

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 11 March 2019

Africa

Forest Fire in Mount Kenya, Kenya - Copernicus EMS Number: EMSR345

Last week of February 2019, a fire started in Mount Kenya, on the Tharaka Nithi side or eastern slope of the mountain. The fire had spread quickly due to the dry weather conditions and charred thousands of hectares of moorland within Mount Kenya National Park. Fortunately, heavy rain in early March helped hundreds of firefighters and soldiers slow the fire's spread.

NASA published Terra(MODIS) satellite images acquired on 27 February 2019, obviously revealed the burn scar left in the wake of the fire. In addition, Copernicus EMS had released a map over Mount Kenya illustrated active flames location and burnt area information of 28 February 2019 and 3 March 2019 shown burnt area about 13991.4 ha or 139.92 km² and 16991.4 ha or 169.92 km² accordingly.

Source: Copernicus Emergency Management Service (EMS) & NASA Earth Observatory

Link: <https://emergency.copernicus.eu/mapping/list-of-components/EMSR345>
<https://earthobservatory.nasa.gov/images/144615/fire-on-mount-kenya>

Flood in Mozambique - Copernicus EMS Number: EMSR346

The whole coastal area of Mozambique had been affected by heavy rains and floods. Urban areas, particularly the cities of Beira and Quelimane, had been significantly affected. The situation on the ground was reported to be very critical.

Copernicus EMS released two delineation maps over Quelimane and Pebane which no flooded areas could be detected from analysed Sentinel-1 satellite image on 9 March 2019.

Source: Copernicus Emergency Management Service (EMS)

Link: <https://emergency.copernicus.eu/mapping/list-of-components/EMSR346>

Asia

Satellite detected water extent and evolution over Arghandab Dam, Kandahar Province, Afghanistan - GLIDE: FL20190305AFG

As of 5 March 2019, nine provinces had been affected by heavy rains and flooding, according to governmental reports. More than 40 people were reported to have died, and hundreds of others had been injured or are missing. According to the Government, more than 2,500 houses had been

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.

damaged and over 1,300 destroyed. Flood affected people was in need of emergency shelter, warm clothing, food and hygiene kits.

UNITAR-UNOSAT released a map that illustrated the satellite-detected surface waters extent and evolution, over Arghandab Dam, in Shah Wali Kot District, Kandahar Province, Afghanistan, as observed from the Landsat-8 imagery acquired on 14 January, 15 February and 04 March 2019. The Normalized Difference Water Index (NDWI) analysis showed an increase of the water extent in the Arghandab dam reservoir located 30 km to the North of Kandahar city. 369 ha of waters were observed the 14 January 2019. 1,246 ha of waters, observed from the image acquired 15 February 2019 corresponding to an increase 200%. 2,080 ha of waters were detected from the image acquired on the 04 March 2019 corresponding to an increase of surface waters of about 70% since mid-February 2019.

Source: UNITAR-UNOSAT

Link: <https://www.unitar.org/unosat/node/44/2864>

Australia

Fires Rage in Victoria

In early March 2019, a rash of bushfires sprouted across the Australian state of Victoria, particularly in the hills east of Melbourne. Government officials noted at least 380 small and large fires burned in the state in the first week of the month, with the vast majority caused by lightning.

An estimated 70,000 hectares (270 square miles) of land burned, with significant fires raging in Bunyip State Park and around Licola, Dargo, Gippsland, and Yinnar South. As the news agencies reported that the entire town of Tonimbuk was wiped out by fire.

NASA published Aqua (MODIS) satellite map acquired a natural-color image of smoke over Victoria on 7 March 2019 and A set of satellite images from Terra, Suomi NPP and Aqua acquired within a span of four hours on 3 March 2019. The trio appeared to show the formation of bright, tall pyrocumulus clouds represented to the rapid development of fire.

Source: NASA Earth Observatory

Link: <https://earthobservatory.nasa.gov/images/144630/fires-rage-in-victoria>

North America

Flooding on the Russian River

As the severe rainstorms doused California in late February 2019, the Russian River approached record levels and brought catastrophic flooding. More than 2,000 businesses and homes in Sonoma County were flooded and the river valley towns of Guerneville and Monte Rio were turned into islands, temporarily cut off from all land transportation.

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.

Meteorologists reported widespread rainfall totals above 5 inches (13 centimeters), with the town of Venado, California, seeing 21.36 inches (54.25 cm) in 48 hours. According to a report from NBC Bay Area meteorologist Jeff Rainieri, the mountains around Guerneville saw February rainfall that was more than 400 percent of normal. The Russian River crested at 45.38 feet (about 14 meters) in Guerneville, the highest level since 1995.

As 5 March 2019, NASA published flood map from Landsat 8 imagery acquired on 28 February 2019 in a false-color of flooding along the Russian River. It showed flood water west of Santa Rosa, near a point where the river takes a hard turn to the west toward Sebastopol and Guerneville. Also, the Moderate Resolution Imaging Spectroradiometer (MODIS) on NASA's Aqua satellite acquired on 28 February 2019 in a natural-color image of a sediment plume pouring out from the Russian River into the Pacific Ocean.

Source : NASA Earth Observatory

Link : <https://earthobservatory.nasa.gov/images/144619/flooding-on-the-russian-river>