***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.***

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# Satellite mapping overview

As of 01 June 2015

## Asia

### Japan volcano – GLIDE number: TBD

Located in the Kagoshima Prefecture, Sakurajima is currently Japan's most active volcano. Between 18 and 25 May 2015, the Japanese Meteorological Agency reported 19 explosions at Sakurajima. The NASA Earth Observatory acquired 21 May 2015 satellite imagery of one such volcanic eruption and produced a situational overview map. As of this date, a large ash plume could be seen emanating from the volcano and moving in a southeast direction over the island of Kyushu. According to the Tokyo Volcanic Ash Advisory Center, this ash plume reached an altitude of 5.2 kilometers. On a scale of one to five, the alert level for the volcano attained a three on this day. This map product is available for online viewing and 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=85936&eocn=home&eoci=nh

## Europe

### Italy phytosanitary emergency – GLIDE number: EMSR124*

A phytosanitary emergency took hold over the Apulia region of Southern Italy in early April 2015. Xylella fastidiosa is a bacterium that causes disease in vegetation and has resulted in a rapid decline of olive trees in this part of Italy. The Copernicus Emergency Management Service created an internal activation for this event on 24 April 2015 in order to aid Civil Protection authorities with planning and logistics for field operations. Copernicus continues to monitor the situation and recently released new delineation maps with 04 May 2015 background imagery for San Donaci, San Pancrazio Salentino West, Torchiarolo, Avetrana, Torre Colimena, San Pancrazio Salentino, and Cellino San Marco. Approximately 6,291 hectares of crop land were found to be treated in these areas and 1,483 vineyards, bushes, fruit and olive trees were eradicated. Map products are available in TIFF, PDF, and JPEG 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/EMSR124

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# North America

## Canada wildfires – GLIDE number: TBD

Canada's Northwest Territories experienced multiple wildfires in May 2015. The NASA Earth Observatory collected satellite imagery of several fires burning on 28 May 2015 and created an overview map. At this time, smoke billowing from the wildfires was visible to the north and west of the Great Slave Lake. All areas where the satellite detected abnormally warm surface temperatures typical of fire were outlined in red on the map. According to the Northwest Territories Department of Environment and Natural Resources, there have been a total of 46 fires thus far in 2015 and 406 square kilometers of the Northwest Territories have been affected by these events. This overview map is available for online viewing and download in JPEG format on the NASA Earth Observatory website.

Source: NASA Earth Observatory

Link: http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=85953&eocn=home&eoci=nh

## United States floods – GLIDE number: FL-2015-000060-USA

In April and May 2015, many parts of Texas, Oklahoma, Arkansas, Nebraska, and Louisiana experienced significant levels of rainfall, some of which reached up to 500 millimeters. As a result of this intense precipitation, several lakes, streams, and rivers in these areas flooded. Subsequent property losses and evacuations occurred in Texas, Oklahoma, and Arkansas. The NASA Earth Observatory acquired 26 May 2015 satellite imagery of the Arkansas River traversing the Oklahoma and Arkansas border and produced an overview map. As of this date, a swelling of the river and surrounding water bodies was visible. A local gauge measured the Arkansas River at 10.18 meters, a value regarded as that of a major flood. The Dartmouth Flood Observatory also mapped flood waters in Texas, Oklahoma, and Arkansas using recent satellite imagery. Its maps are updated each day with the latest information. The NASA Earth Observatory map product is available for online viewing and download in JPEG format on its website. The Dartmouth Flood Observatory map product can be viewed online or downloaded as a GeoTIFF, KMZ, and PDF on its website.

Sources: NASA Earth Observatory, Dartmouth Flood Observatory

Link: http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=85939&eocn=home&eoci=nh

http://floodobservatory.colorado.edu/Version3/2015Texas4252.html

# South America

## Colombia landslide – GLIDE number: FL-2015-000056-COL

Heavy rainfall caused Colombia's Liboriana River to overflow and led to a devastating landslide on 18 May 2015 in the town of Salgar, Antioquia Department. UN OCHA requested the UNITAR-UNOSAT humanitarian rapid mapping service, which programed commercial imagery. In addition, the

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International Charter on Space and Major Disasters was activated on 20 May 2015 by the USGS on behalf of UNGRG and project management was assumed by the Brazilian National Risk and Disaster Management Center (CENAD). Using satellite imagery collected 23 May 2015, the CENAD and UNITAR-UNOSAT produced maps of potentially affected areas within the vicinity of Salgar. UNITAR-UNOSAT identified a total of 48 homes that were destroyed by the mudslide/landslide. Given the unique characteristics of the satellite imagery used for this analysis, it is likely that the depicted landslide extent represents an underestimation over built-up areas. The CENAD map product is available for online viewing and download in JPEG format on the International Charter on Space and Major Disasters' website. UNITAR-UNOSAT's map can be accessed on its website as a PDF. Accompanying data in ESRI shapefile and geodatabase format are also provided by UNITAR-UNOSAT.

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

Links: https://www.disasterscharter.org/web/guest/-/other-in-colombia

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

## Galapagos Islands volcano – GLIDE number: TBD

The highest volcanic peak in the Galapagos, known as Wolf volcano, erupted for the first time in 33 years on 25 May 2015. Fortunately, the eruption and its aftermath posed no immediate danger to the local population, nor the pink iguanas of Isabel Island. The NASA Earth Observatory acquired satellite imagery of the volcano on 28 May 2015 and created an overview map. As of this date, lava was visible flowing from the volcano into the Pacific Ocean. As a result of the difference in temperature, a smoke plume could also be seen at the lava's point of entry into the ocean. This map product is available for online viewing and 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=85963&eocn=home&eoci=nh

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*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.*