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 31 October 2016

Africa

Nigeria complex emergency – GLIDE number: CE20140617NGA

Ongoing conflict in Nigeria has led to a significant internal displacement of the country's population. UNITAR-UNOSAT released a new map of shelters for internally displaced persons in Borno state's Sangaya settlement and the surrounding town of Dikwa. Analysis of satellite imagery acquired 29 September 2016 revealed a total of 433 shelters and 54 infrastructure and support buildings within the Sangaya compound. Additionally, a total of 2,259 shelters were identified in the surrounding town. A density analysis was also performed to highlight areas with the most shelters, ranging from 400 to 10,500 shelters per square kilometer. This map product is available for download on the UNITAR-UNOSAT website. Accompanying data in shapefile and ESRI geodatabase format is also accessible on this website.

Source: UNITAR-UNOSAT

Link: https://www.unitar.org/unosat/maps/NGA

Caribbean

Haiti tropical cyclone – GLIDE number: TC-2016-000106-HTI

Tropical cyclone Matthew made landfall over the west coast of Haiti on 04 October 2016. The International Charter on Space and Major Disasters was activated on 03 October 2016 by the USGS on behalf of the Pacific Disaster Center. UNITAR-UNOSAT recently produced a new damage assessment report and maps for areas in the Grand South departments of Haiti. Using satellite imagery from 07, 09, 12 and 17 October 2016, UNITAR-UNOSAT analyzed a total area of approximately 810 square kilometers in the communes of Jérémie, Roseaux, Abricots, Dame-Marie, Anse-d'Hainault, Les Irois, and Tiburon. It identified a total of 26,604 damaged structures, 1,381 temporary people gathering sites, and 351 road obstacles. All products are available for download as PDFs on the UNITAR-UNOSAT website. Accompanying data in shapefile and ESRI geodatabase format is also accessible on this website. Map products may also be viewed online or downloaded in JPEG format on the International Charter on Space and Major Disasters website.

Sources: International Charter on Space and Major Disasters, UNITAR-UNOSAT

Links: https://www.disasterscharter.org/web/guest/-/cyclone-in-haiti

http://www.unitar.org/unosat/maps/HTI

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Europe

Italy earthquake – GLIDE number: EMSR190*

Following a devastating earthquake in August 2016, a 5.4 magnitude quake struck central Italy on 26 October 2016. In response to this event, the Copernicus Emergency Management Service created an internal activation. It has since produced several maps of the situation for the Italian Civil Protection Department. In the most recent analysis of satellite imagery acquired 27, 28 and 30 October 2016, a total of 533 impacted settlements and 997 affected residents were found in different parts of the Umbria and Marche regions. On 30 October 2016, central Italy experienced another earthquake with a 6.6 magnitude. Reportedly, this was the strongest tremor to hit the country in more than three decades, and it has been followed by many aftershocks. Map products are available for download in TIFF, PDF, and JPEG formats on the Copernicus Emergency Management Service website. Accompanying zipped vector packages are also provided on this website.

Source: Copernicus Emergency Management Service

Link: http://emergency.copernicus.eu/mapping/list-of-components/EMSR190

Middle East

Iraq complex emergency – GLIDE number: CE-2016-000109-IRQ

The al-Mishraq sulfur plant was set ablaze recently, as fighting for the Iraqi city of Mosul intensified. Oil well fires have also been burning, some of which were active since the summer of 2016. UNITAR-UNOSAT and the NASA Earth Observatory published maps of the fires. Satellite imagery acquired between 18 July 2016 and 24 October 2016 was analyzed by UNITAR-UNOSAT. In a subsequent map, the frequency of smoke plumes occurring between these dates from fires at the Qayyarah oil field is shown. The most affected settlements are displayed as well. The NASA Earth Observatory collected 22 October 2016 satellite imagery of the burning sulfur plant. As of this date, a white-grey plume of sulfur dioxide could be seen rising out of the facility. To the south of the plant, a plume of black smoke was also visible streaming from the Qayyarah oil field. High concentrations of sulfur dioxide can lead to health problems. At least two deaths resulted from inhaling the sulfur fumes and 1,000 people have been treated for breathing issues. Map products are available in various formats on their respective websites. Accompanying data for the UNITAR-UNOSAT analysis is also accessible in shapefile and ESRI geodatabase format on its website.

Sources: UNITAR-UNOSAT, NASA Earth Observatory

Links: http://www.unitar.org/unosat/maps/IRQ

http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=88994&eocn=home&eoci=nh

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Oceania

Australia floods – GLIDE number: EMSR184*

Starting on 24 September 2016, heavy rain fell over southeast Australia. Roughly 34,000 square kilometers of the Lachlan river catchment flooded and hundreds of residents were evacuated. The International Charter on Space and Major Disasters was activated on 26 September 2016 by Geoscience Australia. In an effort to monitor the aftermath, the Copernicus Emergency Management Service released new maps of the situation in the Eubalong and Hillston FMP areas. Satellite imagery acquired 19, 20 and 26 October 2016 was analyzed, and a total flooded area of approximately 24.8 square kilometers was observed in these locations. Additionally, 3.6 kilometers of roads and 91 inhabitants were affected in Eubalong. Map products are available for download in TIFF, PDF, and JPEG formats on the Copernicus Emergency Management website. Accompanying zipped vector packages are also provided on this website.

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

Links: https://www.disasterscharter.org/web/guest/-/flood-in-austral-2

http://emergency.copernicus.eu/mapping/list-of-components/EMSR184

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.*