

INTERREG III B  
« ClimChAlp »



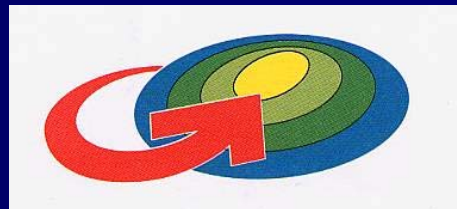
WP 5 MEETING  
Rome 29/09/06

Partner : Région Rhône Alpes



WP 5-6-7-8-9

Subcontractor : Pôle Grenoblois  
Risques Naturels



TASKS

- French coordination on WP 5-6-7
- WP 5 « Natural Hazards module »
- Ressource for WP 8

Jean-Marc Vengeon



# PGRN : a federative research organisation

Network of 180 persons working on natural hazards

(90 researchers, 50 technicians et 40 PhD students)

- **4 universities** : UJF, INPG, UPMF and Université de Savoie
- **3 research institutes** : CEMAGREF, CEN (Météo-France), LCPC
- **2 public organisations** : CETE Lyon, EDF-DTG
- **2 private engineering companies** : SOGREAH and ADRGT
- **1 non profit organisation** : ANENA

A lightweight structure : 4 permanent persons

Permanent Founding : Conseil Général Isère





# Thematic field of PGRN

- Seismic hazard
- Snow avalanches
- Rockfall-avalanches and landslides
- Floods
- Erosion / mountain stream floods – debris flows

Impacts of climate change = new subject (2005)

Permanent common question for the coming years



# Activities in WP 5 « natural hazards Module »

1. **Network** : set up a group of french experts
2. Organize a **critical synthesis on the impacts** of climate change on natural hazards
3. Report to WP 5 and link with « Climate change module »
4. Link to other WP (ex : WP 7)



# 1. Network : set up a group of french experts

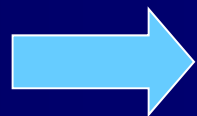
| Hazard           | Landslides / rockfall   | Debris flows   | Alpine rivers floods   |
|------------------|---|--|--|
| External experts | <b>O. Maquaire</b> (Univ. Caen)<br><b>Y Guglielmi</b> (Univ. Nice)<br><b>P.Desvarreux</b> (ADRGT)<br><b>JP Requillart</b> (ONF-RTM) | <b>C. Obled</b> (INPG)<br><b>D. Duband</b> (CSM)<br><b>JP.Requillart</b> (ONF- ) | <b>C.Obled</b> (INPG-LTHE)<br><b>D. Duband</b> (CSM)<br><b>M. Lang</b> (Cemagref Lyon)<br><b>JP Bravard</b> (ZABR) |
| Partners         | <b>D Hantz</b> (UJF-Lirigm)<br><b>P. Potherat</b> (Cete Lyon)<br><b>C. Delacourt</b> (UCB)  | <b>D. Richard</b><br>(Cemagref)  |  |

| Hazard           | Avalanches                            | Glaciers                 | Permafrost   |
|------------------|---------------------------------------|--------------------------|--|
| Experts externes | <b>Y. Durand</b> (CEN)<br>Cemagref :? | <b>C. Vincent</b> (CNRS) | <b>P.Deline</b> (U. Savoie)<br><b>P.Schönheich</b> (UJF) |
| partners         | <b>D. Richard</b> (Cemagref)          |                          |  |



## 2. Critical synthesis on the impacts of climate change on natural hazards

- Impulse and organize the exchanges between experts on hypothesis of impacts
- **Documente and track** all arguments and references, online available proces
- **Synthetize** the experts meanings for each impact



- Documents and dialog platform
- Mailing list of experts
- Workshop



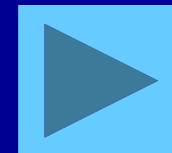
## 2. Critical synthesis : Documents and dialog platform

- References : articles, reports, **expert writings**...
- Insert references in a **logical matrix**
- Insert every argument in the right  
« hypothesis discussion» box and track references
- For each reference : standardized synthesis file +  
link to the original file or contact adress



## 2. Critical synthesis : Documents and dialog platform

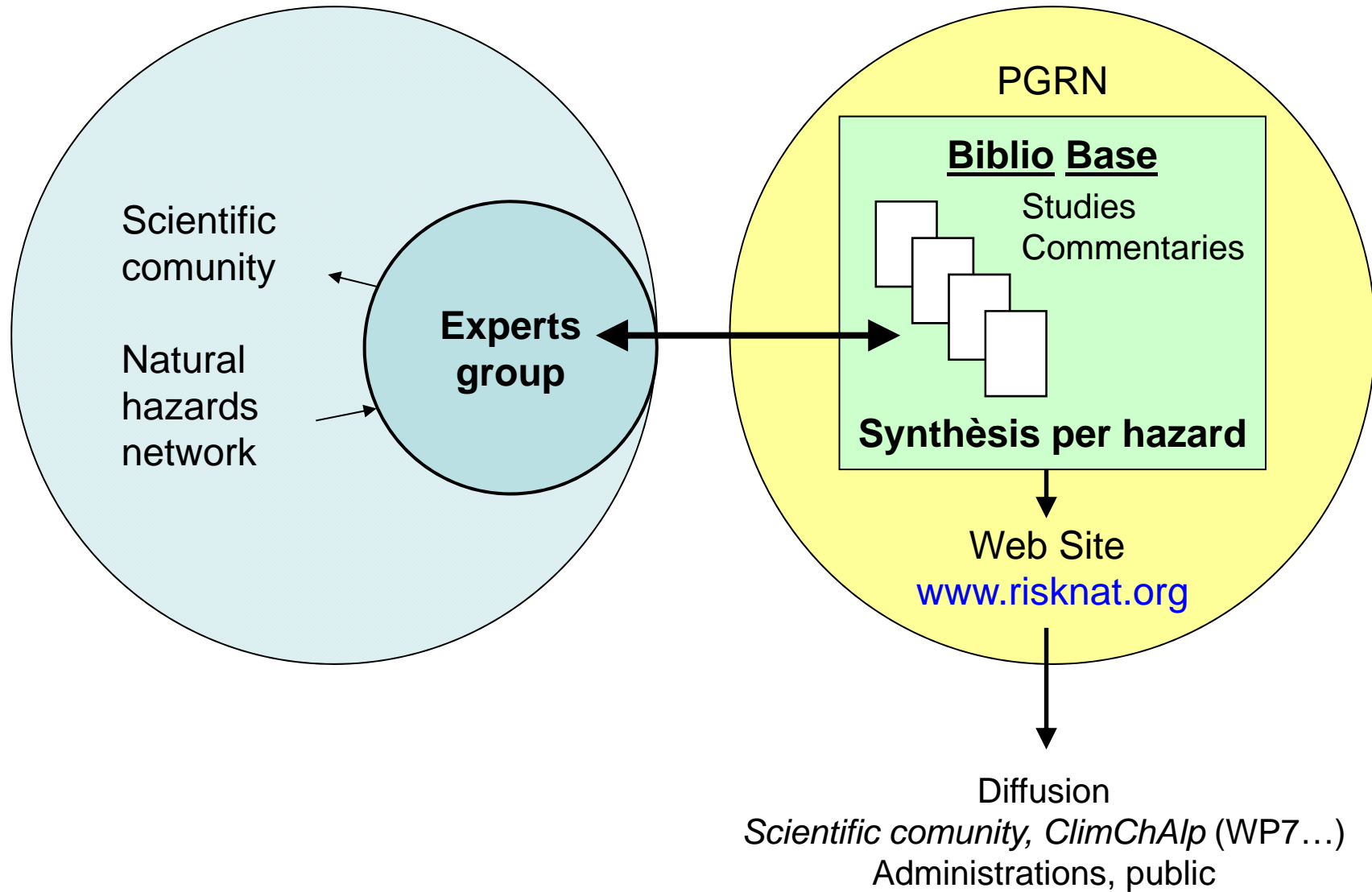
- **Subjects** : impacts on nature, impacts on natural hazards, synthesis published, recommendations
- **Impact argument hierarchy** :
  - Observed impacts
  - Computed, modeled, demonstrated impacts
  - Possible impacts



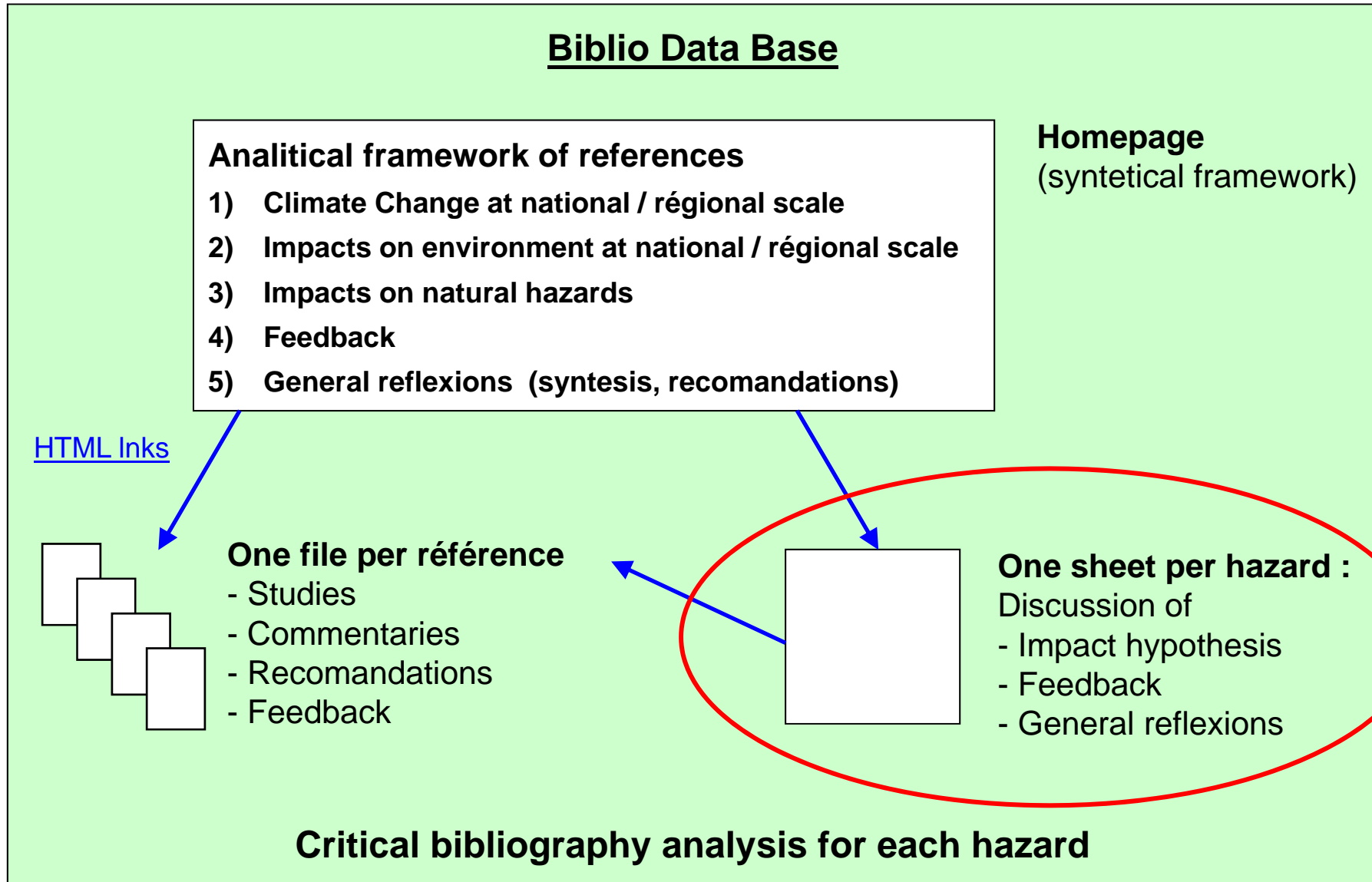


# ClimChAlp WP5 : Module « Natural hazards »

French expert group animation



# Content of the Expert Dialog platform



# Fields of the Biblio data base and navigation

Homework

| Analysis frame : positionig of références ( <a href="#">HTML link</a> ) |  |
|---|--|
| 1) Changements climatiques nationaux / régionaux                        | Température / Précipitations / Wind  |
| 2) Impacts sur le milieu naturel national / régional                    | Rivers regime / Torrents regime / snow cover / Erosion / Underground water / Régime of permafrost / Regime of glaciers / Forest – vegetation   |
| 3) Impacts sur les aléas naturels                                       | <a href="#">River floods</a> / <a href="#">Torrents floods and debris flows</a> / <a href="#">Avalanches</a> / <a href="#">Landslides</a> / <a href="#">Rockfall – rock avalanches</a> / <a href="#">Glacial hazards</a> / <a href="#">Storms</a> / <a href="#">Forest fires</a> |
| 4) Retours d'expérience   |  |
| 5) Réflexions générales (synthèse, préconisations)                      | Synthesis / recomandations / Others  |

## Hazard sheet

### 1) Management parameters

### 2) One dialog box for each parameter :

- Observed / modeled / possible
- Observation and analisis method
- [Biblio Reference](#)

## Biblio File

- Référence / Author(s) / Title / Type of study / Source / Contact
- Hazard / Zone - district / Altitude level / Parameter(s) concernde
- Paramètre / Sensibilit to climate / Observation and analysis methodes
- Impact on environment
- Impact on natural hazards
- Synthesis and recomandations

# Fields of the Biblio data base and navigation

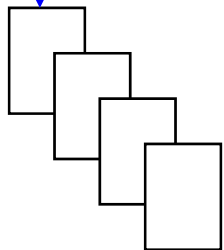
|   |  |   |
|---|--|---|
| Impacts du changement climatique sur les ALEAS naturels ("hazards") | <a href="#">Inondations - rivières</a>   | <b>Analysis frame :<br/>positioning of<br/>références<br/>(<a href="#">HTML link</a>)</b> |
| Impacts observés  | <a href="#">Renard (2006)</a>            |   |
|   | <a href="#">Lins (?)</a>                 |   |
|   | <a href="#">Götz &amp; Raetzo (2006)</a> |   |
| Impacts modélisés ou démontrés                                      |  |   |
| Impacts envisagés (sensibilité)                                     | <a href="#">Seiler (2006)</a>            |   |

Extract from homepage

Aléa : Crues de rivières et inondations

| Paramètres                  | Sensibilité aux paramètres climatiques / météorologiques   | Méthodes d'observation et d'analyse  | Référence  |
|-----------------------------|--|--|--|
| <b>Impact</b>               | <b>Intensité : Evolution des volumes totaux ?</b>  | <b>Méthodes d'observation et d'analyse</b>   | <b>Référence</b>   |
| <b>Impact</b>               | <b>Intensité : Evolution des débits journaliers maximum annuels ?</b>  | <b>Méthodes d'observation et d'analyse</b>   | <b>Référence</b>   |
| Observé                     | France : pas de tendance décelable sur les données depuis 1960 clairement attribuée au CC<br><br>Monde: La majorité des enregistrements de maxima annuels de débits (70%) ne présentent aucune tendance statistiquement significative. La tendance des autres enregistrements se partage presque également entre croissance et décroissance. Défaut de preuves convaincantes d'une quelconque augmentation à long terme de la puissance des crues fluviales. | Méthodologie statistique de recherche d'évolutions des valeurs extrêmes dans séries hydrométriques<br><br>Etude des tendances des longues séries de maxima annuels de débits de rivières sur 195 stations de jaugeage à travers le monde | <a href="#">Renard (2006)</a><br><br><a href="#">Communication Svensson et al. (?)</a> |
| Modélisé / démontré         |  |  |  |
| Envisagé                    | Hypothèse de crues extrêmes plus intenses  |  | divers docs, IPCC..  |
| <b>Impact</b>               | <b>Fréquence</b>   | <b>Méthodes d'observation et d'analyse</b>   | <b>Référence</b>   |
| <b>Impact</b>               | <b>Temporalité</b>   | <b>Méthodes d'observation et d'analyse</b>   | <b>Référence</b>   |
| <b>Impact</b>               | <b>Extension</b>   | <b>Méthodes d'observation et d'analyse</b>   | <b>Référence</b>   |
| <b>Retours d'expérience</b> | <b>Objectifs</b>   | <b>Etat d'avancement / enseignements</b>   | <b>Référence</b>   |
| <b>Préconisations</b>       | <b>Résumé</b>  | <b>Objet</b>   | <b>Référence</b>   |

Hazard sheet – exemple : river floods



Biblio files





## 2. Critical synthesis : time schedule

### Achieved

- Platform conception and test (PGRN)
- French document inventory < 2005 (ONERC)

Guillaume Prudent : questionnaires to all  
french institutions, synthesis



## 2. Critical synthesis : time schedule

### Going on

- Validation of parameters for each hazard
- Insert WP 7 « Impact matrix » references + others and collect first reactions of experts
- Update, syntetize and insert bibliography  
ONERC (nov-dec 2006) for < 2005  
PGRN (oct - march) > 2005



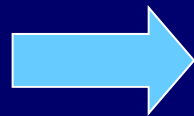
## 2. Critical synthesis : Documents and dialog platform

WP 5  
Rome

29/09/06

To come

- Online availability, weekly updated (october 2006)
- Synthesize arguments (winter 2007)
- Expert workshop spring 2007 to conclude :



- common statement
- polemical point
- lack of knowledge



## 3. Reporting to WP 5

To come

- Online availability of dialog platform (october 2006)
- Link to « WP 5 climate change module » :  
express relevant climatical parameters for each hazard (winter 2007)





## 4. Link to other WP

**WP 7** : Impact matrix to be urgently discussed /  
completed by WP5 : urgent !

**WP 8** : waiting for impacts / adaptation strategies  
recommandations : summer 2007 sufficient ?



Contact soon

and discussion at Bolzano ?



# Objectives

- Fulfill task during the project / time schedule
- Continue the process after the end of ClimChAlp
  - Track knowledge and recommendations evolution
  - Dialog platform : basic tool to design future projects contents and to transfer state-of-knowledge to risk managers
- Extend and intensify networking activities



Thank for your attention