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 07 March 2016

Africa

Mozambique complex emergency – GLIDE number: CE20160204MOZ

As a result of conflict between government forces and the opposition Mozambican National Resistance, the number of people fleeing Mozambique in search of asylum in Malawi has increased considerably since mid-December 2015. Located in Mwanza district, roughly 100 kilometers south of the Malawi capital of Lilongwe, the village of Kapise had received 6,013 new arrivals as of 18 February 2016. The majority of refugees in this group were women and children. UNITAR-UNOSAT recently published a map of the Kapise refugee camp using satellite imagery acquired 26 February 2016. A total of 1,497 structures were identified within the camp on this date. This figure is comprised of 24 administrative buildings, 753 tent shelters, 663 improvised shelters, and 57 semi-permanent structures. With Kapise becoming more crowded each day, the UNHCR has appealed to the Malawi government for a new site farther from the border to be identified for hosting the growing number of refugees. This map product is available for download as a PDF on the UNITAR-UNOSAT website. Accompanying data in ESRI shapefile and geodatabase format is also accessible on this website.

Source: UNITAR-UNOSAT

Link: http://www.unitar.org/unosat/maps/MOZ

Asia

Indonesia mining – GLIDE number: OT20151123IDN

Artisinal and small scale gold mining (ASGM) has become a prevalent activity in parts of Central Kalimantan, Indonesia. While it contributes to the local economy, ASGM also has adverse environmental impacts such as deforestation, land degradation, mercury emissions into the atmosphere and surface waters, etc. In collaboration with UNEP, UNITAR-UNOSAT released several land cover classification maps and a report detailing ASGM activities along the Kahayan, Kapuas, Galangan and Katingan catchment areas. Analysis of satellite imagery collected on various dates in 2002, 2005, 2014 and 2015 revealed general trends of decreasing dense vegetation/forest, substantial growth of agriculture, and varying degrees of increase for mine affected areas as well as exposed soils. Affected mining areas increased between 2005 and 2015 by 7,805 hectares along the Kahayan River and by 13,385 hectares along the Kapuas River. From 2002 to 2014 affected mining areas grew by 6,114 in the Galangan and Katingan catchment. All products are available for download as PDFs on the UNITAR-UNOSAT website. Accompanying data in ESRI shapefile and geodatabase format is also accessible on this website.

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Source: UNITAR-UNOSAT

Link: http://www.unitar.org/unosat/maps/IDN

Thailand fires – GLIDE number: TBD

In late February 2016 hundreds of fires burning across Thailand and Cambodia were observed by satellite, most of which affected cropland or grass. The NASA Earth Observatory acquired 01 March 2016 satellite imagery of the fires and produced an overview map. As of this date many wildfires were detected in Thailand as well as some in the neighboring countries of Myanmar and Cambodia. Two of the larger visible smoke plumes emanated from fires burning in Thailand's UNESCO World Heritage sites of Huai Kha Khaeng Wildlife Sanctuary and Khao Yai National Park. Though fires can be advantageous to crops and pasture grass, the smoke they produce degrades air quality. One expert from the Forest Fire Prevention and Suppression Office warned of the possibility of severe haze in northern Thailand which could be the worst the country has experienced since 1998. This map product is available for online viewing or download in JPEG format on the NASA Earth Observatory website.

Source: NASA Earth Observatory

Link: http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=87620&eocn=home&eoci=nh

Central America

Nicaragua volcanic eruption – GLIDE number: TBD

Nicaragua's Momotombo volcano erupted for the first time in more than a century during the month of December 2015. The volcano has since erupted over 80 times, emitting ash plumes and gas into the air as well as occasional deposits of hot lava onto the flanks of Momotombo. The NASA Earth Observatory collected 02 March 2016 satellite imagery of an eruption and created an overview map. As of this date a vast plume of ash was visible moving in a west-southwest direction from the volcano over the town of Puerto Momotombo, the World Heritage site Leon Viejo, and nearby farming villages. New and old lava flows could also be seen on the north and northeast summit of the volcano. Although it experienced a long hiatus in its own activity, Momotombo is located in the middle of a chain of 19 active volcanoes spanning from the northwest to the southeast in western Nicaragua. This is one of the Earth's most active areas both volcanically and seismically. This map product is available for online viewing or 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=87623&eocn=home&eoci=nh

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Oceania

Fiji tropical cyclone – GLIDE number: TC-2016-000014-FJI

Tropical cyclone Winston made landfall over Fiji on 20 February 2016 with Category 5 winds of up to 325 kilometers per hour. A state of emergency was declared by the government as hundreds of homes were destroyed, thousands of people were evacuated, and at least 42 were reportedly killed. The International Charter on Space and Major Disasters was activated by UNITAR-UNOSAT on behalf of UNOCHA on 19 February 2016. UNITAR-UNOSAT recently published new damage assessments for parts of the Ba and Ra provinces in Viti Levu Island, Fiji. Using satellite imagery acquired 26 and 28 February 2016, UNITAR-UNOSAT identified a total of 819 damaged structures in the Rakiraki area, 352 in the Sasa area, 299 in the Vatukoula area, 165 in the Nanukuloa area, and 143 north as well as west of Ba town. As of 29 February 2015, tens of thousands of Fiji residents were living in evacuation centers. Map products are available for online viewing on the International Charter on Space and Major Disasters website and for download as PDFs on the UNITAR-UNOSAT website. Accompanying data in ESRI shapefile and geodatabase format is also accessible on the UNITAR-UNOSAT website.

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

Links: https://www.disasterscharter.org/web/guest/-/cyclone-in-fi-1

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

This summary is compiled by the GDACS mapping & satellite imagery coordination mechanism, operated by the UNITAR Operational Satellite Applications Programme (UNOSAT).
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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.*