

## **L'AQUILA 2009 EARTHQUAKE AND EFFORTS TO MISUSE GEOETHICS (PERSONAL TESTIMONY)**

L'Aquila was largely destroyed by earthquakes in 1315, 1319, 1452, 1461, 1501, 1646, 1703 (until that time altogether about 3000 victims) and 1786 (about 6000 victims of this event only). The city was rebuilt and remained stable until October 2008, when tremors began again. From January 1 through April 5, 2009, additional 304 tremors were reported. When after measuring increased levels of radon emitted from the ground a local citizen (for many years working for the Italian National Institute of Astrophysics) predicted a major earthquake on Italian television, he was accused of being alarmist. When on March 29 and 30 stronger earthquakes were reported from the area, Italy's National Commission for Prediction and Prevention of Major Risks met in L'Aquila for one hour in the late afternoon on March 31, 2009, without really evaluating and characterising the risks that were present. On April 6 a 6.3 magnitude earthquake struck Aquila and nearby towns, killing 309 people and injuring more than 1,500. The quake also destroyed roughly 20000 buildings, temporarily displacing another 65000 people.

In the course of the Mining Příbram Symposium 2009 two Italian authors Giuseppe Di Capua and Silvia Peppoloni (INGV – Rome, Italy) presented a paper **SCIENTIFIC INFORMATION: PROBLEMS AND RESPONSIBILITIES**. In the proper text the real problem was perfectly hidden and the reader had just one possibility to be convinced that all difficulties and confusions were caused by counterproductive activities of media. Two reports were referred – both of them authored or co-authored by the employees of the INGV Rome.

Only later I discovered lot of other “independent” information in the Wikipedia where just a minority of really independent authors and experts appeared. A brief objective summary was published by N. K. Nikitina in the first book on Geoethics.

In July 2010, prosecutor Fabio Picuti charged the Commission members with manslaughter and negligence for failing to warn the public of the impending risk. Many international organizations were falsely interpreting the accusation and sentence at the first stage as a problem of impossibility to predict earthquakes. (The same situation appeared when the verdict at the 1<sup>st</sup> stage was pronounced in October 2012 – as described below).

I have published information about that case at the virtual 2nd World Sustainability Forum (2012) and a new version has been presented at the April EGU GA 2013 in Vienna (<http://meetingorganizer.copernicus.org/EGU2013/EGU2013-7356.pdf>). Both these geoethically oriented articles bring information about the real ethical problem: top representatives of various international organisations have given a false alarm in favour of the Italian top seismologists.

In the course of last three years I have got lot of personal experiences when organizing the Symposium 2.4 on Geoethics for the Brisbane International Geological Congress. They have graduated in identifying a direct connection of unexpected problems with employees of the INGV Rome and one supporter of them from India. I know without any doubt that the L'Aquila verdict in the 1st instance is exclusively based on the personal behaviour of the sentenced persons in the course of ONE HOUR SESSION of the Great Risk Board in L'Aquila on March 31, 2009 and on the fact that two of them presented results of the session immediately to media and local population.

Terrible consequences of this irresponsible behavior initiated the final accusation shared by a relatively small but intellectually advanced number of families associated with victims of the earthquake. Special INGV web site founded by the “*decreto INGV n.641 del 19/12/2012*” (<http://processoaquila.wordpress.com/>) asking for support letters contains the trial documentation (including the Italian version of the verdict in 781 pages!), unfortunately with incomplete or incorrect and mostly MISSING English translations.

Later I have discovered in the IUGS web site a relatively well hidden statement of the Italian National Council of Geologists:

<http://iugs.org/uploads/GeoNews%20May%202013.pdf>

published originally in the EFG Annual Report 2012 (possibility to download) under the title *Ethical professional practice* – section of Italy:

*In Italy, in the city of L'Aquila, the trial against the members of Great Risks Board ended with a guilty verdict. The sentence produced a lot of contrasting reactions, because many people thought that the conviction concerned failure prediction of earthquakes. Indeed, the truth is different. The seven members of the Great Risks Board have been condemned for involuntary manslaughter due to negligence and errors in the evaluation and communication of the seismic crisis preceding the L'Aquila earthquake of April 6, 2009. So the sentence does not refer, at least directly, to a wrong earthquake prediction. In Italy a sentence is considered as “final” after three levels of judgment. As regards to the L'Aquila case, it is only the first one. Nevertheless it is evident that the convictions are very hard, perhaps too much hard. CNG President Gian Vito Graziano wrote an editorial about this case.*

At [http://www.iag-ggos.org/ggosws\\_2007/3rd International Geohazards Workshop.pdf](http://www.iag-ggos.org/ggosws_2007/3rd_International_Geohazards_Workshop.pdf) I have found an important report about a workshop of European Geologists held in November 2007 in Rome not mentioning at all any idea of impossibility to predict earthquakes but emphasizing necessary risk calculations and permanent further improving of existing prediction methods. Two leading members of the future case (identical with those who presented the results of the special session in L'Aquila after the meeting of March 31, 2009 to media and local population of L'Aquila) were present there as well as almost 30 members of the INGV Rome!

In my opinion many top officers of various both international and national organizations in the world need to be acquainted with the above given statement of the CNG President and have to prove their ethical way of thinking and acting by revoking their original support (based on false information offered by the INGV Rome and not on a later existing official motivation of the verdict).

### **Conclusions of geoethics:**

- a) a new legal interpretation of „false alarms“ and reasonable risk and danger levels is to be established (up-dating internationally acceptable definitions and protection measures);
- b) any positive prediction for any known real natural disaster (whoever made it) is to be precisely analysed by competent institutes avoiding any underestimation of „incompetent“ researchers and amateurs and respecting diversity of scientific research “schools”;
- c) a reciprocal respect between scientists and the population is to be based on the use of a reciprocally understandable language;
- d) scientists as well as media are obliged to respect and publish the complete truth about facts with clearly defined words to avoid any misinterpretation of results;
- e) consequences of relatively "minor" earthquakes are no more limited only to an adjacent local area;
- f) the appropriate programs for computerized predictions are to be under a permanent control of validity (using alternative parameters and incorporating verified or supposed time-tables of events from the past);
- g) any scientist when accepting a function in a State organ has to accept his role with high personal responsibility for and respect to the goals, work and results of such a commission;
- h) any effective prevention of the population is to be based on a mutual consensus preferring in any stage the common good instead of particular or personal interests and respecting human lives as the top value priority.

### **Final remark of the Author**

The L'Aquila process has not yet been brought to the end. The verdict at the 2<sup>nd</sup> stage can be known just in the days of the Conference (and further 5 years will be perhaps needed to come to the final verdict). My intention is to present the most recent information.

*In accordance with previous promises of the Author (who sent special invitations to all people involved in the affair!) the final complete text of this contribution will be published separately after the Conference.*