

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 22 April 2019

Africa

Tropical cyclone in Mozambique– GLIDE : TC20190312MOZ

Tropical Cyclone IDAI made landfall during the night of 14 March 2019 at 23.30 UTC close to Beira City in central Mozambique. Heavy rainfall, strong winds and storm surge affected the coastal area of the Sofala region, in particular Beira. Moreover, the cyclone dropped heavy rainfall throughout the region covered not only almost central part of Mozambique, but also partially of Malawi and Zimbabwe.

UNITAR-UNOSAT has continued its efforts and released the map illustrates satellite-detected surface waters in Dombé and Grudja areas in Manica and Sofala provinces respectively as observed from Sentinel-1 satellite image acquired on 19 March 2019. Within the analysed extent of about 3,700 sq km, a total about 110km² of lands appear to be flooded as of 19 March 2019.

Source: UNITAR-UNOSAT

Link: <https://unitar.org/unosat/node/44/2898>

UNITAR-UNOSAT and REACH jointly have produced building damage assessment in Beira city, Sofala Province, Mozambique from the analysis of a Worldview-2 images acquired on March 26, 2019. According to rapid damage analysis, a total of 77,099 out of 119,187 buildings in Beira city were observed as potentially damaged.

Source: UNITAR-UNOSAT / REACH

Link: http://www.reachresourcecentre.info/system/files/resource-documents/moz_map_cycloneida_beiracity_damage_15apr2019.pdf

Asia

Flood in Iran - Copernicus EMS Number: EMSR352

From mid-March into April 2019, widespread deadly flooding has affected large parts of Iran, most severely in Golestan, Fars, Khuzestan, Lorestan, and other provinces due to several major waves of rain which led to flooding in at least 26 of Iran's 31 provinces.

During 18 – 19 April 2019, Copernicus EMS released 19 delineation maps in difference location in Iran which partially flooded surround the city could be detected from analysed Pleiades-1B satellite image acquired on 8, 11 - 14 Apr 2019, WorldView-2 satellite image acquired on 11 Apr 2019 and Sentinel-1B satellite image acquired on 8 Apr 2019.

Source: Copernicus Emergency Management Service (EMS)

Link: <https://emergency.copernicus.eu/mapping/list-of-components/EMSR352>

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Flood in Republic of Iraq – Activation Number: 603

The Heavy storms continually recurred throughout the country during the period from 24 March 2019 to 2 April 2019 when severe weather finally eased. Central and northern governorates worst affected, primarily regions through which the Tigris River runs and those areas adjacent to Iran.

The National Academy of Science of Belarus has produced 5 flood maps over the affected areas (Amara and Basra) during 17 – 22 April 2019 using multi-temporal composite data of TERRASAR-X satellite images acquired on 3 and 14 April 2019, RADARSAT-2 satellite image acquired on 17 April 2019, KANOPUS-V satellite image acquired on 19 April 2019, KOMPSAT-5 satellite image acquired on 19 April 2019 and Sentinel-2B satellite image acquired on 21 April 2019 accordingly.

Source: The International Charter Space and Major Disasters

Link: <https://disasterscharter.org/web/guest/activations/-/article/flood-in-iraq-activation-603->

Ash and Snow at Shiveluch of Russia's Kamchatka Peninsula

On 10 April 2019, the Shiveluch volcano on the Kamchatka Peninsula, Russia lofted a plume of volcanic gas and ash some 8 kilometers up into the chilly Siberian air for about 30 minutes. NASA programed the moderate resolution imaging spectroradiometer (MODIS) on Aqua satellite to acquire the image on April 19, 2019, ten days after the eruption. The image showed a short airborne plume and a trail of ash extending south for 220 kilometers. In the winter months, ash-colored snow is a common sight on the Kamchatka Peninsula, one of the most volcanically active parcels of land in the world with 29 active volcanoes.

Source: NASA Earth Observatory

Link: <https://earthobservatory.nasa.gov/images/144854/ash-and-snow-at-shiveluch>

North America

Fire

On 17 April 2019, the Moderate Resolution Imaging Spectroradiometer (MODIS) on NASA's Aqua satellite acquired the natural-color image of a large wildfire burning in rugged, forested terrain west of Cienega de Escobar in Durango, Mexico. The sensor first detected evidence of the fire two days earlier. The blaze was one of 95 wildfires of varying sizes burning in 18 Mexican states.

Source: NASA Earth Observatory

Link: <https://earthobservatory.nasa.gov/images/144845/fire-burns-durango>

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South America

Drought in Chile.

Laguna de Aculeo has long been a popular summer destination for residents of Santiago, Chile. Its water once spread across an area four times the size of New York's Central Park and had a depth of 6 meters (20 feet). But by April 2019, all of the water was gone, replaced by a crust of dried mud and a blanket of green vegetation.

NASA used the Operational Land Imager (OLI) on Landsat 8 to revealed the changes of lake in the pair of natural-color images acquired on 26 February 2014, and 12 March 2019. It shown large area was dried and less water is still remained in the lake in the image of 2019.

Source: NASA Earth Observatory

Link: <https://earthobservatory.nasa.gov/images/144836/lake-aculeo-dries-up>