

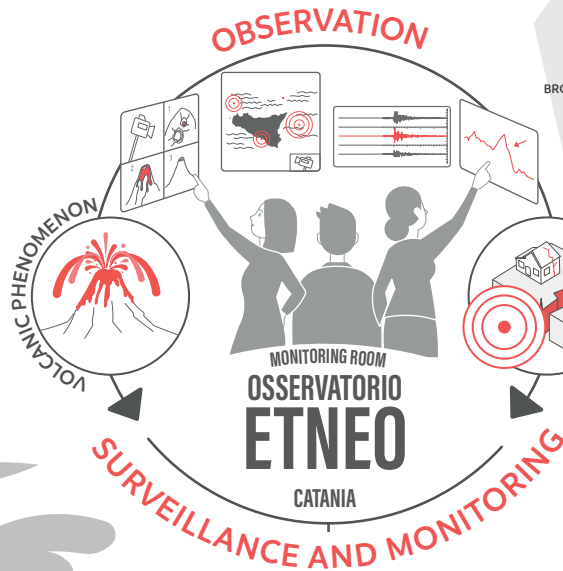
# VOLCANIC ASH

THE ASH CAN COMPROMISE THE SAFETY OF AIR FLIGHTS

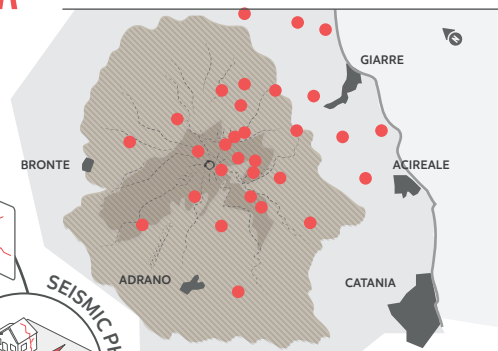


Volcanic ash can seriously damage aircraft in flight. The competent authorities are alerted when the formation of an eruptive column is observed.

# THE SURVEILLANCE OF ETNA



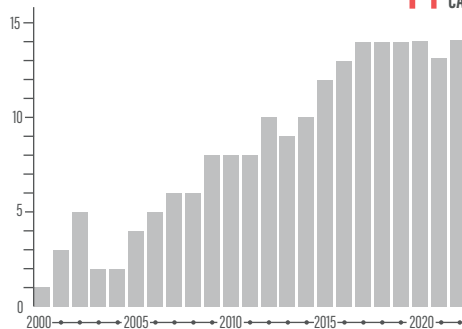
# THE SEISMIC NETWORK



Since 2003, Etna's the Permanent Seismic Network (PSN) has been renewed and enhanced by introducing broadband seismic sensors and a satellite-terrestrial data transmission system, that is terrestrial and satellite. **31 stations are currently active.**

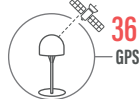
# VOLCANIC SURVEILLANCE

14 CAMERAS



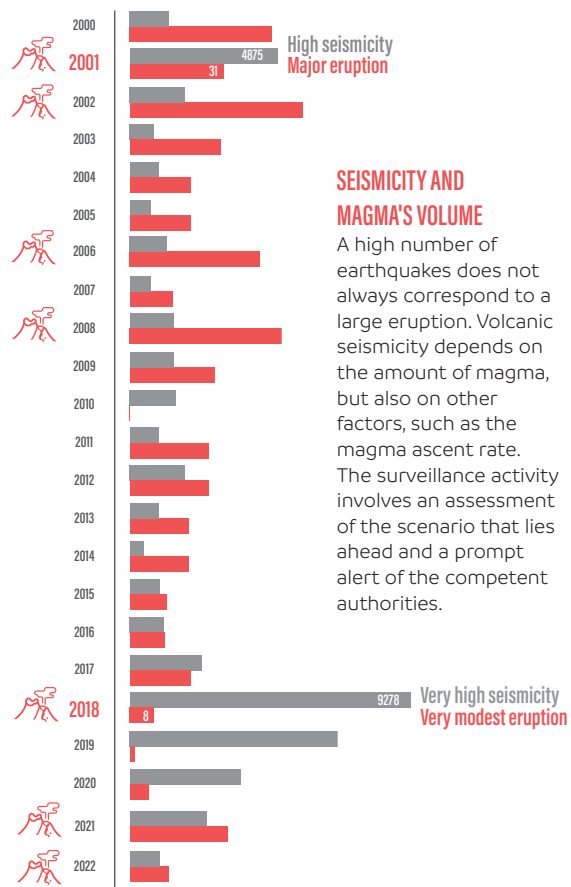
Volcanic video surveillance network allows real-time monitoring through cameras and thermal cameras.

## OTHER SENSORS FOR MONITORING AND SURVEILLANCE ACTIVITIES



# OPERATIONS ROOM OBSERVATIONS

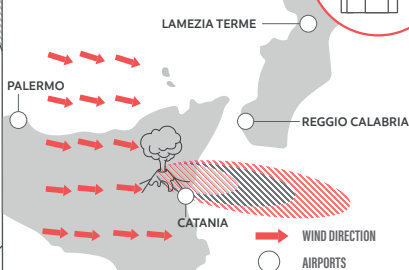
■ NUMBER OF EARTHQUAKES ■ VOLUME OF ERUPTED MAGMA (MILLIONS OF CUBIC) 🦋 LATERAL ERUPTIONS



## SEISMICITY AND MAGMA'S VOLUME

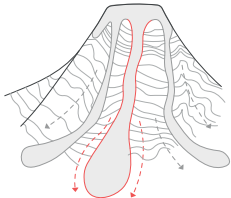
A high number of earthquakes does not always correspond to a large eruption. Volcanic seismicity depends on the amount of magma, but also on other factors, such as the magma ascent rate. The surveillance activity involves an assessment of the scenario that lies ahead and a prompt alert of the competent authorities.

## ASH PROPAGATION



The dispersion of the eruptive cloud is estimated with physical-mathematical models that take into account the wind direction and allow us to alert the airports that are possibly affected by the fallout.

## LAVA PROPAGATION



The lava follows the direction of maximum slope. Knowing the morphology of the land it is possible to estimate the areas potentially invaded by lava. Up-to-date topographic bases are necessary!

## POSITION OF ERUPTIVE VENTS

The position of the eruptive vent is crucial in determining the impact of an eruption: lava flows from vents located along the flanks of the volcano and at low altitudes are more likely to reach inhabited areas.

## LATERAL ERUPTIONS

They are particularly dangerous because the opening of low-altitude eruptive vents can more easily involve urban centers.

# THE LAVA