

**Integrated management and participative approach (participative mapping 3D)
on an avalanche prone territory :
How to develop a collective understanding of the vulnerability
and of the organization of isolation**

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RESUME : La gestion intégrée des risques naturels suppose de penser plus fortement la territorialisation de l'ensemble du cycle de gestion (actions préventives, préparation à la crise, gestion de crise, retour à la normale), à l'échelle des bassins de risque.

Cette démarche suppose une plus forte transversalité :

- en complétant l'approche classique (aléa/ouvrage), par une prise en compte locale de la vulnérabilité territoriale (physique et humaine),
- en développant une résilience plus forte des territoires.

Une telle approche doit être déployée collectivement avec les responsables politiques, les experts des risques, les citoyens et les usagers des territoires. Sur la base de connaissances techniques développées par les gestionnaires des risques et du contexte réglementaire, la gestion intégrée prend aussi forme sur des modalités de participation et de projet collectif renouvelées. Il s'agit de garantir ainsi une connaissance complémentaire du risque local partagée et une adhésion plus forte vis-à-vis du niveau d'acceptabilité du risque qui doit être débattu.

Le contexte montagnard et de changement climatique, voir global (économiques, culturel, social), impose des modes et mesures d'adaptation de la part des organisations, comme des pratiques de gestion des risques.

C'est sur cette base que différents territoires de montagne dans les Alpes se sont lancés, dans une expérimentation coordonnée par le PARN, visant le déploiement d'approches plus intégrées des risques axées sur un renforcement de la participation citoyenne et sur une meilleure coordination générale.

Notre exposé rendra donc compte d'un travail réalisé avec le réseau scientifique du PARN (LYON 3) sur maquette participative 3 dimensions de vulnérabilités développée dans le cadre du scénario d'isolement, par la commune de Névache et le Pays du Grand Briançonnais.

MOTS-CLEF : Gestion du risque, maquette 3D participative, résilience

ABSTRACT: An integrated and holistic risk management assumes that all types of measures for natural disaster reduction are considered. Generally, measures of preparedness, response and recovery (reconstruction) are equally applied (as explicated on the website of the swiss natural hazards platform www.planat.ch).

In practice, an integrated management supposes that management cycle is considered upstream of territorialization, with more transversality in order too:

- Complement the traditional approach (hazard /protection), by consider the local territorial vulnerabilities (physical and human)
- Develop the resilience of territories (risk culture, organization).

Such an approach should be deployed together with local politicians, risk experts, citizens and users territories. On the basis of technical knowledge developed by risk managers and of legal regulation, integrated management also relies on participation's methods and collective project management. The aim is to build a further knowledge of local risk and to strengthen the adhesion to the level of acceptability of risk that must be discussed.

In a mountain environment and in global change context (economic, cultural, social), the natural environment is likely to evolve. So are the citizens expectations and socio-economic resources. To face these changes requires to adaptation of social organizations, schemes such as risk management practices.

This is why different mountain territories in the French Alps have participated to a many years' experimentation coordinated by the Natural Hazard Alpin Pôle (PARN) for the deployment of more integrated approaches risks. It was based on strengthening citizen participation and improving the overall co-

ordination of system-wide risk pools. This was particularly the case in Clarée valley, often cut by avalanches.

KEYWORDS: Risk management, Participatory 3D map, Résilience.

1 INTRODUCTION

Access to the village of Névache (Southern Alps, France) is exposed to avalanches. Artificial or natural release can cause isolation of the village (during 4 days in 2008). The decision to close the road, to release avalanche and after to manage isolation represent a major preoccupation for risk managers (local authorities). It's a concern for local and touristic population (350 inhabitants, 50% takes this road daily) or for socio-economic actors (lodging tourism).

To develop a shared local acceptance, based on a mutual understanding of issues and constraints, it is essential to experiment new integrated approach. This approach is based on the better interests of local communities and implications of stakeholders.

2 SCIENTIFIC APPROACH

The integrated risk approach recognizes people's participation as part of Disaster Reduction. With local authorities, the local population participate at territory's resilience. For this purpose, their knowledges and organizational resources must be integrated into the local management system of risk.

Scientific approaches (human and social) can help local dialogue on risks, promote participation and development of a local culture of risk. Many tools exist: the consensus diagnostics, Participatory 3-dimensional and mapping GIS. These tools channel and catalyse dialogue between different actors .

3 IMPACTS

- Renewal of local risk dialogue with all stakeholders
- Transferable knowledge in local management tools
- Better definition and understanding of local every needs

- An important societal mobilization on a complex and contentious topic



Figure: Elaboration of 3D Participative vulnerability mapping in Névache

4 INSTITUTIONAL CONTEXT OF EXPERIMENTATION

This experiment, coordinated by the PARN in partnership with the municipality of Névache, Grand Briançonnais District, and the University Lyon 3, was conducted as part of Operation CIMA POIA "pilot sites for the integrated management of natural hazards in the Alps "supported by the EU (FEDER), DATAR and regions: Rhône Alpes and Provence-Alpes-Côte d'Azur.

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