Creating links between science and society for more resilient territories facing natural hazards/risks in the Alps

Carine Peisser
Alpine Natural Hazards... and Risks

Specificity of mountainous territories:

- **natural hazards**
  - multiple, high-energy, high-speed
  - cumulative (domino effects)
  - ongoing and future CC impacts

- **vulnerabilities**
  - highly exposed (critical) infrastructures/networks/mobility
  - high vulnerability of exposed buildings/humans

- **catastrophic events**
  - a long history of alpine natural disasters (high costs, fatalities)
Alpine Natural Hazards... and Risks

**NHM Governance**

**Multiple Stakeholders**

- The State
- Mayor
- Elected Politicians
- Private sector
- Citizens
- Experts
- Architects
- Juge

**Complexity**

- No zero risk
- Spatial planning
- Engineers
- Foresters
- Road managers
Alpine Natural Hazards... and Risks – in France

Multi-level Governance: Who does What?

**LEVEL**

**STATE**
- Legislation
- Prevention Plan prescription (Préfet)
- Civil Protection
- Sectoral plans, coordination with regions

**REGIONS**
- Regional development plans (SRADDET), coordinative stakes
- Voluntarist Politics (e.g. AuRA and PACA Regions)

**DEPARTEMENT**
- Road Management by Departmental Councils
- Support to municipalities by deconcentrated State Services and Agencies (DDT, DNF-RTM, etc.)

**MUNICIPALITIES**
- Inter-communal strategic planning
- Land-use planning (Local Urban Plan)

Main actors in the French Alps:
- The State from the National to Departemental level
- The Mayor at Local level
- The Préfet at Departmental level, in connection with Central State services & deconcentrated State agencies (Departemental Territorial Direction - DDT)
- The Departmental Council for road management
- The technical services such as Restauration des Terrains en Montagne (RTM) and expertise centers (Cerema, Irstea, Météo-France, etc.)
- Private sector
- Citizens

Source: Arthur Schindelegger, modified
Natural Hazard Events in the French Alps

Societal, economic and even politic impacts

Ex. of Chambon Landslide-induced valley isolation crisis

→ Needs for multirisk/socio-economic approaches at different scales (data/methods/tools)
PARN = Alpine Center for Natural Hazards and Risks Prevention

The PARN association

• created in 1988 to make an effort in the field of research to develop more effective and less expensive methods

• gathers 9 member organizations (research centers and universities) which have an activity of study and research on natural hazards

Objectives

• Bring together organizations with an activity of study and research in the field of natural hazards in order to develop coordinated research programs and so remedy the fragmentation of efforts in this area

• Support development of efficient scientific and technical tools and make them available to public authorities and operational services to improve the prediction and prevention of natural hazards

➔ Interface between scientists, practitioners and decision makers

http://risknat.org/
Action frame

Local
- Territoires de projet
- Grenoble-Alpes Métro

Régional
- Région AuRA
- Région SUD PACA

Interrégional
- CIMA/POIA (GIRN & SDA)
- Alpes-Climat-Risques

National
- CGET/Commissariat de massif des Alpes
- MTES/DGPR

Européen
- Projets Interreg
- SUERA (EUSALP)
- Convention Alpine

International
- GIEC
- FAO
- Interpraevent
Main activities

1. **Integrated management of natural risks in the Alps** (GIRN) :
   technical coordination (project management) of the territorial dynamics
   Technical and methodological support to the Alpine territories in the development and implementation by local authorities of multi-year GIRN action programs at local / inter-municipal level

2. **Animation of a "Science-Decision-Action" interface** dynamics for the prevention of natural risks in the Alps
   Accompaniment of scientific carriers for the incubation of partnership research-action projects (CIMA-POIA, Interreg, etc.) and the valorisation of the results in relation with the end-user managers

3. **Alpes-Climat-Risques**: Climate Change and Natural Risks in the Alps
   Scientific watch, synthesis and dissemination of knowledge (Portal & Newsletter "Alpes-Climat-Risques")
   **Support to partners** (operational, scientific or associative) in the area of adaptation

4. **Support to EUSALP Action Group** on Natural Hazards Management and Climate Change Adaptation
   Representation of the French stakeholders of the natural risks, participation and support to the coordination of the action group (on behalf of the CGET)
Supporting a network: Interface / animation between scientific/operational/decision-making stakeholders.
Initiating applied research projects / research-action projects involving scientists and local actors

- develop innovative tools adapted to alpine and local specificities
CORESTART project (POIA)
Building a resilience index adapted to mountain territories
Workshops involving scientists and local stakeholders → set up risk dialogue

- Provide local stakeholders with scientific background / newest research results
- Give scientists practitioners feedback
- Building thematic communities of actors / users – ex. C2ROP about rockfall risks
Supporting an alpine network of climate experts for exploring impacts on natural hazards
Gestion Intégrée des Risques Naturels
Integrated Natural Risk Management

Support local pilot collectivities

Figure 4: Development of the management and governance concept in the cycle of integrated risk management (Author: Rimböck, Schindelegger, 2018)
GIRN Alpes

2019 : 12 TAGIRN

Territoires Alpins de Gestion Intégrée des Risques Naturels (TAGIRN) 2015-2020

<table>
<thead>
<tr>
<th>TAGIRN en cours</th>
<th>2016-2019</th>
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<tbody>
<tr>
<td>CCAA : Communauté de Communes Alpes d’Azur</td>
<td>2018-2021</td>
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<tr>
<td>CCAPV : Communauté de Communes Alpes-Provence-Verdon</td>
<td>2018-2021</td>
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<tr>
<td>CCVCMB : Communauté de Communes de la Vallée de Chamonix Mont-Blanc</td>
<td>2016-2019</td>
</tr>
<tr>
<td>CCVUSP : Communauté de communes de la Vallée de l’Ubaye Serre-Ponçon</td>
<td>2018-2021</td>
</tr>
<tr>
<td>PETR BEGQ : Pôle d’Équilibre Territorial et Rural du Briançonnais, des Écrins, du Guilietrois et du Queyras</td>
<td>2016-2019</td>
</tr>
<tr>
<td>PNRBP : Parc Naturel Régional des Baronnies Provençales</td>
<td>2016-2019</td>
</tr>
<tr>
<td>SMIGIBA : Syndicat Mixte de Gestion Intercommunautaire du Buëch et de ses Affluents</td>
<td>2018-2021</td>
</tr>
</tbody>
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Territoire candidat à l’appel à propositions POIA 2017 (en cours d’instruction)

| SMIAIE : Syndicat mixte pour les inondations, l’aménagement et la gestion de l’eau / EPTB maralpin | Candidat 2017 |

Territoires candidats à l’appel à propositions POIA 2018

| CCVT : Communauté de communes de la Vallée de Thônes | Candidat 2018 |
| GAM : Grenoble Alpes Métropole                     | Candidat 2018 |
| PNRQ : Parc Naturel Régional du Queyras            | Candidat 2018 |
| SDIS73 : Service Départemental d’Incendie et de Secours de la Savoie | Candidat 2018 |
So what is a TAGIRN?

- it is **not** a TAJINE!

✓ a TAGIRN is a territorial approach for **Integrated Risk Management (IRM)** of Alpine Natural Hazards, called:

“**Alpine Territories of Integrated Natural Risks Management**”

« Territoires Alpins de Gestion Intégrée des Risques Naturels » (TAGIRN)

for Climate Adaptation and Disaster Risk Reduction at the local level
with a full spectrum of stakeholders, in an inclusive way

*Coordinated by the PARN since 2009*

➢ Experiment new types of risk governance **at a local scale**
➢ Take natural hazards/risks better into account before projects begin
➢ Build risk awareness
Ex. Local civil security tool for anticipating crisis situations when facing avalanche events
Complete the classical and regal practices of alpine natural hazards (top-down management by State)
Focus more on a technical, organizational and territorial level

Bottom-up risk management
Tool box for more resilience facing natural hazards / risks
Adapted to the local specificities of each community
Cross-border level Cooperation products

Cross-border network of mountain risk managers:

RiskNat-RiskNET (Interreg Alcotra project France-Italy)

www.risknet-alcotra.org/
Cross border level - Cooperation products

Training: Summer schools for practitioners

- Organisées par le PARN en collaboration avec la FMS
- Sessions organisées depuis 1990 :
  - Risques d’origine glaciaire (2014)
  - Instabilités de falaises et chutes de blocs (2002, 2007)
  - Tremblements de terre (1991)
- Le public :
  - Des praticiens confrontés à la gestion des risques naturels
  - Des étudiants (PhD, Postdoc)
- Les soutiens :
  - En 2014, le projet Alcotra RiskNET
  - En 2010 et 2011, le projet stratégique Alcotra RiskNat
  - En 2004 et 2005, le projet COTRAO/PRINAT du programme INTERREG 3 ALCOTRA
  - Depuis 1990, le Ministère en charge de l’Environnement (MEEDDM)
  - Les institutions locales des pays où se déroulent la session

→ A cross-border practitioners network
Interreg New Project

Projet PITEM Alcotra « Risk »

Objectifs
PITEM : Plan Intégré ThEMatique sur la thématique des risques naturels
Collaboration pour approfondir en commun le développement dans le domaine de la gestion des risques, notamment :
- l'information et la communication tant auprès du public (alerte et information) qu'entre les parties impliquées dans la résolution de la crise (opérationnelle et gestionnaire) ;
- le développement d'outils d'analyse, de retour d'expérience et de planification ;
- la formation et la préparation opérationnelle des acteurs ;
- l'interactivité avec le public, en situation de crise.

Partenaires
- Région Provence Alpes Côte d'Azur et BRGM (déléguée)
- SDIS Savoie (73)
- Conseil Départemental Hautes-Alpes et SDIS 05 (délégué)
- Conseil Départemental Alpes de Hautes-Provence et SDIS 04 (délégué)
- Métropole de Nice Côte d'Azur
- Région Autonome Val d'Aoste
- Région Piémont
- Ville métropolitaine de Turin
- Région Ligure
- Fondation CIMA

Budget
Feder : 7,6 M€ - Répartition 50% France - 50% Italie
European context

Transnational collaboration

- **Alpine Convention**
  - Platform on Natural Hazards (PLANALP)
    - [http://www.alpconv.org/en/organization/groups/WGHazards/default.html](http://www.alpconv.org/en/organization/groups/WGHazards/default.html)

- **EU macro-regional Strategy for the Alpine Region (EUSALP)**
  - Action Group 8: “To improve risk management and to better manage climate change, including major natural risks prevention”
    - [http://risknat.org/eusalp-suera/](http://risknat.org/eusalp-suera/)
European context

European Commission – DG HOME initiative

Community of Users on Secure, Safe and Resilient Societies (CoU)

Objectives

- Ensuring that research programming (particularly H2020) takes account of practitioners' needs, thereby promoting research results that are relevant to them;
- Identifying the most promising tools and methods (including those developed in FP7 and H2020 projects) that have the potential to be taken up by practitioners;
- Support the competitiveness of EU industry by enhancing the market for research results;
- Ensuring that practitioners' expertise is available to policy makers, thereby facilitating the policy-making process; promote INRM
- Facilitating the implementation of policy.

11th CoU Meeting

https://www.securityresearch-cou.eu/
Thank you

Carine Peisser

http://risknat.org/