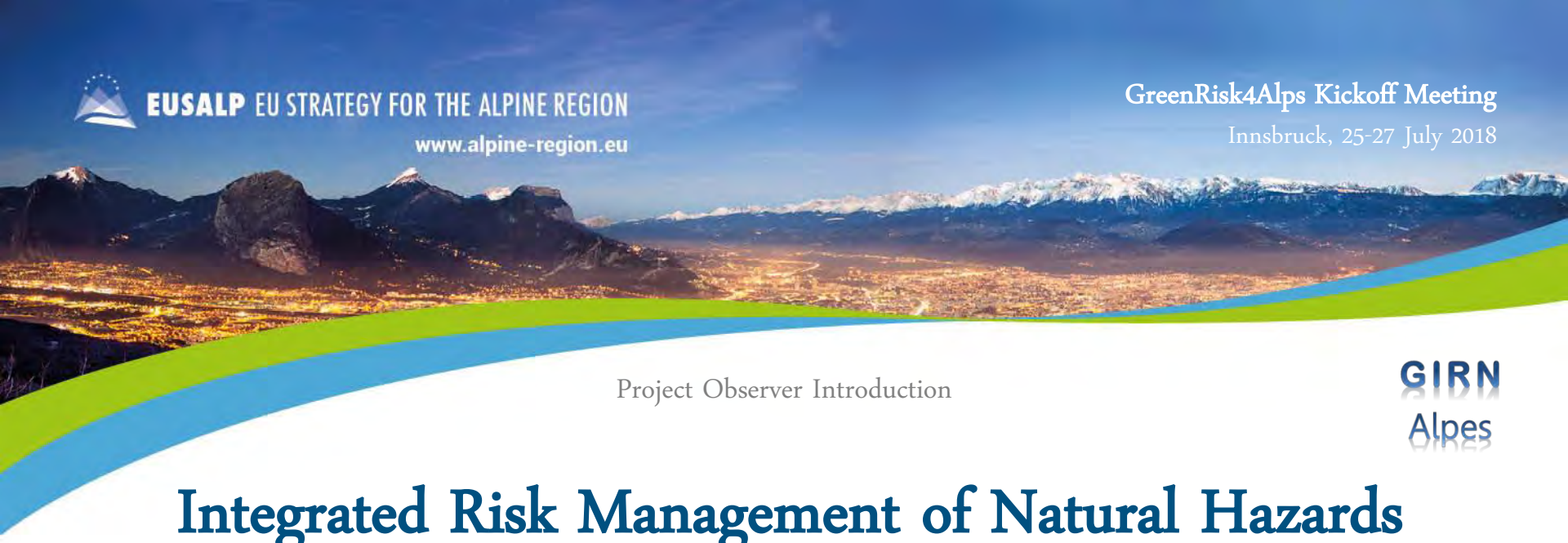


GreenRisk4Alps Kickoff Meeting
Innsbruck, 25-27 July 2018

Project Observer Introduction

GIRN Alpes

Integrated Risk Management of Natural Hazards and Climate Change Adaptation in Alpine Regions

Governance Framework and concrete examples in the French Alps

Benjamin Einhorn, PARN Director
EUSALP Action Group 8 Member
benjamin.einhorn@univ-grenoble-alpes.fr

with the support and in collaboration with:

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

This project is co-financed by the European Union via Interreg Alpine Space

What is it about?

- **Introduction**: Alpine Natural Hazards and Climate Change
- **EUSALP Action Group 8**: Objectives and Current Works
- **Natural Hazards and Climate Change in the French Alps**: Elements of context
- **NHM Governance in the French Alps**
  - General Framework
  - Concrete examples:
    - Baronnies Provençales Regional Natural Park
    - Grenoble Metropole
- **French Participation in GreenRisk4Alps**
  - Partners
  - French 'TAGIRN' approach for Integrated Risk Management (IRM)
- **Challenges for GreenRisk4Alps:** Building bridges between scientists and territories to capitalize, implement and disseminate local scale nature-based IRM and CCA alternatives, strategies and concrete actions in pilot action regions and in EUSALP

Introduction

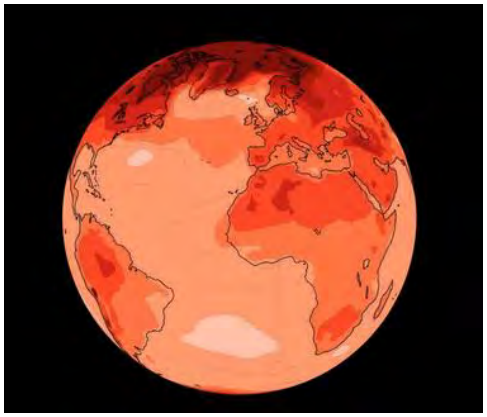
Alpine Natural Hazards and Climate Change

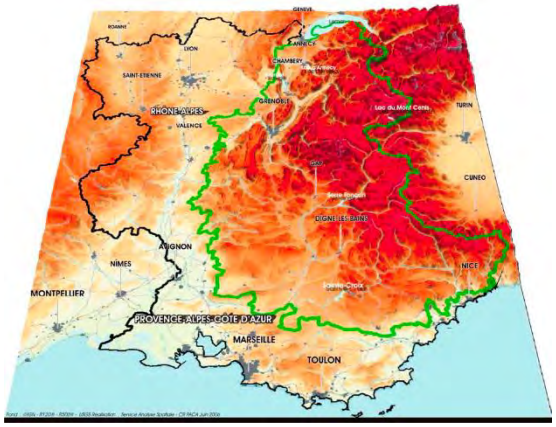
Interreg
Alpine Space
EUROPEAN UNION
GREEN RISK 4 ALPS

From global to local

Alpine Regions are Climate Hot Spots

Climate change





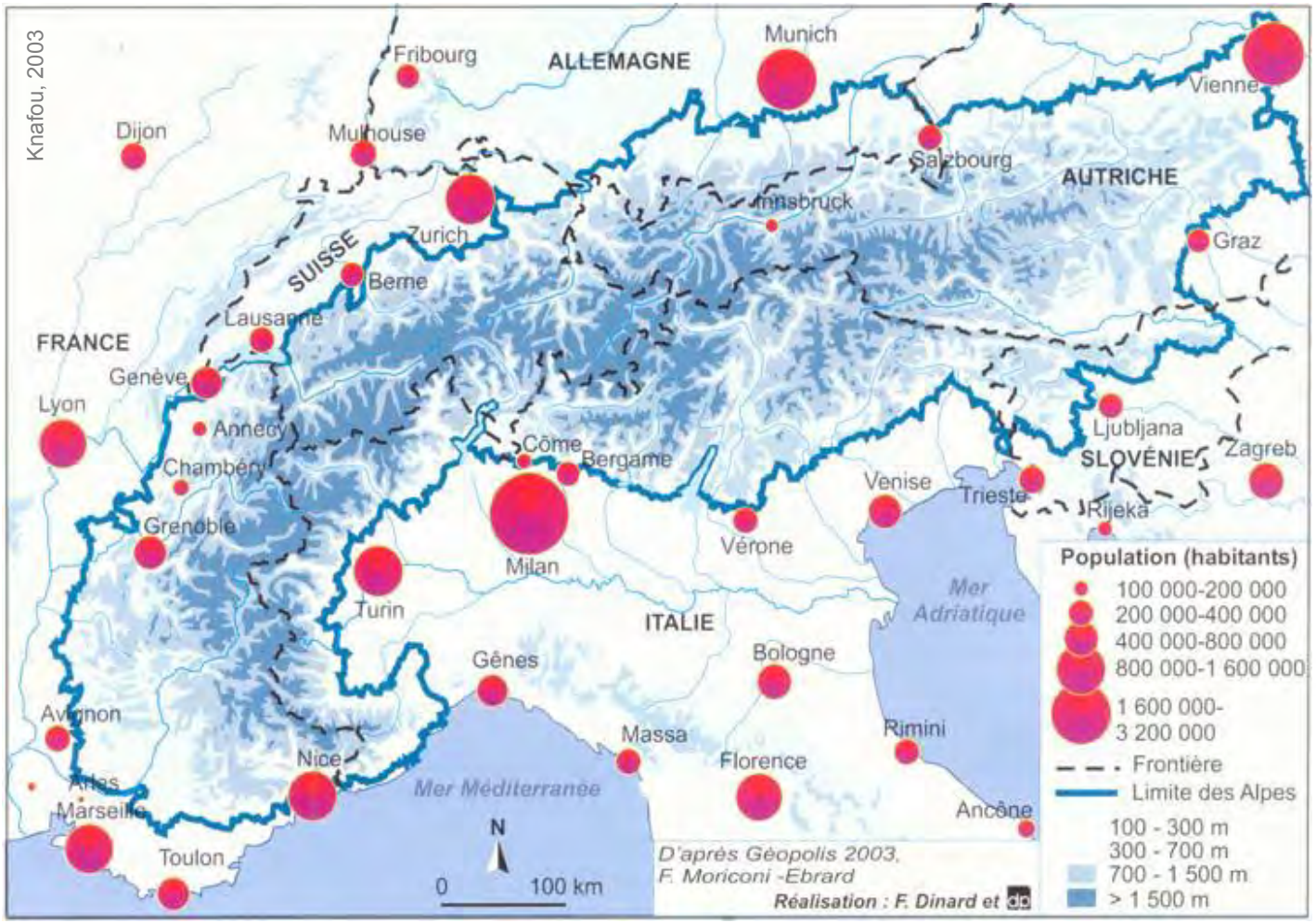
A territory with geographic and geomorphic specificities

Alpine Geomorphology

Increasing concentration of people and activities

Alpine Region

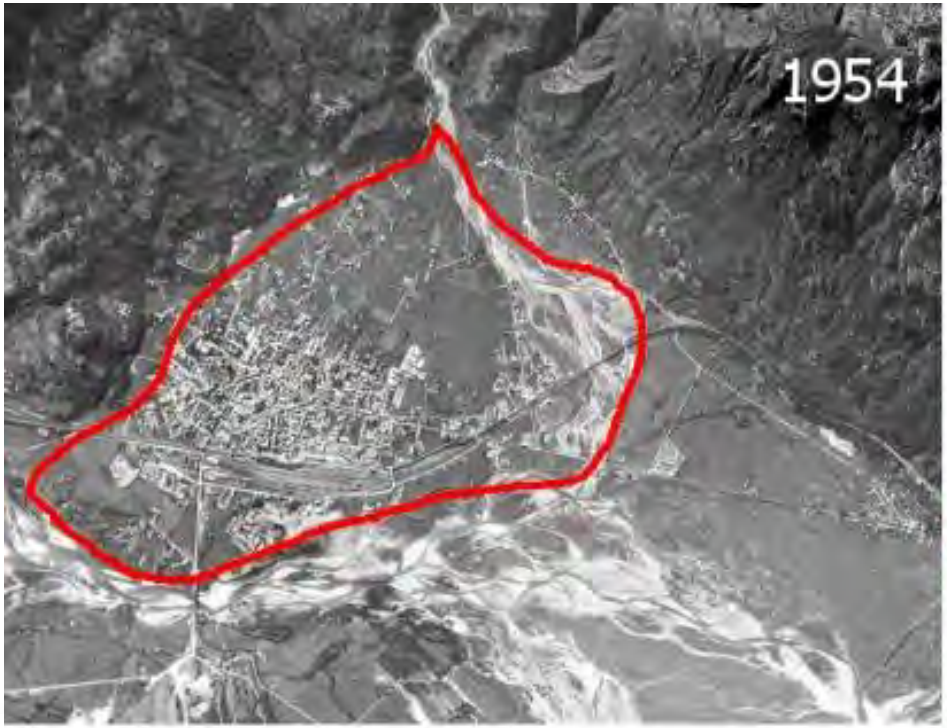
Alpine Metropoles



Increasing concentration of people and activities

Ex.: Domodossola

Socio-Ecosystem Changes in the Alpine Region



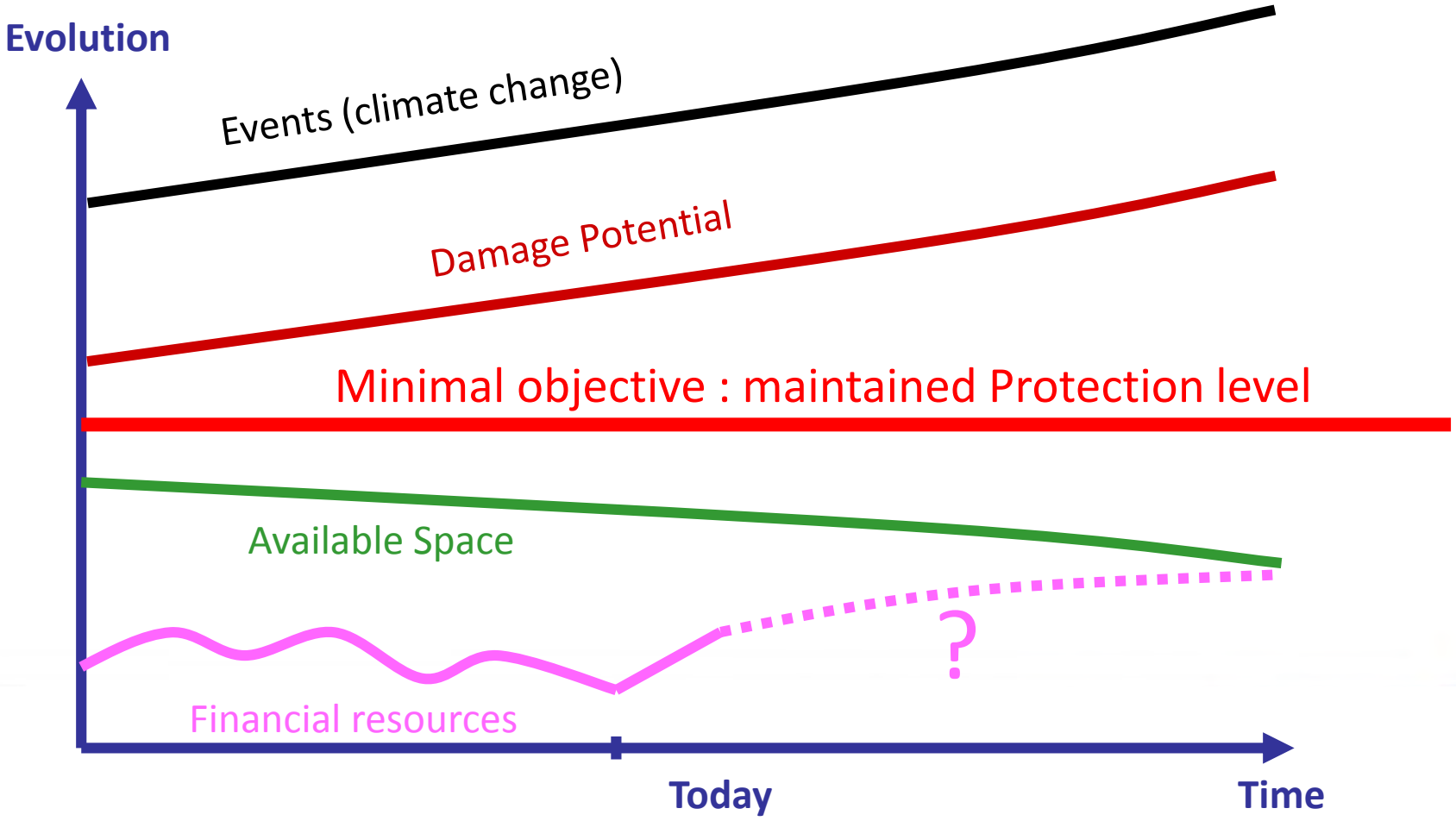
Cône de déjection du torrent Bogna, Commune de Domodossola

Regione Piemonte, PRINAT Project Torrent Workshop, 2006

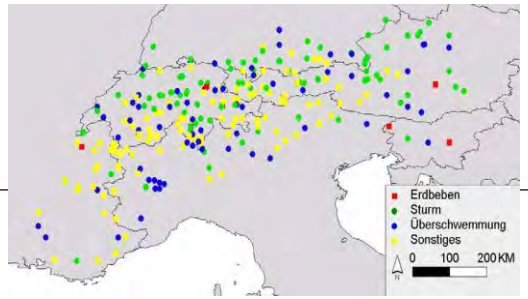
Some 'remarkable events' in the Alpine Region

- 1957 Debris flows & Torrential floods (FR, IT)
- 1987 Mount Zandila (IT)
- 1991 Randa (CH)
- 1993 Brig (CH)
- 1994 Alluvione in Piemonte
- 1999 Avalanches (Alpine Region)
- 2003 Heat Wave impacts in High Mountain
- 2006 Martigny/VS (CH)
- 2000 Torrential floods (FR, IT)
- 2008 Torrential floods (FR, IT)
- 2016 Torrential floods in the Alps (FR, IT, DE, AT...)
- 2017 Bondo disaster (CH)
- 2018 Debris flows & Torrential Floods (FR, CH)

Minimum objective of a protection strategy (eg floods)



Andreas Götz (Third Rhône correction presentation)



ALPES-CLIMAT-RISQUES

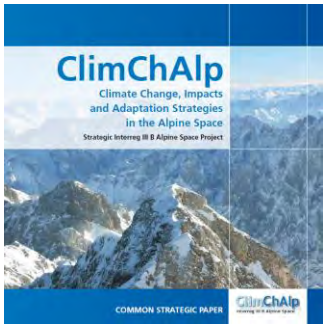
Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

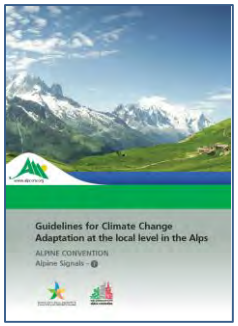
Alpine NHM: IRM and CCA are needed!

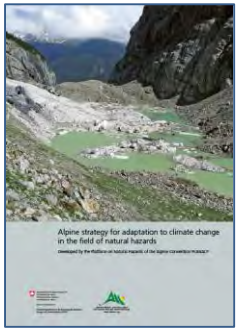
→ Cf. Annex 2

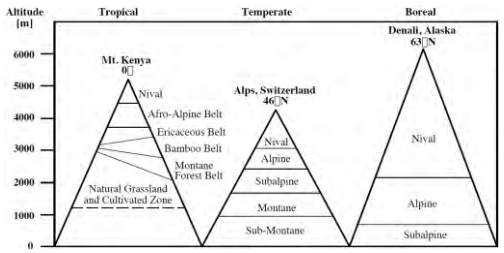
Some references:

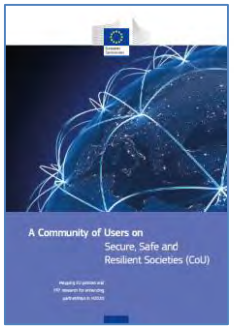
- Beniston et al. 1996
- OECD 2007
- ClimChAlp 2008
- EEA 2009
- AdaptAlp 2011
- IPCC 2012
- PLANALP 2012; 2014
- CoU 2017
- EEA 2017

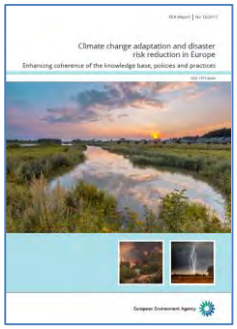












CCA Multi-level Governance Framework

Local action	Regional action	National action	European action
Implementing action			
• Planning and implementation of local adaptation strategies • Mainstreaming of adaptation concerns into other policy areas • Spatial integration of adaptation needs through urban planning • Local emergency plans • Allocation of municipal resources and raising of other funds • Upgrading local infrastructure to make it resilient to climate change • Engaging civil society and private actors	• Providing incentives, funding and authorisation to enable local action • Addressing inter-municipal and urban-rural relations of climate change impacts and vulnerabilities • Developing and implementing with cities regional approaches, e.g. in river basins • Ensuring regional coherence of local /municipal plans and measures	• Providing a supportive national legal framework, e.g. appropriate building standards • Mainstreaming of urban adaptation into the different national policy areas and the national adaptation strategy • Funding of local adaptation measures • Providing national information related to climate change and regionally downscaled information • Funding of research and knowledge development for urban adaptation • Supporting boundary organisations that link science and policy to local adaptation needs • Adjusting the degree of decentralisation of competences and authorities	• Providing a supportive European legal framework • Mainstreaming of urban adaptation needs into the different European policy areas, e.g. cohesion policy • Funding of local adaptation measures as well as knowledge development for urban adaptation; • Providing European and global information related to climate change • Enabling and coordinating exchange of knowledge and experience across national borders • Addressing and coordinating cross-border adaptation issues

Actions at different governmental levels towards adaptation in Europe

Adaptation Territorialization

Roadmap and the key steps to implement subnational Adaptation Strategies

Local Climate Change Adaptation Orientations

- Under Alpine Convention Italian Presidency 2013-2014
- Practice-based approach, taking account:
  - Climate impacts analysis
  - Alpine local and regional administrations needs/demands

The 4 steps of adaptation process:

1. **impacts, vulnerabilities and risk analysis**
2. **adaptation planification**
3. **adaptation measures implementation**
4. **adaptation interventions control and evaluation**

Integrated Risk Management increases adaptation capacity

An holistic strategy for disaster risk reduction with consideration of structural, non-structural, organizational measures and their best combination is the most appropriate approach for climate adaptation in Extreme Events and Natural Hazards Management

www.alpconv.org

EUSALP

Action Group 8

Objectives and current works

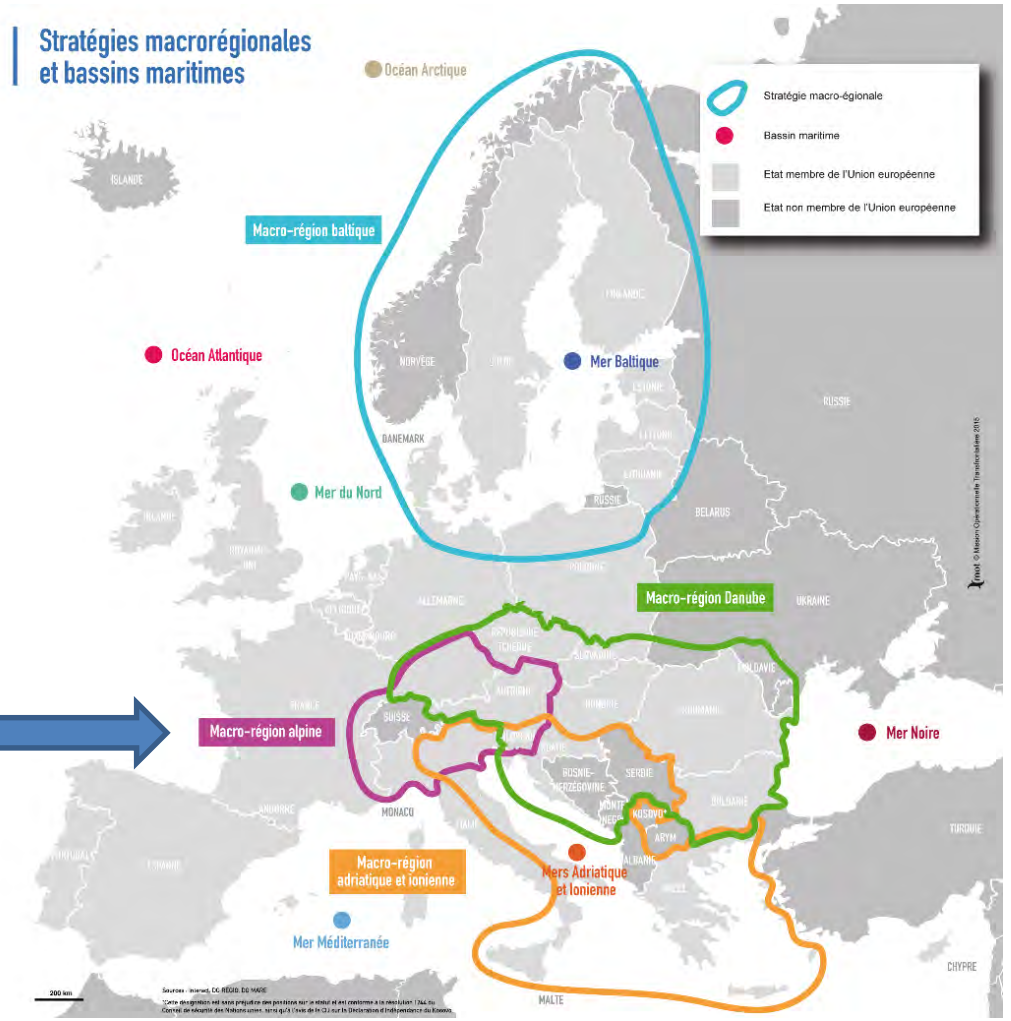
www.alpine-region.eu

EUSALP: a macro-regional Strategy for the Alpine Region

The EU Strategy for the Alpine Region (EUSALP) is the fourth EU macro-regional strategy, adopted by the European Commission in 2015 and endorsed by the European Council in 2016.

EUSALP
EU STRATEGY FOR THE ALPINE REGION

https://www.alpine-region.eu/



Why a Strategy for the Alpine region?

- one of the **economically most dynamic, innovative and competitive areas** in Europe

But also

- environmental, economic and social **challenges requiring a common response**
- important number of **cooperation structures** already operating in the area
- strong **request from the regions**

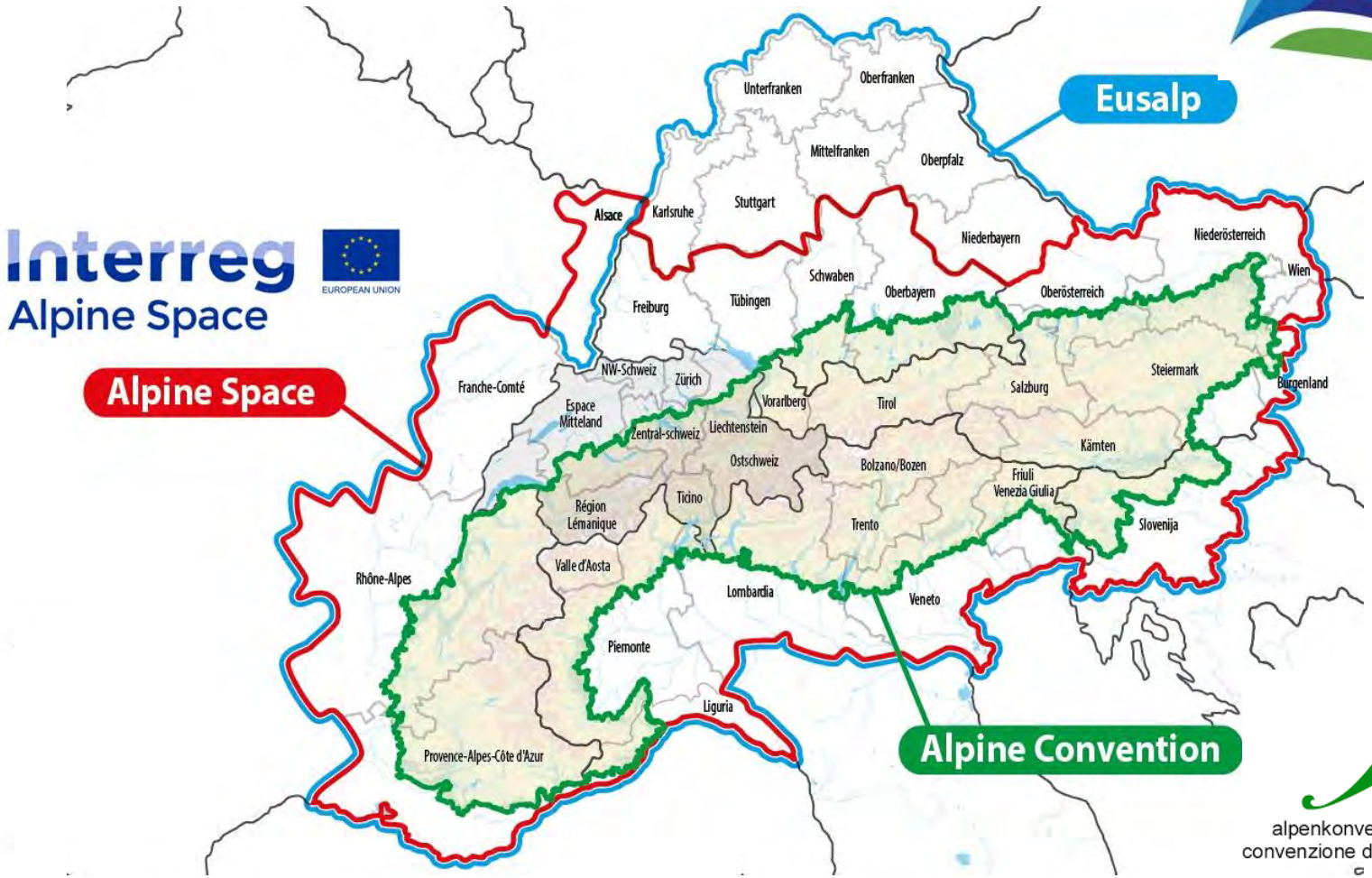


http://ec.europa.eu/regional_policy/en/policy/cooperation/macro-regional-strategies/alpine/

Perimeters of EUSALP, Alpine Space and the Alpine Convention

Three key transnational cooperation structures in the Alpine region

EUSALP
EU STRATEGY FOR THE ALPINE REGION



alpenkonvention • convention alpine
convenzione delle alpi • alpska konvencija

Objectives and Action Groups

AG 1: To develop an effective **research** and **innovation** ecosystem

AG 2: To increase the economic potential of **strategic sectors**

AG 3: To improve the adequacy of **labour market, education** and **training** in strategic sectors

AG 4: To promote **inter-modality** and **interoperability** in passenger and freight **transport**

AG 5: To **connect** people **electronically** and promote accessibility to public services

AG 6: To preserve and valorise **natural resources**, including water and cultural resources

AG 7: To develop **ecological connectivity** in the whole EUSALP territory

AG 8: To improve risk management and to better manage climate change, including major natural risks prevention

AG 9: To make the territory a model region for **energy efficiency** and **renewable energy**

Thematic policy area / objective 1: **Economic Growth & Innovation**

Thematic policy area / objective 2: **Mobility & Connectivity**

Thematic policy area / objective 3: **Environment & Energy**

Cross-cutting policy area 4: **Governance**

Joint declaration of Alpine States and Regions: *"Alpine Green Infrastructure - Joining forces for nature, people and the economy"* Munich, October 2, 2017

Österreich, Kärnten, Salzburg, Tirol, Schweiz, Bayern, France, Provence-Alpes-Côte d'Azur, Italia, Lombardia, Piemonte, Südtirol / Alto Adige, Provincia autonoma di Trento, Slovenija

Supported in written by

Burgenland, Niederösterreich, Oberösterreich, Steiermark, Bern, Graubünden, Sankt Gallen, Ticino, Veneto, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, Baden-Württemberg, Bourgogne-Franche-Comté

Outcomes:

- Emphasizing the benefits of Green Infrastructure
- Making the Alpine region a model region for Green Infrastructure
- Providing appropriate governance and financing mechanisms
- Taking further action for implementing Alpine Green Infrastructure


Alpine Green Infrastructure –
Joining forces for nature, people and the economy
Joint declaration of Alpine States and Regions
Munich, October 2, 2017

EUSALP Action Group 8

To improve risk management and to better manage climate change, including major natural risks prevention

The project is co-financed by the European Regional Development Fund.

EUSALP Action Group 8

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

80 million people, 7 countries, 48 regions, mountains and plains addressing together common challenges and opportunities

European Commission

Interreg Alpine Space AlpGov

The project is co-financed by the European Regional Development Fund.

AG8 Objectives

EUSALP Action Group 8

Additional information → Cf. Annex 3

Specific Objectives

Therefore Action Group 8 aims at improving risk management and better managing climate change in the Alpine Region by pursuing the following **objectives:**

- Stocktaking of relevant actors and interests, mapping and enhancing **governance structures** and processes in the policy fields of risk/hazard management and climate adaptation
- Improving **risk and adaptation governance** mechanisms in the EUSALP region by enhancing, valorizing and leveraging the existing cooperation structures
- Identification of **good practice solutions** in tackling the challenges ahead
- Promoting, developing and implementing local, regional and transnational **pilots and projects** based on the action plan and exploring funding opportunities on both EU as well as national/regional/private levels

Who is AG8?

Actiongroup Leader (AGL):

- Florian Rudolf-Miklau (Austria)
- Christian Wanger (Bavaria)

Additional AGL Representative Contact:
- Kilian Heil (Austria)
- Hannah Berger (Bavaria)

Bavaria:
- Andreas Rimböck

Switzerland:
- Josef Eberli
- Carolin Schärpf

Liechtenstein:
- Heike Summer

France:
- Rodolphe Van Vlaenderen (DGPR), Paris
- Catherine Bertrand (Univ BFC), Besançon
- Benjamin Einhorn (PARN) Grenoble

Austria:
- Andreas Pichler
- Cornelia Jäger
- Siegfried Jachs
- Rudolf Hornich (Styria)
- Ernst Böcskör (Burgenland)
- Marcel Innerkofler (Tyrol)
- Markus Federspiel (Tyrol)
- Markus Kottek (Carinthia)

Slovenia:
- Milica Slokar
- Jože Papež

Observers:
- Elisabeth Sötz (WWF)
- Daniel Bieri (Club Arc Alpin)
- Veronika Schulz (Club Arc Alpin)
- Nicholas Chesnel (Alpine Space)

Italy:
- Marcello Petitta
- Luigi D´Alpaos (Veneto)
- Roberto Barbiero (Trento)
- Dino Zardi (Trento)
- Massimo Ceriani (Lombardy)

Kontakt AG8:

- Kilian Heil (BMNT) kilian.heil@bmnt.gv.at
- Hannah Berger (StMUV) Hannah.Berger@stmuv.bayern.de

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

EUSALP French participation

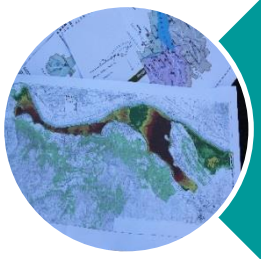
- **EUSALP national coordinator for France**
  - **Nicolas GOUVERNEL**
    Commissariat général à l'égalité des territoires (CGET)
    Contact: nicolas.gouvernel@cget.gouv.fr
- **AG8 French Members**
  - **Rodolphe van VLAENDEREN**, Direction générale de la prévention des risques (DGPR), Ministère de la Transition écologique et solidaire (MTES)
    rodolphe.van-vlaenderen@developpement-durable.gouv.fr
  - **Benjamin EINHORN** (PARN), on behalf of the CGET/Commissariat de massif des Alpes
    benjamin.einhorn@univ-grenoble-alpes.fr
  - **Catherine BERTRAND**, Bourgogne-Franche-Comté University, on behalf of the BFC Region and CGET
    catherine.bertrand@univ-fcomte.fr
- France will take the **Presidency of EUSALP in 2020**

Current work plan of AG8

Risk Governance

- Mapping and analysis of status quo for Alpine natural hazards (report)
- Comparative study on the management of residual risk / overload cases (report)

Paving the ground for shared risk governance policies regarding Alpine natural hazards



Adaptation to climate change

- Mapping and comparing of climate adaptation governance systems in Alpine countries (report with good practice examples and recommendations)
- Climate Change Adaptation Platform for the Alps (CAPA)

Paving the ground for shared adaptation governance policies

Mainstreaming climate adaptation & risk management

- Promoting closer alignment of governance mechanisms in climate adaptation and natural hazard management
- Implementing interface module on CAPA

Supporting synergies between risk management and climate adaptation

No Action Group is an Island…

→ Cf. Annex 4

PLANALP
Platform on Natural Hazards of the Alpine Convention

AlpGov
Alpine Space project supporting EUSALP governance structure

AlpES
Alpine Space project on Ecosystem Services

PLACARD
Platform for Climate Adaptation and Risk Reduction (Horizon 2020)

EUSALP AG8

Links4Soils
Alpine Space project on Sustainable Soil Management

GreenRisk 4Alps
Alpine Space project on ecosystem-based solutions

(…)

Alpine Climate Board
Advisory body of the AC on climate mitigation and adaptation

GoApply
Alpine Space project on governance of climate adaptation

RockTheAlps
Alpine Space project on harmonized rockfall & protection forest mapping

VAO
Virtual Alpine Observatory

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

Source: *From Wolfgang Lexer, modified*

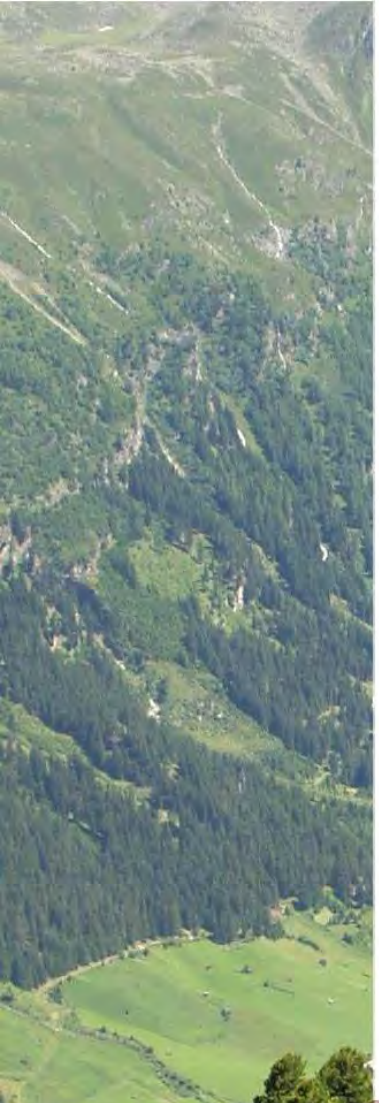
Working modes and implementation activities

- Work meetings
- Providing information for studies
- Knowledge exchange
- Knowledge transfer and dissemination
- Conferences and events


Source: EUSALP AG8


Source: BMLFUW / Tadros

The project is co-financed by the European Regional Development Fund.



MINISTERIUM
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ÖSTERREICH

bmlfuw.gv.at

IN HARDLY ANY OTHER AREA the consequences of climate change and social transitions are more evident than they are in the mountain areas. Therefore it is important to protect the Alpine living environment and economic area in the best possible way against natural hazards in order to ensure sustainable development.

The working group 8 of the EU Strategy for the Alpine Region (EUSALP), co-chaired by Austria and Bavaria, is dealing with risk of natural hazards and adaptation to climate change. Within the framework of this event stakeholders of the Alpine area and political representatives will discuss new ways of dealing with natural hazards as well as necessary adaptation strategies.

The results will contribute to the development of a political agenda for a Regional Risk Governance as well as to the implementation of the Austrian Forest Strategy 2020+.

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Interreg Alpine Space AlpGov

tirol Unser Land

EUSALP

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www.alpconv.org

walddialog

DATE
Monday 18 September 2017, 9.30 to 16.30

LOCACTION
Landhaus/Office of the Provincial Government of the Tyrol
Eduard-Wallnöfer Platz 3 | 6020 Innsbruck, Austria

INVITATION
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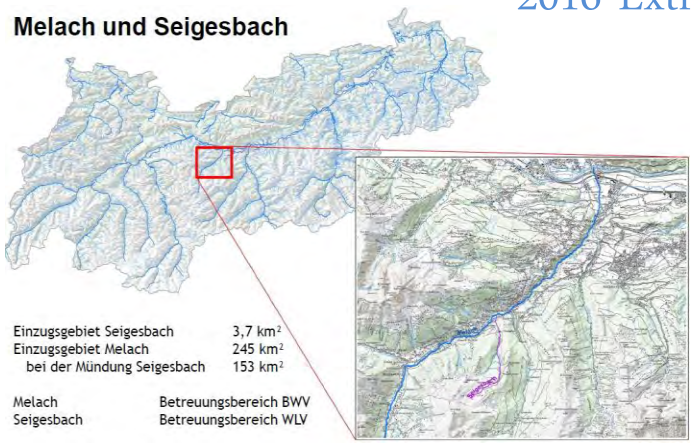
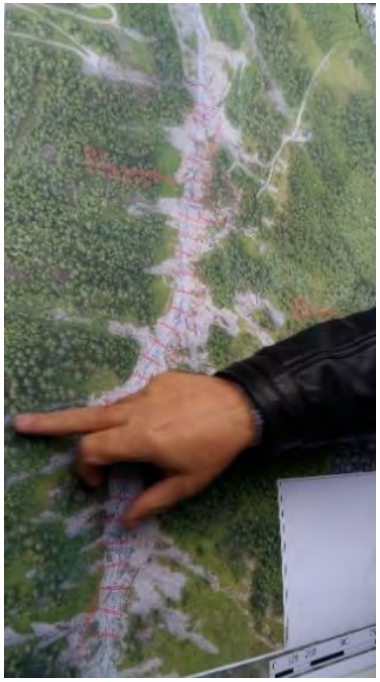
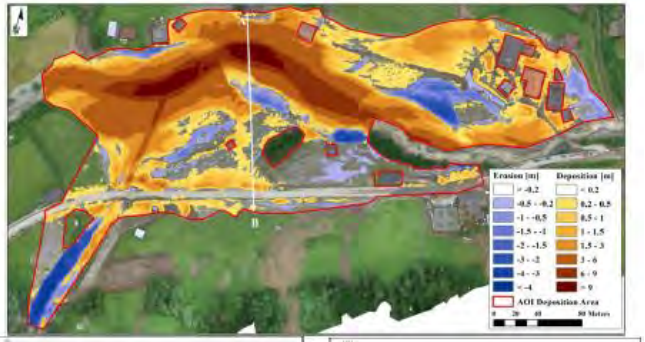
Pôle Alpin d'Etudes et de Recherche
pour la Prévention des Risques Naturels

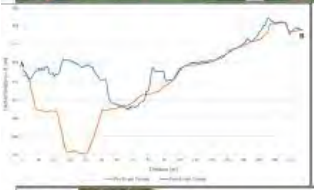
Excursion

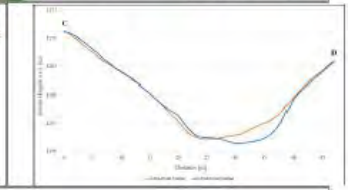
2016 Extreme Event

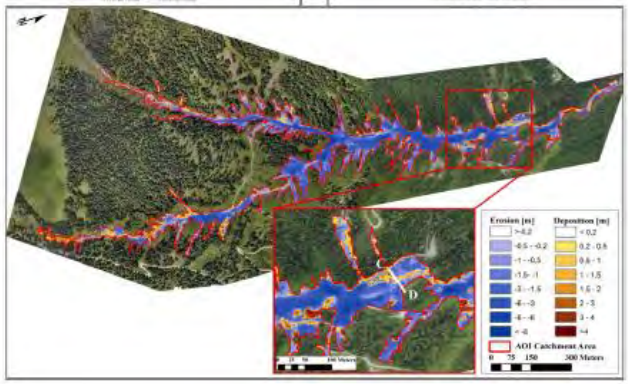








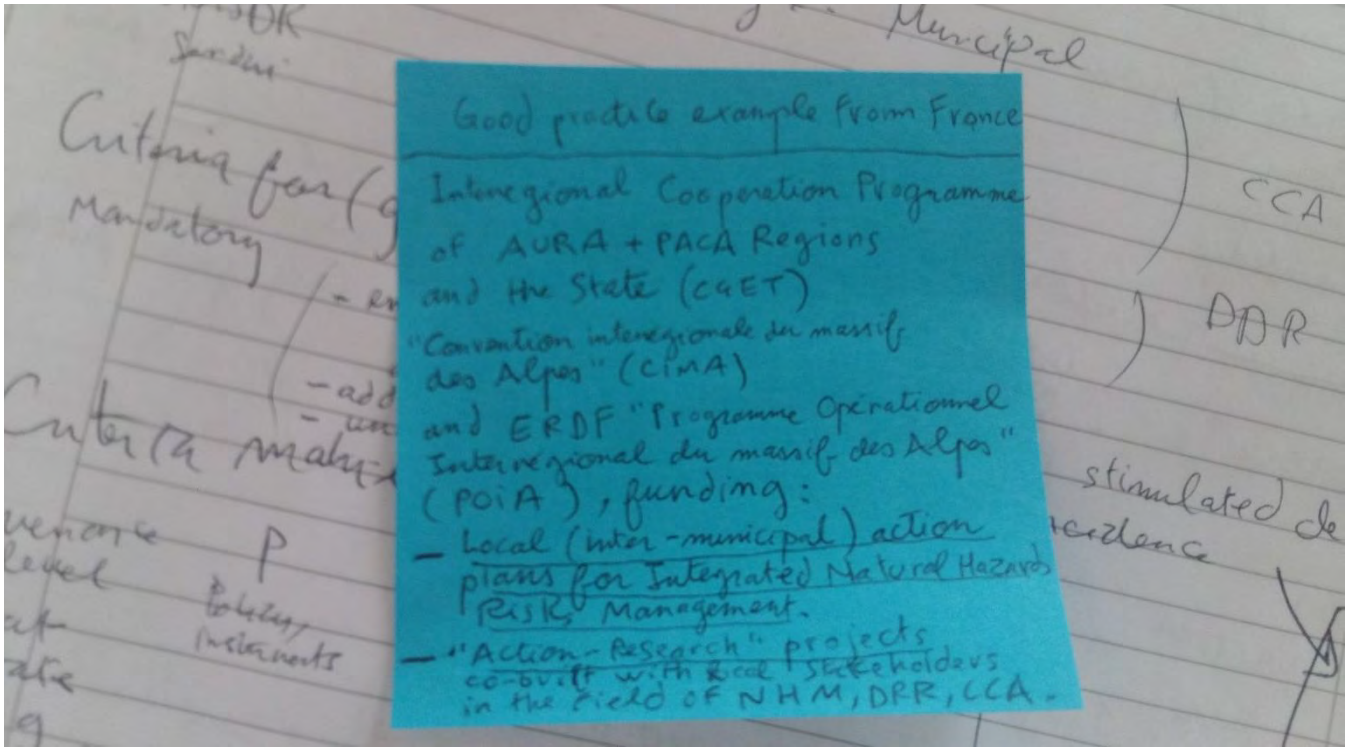




Last AG8 Meeting in Piran (Slovenia)

The project is co-financed by the European Regional Development Fund.

Interregional '('multiregional') cooperation for IRM and CCA in the French Alps



GIRN Alpes

cget Commissariat général à l'égalité des territoires
Liberté • Égalité • Fraternité RÉPUBLIQUE FRANÇAISE
MINISTÈRE DE LA COHÉSION DES TERRITOIRES
Liberté • Égalité • Fraternité RÉPUBLIQUE FRANÇAISE
MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE ET SOLIDAIRE
RÉGION SUD PROVENCE ALPES CÔTE D'AZUR
La Région Auvergne-Rhône-Alpes
RÉGION BOURGOGNE FRANCHE COMTE

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

80 million people, 7 countries, 48 regions, mountains and plains addressing together common challenges and opportunities

European Commission

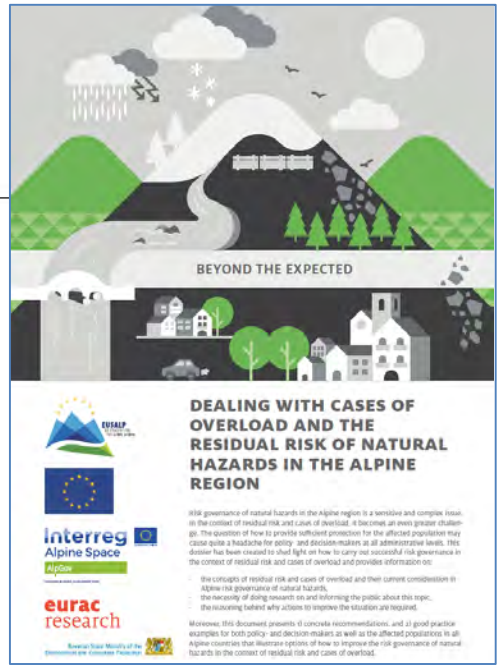
Interreg Alpine Space AlpGov

The project is co-financed by the European Regional Development Fund.

Study and Policy paper on Residual Risk

Recommendations and good practices:

1. Develop a harmonised approach to **integrated risk assessments** in the Alps.
2. Reach and share common definitions for the terms '**residual risk**' and '**cases of overload**'.
3. Establish the full and transparent **participation of actors in risk governance processes**.
4. Consider residual risk and cases of overload **in land-use and spatial planning**.
5. Introduce **an integrated set of measures to increase the overall resilience** of a community and its critical infrastructure.
6. Establish **legal and policy frameworks** that support residual risk management.
7. Promote **a cross-sectoral approach to risk governance**, which fosters synergies between technology, economy and the lifestyle of the society.
8. Create a **risk culture**, in which the community is aware about residual risk.
9. **Risk Communication**: Create a lively risk dialogue and foster the distribution of information through multiple channels.



→ Cf. Annex 5

Document established by EURAC in AlpGov project; EN and DE version available; needed in other languages (FR, IT, SLO)

Proposition: **to translate this document in GreenRisk4Alps**

Next event

EUROPEAN FORUM ALPBACH

Austro-European think tank since 1945

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Diversity and Resilience

Our age is defined by rapid transformation. The way we live, think and work is subject to constant change, giving rise to a multitude of new challenges. Now more than ever, we need to act purposefully, consider diverse courses of action, and come up with cutting-edge solutions.

HOME / EUROPEAN FORUM ALPBACH 2018 / TYROL DAYS

Cooperation in natural hazard management: Examples from the EUSALP region

In Cooperation with EUSALP - EU-Strategy for the Alpine Region

18.08.2018, 14:00-16:10 PARTNER / PANEL

Dear Sir or Madam!

On 1 January 2018, the Tyrol took over the presidency of the EU Strategy for the Alpine Region (EUSALP). The EUSALP enables more than 80 million inhabitants in 48 Alpine regions and seven states to face the most important challenges in the Alpine region together. One challenge that particularly affects the Alpine region is global and climatic change and the associated natural hazards. In this regard, the population's response to risk is of great importance. Regional cooperation models for financing protective measures, such as water associations and cooperatives in the area of flood, avalanche and rock protection, can make an important contribution here. The expert event "Cooperation in Natural Hazard Management" at the Tyrol Days of the European Forum Alpbach offers the opportunity to discuss the different forms of cooperation as well as the challenges and possible solutions with science and practice, local and regional decision-makers throughout the Alps and Europe.

We cordially invite you to the EUSALP expert event

Cooperation in Natural Hazard Management
Saturday, August 18, 2018, 2 – 6 p.m.
Congress Centre Alpbach
Hausnummer 246
6236 Alpbach, Austria

We look forward to your participation!

Josef Geisler
Deputy Governor

Maria Patek
EUSALP Action Group 8 - Lead

Natural Hazards and Climate Change in the French Alps

Elements of context

Interreg
Alpine Space
EUROPEAN UNION
GREEN RISK 4 ALPS

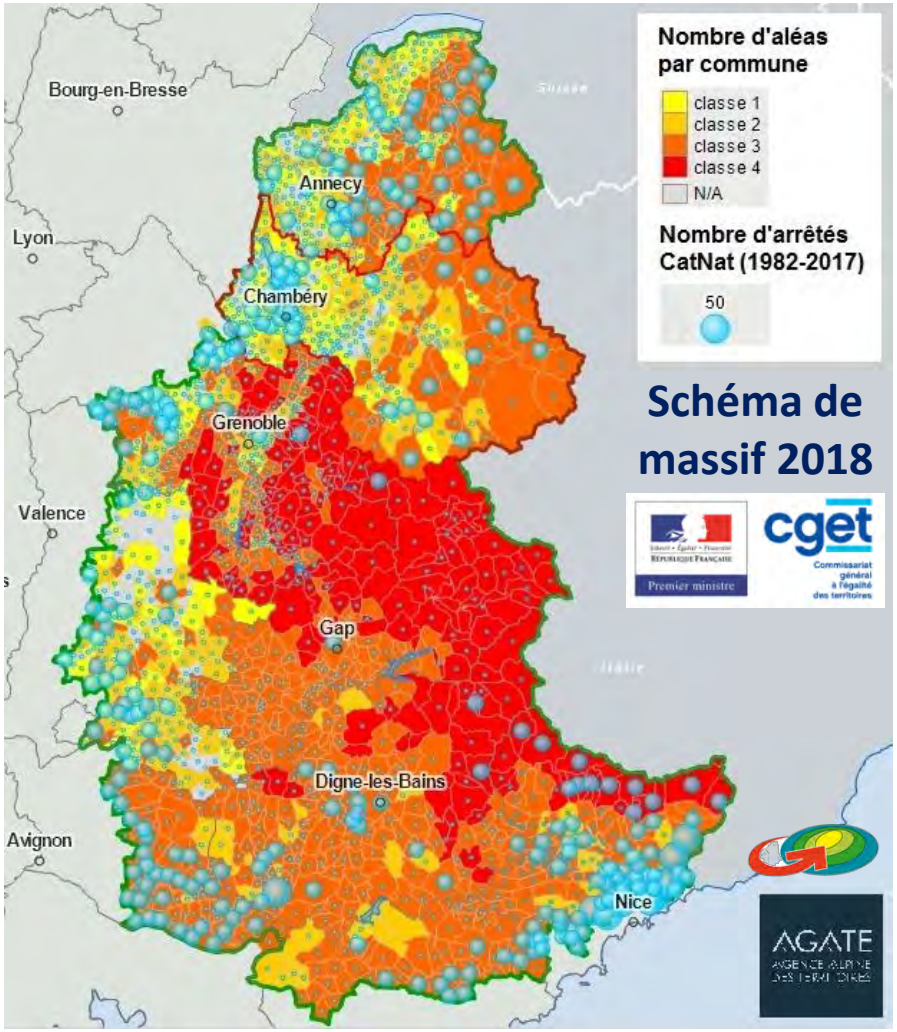
Natural Hazards in the French Alps

Mountain territories:

- Sur-exposure to natural hazards
- Concentration of vulnerabilities in urbanized plains

Global change

- climate and environmental changes
- economic, politic, institutional, territorial, budgetary, social, technical... changes

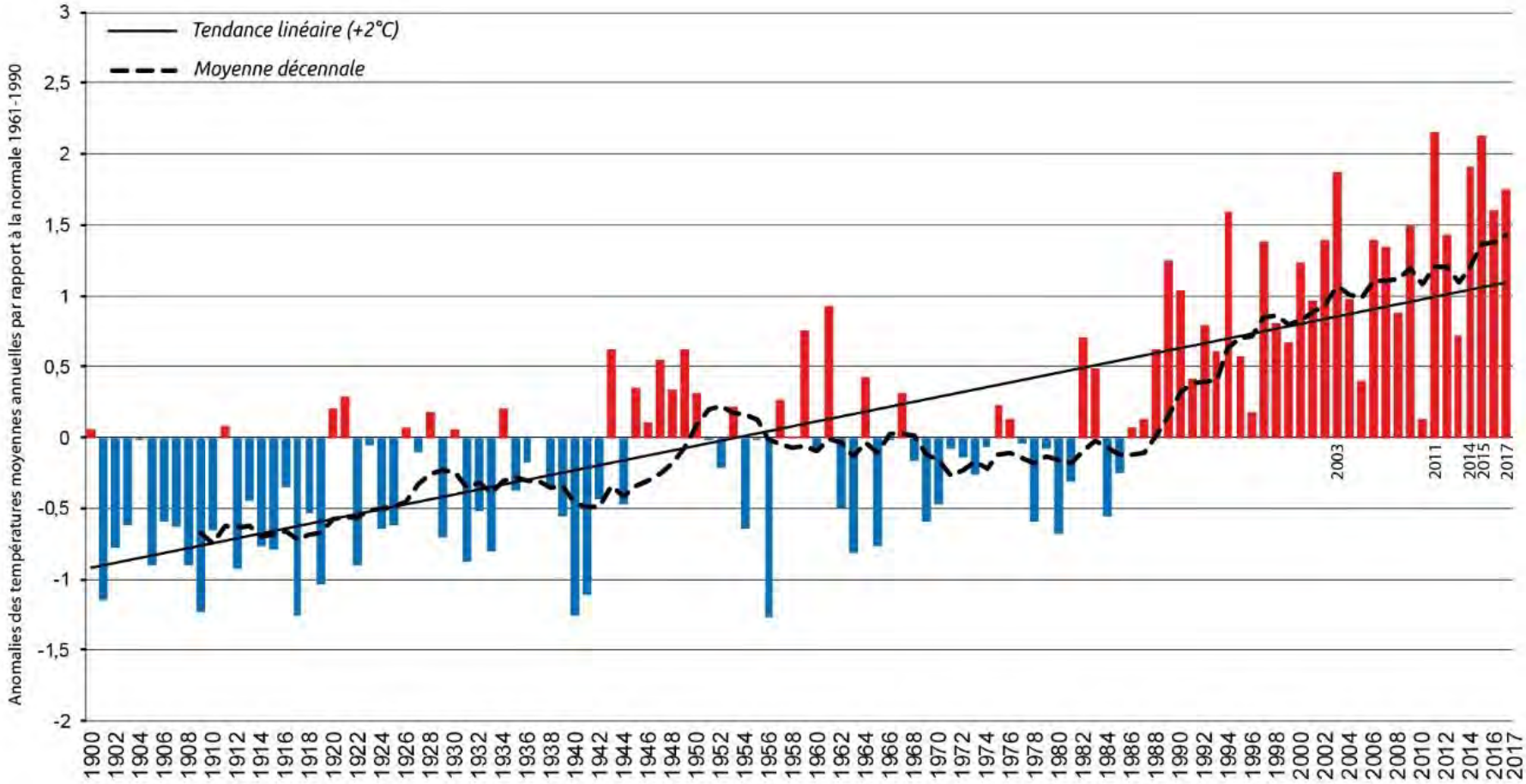


Northern French Alps Climate Change Observatory

AGATE AGENCE ALPINE DES TERRITOIRES

Climate Change in the French Alps

Mean Annual Temperature 1900-2017



Données Histalp (www.zamg.ac.at/histalp), Météo-France, traitement Agence alpine des territoires / Observatoire du changement climatique

Climate Change in the French Alps

Accelerated Glacial Retreat

VALLÉE DE CHAMONIX MONT-BLANC

Mont-Blanc Massif, August 31th, 2015

Natural Hazards under Climate Change in the French Alps

Recent landslide triggering or reactivation

August 2003 Mountain Forest Fires

Climate Change in the French Alps

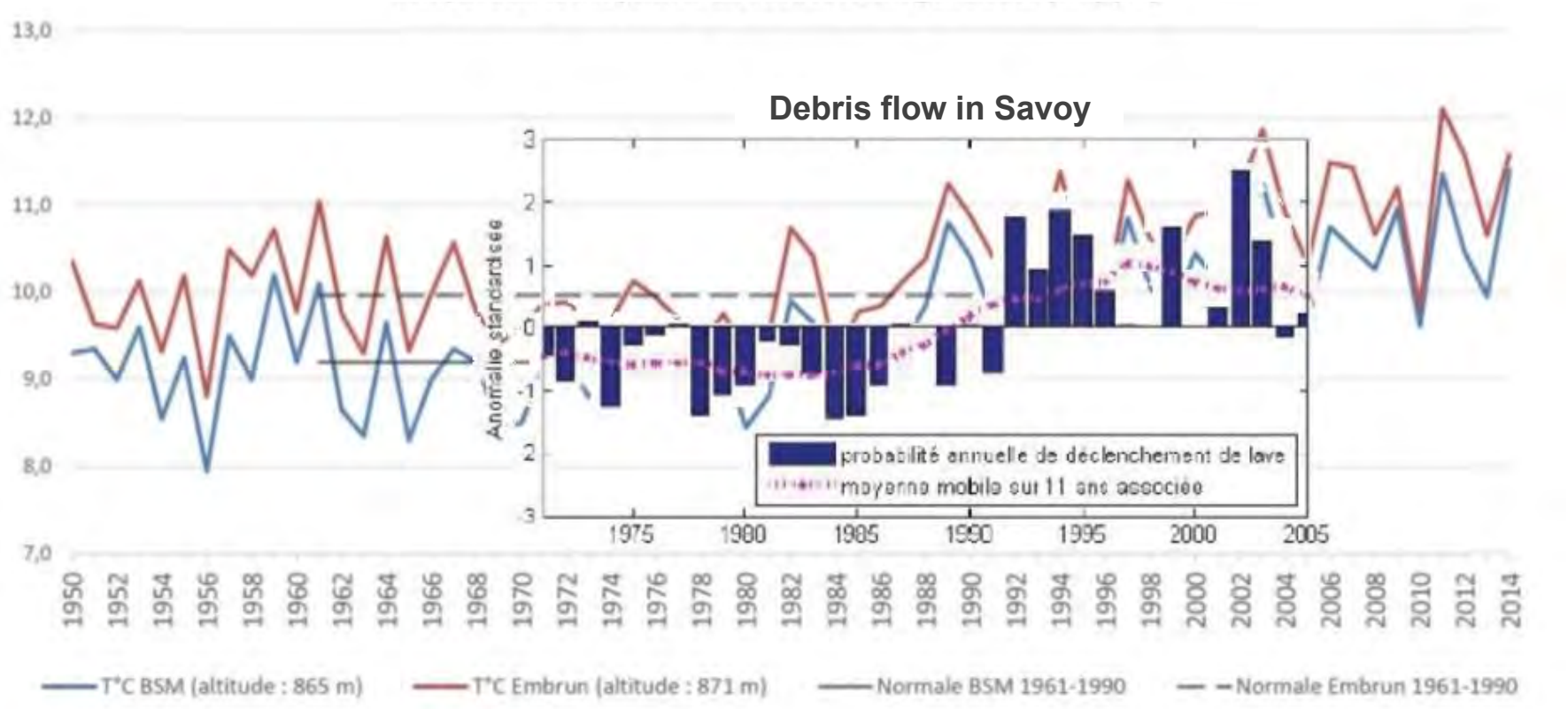
Heat-wave induced mountain forest fires

Regionalization of CC impacts

Climate Change and Natural Hazards in the French Alps

Ex.: Climate rupture marks the beginning of increased debris flow activity in Savoy

Homogenised annual mean temperature (*Tm*) (°C) at Bourg-Saint-Maurice and Embrun



Einhorn *et al.*, 2015

2015 Numerous Events

Natural Hazard Events in the French Alps

Impacts on Road and Railway Transport Networks


Val d'Arly ©CD73

Chambon Landslide

2015 Numerous Events

Natural Hazard Events in the French Alps

Impacts on infrastructure, buildings and settlements

Natural Hazard Events in the French Alps

Societal, economic and even politic impacts

Ex. of Chambon Landslide-induced valley isolation crisis

Source photos : **france3-regions.francetvinfo.fr** & freneydoisans.com

NHM Governance in the French Alps

General Framework and Concrete Examples

Interreg Alpine Space
GREEN RISK 4 ALPS

Multi-level Governance: Who does What?

LEVEL	RESPONSABILITY
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, ONF-RTM, etc.)
MUNICIPALITIES	- Inter-communal strategic planning - Land-use planning (Local Urban Plan)

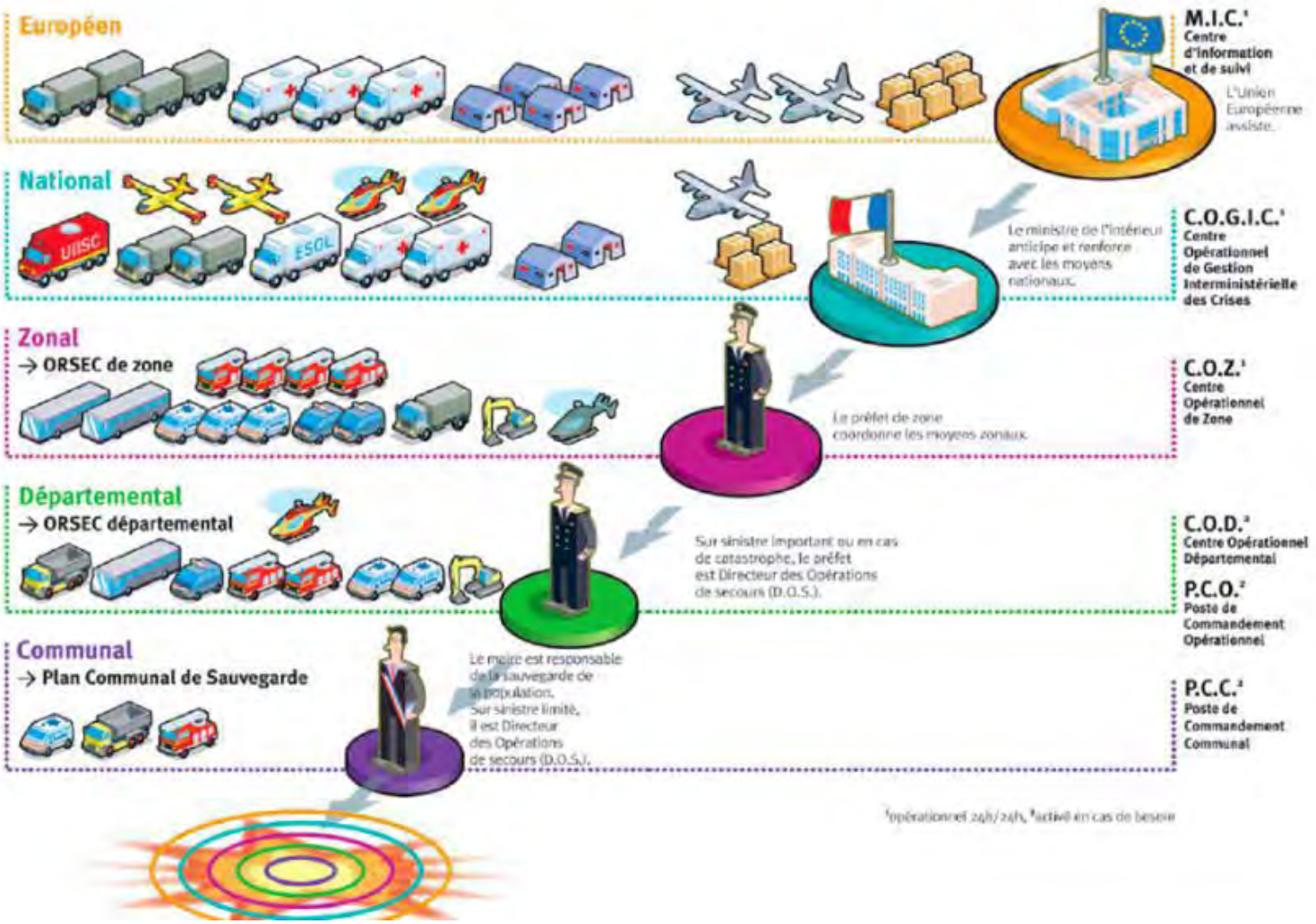
National-Regional planning contract

Source: *Arthur Schindelegger, modified*

Main Actors

- **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**

Vertical structure of Civil Protection organisation

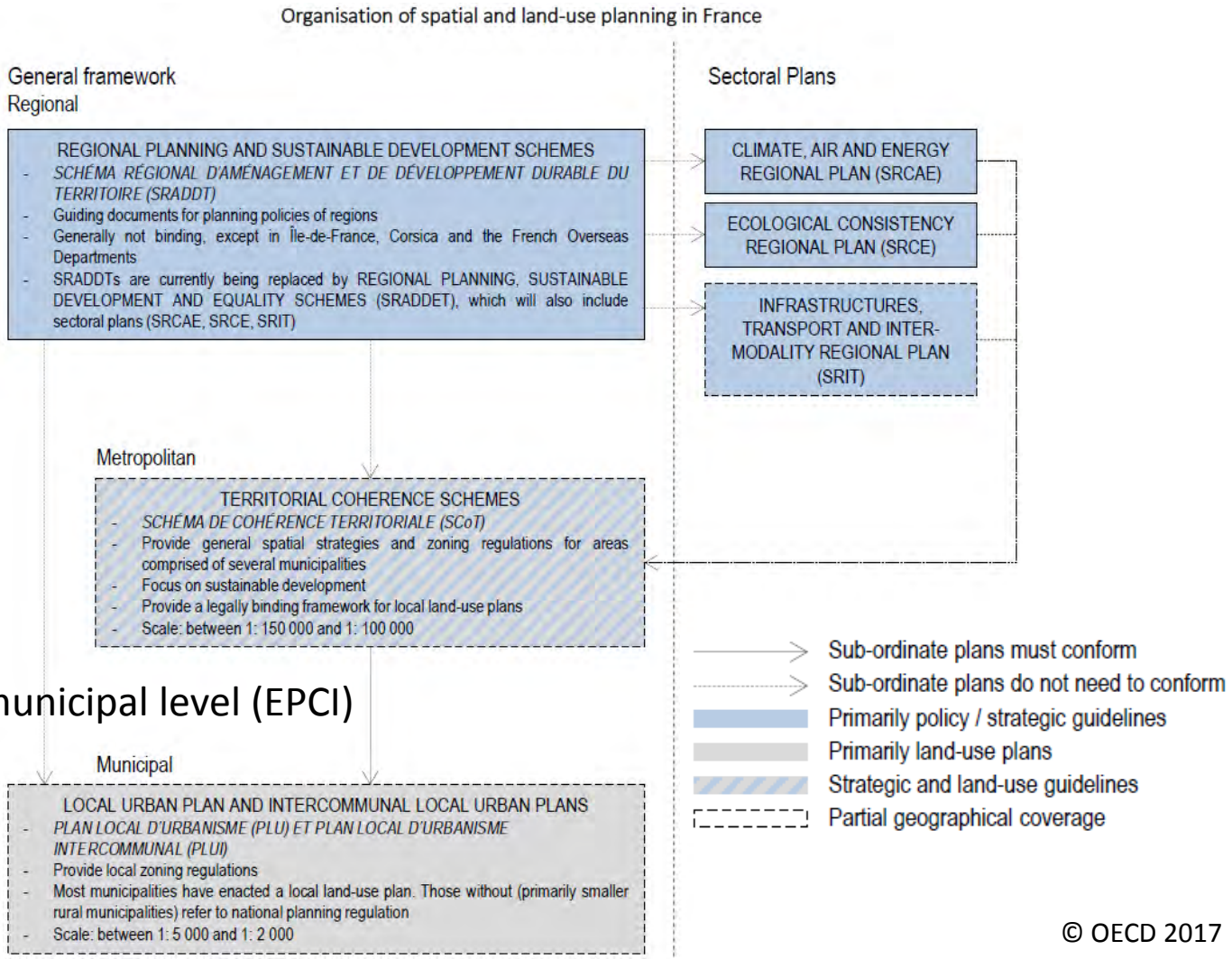


Horizontal structure of Natural Hazard Prevention in Planification and Urbanism

Tools

SRADDET →

PCAET
SCoT
PLUi
OAP
TRI, PAPI,
STePRiM… → Inter-municipal level (EPCI)
PLU
PPR →



© OECD 2017

No zero risk

Complexity

NHM Governance

Multiple Stakeholders

Juge

Spatial planning

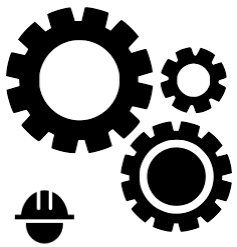
Engineers

Foresters

The State

Mayor

Elected Politicians



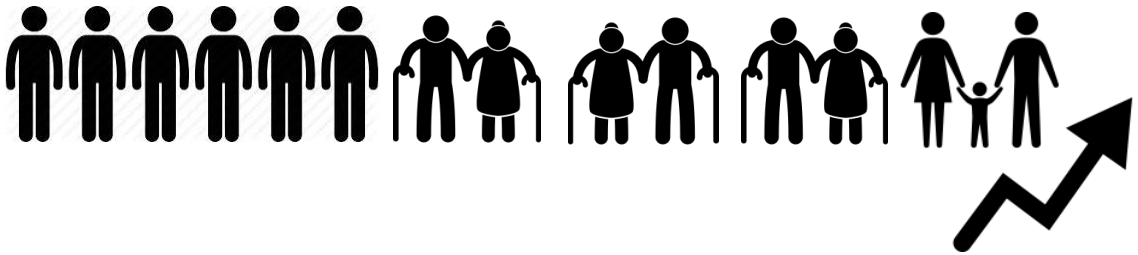
Private sector

Road managers

Citizens

Experts

Architects



French Participation

in GreenRisk4Alps

GreenRisk4Alps French participants

- **Irstea** *partner*

  National research institute of science and technology for environment and agriculture, Grenoble regional centre

- **Cerema** *observer*

  National Centre For Studies and Expertise on Risks, Environment, Mobility, and Urban and Country planning

- **PARN** *observer*

  The *Alpine Pole of Natural Hazards*

  A Science-Society Interface Association in NHM & CCA

- **PNRBP – Baronnies Provençales Park** *observer*

  A Regional Natural Park ('Parc Naturel Régional' - PNR)

  And a ***'TAGIRN' area***

What is a TAGIRN ?

French TAGIRN Approach for GreenRisk4Alps

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

Support to NHM public policies

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

Territorial collectivities (1/2)

- **Interregional policy of AuRA and PACA regions + CGET** for programme coordination of Alpine NH-IRM (TAGIRNs) and Science-Decision-Action research projects
- **Auvergne-Rhône-Alpes Region (AuRA)** since 2005
  - Support to Cross-border and Transnational Cooperation participation (PRINAT, ClimChAlp, AdaptAlp, RiskNat, RiskNET, PITEM RISK projects)
  - Alps-Climate-Risks Platform for supporting regional partners in CCA of NHM
- **SUD/Provence-Alpes-Côte d'Azur Region (PACA)** since 2009
  - Support to Mountain Multirisk Commission of Concertation, since 2018
- **Departmental Councils**
  - Coordination of Isère Departemental Studies and Research Program on Natural Hazard from 1989 to 2010 (> 200 projects)
  - Support to Alpine Departmental Councils participation in Interreg projects (Hautes-Alpes, Savoy, Haute-Savoie...)
  - Coordination of a working group of road managers in the national project C2ROP

cget Commissariat général à l'égalité des territoires

La Région Auvergne-Rhône-Alpes

RÉGION SUD PROVENCE ALPES CÔTE D'AZUR

ALPES DE HAUTE PROVENCE LE DÉPARTEMENT

HAUTES ALPES

DÉPARTEMENT DES ALPES-MARITIMES

- LA DRÔME -

isère LE DÉPARTEMENT

SAVOIE

haute savoie le Département

Support to NHM public policies

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

Territorial collectivities (2/2)

- **Alpine Metropoles**
  - **Grenoble** (support to Territorial Resilience Strategy)
  - **Nice** (interactions for project cooperation)
  - **Chambéry** (interaction in Science-Decision-Action network)
- **Inter-municipalities (EPCIs)**
  - **TAGIRNs** (Chamonix-Mont-Blanc Valley, Briançonnais and Baronnies Provençales), **new candidates** (ComCom's Alpes d'Azur, Alpes-Provence-Verdon and Ubaye valley), river syndicate (Buëch and Maralpine), **territories in prospect** (ex.: Grenoble Metropole, Arve syndicate, etc.) and **former pilot sites** (Maurienne valley, Tarentaise-Vanoise valleys)
  - **Project partners** (PNR Bauges and ComCom Haut-Chablais in ARTACLIM)
- **Municipalities**
  - Bourg-Saint-Maurice, Grenoble, Les Orres, Valloire, etc.

Support to NHM public policies

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

State agencies

- Ministry of Territorial Cohesion – **General Commission for Territorial Equality (CGET)**
  - Coordination of TAGIRN and Science-Decision-Action research programmes
- Ministry of Environment – **Directorate-General of Risk Prevention**
  - Territorial Strategies for Mountain Risks Prevention (since 2016)
  - State of knowledge / support to implementation of an Action Plan for Glacial and Periglacial Hazards Prevention (since 2012)
  - Preliminary works on socio-economic analysis (Cost-Benefit, Multi-criteria) in Alpine NHM (AdaptAlp project, 2011)
- Ministry of Environment – **National Climate Change Observatory (ONERC)**
  - State of knowledge on Climate Change and Natural Hazards in the Alps (ClimChAlp project, 2008)
- Ministry of Environment – **General Council for Environment and Sustainable Development (CGEDD)**
  - Contribution to expertise mission (ex.: on Local Avalanche Risk Prevision organization in the French Alps in 2018)
- Ministry of Environment – **Deconcentrated services**
  - Regional Direction Auvergne-Rhône-Alpes (ex.: support to "Seismic Plan" 2005-2010 in Rhône-Alpes region; Projects Database)
  - Regional Direction Provence-Alpes-Côte d'Azur (ex.: new territorial approaches in HHM /IRM PREGIPAM experiment in 2016)
  - Mountain Terrane Restauration Service of the National Forest Office (ONF-RTM)

TAGIRN Approach

Framework:
Interregional Territorial Cooperation Programme ERDF-Alpes and CIMA

The **ERDF interregional operational programme "Massif des Alpes"** (Operational Program for the Massif of the Alps - POIA) focusses on the implementation of a strategy on the development of natural and human resources of the Alps and on **the management of natural risks in the Alps**. This strategy aims at improving the attractiveness of this area and at ensuring sustainable growth.

http://ec.europa.eu/regional_policy/en/atlas/programmes/2014-2020/france/2014fr16rfop001

Two regions, Auvergne-Rhônes-Alpes and SUD/Provence-Alpes-Côte d'Azur are concerned by this programme. They cooperate and co-finance it, with the CGET, in the framework of the **Inter-regional Alpine Massif Convention (CIMA)**.

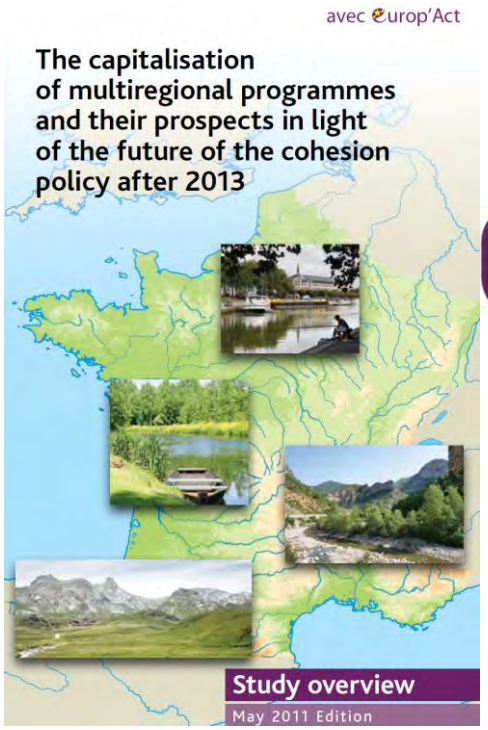
http://www.prefectures-regions.gouv.fr/provence-alpes-cote-dazur/Documents-publications/La-boite-a-outils-de-la-Convention-Interregionale-du-massif-des-Alpes3

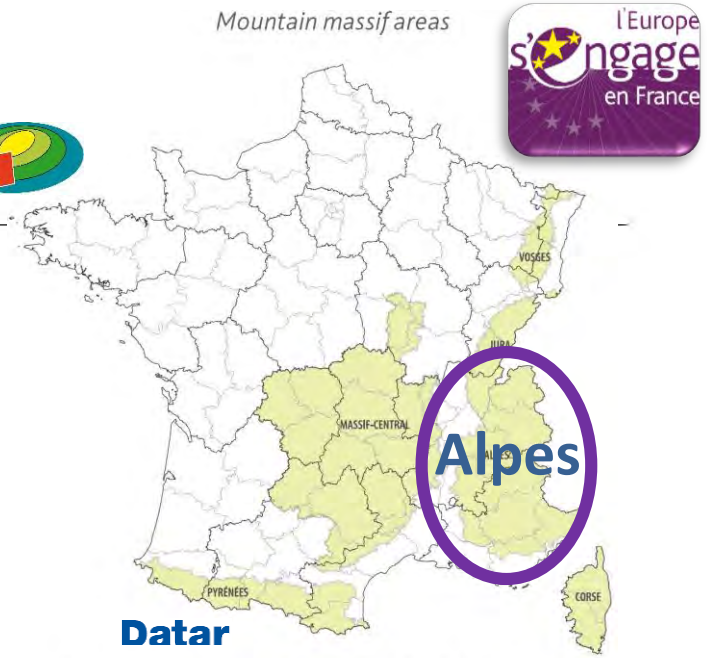
Specific Objective 4: to expand IRM approach in the French Alpine Massif

TAGIRN Approach

Framework: Interregional Territorial Cooperation Program ERDF-Alpes and CIMA

A new type of governance for structural funds





Interregional mountain massif plans (Alps, Massif central, Pyrenees, Vosges, Jura Mountains)

- Interregional Mountain Massif Agreement (CIM) securing financing from the State-Regions and sometimes other partners (departments, etc.)
- Interregional component or programme receiving ERDF financing

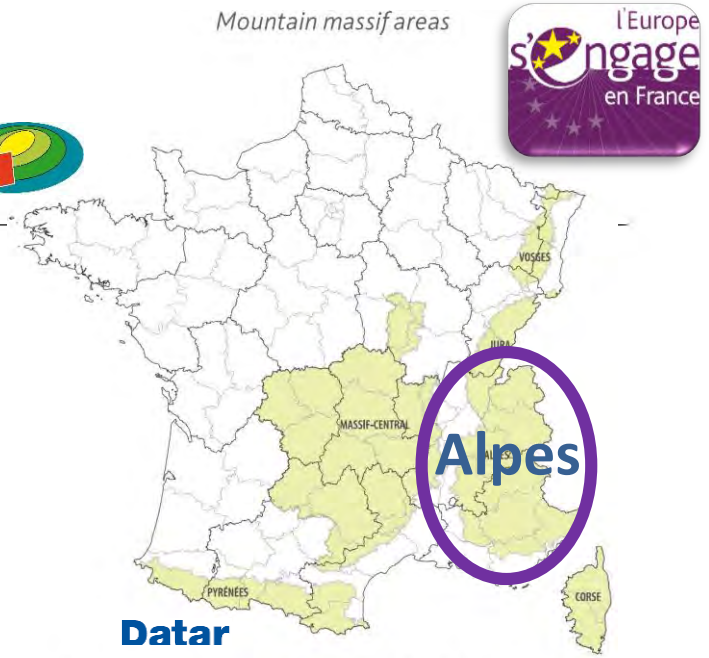
Major River Plans (Rhone, Loire, Seine, Garonne)

- Interregional State-Region project contract (CPIER) securing financing from the State-Regions and other partners (water agencies, etc.)
- Interregional component or programme receiving ERDF financing

viaregio
Agence de Services et de Paiement

TAGIRN Approach

Framework: Interregional Territorial Cooperation Program ERDF-Alpes and CIMA



An original, ground-breaking territorial approach on the European level

France is the only EU member state that has implemented multiregional programmes whose primary objective is related not to a specific topic, but rather to territorial development within areas of cooperation facing common challenges.

This also makes France the only European country currently testing a new type of governance for structural funds that takes account of the specific characteristics of certain territories that go beyond the usual boundaries within which regional policy is implemented.

As a result, the implementation of multiregional programmes in France is ground-breaking on the European level, with the reinforced application of a certain number of principles set forth by the cohesion policy which will be applied even more strongly in the future, such as joining public policies together to serve the territories, going beyond the established administrative borders or the extended implementation of the partnership principle.

In the Alps, the ERDF is cofinancing the **initiatives led by local pilot communities on integrated natural risk management**. The objective is to try out **new types of risk governance on the territorial scale** while building risk awareness by better integrating risk before projects begin and by promoting **feedback on the scale of the entire mountain massif**.

TAGIRN Approach

Integrated Natural Risks Management in the French Alps

The **Interregional Program for Integrated Natural Risks Management in the Alpine Massif (GIRN-Alps)** has been coordinated by the PARN since 2009 in the French Alps as part of the joint programming of the Inter-regional Alpine Massif Convention (CIMA) and the Interregional Operational Program for the Massif of the Alps (POIA). It is co-financed by the Provence-Alpes-Côte d'Azur and Auvergne-Rhône-Alpes Regions, the State (CGET) and the EU's ERDF funds.

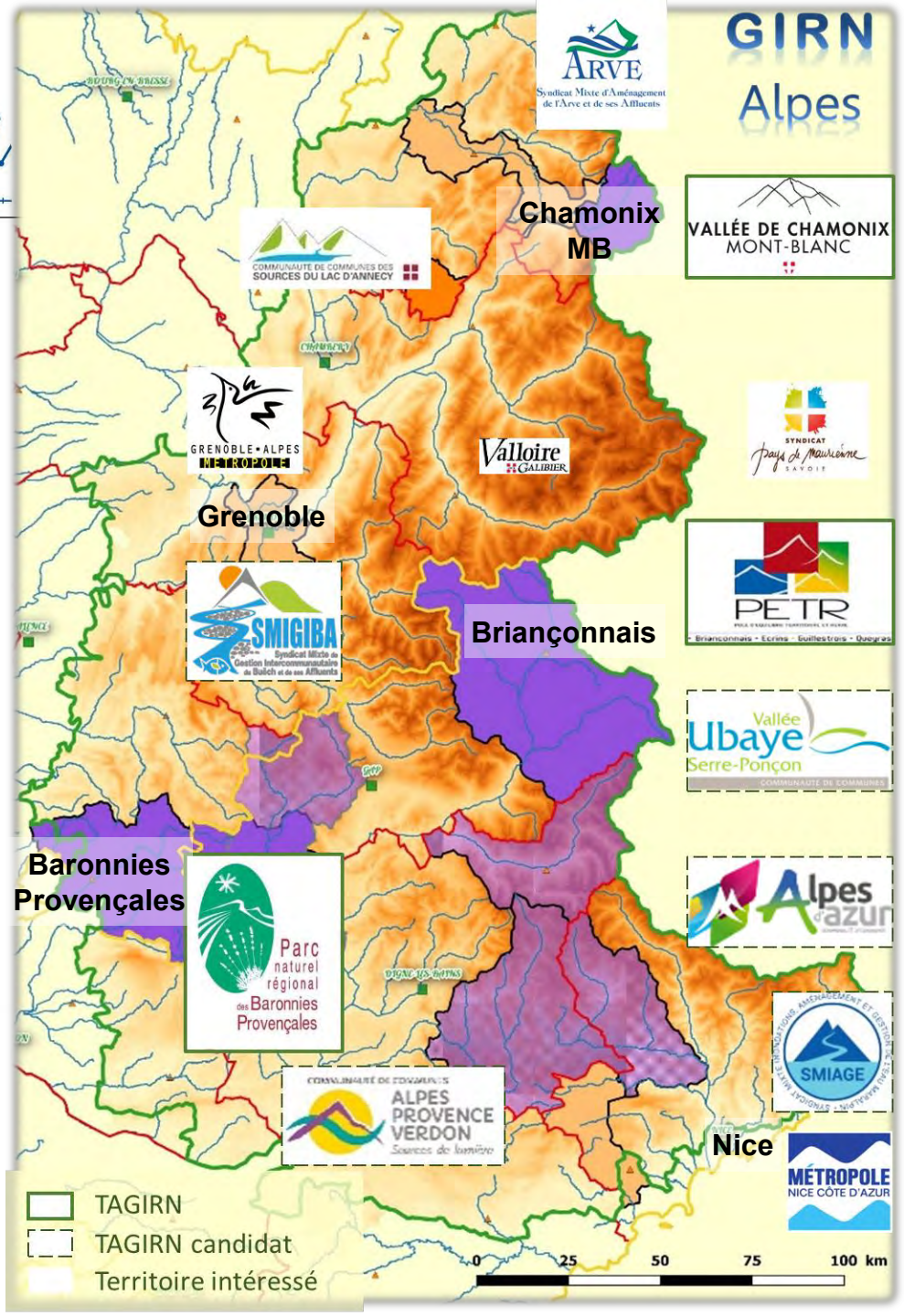
The objective is **to develop Integrated Risk Management (IRM) approaches** ("*Gestion Intégrée des Risque Naturels*" – GIRN) **at the inter-regional scale of the French Alps**. The GIRN approach aims to complete the classic and regal practices of alpine natural hazards by focusing more on a technical, organizational and territorial level with the aim to co-build new dynamics with the stakeholders at the local scale in the management of natural risks.

http://risknat.org/girn/?lang=en

TAGIRN Network

"Alpine Territories of Integrated Risk Management"

Local Action Plans in NHM for DDR and CCA



TAGIRN Approach

Science-Decision-Action Network

The **interface network "*Science-Decision-Action for natural hazard and risk prevention in the Alps*"** led by the PARN with the support of the AuRA and PACA regions and the State (CGET) within the framework of the interregional program CIMA and POIA 2014-2020 aims to impulse **partnership scientific projects co-built with local actors to develop innovative tools for Integrated Risk Management (IRM)** able to contribute to the resilience and climate change adaptation in mountain areas of the country. alpine massif.

http://risknat.org/science-decision-action/?lang=en

TAGIRN Approach

Alps-Climate-Risks Platform

The ***Alps-Climate-Risks platform***, run by the PARN since 2006, relies on **a national and cross-border expert network** in connection with operational and scientific partners, research and territorial cooperation projects, to produce **an updated state of knowledge on climate change impacts and adaptation** in natural risk management in the Alps.

This animation is based on the **thematic portal** Alps-Climate-Risks and on specific supporting activities to the PARN partners, associated with publications and communications on this thematic.

http://risknat.org/alps-climate-risks-platform/?lang=en

Some innovative Stakeholders Dialogue formats (1/2)

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

Types of stakeholders exchange meetings:

- **Cross-border expert and stakeholder workshops** of the **IT-FR-CH Network of Natural Hazard Managers in Interreg Alcotra area** built since 1991 (started in PRINAT project, formalized in RiskNET and kept on in ARTACLIM and PITEM RISK projects)
- **Transnational expert workshops** of the **Transnational Alpine Space Climate Change Impacts and Adaptation Network** since 2006 (ClimChAlp & AdaptAlp projects)

Some innovative Stakeholders Dialogue formats (2/2)

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

Types of stakeholders exchange meetings:

- **Technical TAGIRN workshops** and **annual events with the steering committee and local stakeholders** of the **"Alpine Territories if Integrated NHM"** since 2009
- **Transversal stakeholder seminaries** and **annual events gathering scientists, practitioners and decision-makers** of the **"Science-Decision-Action" Network** since 2016
  - **Stakeholder Feedback on January 2018 Events in the Northern French Alps**, October 16th 2018
  - **Seismic Risk and Stakeholder Responsibilities**, October 19th 2018
  - **Alpine Valleys Territorial Isolation by Natural Hazards**, March 2018
  - **Hydrometeorological Risk Management in Grenoble agglomeration**, June 2016
  - **Rockfall Hazard and Risk Management in Grenoble agglomeration**, March 2016

GIRN & SDA annual event 2016, Savines-le-Lac

NHM governance in the French Alps

Concrete example 1

Baronnies Provençales Regional Natural Park

Baronnies Provençales case

GreenRisk4Alps Kickoff Meeting, Innsbruck, 25-27 July 2018

GIRN Alpes

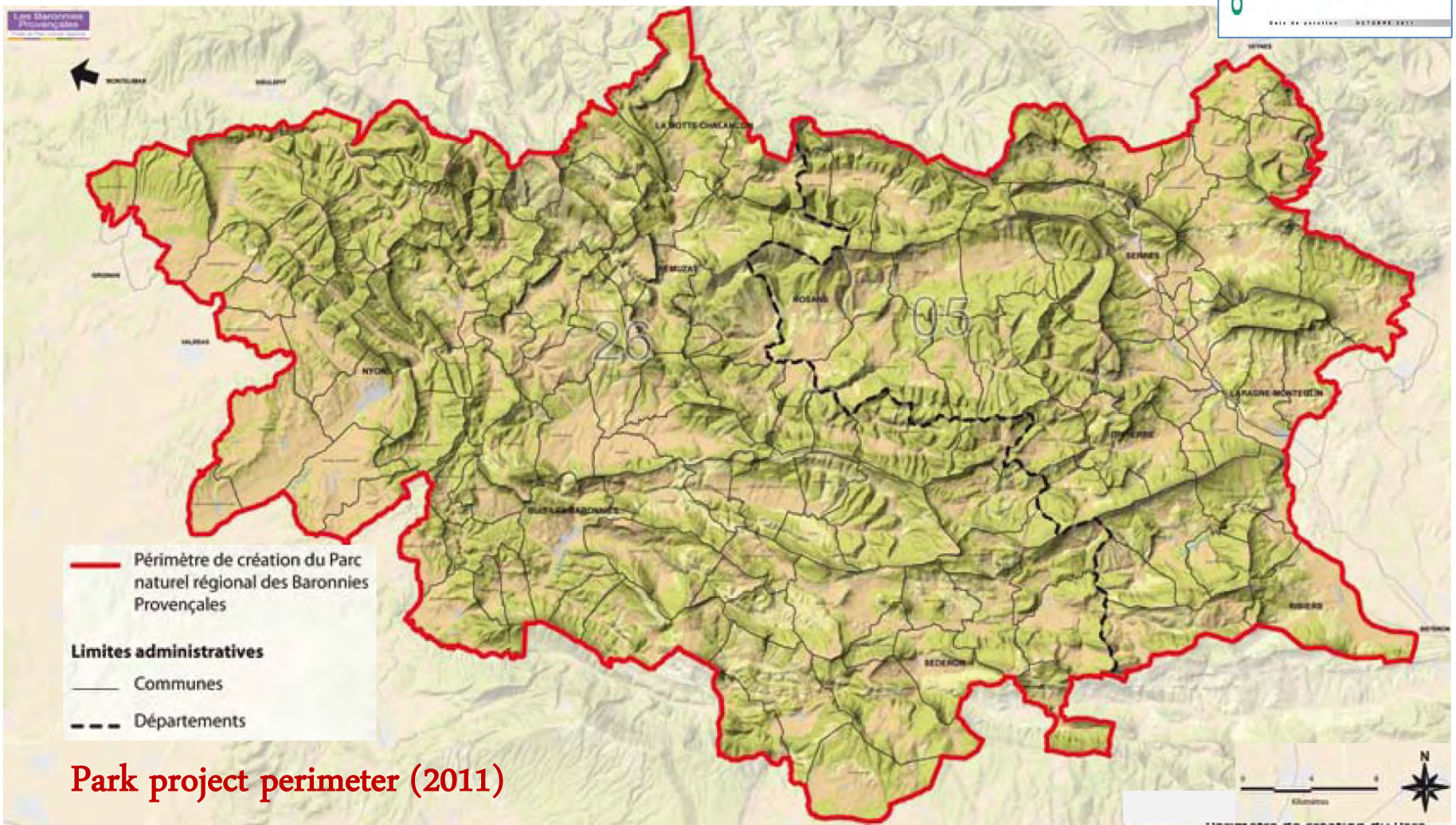
Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

Parc naturel régional des Baronnies provençales

© F. Flamain

Baronnies Provençales Regional Natural Park

Baronnies Provençales Regional Natural Park



Park project perimeter (2011)

Baronnies Provençales Regional Natural Park

Chart of the Natural Park (2011)

3 ambitions and 12 strategic orientations

- To base the evolution of the Baronnies Provençales on the **preservation and valorization** of the various natural and human assets
- **Relocate** an economy based on identity and the valorization of territorial resources
- Design **a coherent, supportive and sustainable development** of the Baronnies Provençales

37 measures or operational objectives

Fonder l'évolution des Baronnies Provençales sur la préservation et la valorisation des différents atouts naturels et humains

- *Connaître et préserver la biodiversité des Baronnies Provençales*
- *Préserver les patrimoines agricoles et forestiers emblématiques*
- *Préserver et partager durablement la ressource en eau*
- *Donner aux patrimoines culturels toute leur place dans la compréhension et l'aménagement du territoire*

Relocaliser une économie fondée sur l'identité et la valorisation des ressources territoriales

- *Développer et promouvoir une agriculture de massif diversifiée de qualité*
- *Développer et promouvoir un tourisme durable qui s'inscrit dans le paysage et l'art de vivre le territoire*
- *Référencer les Baronnies Provençales en matière de pratiques et de gestion des sports de nature*
- *Anticiper et innover en mobilisant des ressources territoriales nouvelles*

Concevoir un aménagement cohérent, solidaire et durable des Baronnies Provençales

- *Préparer et accompagner un urbanisme rural durable*
- *Impulser et développer une politique énergétique territorialisée*
- *Rééquilibrer l'offre culturelle pour en favoriser l'accès*
- *Faire reconnaître le Parc comme fédérateur des politiques territoriales*

Baronnies Provençales Regional Natural Park

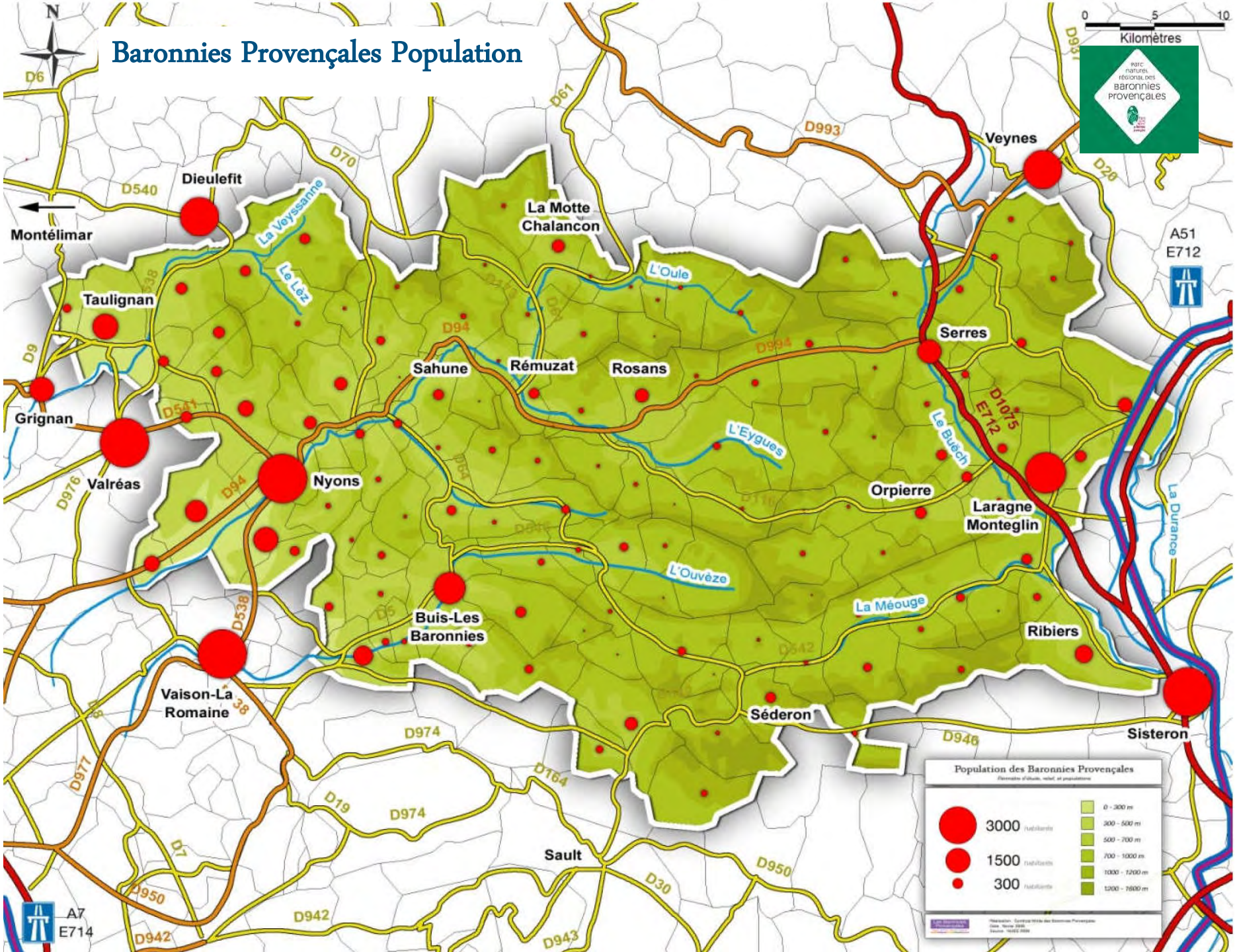
Additional information → Cf. Annex 6

Territorial Diagnosis for Natural Park Project (2011)

Numerous Data

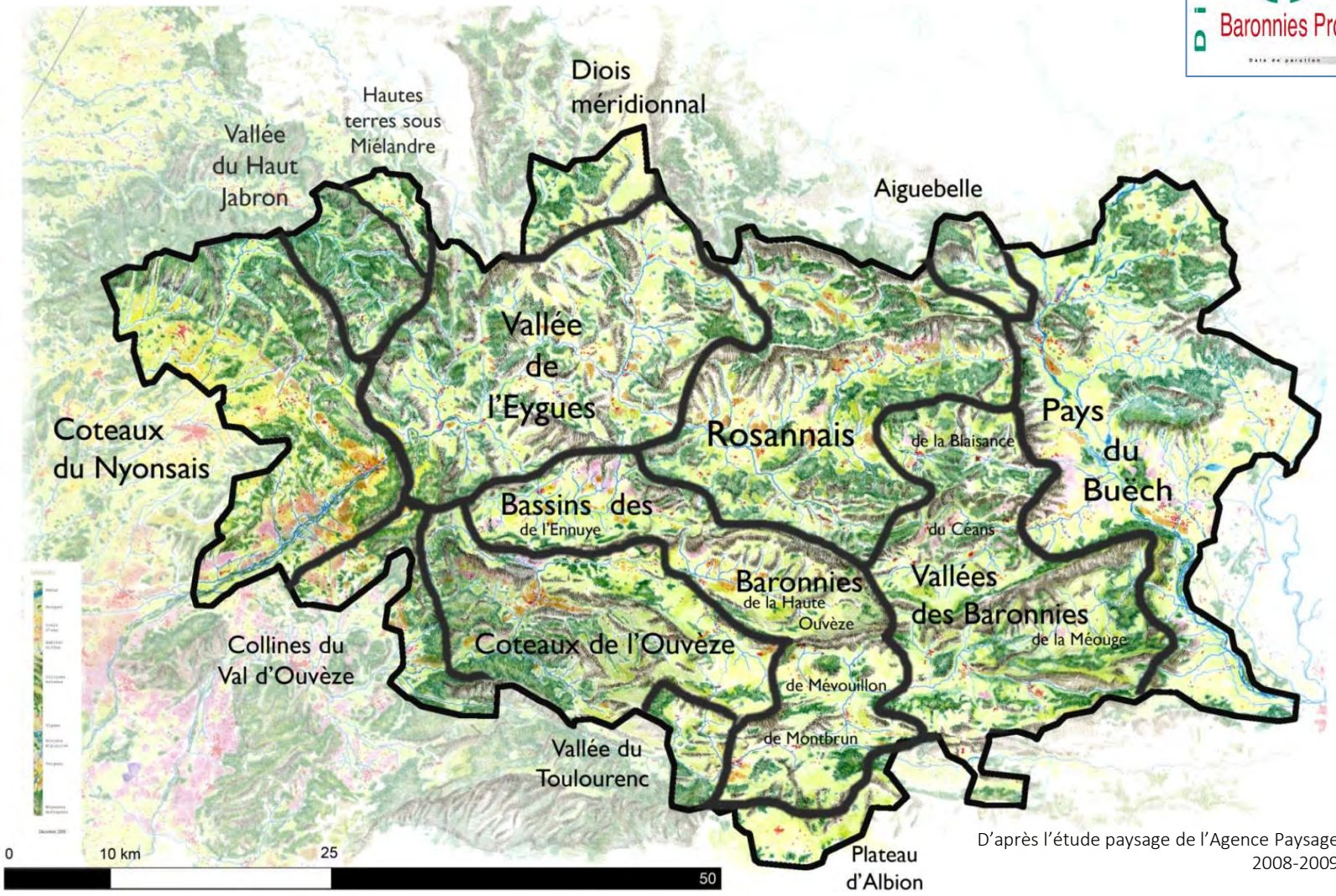
- **Physical data** (geology, hydrology, climate, forest cover, land cover, biodiversity, natural heritage, etc.)
- **Human and social data** (population, demography, history, cultural heritage, etc.)
- **Economic data** (sectoral activities: agriculture, forestry, industry, etc.)
- **Administrative data** on inter-municipal governance (political perimeters, roles and responsibilities, current actions, etc.)

Baronnies Provençales Population



Baronnies Provençales Landscape

14 Landscape Mosaics Entities



D'après l'étude paysage de l'Agence Paysage 2008-2009

Baronnies Provençales Natural Hazards

Floods


Eygues flood 22/09/1988


Vaison-La-Romaine Disaster 22/09/1992

Baronnies Provençales Natural Hazards

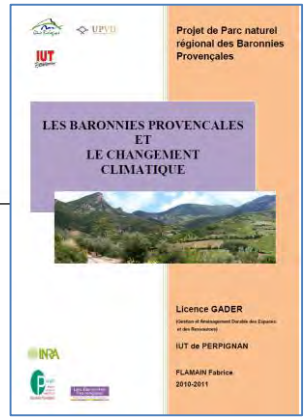
Forest fires

In Flamain, 2011. Photo Alain Bosmans (source : www.tamtamdesbaronnies.com)

Baronnies Provençales Natural Hazards

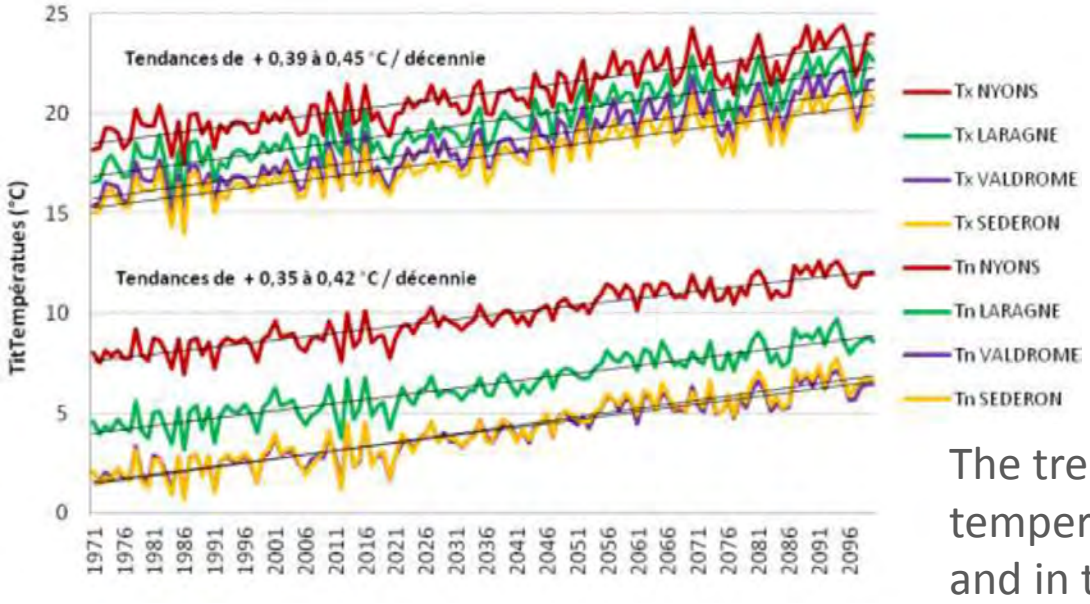
Rockfalls

May, 25, 2018
Rockfall at Soubeyrand pass (Drôme département)



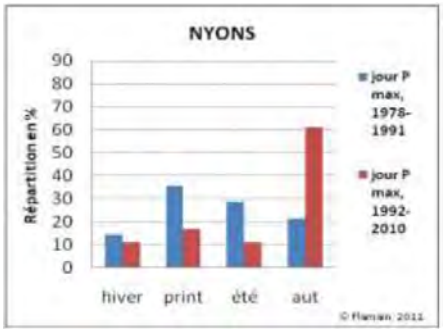
Baronnies Provençales and Climate Change

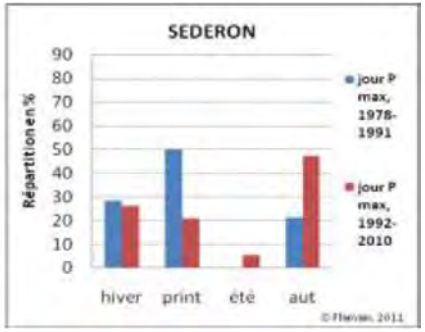
INRA
Institut National de la Recherche Agronomique



ARPEGE-Climat simulation of year-to-year variations in minimum (Tn) and maximum (Tx) **annual temperatures** for Nyons, Laragne, Valdrôme and Séderon stations

The trends in minimum and maximum temperatures are close to each other and in the order of **+ 0.4 ° C / decade**



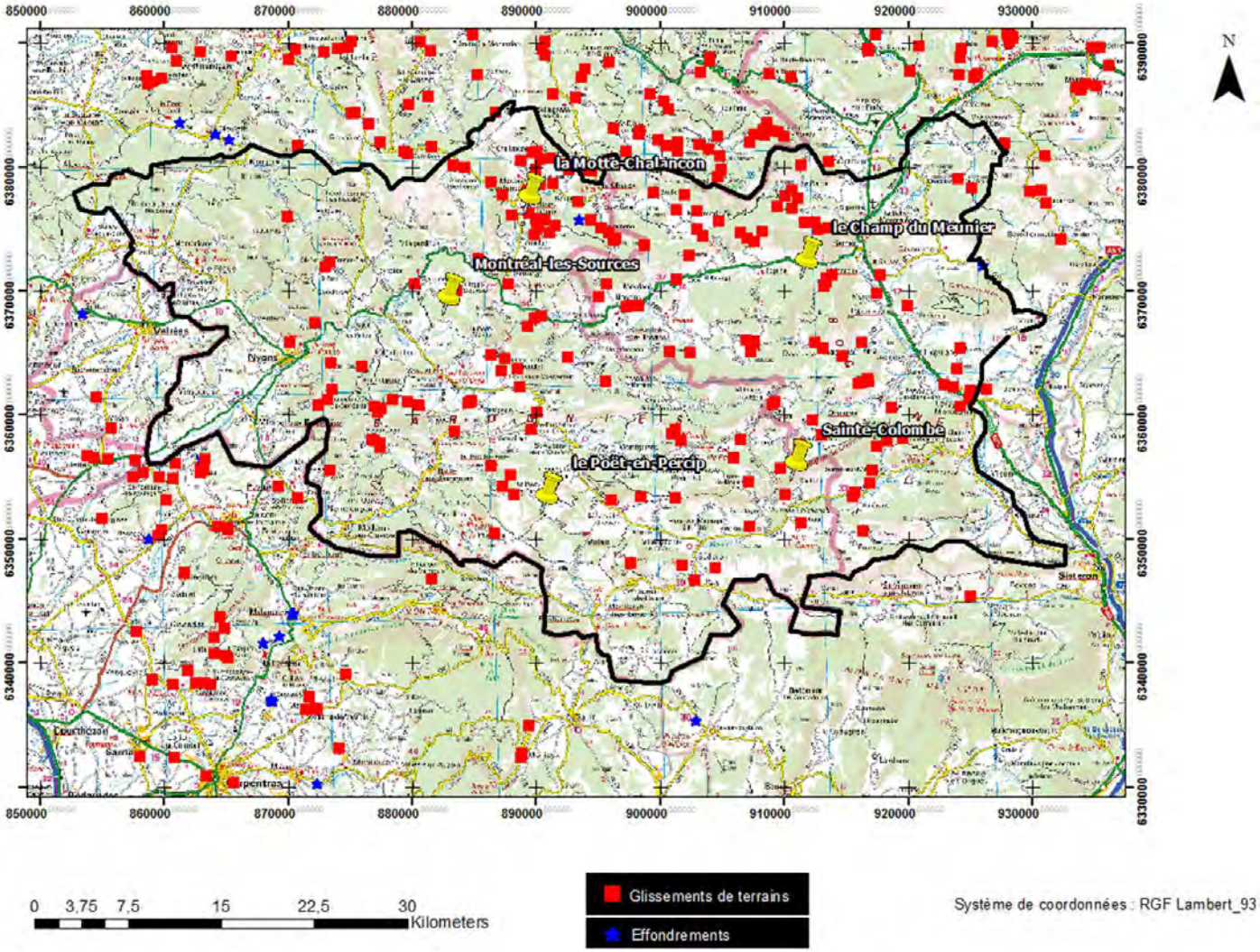


Comparison of the seasonal distribution (in%) of the wettest annual day before (1978-1991) and after (1992-2010) the climatic rupture

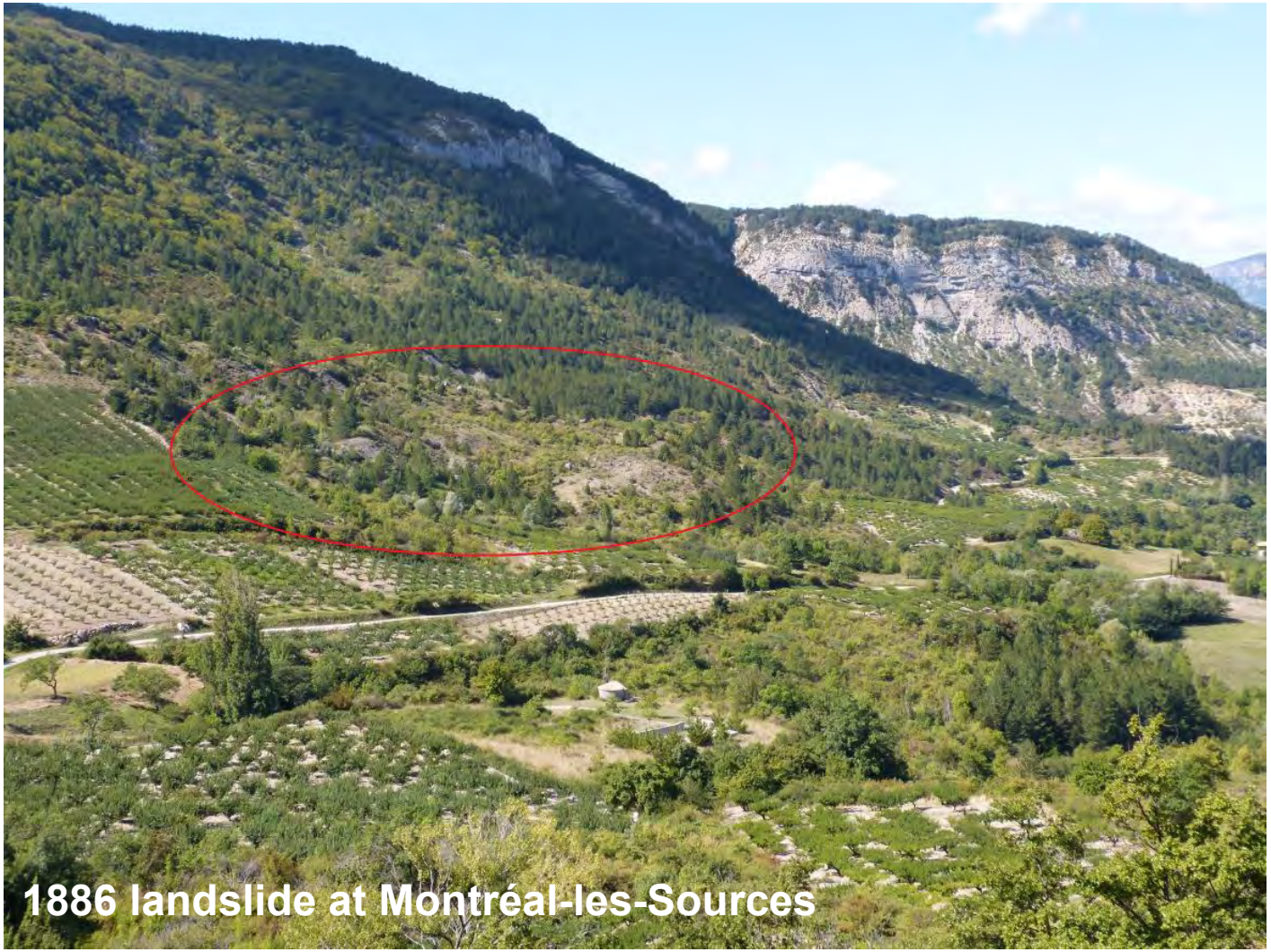
Seasonal changes in precipitation

Flamain, 2011

Landslides inventory

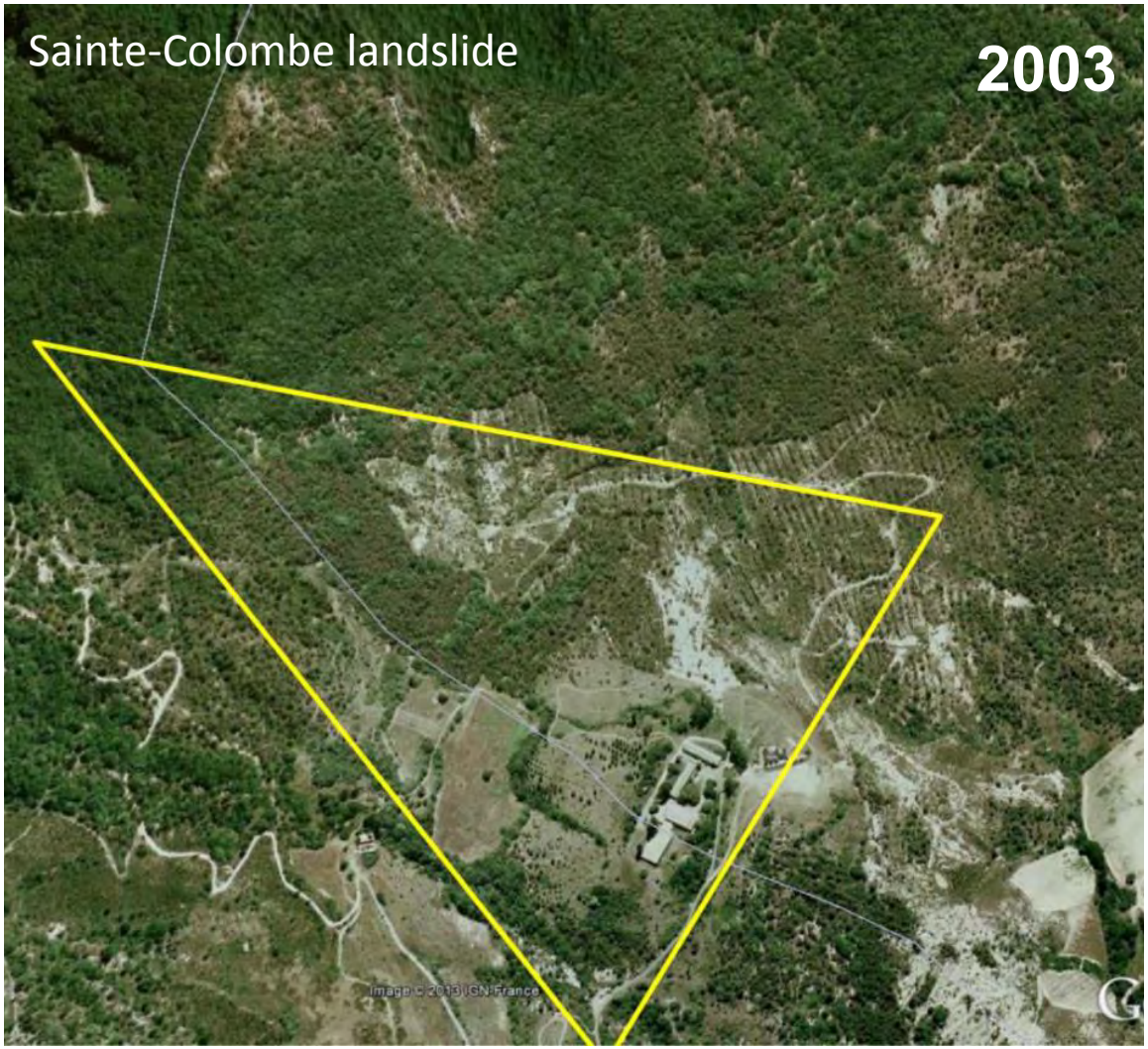


Old Landslides

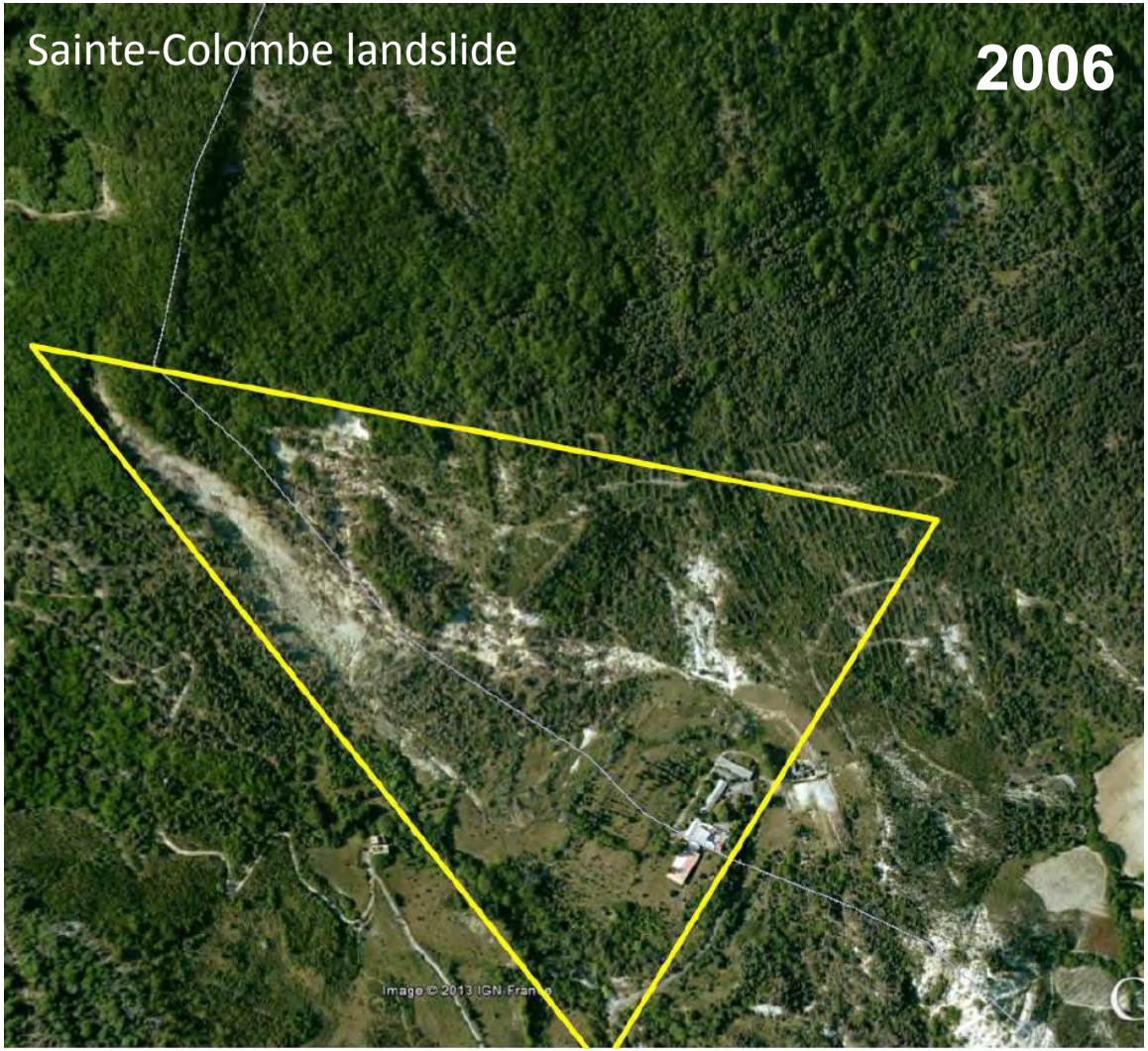


Reactivated Landslides

Current Landslides



Current Landslides



NHM Governance

Main Stakeholders

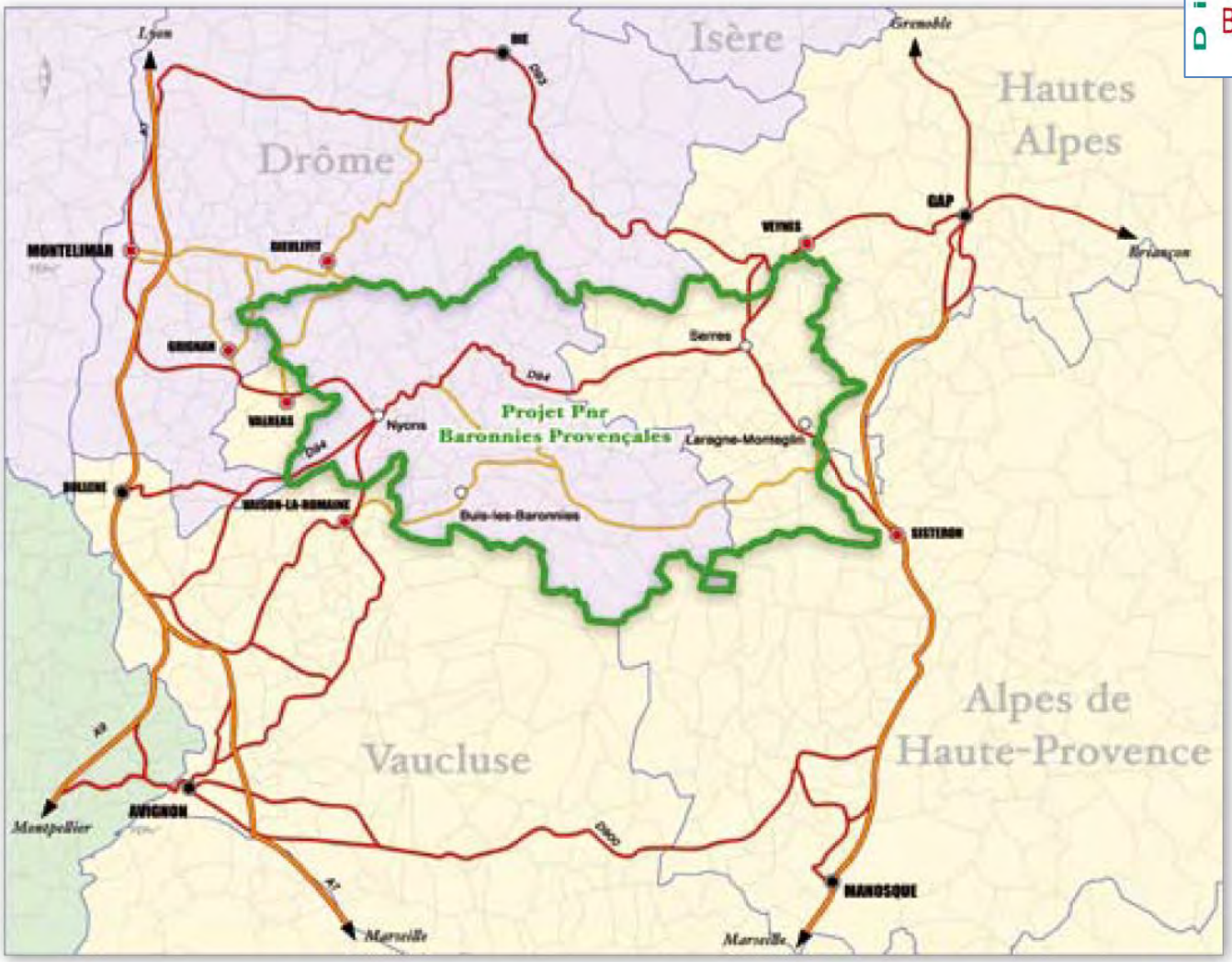
Level	Actor	Role and responsibilities
Municipal	▪ **Mayor** ▪ Civil society (citizen associations, population) ▪ Private sector	*To document and analyse…*
Inter-municipal	▪ PNRB representatives and **TAGIRN technical team** ▪ EPCIs (inter-municipalities)	
Departemental	▪ **Préfet** (represents the State) ▪ Departemental Council ▪ DDT, ONF-RTM	
Regional	▪ Regional Council ▪ DREAL	

Territorial and NHM Governance

Welcome into French administrative complexity!

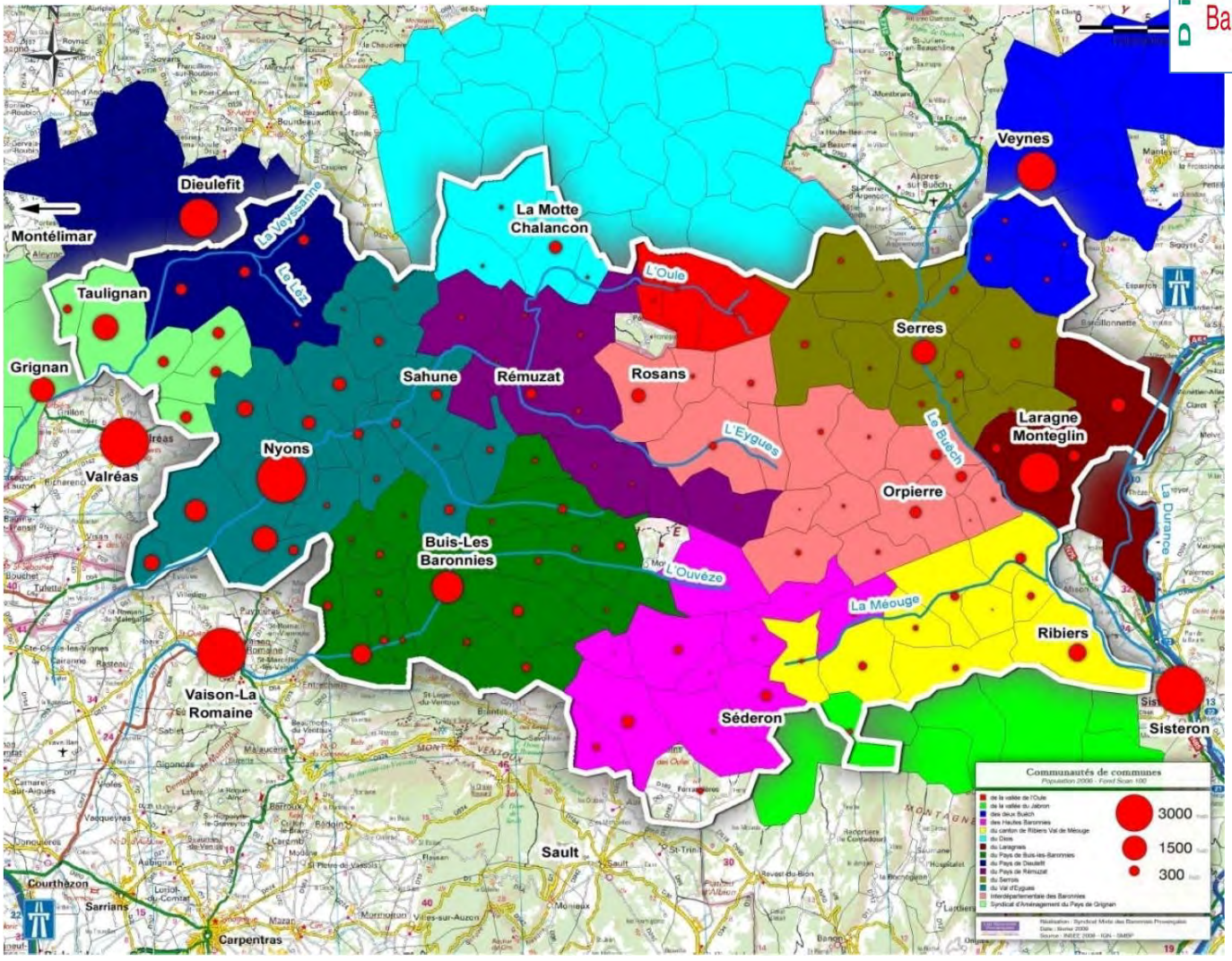
Diagnostic territorial
Rapport
Projet Parc naturel régional Baronnies Provençales

A territory crossing 2 Regions and 2 Départements!

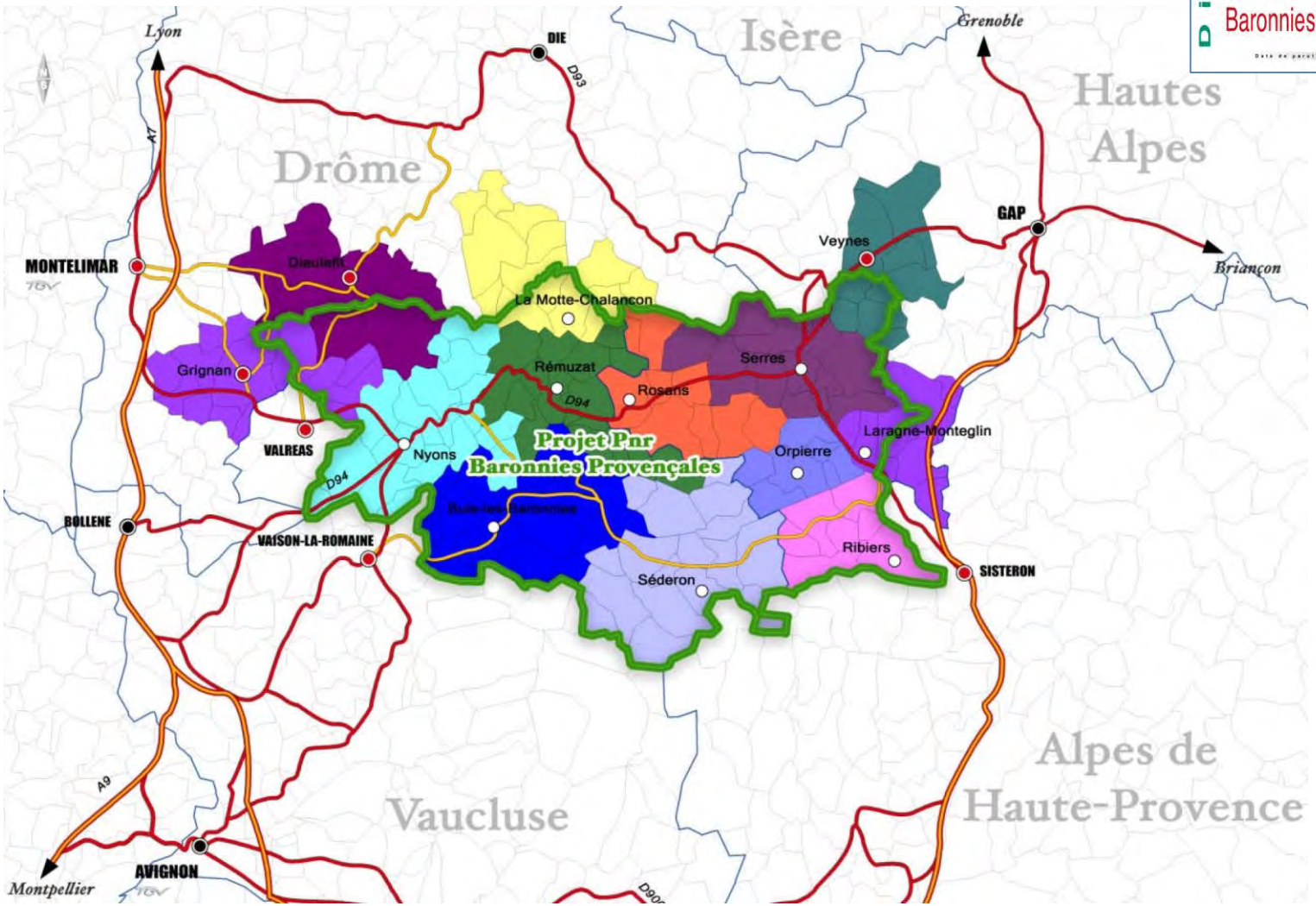


Diagnostic territorial
Rapport
Projet Parc naturel régional Baronnies Provençales

"Communautés de communes" (Public Establishments for Inter-municipal Cooperation)



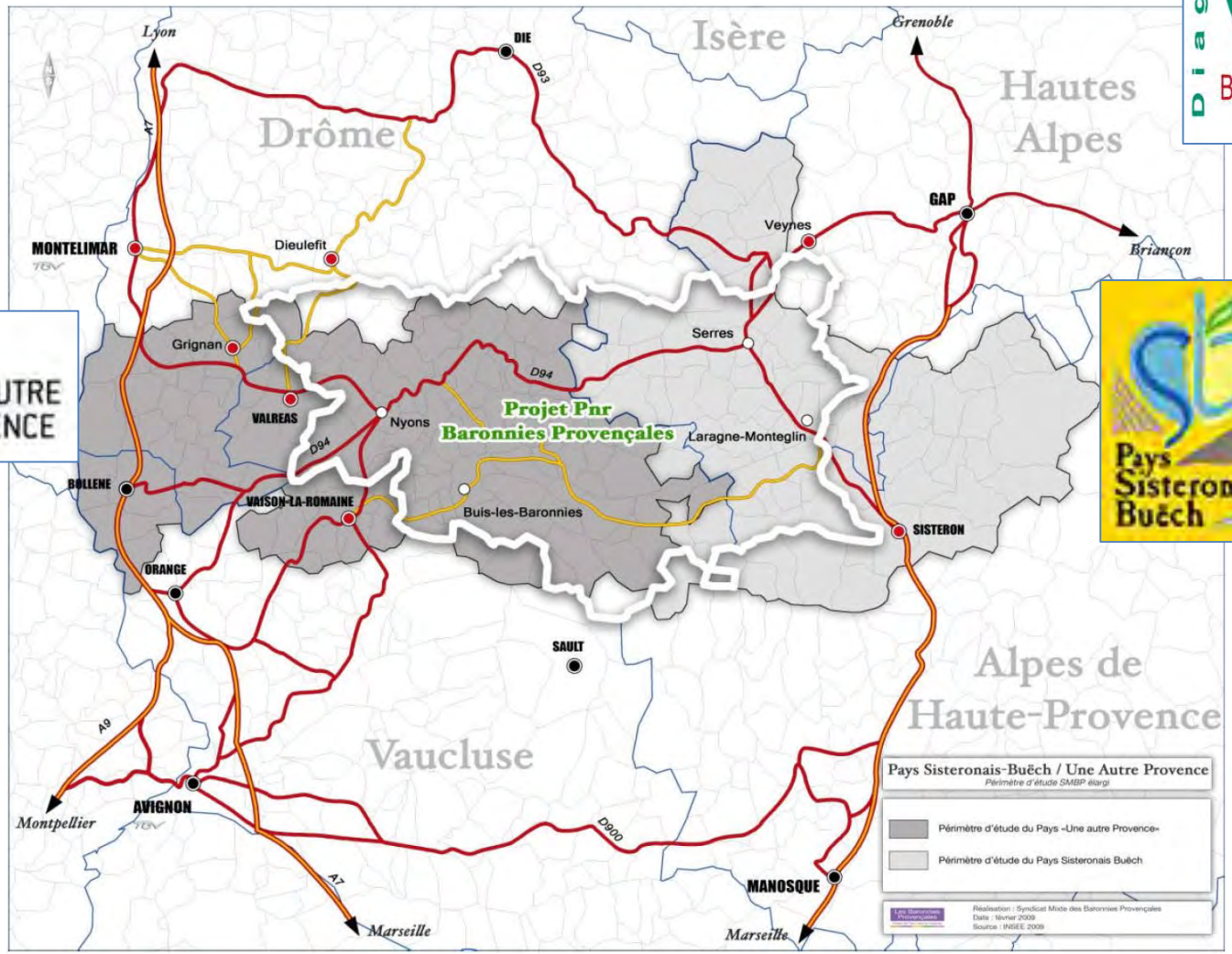
"Cantons" Electoral Perimeters



Diagnostic territorial
Rapport
Projet Parc naturel régional Baronnies Provençales

"Pays"

PAYS UNE AUTRE PROVENCE

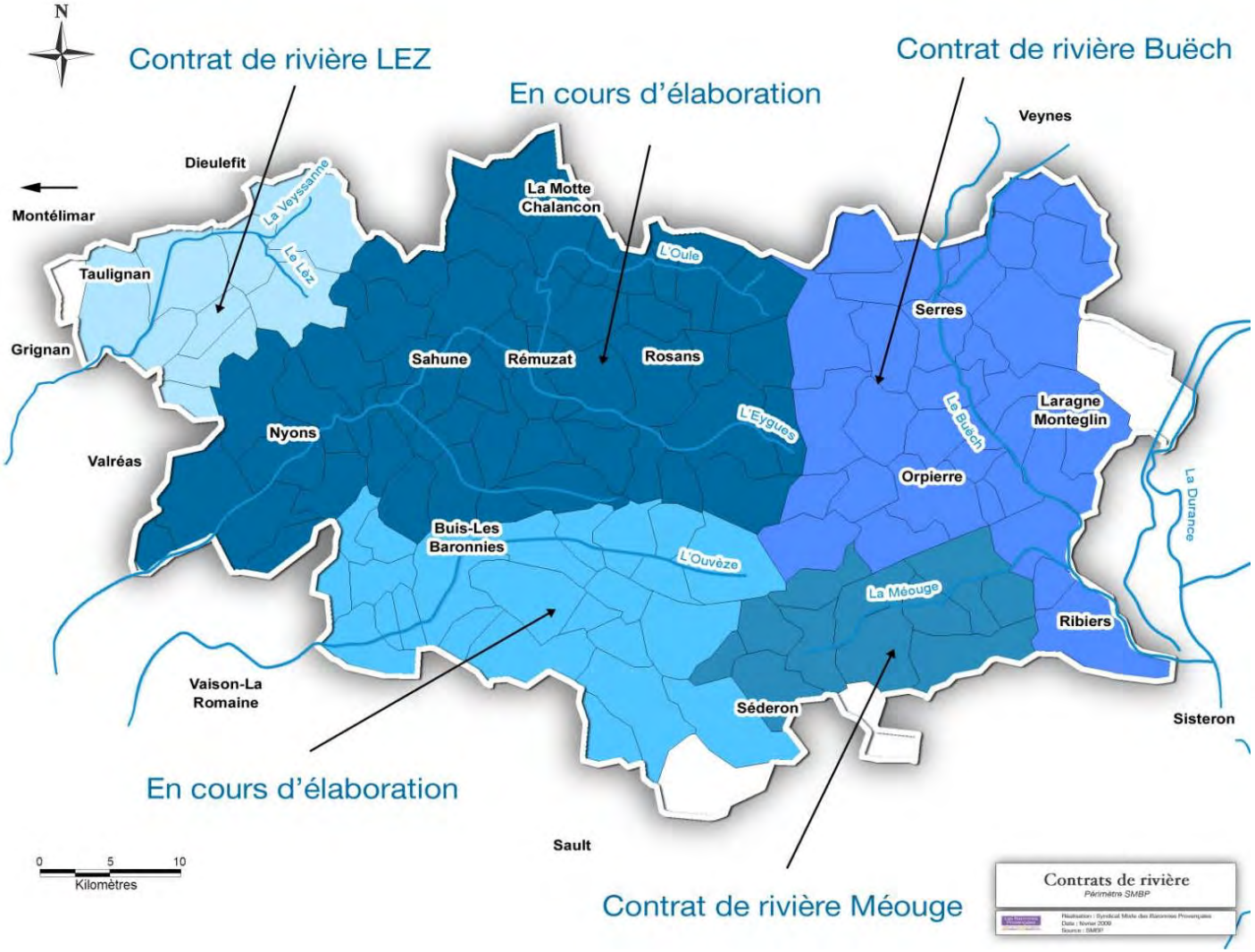


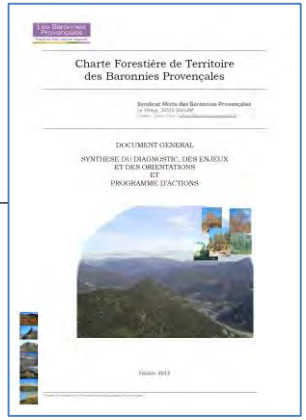
Pays Sisteronais-Buëch

Pays Une Autre Provence | **Pays Sisteronais-Buëch**

Diagnostic territorial
Rapport
Projet Parc naturel régional Baronnies Provençales

"River contracts" (inter-municipal masterplan for river management)





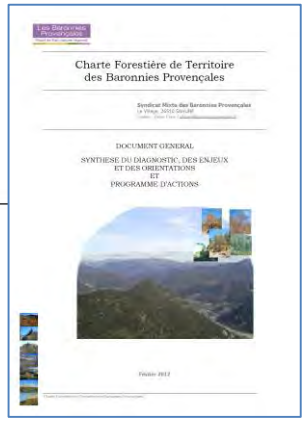
"Forest Chart" 2012 (inter-municipal action plan for forest management)

Forest stakes and strategic orientations

Enjeux forestiers et orientations stratégiques
Enjeu I. Redonner une valeur économique au territoire forestier
Orientation I.1. - Relancer l'exploitation du bois
Orientation I.2. - Structurer la filière en vue d'une meilleure valorisation de la production locale
Orientation I.3. - Promouvoir le maintien de l'activité sylvo-pastorale et diversifier l'activité des éleveurs
Orientation I.4. - Organiser et professionnaliser l'offre touristique en forêt
Orientation I.5. - Promouvoir la trufficulture
Enjeu II. Organiser durablement les usages et valoriser les activités traditionnelles
Orientation II.1. - Améliorer la gestion de la fréquentation du territoire forestier
Orientation II.2. - Contribuer à une meilleure gestion des activités traditionnelles (chasse, cueillette de champignons…)
Enjeu III. Préserver et valoriser le patrimoine écologique et culturel forestier
Orientation III.1. - Développer des actions en faveur du maintien de la biodiversité et de la préservation des milieux
Orientation III.2. - Développer des actions en faveur de la valorisation du patrimoine forestier
Orientation III.3. - Protéger la forêt contre les risques d'incendies et conforter les fonctions de protection de la forêt contre les risques naturels
Enjeu IV. Rénover la culture forestière et environnementale
Orientation IV.1. - Former, informer et sensibiliser les acteurs du territoire (propriétaires, professionnels, élus, scolaires, touristes) aux problématiques forestières et à l'environnement

To protect forest against risk of fire and ***to consolidate forest protective function against natural hazards***

Table des enjeux majeurs et des orientations stratégiques de la CFT – Diagnostic CFT 2008



"Forest Chart" 2012 (inter-municipal action plan for forest management)

Forest stakes and strategic orientations – Action Plan & Priorization

Enjeux	Orientation	Actions	Priorité
1 - Redonner une valeur économique au territoire forestier	1.1 - Relancer l'exploitation du bois	1 - Mise en place d'outils de gestion forestière	prioritaire
		2 - Réorganisation du parcellaire forestier	priorité 1
		3 - Réalisation de travaux d'amélioration de desserte	prioritaire
	1.2 - Structurer la filière en vue d'une meilleure valorisation de la production locale	4. Organisation de l'approvisionnement local des chaufferies et réseaux de chaleur bois du territoire	priorité 1
		5 - Appui au développement des chaufferies et réseaux de chaleur bois	priorité 1
		6 - Promotion et valorisation du bois local comme bois d'œuvre	prioritaire
	1.3 - Promouvoir le maintien de l'activité sylvo-pastorale	7 - Coordination des actions de la CFT avec celles menées en faveur du pastoralisme	priorité 1
	1.4 - Organiser et structurer l'offre touristique en forêt	8 - Valorisation du milieu forestier à travers le tourisme et les activités de pleine nature	prioritaire
2 - Organiser durablement les usages et valoriser les activités traditionnelles	2.2 - Contribuer à une meilleure gestion des activités traditionnelles en forêt	9 - Etude de l'équilibre sylvo-cynégétique des populations de cerfs	priorité 1
3 - Préserver et valoriser le patrimoine écologique et culturel de la forêt	3.1 - Développer des actions en faveur du maintien de la biodiversité et de la préservation des milieux forestiers	10 - Sensibilisation et formation à la préservation de la biodiversité des espaces forestiers	priorité 1
	3.3 - Protéger la forêt contre les risques d'incendies et conforter ses fonctions de protection contre les risques naturels	11 - Sensibilisation et organisation des collectivités vis-à-vis de la problématique DFCI	priorité 1
4 - Rénover la culture forestière et environnementale		12 - Sensibilisation et éducation des enfants à la forêt et son environnement	priorité 1
		13 - Gouvernance de la politique forestière du territoire	prioritaire

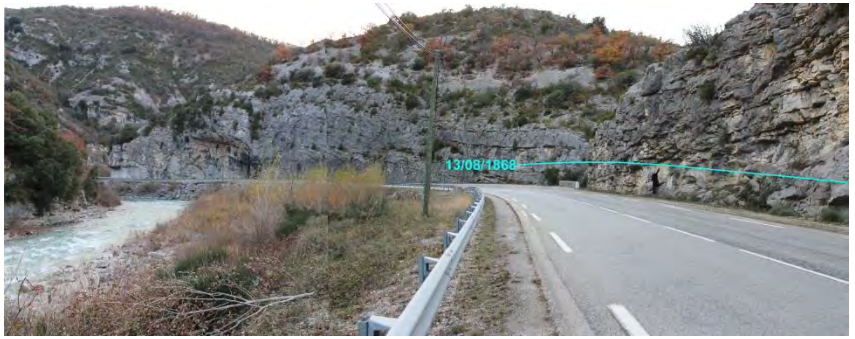
Baronnies Provençales case

A French Mediterranean Mountain type territory

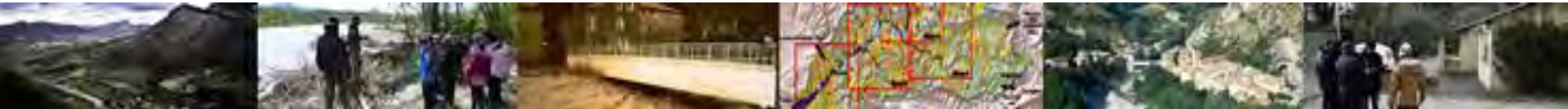
A very active Regional Natural Park

And a TAGIRN!

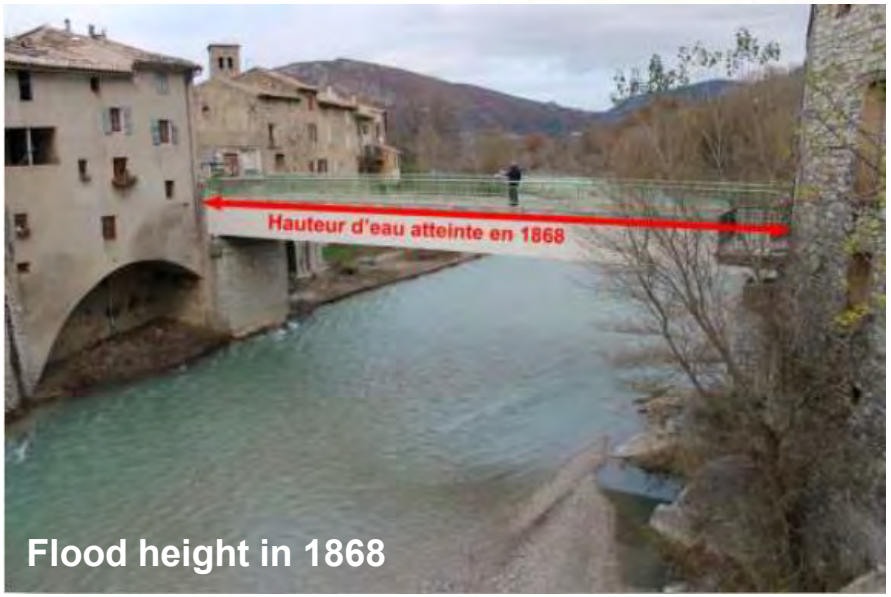
GIRN Alpes



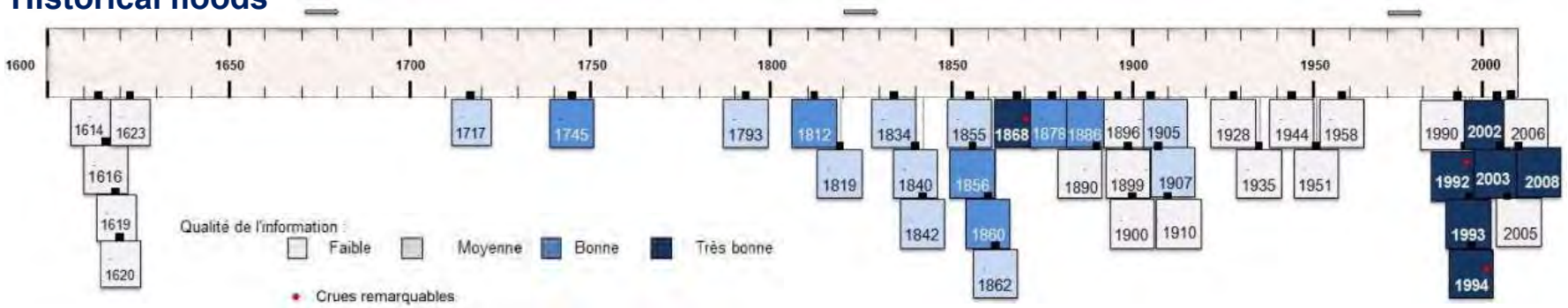
"Alpine Territories of Integrated Natural Risks Management"



Past-events-based risk analysis based on documents and testimonies

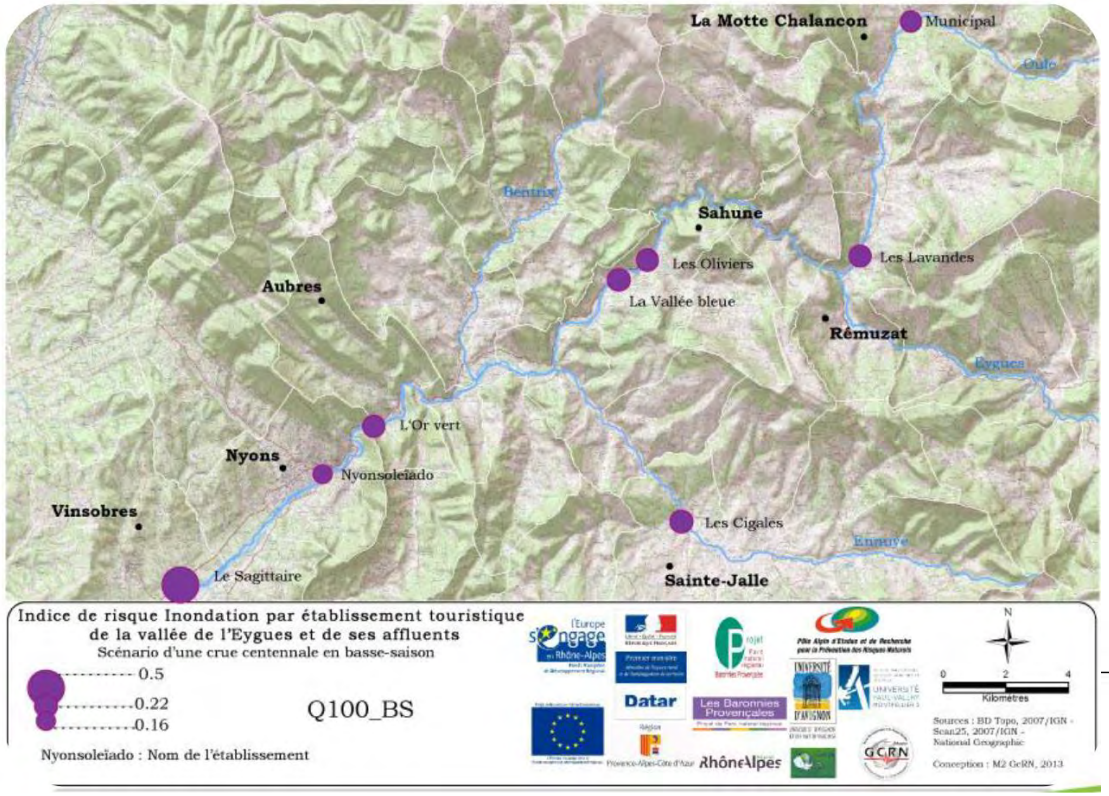


Historical floods

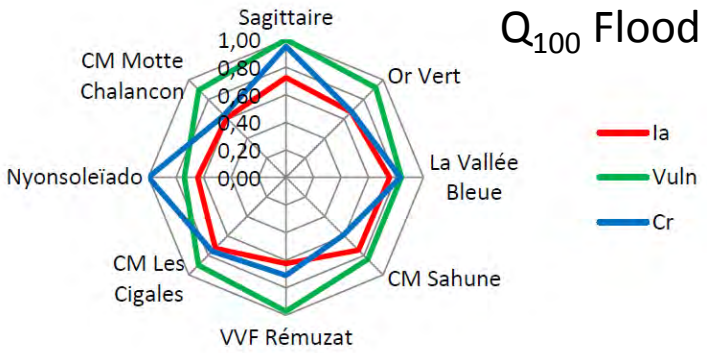


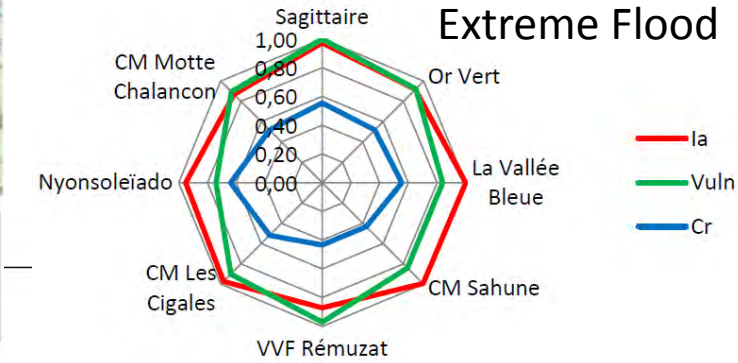
Vinet, Douvinet et Leone (Dir.), 2013

Vulnerability diagnosis of touristic infrastructures in Eygues valley



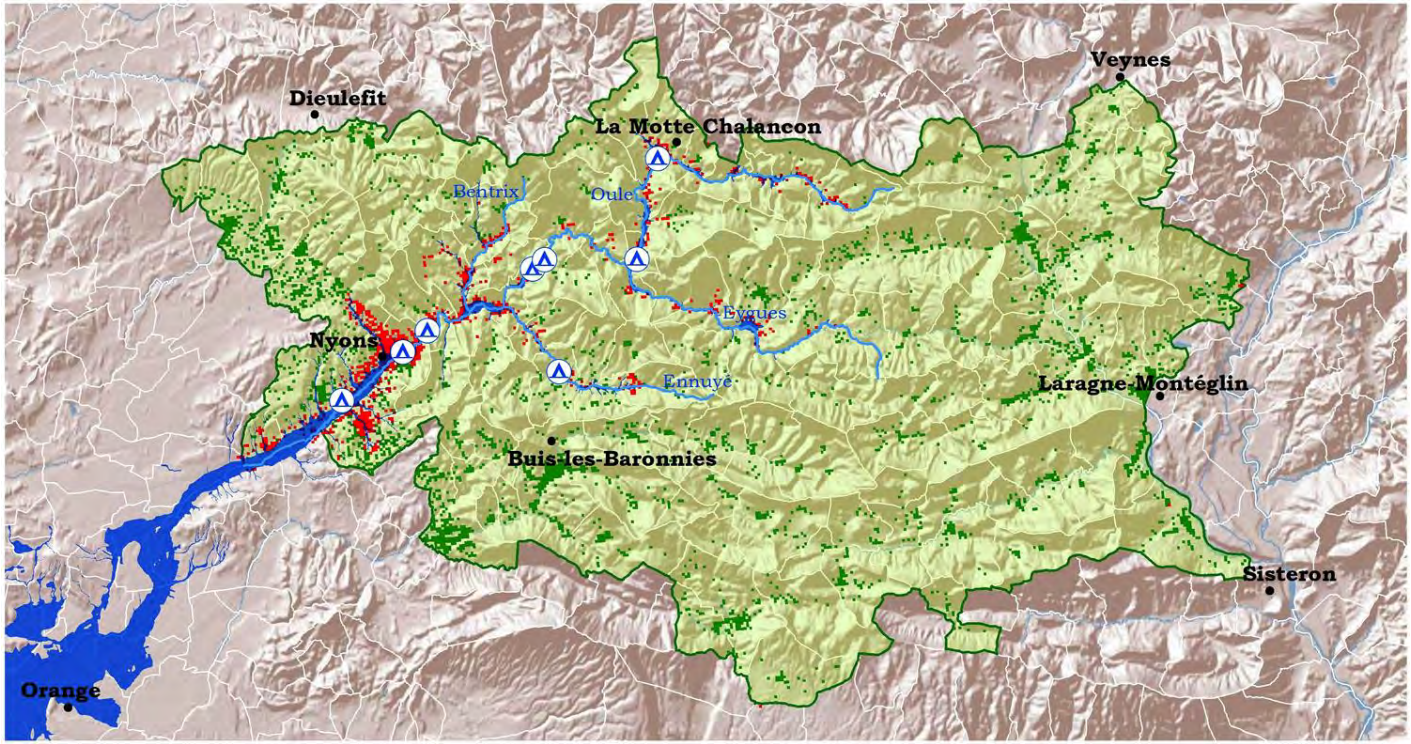
Inundation risk by flooding of touristic infrastructures in Eygues watershed





Flood Risk and Response capacity index

Population prone to be isolated in case of extreme flood



Population susceptible d'être isolée en cas de crue extrême

- Crue extrême
- Rivière
- Projet de Parc Naturel Régional des Baronnies
- Etablissement touristique
- Population isolée (12 380 hab)
- Population non-isolée (22 769 hab)

N

0 2,5 5 10 15
Kilomètres

Sources : BD Topo, 2007/IGN - Syndicat mixte des Baronnies Provençales - Données carroyées, 2013/INSEE - Carrex Hydrogéomorphologique, 2003, 2004 - National Geographic

Conception : M2 GcRN, 2013

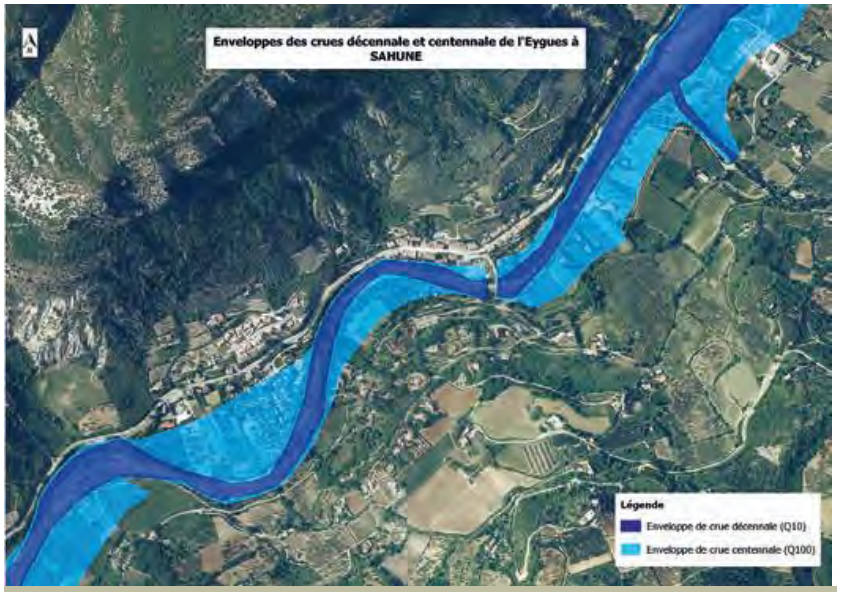
Vinet, Douvinet et Leone (Dir.), 2013

Scholars education in the field and on docs

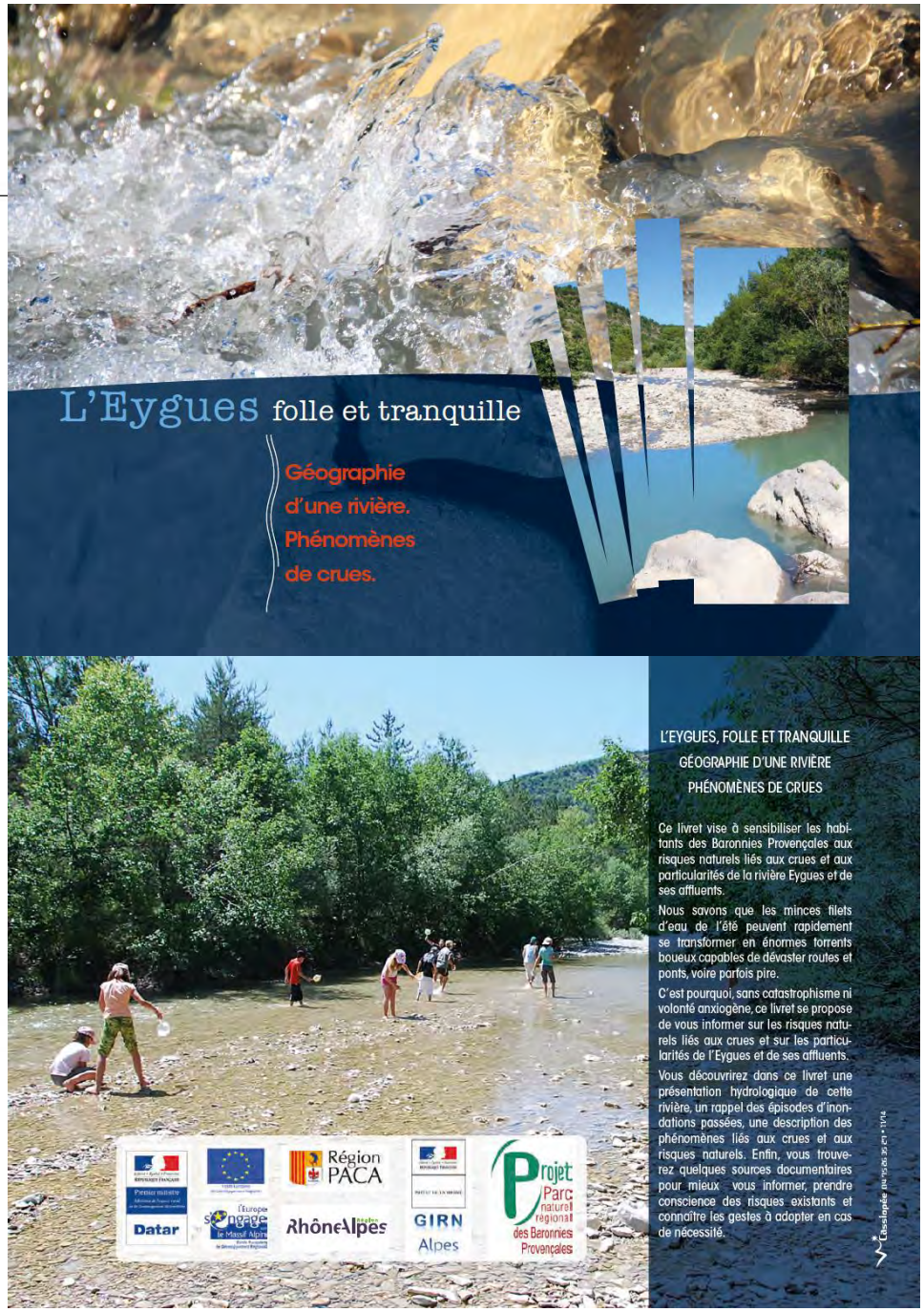
Photo aérienne : zoom de la berge et du cours du Buëch, été 2004

Photo aérienne : zoom de la berge et du cours du Buëch, été 2012

Territorialized information support on floods



Enveloppes Q10-100 pour Sahune. (Sources documentaires : IGN et SMBP)



Information support for municipalities on forest fires defense legal framework

NHM governance in the French Alps

Concrete example 2

Grenoble Metropole

Grenoble Metropole case

GreenRisk4Alps Kickoff Meeting, Innsbruck, 25-27 July 2018

GIRN Alpes

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

GRENOBLE-ALPES METROPOLE

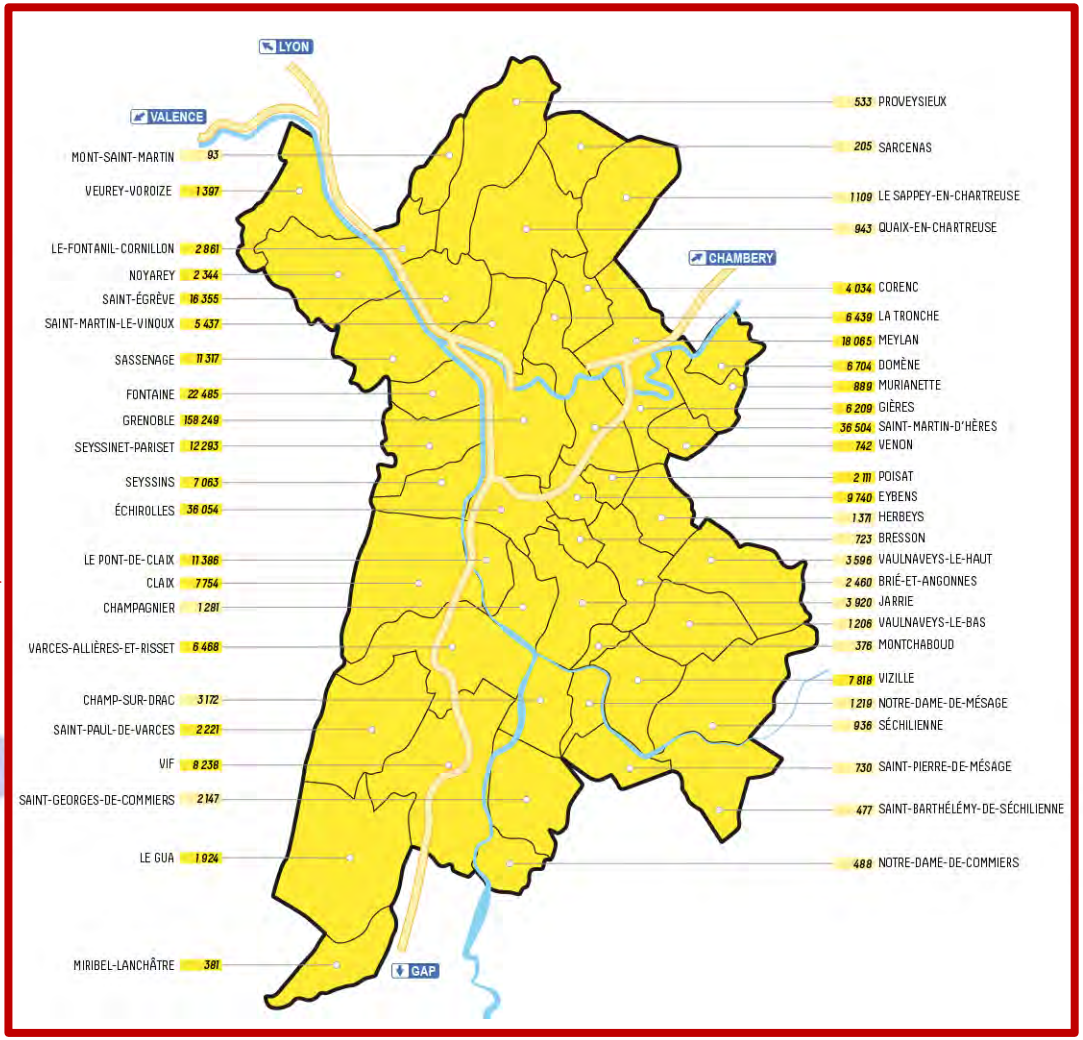
© Photothèque IRMa

Grenoble case

A French Alpine Metropole "*Capitale des Alpes*"

Grenoble Alpes: a Metropole merging 49 municipalities

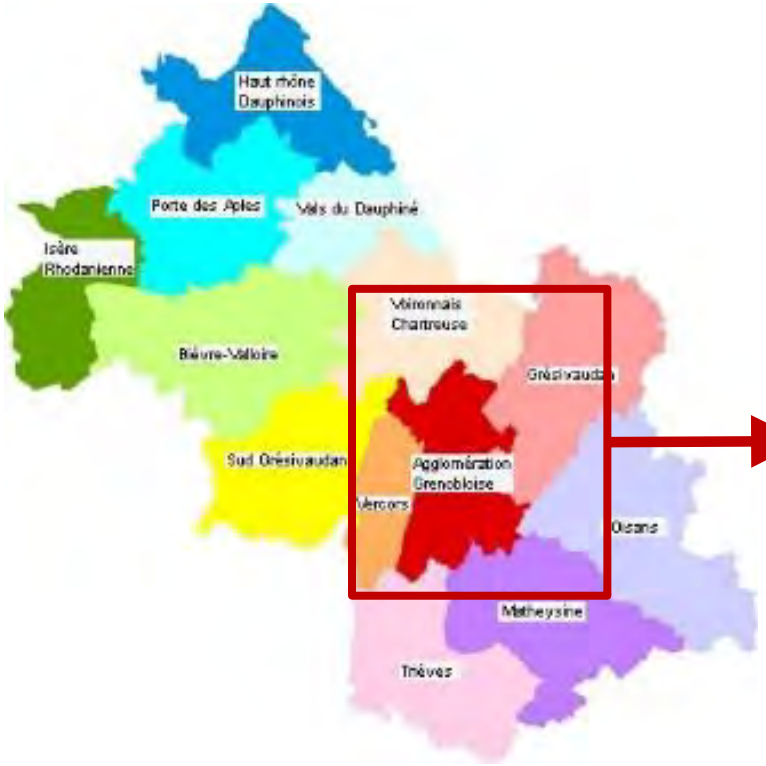
In the Auvergne-Rhône-Alpes region, Isère "Département"



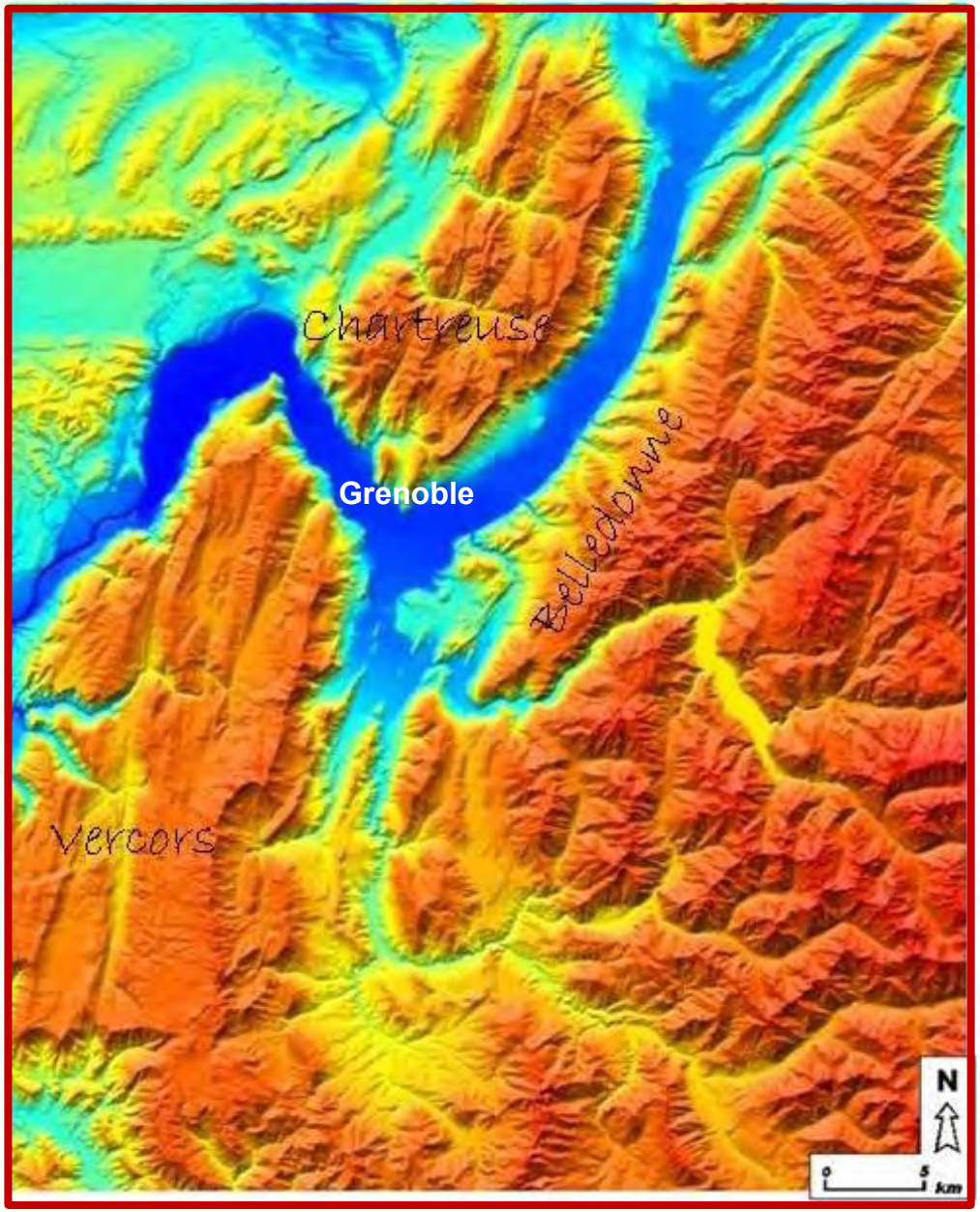
A Metropole merging 49 municipalities

in a bowl-like basin ("*une cuvette*")

surrounded by 3 massifs ("*a Y*")

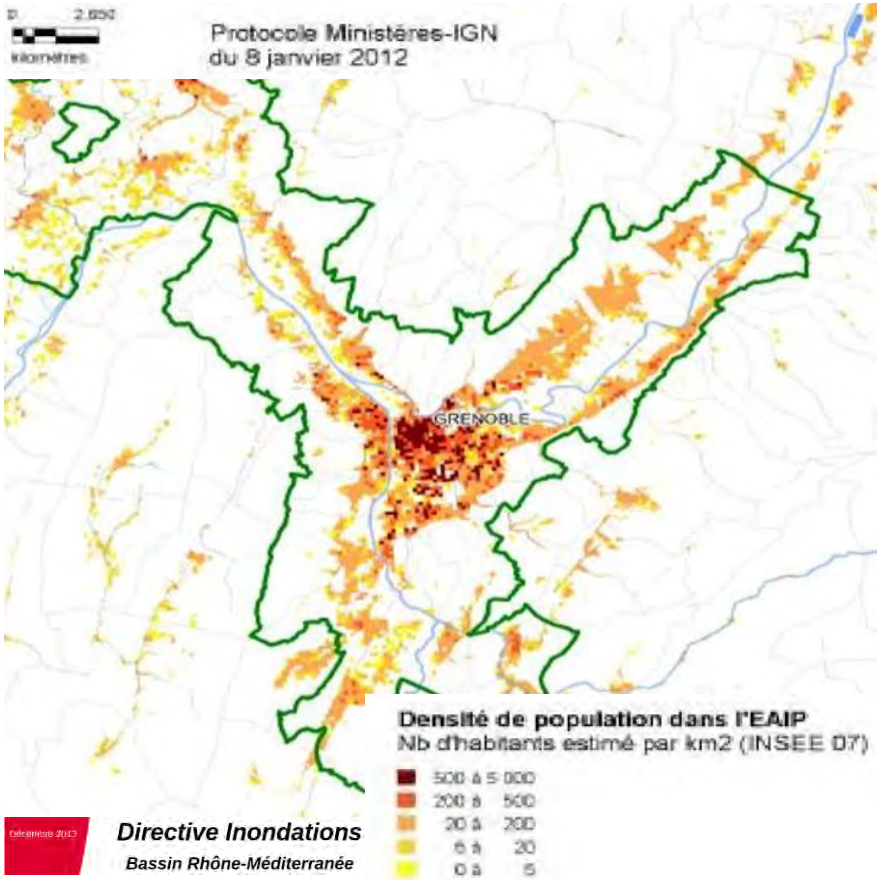


Isère "Département"



Grenoble case

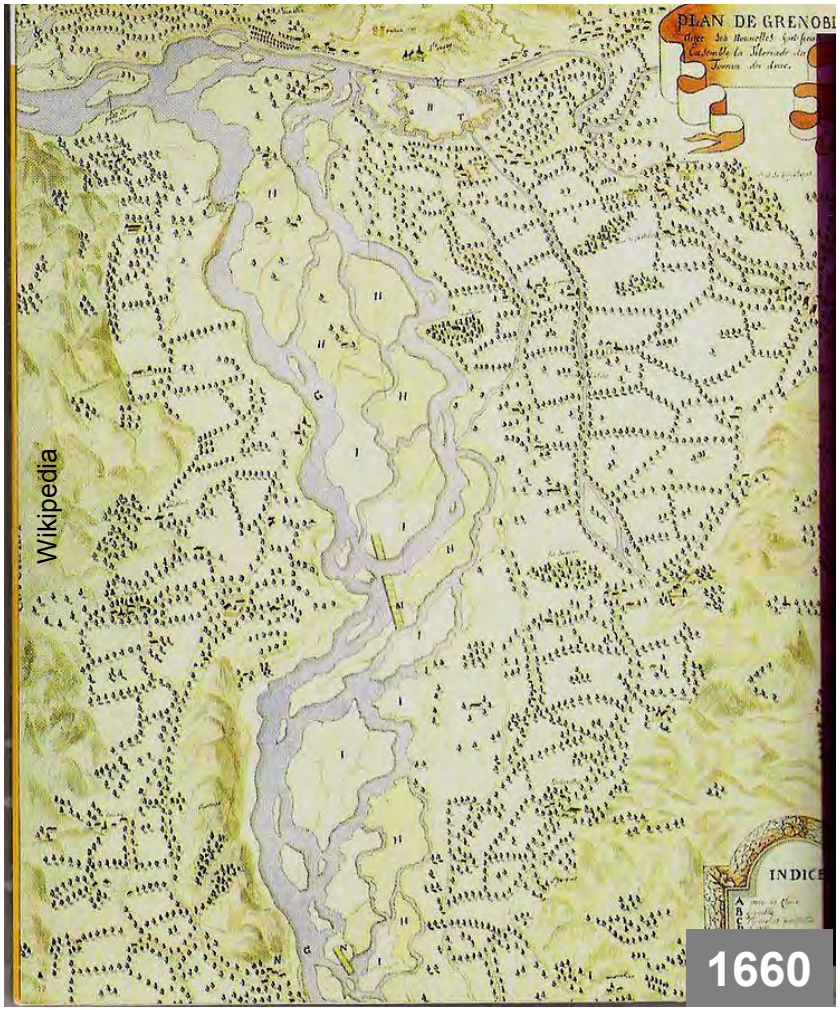
A dense urban territory: > 500 000 inhabitants in the urban area



Grenoble case

River control PRECEDED urban extension

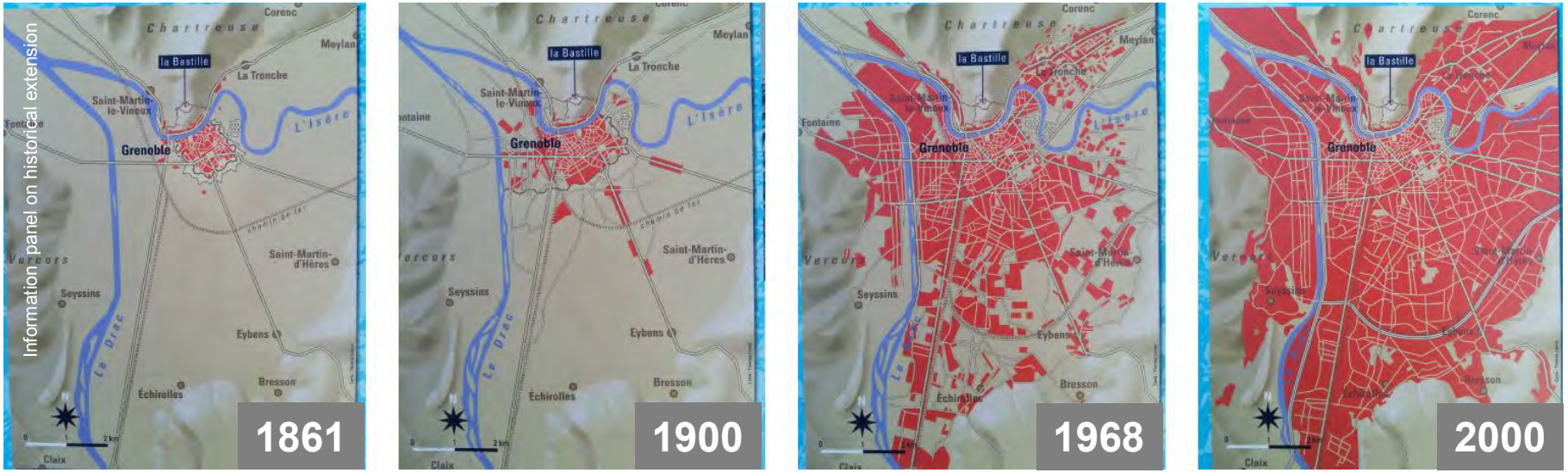
The Drac River before bed embankment works

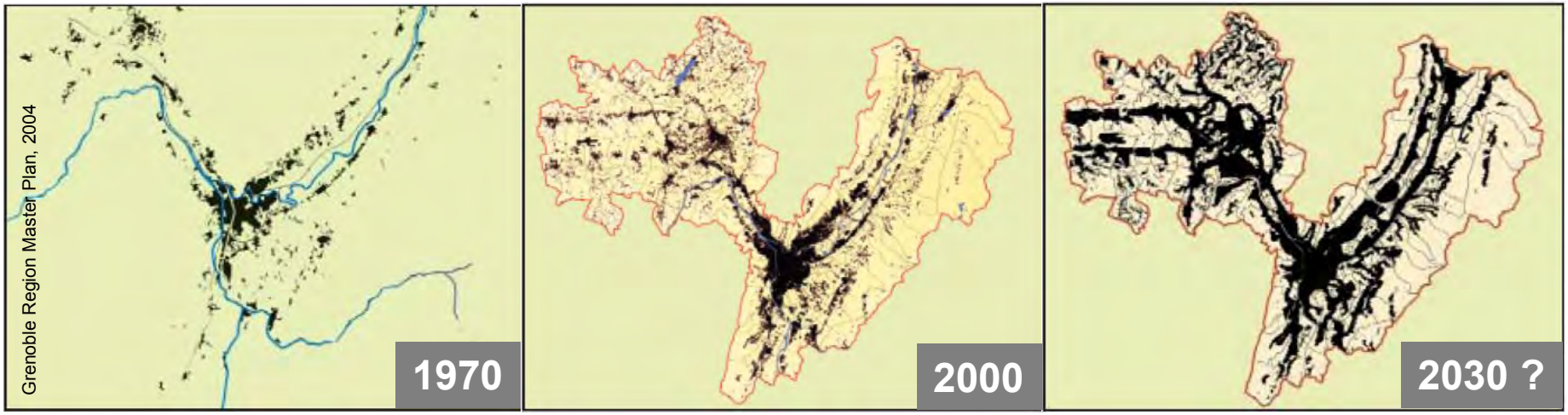


Socio-Ecosystem Changes in the French Alps

Grenoble case

Urban extension

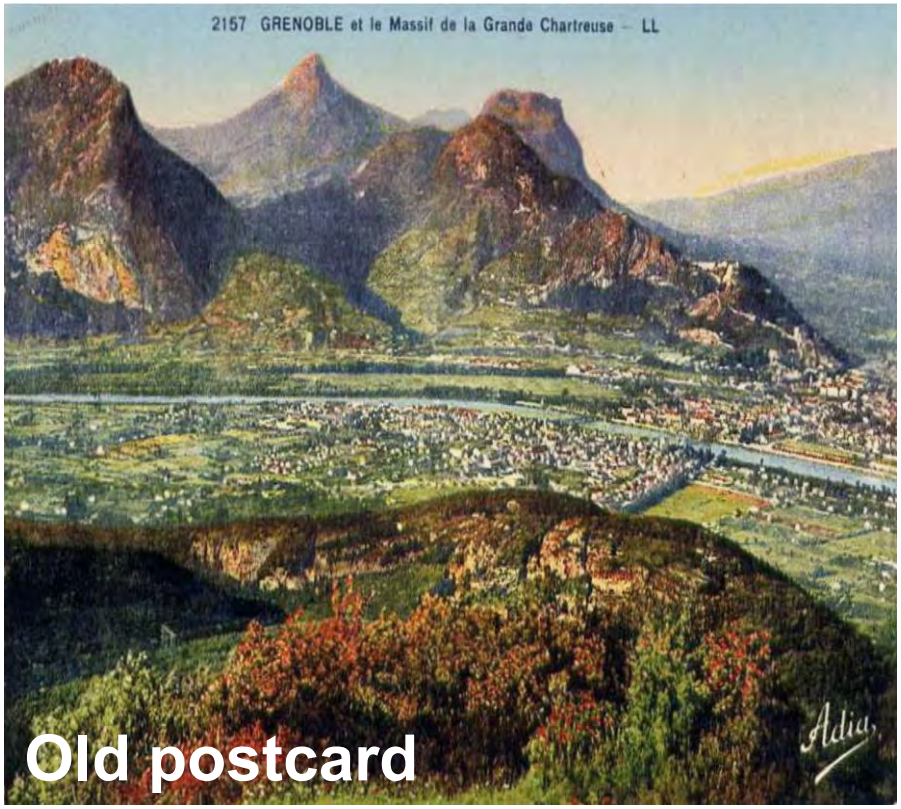




Socio-Ecosystem Changes in the French Alps

Grenoble case

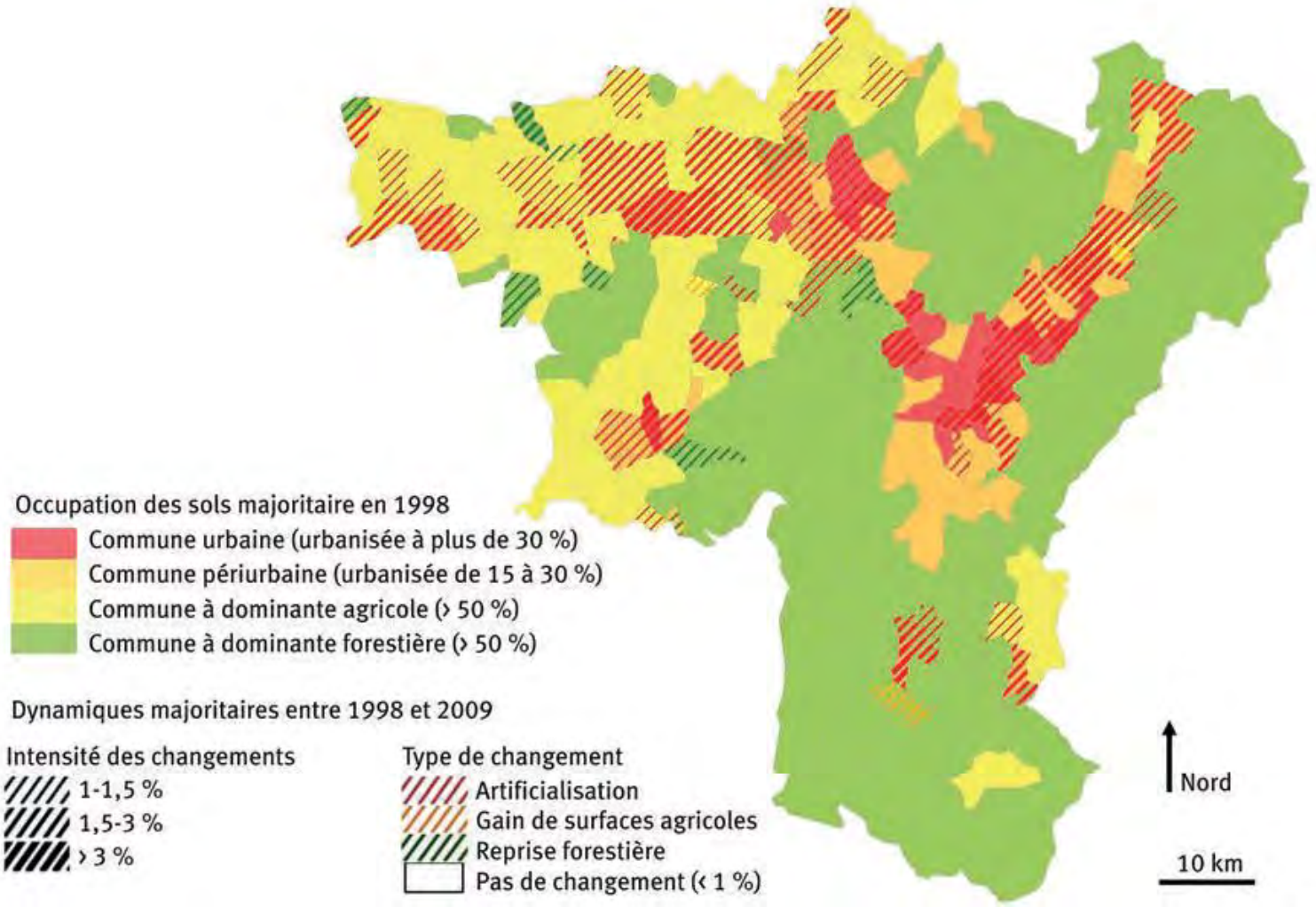
Urban extension and densification



End XIX^{e} century?

Grenoble case

Major land use dynamics observed in the Grenoble employment area



Vannier *et al.*, 2016

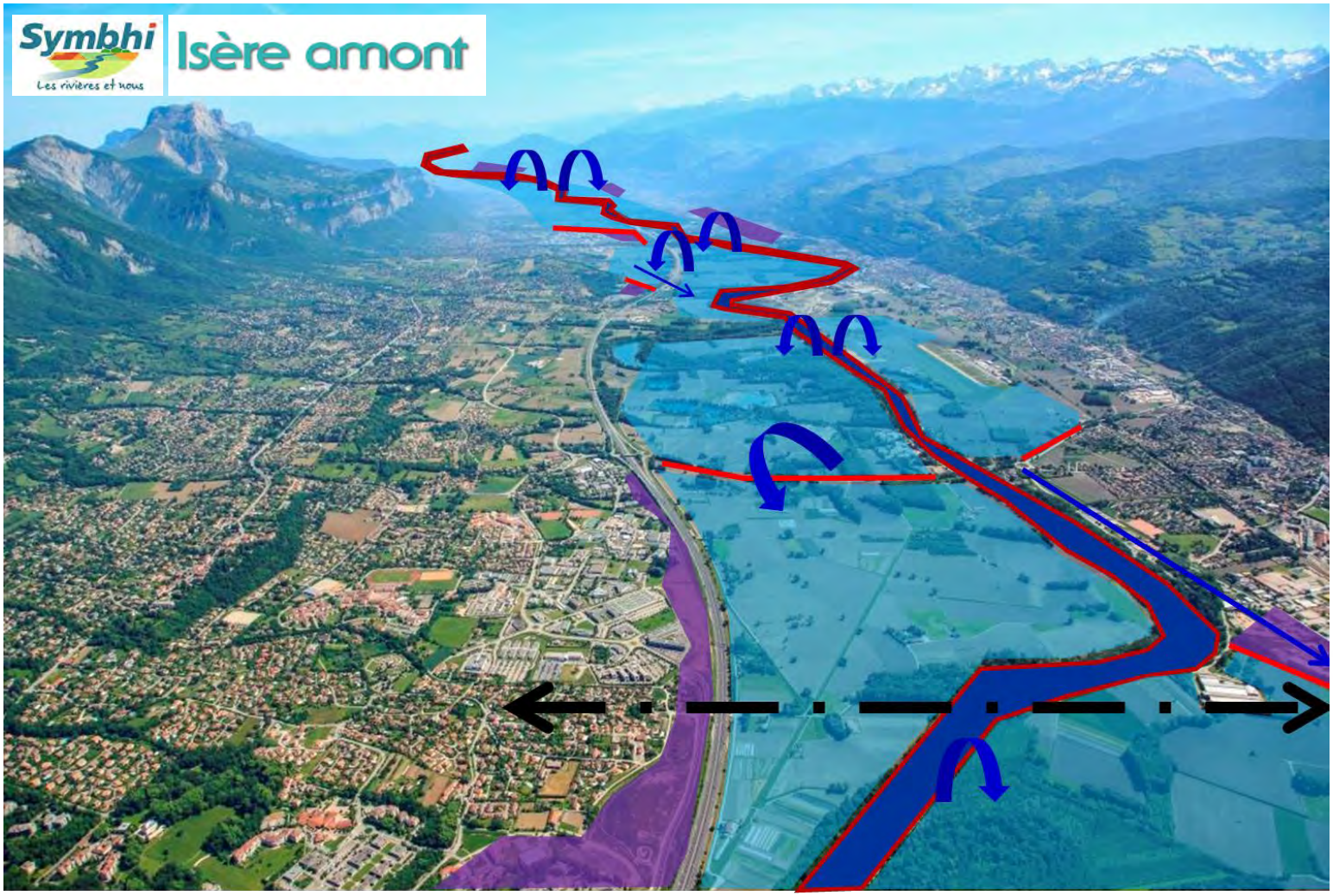
Grenoble case

Alpine river floods

Last disastrous flood: Isère 1859

Grenoble case

River bed controlled expansion for downstream protection against Isère floods



Grenoble case

Claix Landslide Disaster, 30/12/2017

(Sources: IRMa, Le Dauphiné)

Intercommunal Local Urban Plan governance

Development of new integrated approaches and new tools:

- Hazards maps covering the whole inter-municipal perimeter
- Territorial Resilience Strategy *in preparation*
- Integrated Risk Management Action program TAGIRN *in preparation*
- With the support of the scientific community via:
  - The **PARN** Scientific and Technical Advisory Board
  - The **TAGIRN**, **Science-Decision-Action** and **ACLIMARISK** networks

Challenges for GreenRisk4Alps

Building bridges between scientists and territories to capitalize, implement and disseminate local scale nature-based IRM and CCA alternatives, strategies and concrete actions in pilot action regions and in EUSALP

GreenRisk4Alps project

"Development of **ecosystem-based** **risk governance concepts** with respect to natural hazards and climate impacts – from risk assessment to ecosystem based solutions"

Challenges for the project

To develop useful NHM and CCA tools for practitioners and decision-makers, really used in the pilot action regions project observers

Challenges for the project

Work with EU Partners and Institutions

at Macroregional, Transnational and Cross-border level:

- **Alpine Convention**
- **Interreg** Alcotra, Alpine Space, FR-CH, IT-CH, Maritimo, MED, etc.
- **EUSALP**
- **CoU**
- **LIFE**
- Etc.

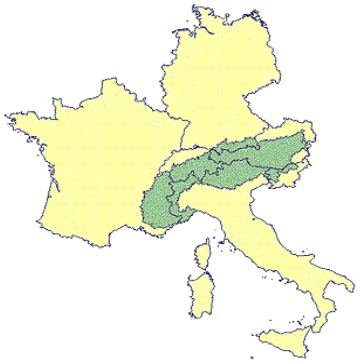
and also at Interregional, Regional and Local level!

- With Project **Pilot Action Regions**, the French **TAGIRN**, etc.

The Macroregional space

- Alpine Convention/PLANALP
- EUSALP AG8

In synergy



PLANALP

alpenkonvention • convention alpine
convenzione delle alpi • alpska konvencija

EUSALP AG8

EUSALP: a macro-regional Strategy for the Alpine Region

The Strategy focuses on **3 objectives**, divided into **9 concrete actions** → **Action Groups**:

FAIR ACCESS TO JOB OPPORTUNITIES, BUILDING ON THE REGION'S HIGH COMPETITIVENESS

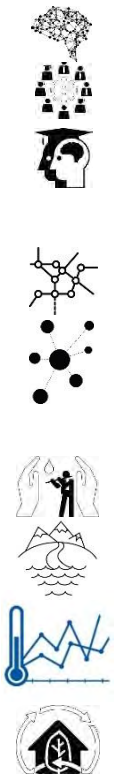
- **AG1**: Develop an effective research and innovation ecosystem
- **AG2**: Increase the economic potential of strategic sectors
- **AG3**: Improve the adequacy of the labour market, education and training in strategic sectors

SUSTAINABLE INTERNAL AND EXTERNAL ACCESSIBILITY FOR ALL

- **AG4**: Promote intermodality and interoperability in passenger and freight transport
- **AG5**: Connect people digitally and promote accessibility to public services

A MORE INCLUSIVE ENVIRONMENTAL FRAMEWORK FOR ALL AND RENEWABLE AND RELIABLE ENERGY SOLUTIONS FOR THE FUTURE

- **AG6**: Preserve and valorise natural resources, including water and cultural resources
- **AG7**: Develop ecological connectivity across the whole EUSALP territory
- **AG8**: **Improve risk management and better manage climate change, including prevention of major natural risks**
- **AG9**: Make the territory a model region for energy efficiency and renewable energy



In addition, the Strategy includes a cross-cutting objective aimed at building

a sound macro-regional governance model for the region.

Pôle Alpin d'Etudes et de Recherche pour la Prévention des Risques Naturels

Interreg Projects on NHM in the Alcotra area

RiskNat RiskNET

Programme	Interreg ALCOTRA	Interreg Alpine Space	Interreg France - Suisse	Interreg	Interreg Mediterranean
Interreg V 2014-2020	▪ *PITEM RISK* (soumis) ▪ **AdaPT Mont-Blanc** (2017-2020) ▪ **Ad-VITAM** (2017-2020) ▪ **ARTACLIM** (2017-2020) ▪ **CClimaTT** (2017-2020) ▪ **PrévRiskHauteMontagne** (2016-2017) ▪ **PRODIGE** (2016-2018) ▪ **Risq'EAU** ▪ **RISVAL** ▪ **URAMET** ▪ ...	▪ **AlpES** ▪ **CESBA_Alps** ▪ **GoApply** ▪ **HyMoCARES** ▪ **INTENSI** ▪ **Links4Soils** ▪ **RockTheAlps** ▪ **SPARE** ▪ **YOUrALPS** ▪ ...	▪ ...	▪ ...	▪ ...
Interreg IV 2007-2013	▪ **CASSAT** (2013-2015) ▪ **CRISTAL** (2008-2011) ▪ **EUR-EAU-PA** (2012-2013) ▪ **FORMARISC** (2013-2015) ▪ **GlaRiskAlp** (2010-2013) ▪ **MAP3** (2011-2014) ▪ **MASSA** (2010-2013) ▪ **O3E** (2008-2011) ▪ **PELLIDRAC** (2009-2011) ▪ **PICRIT** (2010-2013) ▪ **PREVRISKMONT-BLANC** (2011-2013) ▪ **RISBA** (2009-2012) ▪ **TT:CoCo** (2013-2015)	▪ **AdaptAlp** (2008-2011) ▪ **ALP FFIRS** (2009-2012) ▪ **C3-Alps** (2012-2014) ▪ **CLSIP** (2008-2011) ▪ **MANFRED** (2009-2012) ▪ **PARAmount** (2009-2012) ▪ **PermaNET** (2009-2012) ▪ **TranSAFE-Alp** (2011-2013) ▪ **SedAlp** (2012-2015) ▪ **START_it_up** (2013-2014) ▪ **WIKIAlps** (2013-2014)	▪ **Geni'Alp** (2010-2012) ▪ **IFP** (2007-2011)	▪ **FLORA** (2009-2012) ▪ **IRKIS** (2009-2012) ▪ **MIARIA** (2009-2012) ▪ **SloMove** (2012-2014) ▪ **STRADA** (2010-2013)	▪ **FOR CLIMADAPT** (2010-2012) ▪ **SylvaMED** (2010-2013)
Interreg III 2000-2006	▪ **DYNAVAL** (2009-2012) ▪ **EUROBASSIN** (2003-2006) ▪ **FRAMEA** (2004-2006) ▪ **GSM** (2004-2006) ▪ **GSR** (2004-2007) ▪ **PERMAdataROC** (2005-2008) ▪ **PRINAT** (2004-2007) ▪ **PROVIALP** (2005-2007) ▪ **RIVES** (2005-2007) ▪ **RISKYDROGEO** (2003-2006) ▪ **ROCKSLIDETEC** '(2003-2006) ▪ **VIVERE** (2003-2004)	▪ **ALPTER** (2004-2008) ▪ **AGENDA** (2003-2006) ▪ **ALPTER** (2004-2008) ▪ **ALPS-GPS-QUAKENET** (2004-2006) ▪ **ClimChAlp** (2006-2008) ▪ **METEORISK** (2003-2004) ▪ **SISMOVALP** (2004-2007)	▪ **HAUT RHÔNE** (2005-2008)		▪ **AMPHORE** (2003-2006) ▪ **CATCHRISK** (2003-2005) ▪ **DAMAGE** (2004-2006) ▪ **GRINFOMED** (2004-2007) ▪ **MEDIFIRE** (2004-2007) ▪ **HYDROPTIMET** (2002-2004) ▪ **RINAMED** (2002-2004) ▪ **QUATER** (2002-2004)
Interreg II 1994-1999	▪ **COMBAL** (1997-2003) ▪ **DEVINE** (1998-2001) ▪ **GERIA** (1999-2001) ▪ **INONDATIONS** (1994-1999) ▪ **TGRS** (1994-1997)			▪ **Gestione del rischio idrogeologico** (1994-1999)	
Interreg I 1990-1993	▪ **Risques grands mouvements terrain** (1991-1994)				

http://risknat.org/artaclim/?lang=en

The **ARTACLIM** project aims to develop and test public policy framework strategies for identifying and implementing climate adaptation actions in the ALCOTRA region.

ARTACLIM will investigate **most-suited strategies accounting for regional** socio-economic landscape, spatial planning and land use, urban planning, natural hazards, agriculture, tourism, biodiversity and energy transition, for the benefits of cross-border population and areas subject to the similar pressures and development objectives.

ARCTACLIM is a research-action project based on a reinforced cooperation and cross-fertilization amongst its international partnership ensuring that the developed tools will be **innovative and usage-driven**.

This validated and shared process of adaptation to climate change will contribute to increase the resilience capacity in the ALCOTRA area.

The Alcotra cross-border network of NH managers hence can fully contribute to EUSALP AG8 objectives and concrete actions in matter of NHM and CCA

Merci

benjamin.einhorn@univ-grenoble-alpes.fr