

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 25 May 2015

Africa

Niger complex emergency – GLIDE number: TBD

In February 2015, Niger declared an emergency in the region of Diffa following Boko Haram attacks. In an effort to monitor the humanitarian situation in part of Diffa, REACH recently released an overview map for the village of Gaidam Tchoukou and part of Chetimari. Using satellite imagery acquired in 2015, REACH identified human-powered water pumps, public water fountains, schools, and inoperative infrastructure. As of 16 May 2015, only one school and one water pump were operational in Gaidam Tchoukou. The school was composed of 67 students, eight of whom were likely displaced by violence. This map product is available for online viewing and download as a PDF on the REACH website.

Source: REACH

Link: http://www.reachresourcecentre.info/system/files/resource-documents/ner_diffa_gaidamtchoukou_infrastructures_16mai2015_a3_fr_v1.pdf

South Sudan complex emergency – GLIDE number: CE20131218SSD

As a result of continuous violence in South Sudan, the village of Ngop in Unity State recently experienced significant structural damage. UNITAR-UNOSAT analyzed satellite imagery collected 17 May 2015 and produced a rapid damage assessment. More than 250 damaged structures were identified within the immediate area of Ngop village. All of the structures were likely burnt, with clear signs of scorched structural remains and ash residue visible. cursory examination of the surrounding few kilometers indicated that dozens of nearby structures outside of Ngop were also burned. This rapid damage assessment is available for download as a PDF on the UNITAR-UNOSAT website.

Source: UNITAR-UNOSAT

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

Asia

Guam, Northern Mariana Islands typhoon – GLIDE number: TBD

A strong typhoon named Dolphin traversed the Northern Mariana Islands and struck Guam with strong winds and torrential rain on 15 May 2015. The International Charter on Space and Major

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Disasters was activated that same day by the USGS on behalf of FEMI and project management was assumed by the Pacific Disaster Center. The German Aerospace Center (DLR) recently analyzed flood waters in the southernmost Mariana Islands territory of Rota after Dolphin's passing. Satellite imagery acquired 16 May 2015 was used to produce a flood map. Flood waters appeared to be most prevalent in the western portion of Rota Island. Some flood waters were also detected to the east within and surrounding Rota International Airport. In addition to the DLR, NASA continued to monitor the typhoon this past week and released recent satellite images of the storm from 20 and 21 May 2015. The DLR flood map is available for online viewing and download in JPEG format on the International Charter on Space and Major Disasters' website. Satellite images from NASA can also be viewed online or downloaded in JPEG format on the NASA website.

Sources: International Charter on Space and Major Disasters, NASA

Links: <https://www.disasterscharter.org/web/guest/-/cyclone-in-northern-mariana-islands>

<http://www.nasa.gov/feature/dolphin-was-07wsystem-93w-nw-pacific-ocean>

Nepal earthquake – GLIDE number: EQ-2015-000048-NPL

On 25 April 2015, Nepal experienced a 7.9 magnitude earthquake which caused over eight thousand deaths as well as widespread damage and destruction. The International Charter on Space and Major Disasters was activated the same day by the Disaster Management Support (DMS) Programme Office, Indian Space Research Organisation (ISRO), and UNITAR-UNOSAT, the latter activated on behalf of UNICEF. In order to provide an ongoing record of satellite imagery analysis results over Nepal, UNITAR-UNOSAT continues to update the GDACS LIVE web map which combines multiple image analysis products from the United States National Geospatial-Intelligence Agency (NGA), the Copernicus Emergency Management Service, and UNITAR-UNOSAT. This tool is open to contributions from all entities deriving information from satellite imagery. Crowd-sourced UN-ASIGN field photos that have been georeferenced are also provided in near real time in the web map. The Copernicus Emergency Management Service recently produced delineation maps for Gumda, East Gumda, and East Sirdibas using satellite imagery acquired 02 and 08 May 2015. Landslides and affected settlements in Gumda and East Gumda are depicted in the maps, as well as a delineated area of interest for East Sirdibas. All aforementioned map products are available for online viewing and download in various formats on their respective websites listed below.

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

Links: <https://www.disasterscharter.org/web/guest/-/landslide-in-nep-2>

<https://unosatgis.cern.ch/live/EQ20150425NPL/>

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

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<http://emergency.copernicus.eu/mapping/list-of-components/EMSR125>

Europe

Italy phytosanitary emergency – GLIDE number: EMSR124*

A phytosanitary emergency took hold over the Apulia region of Southern Italy in early April 2015. *Xylella fastidiosa* is a bacterium that causes disease in vegetation and has resulted in a rapid decline of olive trees in this part of Italy. The Copernicus Emergency Management Service created an internal activation for this event on 24 April 2015 in order to aid Civil Protection authorities with planning and logistics for field operations. Copernicus continues to monitor the situation and recently released new delineation maps with 04 May 2015 background imagery for San Donaci, San Pietro Vernotico, San Pancrazio Salentino West, Torre Colimena, Casalabate, San Pancrazio Salentino, Cellino San Marco, Campo Di Mare, Avetrana, and Torchiarolo. Approximately 6,776.14 hectares of crop land were found to be treated in these areas and 3,852 vineyards, bushes, fruit and olive trees were eradicated. Map products are available in TIFF, PDF, and JPEG formats as well as a downloadable zipped vector package on the Copernicus Emergency Management Service website. Data can also be accessed in GeoTIFF, GeoPDF, GeoJPEG and vector (shapefile and KML) formats.

Source: Copernicus Emergency Management Service

Link: <http://emergency.copernicus.eu/mapping/list-of-components/EMSR124>

Middle East

Yemen complex emergency – GLIDE number: CE20150402YEM

Ongoing conflict in Yemen has caused parts of the country to suffer from significant damage and destruction. UNITAR-UNOSAT recently published a damage assessment for the city of Sadah. Using satellite imagery acquired 17 May 2015 and 07 January 2015, UNITAR-UNOSAT identified a total of 1,171 affected structures within the city. Approximately 273 of these were destroyed, 271 severely damaged, and 627 moderately damaged. Additionally, 35 impact craters were found in the city, the majority of which were located along the runway of Sadah City Airport. A total of 4 medical facilities were identified within 100 meters of damaged and destroyed buildings and it is possible that these facilities also sustained some damage. This map is available for download as a PDF on the UNITAR-UNOSAT website. Accompanying data in ESRI shapefile and geodatabase format are also provided.

Source: UNITAR-UNOSAT

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

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South America

French Guiana algae bloom – GLIDE number: EMSR126*

An ongoing algae bloom in the coastal area of French Guiana has caused significant concern due to its ecological and economic impacts. The Copernicus Emergency Management Service created an internal activation for this event on 20 May 2015 in order to aid France’s Operational Center for the Interministerial Management of Crises (COGIC). Using satellite imagery acquired 10, 12 and 17 May 2015, Copernicus produced a delineation map of algal blooms off the French Guiana coast. A total of 2,987 hectares of floating algae and 8,791 submerged algae were detected. This map product is available in TIFF, PDF, and JPEG formats as well as a downloadable zipped vector package on the Copernicus Emergency Management Service website. Data can also be accessed in GeoTIFF, GeoPDF, GeoJPEG and vector (shapefile and KML) formats.

Source: Copernicus Emergency Management Service

Link: <http://emergency.copernicus.eu/mapping/list-of-components/EMSR126>

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.*