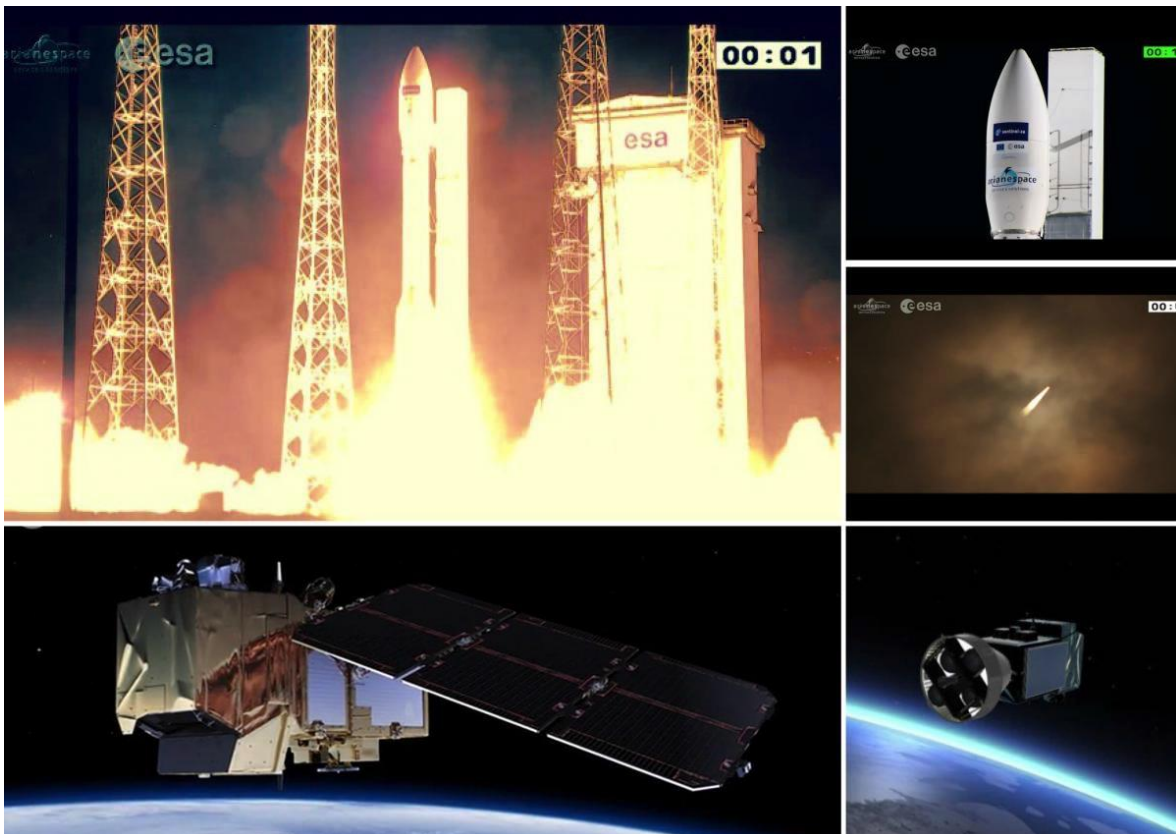
## The Next Big Step for Copernicus: Sentinel-2A lifts off Successfully

The June 22, 2015 launch of Sentinel-2A marks a major milestone for the European Union's Earth observation programme Copernicus. Sentinel-2A, the second satellite dedicated to the programme, was put into orbit after a successful launch from Europe's spaceport in French Guyana.

With a 290 km-wide coverage swath, Sentinel-2A will deliver images of Earth's changing land with an unprecedented frequency and accuracy spatial resolution of up to 10 meters in 13 spectral channels. The mission will monitor in particular variability in land surface conditions. The wide coverage area and revisit time of Sentinel-2 will support monitoring of changes, such as those of vegetation and cultures during the growing season.

Operational information from this latest Copernicus mission will help improve agricultural practices, monitor desertification and the state of the world's forests, detect pollution in lakes and coastal waters, contribute to disaster mapping and much more. The mission, will make Sentinel-2 a significant asset for Copernicus Services such as Land Monitoring, Emergency Management, Security and Climate Change.

Sentinel-2 is a key element of the Copernicus programme and features a two-satellite land-monitoring constellation designed by the European Space Agency (ESA) and built by Airbus Defence and Space. The full Sentinel-2 mission comprises twin polar-orbiting satellites in the same orbit, phased at 180° to each other. The mission will monitor variability in land surface conditions, and its wide swath width and high revisit time (10 days at the equator with one satellite, and 5 days with 2 satellites under cloud-free conditions which results in 2-3 days at mid-latitudes) will support monitoring of changes to vegetation within the growing season. The coverage limits are from between latitudes 56° south and 84° north. Sentinel-2B, the twin to Sentinel-2A, is scheduled to be launched in 2016.





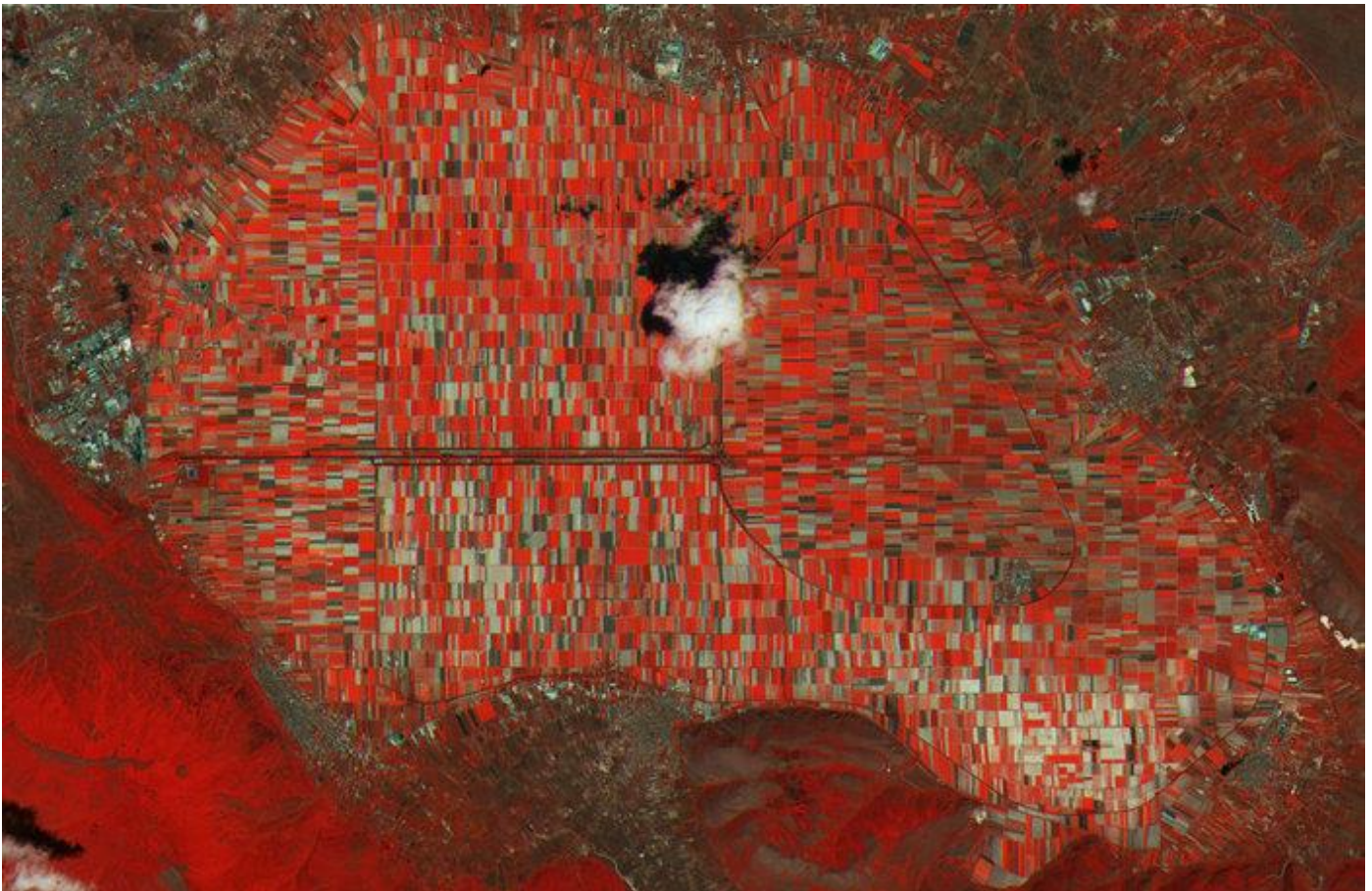
## Sentinel-2A products available in the Data Hub

On 03 December 2015, ESA announced the availability of Sentinel-2A orthorectified products in the [Sentinel Data Hub](#). Any products acquired from 28 November onward are available to any user. Sentinel-2 products can be searched for by selecting Sentinel-2 in the search menu, or search bar. Products from the Commissioning Phase will be reprocessed and become available later.

The Sentinel-2A data quality status can be found [here](#).

Sentinel-2 is currently in its [Ramp-up Phase](#), operating the following observation scenario: with an average of 10 minutes MSI sensing time per orbit, Sentinel-2A is acquiring Europe and Africa systematically on every orbit, while the rest of the sunlit world land masses between 56 degrees South and 84 degrees North will be mapped with a 30 days revisit time. As this acquisition plan will evolve, ESA will publish the acquisition plan for the next cycle 10 days ahead on the [Acquisition Plans](#) page.

A new version (V2.0) of the [S2 toolbox](#) is available for download. Further information on Sentinel-2 is available in the [Mission guide](#).



This Sentinel-2A false colour image shows agricultural structures in the Abruzzo region of central Italy. This image, captured on 8 July by Sentinel-2A, is featured on the [Earth from Space video programme](#).