

Volcano, Earthquakes A Hot Issue in Italy

by Claudio Celani

May 29—At the height of the hysteria campaign over the so-called “nuclear crisis” in Japan, astrophysicist Margherita Hack intervened in the debate in Italy, scolding the idiots who were calling on Italy to cancel its “nuclear renaissance.” Instead of worrying about risks of nuclear energy, she said, “We should worry about the next eruption of Mt. Vesuvius, which will occur with certainty in the future, and will kill 2 million people who live at the foot of the volcano.”

A recent study by geologists at the Osservatorio Vesuviano, the local section of the National Geological Society, has raised that figure to 3 million for a “worst case scenario”—an eruption of the same magnitude as the 3800 B.C. “plinian eruption,” which was reconstructed in 2006 by scientists Lucia Pappalardo and Giuseppe Mastrolorenzo. The two have called on the Italian government to expand current evacuation plans from 600,000 to 3 million people.

Speaking to *EIR*, Dr. Pappalardo explained that “it is not my job to work out such plans, but my duty is to tell authorities that scientists say this is the worst-case scenario and you have to draft your plans accordingly. It might be that there is no practical solution, but the population should be informed, so that they know exactly what they are facing.”

The Danger from Vesuvius

Current government plans are based on an “intermediate” scenario between a plinian eruption and smaller, recent eruptions such as that in 1944. The scenario defines a “red zone” to be evacuated, where 600,000 people live. To evacuate 600,000 people is already a promethean enterprise, but an evacuation on that scale was done successfully in Haicheng, China in 1975. In an intermediate scenario, the time between a pre-eruption and the eruption itself is definitely long enough to allow for that relocation to be made.

But in a plinian eruption, things move much more quickly. Due to the high pressure on the magma chamber, the magma is pushed up the conduits in a very short

time, just a few hours. Dr. Pappalardo specializes in studying such phenomena through the analysis of sedimentation on rocks found in the area of the 3700 B.C. eruption, around the town of Avellino.

Dr. Pappalardo and her colleagues are positive that the recently discovered chamber 8-10 km under the Vesuvius, is a magma chamber, corroborating the hypothesis that a plinian eruption is the most probable scenario.

The “plinian eruption” takes its name from Pliny the Younger, who observed and described the famous 79 A.D. eruption that destroyed Pompeii and Herculanium. The 3800 B.C. eruption was as sudden and devastating as the one described by Pliny, and it is now 2,000 years past, so that, these scientists believe, we are approaching that threat again. “Therefore, it is our task to tell authorities that they should base their evacuation plan on this scenario and be ready to evacuate 3 million people,” Dr. Pappalardo said.

A plinian eruption would be deadly in the second phase, characterized by “pyroclastic flows” of hot gases and debris that travel at extremely high speeds. That is what Pliny described as “pine-like clouds,” which go up and collapse under their own weight, forming fireballs coming down to the ground at speeds over 100 kmh. That is what killed most of the people in Pompeii.

The May 18, 1980 Mount St. Helens eruption in the U.S. state of Washington was also a plinian eruption, and current evacuation plans for Mt. St. Helens are based on that worst-case scenario still. Although the probability of a repetition in the short term is low, she said, that is the correct policy.

As LPAC-TV has described, similar dangers exist for the Seattle area, from an eruption of Mt. Rainier, in the same Cascade Range of volcanoes as Mount St. Helens.

Since temporary relocation is not feasible, the ideal solution would be to build new cities far away, as Turkey is doing. It will not be easy to convince Neapolitans to leave Naples, but if you inform them of the dangers and offer them a job, they would probably agree, because so many of them are unemployed.

An ideal contingency plan based on the worst-case scenario would involve three different approaches: 1) pre-emptively move as many people as possible away from the volcano (building new cities); 2) evacuate the population around the periphery of Naples, who can most easily be evacuated; 3) build underground shelters



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A government office in L'Aquila, after the 2009 earthquake. Government commissioners who said an earthquake was unlikely are on trial for dereliction of duty.

for those who remain, similar to the bomb shelters used during World War II.

Such an approach involves scrapping current budget policies, which are dictated by Italy's membership in the European Currency Union. Unfortunately, under the EU ideological approach, Dr. Pappalardo complained, Italian politicians have degenerated to the point that they think, "By the time the eruption takes place, I will be dead, so my successor will be blamed!" Such a cynical approach is what endangers not only the 3 million people at risk in Naples, but the whole nation, which is left exposed to risks created by the failure to repair or replace decaying infrastructure.

The Earthquake Threat

Another example is the case raised by a court in L'Aquila, in central Italy, which, on May 25, indicted all members of the Government Commission on Major Risks, for having issued faulty evaluations on the eve of the magnitude 6.3 earthquake of April 6, 2009, which killed more than 300 people. The Commission is composed of seven experts: government officials and leading geologists.

The Commission met on March 31, 2009, one week

before the earthquake, because of mounting concerns about seismic activity in the Abruzzo region. It concluded that it was "improbable" that there would be a major quake, but the threat could not be discounted. The experts have been accused of manslaughter and will go on trial Sept. 20.

Media coverage has raised the issue of 1) whether earthquakes can be predicted; and 2) whether the case should be tried by the courts or ruled on within scientific forums.

Asked by *EIR*, Dr. Pierfrancesco Biagi, a leading researcher on earthquake precursors, shed some light on the subject. Contrary to what some of the defendants, such as National Geophysics Society Chairman Enzo Boschi, allege, "the issue of earthquake forecasts is not unsolvable." However, the L'Aquila story

is complicated by the fact that the public has been polarized around the case of researcher Giampaolo Giuliani, who used his data on radon precursors to the earthquake to claim that he had forecast the earthquake. Radon emission is indeed a precursor, but is not enough to build a reliable forecast. It must be used in correlation with other parameters, such as electromagnetic activity on Earth, in the atmosphere, in the ionosphere, etc. Researchers on earthquake precursors, such as Dr. Biagi and Russian physicist Dr. Sergey Pulinet, are advocating a "multi-parameter" approach, to establish a credible early-warning system.

Therefore, Dr. Biagi said, "it is not credible that one single individual would go on television and in the newspapers claiming that he has forecast an earthquake. We would have constant warnings, because there are many crazy people around. Forecasts must be made by a government agency."

In the case of Giuliani's warnings, he even erred on the epicenter, pointing to the town of Sulmona, 55 km south of L'Aquila. Had people from Sulmona been evacuated on the basis of his warnings, they would have been moved to L'Aquila, and the earthquake toll would have increased! As concerns the Government Commis-

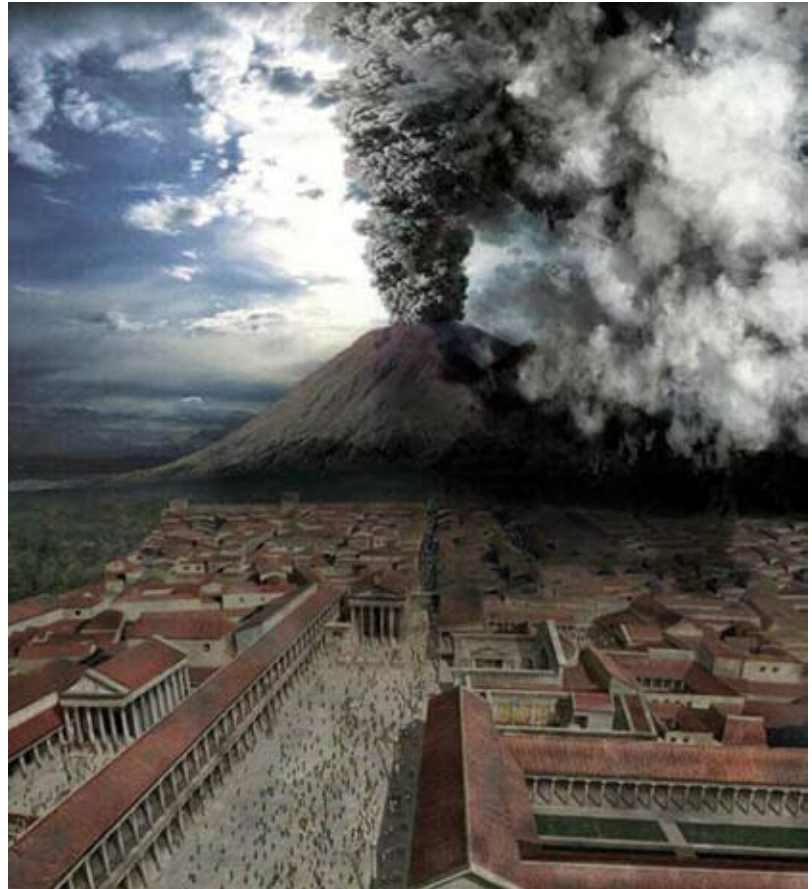
sion on Major Risks, it does have a responsibility, Dr. Biagi insists. The Commission met on March 31 for less than one hour and issued a release that essentially said that there was no threat of a strong earthquake. “Well, if earthquakes are not predictable, as they say, the Commission made a mistake, because de facto it made a forecast. It was a forecast that there would be no earthquake, but still a forecast!”

The Commission should have said instead, according to Biagi: “We are watching a strong seismic sequence in the Aquila region. Seismic sequences are quite common in Italy; generally they tend to decrease in intensity and frequency over time. Sometimes, however, they culminate in a strong event (and this is seismic history, on the record!). We are not able to say what will happen in this case, but there is a *state of alert* in the area, and those who want to leave, should do so. Technicians will be sent immediately to check the safety of various buildings, and single buildings may eventually be condemned.”

Professor Biagi was in L’Aquila on March 30, and he pointed out that all you had to do was to look at the Casa dello Studente dormitory, to condemn it. The building collapsed like a house of cards in the quake, killing eight students.

Most international media have covered the L’Aquila developments by announcing that an Italian court is going to try scientists for their opinions, citing the Inquisition trial against Galileo, and making summary judgments on the Italian justice system based on Hollywood movies. True, a certain lynch-mob sentiment has emerged among some Italians (and even in sections of the judiciary), after it was discovered that many collapsed buildings had not been built according to mandatory anti-seismic regulations; and that although most inhabitants have been provided with new homes, the reconstruction of the historic center of L’Aquila has not yet started.

However, according to information currently available, the indictment’s counts are related not to scientists’ opinions, but to a wrong judgment given by mem-



Courtesy of Crew Creative, Ltd.

A dramatization of the eruption of Mt. Vesuvius in 79 A.D., from the Discovery Channel’s film “Pompeii: The Last Day.”

bers of a government body in the exercise of the function that body is supposed to perform. The issue to be tried is not whether the earthquake could be forecast, but what precautionary measures could have been taken on the basis of a reasonable evaluation of available data, knowing the vulnerable state of many buildings.

The larger issue of whether and how earthquake forecasting can be carried out, should in no way be dealt with in a court of justice. But a government commission created to improve security against seismic events cannot be composed of members who have a fatalistic approach to natural cataclysms, such as believing that science will never be able to forecast earthquakes. As long as mainstream scientists insist on that lie, bankers will be happy, because there is no push for financing scientific research and infrastructure. In the end, it is the people versus the banksters.