



INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS

SATELLITE DATA TO SUPPORT DISASTER RESPONSE WORLDWIDE

The International Charter: Space and Major Disasters

17th UFA Session 2: 17 September 2024

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Charter Overview

INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS SATELLITE DATA TO SUPPORT DISASTER RESPONSE WORLDWIDE



INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS

A worldwide collaboration through which satellite data are made available for the benefit of disaster management



+750
ACTIVATIONS



+130
COUNTRIES

17
CHARTER MEMBERS



+270
SATELLITES

+35
CONSTELLATIONS



OPERATING
24 HOURS A DAY
7 DAYS A WEEK



FOUNDED BY ESA,
CNES AND CSA ON
20 OCTOBER 2000

+20 SUPPORTED BY MORE
THAN 20 INTERNATIONAL
ORGANISATIONS



MORE THAN 80 NATIONAL USERS FROM OVER 80 COUNTRIES CAN REQUEST DATA FROM THE CHARTER. FIND OUT HOW TO REGISTER THROUGH UNIVERSAL ACCESS:
disasterscharter.org/web/guest/how-to-register-as-a-user



PROGRAMME OF THE
EUROPEAN UNION



Emergency
Management



Charter virtual satellite constellation

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Charter virtual constellation



Typical Disaster Types

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Natural events:

Earthquakes

Fires

Floods

Ice jams

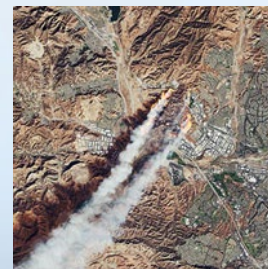
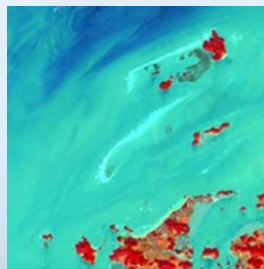
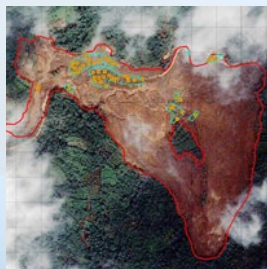
Landslides

Snow hazards

Storms

Tsunamis

Volcanic Eruptions



Man-made events:

Oil Spills

Industrial Accidents

Charter cannot be activated for:

War or Armed Conflicts

Slow-onset disasters like drought



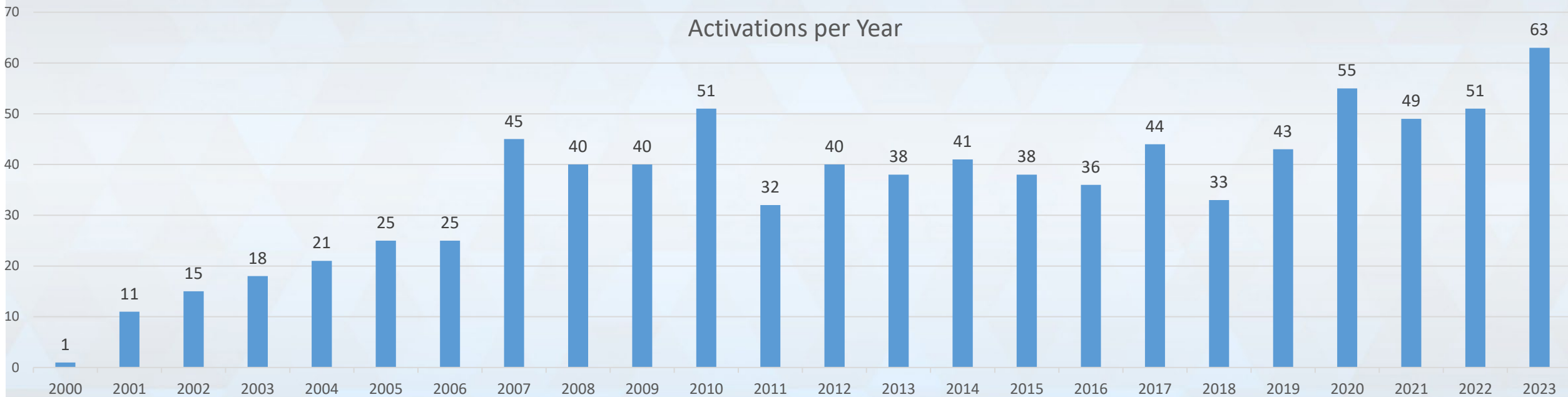
Number of Activations (per year)

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November 2000 to December 2023:

856 Charter Activations

Activations per Year



- **2021: 49 activations in 28 countries**
- **2022: 51 Activations in 33 countries**
- **2023: 63 Activations in 40 countries**

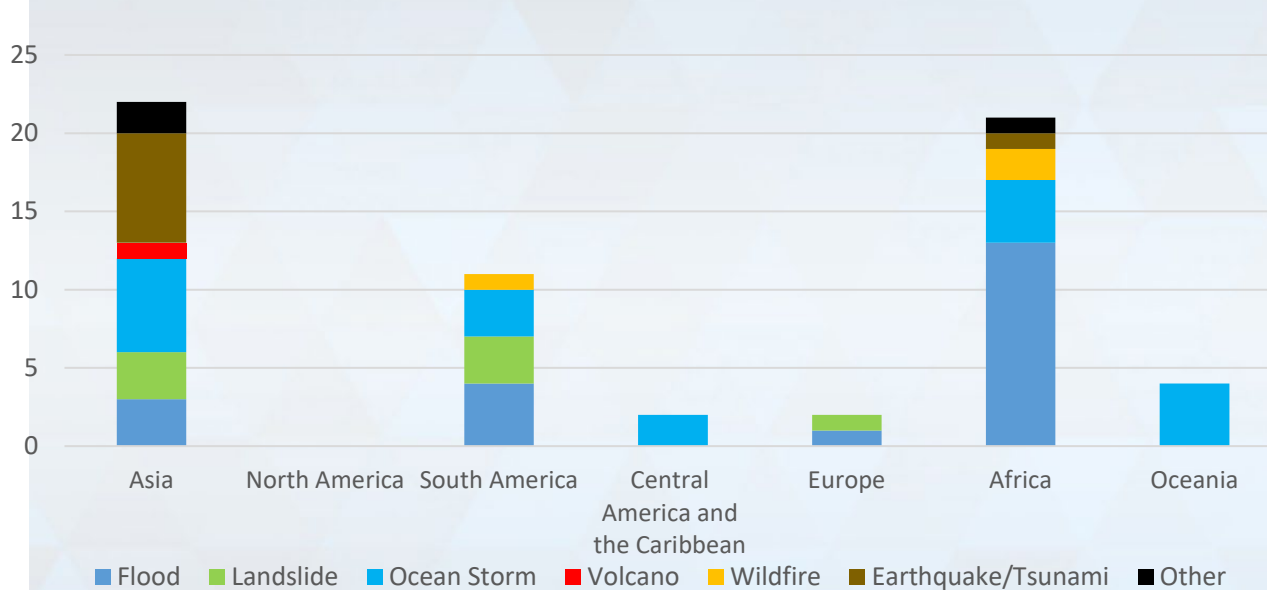
- **2024: 57 activations in 49 countries to date**



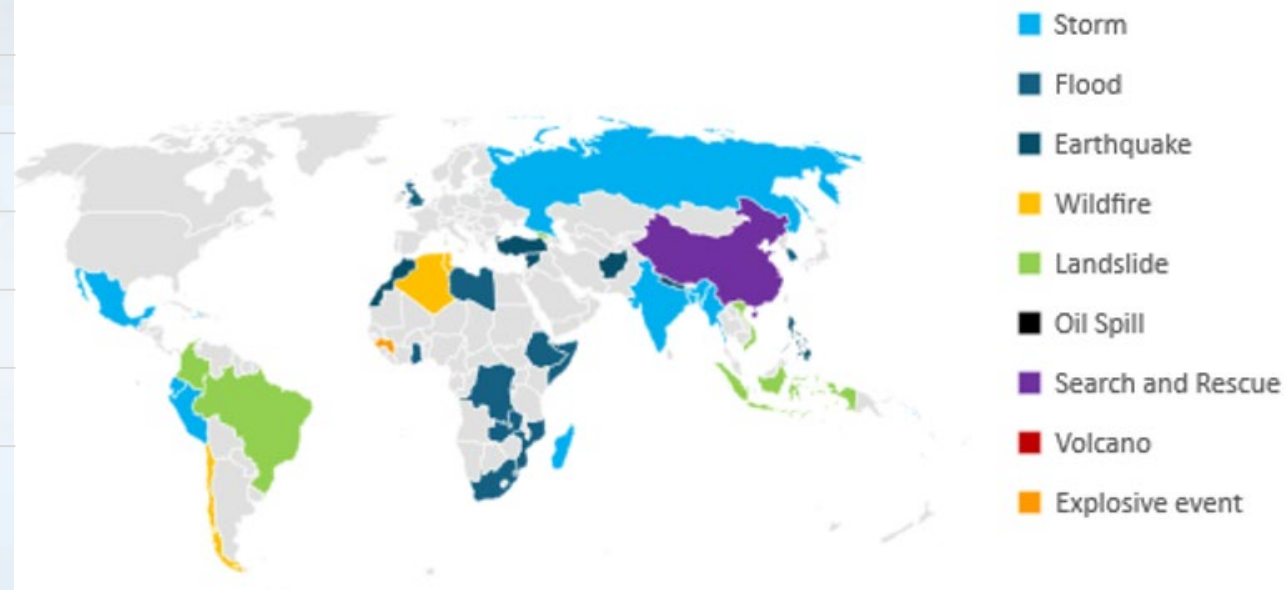
Charter Activations in 2023 (by distribution)

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Activations by continent and hazard type



Geographic Distribution of Activations

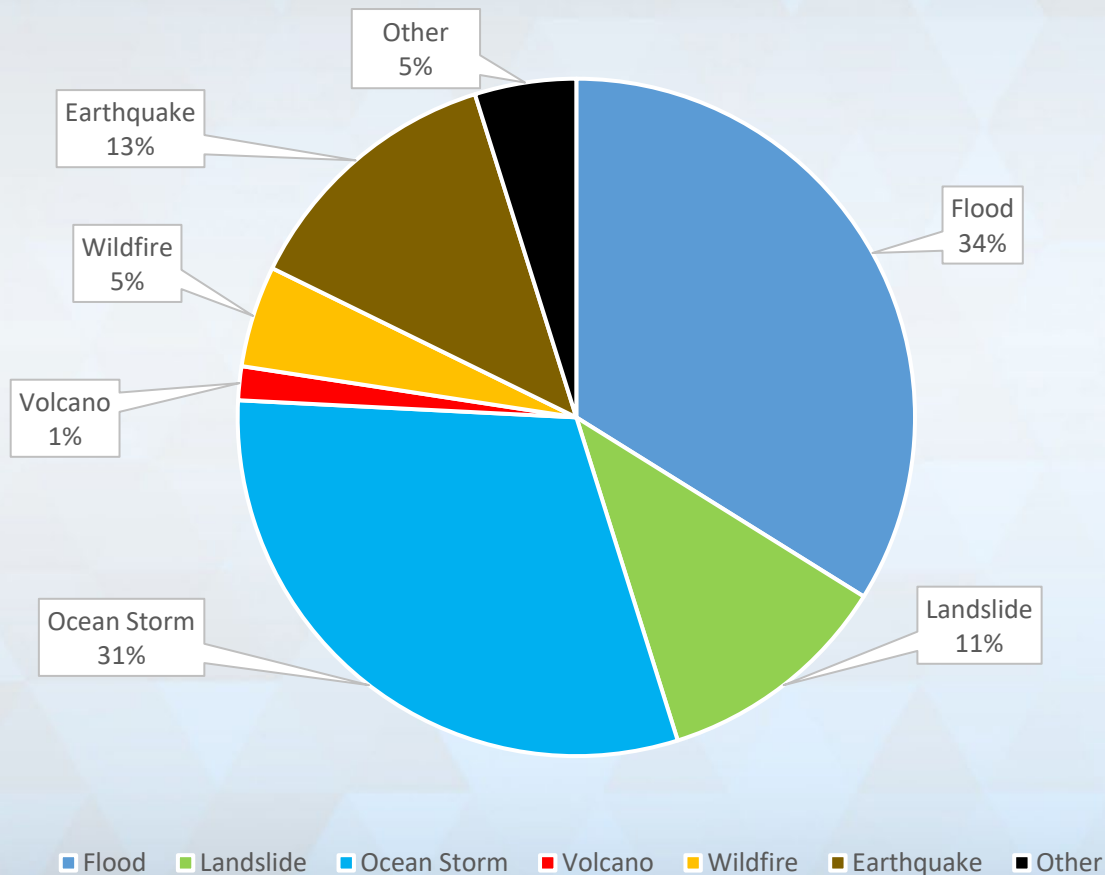


- In 2023: Asia was the region with most activations (22), followed closely by Africa (21)
- Flooding in Africa was the most common activation
- Every continent with an activation included an activation for a flood

2023 Activations: Type of Hazards

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Activations by Hazard Type



- Most frequent hazards in 2023: **flooding 34%** and **storms (31%)**. Storms took an increased share of the hazards compared to previous years
- Hydro-meteorological related hazards represent **72%** of activations since 2020, while **solid earth-related hazards** represent **15%** of them.
- Activations for **flood** represent **+50%** of Charter activations over the last 8 years.



Charter operational loop

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- Authorised user triggers an activation
- The activation is verified, and satellite data are made available
- Value added products are generated
- The project manager communicates with the authorized and end users to ensure the products meet their needs
- Once the activation is closed, a feedback report is prepared



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Examples of Charter activations





Example of Charter activation: Flooding in Libya

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12 September 2023

AU: UNITAR on behalf of United Nations Office for the Coordination of Humanitarian Affairs (OCHA) / Joint Environment Unit

ECO: DLR

PM: UNOSAT & ACRI-ST

VA: Copernicus EMS, British Geological Survey, EMERCOM of Russia, K-water Research Institute, Mohammed Bin Rashid Space Centre

EU: UNOCHA



Description of the Event: Storm Daniel, the result of a very low pressure system which developed into a tropical-like cyclone known as a medicane, battered Libya with torrential rain on the 10th September 2023 unleashing catastrophic floods in the north-eastern cities. The eastern city of Derna, which has a population of 100,000, has reported 4000 fatalities

Data: ALOS2, AMAZONIA-1, CBERS4, GF-3, GLOBAL, KOMPSAT3A&5, Landsat 8, Pleiades, PlanetScope, RCM, Sentinel-1&2, TerraSAR-X, US_VHR



Example of Charter activation: Forest Fire in Algeria

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24 July 2023

AU: Protection Civile Algérienne

ECO: ROSCOSMOS

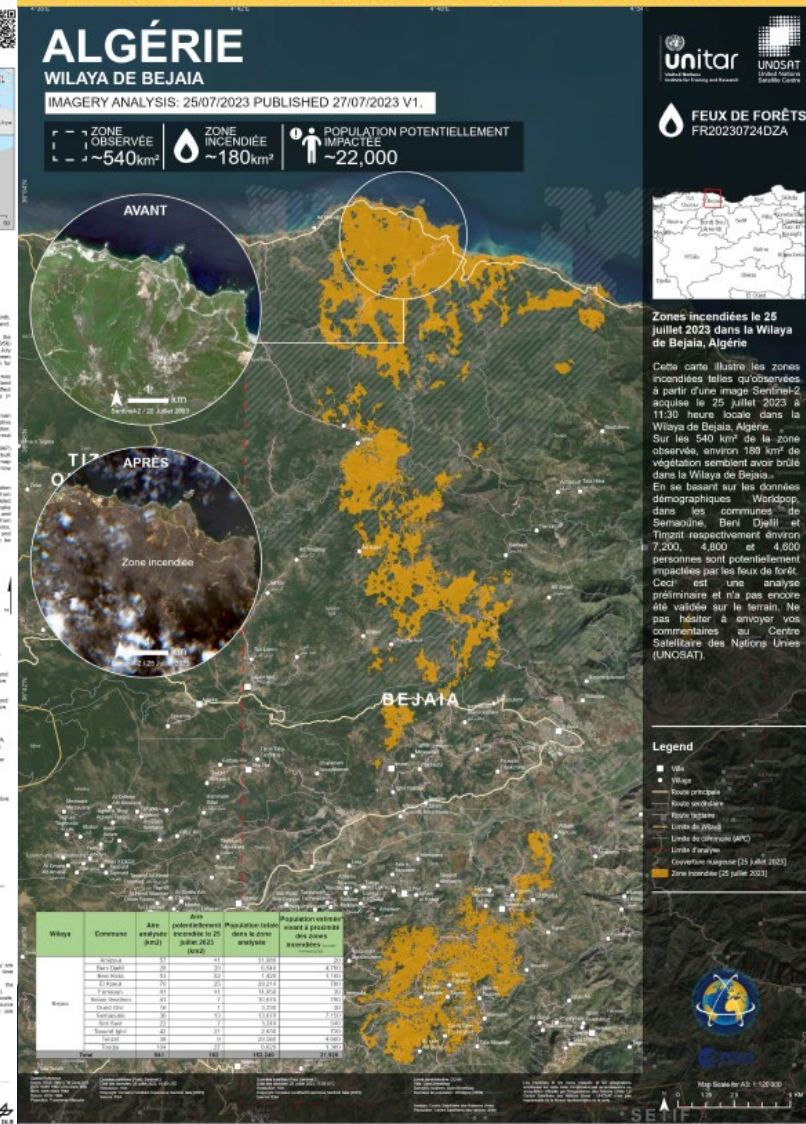
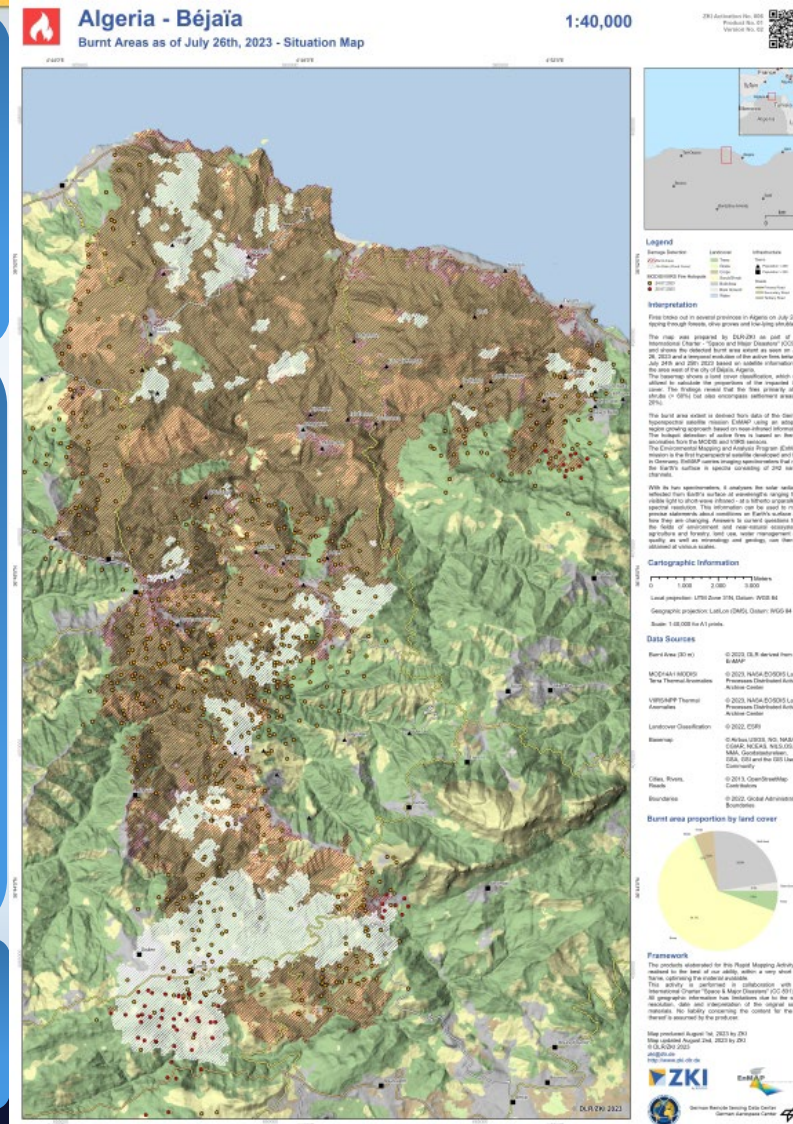
PM: ASAL & ACRI-ST

VA: DLR, UN-SPIDER, UNOSAT

EU: Protection Civile Algérienne

Description of the Event: Wildfires have killed 34 people in the Bejaia and Bouira regions of Algeria. The fires started on 17 July, following a hotter than normal heatwave in the region, with some parts of Algeria experiencing temperatures as high as 48 degrees Celsius. The fires have affected forests and agriculture, and strong winds have also spread the fires to the towns of Bejaia and Jijel. 1500 people have been evacuated from the affected areas, while 7500 firefighters are working against the fires. 97 wildfires were recorded across 16 provinces on 24 July

Data: CBERS4, GF-1/2, KOMPSAT3A, KANOPUS-V, Landsat 8/9, Pleiades, NewSat, Sentinel-1&2, TerraSAR-X, US_VHR, VRSS-2, VISION-1, KhalifaSat, OHS-2

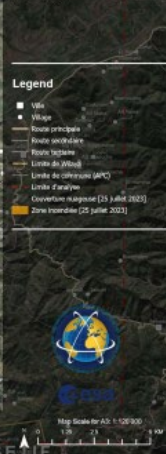


Zones incendiées le 25 juillet 2023 dans la Wilaya de Béjaïa, Algérie

Cette carte illustre les zones incendiées telles qu'observées à partir d'une image Sentinel-2 acquise le 25 juillet 2023 à 11:30 heures locales dans la Wilaya de Béjaïa, Algérie. Sur les 540 km² de la zone observée, environ 180 km² de végétation semblent avoir brûlé dans la Wilaya de Béjaïa.

En se basant sur les données démographiques WorldPop dans les communes de Serradine, Beni Djellil et Tingizi respectivement environ 7.200, 4.800 et 4.600 personnes sont potentiellement impactées par les feux de forêt.

Ceci est une analyse préliminaire et n'a pas encore été validée sur le terrain. Ne pas hésiter à envoyer vos commentaires au Centre Spatiaux des Nations Unies (UNOSAT).





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Become an Authorised user



How to become an Authorised User

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- Must be a national disaster management authority or its delegated agency in that country



- Skills and the capacity to download and use maps



- Be able to submit and pursue an activation request in English



Authorised Users in Africa

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1. Cameroon
2. Eswatini
3. Ethiopia
4. Gambia
5. Ghana
6. Guinea
7. Malawi
8. Niger
9. Sudan
10. Tanzania
11. Togo
12. Tunisia
13. Uganda

- Many civil protection agencies in African countries are still not able to activate the Charter themselves
- Activations for countries without Authorised Users are typically triggered by UN OOSA & UNITAR/UNOSAT: UN agencies can submit activation requests on behalf of UN users, under the Charter's agreement with the UN
- Local knowledge, local skills provide a better result



Become an Authorised User

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- The Charter encourages all national disaster management agencies to become Authorised User
- In particular, it is reaching out to African countries

- A form and registration details are available the Charter website
- Support and training in activating the Charter is provided by member agencies





Charter video

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Charter Summary

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- provides Earth-observation satellite data, free at the point of delivery
- works with experts to derive information products to support disaster relief organizations
- performs satellite tasking to acquire new data and provides archive data
- delivers data processing to pre-determined level
- supports saving lives, property, infrastructure, and the environment following major disasters worldwide



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www.disasterscharter.org

For further information and questions:

helpdesk@disasterscharter.org

