

RISK PERCEPTION AMONG STAKEHOLDERS AND STAKEHOLDER INVOLVEMENT

*THE EXAMPLE OF AN EUROPEAN PROJECT
FOR RISK MANAGEMENT*

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Introduction

- With 860 hazardous events in 2009 more events were documented than in the previous years.
- 93% of worldwide natural disasters were weather-related, 7% were due to earthquakes and volcanic eruptions.
- Main reasons for the increasing number of such events:
 - increasing vulnerability
 - impacts of climate change
 - population growth
 - concentration of population
 - urbanization and industrialization of strongly exposed regions

Introduction

- Damages affect landscape, buildings and infrastructures
- Especially transport infrastructures in the Alps suffer from vulnerability to natural hazards, since due to the special topography of mountain regions, many locations are accessible only from one direction

Accessibility and its assurance, however, is one of the most important location factors in today's economy. In a region such as the Alpine Space a comprehensive hazard management of transport infrastructures is therefore of utmost importance.

Introduction

- To cope with natural hazards and its effects on transport infrastructures and services, it is important to assess their risk.
- Moreover engineering, management and financial strategies to abate the risk of damages have to be identified (Marshall, Chapman & Leng, 2004).
- Furthermore, scenario planning may help managers acquire the knowledge necessary to respond effectively to unexpected negative events (Worthington, Collins & Hitt, 2009).
- But it is also important to increase the awareness for natural hazards of local and regional authorities, managers of transport infrastructures, inhabitants and guest.
- Risk communication is an integral part of the science of risk assessment and the process of risk management (Lundgren & McMakin, 2009).

Definitions

Risk perception:

Belief (whether rational or irrational) held by an individual, group, or society about the chance of occurrence of a risk or about the extent, magnitude, and timing of its effect(s).

Risk awareness:

Risk awareness is the raising of understanding within the organization of what risks exist and their potential impacts both in the “probable” (what is likely to happen) and the “possible” (what could in the worst case happen).

Aims of the project

- Assess the level of risk awareness and risk perception in the study areas
- Increase knowledge about risk awareness and risk perception
- Collect information on the management tools being implemented
- Create local and regional networks and dialogue between different local actors
- Assess the effects of risk awareness on decision behavior

Methodology

- To assess the risk perception and risk awareness regarding the disruption of transport infrastructures and services by natural hazards a multi-methodological approach was used:
 - 21 semi-structured interviews with representatives from a wide range of stakeholder groups, including road maintenance, local and provincial authorities, the chamber of commerce and tourism.
 - Online questionnaire with six open-ended and 31 closed questions with stakeholders of the study areas in France, Italy, Switzerland and Slovenia.
 - Workshops and group discussion.

Methodology

- Importance of involvement of all important stakeholder, because awareness varies:
 - Tourists
 - Inhabitants
 - Persons responsible for risk management
 - Public administration
 - Private companies
- Often risk management doesn't consider certain groups
- Risk dialogue as basis for strong collaborations

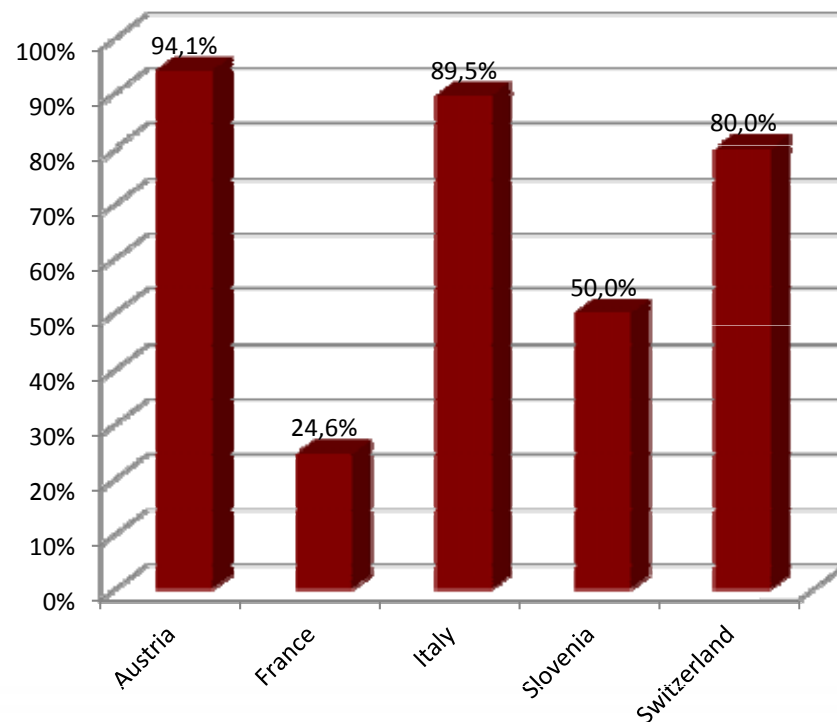
The survey

In total 590 respondents answered the online-questionnaire.

| Region | Respondents | Percentage |
|--------------|-------------|-------------|
| Austria | 17 | 2,9 % |
| France | 533 | 90,3 % |
| Italy | 22 | 3,7 % |
| Slovenia | 8 | 1,4 % |
| Switzerland | 10 | 1,7 % |
| Total | 590 | 100% |

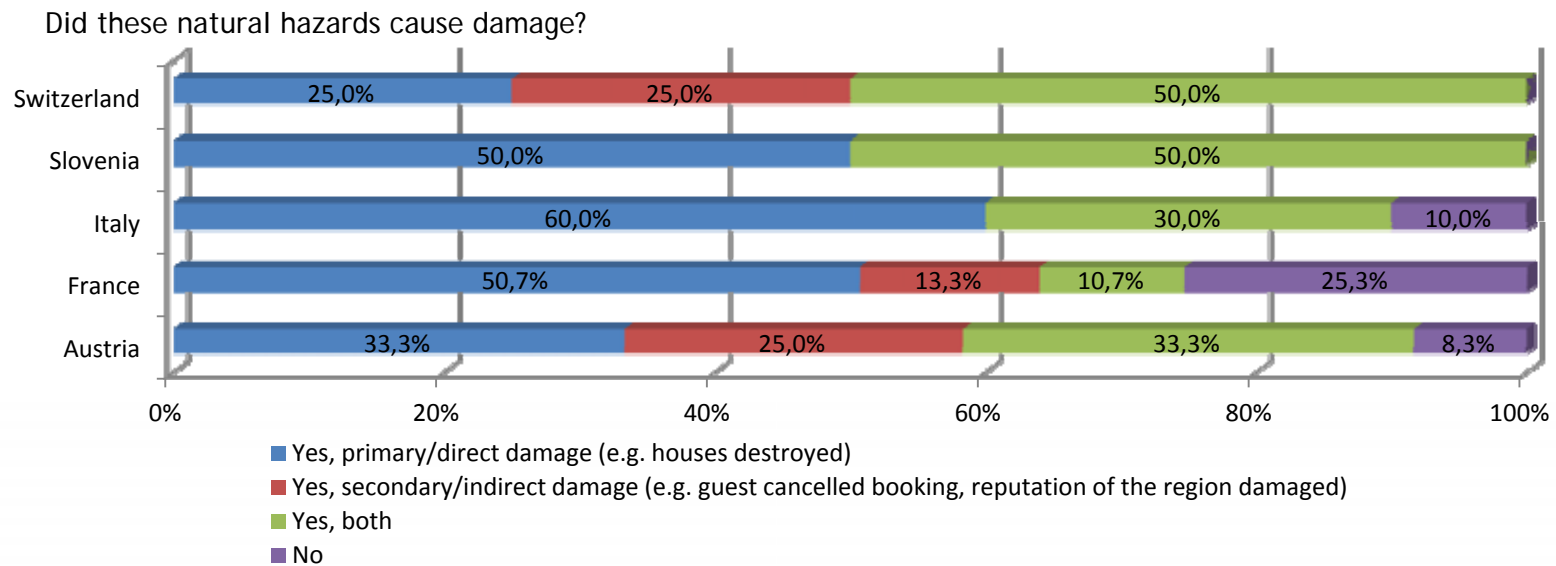
Experience with natural hazards

Experience with natural hazards in the past 5 years



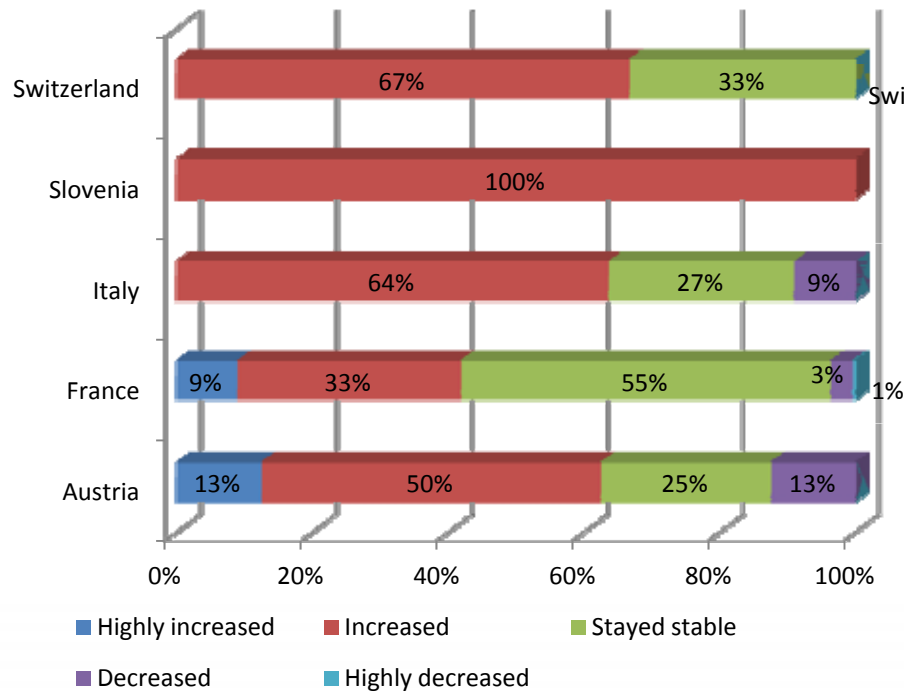
Overall a high percentage of respondents indicated, to have experienced a natural hazards in the past five years. In Italy 94,1% of respondents experienced natural hazards. In France the percentage is rather low (24,6%).

Damages caused by natural hazards

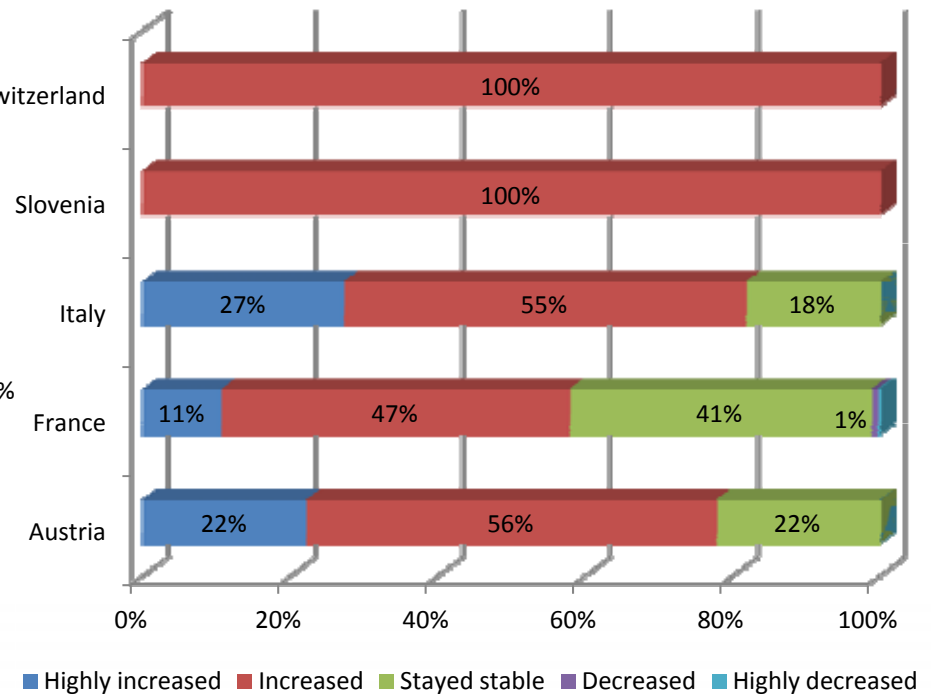


Most natural hazards in all five test beds cause primary/direct or secondary/indirect damages. Only few respondents indicate that natural hazards did not cause damages.

Development of risk and awareness



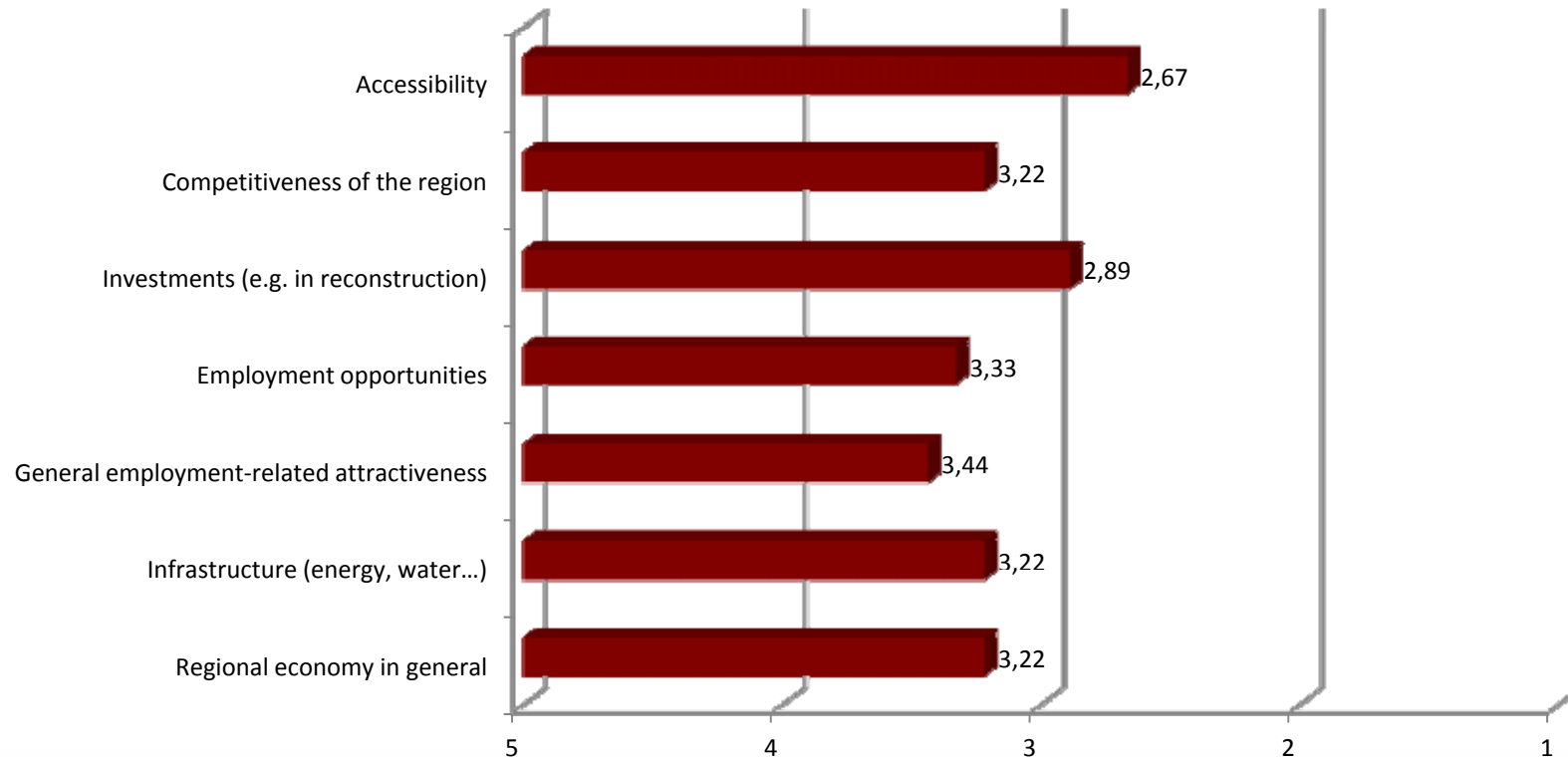
Development of natural risk



Development of awareness of natural hazards

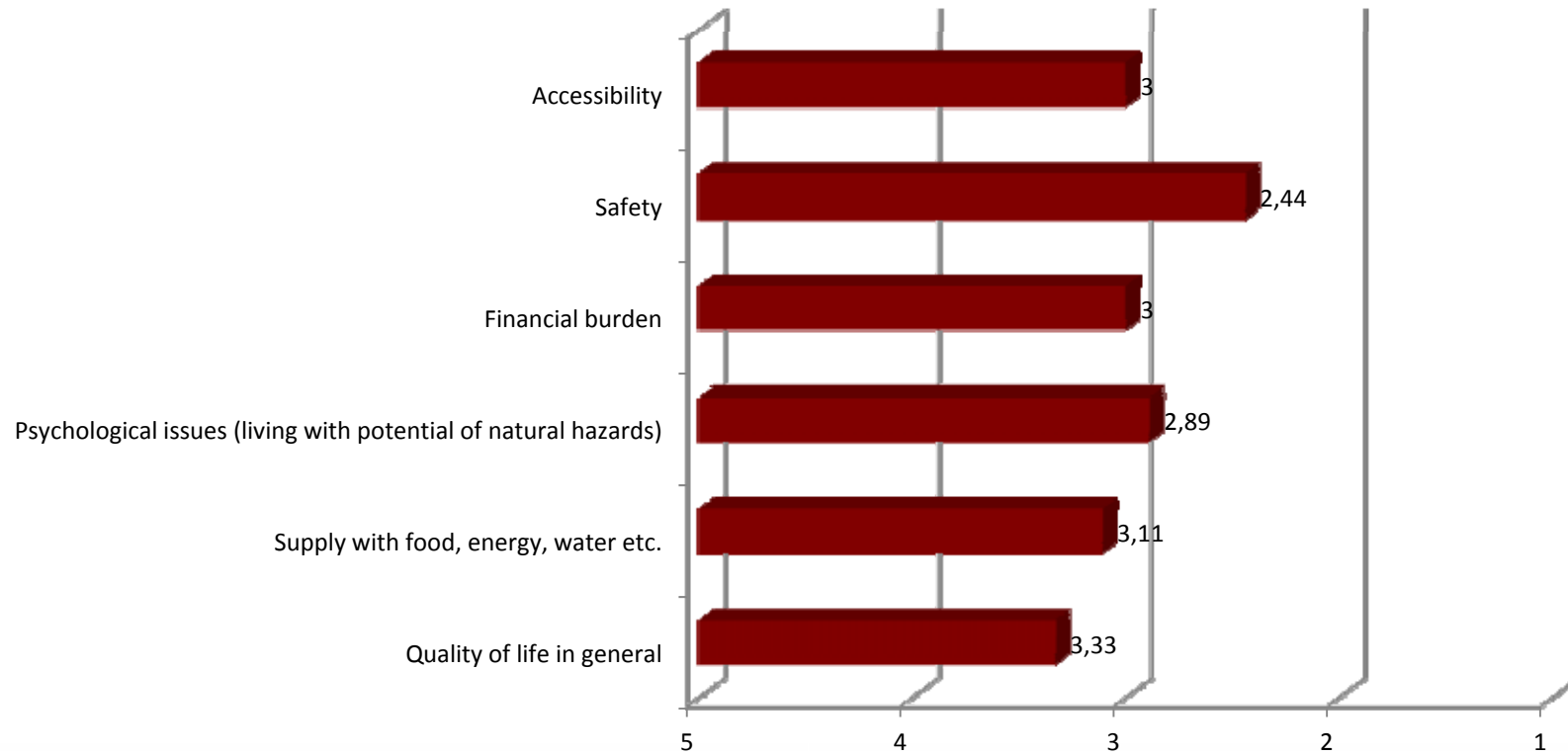
Impacts on regional economy

Please rate the impact of natural hazards on the regional economy.



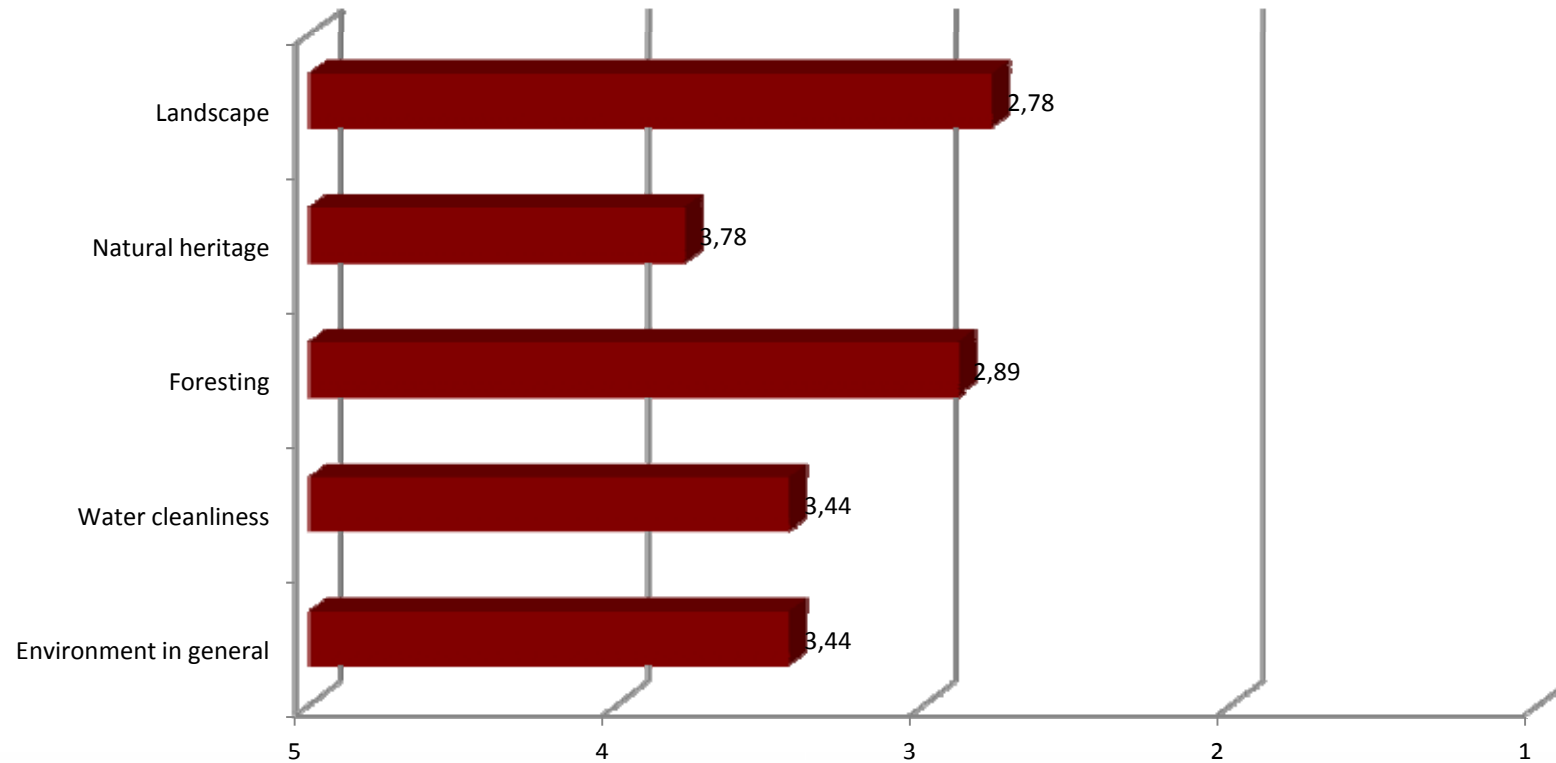
Impacts on the quality of life

Please rate the impact of natural hazards on the quality of life of the local population.



Ecological impacts

Please rate the ecological impact of natural hazards on the following scale.



Conclusions

Current risk perception:

- The risk resulting from natural hazards is high and the frequency and intensity of natural hazard has increased.
- Not only municipalities, but also the local population and economic sectors, especially tourism is affected by natural hazards.
- The degree up to which natural hazards cause economic losses in the tourism sector depends on the communication and management of hazard situation.

Conclusions

Problems and focus of future actions:

- Information about natural hazards
 - The availability of information in general and especially on local level should be improved.
 - Furthermore information on the local level should be provided more frequently.
 - The quality and reliability of information must be secured.
 - In order to take appropriate decisions, the responsible actors need support for interpreting the available information.

Conclusions

- Risk management:
 - More importance should be given to awareness raising activities, preventive actions, education, more accurate information systems and the necessary equipment on site.

Need for actions on the regional level:

- In general a need for actions on the regional level could be identified.
- On the regional level there is a lack of decision support systems, risk dialogue groups and action plans.

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