

## Trialling *Riskplan* in Aosta

A new piece of software, *Riskplan*, has been used for the first time in the Aosta Valley to assess the economic implications of risks. Concentrating on a regional case study has allowed an evaluation of the potential advantages and disadvantages of this tool.

Three experts from the Regional Hydraulic Works Service and two from Fondazione Montagna Sicura (regional subcontractor for the AdaptAlp project) used the municipality of Gressoney-Saint-Jean as a case study, and compared two hazards: flooding from the River Lys which runs through the of Gressoney Valley, and the landslide which continues to threaten Bosmatto village and which can trigger flows of debris. They examined the state of affairs before and after preventative measures were set in place following the flood of autumn 2000, namely the dam to prevent debris flow in Bosmatto, and the embankments in the Dresal plain to control flooding from the river Lys.



Dresal plain during the flood of 2000 (left) and during the flood in 2008, after the construction of protection measures (right) (photo RAVA).

*Riskplan* clearly showed that, for the test region at least, the dams to prevent debris flow in Bosmatto proved the more effective solution, especially in terms of reducing the annual cost of protection, whilst the embankments in the Dresal plain only have a financial benefit for events occurring during a time-span of less than 100 years. The reason for this is that in the Dresal plain the defences were constructed for an HQ200 recurrence interval specification, but have no effect on the main town where the dams have been designed with an HQ100 specification.

A first evaluation of *Riskplan* indicated that the software could be made more user-friendly and effective by associating it with a GIS tool as well as adding a facility which allows the copying of inputs from one section to another. All the necessary economic data has to be collected in advance by experts with different areas of experience. The extent of the damage can only be assessed *after* an extreme event, or from estimates made by insurance companies. However, this latter option is not available in Italy, where one cannot insure against natural hazards.

On the other hand, *Riskplan* has shown itself to be a good tool for local administrations in terms of taking strategic decisions and planning land use, as it provides a rank order for different natural hazards and therefore facilitates the prioritisation of interventions and investments. The connection between different scenarios and the measures adopted is made easier, especially as the outputs include the annual costs, broken down by categories such as annual maintenance and operational costs, all of which are illustrated in clear graphs. *Riskplan* was therefore considered a useful tool in the ‘risk dialogue’, and it encourages the inclusion of a variety of interest groups, not only technicians and experts in risk management.



**Bosmatto village after the event of Autumn 2000 (photo RAVA).**

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