

Scientists condemned for l'Aquila deaths

Judge Marco Billi of the court of Aquilla passed on 22 October 2012 a guilty sentence on the former members of Commissione Grandi Rischi (the commission) of Italy (Franco Barberi, president of the commission; Bernardo De Bernardinis, vice president of the technical sector of Protezione Civile; Enzo Boschi, president of Istituto Nazionale di Geofisica e Vulcanologia; Giulio Selvaggi, director of Centro Nazionale Terremoti; Gian Michele Calvi, director of Eurocentre; Claudio Eva, professor of physics at the University of Genoa; Mauro Dolce, director of the seismic risk office of Protezione Civile) for their failure to issue adequate preventive recommendations on continuing earthquakes to the residents of Aquilla, following the 4 magnitude earthquake on 30 March 2009 and prior to the 6 magnitude earthquake on 6 April 2009 that destroyed the city and other 56 surrounding communities, caused 309 deaths, and produced more than 2000 injuries.

On the evening of 30 March 2009 the head of Italian Protezione Civile (Civil Protection), Guido Bertolaso, called the regional head of civil protection Daniela Stati and explained that his vice Bernardo De Bernardinis will call her to arrange for the commission members to have the next day a meeting in Aquilla, after the 4 magnitude earthquake during the day caused the evacuations of many buildings in the city and caused an alarm among the population. (This telephone interception is available on the internet and was obtained during the police surveillance on the occasion of a G8 meeting.) Bertolaso explained that he will not participate but that the purpose of the meeting is to “silent immediately the imbeciles and placate the situation” (zittire subito qualsiasi imbecile e placare la situazione) and to have the “luminaries” present for a “media operation” (operazione mediatica), such that “they who are the super experts of earthquakes will say: it is a normal situation, phenomena that are happening ... it is better to have 100 earthquakes of magnitude 4 on the Richter scale rather than silence because 100 earthquakes serve to liberate the energy and there will never be a large earthquake that causes injuries ... this [meeting] is not because we are frightened and preoccupied but because we want to tranquilize the people and instead of having I or you talk about this let's have the super experts in the field of seismology do this” (e' piu' un'operazione mediatica, hai capito? Così loro, che sono i massimi esperti di terremoti, diranno: e' una situazione normale, sono fenomeni che si verificano ... meglio che ci siano 100 scosse di 4 scala Richter piuttosto che il silenzio perche' 100 scosse servono a liberare energia e non ci sara' mai la scossa che fa male, hai capito? ... che non e' perche' siamo spaventati e preoccupati ma e' perche' vogliamo tranquillizzare la gente ... e invece di parlare io e te facciamo parlare i massimi scienziati nel campo della sismologia).

Following the commission's meeting on 31 March 2009 the spokesman for the commission and vice head of Protezione Civile Bernado De Bernardinis issued the statement that “it is a normal phenomenology for the area from the standpoint of seismic phenomena” (si colloca in una fenomenologia senz'altro normale dal punto di vista dei fenomeni sismici che si aspetta in questa tipologia di territorio). From the minutes of the commission's meeting (also available on the internet) we have statements such as: it is the objective of the meeting to “make an objective evaluation of current earthquakes as it pertains to what can be predicted” and “discuss and issue indications on the diffuse alarms among the population”, “it is extremely difficult to predict the temporal evolution of earthquakes”, “it is improbable in the near future to have a large earthquake like that of 17 March, even if it cannot be excluded absolutely”, “the simple observation of many small earthquakes does not constitute a precursory phenomenon” (la semplice osservazione di molti piccoli terremoti non costituisce fenomeno precursore), “it is not possible to predict earthquakes”, “the emissions of Radon have not been identified to serve as the precursor for earthquakes”, “today there are no instruments available for prediction and any prediction has no scientific validity” (oggi

non ci sono strumenti per fare previsioni e qualunque previsione non ha fondamento scientifico). The meeting on 31 March 2009 adjourned after 1 hour of deliberations.

Those who are taking sides against the sentence of the court of Aquilla assume that the Commissione Grandi Rischi members were condemned for not being able to predict the earthquakes and lack the familiarity of other issues that led the judge Marco Billi to condemn these individuals for “approximate evaluation of seismic risk, generic and inefficient in relation to the activities of the commission and its duties of prevention and foresightedness of seismic risk” (una valutazione del rischio sismico approssimativa, generica e inefficace in relazione alla attività della commissione e ai doveri di prevenzione e previsione del rischio sismico) and because after its meeting the same commission provided the population with “imprecise and contradictory information of the seismic hazard that is fruitless for the pursuit of tutelage activities for the population” (informazioni imprecise, incomplete e contraddittorie sulla pericolosità dell’attività sismica, vanificando le attività di tutela della popolazione). The judge sentenced each member of the former Commissione Grandi Rischi to 6 years in jail, perpetual exclusion from public office, and payment of damages.

The sentence has nothing to do with predicting earthquakes, but about the failure of a group of scientists to recommend caution following the seismic events from January to March 2009. The Italian public depended on Commissione Grandi Rischi for an objective evaluation of seismic (and other natural) risk and interpreted its evaluation of 31 March 2009 as a certainty for the non-occurrence of large earthquakes. The seismic swarms of 2 and 3 magnitude earthquakes from January through March and the 4 magnitude earthquake on 30 March 2009 should have been serious enough for the commission to recommend to the local authorities to maintain an alarm, which could have prevented some tragedies on April 6. The commission (through De Bernardinis) issued instead the communication that only tranquilized the people, as the head of Protezione Civile wanted. The commission in effect predicted that no large earthquake will occur and thus induced people to stay at home. This is a negligence that is punishable by law.

The scientific community should not pronounce judgments without knowing all the facts used by judge Billi to come with the verdict. Let the Aquilla prosecutors and judges do their jobs because many of us lack their competences. By pronouncing open supports for a politicized group of scientists without knowing all the facts is reckless, and certainly contrary to the spirit of science. Those in the scientific community who are condemning the judge’s ruling without knowing his full motivations are producing more damage to the science than the condemned individuals. Without the law we would know nothing of the commission’s methods used to manage the risk and of the abuse of power. Imagine what could have happened if instead in Aquilla we had a similar situation in the Vesuvius area and what will happen if we continue relying on an unreliable evacuation plan for this area. Even those with minimum scientific abilities know that the earthquakes and volcanic eruptions cannot be predicted (with certainty), and thus no one needs a commission that says this, or worse there is no need for a commission of “eminent” scientists that reassures the population to stay tranquil while the earth is noticeably and continuously shaking and it is unpredictable whether or not this may degenerate into something much more serious.

We must keep in perspective that 309 people died in Aquilla because of a flawed risk communication. Judge Billi reminded us that in the absence of hard scientific facts about a hazard the risk managers should simply follow the precautionary principle. Let me conclude with some of the words of Dacia Maraini (“Tra I sette dell’Aquila non c’era Galileo” (Among the seven of Aquilla there was no Galileo), Corriere della Sera, 28 October 2012).

“Let us recall that all of Italy is at seismic risk, that the prevention costs less than the reparation, that the controls must be more rigorous and certain, and above all that the experts must be autonomous from politics. Galilei ceded, but he risked his life. What have our seven sages risked? Perhaps only a reprimand from those who controlled them at that moment. Was it worth loosing the self-respect to avoid this reprimand? (Ricordiamo che tutta l’Italia e’ un Paese a rischio sismico, che la prevenzione costa meno della riparazione, che i controlli debbono essere piu’ rigorosi e certi, e soprattutto che gli esperti debbono essere autonomi dalla politica. Galilei ha ceduto, ma rischiava la vita. Cosa rischiavano i nostri sette savi? Forse solo un malumore di chi li comandava in quel momento. E valeva la pena di perdere il rispetto di se’ per questo?).

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