

This service summarizes current satellite mapping activities of interest to GDACS stakeholders. It is issued weekly and based on contributions from map-producing entities and GDACS partners.

Satellite mapping overview

As of 09 May 2016

Asia

China dust storm – GLIDE number: TBD

Located in northwest China, the Taklimakan desert experienced a dust storm in early May 2016. As one of the driest and most barren places in the world, roughly 85 percent of the Taklimakan consists of moving sand dunes which reach up to 200 and 300 meters high. The NASA Earth Observatory acquired 01 May 2016 satellite imagery of the large dust storm and produced an overview map. As of this date, a wall of dust was visible with winds pushing it towards the southwest across the Tarim Basin. Fortunately, the dust appears to have stayed at a relatively low altitude during the storm and did not move outside of the Tarim Basin. Occasionally in the springtime, strong winds can transport dust across China and the Pacific. When populated areas come into contact with dust from these storms, public health problems can arise due to the small particles, bacteria, and viruses that can enter into the human respiratory system. This map product is available for online viewing and download in JPEG format on the NASA Earth Observatory website.

Source: NASA Earth Observatory

Link: <http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=87969&eocn=home&eoci=nh>

Central America

Panama fires – GLIDE number: TBD

In early April 2016, forest fires began burning in the Darien Province of Panama. Despite initial containment efforts, the fires grew out of control in Darien National Park and continued to spread. In response to this event, the International Charter on Space and Major Disasters was activated on 17 April 2016 by the USGS on behalf of the Panama Ministry of Environment, and project management was assumed by Cathalac. Using satellite imagery acquired 17 April 2016, Cathalac recently produced a map of potentially burned areas along the Congo River upper course in Darien Province. The location of potential burn scars from the fire, as well as riparian forest, shrub and grass lands are illustrated in the map. The Congo River is a very important natural resource for the economic activities of northern Darien Province. It is evident from the map that large portions of this area may have been significantly impacted by the forest fires. This map product is available for online viewing and download in JPEG format on the International Charter on Space and Major Disasters website.

Source: International Charter on Space and Major Disasters

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Link: <https://www.disasterscharter.org/web/guest/-/fire-in-panama>

Middle East

Iran flash floods – GLIDE number: FF-2016-000036-IRN

Torrential rainfall across Iran began on 13 April 2016 and resulted in flash floods as well as significant damage in 12 provinces. The provinces of Lorestan and Ilam in the west, Kurdistan and Kermanshah in the northwest, and Khuzestan in the southwest were the most adversely affected. The International Charter on Space and Major Disasters was activated on 15 April 2016 by UNOOSA/UN-SPIDER on behalf of the Iranian Space Agency (ISA). The ISA has since produced flood maps using satellite imagery from 16 and 18 April 2016. The maps illustrate normal water bodies, muddy rivers, and flooded areas in the southwest part of the country. More than 2,500 people were evacuated from several provinces and over one hundred cities reportedly suffered from the flooding and subsequent damage. Thousands of people were left without water and electricity, and dams were near their limit as water levels rose higher from the rainfall. Map products are available for online viewing and download in JPEG format on the International Charter on Space and Major Disasters website.

Source: International Charter on Space and Major Disasters

Link: <https://www.disasterscharter.org/web/guest/-/flood-in-iran-islamic-republic-of>

Syria complex emergency – GLIDE number: CE20130604SYR

As a result of continuous violence in Syria, the country's population has experienced significant upheaval. UNITAR-UNOSAT released a map of shelters at the Hadalat crossing on the Syria-Jordan border. Analysis of 29 April 2016 satellite imagery revealed 1,869 probable shelters within 76.5 hectares of the camp area, situated north of the security berm. This represents a 587 percent increase in shelters since the previous UNITAR-UNOSAT analysis done using 29 January 2016 satellite imagery. In addition to depicting the location of recent shelters and providing an inset close-up view of some of these, the map also includes a table with the number of structures detected in all previous UNITAR-UNOSAT analyses of this area. Due to the small size and irregularity of the shelters, it is likely that some were missed or included erroneously in the recent analysis. This map is intended for field support and local authorities should be consulted for boundary information. It is available for download as a PDF on the UNITAR-UNOSAT website. Accompanying data in ESRI shapefile and geodatabase format is also accessible on this website.

Source: UNITAR-UNOSAT

Link: <http://www.unitar.org/unosat/maps/SYR>

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North America

Canada wildfire – GLIDE number: WF-2016-000043-CAN

In early May 2016, a massive wildfire broke out in the Northern Alberta region of Canada and necessitated the evacuation of an entire city. The International Charter on Space and Major Disasters was activated on 04 May 2016 by GOC Public Safety Canada, and project management was assumed by the Canadian Space Agency (CSA). The NASA Earth Observatory has since released several maps of the wildfire based on satellite imagery from 03, 04 and 05 May 2016. On 03 May 2016, a large burn scar as well as multiple active fires and smoke were visible southwest of downtown Fort McMurray. At the end of the day, all of Fort McMurray had been ordered to evacuate, signifying the largest evacuation on record in Canada. By 04 May 2016, the fire had burned 100 square kilometers and reached Fort McMurray, leaving even bigger burn scars on both sides of the Athabasca River. Many active fires were also visible on 04 May 2016 within and outside of Fort McMurray. As of 05 May 2016, the wildfire had burned through 850 square kilometers. Vast areas of burn scars could be seen in the vicinity of Fort McMurray and many active fires were still detected. Map products are available for online viewing and download in JPEG format on the NASA Earth Observatory website.

Source: NASA Earth Observatory

Links: <http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=87985&eocn=home&eoci=nh>

<http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=87992&eocn=home&eoci=nh>

<http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=87990&eocn=home&eoci=nh>

South America

Ecuador earthquake – GLIDE number: EQ-2016-000035-ECU

On 16 April 2016, a 7.8 magnitude earthquake struck near the town of Muisne on the western coast of Ecuador. The International Charter on Space and Major Disasters was activated on 17 April 2016 by UNITAR-UNOSAT on behalf of UN OCHA. UNITAR-UNOSAT recently published a preliminary satellite based damage assessment report. Together with the Copernicus Emergency Management Service, a total of 1,790 buildings were identified as impacted by the earthquake. Of these, 110 were educational and health facilities, as well as other important buildings. A co-seismic and post-seismic landslide assessment in collaboration with the British Geological Survey is also described in the report. Copernicus released new maps of damage in La Unión, La Concordia, Pichincha, El Carmen, Guale, Quinindé, Las Villegas, south Esmeraldas, north and south Portoviejo. Using satellite imagery acquired 19 April 2016, 02 and 03 May 2016, it found 103 damaged structures and 510 affected inhabitants. Report, map products and data are available for download in various formats on the International Charter on Space and Major Disasters, UNITAR-UNOSAT, and Copernicus Emergency Management websites.

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Sources: International Charter on Space and Major Disasters, UNITAR-UNOSAT, Copernicus Emergency Management Service

Links: <https://www.disasterscharter.org/web/guest/-/earthquake-in-ecuador>

<http://www.unitar.org/unosat/maps/ECU>

<http://emergency.copernicus.eu/mapping/list-of-components/EMSR159>

This summary is compiled by the GDACS mapping & satellite imagery coordination mechanism, operated by the UNITAR Operational Satellite Applications Programme (UNOSAT).

When referring to this summary, please credit: GDACS, UNITAR-UNOSAT.

For comments, questions and to submit information on satellite image derived products, please contact: maps@gdacs.org

Sources indicate satellite analysis production entities and imagery providers. The products referenced in this summary are based on remote satellite imagery and may not be validated in the field prior to release, in which case findings are based only on what is observed in the satellite imagery.

**Not an official GLIDE number, as event has no entry in GLIDE database, but used by GDACS for seamless information integration.*