

TOWARDS OPTIMISED EARLY WARNING - DEVELOPMENTS IN SWITZERLAND

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INTRODUCTION

The floods of August 2005 affected large parts of Switzerland and resulted in six casualties and caused total property damages of three billion Swiss Francs. With regard to the damages the event is thus without parallels within the last three decades. The event analysis (Bezzola & Hegg, 2008) revealed that better information and earlier warning of the intervention staff could have minimised the losses by 20 %.

Several weak points in the response have been identified: The missing coordination between the responsible federal authorities led to delays in the dissemination of information. Furthermore, intervention staff at the local level had difficulties to interpret the official warnings and to transform them into the necessary rescue and relief actions. This was also due to limited information exchange with experts specialised in meteorology, hydrology or geology.

IMPROVING EARLY WARNING AT NATIONAL LEVEL

The lesson learnt is that high quality and timely warnings and alerts enable the intervention staff but also private persons to safeguard people and material assets from natural disasters. Therefore, the Federal Council initiated shortly after the floods 2005 the project “Optimisation of Early Warning and Alerting of Natural Hazards” (OWARNA) at national level and mandated the responsible Federal authorities to take following measures:

- Ensuring around the clock specialist counselling by Federal authorities in emergencies.
- Ensuring emergency power supply.
- Improving weather and discharge forecasting systems.
- Establishing a reporting and situation centre.
- Improving public information.
- Setting up a “single official voice” for warnings from Federal authorities.
- Providing a training drill scheme.

In this framework, a Joint Information Platform for Natural Hazards (GIN) has been established (see Petzold et al.). The platform contains data as well as early warning products related to avalanches, floods, heavy precipitation and storms and addresses the specialists from local to national level. Furthermore, a website with information on emergency behaviour directed to the broad public has been developed.

These measures are important elements in the warning and alerting chain which ensures an optimised preparedness and – in case of emergency – successful response activities.

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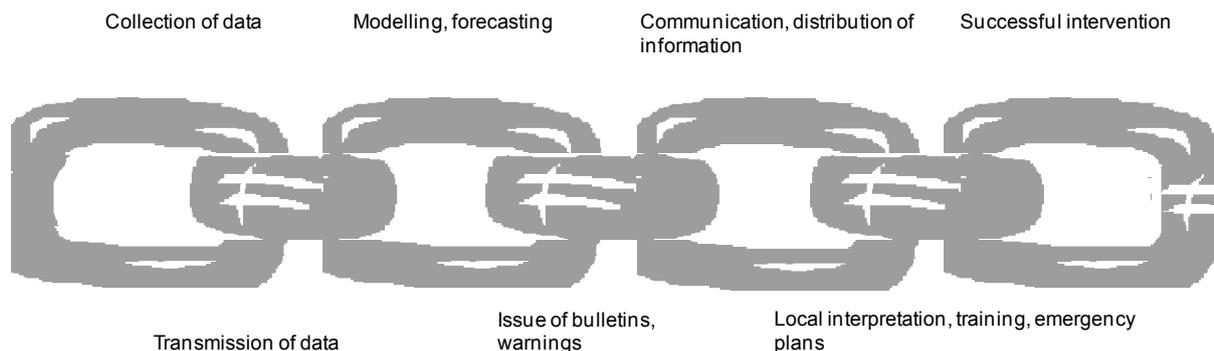


Fig. 1 A functioning warning and alerting chain contributes to a successful response.

COORDINATION AND DECISION MAKING

In October 2008, the Federal Office for the Environment, the Federal Office of Meteorology and Climatology, the Federal Office for Civil Protection, the Swiss Federal Institute for Forest, Snow and Landscape Research WSL and the Swiss Seismological Service adopted the “Steering Committee Intervention Against Natural Hazards” (LAINAT). Here common decisions are taken and the implementation of the above mentioned measures are coordinated. This implies a regular information exchange across the different Federal Departments.

ACTION PLAN 2010 - 2018

In the “OWARNA follow-up report”, the Steering Committee accounts for the state of implementation and states the requirement of supplementary measures. In May 2010, the Federal Council approved the report and assigned financial resources and personnel to improve the meteorological network and the flood warning system (forecasts for all rivers in Switzerland and around the clock service) and to develop information platforms. In addition, the responsible departments at Federal level have been mandated to develop an emergency task force and a training module for “local natural hazards advisors”.

CONCLUSION

LAINAT is convinced that preparedness is an indispensable part of integral risk management. Response activities are seen as complementary to technical protection measures; both contribute to risk reduction. The article shows the developments towards an optimised early warning for natural disasters at national level. However, a successful response needs the contribution of all actors. The Federal authorities are ready to support the cantons assuming their statutory duties of protection against natural disasters.

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