

# The ISARD project: A contribution to Seismic Prevention in Eastern Pyrenees

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One of the main problems for an efficient seismic prevention in border zones is the lack of harmonization of tools available in each country. ISARD is a project, financed by INTERREG IIIA programme, with participation of various Catalan, French and Andorran organisms which will contribute to the improvement of this situation in the Eastern half of the Pyrenees.

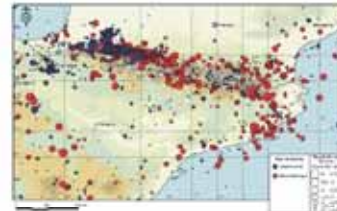


### Part 1

The objective of the first part is the **seismic hazard assessment unification** at the transborder area of the Pyrenees. This will allow:

- a coherent application of the seismic regulations at both sides of the border, and
- the characterization of realistic and coherent seismic actions for risk studies.

The unification of the seismicity information constituted the first step to the study.



### Part 2

Two pilot zones, the urban centre of the Andorra and Cerdanya valley are chosen to develop a methodology for a realization of realistic seismic scenarios giving the direct and indirect expected damage. Local seismic hazard with soil effects and the vulnerability assessment of dwelling buildings and the main essential installations will be carried out in both zones. The methodology issued from these applications will be used for the realization of damage scenarios in real time, the objective of the third part of the project.



Urban centre of the Andorra

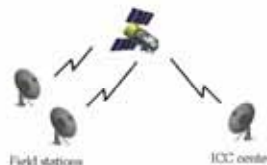


Cerdanya valley



### Part 3

An automatic alert system by SMS, at the present time, it is being tested at the ICC network. This system gives the location and the magnitude of an earthquake a few minutes after its detection.

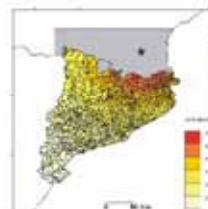


SMS

This system will be extended to the whole inter-regional study area, and furthermore, the development of the system will include the estimation of damages in real time after the earthquake is detected and the elaboration, and automatic transmission of an informative note to the Civil Defence crisis managers.



Alert seismic Network



Example of intensity (EMS) scenario for the Sant Pau de Fenollet earthquake (18/02/1996 M=5.2), that will be automated and extended to French territory and Andorra.



### Part 4

Creation of a trilingual WEB page (in French, Catalan and Spanish languages) with useful information for the population located at both sides of order and organization of international workshop.