

Italian court finds seismologists guilty of manslaughter

At the end of a 13-month trial, six scientists and one government official have been found guilty of manslaughter and sentenced to six years in prison. The verdict was based on how they assessed and communicated risk before the earthquake that hit the city of L'Aquila on 6 April 2009, killing 309 people (see '[Scientists on trial: At Fault?](#)').

The hearing took place in a prefabricated building in the industrial outskirts of L'Aquila that has served as the provisional seat of the court since the earthquake destroyed the city centre. As Judge Marco Billi read the verdict, the room was crowded with victims' relatives, reporters from local and international media, and many ordinary citizens. In addition to the prison term, those indicted will be permanently banned from public service and will have to pay financial compensation to the families of 29 victims named in the indictment and to the city of L'Aquila, totalling €7.8 million.

The defendants all took part in a meeting held in L'Aquila on 31 March 2009, during which they were asked to assess the risk of a major earthquake in view of many shocks that had hit the city in the previous months. The meeting was unusually quick, and was followed by a press conference, during which Italy's Civil Protection Department and local authorities reassured the population, stating that minor shocks did not raise the risk of a major quake. In a television interview recorded shortly before the meeting, Bernardo De Bernardinis, then deputy director of the Civil Protection Department, said, “the scientific community tells me there is no danger because there is an ongoing discharge of energy”. Most seismologists, including several of the indicted, consider this statement to be scientifically incorrect.

Higher death count

According to the prosecutor, such reassurances were the reason why 29 people who would otherwise have left L'Aquila in the following days changed their minds and decided to stay, and were killed when their homes collapsed. The prosecutor thus indicted all seven members of the panel for manslaughter, reasoning that their “inadequate” risk assessment had led to scientifically incorrect messages being given to the public, which contributed to a higher death count (see '[Scientists on trial over L'Aquila deaths](#)').

The seven are De Bernardinis, who in 2010 became president of the Institute for Environmental Research and Protection (ISPRA) in Rome; Enzo Boschi, former president of the National Institute of Geophysics and Volcanology (INGV) in Rome; Giulio Selvaggi, former director of the INGV's National



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Mauro Dolce, head of seismic risk at the Italian Civil Protection Department, is one of seven people found guilty of manslaughter in relation to the deadly 2009 earthquake in L'Aquila, Italy.

Earthquake Centre in Rome; Franco Barberi, a volcanologist at the University of Rome 'Roma Tre'; Claudio Eva, a professor of Earth physics at the University of Genoa; Mauro Dolce, head of the seismic-risk office of the Civil Protection Department in Rome; and Gian Michele Calvi, director of the European Centre for Training and Research in Earthquake Engineering in Pavia.

In their final arguments on Monday morning, the defendants' lawyers remarked that the prosecutors had not managed to prove a clear causal link between what happened at the meeting and the deaths. “The minutes of the meeting were not made public before the earthquake. There was no press release, no official statement. So how could those deaths be caused by what scientists said at the meeting?” asked Marcello Melandri, Boschi's advocate. They also noted that the accusation relies mostly on relatives' recollections of the victims' decisions at the time of the earthquake, which can be unreliable.

The sentence came as a surprise even to the public prosecutor, Fabio Picuti, who had requested a prison term of four years. “We'll have to read the judge's motivations to understand why,” he says, declining to comment further. In Italy, the judge has up to three months to file the full motivation behind a sentence.

Selvaggi and Dolce were in court during the final hearing, but declined to comment. De Bernardinis said that the sentence will probably “affect the way experts assume responsibilities in crisis situations”. Melandri was more explicit. “In Italy you will now see many more false alarms in such situations, because experts will choose to cry wolf when in doubt. In the end they will become less and less credible.”

According to Vincenzo Vittorini, who represents the association “309 Martiri” that gathers victims' families, “we've been saying for three years that seismic risk was underestimated in L'Aquila, and now a court has confirmed we were right. Yet this verdict makes me bitter, because it means that those deaths could be avoided. This verdict must be a departure point to change the way risk prevention is done in Italy, we do not have the same standards found in other countries”.

The matter is far from closed, however: the defendants' lawyers have all announced that they will appeal the verdict. The sentences will not come into effect until all appeals have been exhausted.