

RiskPlan – Arguments for an Appropriate and Effective Risk Dialogue

The IT-based tool for the assessment and prevention of natural hazards.



Engelberger Aa training dike: during the storm of 2005...



...and during normal summer weather

What is more cost-effective in the long term: a tunnel that eliminates a rockfall risk completely, or would an early-warning system be sufficient? What contribution can house owners make to reducing the potential damage arising from a flood, and would the associated measures affect the possible damage costs? Questions of this kind always need to be answered in the context of natural hazard protection. Imagine how easy it would be if we had a machine, into which we could feed the relevant data and then receive a print-out with appropriate instructions for the action to be taken.

Such a wish is, of course, utopian. However, the idea itself is worth pursuing: i.e. the development of a computer program that provides precise or less precise results, depending on the quality of the data it is given to analyse. The RiskPlan hazard assessment program fulfils this wish to an extent that would not have been thought possible in the past.

Using inputs based on the existing and available knowledge and experience of natural hazards, RiskPlan offers the possibility of obtaining a general overview of a risk situation in a region quickly and efficiently and, based on this, of analysing the possible measures to be taken to counteract the identified risks. RiskPlan makes this possible in a highly pragmatic way in that the knowledge and experience of both experts and the populations directly affected by the hazard in question are used in the analysis.

Thanks to RiskPlan, the costs of hazard prevention measures can be compared with the expected damage costs. It provides hazard information that makes an important contribution to the risk dialogue with decision makers, which should not be underestimated.

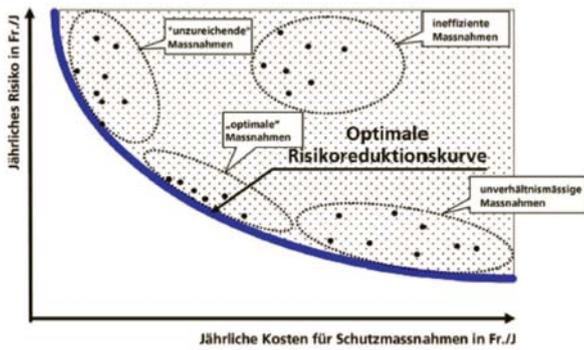
The pragmatic approach also has the advantage that hydraulic engineers, natural hazard experts, politicians, officials, insurers and representatives of the emergency services can sit together at a table and incorporate their data and experience into RiskPlan's risk assessment matrix and immediately discuss the results of their inputs. This promotes interdisciplinary dialogue and fosters a new culture of cooperation.

RiskPlan is an IT-based tool which is currently tailored to natural hazard analysis and prevention. It was developed in Switzerland in close co-operation with the Federal Office for the Environment (FOEN), the Federal Office for Civil Protection (FOCP) and the private-sector companies Ernst Basler + Partner AG and GRSOFT GmbH.

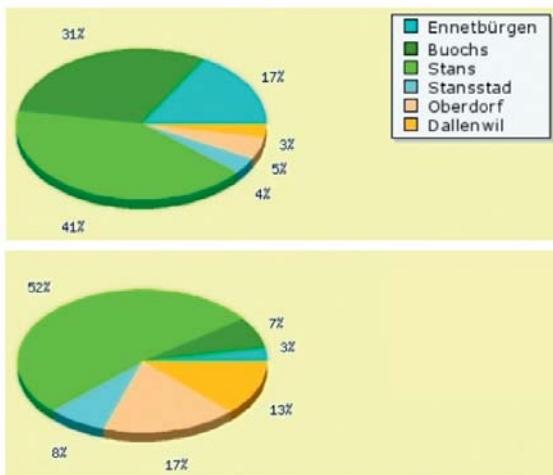
The analysis method developed for RiskPlan is basically applicable to all types of risk. Thus it may be assumed that the RiskPlan tool will gain in significance in other safety-related areas, for example in the area of hazardous materials incidents and other environmental risks.

During its presentation at an international workshop in Stans in March 2009, the partner regions of Vorarlberg, Carinthia, Rhône-Alpes, Valle d' Aosta, Slovenia, Piedmont and South Tyrol were given the opportunity to explore some basic questions using RiskPlan, for example: What can happen? – What should not be allowed to happen? – What can we do? – What will it cost us? – What level of residual risk do we have to accept?

RiskPlan is Switzerland's main contribution to the Interreg III B Alpine Space Project «AdaptAlp – Adaptation to Climate Change in the Alpine Space».



A range of options may be considered to reduce the risk associated with a natural hazard, e.g. early-warning, individual object protection for buildings and technical protection structures along a mountain torrent. The costs of the individual measures vary. The aim of risk reduction is, therefore, to strike an ideal balance between the costs and benefits of such measures.



RiskPlan makes it possible to obtain an overview of the risk situation in the different municipalities of a region. It also enables the comparison of the risk situation in the municipalities before and after the implementation of hazard protection measures.

Scenario	Personen	Sachwerte	Gesamt
Engelberger Aa East	113 333 CHF	4 838 833 CHF	4 952 167 CHF
Buochs	182 322 CHF	2 182 000 CHF	2 364 322 CHF
Ennetbürgen	15 000 CHF	1 718 833 CHF	1 733 833 CHF
Stans	17 225 CHF	181 767 CHF	198 992 CHF
Stansstad	131 888 CHF	4 848 833 CHF	4 980 721 CHF
Oberdorf	20 175 CHF	1 188 833 CHF	1 209 008 CHF
Dallenwil	110 822 CHF	3 176 833 CHF	3 287 655 CHF

The risk matrix is the heart of the RiskPlan risk assessment approach. It incorporates possible scenarios, their probability of occurrence and the scope of the eventual damage that could arise. Each scenario includes the damage costs and the possible costs in terms of the loss of human life.



Josef Eberli, Cantonal Engineer Nidwalden and RiskPlan user
«RiskPlan is very helpful as it enables us to work in a structured way with relatively little cost and effort, and to obtain concrete results quickly. This helps to make the benefits of measures understandable for politicians.»



Michael Kohler, Director of the NSV insurance and RiskPlan user
«RiskPlan demonstrates the cost-benefit ratio of possible preventive measures: this constitutes an important decision-making basis for the authorities and the population. From the perspective of the insurance company, it shows how the preventive line of attack is the way forward.»