

Newsletter 2

International Sabo Network

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Message from the European Region

Administrations are forced to intensify the efforts for disaster prevention owing to an increasingly sensible economy and the impact of climatic change.

The Sediment-related Issues Committee for the 3rd World Water Forum from Japan and the Swiss Federal Office for Water and Geology invited 6 european countries (Austria, France, Germany, Italy, Netherlands, Switzerland) for an Exchange of experience between administrations on Sediment and Flood-related Issues in Europe.

The Symposium was held on December 5 – 7, 2002, in Sion, Switzerland. Based on country reports and discussions by all participants the following message resulted:

- Especially large scale desasters ask for international cooperation and interdisciplinary solutions. For this reasons, international network is necessary.
- The contacts on scientific and administrative basis between institutions and authorities in the field of natural hazard protection has to be intensified.

We would like to invite you to take note from the report (Annex).

It is planned to held a second symposium during the Congress INTERPRAEVENT 2004 in Italy.

Sig. Andreas Goetz

Deputy Director Swiss Federal Office for Water and Geology
President of the Swiss National Platform for Natural Hazards

Report of the International Symposium on Sediment-related Issues in Europe December 5 – 7, 2002, Sion, Switzerland



River Saltina, City of Brig 1993
Peak discharge 100 m³/s; Damage: 500 mio Sfr



River Saltina, City of Brig 2000
Peak discharge 125 m³/s; No damage

1. Introduction

In the Alpine countries the protection from natural hazards is a task of paramount importance for authorities in charge. Administrations are forced to intensify the efforts for disaster prevention owing to an increasingly sensible economy and the impact of climatic change.

Experience showed that technical measures can only provide limited protection, and that priority must be given to improve the overall condition of catchment areas by comprehensive measures. However, there remains always a residual risk, since technology can never completely control nature. In addition, to employing engineering techniques, we are increasingly concerned with new strategies, promoting cooperation with municipalities and citizens to limit potential risks.

Decisions must follow a certain strategy, which is laid down in corresponding papers, or which follows general acknowledged principles but without explicit wording. National strategies consider as well the social environment (e.g. risk acceptance) as the economic situation (e.g. financial resources) as legal constraints (e.g. land ownership) and ecological targets.

2. Participants



City of Brig, December 2002

The Symposium held from 5 to 7 December 2002 in Sion Switzerland, promoted by the Sediment-related Issues Committee for the 3rd World Water Forum, was an excellent possibility to exchange experiences between administrations of the following countries with similar problems:

Austria	Reiterer	Andreas	Torrent and avalanche Control, State of Vorarlberg
	Rhoner	Kurt	Water Management Department, State of Kärnten
	Rudolf-Miklau	Florian	Ministry of Agriculture, Forestry, Environment and Watermanagement
France	Garry	Gérald	Ministry of Public Works, Transport, Housing, Tourism and Maritime Affairs
Germany	Loipersberger	Toni	Bavarian State Agency for Water Management
	Störk	Konrad	Administration, State of Baden-Württemberg
Italy	Bonora	Karen	Department for Landuse planning, Environment and Public Works, Aosta
	Rocco	Raffaele	Department for Landuse planning, Environment and Public Works, Aosta
Japan	Mizuyama	Takahisa	Kyoto University
	Sorimachi	Yuji	Sabo Technical Center
	Anyoji	Nobuo	Sabo Technical Center
	Irasawa	Michiya	Iwate University
	Fujita	Kumiko	Sabo Technical Center
Netherlands	Venema	Nelleke	Ministry for Traffic and Water
Switzerland	Bérod	Dominique	Division Flood Control, State of Wallis
	Goetz	Andreas	Federal Office for Water and Geology
	Greminger	Peter	Federal Forest Agency
	Loat	Roberto	Federal Office for Water and Geology
	Petrascheck	Armin	Federal Office for Water and Geology

3. Country reports

The following reports were presented by the delegations:

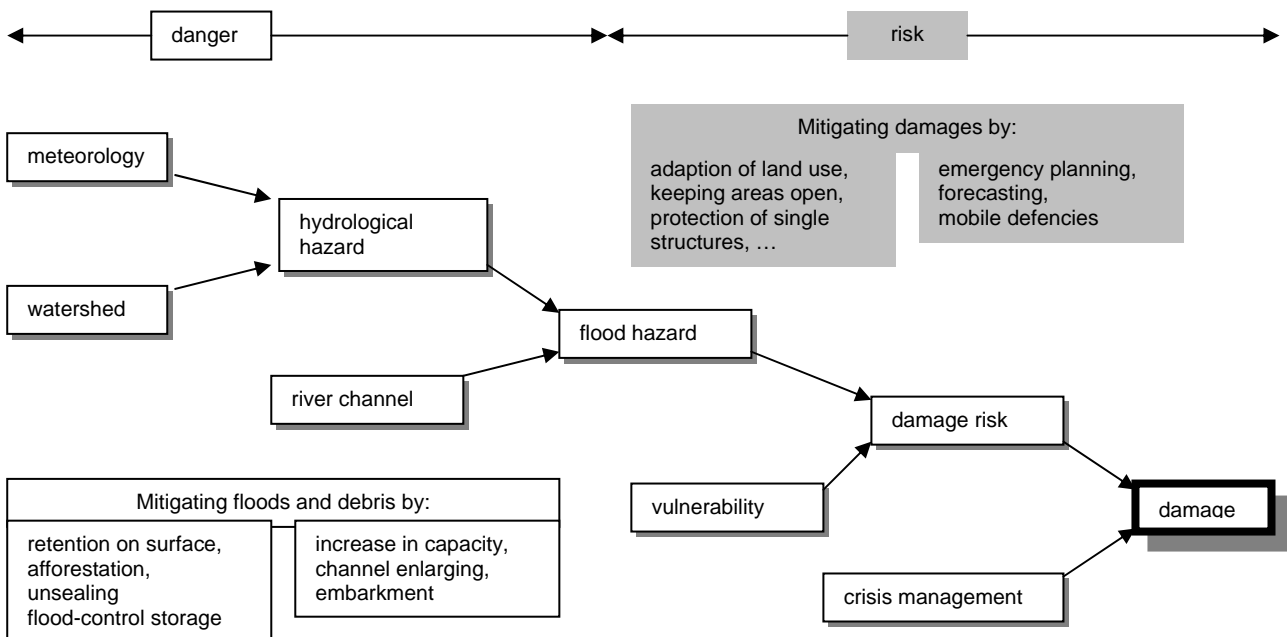
- 1 Desaster mitigation, Swiss experience
- 2 National strategies regarding the risks caused by torrents, avalanches and erosion in Austria
- 3 The situation of flood protection in Austria 2002, analysis and strategies for the future
- 4 Situation report and strategies related to risk control in Bavaria
- 5 Flood Protection and Flood Damage Mitigation. Constraints, Experiences and Policies of the Water Resources Administration in the Federal State of Baden-Württemberg
- 6 Flood water strategy in the Netherlands
- 7 The French Policy for Natural Risk Prevention
- 8 The October 2000 Flooding in Valle d'Aosta: Event Description and Risk Mitigation Measures
- 9 Sediment-related disasters in Japan
- 10 Measures Employing an International Sabo Network to Mitigate Sediment-related Desasters
- 11 Experiences with flood events in Canton Wallis

4. Discussion

During the discussion, the following questions were of great interest

- Hazard maps (Types, Quality, Range of event, Content)
- Protection level / Residual risk
- Ecological criterias
- Networking (Exchange of experience, technics, strategies, policies,...)
- Insurance
- Awareness
- Climate change
- Management of catchment areas

5. Conclusions



Chain of damage generation

Based on the country reports and discussions by all participants the following **conclusions** resulted:

The major natural hazards of the past years revealed that protection efforts show clear gaps. The reasons for increasing damages are obvious:

- intense land-use and increasing economic value in endangered areas
- increasing vulnerability of buildings and infrastructure
- missing space for water and debris in case of large-scale events
- conceptual and construction deficits of protective measures
- deficits in maintenance of catchment areas, river courses and protection structures

Less obvious are reasons for an increasing frequency and intensity of events. The following arguments are frequently mentioned:

- climatic change
- reduction of retention potential in the catchment by increasing builtup areas, deforestation and soil compaction in intensively used agricultural areas
- acceleration of runoff by river correction and elimination of natural flood areas

In addition it has to be admitted that

- many rivers have lost their ecological diversity

which is not only a loss from the ecological point of view, but also from the safety aspect, since natural river beds are important in attenuation of flood peaks .

6. Recommendations

The following **recommendations** have been drawn from the analysis:

- Assessment of the whole catchment areas of the rivers concerned is very important
- The prevention of sediment and flood related hazards requires a permanent analysis of the changing environment including climate change aspects.
- The processes flooding, erosion and deposition has to be distinguished according to their potential threat.
- Different consequences (damages) require different protection levels and different measures. Protection of human life has the outmost priority.
- The impact of extrem events higher than the design flood has to be looked at and to be considered in the emergency planning.
- The reduction of natural disasters requires an integral prevention concept as well as an integrated risk management. The natural hazards, the ecological objectives, the socio-economic conditions and the cultural values have to be considered equally.
- The implementation of the above mentioned measures needs the co-operation with the directly affected population.
- A 100 percent safety cannot be achieved. The land-use defines the necessary safety objectives.
- Information on the existing hazards must be given to everyone concerned and involved in the decision making process. Hazard maps are a tool to spread this information.
- International collaboration on the basis of an open exchange of know-how and practical experience enables the multiplication of knowledge.
- The dialogue between administrations fosters the appreciation of a differing behaviour towards natural hazards and differing value systems with regard to human life and property.

Especially large scale disasters ask for international cooperation and interdisciplinary solutions. For this reasons, international network is necessary.

The contacts on scientific and administrative basis between institutions and authorities in the field of natural hazard protection has to be intensified.

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Profile

Profession	Civil Engineer, ETH (Swiss Federal Institute of Technology)
Position	Deputy Director, Head of division „Natural Hazards Mitigation“ FOWG
Responsibilities	<p>The Division of Natural Hazards Mitigation is responsible for:</p> <ul style="list-style-type: none">- assigning tasks to protect people and important material assets from natural hazards caused by debris flows, floods, earthquakes, and mass movements;- harmonizing policies, procedural flow, and guidelines on subsidies for various natural hazards in connection with other federal agencies involved;- implementing laws;- overall supervision of run-off regulation;- assuring expertise in connection with universities, officials, and specialized organizations;- running the secretariat of the national platform for natural hazards (PLANAT)
Memberships	<ul style="list-style-type: none">- International Commission Switzerland - Austria concerning the River Rhine, <i>Expert</i>;- International Commission Switzerland – France concerning the regulation of the lake of Geneva, <i>President</i>;- Rock Fall Randa 1991, <i>Management on National level</i>;- Flood desasters Cantons Wallis and Tessin, 1993; <i>Management on National level</i>;- IDNDR, World Conference on Natural Disaster Reduction, Yokohama, 1994, <i>Head of CH- Delegation</i>- ECE- Convention "Protection and use of transboundary watercourses and international lakes", meeting of the Parties, <i>Head of CH- Delegation</i>;- IDNDR, Final Forum, Geneva, 1999, <i>Head of CH-Delegation</i>- Flood desasters in Switzerland 1999, 2000, <i>Management on National Level</i>- PLANAT, National Platform for Natural Hazards, <i>President</i>