

Sweltering southern Europe

The ESA Sentinel mission

Earthquakes in China

Southern Europe is in the grip of a relentless heatwave, fuelling wildfires and water shortages. Information from the Copernicus Sentinel-3A satellite has been used to map the sweltering heat across the region.

The map here shows that on 7 August 2017, temperatures of the land surface rose above 40°C – not an unusual occurrence over recent weeks.

Much of Italy, including Rome, Naples, Florence, Sardinia and Sicily has been suffering these highs. With numerous towns and cities on the ministry of health's maximum heat alert, the Italians have aptly dubbed the heatwave 'Lucifer'.

Extreme temperatures have also been recorded in Spain and Portugal, the Balkans and Greece.

As well as wildfires and water shortages, the heat has also led to some tourist attractions being closed, ill health and even some fatalities, and the drought is also threatening crops.

The map (illustrated) uses data from the satellite's Sea and Land Surface Temperature Radiometer, which measures energy radiating from the Earth's surface in nine spectral bands – the map therefore represents temperature of the land surface, not air temperature which is normally used in forecasts.

About the Sentinel series of missions

The main objective of the Sentinel-3 mission is to measure sea surface topography, sea and land surface temperature, and ocean and land surface colour with high accuracy and reliability to support ocean forecasting systems, environmental monitoring and climate monitoring. The mission is jointly operated by ESA and EUMETSAT to deliver operational ocean and land observation services.

People's Republic of China

Specific Sentinel-1B observations have been planned to support the analysis of two earthquakes that occurred on 8 August in central China at 1319 UTC, and

in north-western China close to the border with Kazakhstan the same day at 2347 UTC), and possible aftershocks.

With the Sentinel-1A acquisitions already planned, these additional Sentinel-1B acquisitions will allow generation of interferograms* at six days for the month of August, in both ascending and descending geometry.

* a photographic record created of light interference patterns produced with an interferometer for recording shock waves and patterns of fluid flow.

Picture caption

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Picture caption

The Sentinel family

The Sentinel missions mark a new era in Earth observation focusing on delivering a wealth of operational data for decades to come. The six different missions carry a range of state-of-the-art technologies to supply a stream of complementary imagery and data tailored to the needs of Europe's environmental monitoring Copernicus programme.

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