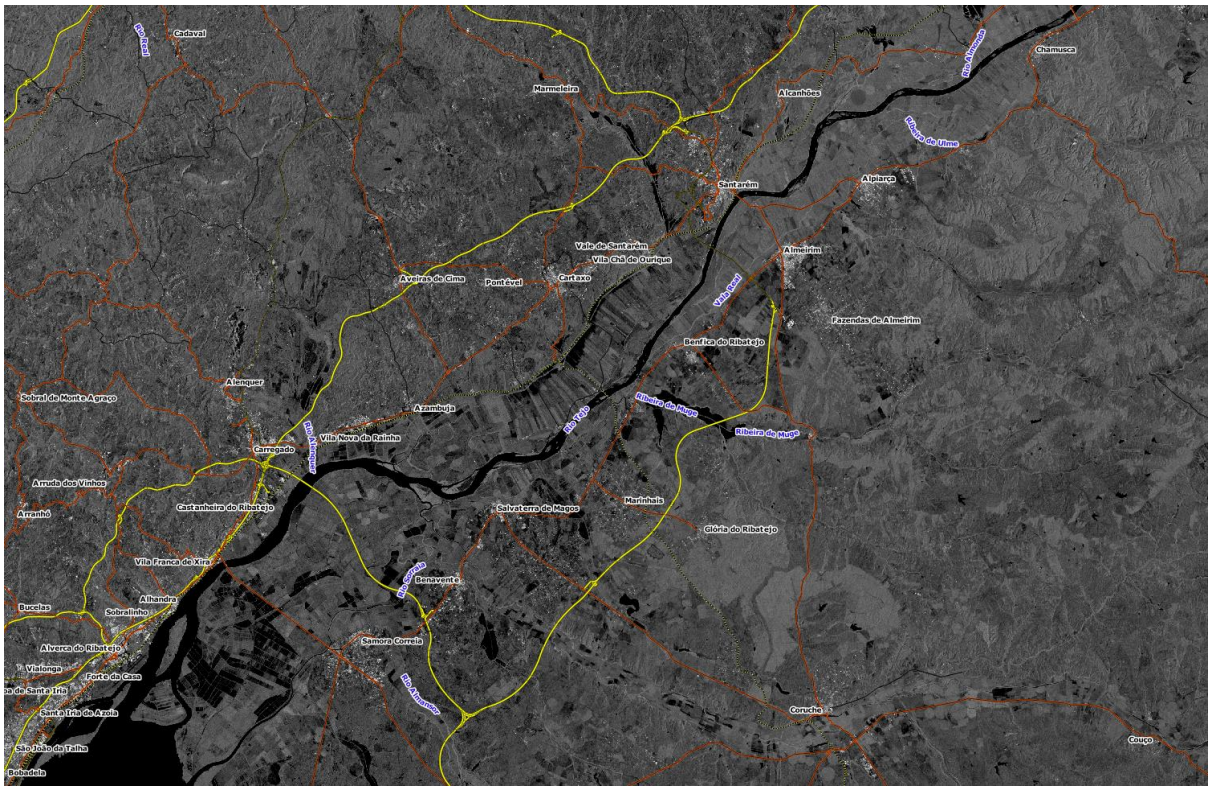
**Floods in Portugal in spring 2026**

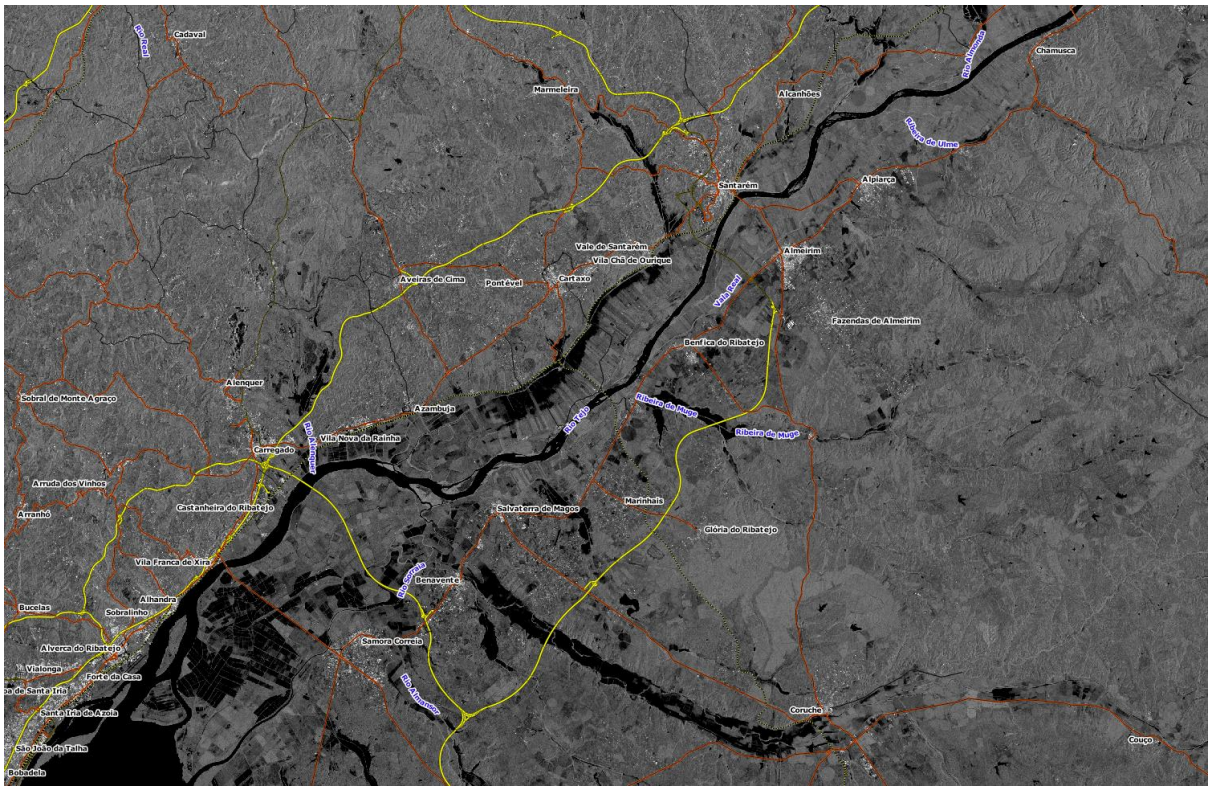
In January and February 2026, several locations in Portugal experienced persistent flooding, which was well-documented using Sentinel-1 data, as the signal can penetrate clouds and therefore provides consistent data quality.
Let's first consider the river Tejo, which flows into the Atlantic Ocean near Lisbon.
The following grayscale representation shows the situation on December 27th and 28th, before the rains began. Portugal is overflown by two satellite constellations (D052 and D125) on two consecutive days, one in the western part and the other in the east.



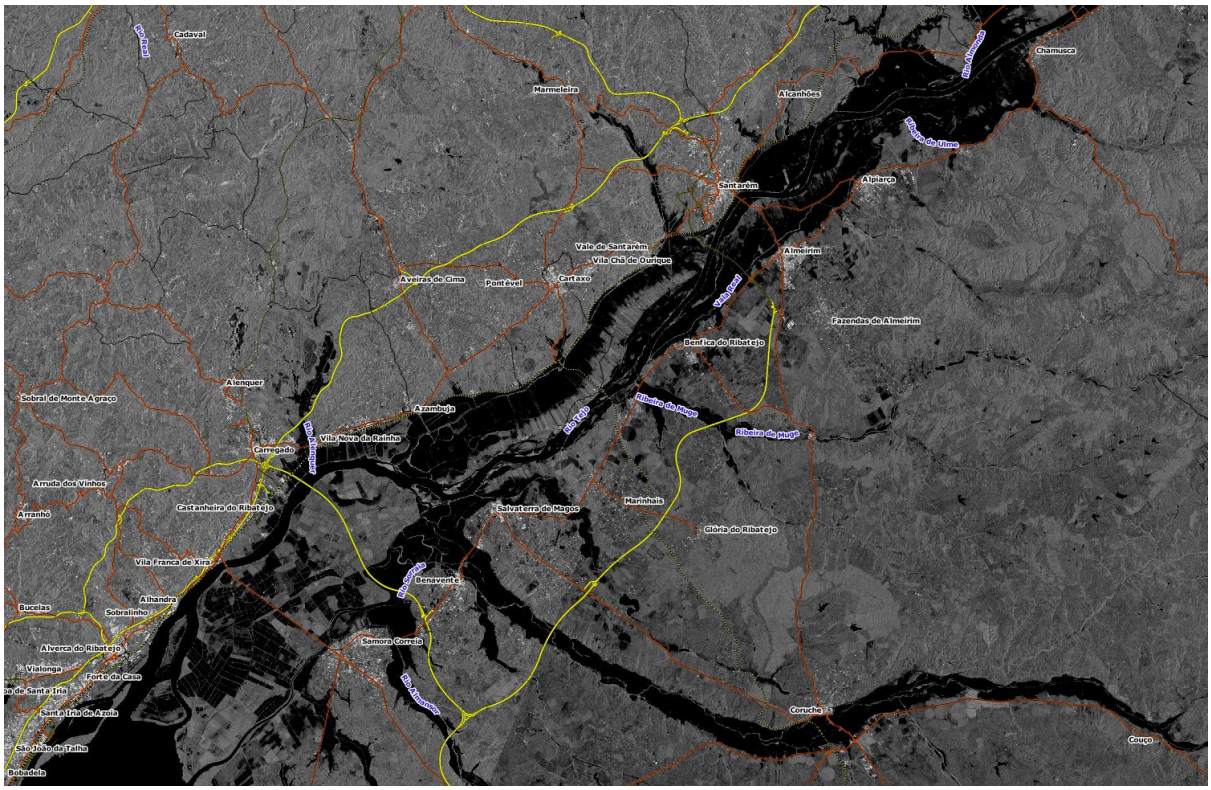

The two satellite images appear in grayscale. Black symbolizes low values and thus water that completely reflects the radar satellite's signal. OpenStreetMap data is shown in color and labels for better orientation.

The following pages show the same map section at later times.
First, an image from January 26 & 27 shows an increase in flooded areas, followed by an image from February 6 & 7, which marks the peak of the flooding.
Afterward, the floods gradually recede. On the next page, you will see the images from February 13 & 14 and those from February 19 & 20.
A further decrease in water levels can be observed there as well.

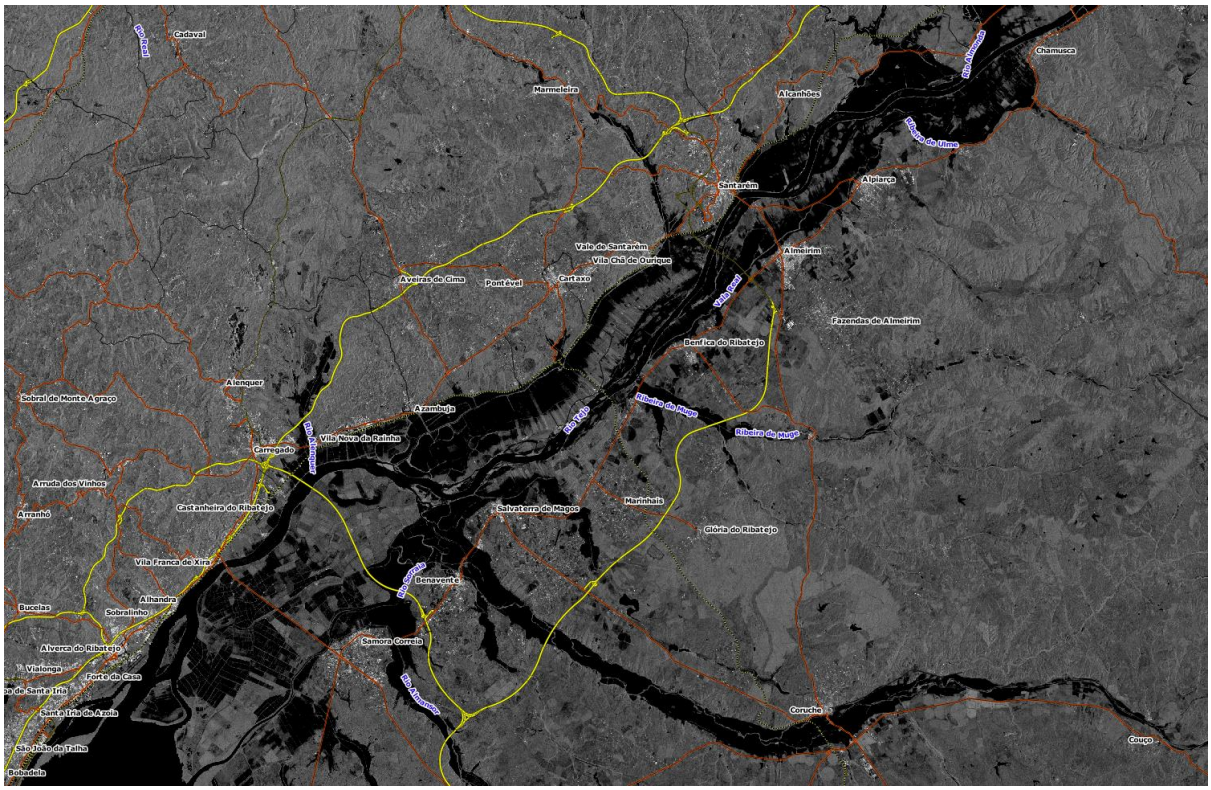
Acquisition from 26. & 27. January 2026



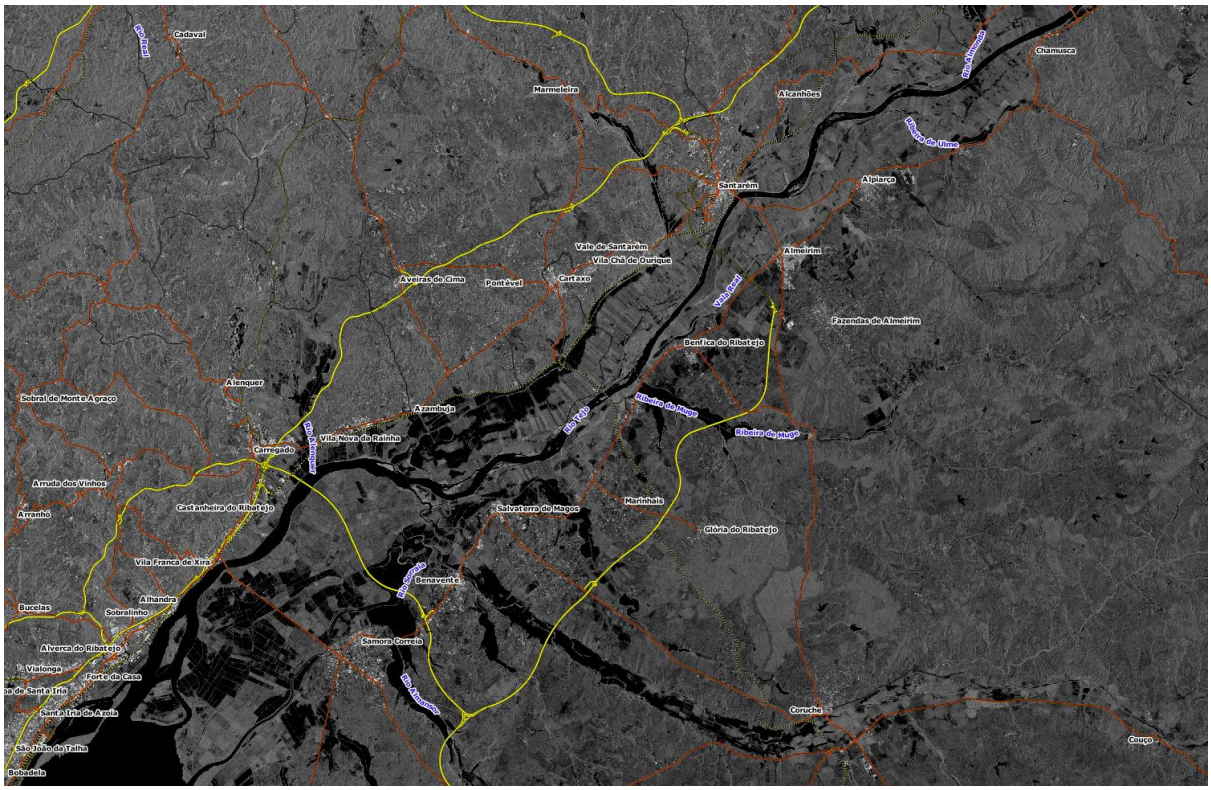

Acquisition from 6. & 7. February 2026



Acquisition from 13. & 14. February 2026



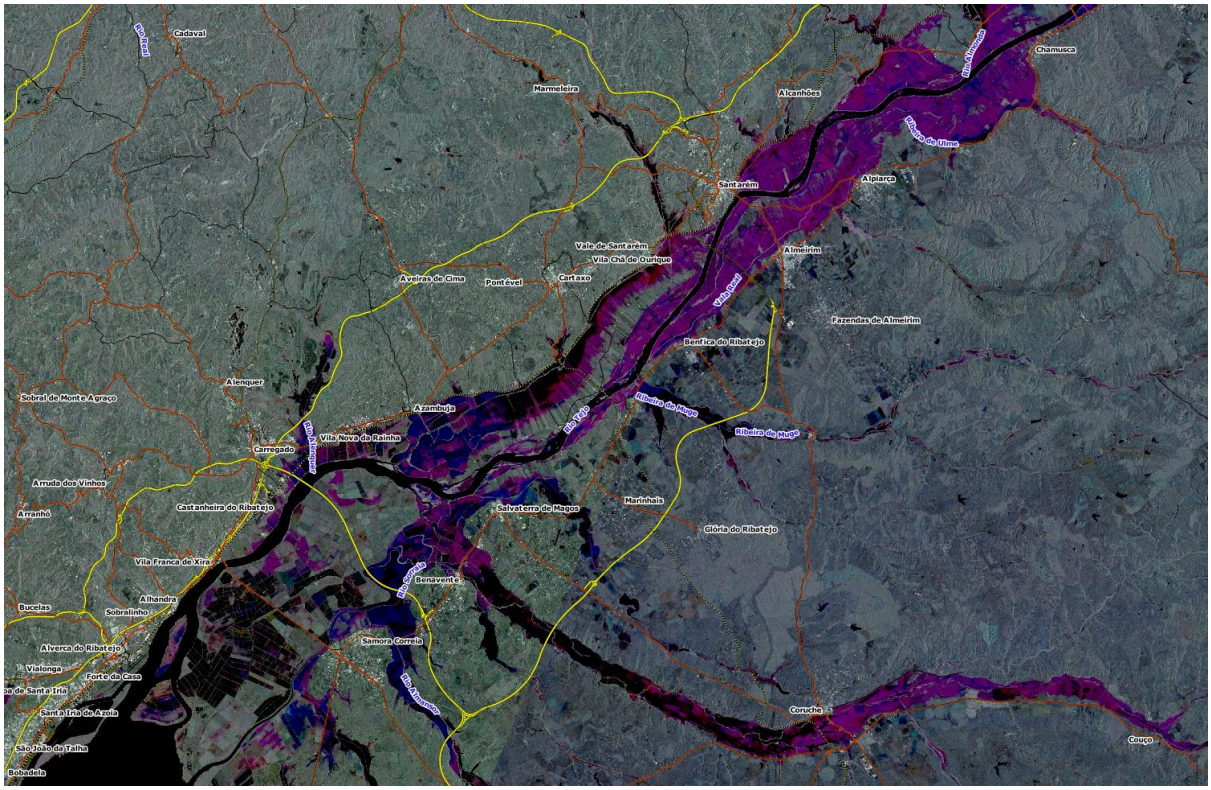

Acquisition from 19. & 20. February 2026



The damage caused by flooding on agricultural land depends primarily on the crop, the duration of the flooding, and the water level. Some crops, such as corn, can tolerate flooding for a few days, whereas wheat, for example, is at risk of dying after just 2-3 days.

To assess the extent of potential flood damage, it is therefore crucial to know how long the water remained on the affected fields.

The following image is a composite of three photos combined into a color image.
These photos were taken on January 26 & 27, February 6 & 7, and February 19 & 20, with a 12-day interval between each.




The black signature shows areas that were underwater throughout the entire period.
This also includes areas that were already covered with water before the flooding.

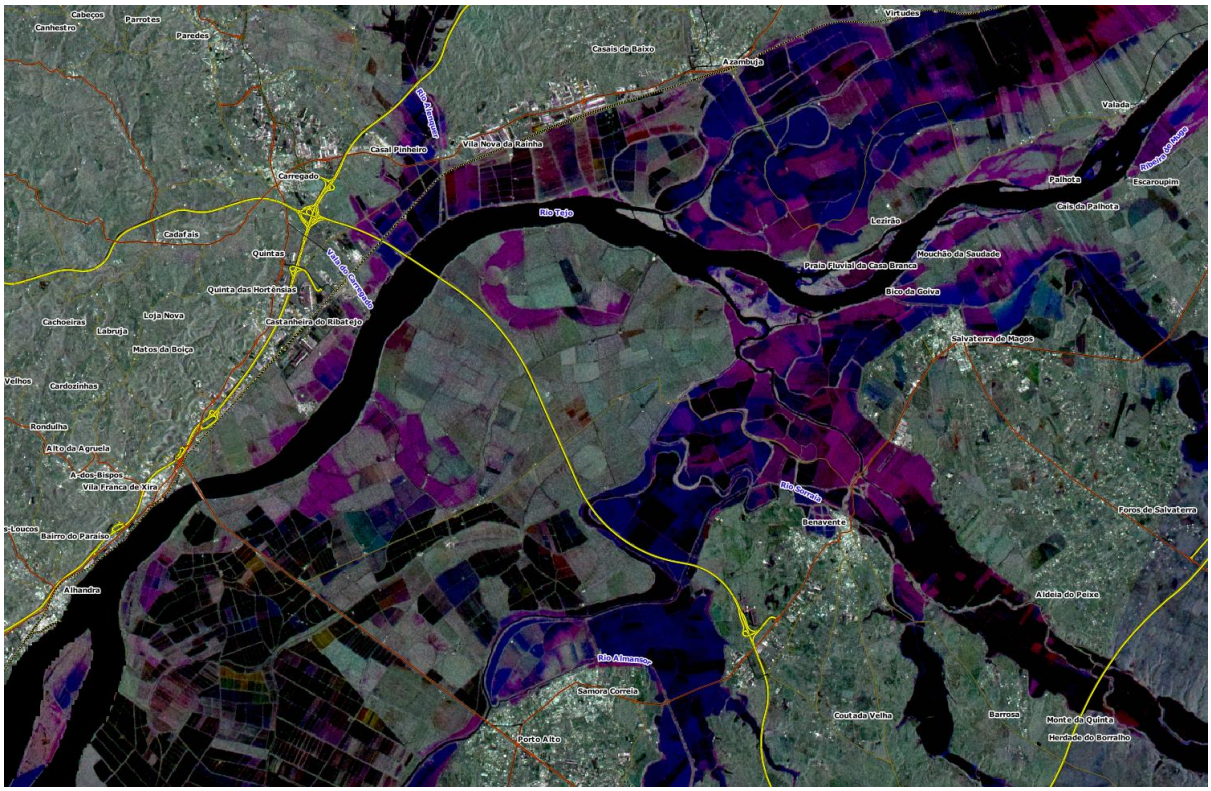
The blue area is the one that was flooded on both February 6th & 7th and February 19th & 20th. This area is blue because it was only not flooded on January 26th & 27th, and this date falls on the blue color channel. Since it was not flooded on this date, we have a higher radar signal backscatter there, resulting in higher values, which are represented here in blue.

We have red areas that were flooded on the first two dates but not on the last, and we primarily have pink as the dominant color. Pink is a mixture of red and blue. This means that these areas were only affected by flooding on the middle date, February 19th & 20th.

By analyzing the color values, this partial view can also be analyzed, revealing individual areas in different color gradations.

131

Try to identify for yourself which areas were affected by the floods, when, and for what period of time.



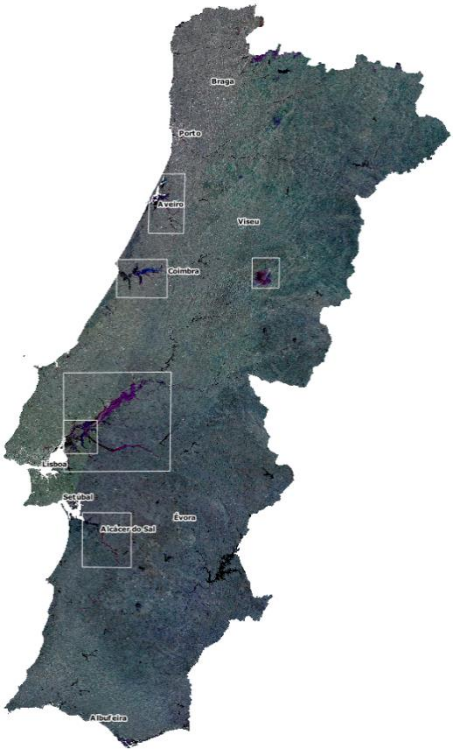

The channels are: Blue 26. & 27. January  Green 6. & 7. February  Red 19. & 20. February

Further flood-prone areas, distributed throughout Portugal, are shown on the following pages.

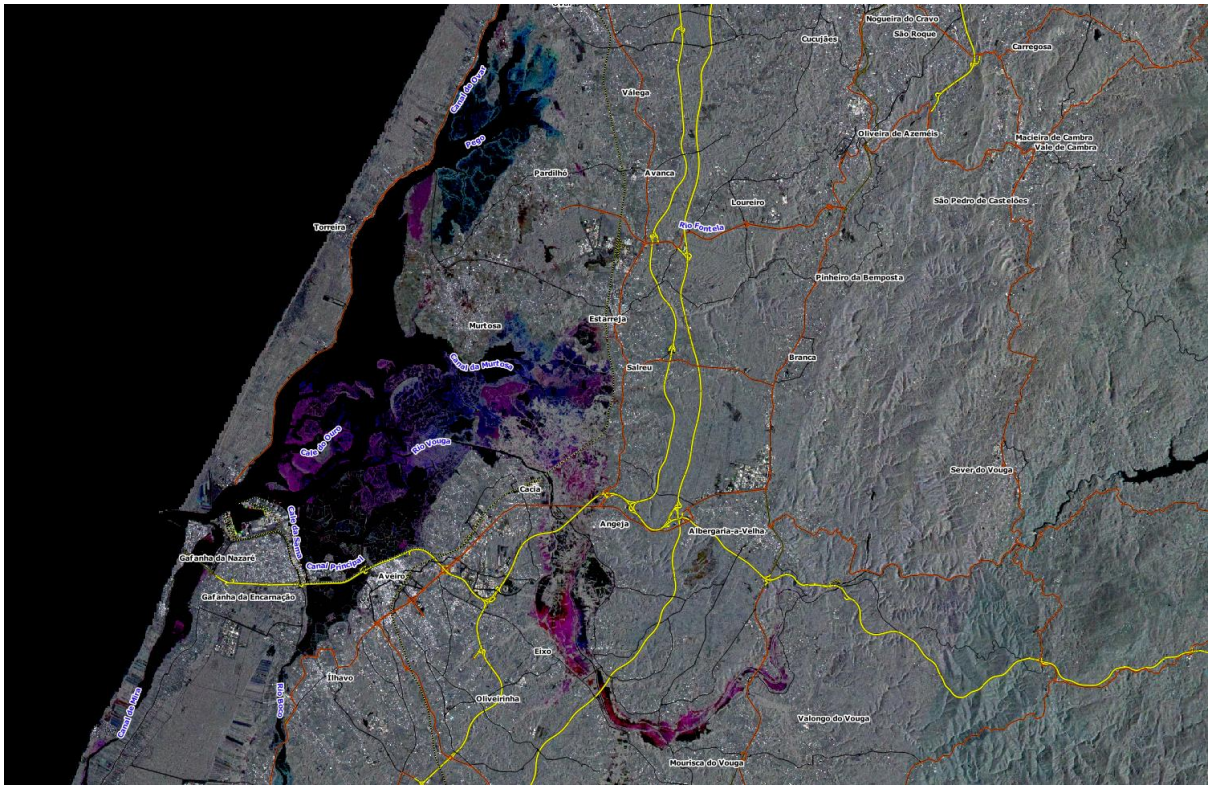
The same map product was used, representing a combination of three survey dates, each 12 days apart. Once you understand the principle, you learn relatively quickly to interpret the colors correctly.

This provides a rapid overview of the temporal dynamics of the floods.

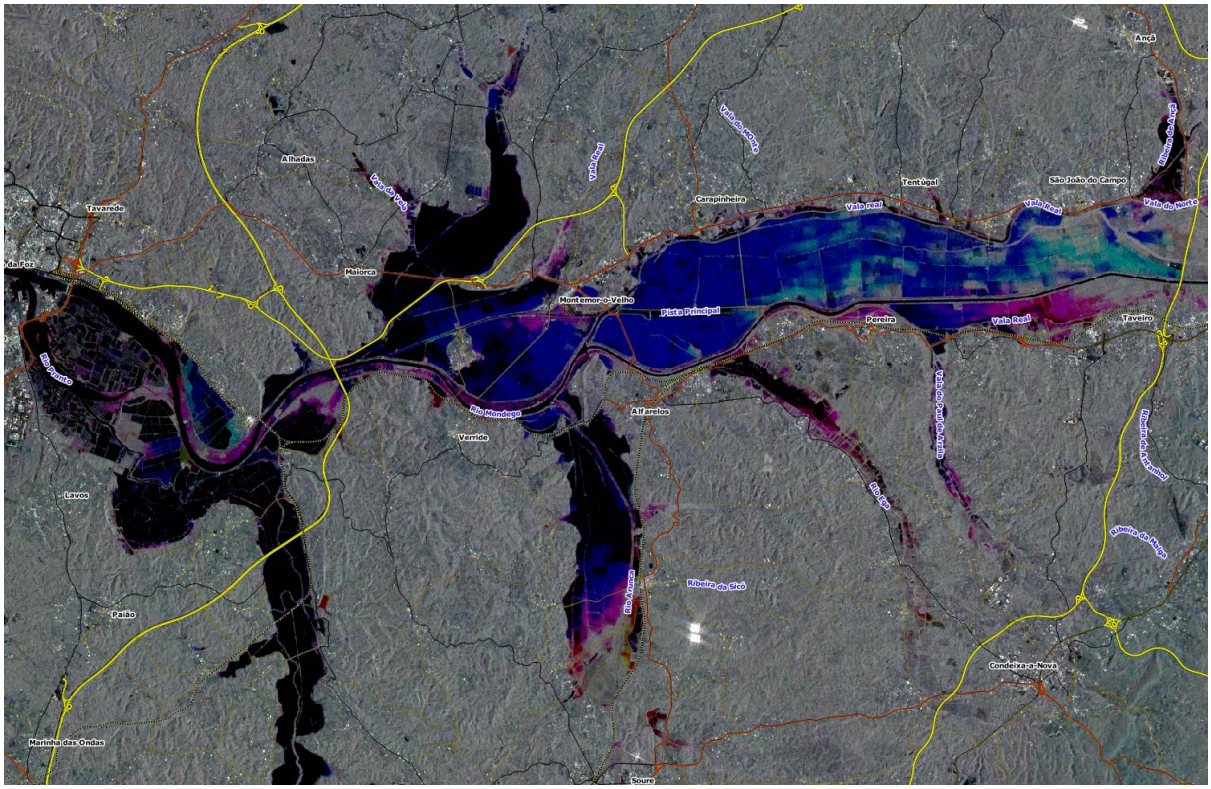
The last example shows an area where there had previously been forest fires. The heavy rain caused landslides and a displacement of the topsoil.



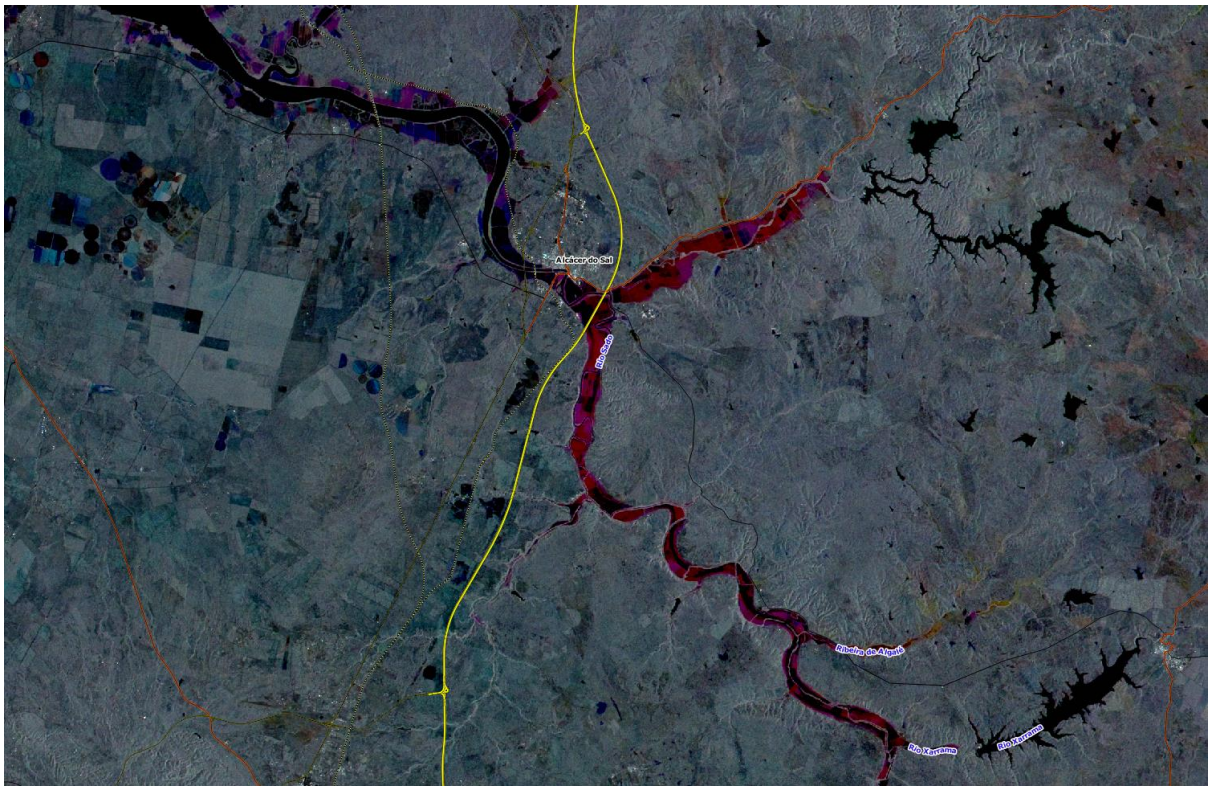
The river Vouga in the estuary near Aveiro.




The river Mondego near Montemor o Velho.



The river Sado near Alcacer do Sal




An area between Loriga and Manteigas was affected by landslides caused by heavy rainfall. Previously, there had been forest fires in the area, and now the soil was washed away by the rains.