

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 03 August 2015

Africa

Niger complex emergency – GLIDE number: TBD

The Diffa region of Niger is home to many refugees living outside of traditional camps. According to the UNHCR, limited social services and a precarious socio-economic situation in Niger have led to problems between host communities and refugees. In order to aid humanitarian efforts, REACH recently produced several maps of infrastructure within villages situated in the Diffa region. Villages that were examined include Ambouram Ali, Ambouram Abakaram, Abounga, Abasiri, Yabal, Marwey, Souleri Abounga, Jirikolo, N’Guelkiari, Fogue Maloumdi, N’Guel Doubedje, Kororowa, Kelloumiri, Kanamma Ligaridi, Issari Bagara, Gamsa, Gagamari, Djet Kori, and Boureim N’Guidjiram. Using satellite imagery, REACH identified clinics, schools, markets, stores, water fountains, wells, pumps and latrines in the villages. Additional information specific to each infrastructural feature is also included in the maps. Map products are available for online viewing and download as PDFs on the REACH website.

Source: REACH

Link: http://www.reachresourcecentre.info/advanced-search?name_list%5B%5D=NE&field_document_type_tid%5B%5D=4

Asia

Indonesia volcano – GLIDE number: TBD

Activity from the Mount Raung stratovolcano on Indonesia’s Java Island continued into late July 2015. This latest eruption has been ongoing for roughly four weeks with ash emissions and significant lava flow. The NASA Earth Observatory collected satellite imagery of the eruption on 27 July 2015 and produced a situational overview map. As of this date, ash and volcanic gases were visible moving in a northwest direction from the caldera of Mount Raung. In previous eruptions, ash had floated up to altitudes of four to five kilometers and drifted 100 to 200 kilometers away. According to records from the Smithsonian Global Volcanism Program, Mount Raung has erupted at least 13 times in the last 25 years. Its recent activity caused several flight cancellations and airport closures in the past month. Maps of the eruption are available for online viewing and download in GeoTIFF and JPEG format on the NASA Earth Observatory website.

Source: NASA Earth Observatory

Link: <http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=86318&eocn=home&eoci=nh>

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Myanmar floods – GLIDE number: FL-2015-000089-MMR

Torrential rainfall at the onset of the monsoon season has caused severe flooding in several parts of Myanmar. Sagaing and three other western regions were declared disaster zones by the government. UNITAR-UNOSAT released a map of flood waters over the Kawlin, Kanbalu, Taze and Kyunhla townships in the center of Sagaing State. Using satellite imagery acquired 30 July 2015, compared with 18 July 2015 and 29 April 2015 imagery, UNITAR-UNOSAT observed a notable increase in the expansion of a reservoir north of Shwebo City in the Sagaing region. Many other inundated areas included swamps which are regularly flooded during the rainy season and as the river expands. This map product is available for download as a PDF on the UNITAR-UNOSAT website. Accompanying data in ESRI shapefile and geodatabase formats are also provided. Additionally, a satellite mapping and coordination system (SMCS) event page with an overview of planned, in progress, and completed imagery analysis is available on the UNITAR-UNOSAT website.

Source: UNITAR-UNOSAT

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

Pakistan floods – GLIDE number: FL20150723PAK

Flash floods caused by torrential monsoon rains from mid to late July 2015 devastated northern and eastern Pakistan. UNITAR-UNOSAT recently published flood maps and a GDACS live web map. UNITAR-UNOSAT analysis of satellite imagery acquired 26, 27 and 28 July 2015 revealed flood affected land in the Lahore and Mangla areas of the Northern Punjab Province. Some agricultural areas along the Jhelum River were likely inundated and waters in the Mangla Dam basin increased. An underestimation of flood waters along main river banks and within in highly vegetated and urban areas is possible due to sensor limitations. These map products are available for dynamic viewing on the GDACS live map and download as PDFs on the UNITAR-UNOSAT website. Accompanying data in ESRI shapefile and geodatabase formats are also provided. Additionally, the SMCS event page is accessible on the UNITAR-UNOSAT website for an overview of planned, in progress, and completed imagery analysis.

Source: UNITAR-UNOSAT

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

Russia wildfires – GLIDE number: TBD

In late July 2015 wildfires burned near the shoreline of Lake Baikal, the world's largest freshwater body. Lake Baikal is currently at its lowest level in more than 30 years and its waters are expected to continue dropping. As a result of lower water levels these past few months, peat reserves are drying and making the area more prone to wildfires this summer. The NASA Earth Observatory acquired satellite imagery over Lake Baikal on 27 July 2015 and produced an overview map. As of this date, dozens of satellite detected wildfires were visible burning within the immediate vicinity of the lake

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and its surroundings. 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=86297&eocn=home&eoci=nh>

Vietnam floods – GLIDE number: FL-2015-000098-VNM

Northern Vietnam experienced its heaviest precipitation in forty years when torrential rainfall began in late July 2015. In response to this event, the International Charter on Space and Major Disasters was activated on 30 July 2015 by UNITAR-UNOSAT on behalf of UN ESCAP. UNITAR-UNOSAT recently released a map of satellite detected waters in the Song Lach Tray delta near Hai Phong City in northern Vietnam. Analysis of satellite imagery acquired 31 July 2015 and 19 June 2015 revealed a total of approximately 30,000 hectares of flooded land in this area. Many flooded regions were in close proximity to Ha Long Bay in the Gulf of Tonkin, which is a UNESCO World Heritage Site. Weather forecasts predict that rainfall over Vietnam will continue into the first week of August, with the potential of causing more floods and landslides. The aforementioned map product is available for download as a PDF on the UNITAR-UNOSAT website. Accompanying data in ESRI shapefile and geodatabase formats are also provided. Additionally, an SMCS event page is accessible on the UNITAR-UNOSAT website for an overview of planned, in progress, and completed imagery analysis.

Source: UNITAR-UNOSAT

Link: <https://www.unitar.org/unosat/maps/VNM>

Middle East

Syria complex emergency – GLIDE number: CE20130604SYR

As a result of ongoing conflict in Syria, citizens continue to flee the violence in search of refuge. REACH recently published a general infrastructure map for the Sujjo IDP camp located in the A'Zaz District of Aleppo Governorate, Syria. Using satellite imagery acquired 15 June 2015, REACH identified camp caravans, residential tents, latrines, water points, WASH infrastructure, schools, community spaces, warehouses, management offices, and roads. As of 15 June 2015, a total of 901 households and 5,284 individuals resided within the camp. 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/reach_syr_sujjo_ccm_a2_28jul2015_v3.pdf

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North America

United States algae blooms – GLIDE number: TBD

In July 2015 the Great Lakes region of the United States experienced a rapid proliferation of algae blooms. Algae blooms are important to monitor since they can adversely affect the safety of water for consumption and recreation, as well as cause harm to aquatic ecosystems. The NASA Earth Observatory acquired satellite imagery of algal blooms in western Lake Erie and Lake St. Clair on 28 July 2015 and produced two overview maps. Vast expanses of algae blooms were visible in both lakes at this time. Research from 2011 has confirmed that such large blooms result from a combination of phosphorus from agricultural runoff as well as favourable weather and lake conditions. As of 30 July 2015, the quality of drinking water in the affected areas was reported to be safe. Map products are 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=86327&eocn=home&eoci=nh>

United States wildfires – GLIDE number: TBD

Several parts of the United States were affected by wildfires during July 2015. Alaska experienced the most intense year of wildfires in its recorded history this past year with two million hectares burned. The most damage was caused by wildfires near the central Alaskan town of Tanana. On 24 July 2015, the NASA Earth Observatory acquired satellite imagery over this area and identified multiple large expanses of land covered by burn scars. Meanwhile in north-central Washington State, a wildfire along the shores of Lake Chelan was triggered by lightning on 29 July 2015. The NASA Earth Observatory collected 01 August 2015 satellite imagery of this fire and observed a total of 16 square kilometers of burnt area. By 03 August 2015, the fire had burned through 65 square kilometers of land. In northern California, thousands of acres were burned as a result of several sizeable wildfires. As of 03 August 2015, the largest fire had burned through 60,000 acres in the counties of Lake, Yolo and Colusa. Farther north, two other wildfires burned 39,000 acres. The NASA Earth Observatory acquired satellite imagery from 02 August 2015 over these areas. A few dozen wildfires with billowing smoke plumes were visible at that time. Map products illustrating these fires are available for online viewing and download in GeoTIFF and JPEG format on the NASA Earth Observatory website.

Source: NASA Earth Observatory

Links: <http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=86311&eocn=home&eoci=nh>

<http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=86338&eocn=home&eoci=nh>

<http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=86335&eocn=home&eoci=nh>

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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:

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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.*