GDACS
Global Disaster Alert and Coordination System

GDACS is a cooperation framework between the United Nations, the European Commission and disaster managers worldwide to improve alerts, information exchange and coordination in the first phase after major sudden-onset disasters.

United Nations and the European Commission

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 11 March 2014

Africa

Central African Republic complex emergency – GLIDE number: OT-2013-000152-CAF

Since the Central African Republic experienced an outbreak of violence in December 2013, the UNITAR Operational Satellite Applications Programme (UNOSAT) has been monitoring the evolution of this complex emergency. UNITAR/UNOSAT recently released one damage assessment and two maps of an IDP settlement in the capital city of Bangui. The Copernicus Emergency Management Service (EMS) also published maps depicting damage and destruction in parts of Bangui. Using satellite imagery acquired 22 February 2014, UNITAR/UNOSAT identified a total of 1,872 destroyed structures in Bangui and its surrounding area. UNITAR/UNOSAT analysis of imagery from 22 February 2014 also reveals an increase of IDP occupied areas in Bangui's M'Poko Airport from 22.3 hectares on 28 December 2013 to 29 hectares as of 22 February 2014. UNITAR/UNOSAT counted a total of 7,789 structures on the M'Poko Airport grounds, 7,746 of which are shelters and the other 43 are likely administrative support and other structures. UNITAR/UNOSAT map products are available for viewing as PDFs on its website. For the damage assessment, corresponding shapefiles and a geodatabase in ESRI format can also be accessed through UNITAR/UNOSAT's product links. Map products and data created by the Copernicus Emergency Management Service are available on its website in JPEG, PDF and TIFF formats as well as a downloadable zipped vector package.

Source: UNITAR/UNOSAT, Copernicus Emergency Management Service

Links: http://www.unitar.org/unosat/maps/113

http://emergency.copernicus.eu/mapping/list-of-components/EMSR071

Southeast Asia

Indonesia fires – GLIDE number: TBD

On 27 February 2014, Indonesia's Riau Province of Sumatra Island declared a state of emergency due to extensive forest, plantation, and peatland fires. Satellite imagery acquired 28 February 2014 and 07 March 2014 shows Sumatra covered in haze as a result of dense smoke produced by peat forest fires. Analysis of 07 March 2014 satellite data was conducted by the NASA Earth Observatory and reveals 400 fire detections. This signifies that at least one fire was detected in 400 pixels, each measuring one kilometer. Map products outlining each fire are available for online viewing and download on the NASA Earth Observatory website in GeoTIFF, JPEG, and KMZ file formats.

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Source: NASA Earth Observatory

Link: http://earthobservatory.nasa.gov/NaturalHazards/event.php?id=83243

South America

Bolivia floods – GLIDE number: FL-2014-000008-BOL

Since the end of January 2014, torrential rain in Bolivia has caused floods affecting up to 50,000 people, particularly in the central and northern departments of La Paz, Beni, and Pando. On 12 February 2014, the International Charter Space and Major Disasters was activated by the UNITAR Operational Satellite Applications Programme (UNOSAT) on behalf of UNOCHA. UNITAR/UNOSAT has since created a map of flood waters over the department of Beni using satellite imagery from 19 February 2014. While the map depicts pre-flood waters and accentuates inundated areas, the precise limit of the flood waters remains uncertain due to cloud obstruction and the imagery's low spatial resolution. It is likely that detected water bodies reflect an underestimation of all flood-affected areas within the map extent. The Dartmouth Flood Observatory (DFO) has also used satellite imagery to produce two maps of the flood extent in the departments on 24 and 27 February 2014. Although all departments have been affected by this event, the DFO's maps indicate that the department of Beni has experienced the most significant major flooding (occurring every five years or more) and moderate flooding (occurring every 1.3 years or more). The UNITAR/UNOSAT map product is available on its website for viewing as a PDF. DFO maps are accessible on its website as PDF and GeoTIFFs. Accompanying geospatial data is also available in shapefile and KMZ formats on the DFO's website.

Source: UNITAR/UNOSAT, Dartmouth Flood Observatory

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

http://floodobservatory.colorado.edu/RapidResponse/2014Bolivia4117/2014Bolivia.html

Oceania

New Zealand floods – GLIDE number: TBD

Between 04 and 05 March 2014, a powerful storm over New Zealand's South Island resulted in serious flooding in the city of Christchurch. Satellite imagery from 06 March 2014 was acquired by the NASA Earth Observatory and compared with pre-flood satellite data from 22 February 2014. Although the flood extent is not visible in the 06 March 2014 image, the NASA Earth Observatory notes that the storm's aftermath is evident in the atypical coloration of coastal waters. Large amounts of suspended sediment were transported from rivers to the ocean, rendering its usual dark

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blue color to appear tan. Additionally, sediment pushed upwards from the sea bottom during the storm has caused ocean waters farther offshore to appear aquamarine. Pre-crisis and post-crisis map products are available for online viewing and download on the NASA Earth Observatory website in JPEG format.

Source: NASA Earth Observatory

Link: http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=83299&eocn=home&eoci=nh

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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.