



Data and reasoning processes traceability in risk assessment : application to the risk prevention plans snow avalanches

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Summary

On the 2nd January 1995, a law was created that outlined the Risk Prevention Plans. This still remains the main non-structural instrument for the State to protect from any natural hazards. Most of the time, it is based on existing information and studies. No specific hazard modelling should be done except in very critical situations where the nature of the stakes requires a high level of protection.

The zoning map and the reglementary rules are the two main documents, which compose the risk prevention plan. The zoning map is made by the technical service responsible for managing the administrative procedure. The zoning map shows the limits of the zones where can be applied:

- prohibitions;
- homogenous reglementary rules; and
- protection and prevention measures.

These different kinds of measures are based on land-use and town and country decisions. Two types of zones are identified:

- red zones where any buildings are prohibited;

- blue zones where building is possible only through specific instructions;

In addition to these maps, the Risk Prevention Plans should include and explicit clearly the method used to characterise the phenomenon and to establish the zoning map.

This determination is often the result and a combination of some expert judgements. It is therefore quite difficult to identify clearly the criterions and the process used to fix the different limits of the zoning map. Two kinds of weaknesses may therefore be pointed out : it is difficult to update the existing prevention plans and the population do not easily understand and accept the zoning maps.

Dealing with the specific case of snow avalanches, a study was carried out to analyze the possibilities of improving the traceability of data and reasoning processes. The further objective is to include the results in an information system in order to make them easily available through Internet for example.

Keywords : expert judgement, snow avalanches, non-structural measure, land-use planning, tracability