

How to prepare the risk of the mistake of scientific risk assessment: social condition for making precaution possible

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The case of L'Aquila earthquake trial has raised various questions concerning the relationship among science, politics and society. In this paper I will argue about two types of problems, those of risk communications and those of socio-political ones in risk management, from the viewpoints of how to prepare the risk of the mistake of scientific risk assessment as well as how to make precaution possible when sufficient evidence is not available.

The most crucial problem of risk communication regarding L'Aquila earthquake is the failure of advising the caution as to the uncertainty in assessing the risk of big earthquake. Although the scientists in the advisory board to the government admitted they couldn't deny the possibility that a big earthquake could happen, they didn't mention it to the public. This was obviously against one of the principles of risk communication that uncertainties should be communicated.

This mistake of risk communication is not only the problem of how to communicate the risk to society but also that of risk management strategy which is genuinely normative and political question. In general, the responsibility of scientists is to provide the evaluation and interpretation of facts and uncertainties, while that of policymakers is to make political, normative decisions. It is one of scientists' virtues that they refrain from making such decisions. But, in fact, judging whether scientists should advice caution to policymakers and the public depends on the risk management strategy, especially in terms of the burden of proof. Especially in the case where the scientific evidence of danger is not sufficient, taking precautionary approach requires the political legitimization of allocating burden of proof to the parties to claim the safety. On the contrary, if the policymakers give the highest priority to avoiding the counter-damages that could be caused when the caution turns out to be wrong, the caution tends to be easily neglected by policymakers. Furthermore in such cases, scientists tend to be reluctant to advice caution. In this way, whether to communicate uncertainty and precaution is a political matter in relation to risk management strategy.

In this paper, I will further argue the way of preparation in peacetime for finding right experts and employing right expertise in emergency.