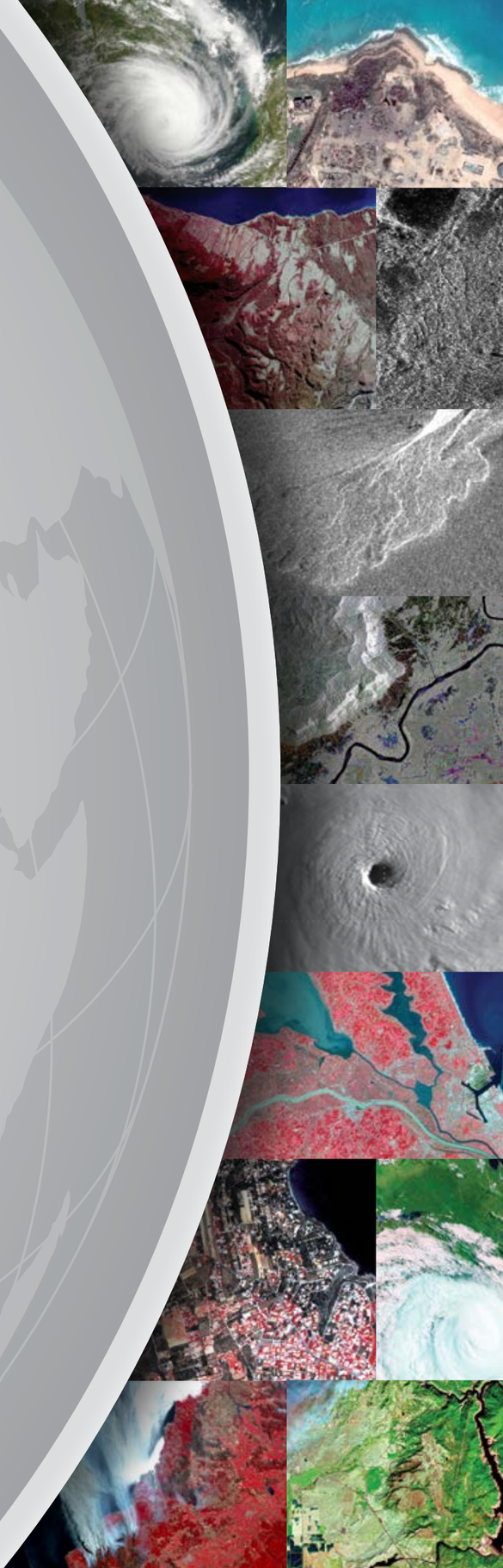
International Charter
“Space and Major Disasters”

2020 CALENDAR



2020 JANUARY

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CHARTER ACTIVATION
Cyclone Idai in Mozambique
Charter activation **598**

SATELLITE: FY-3D
ACQUISITION DATE
13/03/2019

CHARTER ACTIVATION
Cyclone Idai in Mozambique
Charter activation **598**

SATELLITE: METEOR-M-2
ACQUISITION DATE:
15/03/2019

ROSCOSMOS

INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS
CHARTE INTERNATIONALE ESPACE ET CATASTROPHES MAJEURES
20 YEARS

2020 FEBRUARY

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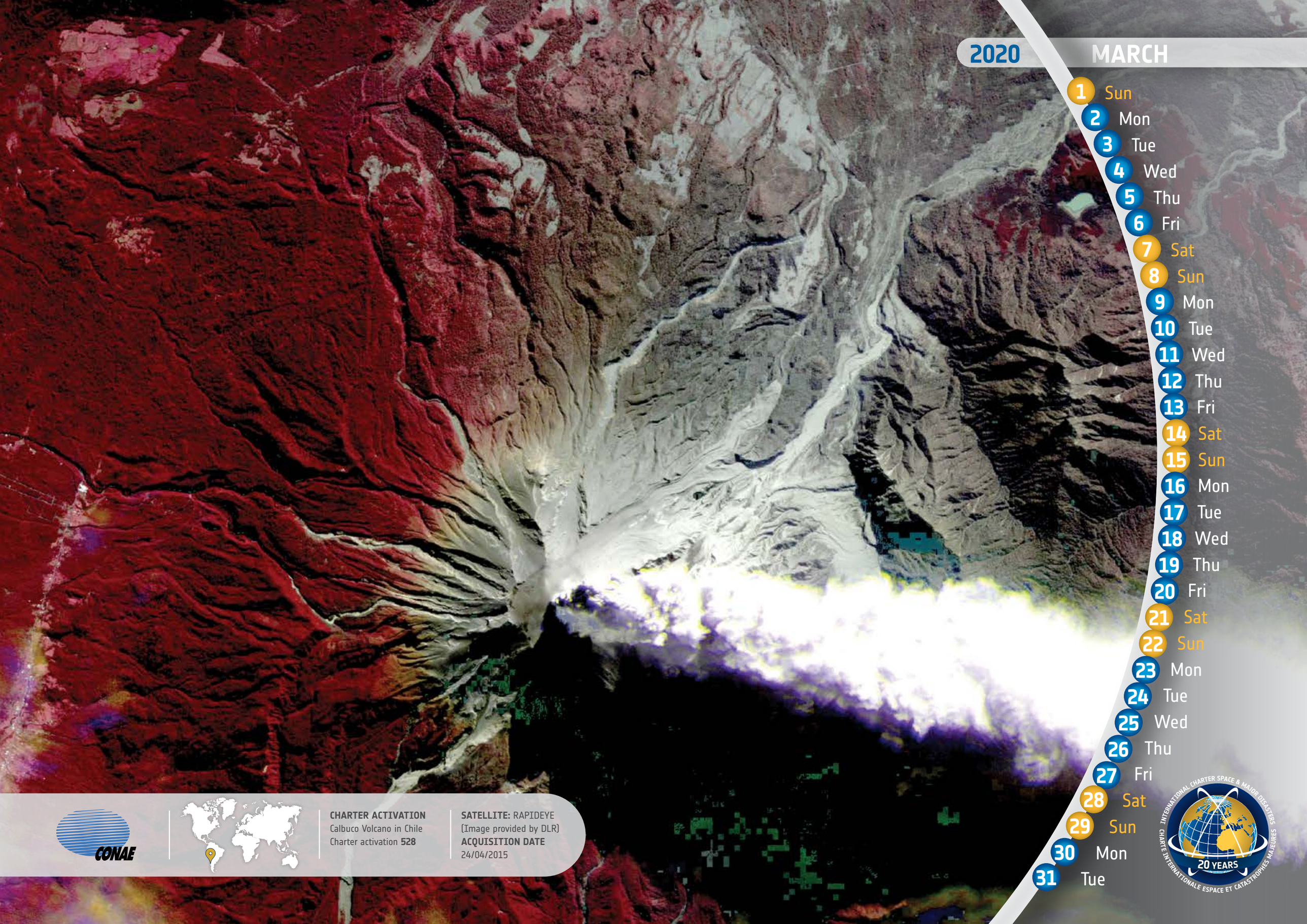
CHARTER ACTIVATION
Hurricane Dorian
in the Bahamas
Charter activation **620**

SATELLITE: PLEIADES
ACQUISITION DATE
Post-disaster: 05/09/2019
Pre-disaster: 04/12/2018

INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS
CHARTE INTERNATIONALE ESPACE ET CATASTROPHES MAJEURES
20 YEARS



2020 MARCH

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CONAE

CHARTER ACTIVATION
Calbuco Volcano in Chile
Charter activation **528**

SATELLITE: RAPIDEYE
(Image provided by DLR)
ACQUISITION DATE
24/04/2015

INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS
20 YEARS
CHARTE INTERNATIONALE ESPACE ET CATASTROPHES MAJEURES

2020 APRIL

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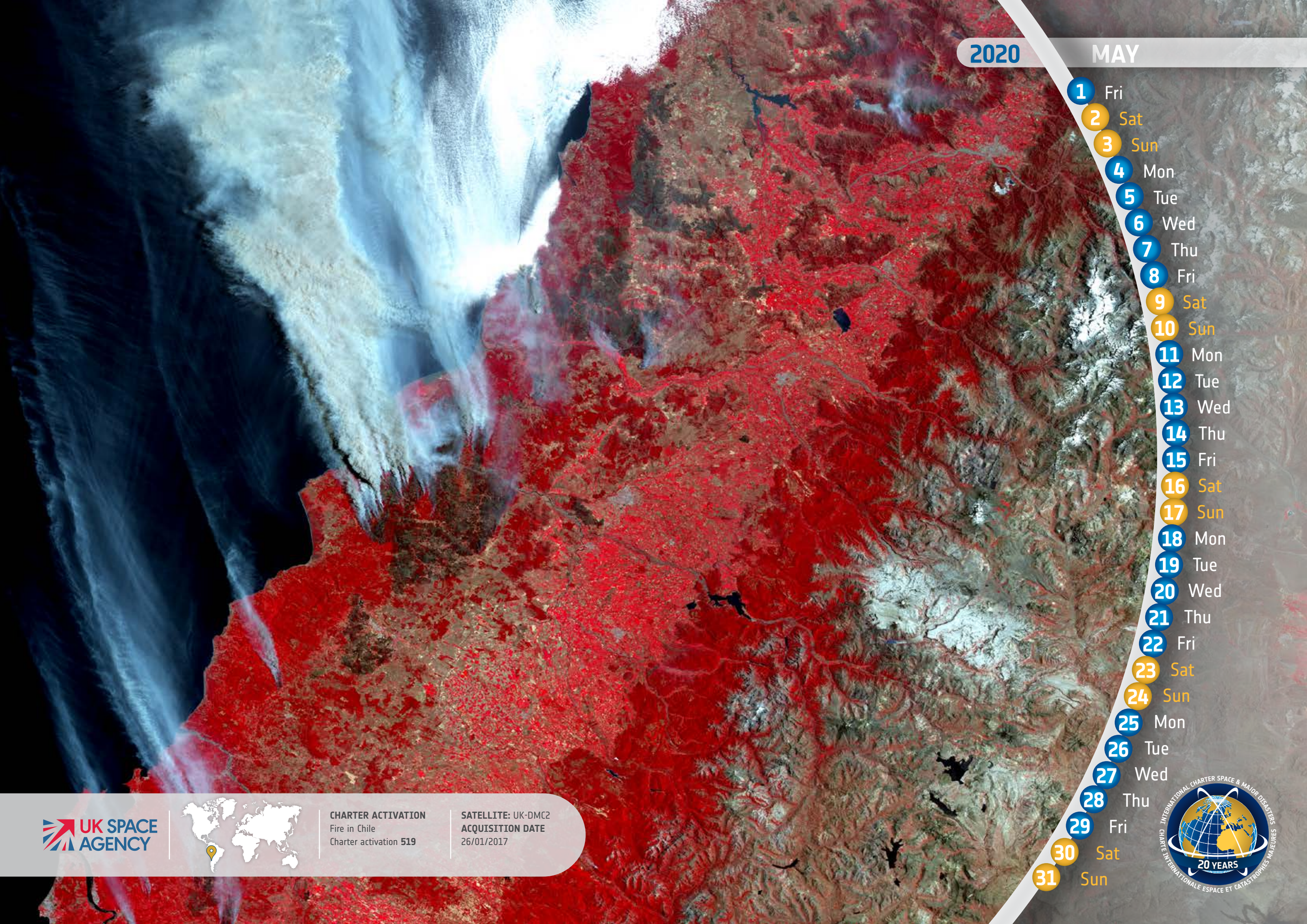
CSA ASC

CHARTER ACTIVATION
Earthquake and eruption of Kīlauea Volcano in the USA
Charter activation **571**

SATELLITE: RADARSAT-2
ACQUISITION DATE
Pre-disaster: 26/05/2018
Post-disaster: 28/05/2018

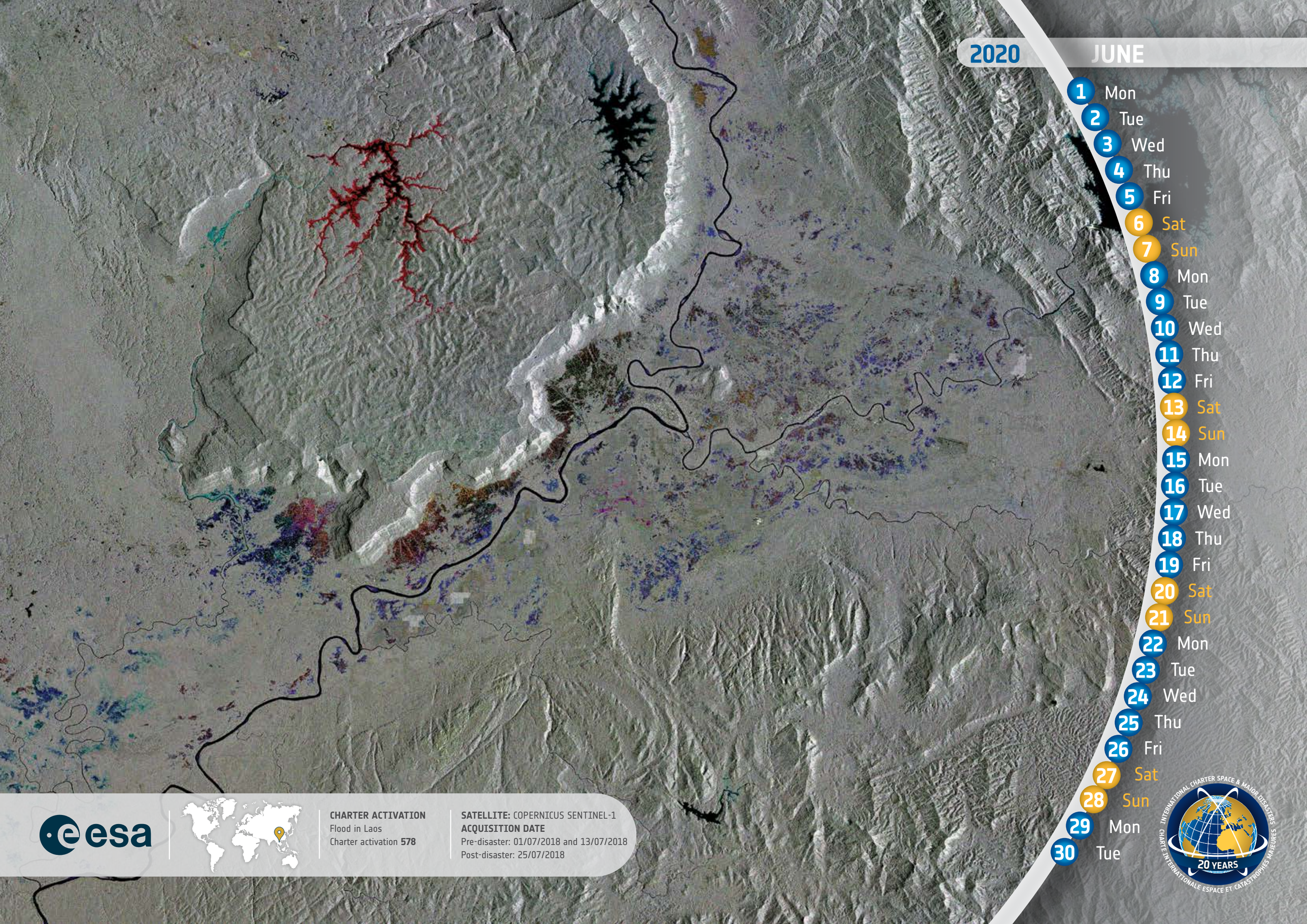
INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS
CHARTE INTERNATIONALE ESPACE ET CATASTROPHES MAJEURES
20 YEARS



UK SPACE AGENCY

CHARTER ACTIVATION
Fire in Chile
Charter activation **519**

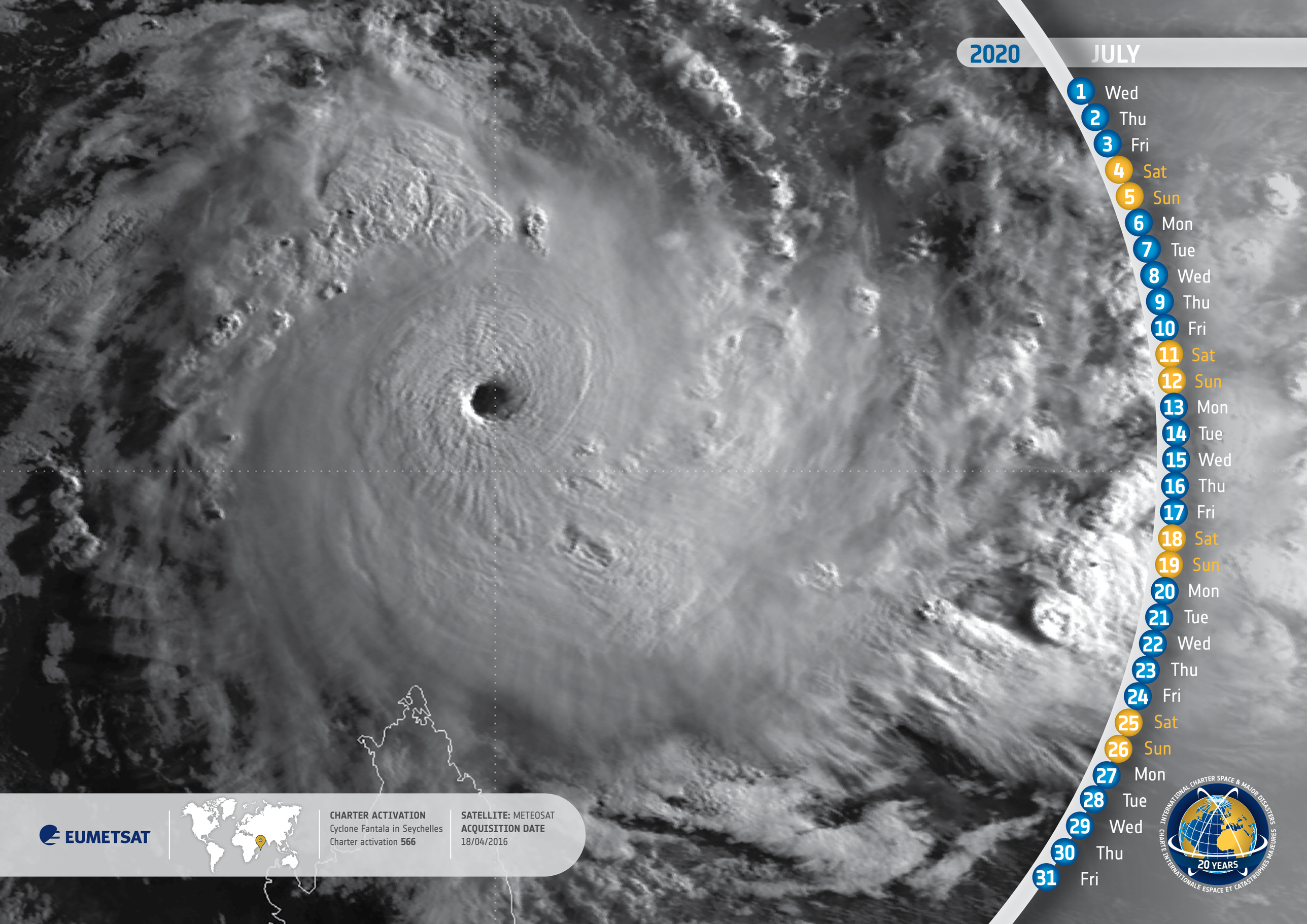
SATELLITE: UK-DMC2
ACQUISITION DATE
26/01/2017



esa

CHARTER ACTIVATION
Flood in Laos
Charter activation **578**

SATELLITE: COPERNICUS SENTINEL-1
ACQUISITION DATE
Pre-disaster: 01/07/2018 and 13/07/2018
Post-disaster: 25/07/2018



2020 JULY

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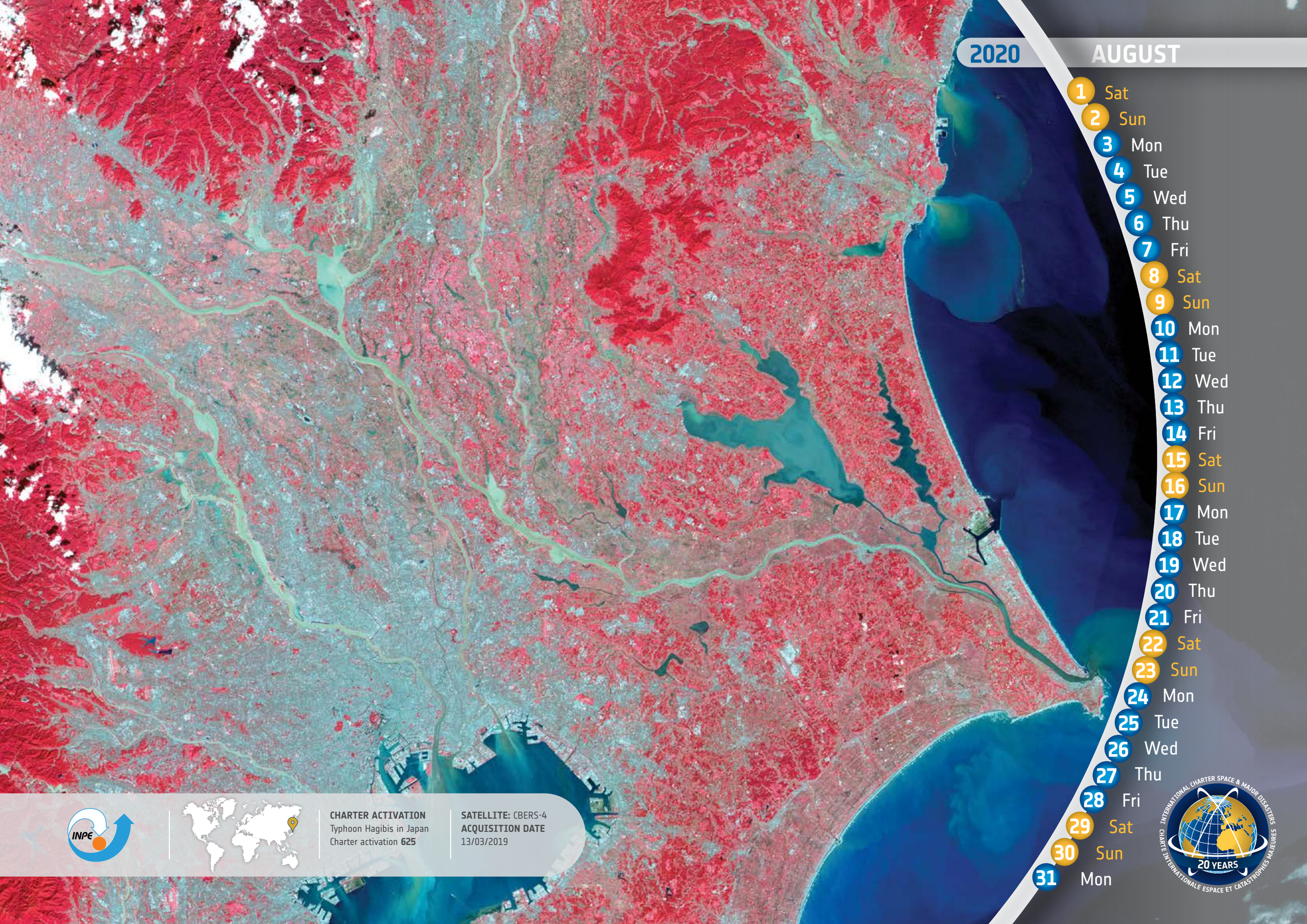
EUMETSAT

CHARTER ACTIVATION
Cyclone Fantala in Seychelles
Charter activation **566**

SATELLITE: METEOSAT
ACQUISITION DATE
18/04/2016

INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS
CHARTE INTERNATIONALE ESPACE ET CATASTROPHES MAJEURES
20 YEARS



2020 AUGUST

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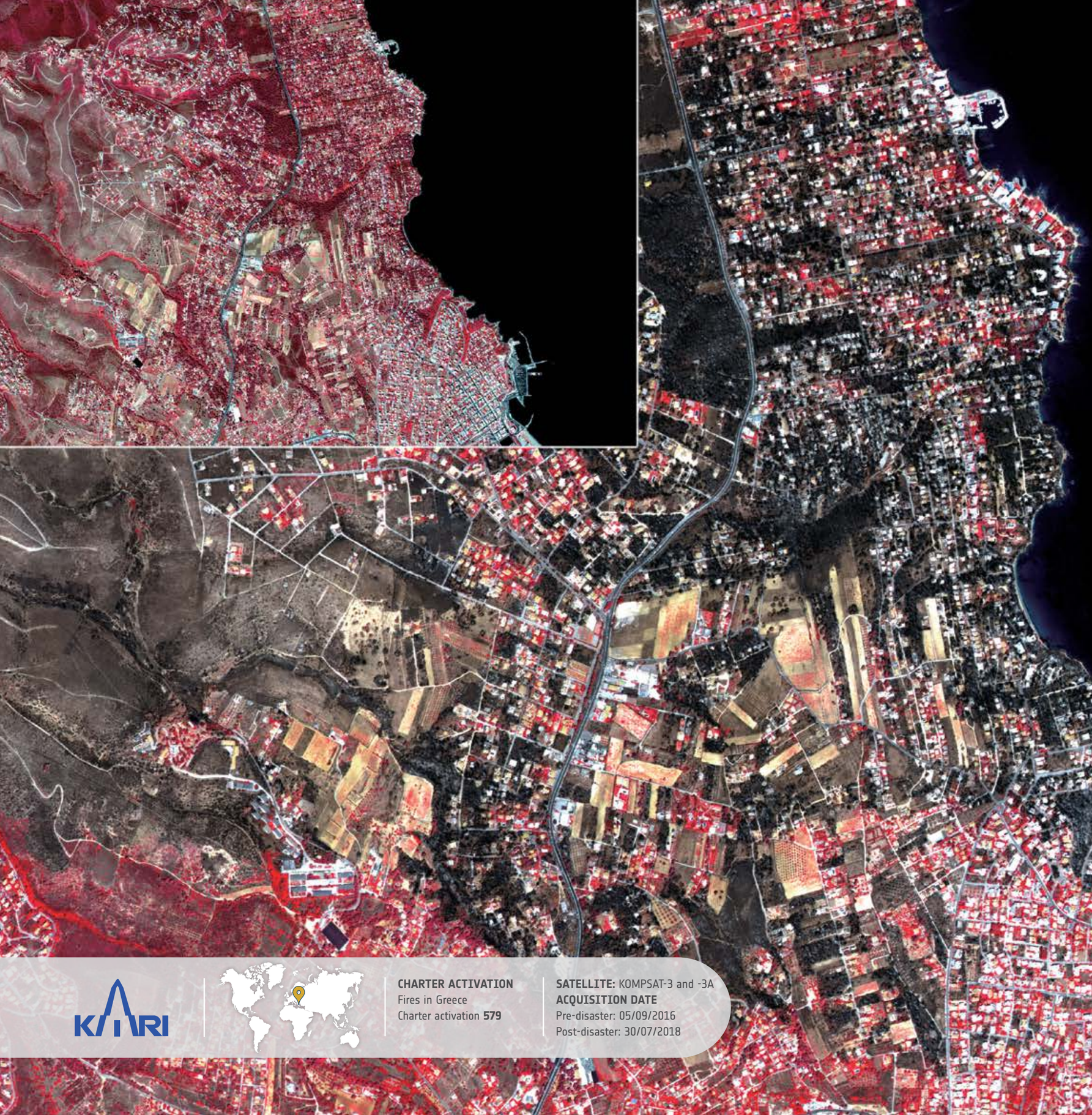
INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS
CHARTE INTERNATIONALE ESPACE ET CATASTROPHES MAJEURES
20 YEARS

INPE

CHARTER ACTIVATION
Typhoon Hagibis in Japan
Charter activation **625**

SATELLITE: CBERS-4
ACQUISITION DATE
13/03/2019



2020 SEPTEMBER

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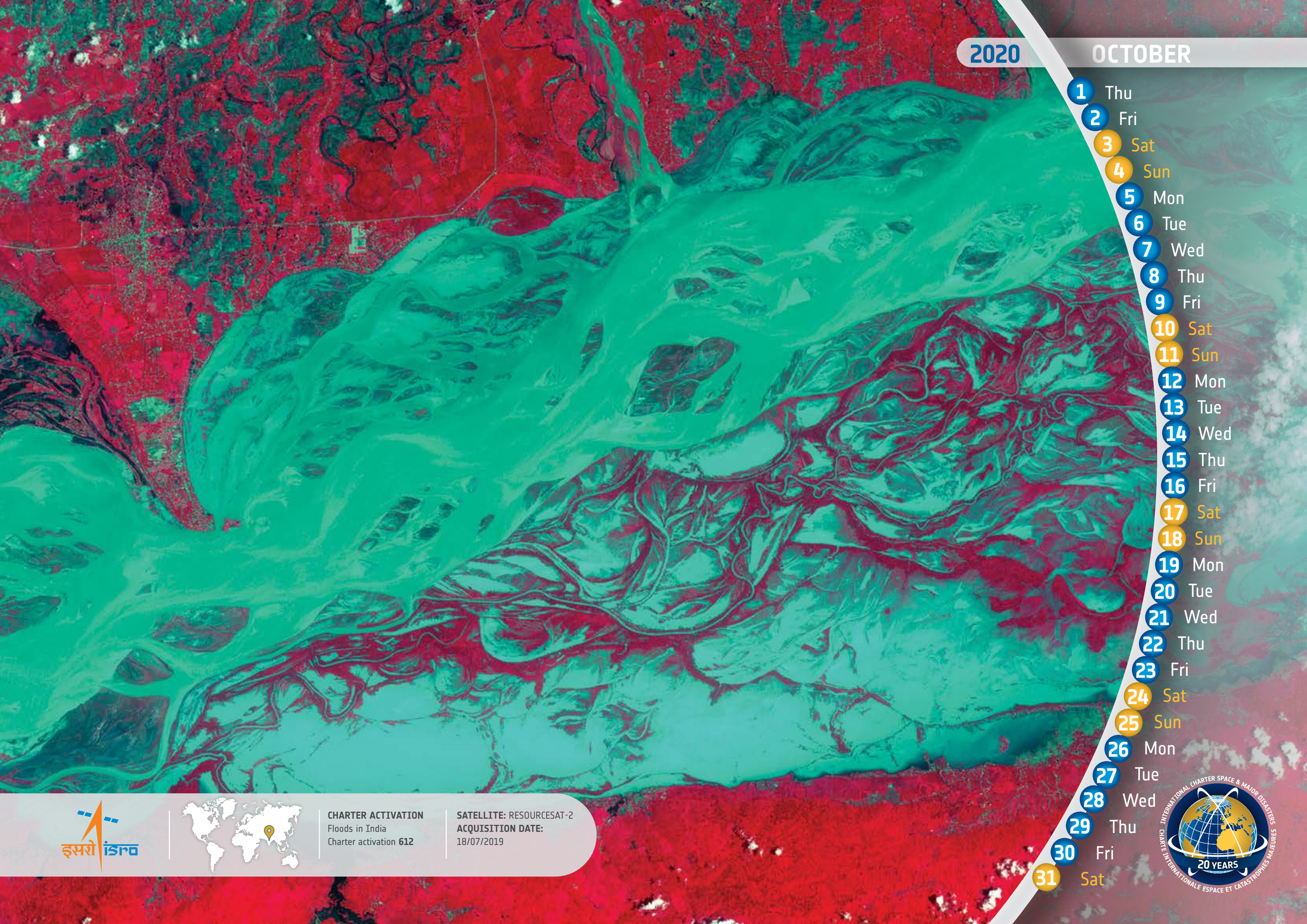
KARI

CHARTER ACTIVATION
Fires in Greece
Charter activation **579**

SATELLITE: KOMPSAT-3 and -3A
ACQUISITION DATE
Pre-disaster: 05/09/2016
Post-disaster: 30/07/2018

INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS
CHARTE INTERNATIONALE ESPACE ET CATASTROPHES MAJEURES
20 YEARS



2020 OCTOBER

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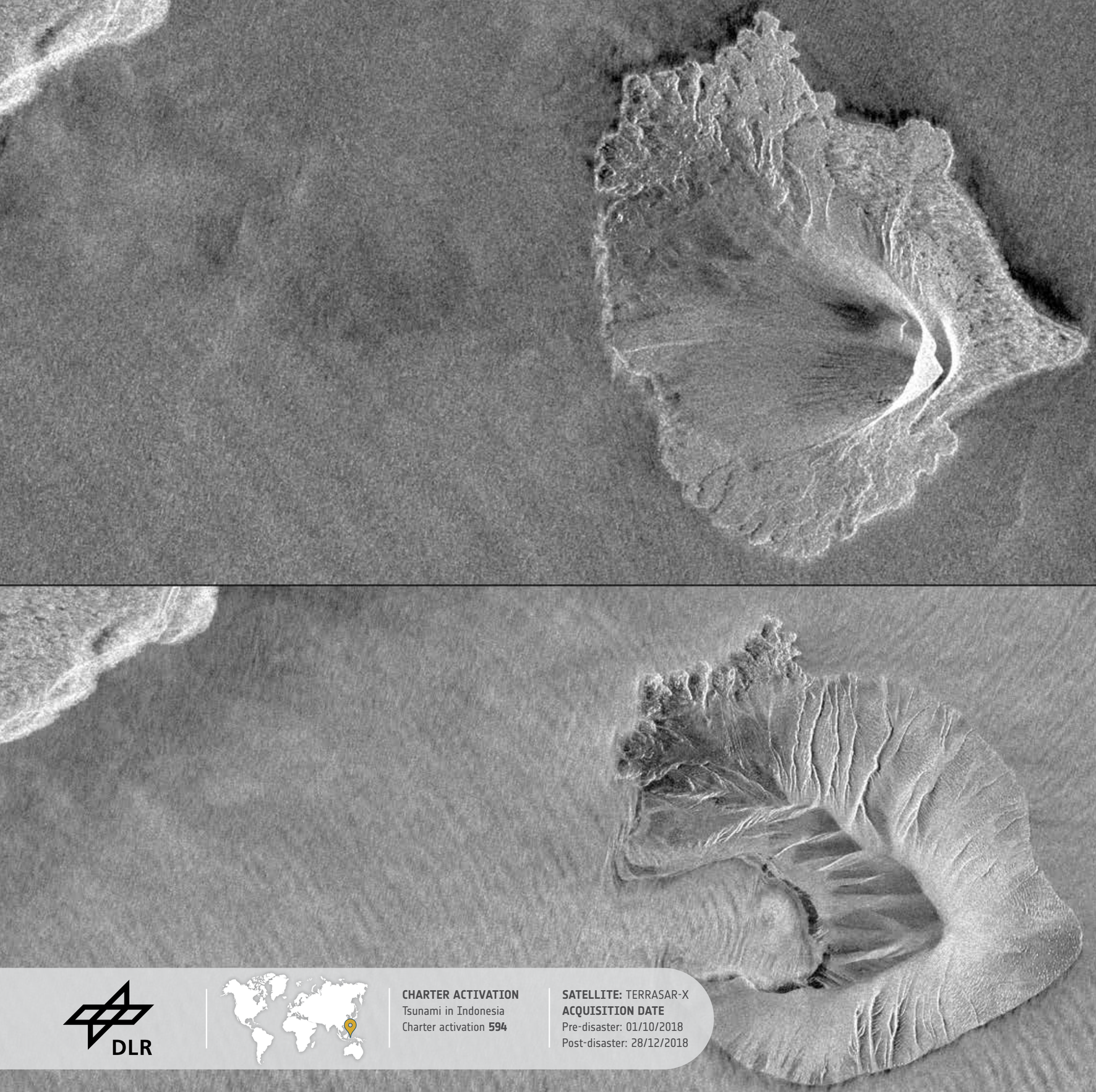
CHARTER ACTIVATION
Floods in India
Charter activation **612**

SATELLITE: RESOURCESAT-2
ACQUISITION DATE:
18/07/2019

INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS
20 YEARS
CHARTE INTERNATIONALE ESPACE ET CATASTROPHES MAJEURES



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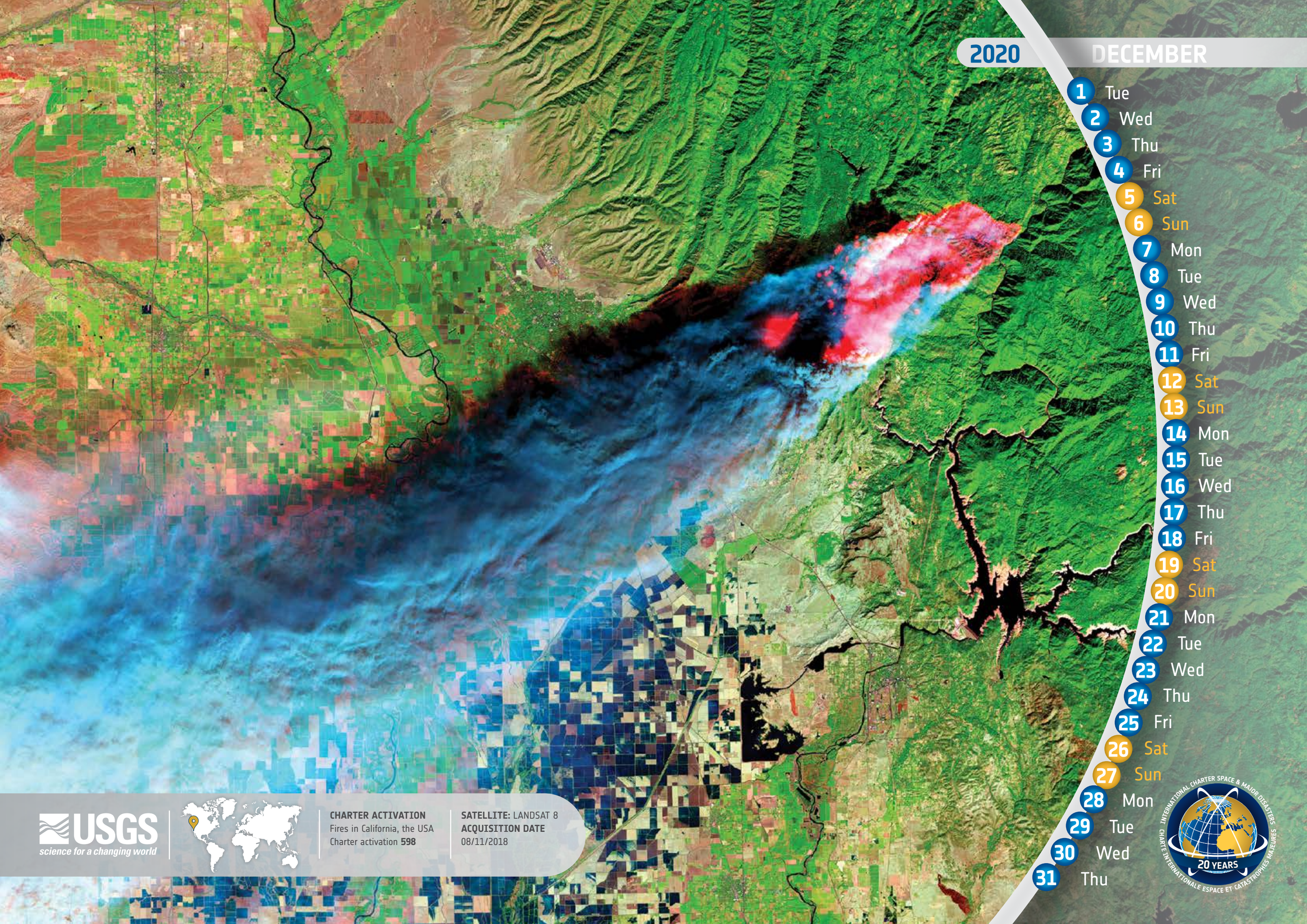
DLR

CHARTER ACTIVATION
Tsunami in Indonesia
Charter activation **594**

SATELLITE: TERRASAR-X
ACQUISITION DATE
Pre-disaster: 01/10/2018
Post-disaster: 28/12/2018

INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS
CHARTE INTERNATIONALE ESPACE ET CATASTROPHES MAJEURES
20 YEARS



2020 DECEMBER

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USGS science for a changing world

CHARTER ACTIVATION
Fires in California, the USA
Charter activation **598**

SATELLITE: LANDSAT 8
ACQUISITION DATE
08/11/2018

INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS
20 YEARS
CHARTE INTERNATIONALE ESPACE ET CATASTROPHES MAJEURES

CYCLONE IDAI IN MOZAMBIQUE

These FY-3D and Meteor-M-2 images show Cyclone Idai over Mozambique. Over a week-long period, this storm caused flooding in the country, notably causing the Buzi River to spill over its banks.

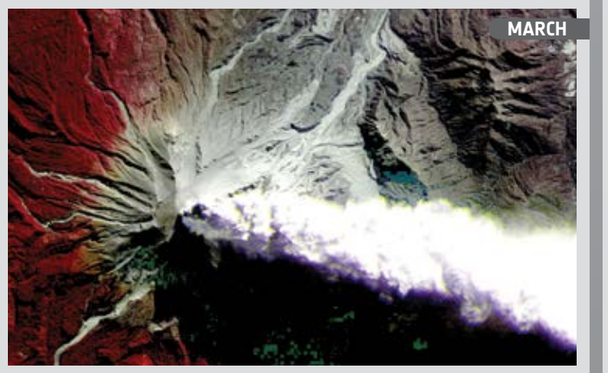
FY-3D ©CNSA/CRESDA (2019)

Meteor-M-2 ©NTs OMZ, All Rights Reserved

HURRICANE DORIAN IN THE BAHAMAS

This Pleiades image shows the impact of Hurricane Dorian over Great Guana Cay City in the Bahamas. In the image we can see destroyed buildings and vegetation, and deposits of sand and debris blocking roads. Inset: Pleiades image acquired before the disaster.

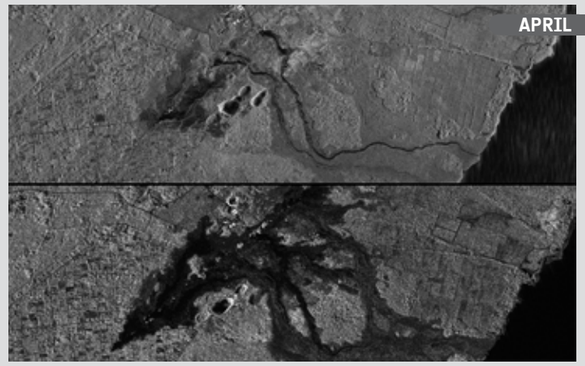
Includes Pleiades material © CNES (2019), Distribution Airbus DS



CALBUCO VOLCANO IN CHILE

This RapidEye image shows ash erupting from Calbuco Volcano in Chile. The false colour imagery was processed to show vegetation in red.

© (2019) Planet Labs Germany GmbH. All rights reserved

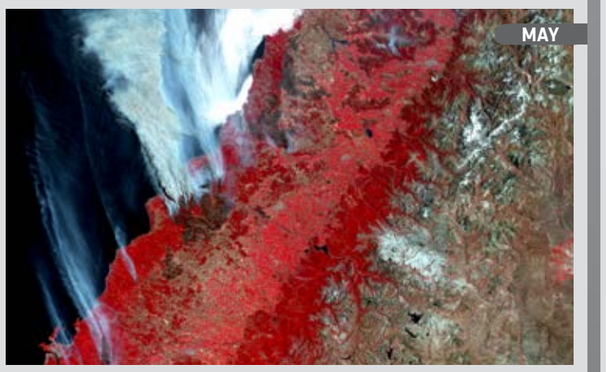


EARTHQUAKE AND ERUPTION OF KĪLAUEA VOLCANO IN THE USA

These RADARSAT-2 images show a before and after comparison of one of the eruptions of Kīlauea Volcano on Hawaii's Big Island in 2018.

RADARSAT-2 Data and Products © Maxar Technologies Ltd. (2018) – All Rights Reserved

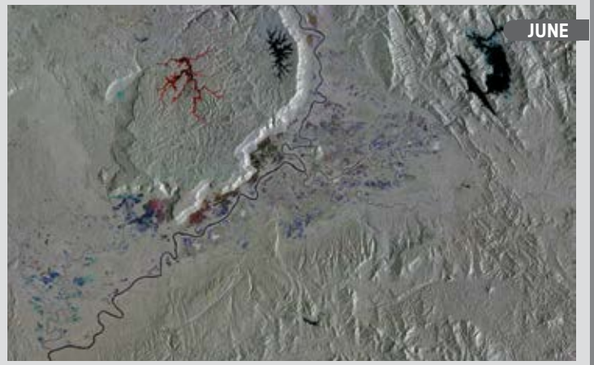
RADARSAT is an official trademark of the Canadian Space Agency



FIRE IN CHILE

This UK-DMC2 image shows wildfires in Chile. In this image we can see many smoke plumes from the fires. Vegetated areas are highlighted in red, and brown areas at the base of some of the smoke plumes indicate areas burnt by the fires.

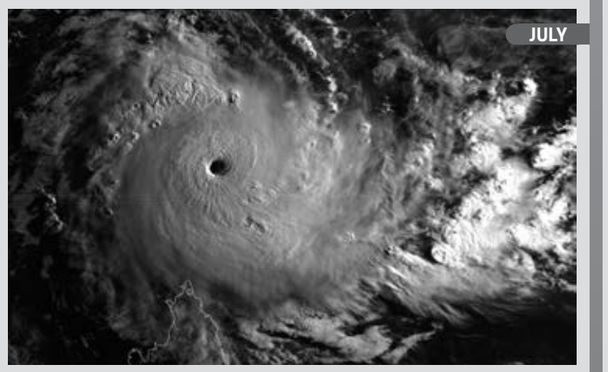
Includes material ©DMCii (2018), Distribution DMCii, all rights reserved



FLOOD IN LAOS

This Copernicus Sentinel-1 temporal composite shows the effect of the collapse of the Xe-Pian Xe-Namnoy hydroelectric dam in Laos. This is using a time series of observations during the flooding event using different colours to indicate when the water was present.

Credits: ESA, Terradue; Contains modified Copernicus Sentinel data (2018)



CYCLONE FANTALA IN SEYCHELLES

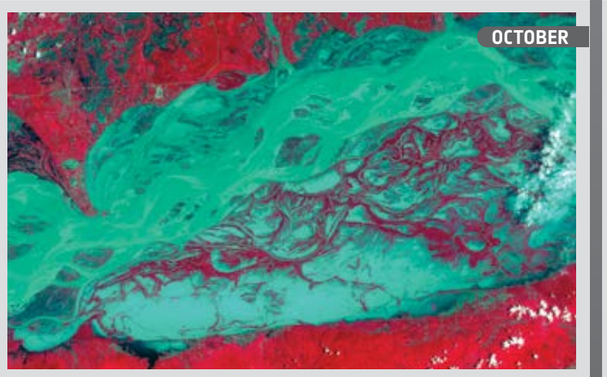
This Meteosat image shows Cyclone Fantala over the Farquhar Atoll of the Seychelles. The Category 5 storm passed over the area on 17 April 2016, destroying much of the infrastructure and buildings on the island. The atoll is indicated by the white outline at the bottom of the image. *Copyright (2019) EUMETSAT*

TYPHOON HAGIBIS IN JAPAN

This CBERS-4 image shows Tokyo and surrounding area after Typhoon Hagibis made landfall on 12 October 2019. While the storm itself is not visible in the false colour image, its impact is demonstrated with storm water emerging as colourful patterns from rivers on the coast and Tokyo Bay. *Copyright (2019) INPE*

FIRES IN GREECE

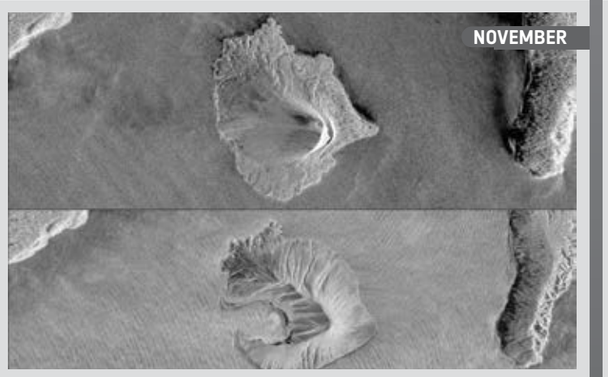
These KOMPSAT-3 and -3A images present a before and after comparison of wildfires in the Attica region of Greece. The false colour imagery highlights vegetation in red, demonstrating the impact of the fires clearly in the image on the right, where much of the vegetation is now absent. *© KARI 2019*



FLOODS IN INDIA

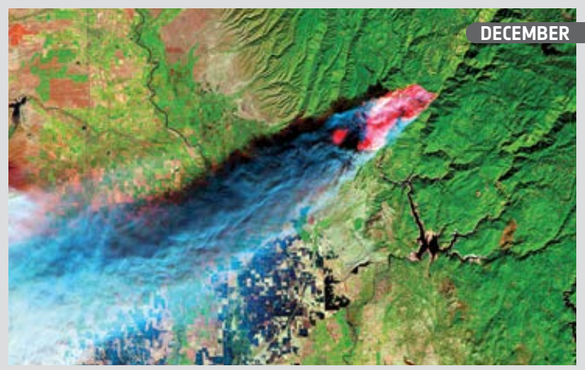
This ResourceSat-2 image shows floods in Kaziranga National Park in India. Monsoon floods affected more than 2 million people in Assam State, India, during July 2019.

Copyright NRSC (2019)



TSUNAMI IN INDONESIA

These TerraSAR-X images show Anak Krakatau Volcano in Indonesia before and after an eruption on 22 December 2018. The radar images clearly show the shape of the island has changed in the post-eruption image, where part of the volcano collapsed into the ocean, causing a tsunami. *© DLR e.V. (2018), Distribution Airbus DS Geo GmbH*



FIRES IN CALIFORNIA, THE UNITED STATES

This Landsat 8 image shows the Camp Fire in California, which burned over 100,000 acres in only two days in 2018. The image was acquired hours after the fire started and this processed image highlights the active fires in red, beneath the smoke plume.

USGS/NASA Landsat Program