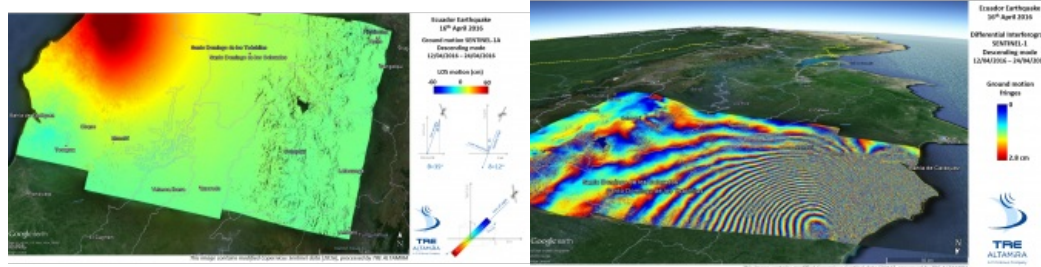


Ecuador Earthquake Captured by Sentinel-1



Altamira Information, headquartered in Spain, has created a new Sentinel-1 [ground motion map](#) and [interferogram](#) showing the massive earthquake that hit Ecuador on 16 April with a magnitude of 7.8. Two Sentinel-1 images have been used: one pre-event image acquired by the satellite on 12 April and the other post-event, captured on 24 April.

The quake occurred as the result of shallow thrust faulting on or near the plate boundary between the Nazca and South America plates, according to the [USGS](#). Ecuador lies above the plate boundary where the Nazca Plate [subducts](#) beneath the South American Plate at a velocity of 61 mm/year. With at least 654 people killed and more than 16,600 injured, this quake was the worst natural disaster in Ecuador since the 1949 Ambato earthquake.

Remote sensing aid

The Sentinel mission marks a new era in remote sensing aid for disaster response. These satellites play a crucial role in helping manage natural disasters because they provide timely information that can be rapidly processed. The results obtained with interferometry allow the monitoring of ground motion, down to a few mm, on wide areas. This type of information is essential for monitoring shifts from earthquakes, landslides, and volcanic uplift, among others.

In the last year there have been some impressive InSAR results from Sentinel-1A, the first from this two-satellite constellation, [that has been in orbit for two years](#). On 25 April its identical twin Sentinel-1B was launched. With the two satellites in orbit double the amount of data will now be produced and global coverage will be achieved in six days. [Watch the Sentinel-1B launch here](#).

Learn more about Altamira Information [here](#).