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 20 January 2014

Europe

England floods – GLIDE number: TBD

Due to continuous storms and heavy rain from 23 December 2013 onwards, the United Kingdom has experienced significant flooding. As of 06 January 2014, the Environment Agency of England and Wales issued more than 200 flood alerts and the International Charter for Space and Major Disasters was activated. The Environment Agency has since released six flood maps based on optical and radar satellite imagery from 07, 09 and 11 January 2014. The maps cover the county of Somerset and South East England (Cambridge, Milton Keynes, London, Reading, and Worthing), as well as portions of the Severn and Thames rivers. Further analysis from the University of Colorado's Dartmouth Flood Observatory uses satellite imagery to map significant flooding of the upper and lower Cherwell River and the upper and middle Thames River. While the Environment Agency's maps can be accessed online, the Dartmouth Flood Observatory's maps are available in GeoTIFF and KMZ file formats.

Source: Environment Agency (of England and Wales), International Charter Space and Major Disasters

Links:

http://www.disasterscharter.org/web/charter/activation_details?p_r_p_1415474252_assetId=ACT-472

http://floodobservatory.colorado.edu/RapidResponse/2014UnitedKingdom.html

France floods – GLIDE number: EMSR065*

On 02 January 2014, the Brittany region of France experienced strong winds and heavy rains that caused rivers to overflow and resulted in significant damage to towns and agricultural areas, particularly in the provinces of Finistère, Morbihan, and Ille-et-Vilaine. In response to this event, the Copernicus Emergency Management Service released six maps that illustrate the water extent in the areas of Redon, Guipry and Lorient. Post event optical and radar satellite imagery acquired 04 and 05 January 2014 was utilized to create both overview and detailed delineation flood maps of these areas for disaster response authorities. Maps indicate that Redon was the most severely flooded area and that both the Vilaine and Blavet rivers experienced substantial overflow. Map products and data for this event are available in JPEG, PDF and TIFF formats as well as a downloadable zipped vector package. Data can be accessed in GeoTIFF, GeoPDF, GeoJPEG and vector (shapefile and KML) formats.

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.

Source: Copernicus Emergency Management Service

Link: http://emergency.copernicus.eu/mapping/list-of-components/EMSR065

Portugal floods – GLIDE number: EMSR066*

On 06 January 2014, Portugal's west coast was struck by a storm that brought heavy rains and caused significant damage to villages, the coastline, and infrastructure. Upon request from Portugal's National Command for Relief Operations, the Copernicus Emergency Management Service produced thirty-three maps based on satellite imagery that depict the post-flood situation in the Ovar, Sagres, Costa da Caparica, Gafanha da Nazaré, and Vila do Conde areas. Map products and data for this event 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/EMSR066

Middle East

Syria complex emergency – GLIDE number: CE20130604SYR*

In the context of Syria's humanitarian crisis, the UNITAR Operational Satellite Applications Programme (UNOSAT) has been monitoring the situation in two refugee camps for Syrians – Al Azraq and Domiz. While Al Azraq Camp is located in Jordan's Az Zarqa Governorate, Domiz Camp is situated in Iraq's Duhok Governorate. UNITAR/UNOSAT has observed Al Azraq's growth since June of 2013 and recently released its latest update based upon satellite imagery acquired 28 December 2013. In comparison with satellite imagery from 14 September 2013, the amount of infrastructure, support buildings, and shelters present in the camp has increased by approximately 18 percent. The number of paved and unpaved roads has also increased substantially and water as well as sanitation services capable of supporting thousands of proximate shelters are under development in many camp zones. Analysis of Domiz Camp with satellite imagery acquired 25 December 2013 reveals a total of 9,367 standard shelters, 990 improvised structures, and 592 infrastructure and support buildings. Approximately 584 new shelters were detected since UNITAR/UNOSAT's last analysis of the camp which employed satellite data from 21 July 2013. Areas of new expansion were also identified, indicating preparations for the accommodation of additional refugees in the near future. Maps of Al Azraq and Domiz are available for download on UNITAR/UNOSAT's website as PDFs. Product links for Domiz also provide access to accompanying shapefiles and a geodatabase in ESRI format.

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.

Source: UNITAR/UNOSAT

Link: http://www.unitar.org/unosat/maps/108

Africa

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 released damage assessments of Bentiu in Unity State and Bor City in Jonglei State, maps of destruction and IDP camps in Unity State's town of Rubkona, an updated map of IDPs in Juba, Central Equatoria State, and a new map of IDPs in Malakal, Upper Nile State. Using satellite imagery acquired 18 January 2014, UNITAR/UNOSAT identified 1,200 destroyed structures in and around the town of Bentiu. Satellite imagery of Bor City acquired on 15 January 2014 indicates the destruction of 1,066 residential structures and 81 warehouse or commercial structures. Satellite imagery of Rubkona from 13 January 2014 reveals that the majority of the town has been destroyed, mainly by fire. UNITAR/UNOSAT found a total of 3,996 structures that were either burned or otherwise destroyed, both in the town center and in surrounding areas. The same satellite imagery from 13 January 2014 illustrates more than 3.9 hectares of area covered with IDP shelters, administrative support, and other structures at the United Nations Mission in South Sudan's (UNMISS) Rubkona base, in comparison with 2.6 hectares from 02 January 2014 satellite imagery. According to satellite imagery of the UNMISS base at Juba airport, a moderate expansion of total IDP occupied area is observable from 7 hectares on 28 December 2013, to 7.9 hectares by 07 January 2014, and finally 8.9 hectares by 19 January 2014. In the UNMISS Malakal base, IDPs currently occupy more than 8.3 hectares, as evidenced by satellite imagery from 18 January 2014. UNITAR/UNOSAT maps of this complex emergency are available for download as PDFs.

Source: UNITAR/UNOSAT

Link: http://www.unitar.org/unosat/maps/110

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

Following an outbreak of violence last month in the Central African Republic, the UNITAR Operational Satellite Applications Programme (UNOSAT) used satellite imagery acquired 05 and 11 December 2013 to identify possible IDP locations in Bossangoa, Ouham Province. Approximately 26 hectares containing possible IDP shelters were detected in the southern portion of the town and additional area was found in the central part of Bossangoa. An updated map based upon satellite imagery acquired 06 January 2014 confirms that these IDP locations have generally remained stable,

but experienced some increase in IDP density since the previous UNITAR/UNOSAT analysis. No additional IDP locations were detected in the vicinity of Bossangoa. This map is available for viewing as a PDF.

Source: UNITAR/UNOSAT

Link: http://www.unitar.org/unosat/node/44/1904

Réunion Island tropical cyclone – GLIDE number: TBD

On 02 January 2014, tropical cyclone Bejisa reached Réunion Island with winds of up to 220 km/h and heavy rainfall. Using satellite imagery from 04 and 05 January 2014 as well as 28 May 2013, analysis by the Regional Image Processing and Remote Sensing Service (SERTIT) was conducted. SERTIT identified flood traces mainly in residential areas adjacent to the coastline in the northern part of Saint-Paul and potentially damaged buildings, greenhouses, and roads in the Saint-Louis area. Maps can be accessed either online or as KML files. Metadata is also available on SERTIT's website.

Source: Regional Image Processing and Remote Sensing Service, International Charter Space and Major Disasters

Link:
http://www.disasterscharter.org/web/charter/activation_details?p_r_p_1415474252_assetId=ACT-471

South Sudan other – GLIDE number: OT20130511SSD*

Shortly after South Sudan gained its independence in July of 2011, it experienced an influx of returnees and refugees fleeing violence. The UNITAR Operational Satellite Applications Programme (UNOSAT) has been monitoring refugee camps in Maban County, Upper Nile State and in Pariang County, Unity State. It recently released five new maps depicting the situation in the Doro, Batil, Gendrasa, Kaya, and Ajuong Thok refugee camps. Using satellite imagery from 06 and 14 December 2013 as well as 25 November 2013, UNITAR/UNOSAT observed a 12%, 22% and 80% increase in the number of shelters for the Doro (16,042 shelters), Batil (14,639 shelters) and Gendrasa (8,028 shelters) camps respectively, when compared with their previous analyses. Satellite imagery from 06 and 07 December 2013 revealed a total of 8,684 shelter structures in Kaya Camp and 2,997 in Ajuong Thok Camp. UNITAR/UNOSAT product links provide access to these maps as PDFs as well as accompanying shapefiles and geodatabases in ESRI format.

Source: UNITAR/UNOSAT

Link: http://www.unitar.org/unosat/maps/110

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.

Oceania

Tonga tropical cyclone – GLIDE number: TC-2014-000003-TON

On 11 January 2014, tropical cyclone Ian swept through the South Pacific archipelago of Tonga and caused widespread damage to homes, infrastructure, and vegetation. Using satellite-detected areas of structural damage observed by the United States Government on 12 January 2014, the UNITAR Operational Satellite Applications Programme (UNOSAT) identified 786 damaged structures situated in the Foa, Lifuka and Moungaone islands. Damage estimates for the towns within these islands are available and reveal that the town of Pangai on the western coast of Lifuka Island was the most heavily affected with an estimate of 315 damaged structures. This map can be accessed as a PDF on UNITAR/UNOSAT's website.

Source: UNITAR/UNOSAT

Link: http://www.unitar.org/unosat/node/44/1916

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.*