

NEWS IN FOCUS

SPACE What makes landing on a comet so hard **p.172**

MEDICAL ETHICS Rules on clinical trials stir debate **p.174**

NEUROSCIENCE Evidence mounts for gut-brain link **p.178**



DEPRESSION The condition that causes a staggering burden of disability **p.179**

FILIPPO MONTEFORTE/AFP/GETTY



More than 300 people perished in the earthquake that struck the medieval centre of L'Aquila.

RISK ASSESSMENT

Scientists cleared of quake deaths

Italian appeals court says six seismologists were not guilty of manslaughter following the 2009 L'Aquila disaster.

BY ALISON ABBOTT & NICOLA NOSENGO

Six seismologists accused of misleading the public about the risk of an earthquake in Italy were cleared of manslaughter on 10 November. An appeals court overturned their six-year prison sentences and reduced to two years the sentence for a government official who had been convicted with them.

The magnitude-6.3 earthquake struck the historic town of L'Aquila in the early hours of 6 April 2009, killing more than 300 people.

The finding by a three-judge appeals court prompted many L'Aquila citizens to react with rage, shouting "shame" and saying that the Italian state had just acquitted itself, local media

reported. But it comes as a relief to scientists around the world who had been following the unprecedented case with alarm.

"We don't want to have to be worried about the possibility of being prosecuted if we give advice on earthquakes," says seismologist Ian Main of the University of Edinburgh, UK. "That would discourage giving honest opinion."

The defendants themselves have mixed feelings. Giulio Selvaggi, former director of the National Earthquake Centre in Rome, says that although he is happy to be acquitted, "there is nothing to celebrate — because the pain of the people of L'Aquila remains".

In the months before the major earthquake struck, the region around L'Aquila had been

subject to frequent, mostly low-magnitude tremors known as seismic swarms. Residents were alarmed by a local amateur earthquake predictor's claims that he had evidence of an impending quake, although geologists dismissed his methods as unsound.

A commission of experts met on 31 March 2009 to advise the government. According to the prosecution, a press conference after that meeting — attended by the acting president of the commission, volcanologist Franco Barberi of the University of Rome 'Roma Tre', and by Bernardo De Bernardinis, then deputy director of the Italian Civil Protection Department — conveyed a reassuring message that a major earthquake was not on the cards. Moreover, in a television interview recorded shortly before the meeting but aired after it, De Bernardinis said that "the scientific community tells me there is no danger because there is an ongoing discharge of energy" during the seismic swarms.

As a consequence, according to the prosecution, when the earthquake struck on 6 April, 29 people chose to stay indoors and died as their homes collapsed. All members of the expert commission were found guilty of manslaughter in October 2012, after a 13-month trial that transfixed the international scientific community.

In addition to De Bernardinis, Selvaggi and Barberi, the other defendants were Enzo Boschi, former president of the National Institute of Geophysics and Volcanology in Rome; Claudio Eva, an Earth physicist 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.

Over the course of six hearings before the appellate court in L'Aquila, the defence argued that there was no proof of a causal link between the meeting and the behaviour of the people of L'Aquila citizens. The lawyers also argued that the scientists could not be held accountable for De Bernardinis's reassuring statements, and that their scientific opinions were ultimately correct.

De Bernardinis was acquitted of the manslaughter charges in 16 cases, but not for the other 13. The judges can take up to three months to publish the reasoning behind their verdict. Lawyers for the families of the deceased have announced that they will challenge the ruling in the Supreme Court of Cassation in Rome, which could call for a retrial. ■