

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 12 January 2015

Africa

Southeast Africa floods – GLIDE number: FL20150112MOZ

Southeast Africa has received heavy rainfall since late December 2014, resulting in floods within Mozambique, Zimbabwe, and Malawi. In an effort to identify the most recent rainfall, UNITAR-UNOSAT published maps of estimated rainfall accumulation from 07 to 11 and 12 January 2015 in Mozambique, Zimbabwe, Malawi, Tanzania, Madagascar, and Mauritius. Precipitation data from the Tropical Rainfall Monitoring Mission (TRMM) was used to derive the total estimates which range between zero and 350 millimeters over this period of time. The maps depict the highest estimates of accumulated rainfall situated over northern Mozambique and western Madagascar. These map products are available for download as PDFs on the UNITAR-UNOSAT website.

Source: UNITAR-UNOSAT

Link: <http://www.unitar.org/unosat/maps/90>

Asia

Sri Lanka floods – GLIDE number: FL20141230LKA

During the last two weeks of December 2014, Sri Lanka experienced flooding and landslides as a result of torrential rain. On 29 December 2014 the International Charter for Space and Major Disasters was activated by UNITAR-UNOSAT on behalf of the World Food Program. As project manager, UNITAR-UNOSAT recently published a map of satellite detected water in the Ampara and Batticaloa Districts of Sri Lanka. Satellite imagery acquired 24 November 2014 and 18 December 2014 was used to create a classification of the pre-crisis water extent and probable standing water. Probable standing water extended along coastal areas and the shores of inland lakes, with few large bodies of flood water detected. Nevertheless, many roads and railroads were likely inundated. It is possible that the water was systematically underestimated in highly vegetated areas along main river banks and within built-up urban areas due to particular characteristics of the satellite data. This map product is available for download as a PDF on the UNITAR-UNOSAT website. An accompanying shapefile and geodatabase in ESRI format can also be accessed through UNITAR-UNOSAT's product links.

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

Links: <http://www.unitar.org/unosat/maps/76>

<https://www.disasterscharter.org/web/guest/activations/-/article/flood-in-sri-lanka>

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Europe

Iceland volcano – GLIDE number: TBD

In September 2014 a fissure eruption between Iceland's Bardarbunga and Askja volcanoes created the Holuhraun Lava Field which has since spewed lava and hot gas across more than 84 square kilometers. This is the largest lava flow in Iceland since the Laki eruption in the 18th century. The NASA Earth Observatory acquired satellite imagery of the Holuhraun Lava Field on 03 January 2015 as well as 06 September 2014 and produced two maps. As of 03 January 2015, a plume of steam and sulfur dioxide is visible rising from the eastern section of the field where the lava intersects the Jökulsá á Fjöllum River. Young basaltic rock and fresh lava can also be seen. In the western part of the lava field, a lava lake formed. In comparison with the 06 September 2014 image, the lava field has grown substantially and the lava is now transported in a closed channel on the field's eastern edge rather than through superficial lava rivers just a few months earlier. A comparison tool for viewing the January 2015 and September 2014 maps adjacently is provided. Map products are available for online viewing and download in KML, GeoTIFF, and JPEG format on the NASA Earth Observatory website.

Source: NASA Earth Observatory

Link: <http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=85031>

Middle East

Iraq complex emergency – GLIDE number: TBD

According to the UNHCR, approximately 1,450,568 refugees, IDPs, asylum seekers and stateless persons reside within Iraq. REACH, a joint initiative of ACTED, IMPACT Initiative, and UNITAR-UNOSAT, recently released updated general infrastructure maps of the Gawilan and Domiz refugee camps located in Duhok Governorate. In collaboration with the UNHCR and UNITAR-UNOSAT, REACH acquired and analyzed satellite imagery from 14 and 21 December 2014. General infrastructure depicted in the subsequent maps includes schools, roads, quarters, offices, clinics, markets, water facilities, community areas, etc. The camp perimeters, areas undergoing construction, and an old sector of the Gawilan camp are also delineated. Map products are available for download as PDFs on the REACH website and at the links below.

Sources: REACH, UNHCR, UNITAR-UNOSAT

Links: http://www.reachresourcecentre.info/system/files/resource-documents/reach_irq_syriacrisis_gawilan_overview_28dec2014.pdf

http://www.reachresourcecentre.info/system/files/resource-documents/reach_irq_map_syriacrisis_domiz2_overview_29dec2014_1.pdf

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Middle East storm – GLIDE number: ST20150107PSE

The Middle East has experienced a powerful winter storm that began on 06 January 2015. Named “Huda” or “Zina”, the storm has since affected parts of Lebanon, Syria, Jordan, Palestine, Egypt, and Saudi Arabia. UNITAR-UNOSAT recently released an elevation map of the West Bank in order to help identify low elevation areas in Palestine that are at risk of flooding. The map incorporates elevation data from the Shuttle Radar Topography mission and illustrates landscape and topographic features. Within the West Bank and its surrounding areas, cities and large towns as well as roads and airports have been identified. REACH also published maps of the storm’s impact on the Al Za’atari refugee camp located in Mafraq Governorate, Jordan. REACH identified 09 and 11 January 2015 storm damage including blocked access points and roads, damaged shelters, muddy areas, flooded septic tanks, as well as flooded camp facilities and general areas. Repaired shelters and septic tanks are also marked in some maps. The West Bank elevation map is available for download as a PDF on the UNITAR-UNOSAT website. The REACH maps can be accessed as PDFs through the links below.

Sources: UNITAR-UNOSAT, REACH

Links: <http://www.unitar.org/unosat/maps/32>

http://www.reachresourcecentre.info/system/files/resource-documents/reach_jor_map_zaatari_stormaffectedareassunday_11jan2015_a1.pdf

http://www.reachresourcecentre.info/system/files/resource-documents/reach_jor_map_zaatari_stormaffectedareassunday_11jan2015_a3.pdf

http://www.reachresourcecentre.info/system/files/resource-documents/reach_jor_map_zaatari_stormaffectedareasfriday_9jan2015.pdf

http://www.reachresourcecentre.info/system/files/resource-documents/reach_jor_map_zaatari_stormaffectedareasfriday_9jan2015_a3_0.pdf

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.*