

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 01 April 2014

Africa

Guinea epidemic – GLIDE number: EP-2014-000041-GIN

Guinea has experienced many cases of febrile illness, some of which were confirmed as Ebola on 21 March 2014. Since the principal vectors of this virus are bats living on oil palms, epidemiologists are now searching for areas of palm oil cultivation in order to identify areas with potential patients. To assist humanitarian aid operators in planning and logistics, the Copernicus Emergency Management Service created overview and detailed reference maps of northeast Guekedou. Satellite imagery acquired 12 March 2014 was used to identify areas of palm oil cultivation and nearby hamlets. The area of interest, home to an estimated population of 1,709 inhabitants, revealed 6.43 hectares of palm oil cultivation, as well as 3,471 hectares of land covered with scrub and sparse palms. Map products and data are available in JPEG, PDF, and TIFF formats as well as a downloadable zipped vector package. 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/EMSR076>

Mozambique other – GLIDE number: ST20140327MOZ*

Precipitation data from the Tropical Rainfall Monitoring Mission (TRMM) was utilized by the UNITAR Operational Satellite Applications Programme (UNOSAT) to produce a map of estimated total rainfall accumulation for Mozambique, Madagascar, and the southern area of Tanzania from 20 to 25 March 2014. TRMM estimated rainfall ranges from zero to more than 360 millimeters during this period. The most significant precipitation occurred in Mozambique's provinces of Cabo Delgado, Nampula, and Inhambane, as well as the Madagascar provinces of Antananarivo, Antsiranana, Mahajanga, and Toamasina. Levels of precipitation may be underestimated for local areas, and cannot replace ground station measurements. This map product is available for download as a PDF on the UNITAR/UNOSAT website.

Source: UNITAR/UNOSAT

Link: <http://www.unitar.org/unosat/node/44/1964>

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South Sudan complex emergency – GLIDE number: OT-2014-000001-SSD

As a result of escalating violence in South Sudan during the month of December 2013, over 30,000 civilians sought refuge in United Nations facilities. In an effort to observe the progression of this situation, the UNITAR Operational Satellite Applications Programme (UNOSAT) recently produced a map depicting the relative spatial density of damaged structures in Malakal, Upper Nile State, South Sudan. Using satellite imagery acquired 18 January 2014 and 15 March 2014, UNITAR/UNOSAT identified 10,082 destroyed structures (more than 20% of overall total), the majority of which are situated in the central and southwestern parts of the city, as well as along the main eastern road. This map product is available on UNITAR/UNOSAT's website for download as a PDF.

Source: UNITAR/UNOSAT

Link: <http://www.unitar.org/unosat/node/44/1962>

Zambia other – GLIDE number: ST20130324ZMB*

The UNITAR Operational Satellite Applications Programme (UNOSAT) recently used precipitation data from the Tropical Rainfall Monitoring Mission (TRMM) to create a map of estimated total rainfall accumulation in Zambia from 20 to 25 March 2014. TRMM estimated rainfall ranges from zero to more than 120 millimeters during this time, with the most significant precipitation occurring in the provinces of Luapula, Northern, and North-Western. Levels of precipitation may be underestimated for local areas, and cannot replace ground station measurements. This map product is available for download as a PDF on the UNITAR/UNOSAT website.

Source: UNITAR/UNOSAT

Link: <http://www.unitar.org/unosat/node/44/1963>

South America

Brazil floods – GLIDE number: TBD

In February of 2014, a state of emergency was declared in Brazil due to flooding from heavy rain in the country's northern regions. As of 19 March 2014, water levels rose to 19 meters above normal and forecasters predicted an ongoing rise until the end of the month. Subsequently, the International Charter Space and Major Disasters was activated by the Brazilian Disaster and Risk Management National Centre (CENAD) on 21 March 2014. The Brazilian National Institute for Space and Research (INPE) analyzed satellite imagery from 23 and 25 March 2014 and produced two flood maps for the towns of Porto Velho, Mutum-Parana District and Jaci Paraná, Rondônia District. The maps show that flood waters along the Madeira River have significantly affected both towns, as well as portions of Highway BR-364 running through them. Map products are available for online viewing and download in JPEG format on the International Charter Space and Major Disasters' website.

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Source: International Charter Space and Major Disasters

Link:

http://www.disasterscharter.org/web/charter/activation_details?p_r_p_1415474252_assetId=ACT-483

North America

United States of America landslide – GLIDE number: LS-2014-000040-USA

Weeks of heavy rainfall induced a devastating landslide on 22 March 2014 near Oso, Washington, United States of America. In addition to causing numerous deaths, mud and debris accumulated across the North Fork of the Stillaguamish River, creating a natural dam that blocked the river flow and resulted in flooding. Satellite imagery acquired 23 March 2014 was analyzed by the NASA Earth Observatory and shows landslide debris as well as the resultant barrier lake. Satellite data from 18 January 2014 is also provided on the NASA Earth Observatory website, along with a tool to compare the pre-crisis and post-crisis imagery. Map products are available for download in KML, GeoTIFF, and JPEG formats.

Source: NASA Earth Observatory

Link: <http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=83409&eocn=home&eoci=nh>

Europe

Luxembourg landslide – GLIDE number: EMSR074*

On 14 March 2014 Luxembourg's second largest town of Esch-sur-Alzette experienced a landslide in an industrial waste depository containing potentially hazardous material. In response to this event, the Copernicus Emergency Management Service recently published overview and detailed grading maps of the area of interest for disaster response authorities. Satellite imagery acquired 27 March 2014 shows portions of the Rue d'Esch that have been highly affected or destroyed by the landslide. Although a total area of 6.1 hectares has been affected, settlements and utilities remain unharmed. Map products and data are available in JPEG, PDF, and TIFF formats as well as a downloadable zipped vector package. 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/EMSR074>

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Asia

India fire – GLIDE number: TBD

India's Sri Venkateshwara National Park experienced a large forest fire on 24 March 2014. Using satellite imagery from this date, the NASA Earth Observatory identified and outlined seven separate areas containing fires. Local news reported several forest fires in wildlife reserves and national parks in the Andhra Pradesh hills during the same week. A map of the fires in Sri Venkateshwara National Park is available for online viewing and can be downloaded in JPEG format at the NASA Earth Observatory website.

Source: NASA Earth Observatory

Link: <http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=83402&eocn=home&eoci=nh>

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.*