

ITALY/NAPLES

Terra instabilis

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Pozzuoli (Phlegraean Fields). The Temple of Serapis (or Macellum) was a former Roman public market. Today it has become a symbol of the phenomenon of volcanic bradyseism due to the fact that sometimes it is completely dry and other times semi-submerged in the seawater.



MOUNT VESUVIUS AND THE PHLEGRAEAN FIELDS: THE WORLD'S MOST FEARSOME SUPER-VOLCANO IS A POTENTIAL TIME BOMB

The area with the world's highest volcanic risk is situated in the heart of Italy near Naples. The risk is not posed by the renowned Vesuvius, or rather, not only: the threat in question is the deadly pairing of the volcano that destroyed Pompeii and the underestimated and almost invisible) Phlegraean Fields, an enormous and devastating caldera situated less than twenty kilometres to the west.

While Vesuvius stands tall in all of its menacing beauty, the Phlegraean Fields, which are currently declared a "yellow zone" for certain types of activities, can only be perceived fully when viewed from above. This volcanic field has been active for more than 80 thousand years and is punctuated by craters, lakes, cones and fumaroles but also roads, factories and homes, where 500 thousand people live.

Together with the 670 thousand people living in the vicinity of Vesuvius, they inhabit one of the planet's highest risk areas.

Today volcanologists monitor activity using sophisticated instruments, ready to detect the smallest sign of an awakening that – and this is certain – will arrive sooner or later. Volcanoes have brought death to the Bay of Naples but also life: they have made the soil fertile, created thermal springs of water whose properties are considered "magical" and provided tuff rock with which entire cities have been built.

But the danger persists, and a recent study demonstrated that the population living in and around the Campi Flegrei, as the Phlegraean Fields are known in Italian, have only a very low risk perception for volcanic hazards. A sophisticated emergency plan has been developed that would involve mass evacuations but could it ever work in such a densely populated area?



Naples. A guided tour underground beneath the city. The tour visits tunnels, aqueducts and a labyrinth of corridors and rooms dug out of the volcanic tuff rock. This network has been used for various different purposes over the centuries, from quarrying stone to dumping waste and even as shelter from air raids.



Monterusciello (Phlegraean Fields). Members of the Civil Protection force check information on a screen. In 2021 the National Civil Protection organization raised the alert level at the Phlegraean Fields to yellow to indicate “potential disequilibrium of the volcano”.



Somma Vesuviana (Naples). At the summit of Mount Somma (originally part of Vesuvius), on the morning of May 3rd people come to dance, sing and play traditional musical instruments (like the accordion, the triccheballacche, the putipù, the tammorra and tambourines) during a celebration of the volcano that incorporates a mix of Christian and pagan rituals.

Milan, Gallerie d'Italia. Visitors admire the oil painting *Eruption of Vesuvius by Moonlight* by Pierre-Jacques Volaire (1774) at the *Grand Tour* exhibition.





Piana delle Ginestre (Naples). At the foot of Vesuvius some volcanologists from the INGV (National Institute of Geophysics and Volcanology) are preparing an electrical resistivity tomography to characterise the inner structure of the volcano.



Herculaneum (Naples). Maria Minnillo, aged 82, prays before a painting of Sant'Anna that she was given as a present in 1972 by a friend ("Don't get rid of it," she said, "because it's very powerful"). Sant'Anna is the patron saint of mothers and Maria often receives requests from expectant mums (or those who want to be), who ask her to light a candle before it in order to receive protection or a grace.



Somma Vesuviana (Naples). Some youngsters that belong to a traditional *paranza* observe the summit of Vesuvius from Mount Somma on the morning of May 3rd, when Christian and Pagan traditions mix in a celebration of the volcano.



Monterusciello (Phlegraean Fields). A view of buildings constructed at the end of the 1980s when, following particularly serious episodes of bradyseism, the population of Rione Terra, the historic centre of Pozzuoli, was forced to evacuate.

Massa di Somma (Naples). Musician and public transport employee **Ciro Formisano** with his dog **Flash** at the site of the former nursery he used to attend, inside the now abandoned convent of Sant'Anna. When he was younger **Ciro** used to paraglide from Vesuvius: "An unforgettable experience," explains **Ciro**, "because up there you can see everything, from Mount Somma to the Bay of Naples all the way to Capri."





Torre Annunziata (Naples). Sebastiano Storzillo checks the “Spaghettoni Oplontini” in a drying cell at the Pastificio Murolo pasta factory.



Naples. In the Galleria Borbonica excavated out of the volcanic tuff rock beneath the city can be found vintage cars abandoned during the Second World War, when the subterranean tunnels and chambers were used by the Naples city council as a judicial deposit.



Somma Vesuviana (Naples), the shrine of Santa Maria a Castello. On the evening of May 3rd the groups of traditional *paranza* come together to sing, dance and play traditional musical instruments (like the accordion, the triccheballacche, the putipù, the tamorra and tambourines) during a celebration of the volcano that mixes Christian and pagan rituals.



Torre Annunziata (Naples). Three men sunbathe on the public beach in the town. The black volcanic sand is renowned for its properties to ameliorate symptoms of arthritis, rheumatism and skin conditions.



Herculaneum (Naples). Anna Sannino prepares *pomodorini del Piennolo*, a particular local tomato grown in the volcanic soil on and around Mount Vesuvius.



Homes and farmland in the craters of Cigliano, in the heart of the Phlegraean Fields, a huge caldera that is currently dormant.



Tourists have their photograph taken on the ridge of the large cone of Vesuvius (Naples). Almost 700 thousand people visit the summit of the volcano every year.



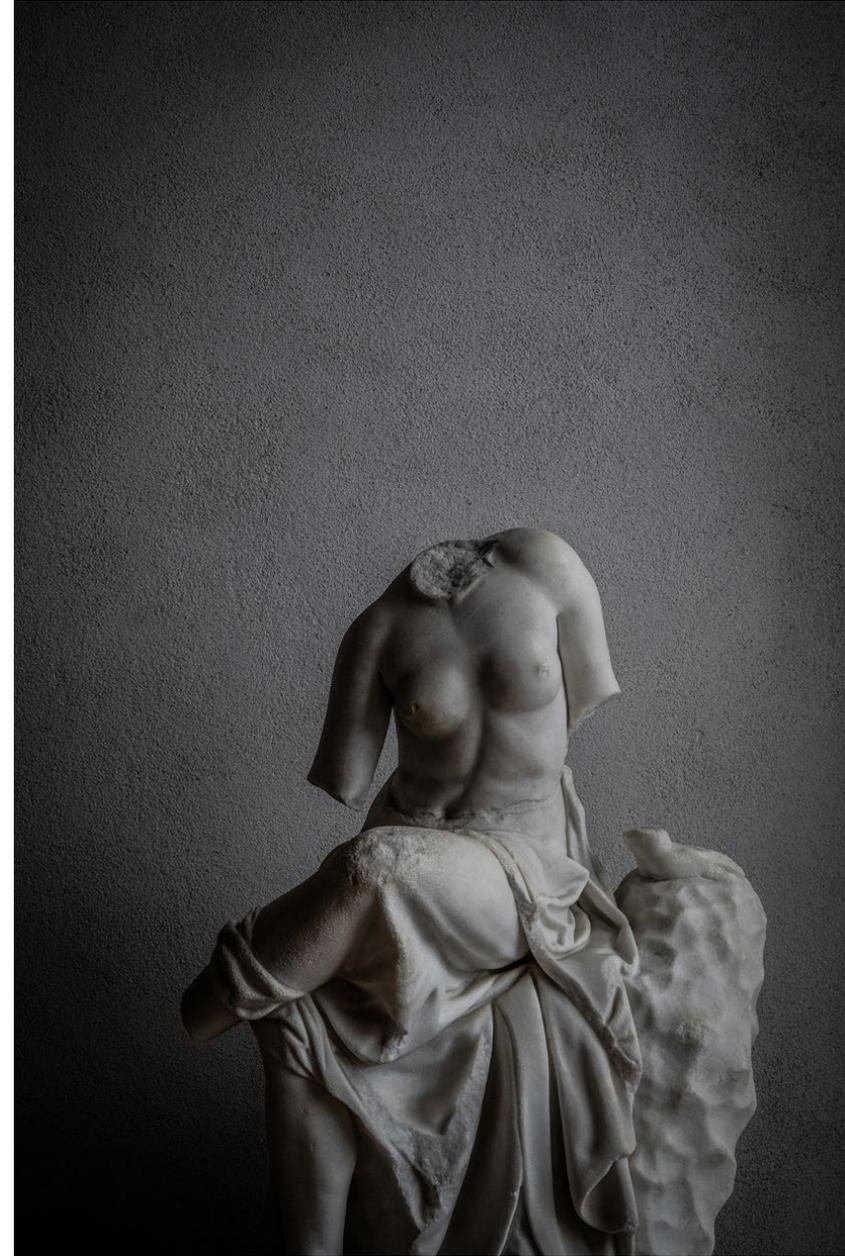
Torre del Greco (Naples). Wedding guests photograph the newlyweds outside the church of San Michele on the Sant'Alfonso hill at the foot of Vesuvius.



Torre Annunziata (Naples). Fisherman Tommaso Agnello hauls in his nets at sunrise. The activity of fishing has ancient roots in this Vesuvian town, dating back to ancient Oplontis (it is said that the place name may have derived from "op/a" – a place of fishermen).



Herculaneum (Naples). A marble statue found in the Bottega del Gemmarius and conserved since the eruption of Vesuvius in the year 79 A.D. that covered the city in mud and pyroclastic materials.



Bacoli (Phlegraeen Fields), the Baia Castle, the Archaeological Museum of the Phlegraeen Fields. A statue of a seated nymph from the group the *Invitation to dance* (Cumae, Greek origin, Claudian age).



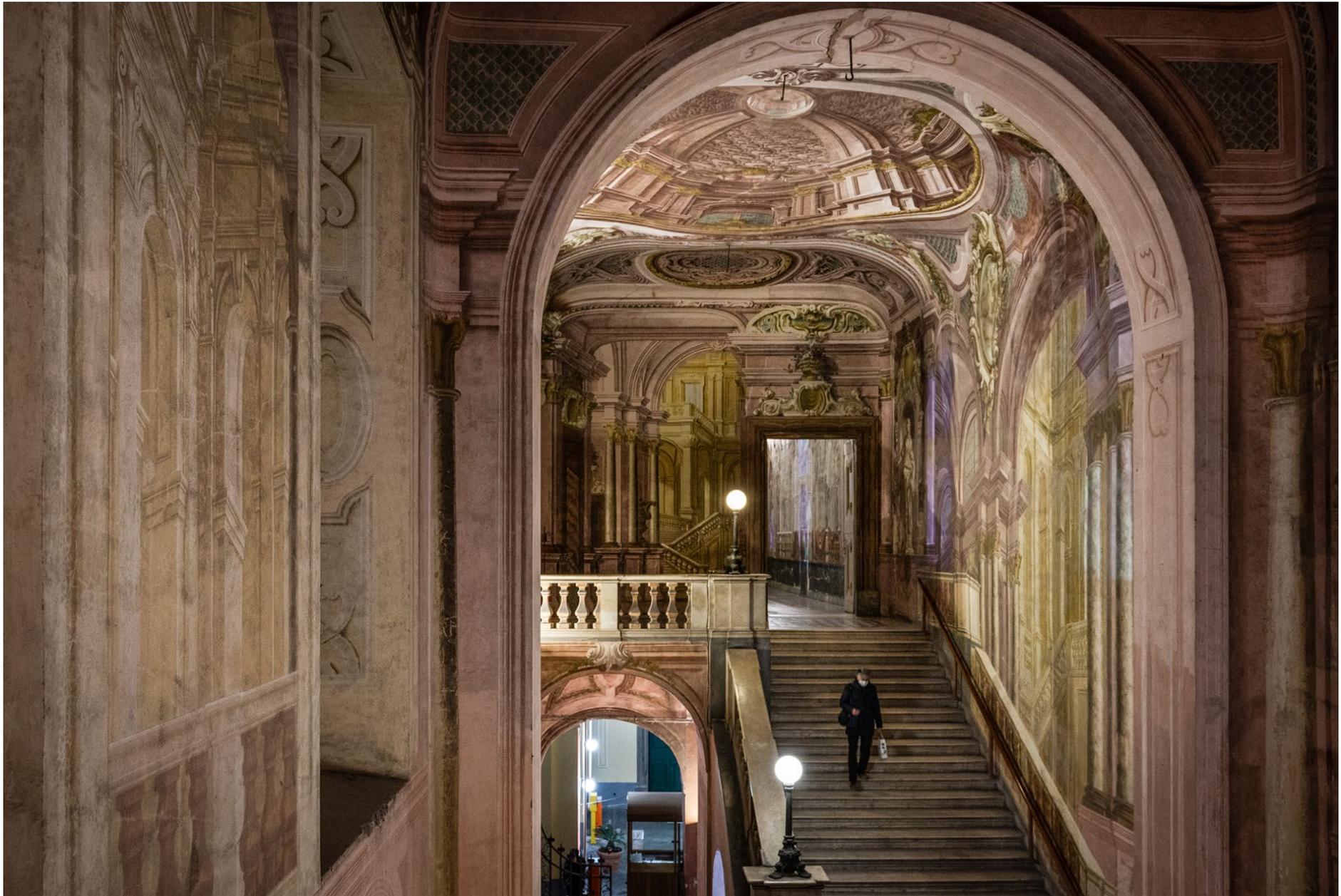
Herculaneum (Naples). On the slopes of Vesuvius two men work with stone at the Fratelli Fiengo company, which for half a century has been extracting and working the lava stone.



Torre Annunziata (Naples). A man has a mud treatment at the Terme Vesuviane spa. In Torre Annunziata the mineral springs connected to Vesuvius have been exploited for their health benefits since Roman times.

Trees burnt by a fire along the Valle del Gigante, part of the ancient caldera of Mount Somma-Vesuvius (Naples).





The stairway of the Reggia di Portici (Naples), Bourbon palace built on the slopes of Vesuvius in 1738. One century earlier, in 1631, the town was half destroyed by a volcanic eruption.



Pozzuoli (Phlegraean Fields). Two US military personnel at Carney Park Golf Course, which belongs to the US Navy. The golf course in Campiglione is the only one in the world to be located inside a spent volcanic crater.

Pompeii (Naples). A view of the Roman city buried by the eruption of Vesuvius (in the background) in 79 A.D.: that year various buildings still showed signs of damage from the strong earthquake that had struck in 62 A.D.





Pozzuoli (Phlegraean Fields). Young people at a beach party in Nabilah, two kilometres away from Monterusciello, the town created to house those displaced by the bradyseism that struck Pozzuoli in the 1980s.



Naples. Two passengers on a MSC cruise ship look out at Vesuvius and the city's port.



Naples, The Archaeological Museum. A plaster cast of one of the victims of the eruption of Vesuvius in 79 A.D. and, behind it, a photograph of the earthquake that struck the Campania region on 23 November 1980.

