

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 22 June 2015

Asia

Myanmar land cover – GLIDE number: OT20150413MMR

Over the last few decades, the land cover in Myanmar's Rakhine Province has experienced substantial change. In order to better understand this evolution, UNITAR-UNOSAT recently produced three land cover classification maps as part of its work for REACH. Satellite images from various dates in 1988, 2000, 2002, and 2015 were analyzed and land cover classifications were derived that included forest, vegetation, bare soil, agriculture, and mangroves. A comparison of the classifications revealed that while the amount of forest and vegetated areas fluctuated over time, bare soil as well as agriculture increased and mangroves decreased. Several of the retracted mangrove areas were transformed into agriculture, most likely consisting of paddy fields. These land cover classification map products are available for download as PDFs on the UNITAR-UNOSAT website.

Source: UNITAR-UNOSAT

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

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. UNITAR-UNOSAT recently published maps of the Sujjo IDP Camp in the A'Zaz District of Syria's Aleppo Governorate and the Oncunipar Refugee Camp located in the Merkez District of Turkey's Kilis Province. An analysis of 05 June 2015 satellite imagery located a total of 955 shelters as well as 74 infrastructure and support buildings within the 12 hectares of the Sujjo IDP Camp. Using satellite imagery from the same date, a total of 2,469 shelters as well as 67 infrastructure and support buildings were identified within the 40.7 hectares of the Oncunipar Refugee Camp. A new area of 10 hectares had been built in the Oncunipar Refugee Camp since December 2014 and contained 506 of the 2,469 shelter structures. These map products are available for download as PDFs on the UNITAR-UNOSAT website. Accompanying shapefiles and geodatabases in ESRI format are also accessible.

Source: UNITAR-UNOSAT

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

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North America

United States wildfires – GLIDE number: TBD

During the month of June 2015, wildfires occurred in the states of Alaska and California. In southern Alaska, a wildfire near the town of Willow began on 14 June 2015 and by 16 June 2015 had burned through 30 square kilometers of land. The NASA Earth Observatory obtained satellite imagery of the fire on 15 June 2015 and created a situational overview map. At this time, wildfires were visible burning to the west of Kashwitna Lake and south near Willow. Large plumes of smoke moving southward and burn scars around Kashwitna Lake could also be observed. As of 17 June 2015, the fire had stabilized and did not show further signs of growth. Another wildfire occurred in southern California on 17 June 2015 near the San Bernadino National Forest. The NASA Earth Observatory acquired 18 June 2015 satellite imagery of this fire and produced an overview map. The area of the fire was outlined in the map and a large plume of smoke was visible moving northeast toward the state of Arizona. By 22 June 2015, the wildfire was 6.9 hectares in size and 500 structures were threatened. These 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=86066&eocn=home&eoci=nh>
<http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=86083&eocn=home&eoci=nh>

United States snowpack – GLIDE number: TBD

Washington and Oregon experienced a decline in normal seasonal snowpack in June 2015. Concerns of drought arose since the region depends on snowpack melt for most of its summertime fresh water supply. The NASA Earth Observatory acquired satellite imagery of the situation in Washington and northern Oregon on 11 June 2015 and created an overview map. As of this date, the presence of diminished snowpacks was detectable and glaciers, which last beyond a single melt season, were visible in the Cascade and Olympic Mountains. Seasonal snowpack in Washington had disappeared by 09 June 2015 and, according to the U.S. Department of Agriculture, the peak of snowpack season in western Oregon was 60 to 90 percent below normal. 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=86051&eocn=home&eoci=nh>

United States tropical storm – GLIDE number: TBD

A tropical storm named Bill made landfall over the Texan Matagorda Island on 16 June 2015. The NASA Earth Observatory collected satellite imagery of the storm that same day and published an overview map. Bill was visible hovering over Matagorda Island, Houston, and the Gulf of Mexico on

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16 June 2015 and the National Hurricane Center estimated that the tropical storm's sustained winds reached 95 kilometers per hour. By 17 June 2015, the storm was downgraded to a tropical depression as it moved east of Austin, though impacts included coastal flooding and flash flood emergencies for parts of Texas and Oklahoma. As of 20 June 2015, Bill had transformed further into a post-tropical cyclone and moved over eastern Kentucky. 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=86070&eocn=home&eoci=nh>

South America

Brazil floods – GLIDE number: TBD

Continuous flooding has occurred in Brazil since April 2015 and affected more than 250,000 people as well as 39 cities. On 11 June 2015, the International Charter on Space and Major Disasters was activated by the Brazilian Disaster and Risk Management National Center (CENAD). The CENAD recently published two maps of flooded areas in the cities of Itacoatiara and Codajas, located in the Amazonas State of Brazil. Using satellite imagery from 17 June 2015, the CENAD identified several flooded areas within the city of Itacoatiara and along the banks of the Amazonas River. Analysis of satellite imagery from the same date also revealed flooding in the majority of Codajas, situated along the Solimoes River. These maps 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-braz-3>

French Guiana algae bloom – GLIDE number: EMSR126*

An algae bloom in the coastal area of French Guiana caused significant concern in May and June 2015 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). Copernicus continues to monitor the situation and produced two new maps of the affected coastal area. Analysis of satellite imagery acquired 10 June 2015 revealed a total of 50.42 hectares of algae and 187.37 hectares of submerged algae located off the French Guiana coast, west of Cayenne. Upon examination of more recent satellite imagery from 17 June 2015, no floating or submerged algae were detected in the area of interest. These 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.

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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.*