

LOCAL NATURAL HAZARDS ADVISORS FOR CIVIL STAFF UNITS

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INTRODUCTION

Coping with natural hazards in the emergency case is a task, which has to be faced on site. In such situations, civil staff units and intervention forces have to rely – amongst other – on local expertise on natural hazards. Such expertise is necessary for a comprehensive assessment of the local hazards situation, its further evolution and to take the right decisions.

NEED FOR HAZARD EXPERTISE ON SITE

One of the most important gaps revealed by the analysis of the flood of August 2005 in Switzerland is the disposability of local natural hazards expertise to cope and manage such events. The large-scale and long lasting flood affected 900 out of 2'700 Swiss municipalities, claimed the lives of 6 people and caused total damages of 3 billion Swiss Francs. The event showed the limitations of the actual system, based primarily on the support by Federal and Cantonal Services responsible for natural hazards. The personal means of these services were not sufficient to assure consulting and support for all municipalities concerned immediately before, during and immediately after the event (DETEC 2008).

POTENTIAL OF INTERVENTION MEASURES

However, the potential to reduce damages by means of well prepared and timely triggered intervention measures during comparable events is estimated to be as much as 20 %. In order for this potential to be exhausted more efficiently than in the past, the management organizations and intervention forces must also be able to rely on local expert knowledge to comprehensively assess the situation and make the right decisions. Therefore, existing local knowledge has to be conserved, supplemented in a targeted way and made more accessible. This expertise is – amongst other – needed to interpret the meteorological and hydrological forecasts in the local context, i.e. taking into account local observations and the knowledge of local conditions. To generate value from such local expertise and competence it must be closely linked to the authorities in charge and the intervention forces.

CONCEPT OF LOCAL HAZARD ADVISORS

Based on these conclusions, the concept of local natural hazard advisors was developed. A training programme for local natural hazard advisors who are familiar with local conditions is currently set up in Switzerland. Analogue to the case of the tried-and-tested structures in the avalanche services (e.g. Bründl et al. 2004), the main aim pursued with these advisors is to provide specialist support for civil staff units and intervention forces at the local or regional level. These local natural hazard advisors are integrated in the civil staff units. Their main tasks can be summarized as follows:

during events

- to combine the information about the evolution of the general situation (e.g. meteorological and hydrological forecasts, bulletins or warnings issued by the federal and cantonal authorities or services) with on-site observations and local experience;
- to warn the local authorities timely and apply for adequate measures.

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between events

- to advise and support the local authorities and intervention forces in the emergency planning works.

QUALIFICATIONS AND TRAINING CONTENT

It is obvious that the fulfilment of the above tasks requires basic knowledge (topography, infrastructure, general hazard situation, crisis management organization and intervention means at the local level), analytical skills as well as an affinity to natural processes in large and natural hazards in particular. Because potential candidates at the local level have different qualifications, an integrated training program consisting of several modules is currently in preparation. Like the formation of fire brigades, civil defense or civil staffs, also the formation of local natural hazard advisors a high level of standardization is required. Therefore, the content and the documents for the formation are prepared at the federal level. The training programme consists of several standard modules. In a first phase, the training programme focuses primarily on floods. In future, further modules covering further processes will be elaborated gradually. In the first phase the training programme comprises the following modules:

1. basic knowledge on hazardous processes
critical weather conditions, runoff formation, slope and flood related processes.
2. basic knowledge on flood protection
protective structures and their mode of functioning, weak points and their impact, emergency planning
3. assessment of the prevailing hazard situation
forecasts, observations and their interpretation
4. basics of staff work
systematic problem analysis and working principles of crisis staff organizations
5. security aspects and event documentation

IMPLEMENTATION OF TRAINING

The modules (1) to (3) were tested in a 3-day pilot training course in the region of Lyss (Canton of Berne) in spring 2010. After some adaptations based on the experiences made during this pilot course, these modules are now ready to be adopted by the cantons, which on their part will recruit and train the local natural hazard advisors. Hence, the formation occurs according to the cascade principle. Of course this needs comprehensive organizational dispositions, which are now starting. However, several years will be needed for the initial training of all hazard advisors and in parallel, the concept for a continuing education is under development.

OUTLOOK

One of the first cantons starting with this training programme is the Canton of Berne, which plans about 4 courses during the year 2011. The whole formation programme, which aims the formation of hazard advisors for all civil staff units at the local or regional level is financially supported by the confederation.

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