



Probabilistic vs deterministic views in facing natural hazards

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Natural hazards can be mitigated through active or passive measures. Among these latter countermeasures, Early Warning Systems (EWSs) are playing an increasing and significant role. In particular, a growing number of studies investigate the reliability of landslide EWSs, their comparability to alternative protection measures and their cost-effectiveness. EWSs, however, inevitably and intrinsically imply the concept of probability of occurrence and/or probability of error. Since a long time science has accepted and integrated the probabilistic nature of reality and its phenomena. The same cannot be told for other fields of knowledge, such as law or politics, with which scientists sometimes have to interact. These disciplines are in fact still linked to more deterministic views of life. The same is true for what is perceived by the public opinion, which often requires or even pretends a deterministic type of answer to its needs. So, as an example, it might be easy for people to feel completely safe because an EWS has been installed. It is also easy for an administrator or a politician to contribute to spread this wrong feeling, together with the idea of having dealt with the problem and done something definitive to face it. May geoethics play a role to create a link between the probabilistic world of nature and science and the tendency of the society to a more deterministic view of things? Answering this question could help scientists to feel more confident in planning and performing their research activities.