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 December 2014

Africa

Cape Verde volcano – GLIDE number: VO20141124CPV

On 23 November 2014 the Pico de Fogo volcano erupted for the first time since 1995. The Copernicus Emergency Management Service, UNITAR-UNOSAT, and the NASA Earth Observatory recently published maps depicting the situation in Fogo Island, Cape Verde. The Copernicus Emergency Management Service used satellite imagery acquired 24, 26, 29 and 30 November 2014 to monitor the volcano's lava flow progression. As of 30 November 2014 the lava had destroyed an area of 236.8 hectares and affected 3.7 kilometers of local roads. Lava was also visible on the western outskirts of residential areas on 30 November 2014. UNITAR-UNOSAT analysis of satellite imagery acquired 24 and 25 November 2014 revealed 5.7 kilometers of affected roadways in the Caldera area, including the road from the Caldera to Sao Felipe city. As of 25 November 2014, UNITAR-UNOSAT analysis illustrated that the lava flow had progressed near to the villages of Portela, Cha das Caldeiras, and Bangaeira. Satellite imagery acquired by the NASA Earth Observatory showed the situation on 29 November 2014 at a smaller scale. An ash plume moving in a southwest direction was visible and volcanic smog covered a substantial part of the Atlantic Ocean located south of Fogo Island. Copernicus map products and data are available in JPEG, PDF and TIFF 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. UNITAR-UNOSAT map products are available for download as PDFs on the UNITAR-UNOSAT website. An accompanying KML file is provided for the 24 November 2014 UNITAR-UNOSAT analysis as well. The NASA Earth Observatory website provides its map product for online viewing and download in JPEG format.

Sources: Copernicus Emergency Management Service, UNITAR-UNOSAT, NASA Earth Observatory

Links: http://emergency.copernicus.eu/mapping/list-of-components/EMSR111/ALL/ALL

http://www.unitar.org/unosat/maps/111

http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=84819&eocn=home&eoci=nh

West Africa infectious disease – GLIDE number: ID20141010LBR

Due to an outbreak of Ebola in western Africa, the World Health Organization (WHO) declared an International health emergency in August 2014. In response to a worsening situation, the International Charter for Space and Major Disasters was activated on 09 October 2014 by the USGS on behalf of the National Geospatial-Intelligence Agency (NGA) and by UNITAR-UNOSAT on behalf of

the WHO Operations Center. As Project Manager, UNITAR-UNOSAT continues to work with the USGS to obtain and disseminate high resolution satellite imagery of the most heavily affected areas. In support of emergency humanitarian assistance activities UNITAR-UNOSAT also recently published an atlas of Ebola Care Facilities in the countries of Guinea, Liberia and Sierra Leone. The atlas provides detailed crisis satellite imagery coverage over the locations of existing, planned, under construction and closed Ebola Care Facilities in these countries. This atlas is available for download as a PDF on the UNITAR-UNOSAT website. Satellite imagery depicting the situation prior to and following the Ebola outbreak is accessible online through the USGS Hazards Data Distribution System (HDDS) RSS feed.

Sources: UNITAR-UNOSAT, USGS

Links: http://www.unitar.org/unosat/maps/112

http://dds.cr.usgs.gov/ee-data/rss/events/201410_Ebola_Africa.rss

Somalia complex emergency – GLIDE number: CE20130710SOM

As a result of conflict as well as political, security, development, and humanitarian challenges, more than one million internally displaced persons (IDPs) currently reside within Somalia. UNITAR-UNOSAT published a map of IDP shelter changes in Bossaso, Somalia between 02 October 2012 and 20 October 2014. Analysis of satellite imagery acquired between these dates revealed one new IDP settlement and seven expanded IDP settlements by 20 October 2014. Despite these new developments, 6 other IDP settlement areas contracted and 7 settlement areas experienced no change. A total of 10,043 IDP structures occupying an area of 162.73 hectares were detected as of 20 October 2014. The total occupied area represents an increase of 27 hectares since 02 October 2012. This map product is available for download as a PDF on the UNITAR-UNOSAT website.

Source: UNITAR-UNOSAT

Link: http://www.unitar.org/unosat/maps/92

Europe

Italy floods and landslide – GLIDE number: EMSR112*

Following heavy rainfall that started on 10 November 2014, the Northern Italian regions of Liguria and Piemonte experienced flooding and landslides. In order to aid local authorities with ongoing recovery efforts, the Copernicus Emergency Management Service recently released reference maps for Genova, Liguria. The reference maps delineate two specific areas of interest in Genova and illustrate basic topographic features. Hydrology, transportation, settlements and industry within the areas of interest are shown. At present, approximately 34,467 inhabitants reside within these potentially affected zones. Delineation and grading maps for this event will likely follow. Reference

map products and data are available in JPEG, PDF and TIFF 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.

Source: Copernicus Emergency Management Service

Link: http://emergency.copernicus.eu/mapping/list-of-components/EMSR112

Middle East

Syria complex emergency – GLIDE number: CE20130604SYR

Due to the ongoing conflict in Syria, many citizens continue to flee the country in search of refuge. UNITAR-UNOSAT recently published an updated map of the Al Azraq refugee camp located in Az Zarqa Governorate, Jordan. Satellite imagery acquired 11 November 2014 was analyzed and a total of 12,761 structures were detected. This includes 2,690 infrastructure and support buildings as well as 10,071 transitional shelters. Compared with the previous UNITAR-UNOSAT analysis conducted with satellite imagery from 26 April 2014, Al Azraq's infrastructure, support buildings and transitional shelters increased by approximately 74%. Paved and unpaved roads also increased and 9 water storage sites capable of supporting thousands of proximate shelters were identified. The updated map of Al Azraq is available for download as a PDF on the UNITAR-UNOSAT website. An accompanying shapefile and geodatabase in ESRI format are also provided.

Source: UNITAR-UNOSAT

Link: http://www.unitar.org/unosat/maps/98

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.*