

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 May 2019

Asia

Tropical Cyclone FANI – TC-2019-000043-IND

Tropical Cyclone FANI is one of the most powerful cyclones to have reached India in the last 20 years. The cyclone was originated from the Indian Ocean then moved to the Bay of Bengal and made landfall between Brahmagiri village and Puri City, Odisha State, India on the morning of 3 May 2019, with maximum sustained winds up to 240 km/h (Category 4 on the Saffir-Simpson scale). Over 1 million people had been evacuated from coastal communities in Odisha and Andhra Pradesh. Rail, road and air traffic have been suspended. After landfall, it weakened as it moved towards West Bengal, reaching western Bangladesh with maximum sustained winds of 90-110 km/h. FANI was such an intensity that it can have a high humanitarian impact as per GDACS assessment. FANI also damaged or destroyed energy infrastructure and many buildings, leaving around 3.5 million households without electric power for days after the storm hit.

The International Charter also published flood and damage assessment maps (ID 608) published the map made by National Remote Sensing Centre (NRSC) – ISRO, India illustrating flood inundation in seven districts of Odisha state using CBERS-4 satellite image acquired on 10 May 2019.

Source: The International Charter Space and Major Disasters

Link : <https://disasterscharter.org/web/guest/activations/-/article/cyclone-in-india-activation-608->

Flood in IRAN – GDACS ID: FL 1000225

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.

On 14 May 2019, UNOSAT-UNITAR released the maps illustrating satellite-detected surface water in the western part of Golestan province, Iran as observed from Sentinel-1A imagery acquired on 10 May 2019 to monitor the flood situation in this region. Within the analysed area of about 3,000 sq km, a total of 76 sq km of lands appear to be flooded as of 10 May 2019.

Source: UNOSAT

Link: https://unitar.org/unosat/node/44/2903?utm_source=unosat&utm_medium=rss&utm_campaign=maps

Dust Swirls over Asia

In Asia, spring is dust season. Strong northwesterly winds raked the Taklamakan and Gobi deserts in March and April, lifting mineral dust particles from the layer near the surface and into the free troposphere. Near the ground, variations in the landscape created enough friction to constrain and

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slow winds and the spread of dust. Higher up, unchecked winds blow faster and were capable of transporting dust farther.

On 16 May 2019, NASA released Terra(MODIS) satellite image map acquired on 12 May 2019 and Suomi NPP satellite (Ozone Mapping Profiler Suite: OMPS) acquired on 14 May 2019. The images showed the dust swirled over clouds from a low-pressure storm system and had blown east toward northeastern China and the Sea of Okhotsk.

Source: NASA Earth Observatory

Link: <https://earthobservatory.nasa.gov/images/145050/dust-swirls-over-asia>

Europe

Forest Fire in Canary Islands, Spain – Copernicus EMS Number : EMSR360

Mid of May 2019, wildfire had affected an area of high ecological value inside the Teide national Park (Tenerife island), Spain. On 17 May 2019, Copernicus EMS published the grading map derived from Pleiades-1A/B satellite image acquired on 17 May 2019 over Tenerife, Spain. The map showed the damage grading assessment in the area of Tenerife.

Source: Copernicus Emergency Management Service (EMS)

Link: <https://emergency.copernicus.eu/mapping/list-of-components/EMSR360>

Flood in the North of Italy – GDACS ID : FL 1000231

Since May 11, 2019, heavy rain, strong winds and hail have hit central and northeastern Italy, causing widespread damage. Heavy rains caused rapid rise in the levels of the Savio, Montone, Ronco, Panaro, Secchia, Sillaro and Foglia rivers, exceeding the alert level.

Copernicus EMS published 3 maps on 15 May 2019 over Forli and Modena city derived from Sentinel-1B acquired 13 May 2019 and Sentinel-1A acquired 12 May 2019.

Source: Copernicus Emergency Management Service (EMS)

Link: <https://emergency.copernicus.eu/mapping/list-of-components/EMSR359>

Flood in Bosnia and Herzegovina – GDACS ID : FL 1000232

Heavy rainfall that affected central and north-western part of Bosnia and Herzegovina caused outflows of rivers and their tributaries in Una-Sana canton and along the Bosna river.

During 15 – 18 May 2019, Copernicus EMS released 10 maps (EMSR359) over Sanski Most, Srbac, Prijedor, Srbac, Samac which was flood are data derived from Sentinel-1 acquired on 15 and 16 May 2019.

Source: Copernicus Emergency Management Service (EMS)

Link: <https://emergency.copernicus.eu/mapping/list-of-components/EMSR358>

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North America

Wildfire Smoke Shrouds Mexico City

In May 2019, fires near Mexico City had filled the skies with smoke over the metropolitan area, which is home to around 22 million people. Air quality had become hazardous as smoke pollution had far exceeded levels considered to be safe. Officials in Mexico City had declared an environmental emergency, closed schools, and advised people to stay inside.

NASA published the Aqua(MODIS) satellite image and Landsat satellite image acquired on 14 May 2019 over central Mexico illustrated fine aerosol particles had been blowing toward Mexico City from fires in the southern states of Guerrero and Oaxaca.

Source: NASA Earth Observatory

Link: <https://earthobservatory.nasa.gov/images/145062/wildfire-smoke-shrouds-mexico-city>