

Press Release by the Joint Committee on Structural Safety

THE L'AQUILA EARTHQUAKE: ENGINEERS SPEAK OUT

A local court in Italy has convicted six scientists of committing manslaughter when their opinion about the likelihood of an earthquake was passed on to the public.

The international Joint Committee on Structural Safety (JCSS), founded in 1971 by the Liaison Committee of the International Associations of Civil Engineering, is profoundly concerned about the possible causes and consequences of the verdict.

The earthquake in L'Aquila occurred in the region of Abruzzo in central Italy on 6 April 2009, causing the death of more than 300 people. In a subsequent inquiry of the handling of the disaster the now convicted scientists were accused of giving "inexact, incomplete and contradictory" advice.

Michael Havbro Faber, professor in Risk and Safety and vice-president of the JCSS, speaking on behalf of the JCSS and with the moral support of a broad representation of leading international engineering and scientific associations (ECCS, fib, IABSE, IASS, RILEM, CERRA and IFED):

“Scientists and engineers must continue to serve the public interest – also on issues associated with significant uncertainty. This is a necessity for sustainable societal development. As the case stands, it is very doubtful that experts and professionals in risk and hazard management will dare to engage in providing decision support for societal decision makers in the future.

The JCSS sees this case as an all too clear indication that there is an urgent need to establish and strengthen best practices on risk management in the public domain.

The case of the L'Aquila earthquake underlines an urgent need for *immediate action* and *clarification* on the part of both the legal authorities and the scientific community to improve societal risk management.”

Immediate action

There is an inappropriate diversity of legal, organizational, strategic and operational approaches to risk management, between and within nation states and industries. This problem should be addressed by a broad international authority to establish a common dispassionate rationale for societal risk management.

The JCSS now announces the initiation of an activity dedicated to this purpose and calls for the active involvement and support by scientists, professionals, government agencies and public authorities on an international scale.

For further information, please contact Head of Department of Civil Engineering, DTU, Denmark, Professor Michael Havbro Faber, Vice-President of JCSS, Tel. +45 51 53 76 77 or e-mail mihf@byg.dtu.dk.

JCSS: www.jcss.byg.dtu.dk

Liaison Committee: <http://www.iass-structures.org/index.cfm/page/activities/LC.htm>

IFED: <http://www.ifed.byg.dtu.dk/>

CERRA: <http://www.ce.berkeley.edu/projects/cerra/>

Necessary clarifications

- Divergent information among the public, societal decision makers and experts about risk is a serious problem in societal risk management, causing misunderstanding and unrealistic expectations among the parties. The JCSS sees a pressing need for defining and disseminating best practices of risk management in: methodology, quality, organization, distribution of responsibilities and liabilities, and communication.
- All hazards, natural hazards in particular, are associated with significant uncertainty, but we can – and must in the interest of the public – try to understand and assess these and take appropriate action to manage them based on the best available evidence and knowledge.
- Risk assessment is the strongest available scientific rationale to support decision making in the face of possible catastrophic events.
- Risk associated with future disasters is equivalent to lives, environmental qualities and economy in the present. Risk management is the responsibility of societal decision makers; politicians and government representatives.
- Risk management involves use and commitment of societal resources – human lives, economy and environment. Risk management must be ethical on first principles and also affordable by the society.
- In many cases the available knowledge concerning potential hazards is limited to estimates on the probability of different possible scenarios.
- Excessive investment into risk reduction may not only lead to unwarranted and expensive false alarms but, more importantly, occupy societal resources which could otherwise be invested in other worthy activities to improve life.
- Due to the underlying and unavoidable uncertainties, the quality of scientific advice concerning risk management cannot be judged on the success of predicting events or avoiding losses, but only on the quality of the underlying probabilistic/statistical analyses and risk assessments.
- Governments are obligated to inform the citizenry about risks and have adequate disaster preparedness programs.
- Societal decision makers may and should seek advice from subject-matter experts; e.g. scientists and specialized engineers. However, the responsibility for making an appropriate decision in conformity with best practices lies in their hands.
- Societal decision makers should, in the interest of the public, have an adequate informed and trained understanding of risks and best practices in risk management in order to be able to validate, confirm and assess the quality of professional advice they receive.
- Subject-matter experts shall provide their advice in accordance with the state of the art and the best practices within their area of expertise. Impartialness, objectiveness and ethical conduct in general, is to be exercised and expected to the highest standards.
- Expert advice for decision making on safeguarding lives and livelihoods should always be open to peer review.