

COP 21: le succès de l'Accord de Paris et les défis pour l'économie globale et la sécurité alimentaire

Gérard Viatte

a. Directeur de l'Agriculture à l'OCDE, a. Conseiller spécial FAO

Assises européennes de la montagne

Euromontana

3 octobre 2016

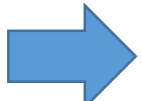
Trois messages

- **Accord de Paris** adopté par la COP21 le 12 décembre 2015. Accord **universel, ambitieux et différencié**. Un **succès** de la négociation internationale. Plusieurs aspects concernent la montagne (même si elle n'est pas mentionnée explicitement).
- De nombreux défis subsistent, notamment sur le plan économique et pour la **gestion des ressources naturelles**.
- Le processus de négociation se poursuit (**COP22**) et des **politiques et actions nationales innovantes** sont requises. D'où une nouvelle importance pour les politiques relatives à la montagne.

1. Le processus des négociations sur le climat

- Première étape : la Convention Cadre des Nations Unies sur le Changements Climatiques, **Sommet de la Terre, Rio, 1992.**
- ...conférences annuelles (Protocole de Kyoto 1997, échec de Copenhague en 2009)...
- **Conférence de Lima (COP20, 2014).** Accord pour la préparation de Paris: INDC (intended nationally determined contributions, «agenda des solutions» pour le secteur privé et les ONG...)
- Engagements nationaux pris en 2014/2015 : **UE: Accord Energie Climat 2030; Accord USA / Chine** : objectifs de réduction des GES.

2. La préparation scientifique: le rapport GIEC 2015

- Dérèglement climatique causé par l'homme
 - Emissions GES les plus élevées de l'histoire
 - **Phénomènes climatiques extrêmes** depuis 1950: moins de périodes très froides, plus d'extrêmes de chaleur, plus d'évènements extrêmes de niveau de la mer..
 - Pour l'avenir, dans tous les scénarios, les températures de surface et de l'océan augmenteraient.
 - **«Risque de ruptures des systèmes alimentaires et de pertes d'existence dans les régions vulnérables»**
-  Nécessité de mesures **d'adaptation** et **d'atténuation** (réduction des émissions GES)

3. L'Accord de Paris du 12 décembre 2015

Des objectifs atteints...

- Un accord **universel**: 195 pays. Signature à New-York avril 2016. Ratifications en cours.
- Un accord **ambitieux**: «contenir l'élévation de la température moyenne de la planète nettement en-dessous de 2° par rapport aux niveaux pré-industriels»...et poursuivre l'action pour la limiter à 1.5°.
- Un accord **différencié**: **contributions des pays (NDC)** pour la réduction des émissions de GES selon leur responsabilité et capacité – et non pas selon leur catégorie politique ou économique.
- Les **NDC** avaient déjà été annoncées en 2014/2015. Mais la trajectoire correspondante reste proche de +3° !

- **Objectif à long terme:** neutralité des émissions dans la 2^{ème} moitié du siècle.
- Un accord **dynamique:** première évaluation en 2018. En 2023, «**Bilan Global**», puis tous les 5 ans, avec publication de nouvelles NDC.
- Un volet **financier:** atteindre puis dépasser l'objectif de 100 mrds USD par an pour les PED (fonds publics et privés) – possibilité contributions volontaires de certains PED. A partir de 2020. Révision à la hausse en 2025.
- un accord «**juridiquement contraignant**»
- Un «**agenda des solutions**» pour 12 secteurs (agriculture, forêts, transports, villes...)

L'Accord de Paris et le **développement durable**

- Pour certains, *«le climat cache la forêt»*, à savoir les autres dimensions du développement durable ...
- mais le Préambule reconnaît tous les éléments du DD.
- **Complémentarité:**
 - avec les 17 **Objectifs de Développement Durable (ODD)** adoptés par les Nations Unies le 25 septembre 2015 (1. Eliminer la pauvreté, 2. Eliminer la faim....)
 - et avec les **autres Conventions environnementales** (Diversité biologique 1992, Lutte contre la désertification 1994...).
- L'Accord de Paris participe à la recherche de solutions «inclusives».

4. Les raisons du **succès** de la COP21

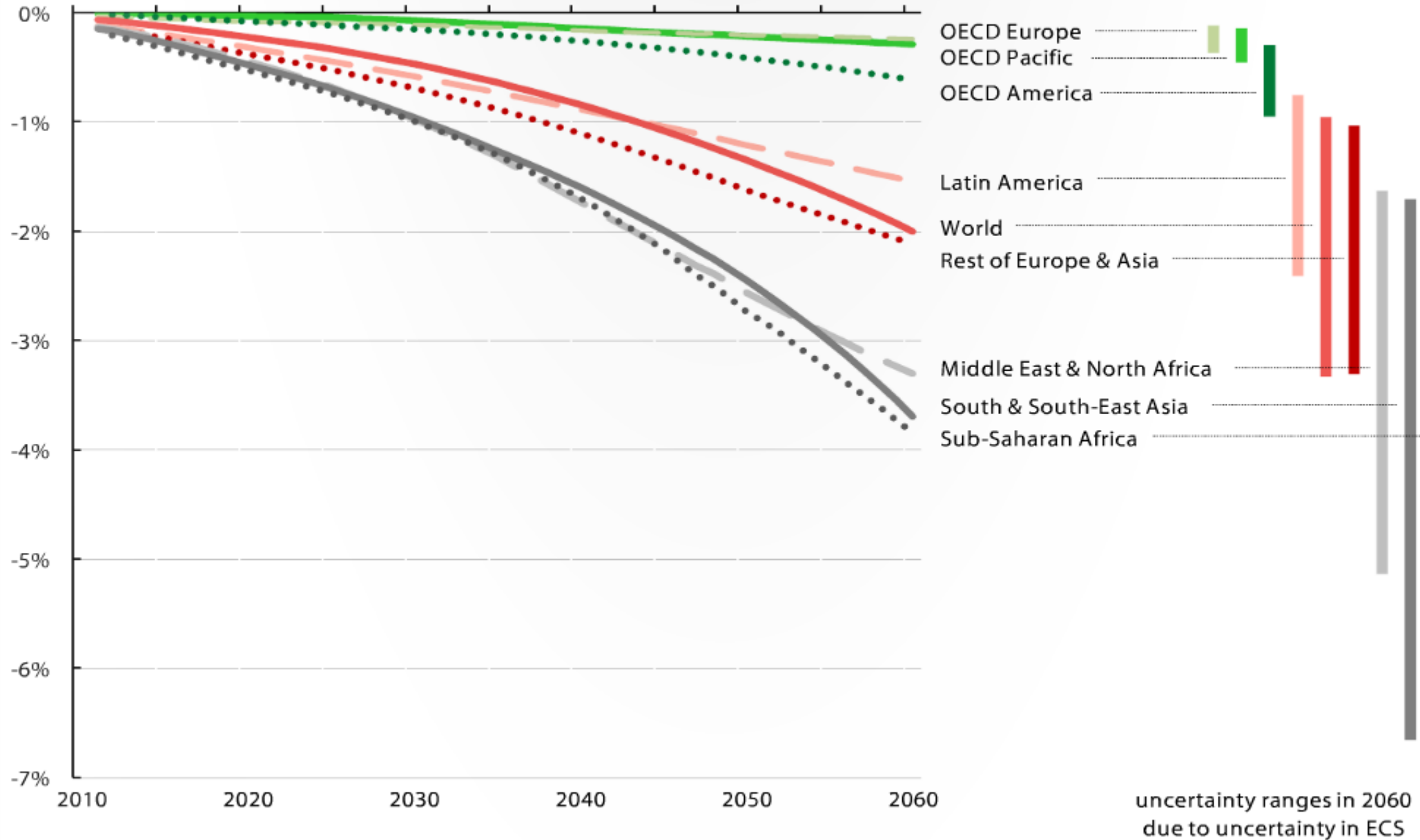
- Une analyse scientifique très solide (**GIEC**)
- Une bonne base établie à la COP20 Lima et des engagements politiques forts des principaux pays avant la COP21.
- Une participation active de la **société civile** (ONG, industrie, régions et villes....360 organisations, espaces expos).
- Un soutien populaire sans précédent pour une négociation internationale. Une couverture médiatique constructive.
- Un engagement exceptionnel de la **Présidence française** à tous les niveaux, pour la préparation et la négociation. Mobilisation des Chefs d'Etat.
- Le cadre institutionnel et logistique des Nations Unies

♦ ***MAIS LES DEFIS SUBSISTENT....***

5. L'incidence économique du changement climatique

- La poursuite de la tendance actuelle aurait des conséquences économiques très négatives.
- **Modélisation OCDE:** *[The Economic consequences of climate change, 2015]*
 - **impact sur PNB annuel de – 1.0% à -3.3% d'ici à 2060 surtout en Afrique et en Asie**
 - l'Europe est la région la moins affectée
 - bénéfices supérieurs aux coûts seulement en Russie et au Canada
 - principaux facteurs: **impact sur les rendements agricoles (-0.8% de PNB par an)**; baisse de la productivité du travail (-0.9% PNB par an)
 - impacts négatifs non linéaires, mais cumulatifs dans le temps

Figure 2. **Global and regional changes in GDP from selected climate change impacts, central projection**
 (Percentage change in regional GDP)



6. Sécurité alimentaire et gestion des ressources naturelles

- Malgré les progrès, **l'insécurité alimentaire** reste un problème économique et géopolitique majeur.
- En l'absence de mesures nouvelles, 650 millions souffriront encore de la faim en 2030 (contre 800 millions en 2015) – majorité dans les zones rurales défavorisées [FAO].
- **Aggravation dans les montagnes:**
 - insécurité alimentaire a augmenté de 30% de 2000 à 2012 .
 - Elle frappe 1 personne sur 3,
 - et même 1 personne sur 2 dans les zones de montagnes rurales [FAO, Mountain Partnership 2015].

Mapping the vulnerability of mountain peoples to food insecurity

A geographic and demographic picture of the world's mountain areas assessing the vulnerability to food insecurity of mountain dwellers in developing countries.



1 in 3

mountain people in developing countries is facing hunger and malnutrition.

Since 2000 the number of people vulnerable to food insecurity in the mountains has **increased**.



Total mountain population in developing countries



Total mountain population (%)



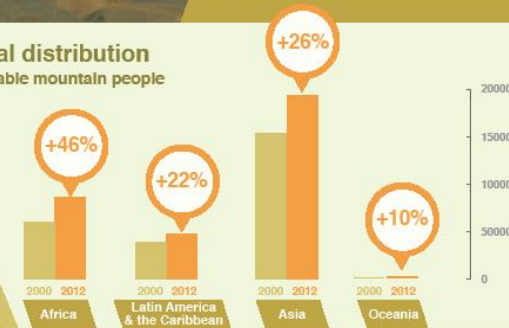
The number of people vulnerable to food insecurity in the mountains has risen at a higher rate than population growth in the same regions.

Rural (%) mountain population



Almost half of the people who live in rural mountain areas are vulnerable to hunger.

Regional distribution of vulnerable mountain people



These results are a clear call to action for policy makers and resource partners. Mountain peoples can no longer be neglected. Investments, specific policies, capacity-building programmes and more research are needed to lift mountain peoples out of hunger and poverty.

fao.org/forestry/watershedmanagementandmountains



Food and Agriculture Organization of the United Nations



La sécurité alimentaire: une priorité de l'Accord de Paris

- **GIEC**: XXIe siècle: importante insécurité alimentaire (dans ses 4 dimensions: disponibilité, accès, stabilité, qualité).
- Dans son Préambule, **l'Accord de Paris** reconnaît «la priorité fondamentale à protéger la sécurité alimentaire et à venir à bout de la faim» et stipule dans l'article 2 que les actions sur le climat doivent être menées **«de telle façon que la production alimentaire ne soit pas menacée»**. *[une des seules références sectorielles de l'Accord !]*

Au centre de la problématique: les relations

- eau/terre/agriculture («Agro-écologie»)

-et agriculture/ développement rural

- Exemple d'action: «initiative 4/1000» lancée par la France (plus de 150 partenaires): Une augmentation de 4/1000 par an du stock carbone dans les sols permettrait

-- d'arrêter la croissance du CO2 dans l'atmosphère: **les terres représentent 40% du potentiel d'atténuation à l'horizon 2030.**

-- ainsi que la dégradation des sols

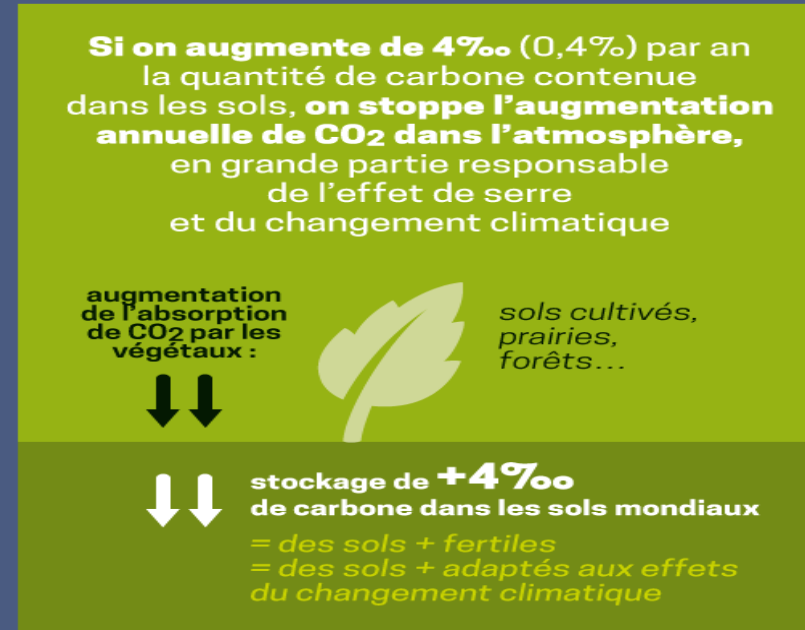
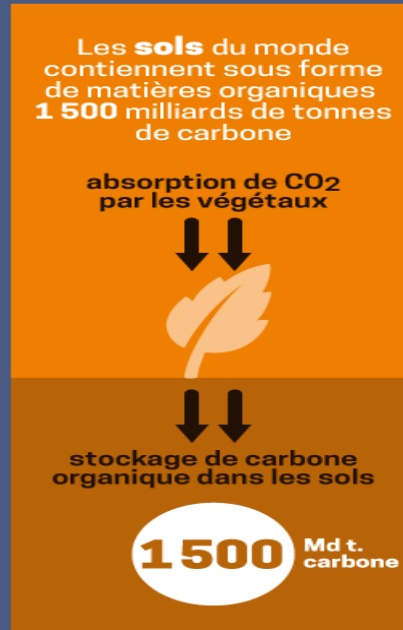
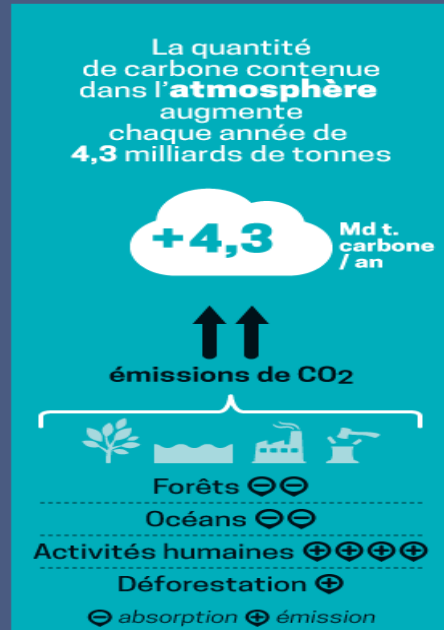
-- et d'améliorer la capacité de nourrir 9.5 milliards personnes en 2050.

- Moyens: développer des pratiques agricoles adaptées (sans labour, agroforesterie, herbages...) . Exemple: Portugal: restauration des prairies dégradées (+1 mio t. stockage carbone depuis 2009). Aussi effet positif de **substitution** par bois et végétaux.

- Approche très pertinente pour la **montagne** – prairies, pâturages et forêts.

LE 4 POUR 1000

LA SÉQUESTRATION DU CARBONE DANS LES SOLS POUR LA SÉCURITÉ ALIMENTAIRE ET LE CLIMAT



COMMENT STOCKER PLUS DE CARBONE DANS LES SOLS ?

Plus on couvre les sols, plus les sols sont riches en matière organique, et donc en carbone. Jusqu'à présent, la lutte contre le réchauffement climatique s'est beaucoup focalisée sur protection et la restauration des forêts. En dehors des forêts, il faut favoriser le couvert végétal sous toutes ses formes.

- 

Ne pas laisser un sol nu et moins travailler le sol ;
ex. : les techniques sans labour
- 

Introduire davantage de cultures intermédiaires, intercalaires et de bandes enherbées
- 

Développer les haies en bordure des parcelles agricoles et l'agroforesterie
- 

Optimiser la gestion des prairies, par exemple allonger la durée de pâturage
- 

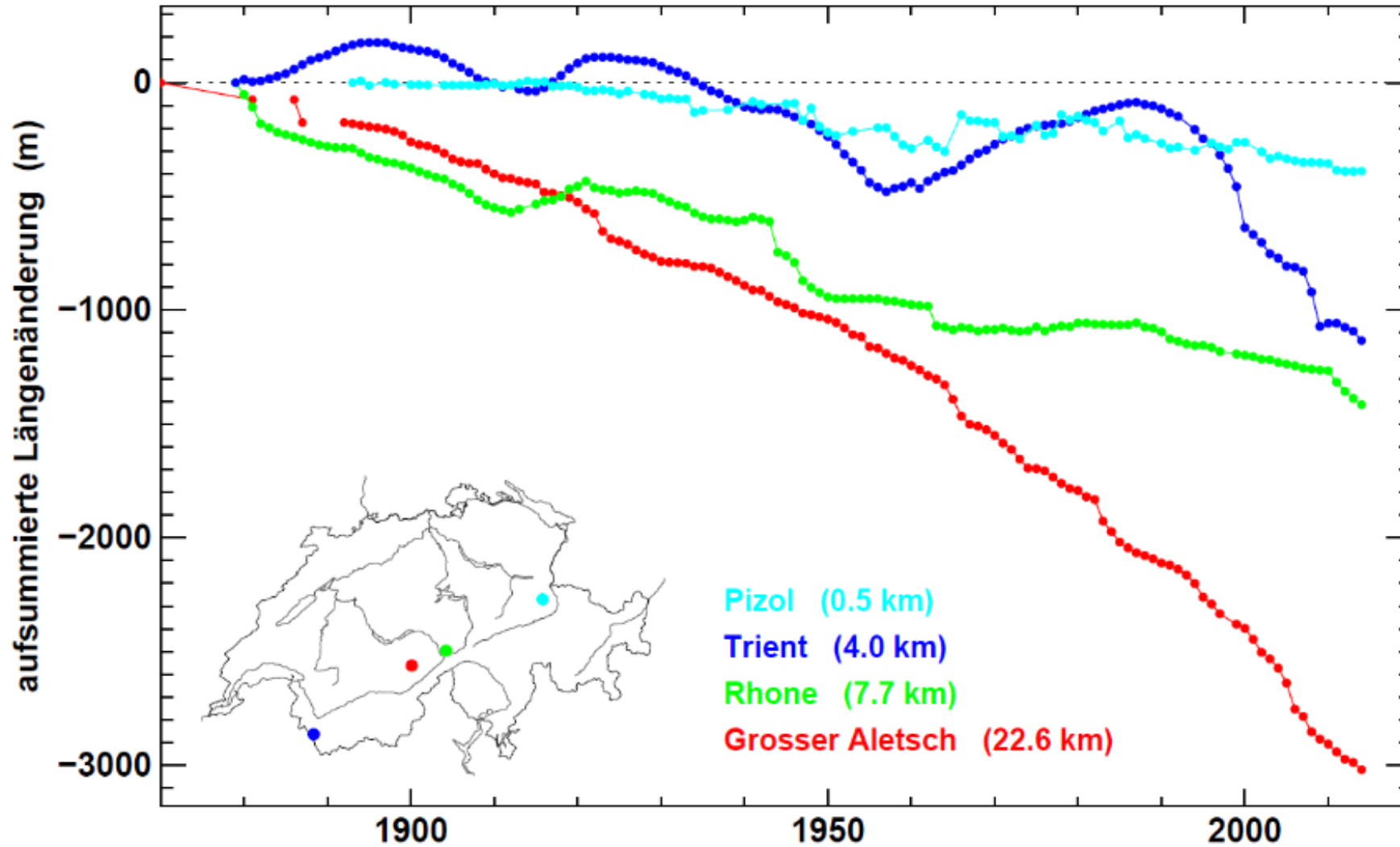
Restaurer les terres dégradées, par ex. les zones arides et semi arides du globe

« Cette initiative internationale permet de concilier les objectifs de **sécurité alimentaire** et de **lutte contre le changement climatique**, et donc d'engager dans la COP21 l'ensemble des pays concernés. »

Stéphane Le Foll, ministre de l'Agriculture, de l'Agroalimentaire et de la Forêt

La gestion de l'eau

- Au plan mondial, 80% de l'eau est utilisée pour l'agriculture.
- Selon Rapport GIEC, la question de l'eau pour l'agriculture est l'un des 3 problèmes clés pour **l'Europe**, avec la canicule et les inondations.
- Augmentation de la demande en irrigation, croissance de l'évapotranspiration et des besoins des plantes, baisse de la teneur en eau des sols, fonte des glaciers [*graphique Suisse*].
- **A la fois, développer l'irrigation et améliorer la gestion du pluvial.**
- **Les politiques de l'eau** doivent plus tenir compte des relations avec la sécurité alimentaire et le changement climatique.



Source : GLAMOS 2015

Fig. 1 : Variation de longueur cumulée (m) des glaciers depuis 1880

Améliorer la gestion des ressources naturelles..

- ...nécessite une approche holistique (eau, terre, biodiversité...)
- ...appelle des solutions fondées sur la nature, **utilisant la capacité de résilience des écosystèmes**
- ...requiert notamment le maintien des milieux naturels en bon état de conservation pour lutter contre le changement climatique et les risques naturels. Exemple: zones humides *[UICN France]*
- ...est essentiel **pour la montagne**, non seulement pour l'agriculture mais pour toutes les activités économiques de la montagne (tourisme) et le maintien de la population.

7. COP22 (Marrakech 7-18 novembre 2016)

- Préparatifs sous présidence marocaine (préCOP 18-19 octobre).
- Suivi de l'Accord de Paris. Conditions de son entrée en vigueur: ratification par 55 pays (OK) représentant 55% des émissions GES (presque OK).
- Priorités COP22 : financement, adaptation, transfert de technologies, formation, gestion du risque...Objectif: **actions concrètes**.
- Accent sur le développement du Sud: adaptation grâce à des modèles de développement axés sur **sécurité alimentaire, lutte contre la dégradation des sols, gestion de l'eau** (expertise du Maroc), énergie.
- Initiative du Maroc: «Triple A»: **«Adaptation de l'Agriculture en Afrique»**.

8. Des politiques et actions nationales innovantes

Le succès du processus dépend surtout de politiques et actions **nationales**, notamment pour la montagne, qui soient:

- **cohérentes**: politiques économique, sociale, environnementale (DD)
- **participatives**: implications de tous les acteurs privés et publics (PPP)
- liées à la dimension **territoriale**
- articulées avec une évolution du **cadre institutionnel et décisionnel**
- basées sur la **recherche scientifique multidisciplinaire**
- **innovantes**: exemple: **paiements pour les services écosystémiques (PSE)** [Conférence Euromontana «Bonus montagne» Arantzazu 2009]


 **Nouvelle importance pour les politiques et actions relatives à la montagne, donc pour Euromontana: pertinence de ces Assises 2016.**



Mountains for Europe's Future

CH-AT Alliance

Supported by

 Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Education,
Research and Innovation SERI

bmwfw
Bundesministerium für
Wissenschaft, Forschung und Wirtschaft

Contribution by

 **m.r.i**

 **ÖAW**

 **IGF**
INTERDISZIPLINÄRE GEBIRGSFORSCHUNG
INTERDISCIPLINARY MOUNTAIN RESEARCH

 **a+** ICAS
Swiss Academies
of Arts and Sciences

 **UNIVERSITÀ
DEGLI STUDI DI TRIESTE**

 **CREAF**

 **MINISTERIUM
FÜR UMWELT,
VERKEHR UND
ENERGIE**

 **University of the
Highlands and Islands
Perth College**

Centre for
Mountain Studies

 **EPFL**
ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

 **ale**

 **u^b**

 **CNRS**

 **Universität
Fribourg**



A Strategic Research Agenda

An input to the Horizon 2020 Work Programmes and Calls 2018–2020
April 2016

3 sections

- 8 reasons why mountains are important at the European scale
- 6 recommendations for activities on mountain topics within Horizon 2020
- 6 sets of proposals for interdisciplinary research in mountains for future Horizon 2020 calls
 - structured according to the Societal Challenges
 - each with a specific rationale

Proposals for interdisciplinary research in mountains

- Health, demographic change and well-being
- Food security, sustainable agriculture and forestry
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, environment, resource efficiency and raw materials
- Europe in a changing world

From the last 100 years to the next 100 years: What has changed in the climate of European mountains?

Evidence and scenarios

Wolfgang Schöner
University of Graz - Austria

wolfgang.schoener@uni-graz.at

Content

- Climate change in the Alps – the past 100 years
- How well do we understand these changes?
(do mountains/the Alps react more sensitive?)
- Impacts of climate change in the Alps
- The coming 100 years – where we are going to?
- Take home messages

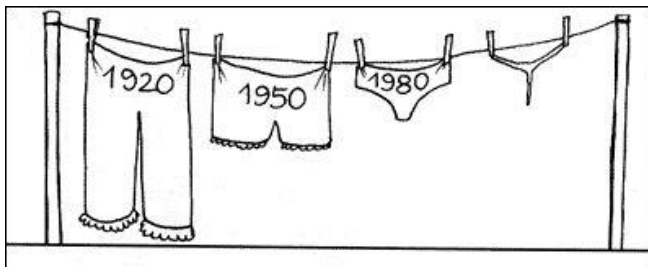
Key evidences



Glacier area of Würtenkees Glacier,
Hohe Tauern, Austrian Alps

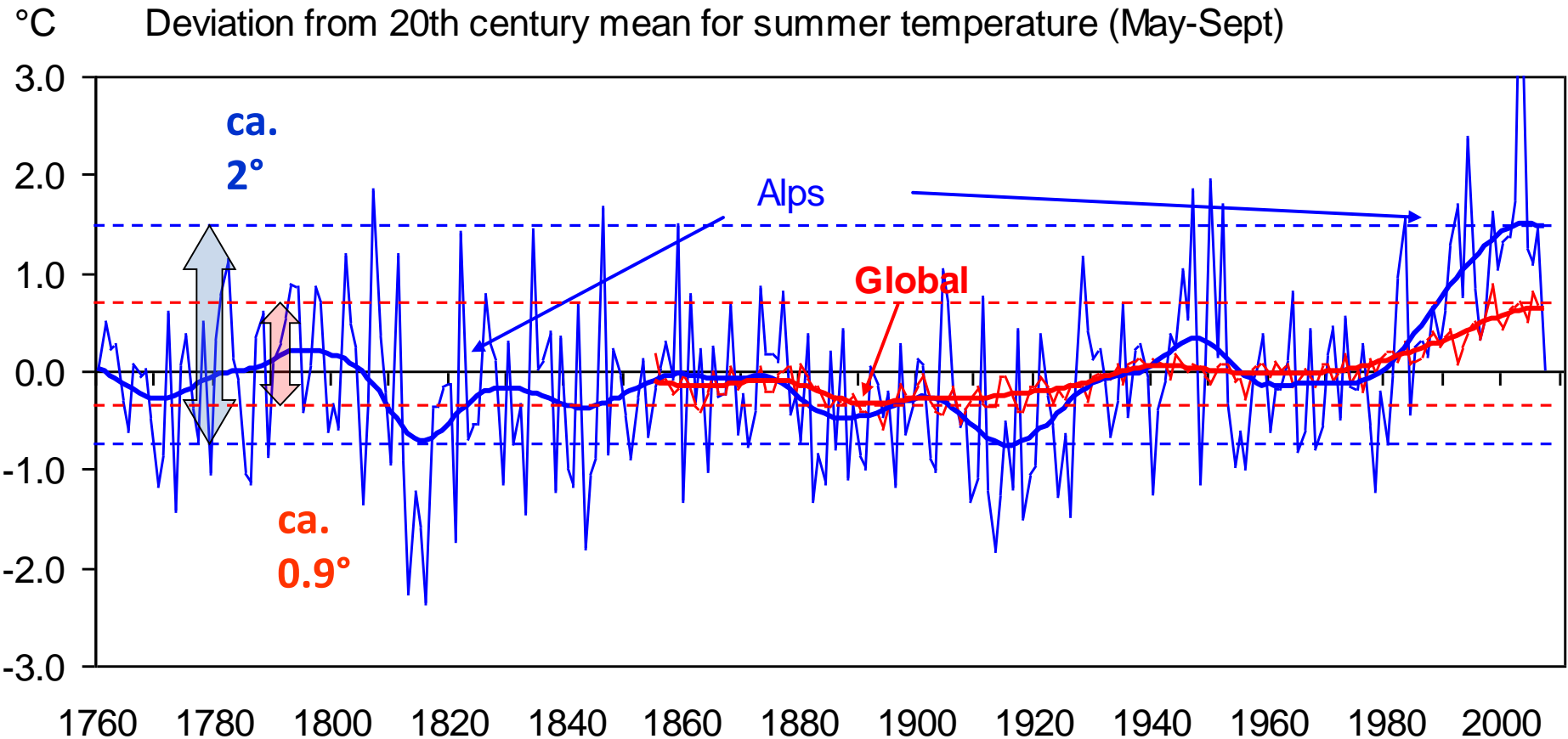
1896 and „today“

Quelle: Archiv Sonnblick Verein



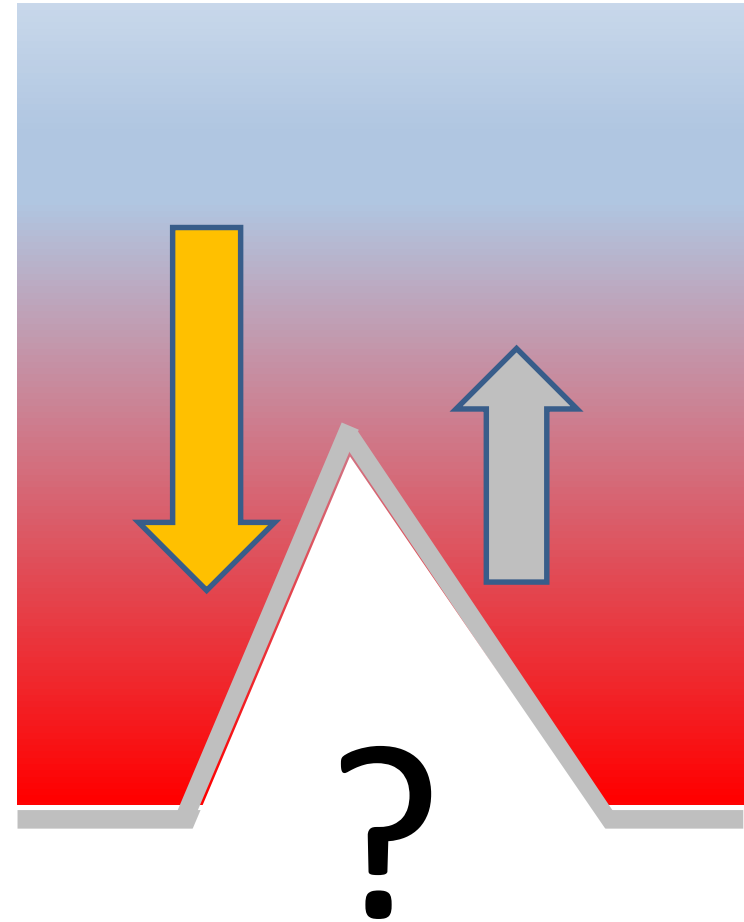
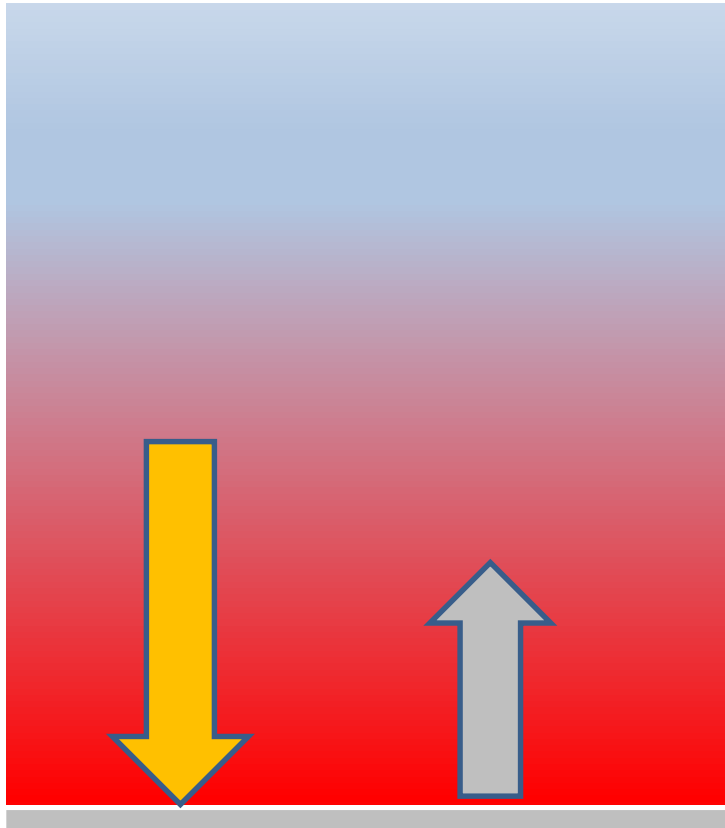
Temperature change

Summer (May-Sept)



Datenquelle: CRU, HISTALP

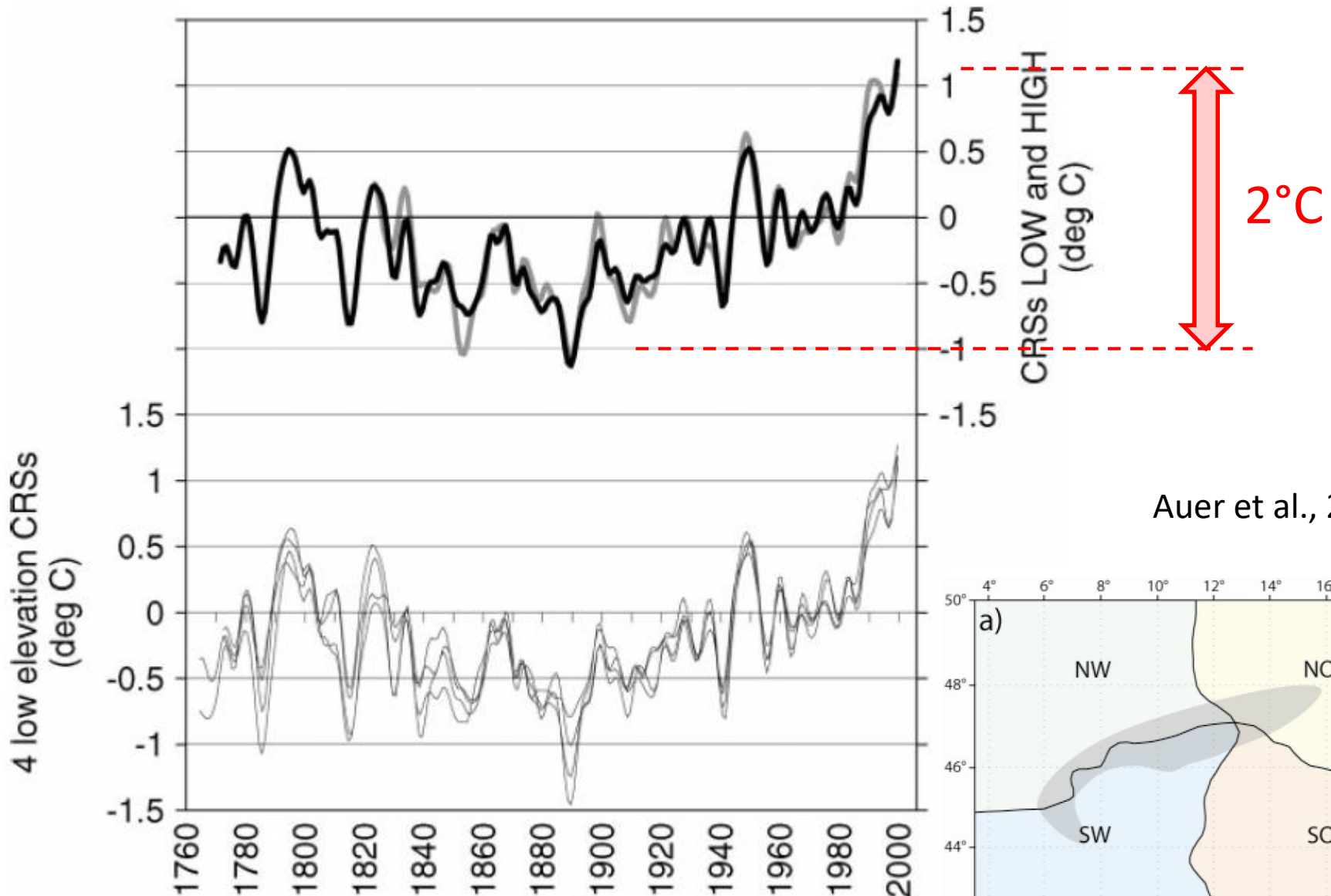
Impact of mountains on Climate Change



Energy exchange
at the surface

Temperature change

Alps (HISTALP)

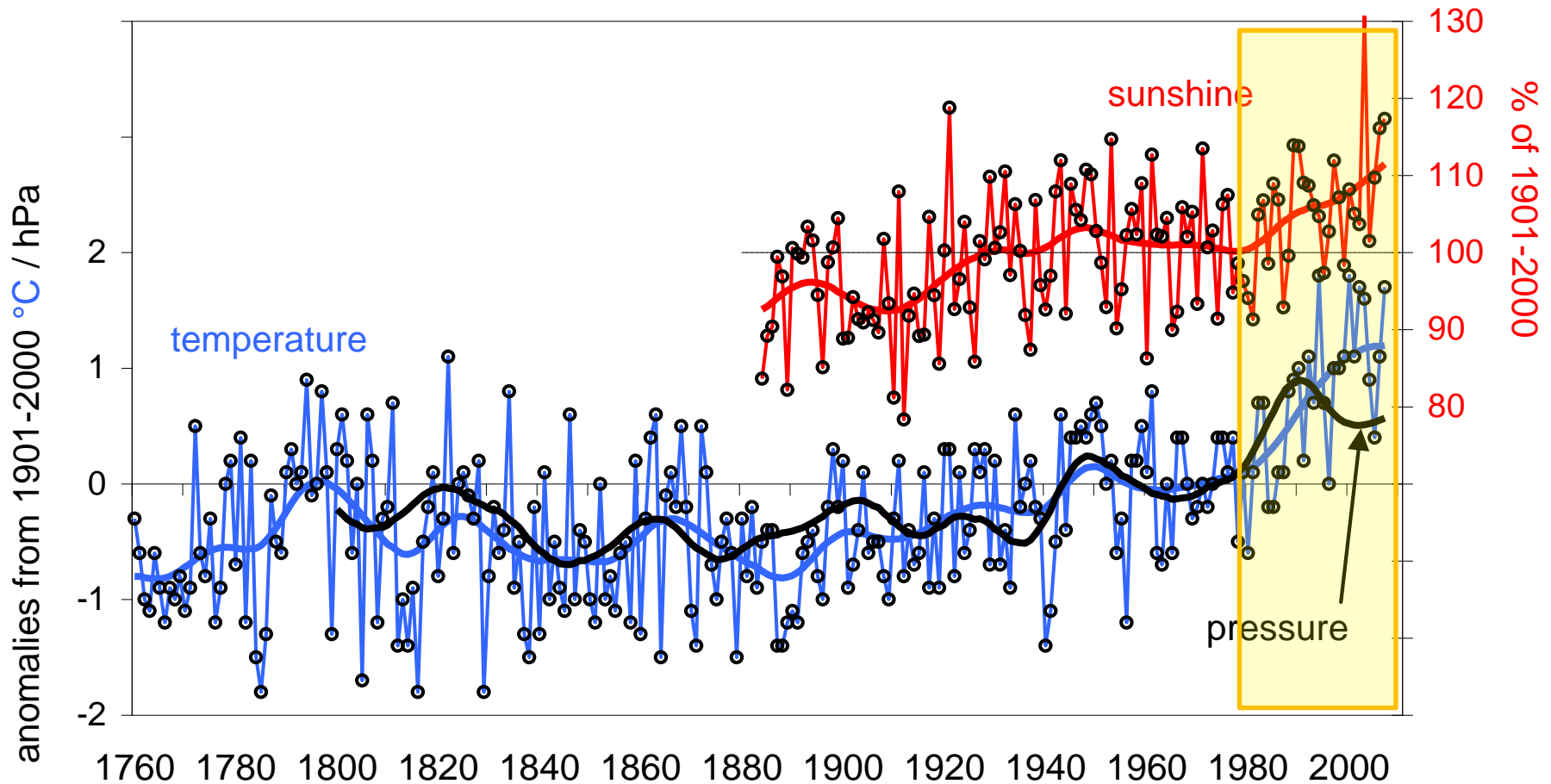


How well do we understand the changes?

Average for:

GAR sunshine HIGH

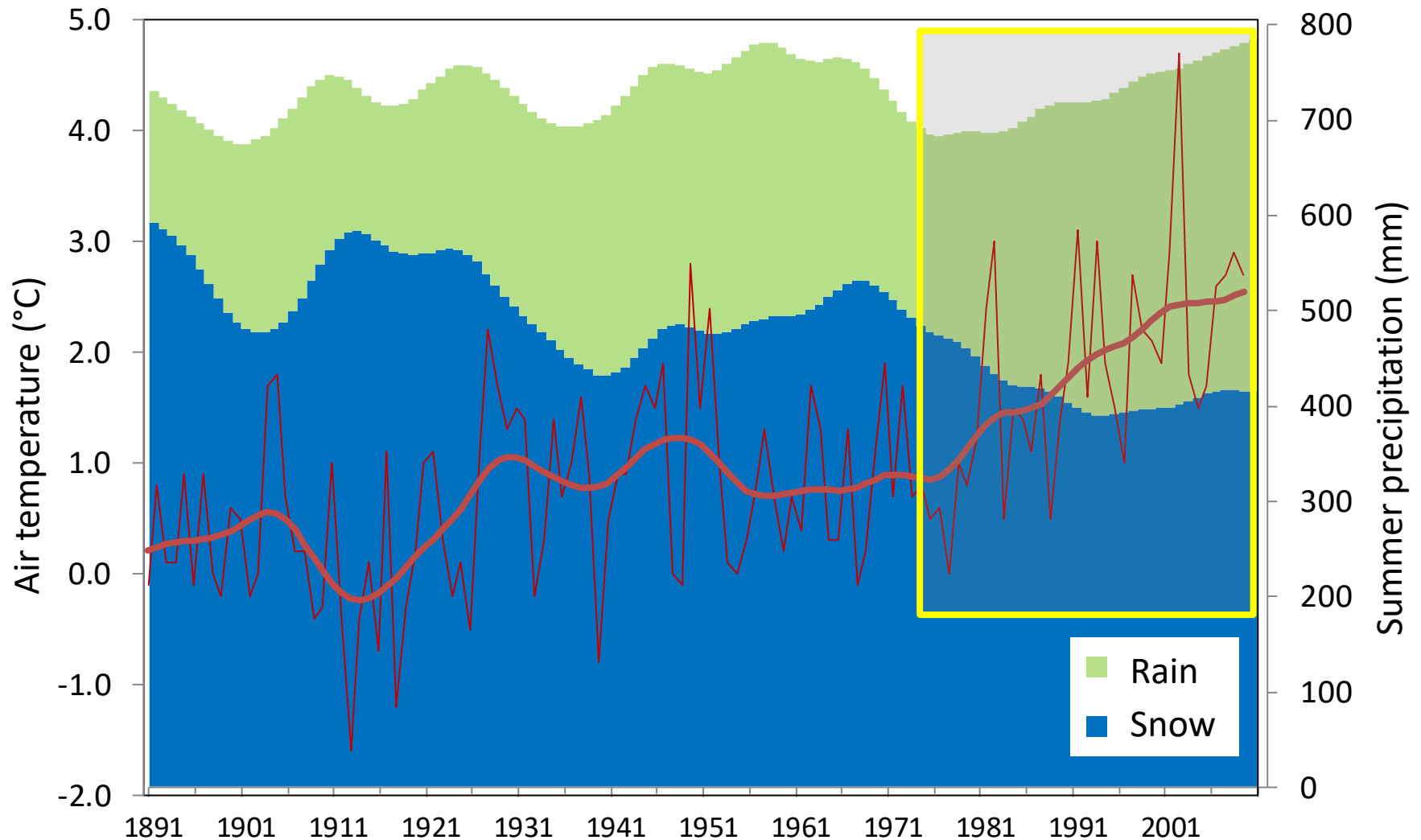
GAR temperature LOW



Datenquelle: HISTALP

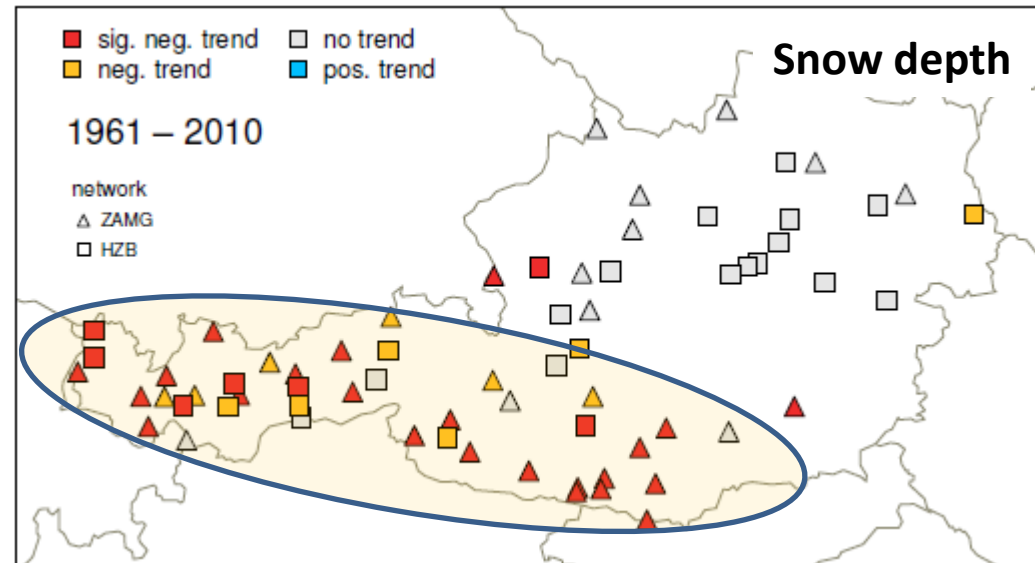
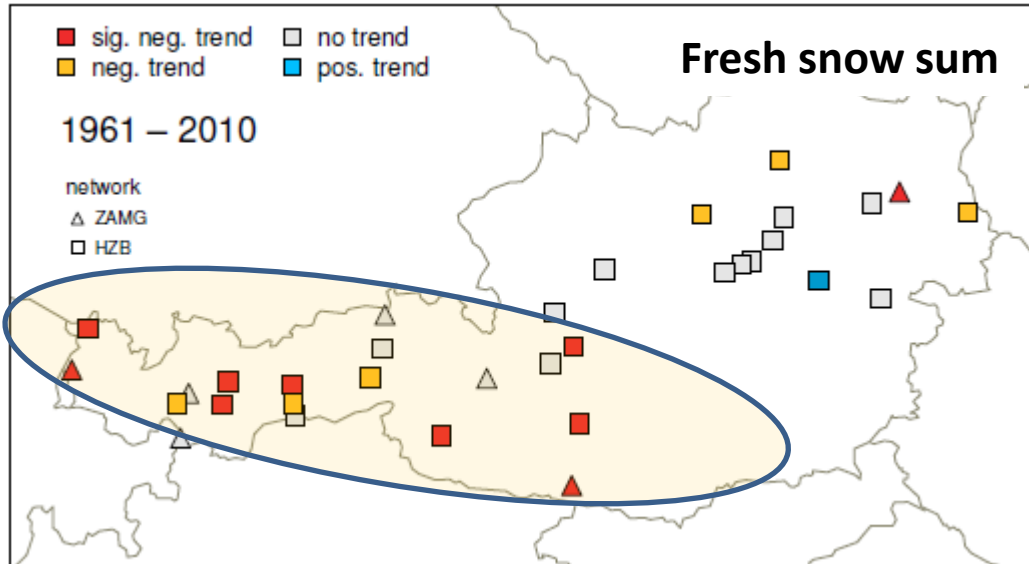
Impacts of climate change in the Alps #1

Precipitation change solid/liquid at Sonnblick



Impacts of climate change in the Alps #2

Snow trends in Austria

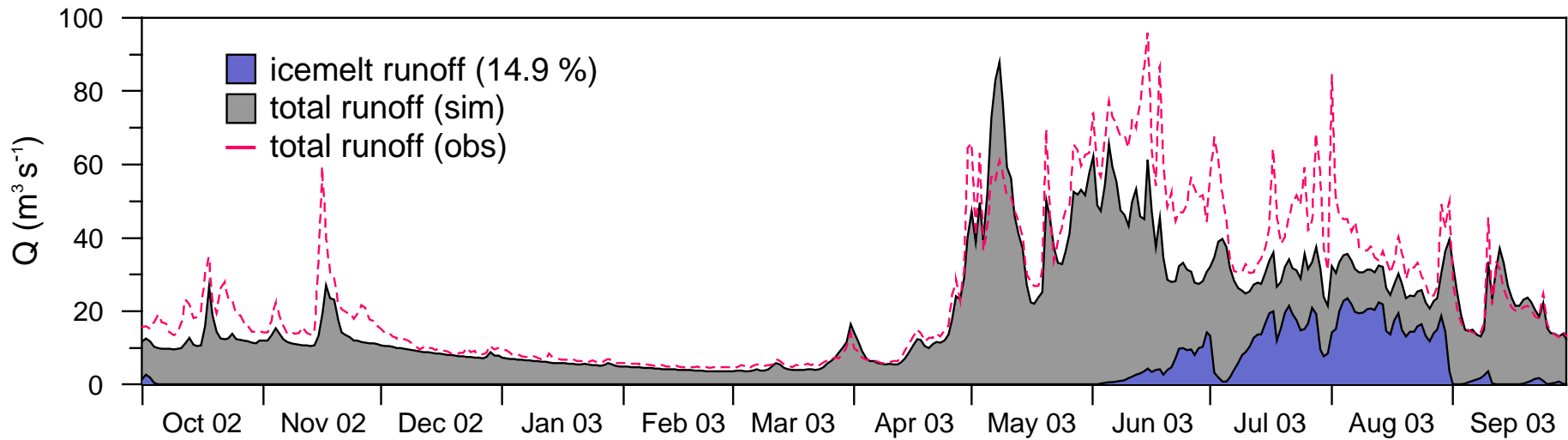


Schöner et al., 2016

Impacts of climate change in the Alps #3

Glacier melt

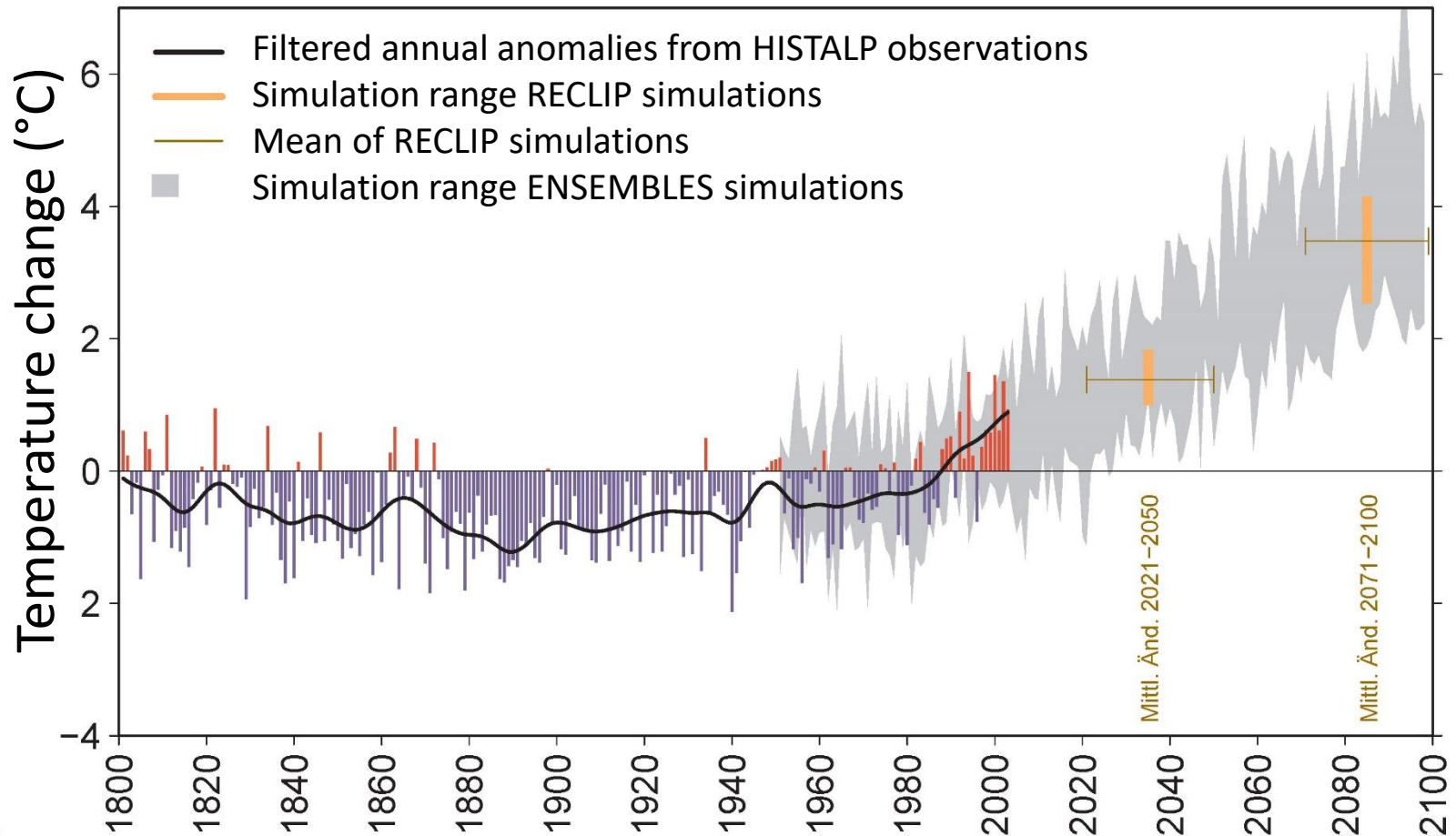
Proportion of glacier melt at discharge for
the Upper Salzach catchment (Austria)
(approx. 500km²)
in 2003



The coming 100 years

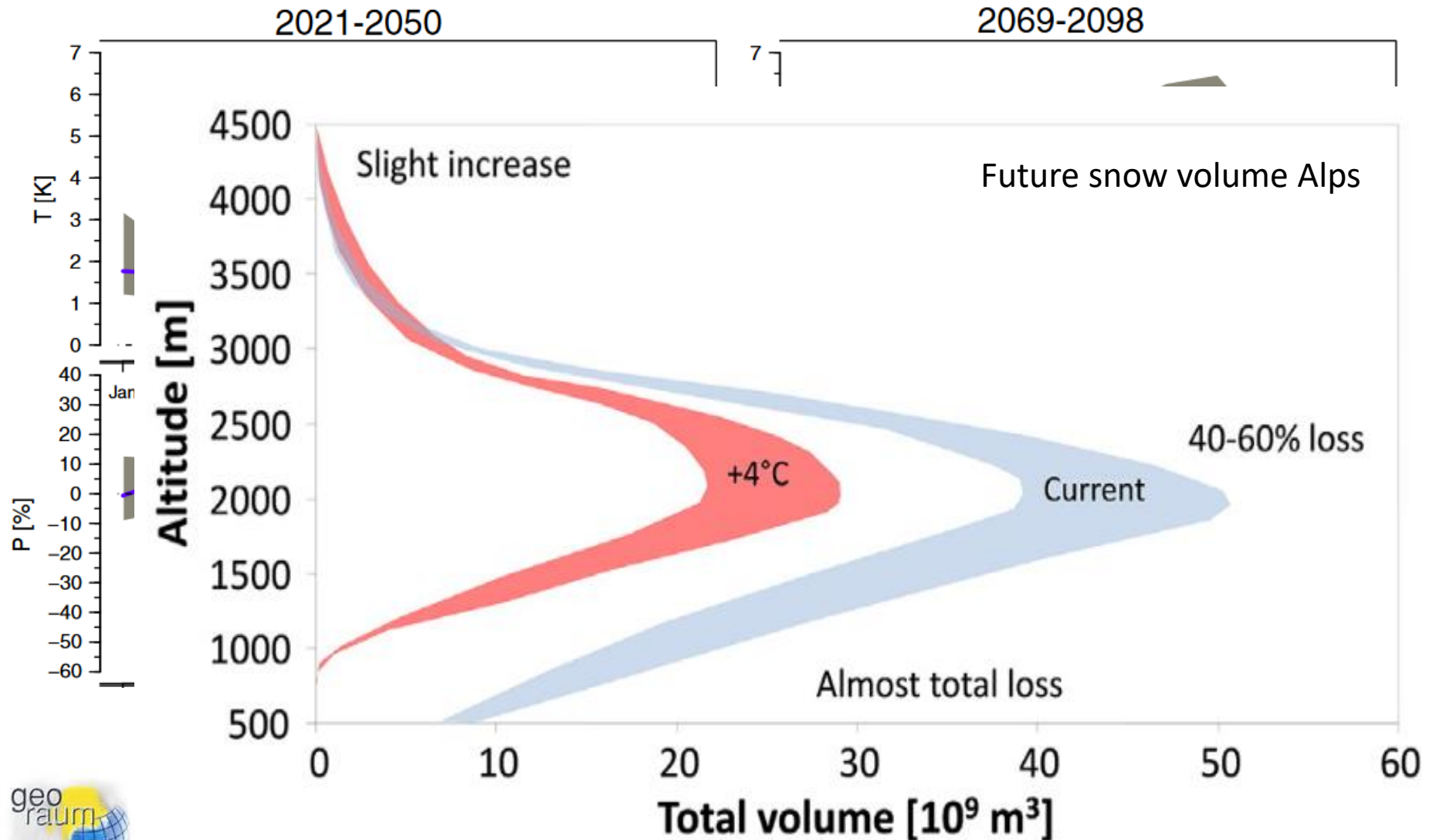
Air temperature

Change of mean annual air temperature (reference period 1971-2000)



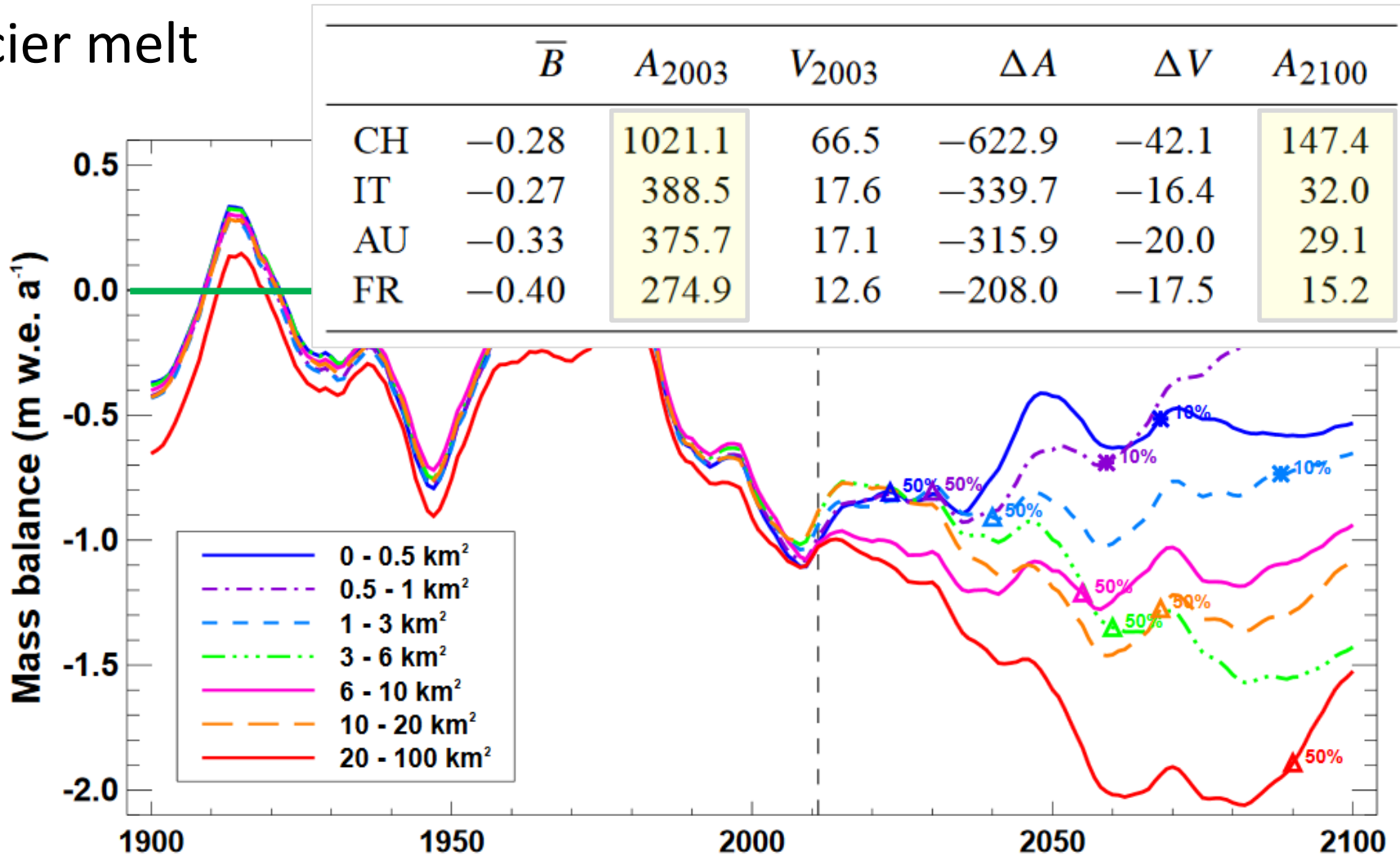
The coming 100 years

Air temperature and precipitation



Impacts of climate change in the Alps (A1B scenario)

Glacier melt



Take home messages

- Over the last 30-40 years climate change in the Alps has been much larger than on the global level. This is, however, not mandatory for other periods in the past and quite unsure for the future. Uncertainty comes from the complex mechanisms causing the **Alpine amplification** of climate change.
- Most obvious and relevant impact of climate change in the Alps is for the cryosphere (glaciers, snow, permafrost) and related changes of Alpine hydrology/water cycle.

Take home messages

- Climate model simulations for the next 100 years generally show larger warming for the Alpine region in comparison to the global level, too. In the light of the Paris treaty a **doubling of the global warming is a preventive assumption**. Scenarios for precipitation are still fighting with high uncertainty of simulations. But increase of extreme precipitation is conclusive.

Thank you!

Still planning for climate change vulnerability?

Evidence from Norway on the lack of success in adapting to climate change, and suggestions on how to move from ‘adjustments’ to ‘transformation’ in climate change adaptation

Presentation during session 2 “Scientific approaches: evidence and scenarios of climate change in mountain areas” at the X European Mountain Convention “Mountains’ vulnerability to climate change: how can people and territories adapt and mitigate its effects?”

3 October 2016

Teatro Municipal de Bragança, Bragança, Portugal



Carlo Aall

Head of research at Western Norway Research Institute

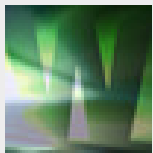
Professor II in Sustainable Development at the Sogn og Fjordane University College





Environment

Industrial ecology | Local Environmental and Climate Policy | Sustainable Mobility |
Alternative Fuels | Sustainable Agriculture



Innovation

eGovernment and public sector organisation | Regional development | Infrastructure and
networking | e-Commerce in small and medium-sized businesses



Research Centre for Tourism

Leisure-time Consumption | Sustainable Tourism | IT and tourism



Usability

Requirements specifications | Semantic web | Human Computer Interface |
Information architecture

www.vestforsk.no

Part of the regional research infrastructure in Norway

Annual turnover of 3,25 mill Euro

24 researchers – 12 of which do sustainable development related research



Home

Courses

Application and Admission

Planning your stay

Arrival

Student Life

Going back home

Current Students

Contact

About Us

Fact Sheets



Study modell: Master in Climate Change Management

Emne	M/C	Namn på emne	A-16	S-17	A-17	S-18
XXXX-1	C	Climate change and climate policy	10			
XXXX-2	C	Introduction to methods in environmental sciences	10			
XXXX-3	C	Climate change and ecosystems	10			
XXXX-4	C	Towards a zero emission society		10		
XXXX-5	C	Geohazards		10		
XXXX-6	C	Rural and urban run-off management		10		
XXXX-7	C	Climate change adaptation in land use planning			10	
XXXX-8	C	Societal transformation			10	
XXXX-9	C	Scientific writing, scientific theory and data analyses			10	
XXXX-10	C	Master thesis				30
XXXX-11	O	Snow sciences and avalanche		10		
Sum			30	30	30	30

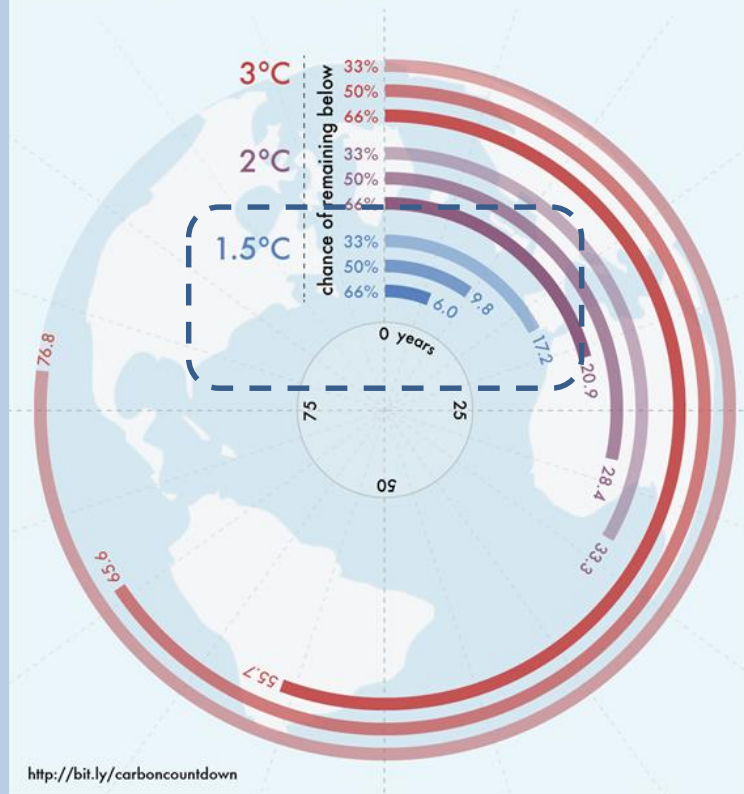
*C = compulsory, O = optional for students with necessary background in Geohazards.
Semester 2 and 4 is open for international student exchange.*



The Paris Agreement Challenge

Carbon Countdown

How many years of current emissions would use up the IPCC's carbon budgets for different levels of warming?

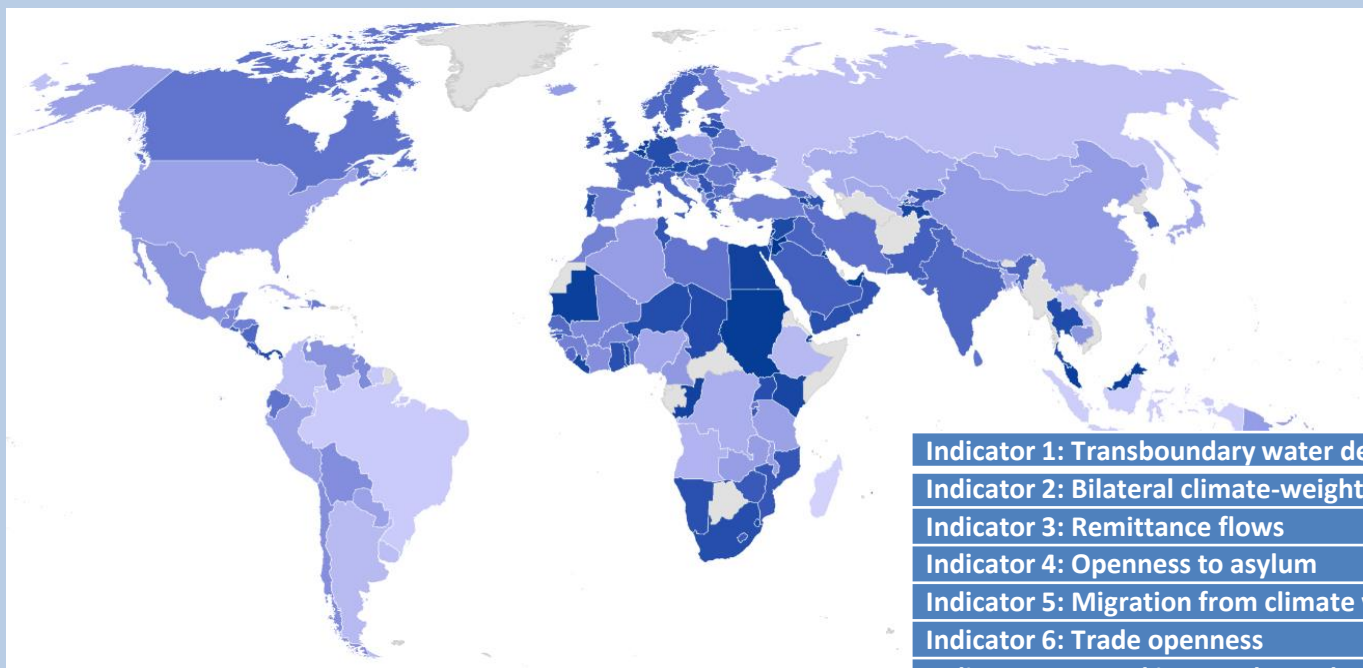


Two observations about the near past

- The need to **mitigate** climate change has been on the table for more than **25 years**
 - still **emissions** continue to **increase**
- The need to **adapt** to climate change has been on the table for more than **10 years**
 - still climate **vulnerabilities** continue to **increase**

And, we need to expanding the currant narrow-sighted perspective on climate vulnerabilities

Stockholm Environmental Institute Index of Exposure to indirect effects of climate change



- Indicator 1: Transboundary water dependency ratio
- Indicator 2: Bilateral climate-weighted foreign direct investment
- Indicator 3: Remittance flows
- Indicator 4: Openness to asylum
- Indicator 5: Migration from climate vulnerable countries
- Indicator 6: Trade openness
- Indicator 7: Cereal import dependency ratio
- Indicator 8: Embedded water risk
- Indicator 9: KOF Globalization Index

One conclusion

- «If current incremental approaches to preventing dangerous climate change and adapting to the change we are already locked into are insufficient, **then more radical approaches may be required**”

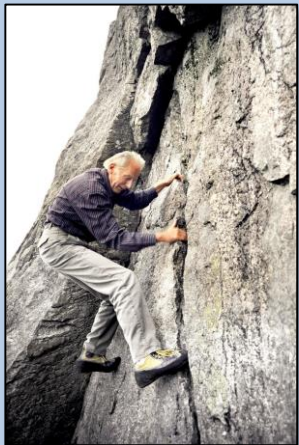
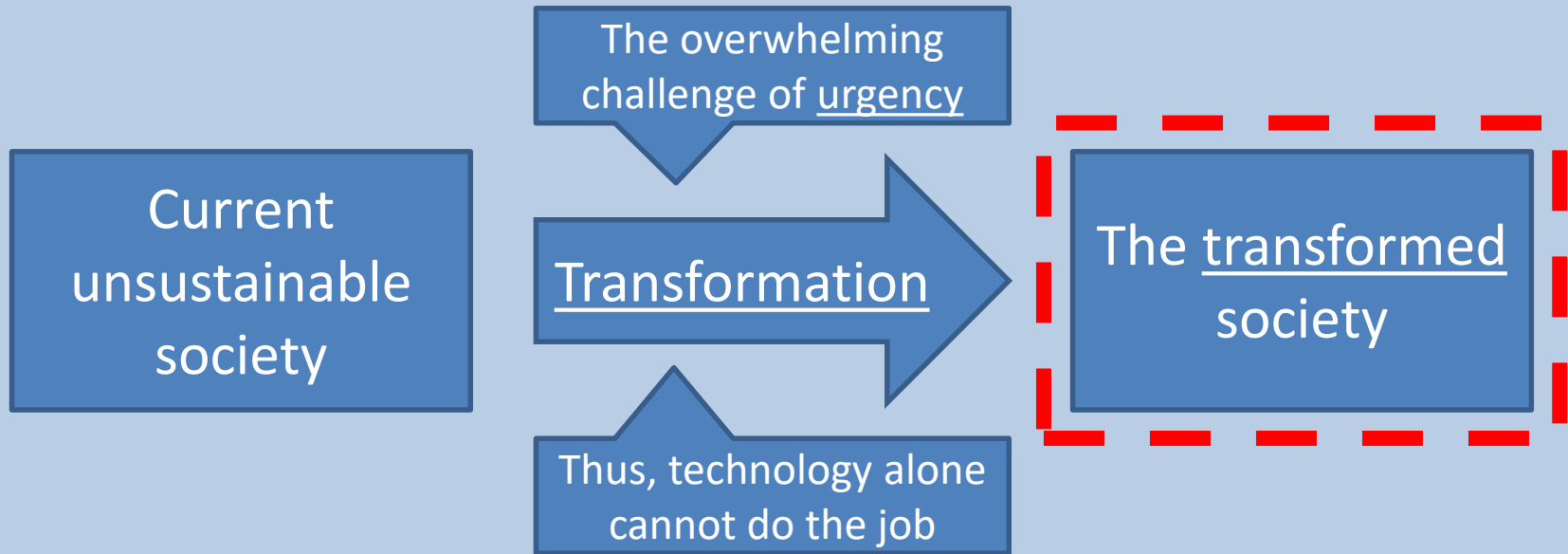
A briefing note issued from the Learning Hub on the concept of
‘transformation’ at the UK Institute of Development Studies
Bahadur and Tanner, 2012:1

..and a corresponding definition

- **Transformation**

- “The **altering of fundamental attributes of a system** (including value systems; regulatory, legislative, or bureaucratic regimes; financial institutions; and technological or biological systems)”
- (as opposite to that of “The process of **adjustment** to actual or expected climate and its effects, in order to **moderate harm or exploit beneficial opportunities**”)

Transformation as process and output



Eco-philosopher and mountain climber Arne Næss:

- “On a long-term basis of 100 years I am **optimistic** with respect the capability of mankind to solve the ecological crisis. However, on a short-term basis I am **pessimistic**”

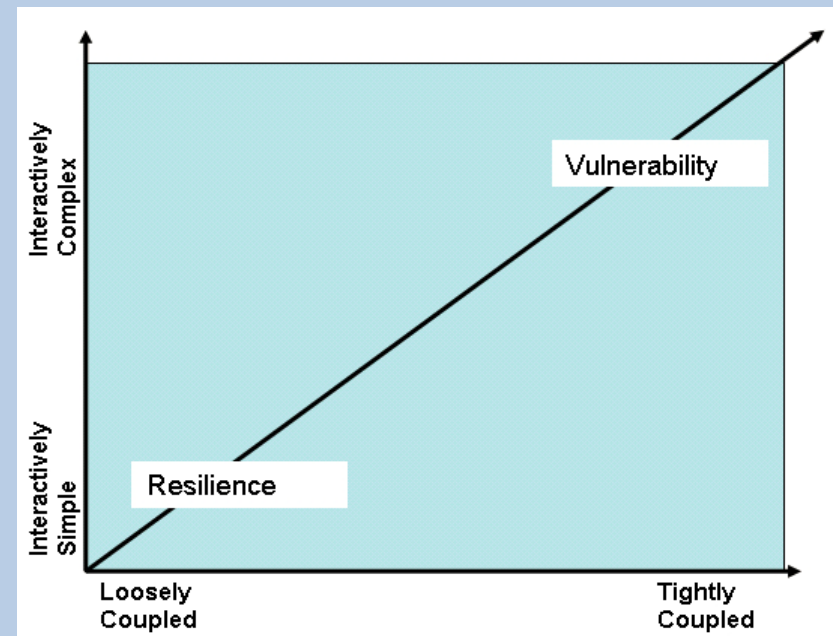
Key characteristics of the transformed society

- Living in a fossil-free world
 - at least in the beginning
- Living with a changed climate
 - Which we currently do not know how will look like
- In many respects, a very different – and - unknown future
- How may mountainous areas of Europe cope under these conditions?

Could climate change be good for mountainous areas? (in a relative sense!)

- In times of big crises – rural areas often come out better than urban areas
 - A potential for increasing “low-capital-intensity” food production and housing capacity
- Rural mountainous areas can be more resilient to the effects of climate change than urban areas
 - When the system is tightly coupled and complex, failures more easily get out of control

Charles Perrow's theory of high-risk societies



Back-casting the transformed mountainous areas

- **Avoid**

- loosing areas with

- a potential of increasing current levels of low-capital-intensive food production
 - a potential of increased housing capacity

- **Maintain**

- Societal structures the creates high resilience

- Loosely coupled and low complexity societies, allowing for high levels of cross-sectorisation, cross disclipinarity and business diversification



Thank you for your attention!

Carlo Aall, caa@vestforsk.no, www.vestforsk.no, + 47 991 27 222

The Alpine Convention: from a political protocol to the implementation of projects



Taja Ferjančič Lakota

Permanent Secretariat of the Alpine Convention

X European Mountain Convention:

Mountains' vulnerability to climate change:

how can people and territories adapt and mitigate its effects?

4 October 2016



The Alpine Convention



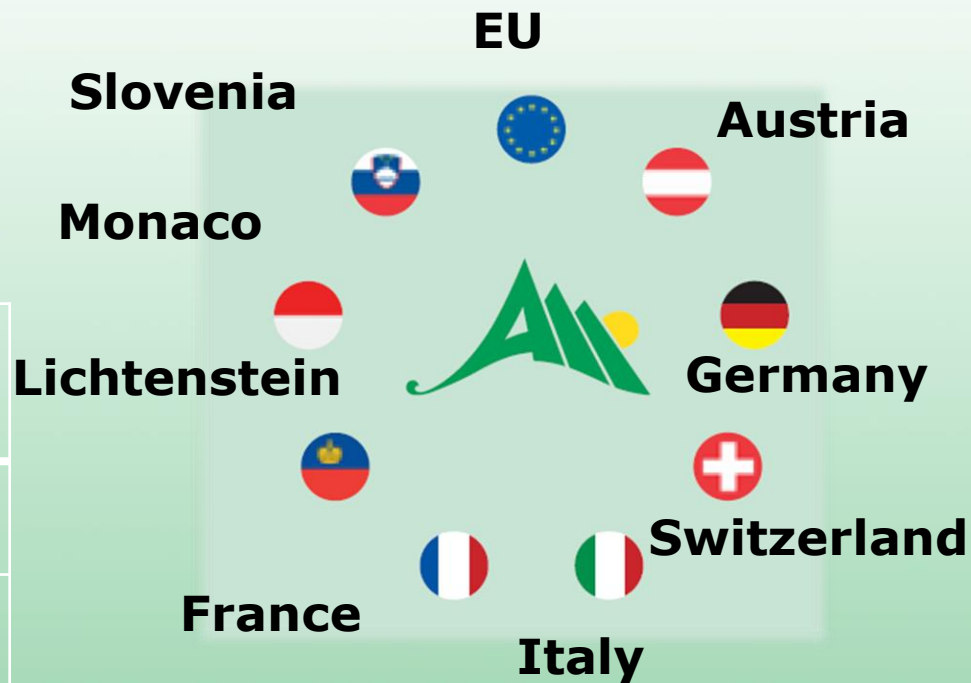
First international treaty for the protection and sustainable development of a mountain range

A small history



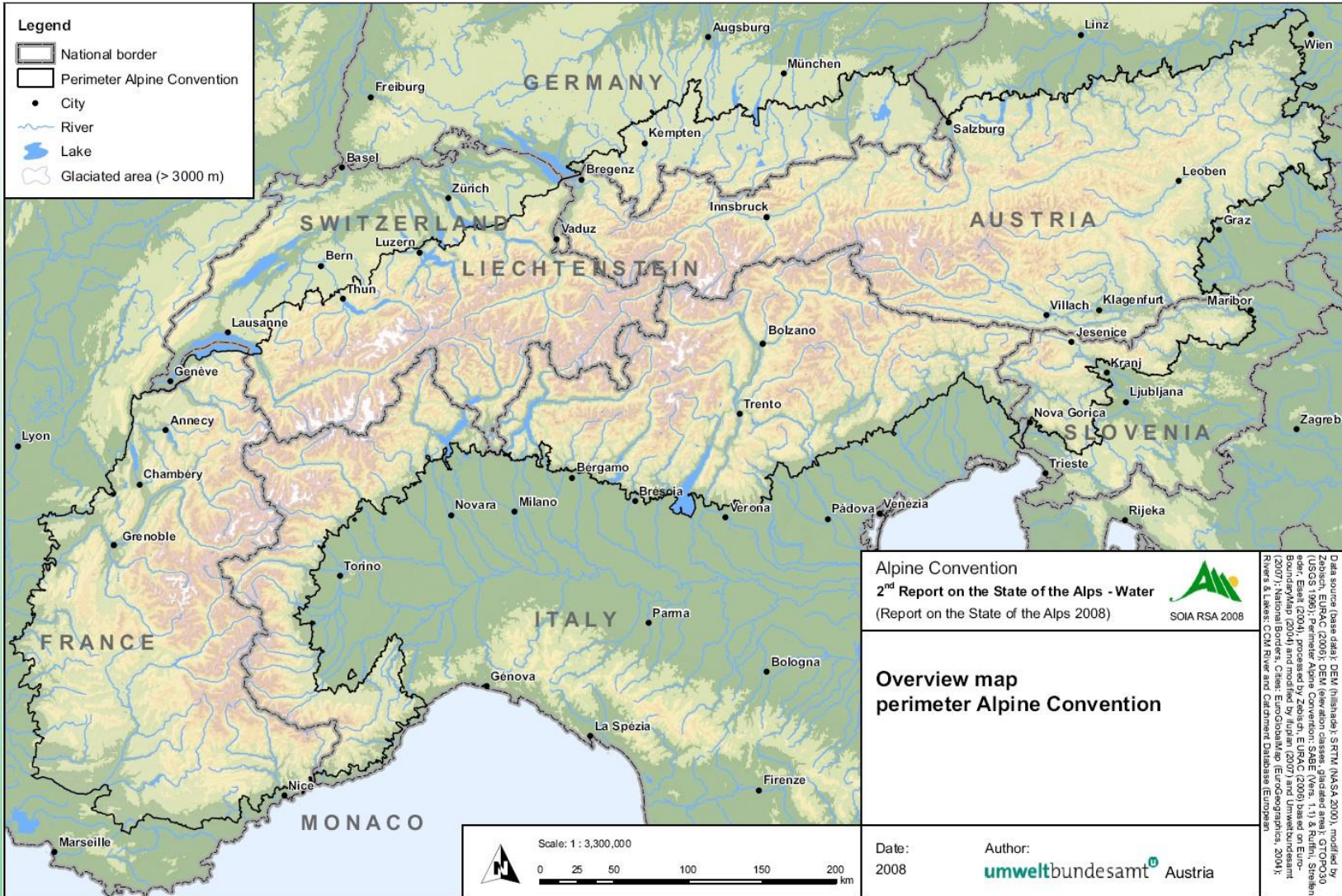
1991	The Convention on the protection of the Alps was signed.
1995	The Convention entered into force
2002	The 8 Protocols entered into force
2003	The Permanent Secretariat was established

Contracting Parties:





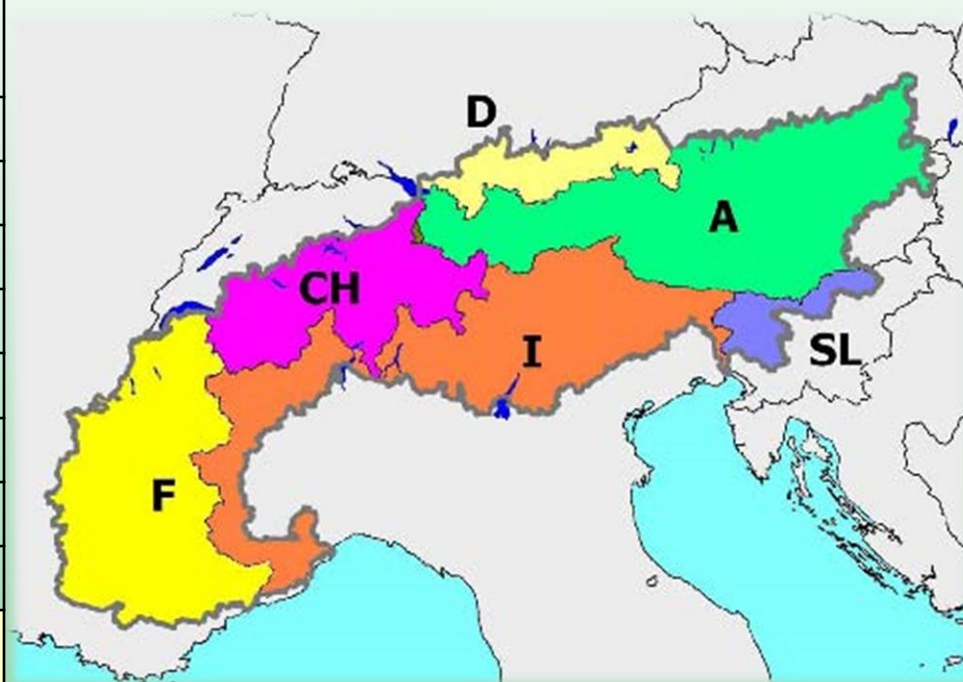
Perimeter of the Alpine Convention





Area and Scope of the Population of the Alpine Convention

COUNTRY	AREA	POPULATION
Italy	27.3%	30.1%
Austria	28.7%	22.9%
France	21.4%	18.5%
Switzerland	13.2%	13.3%
Germany	5.8%	10.2%
Slovenia	3.5%	4.6%
Monaco	0.001%	0.2%
Lichtenstein	0.008%	0.2%
ALPS	190,600 sq km	14.2 million





The Objectives of the Alpine Convention

- aims at the sustainable development of the Alpine region;
- aims to protect the interests of the local population;
- includes the ecological, social, economic and cultural dimension.



Framework Convention and its Protocols

The Convention defines a **framework** by:

- setting basic principles and objectives
- organizing the cooperation

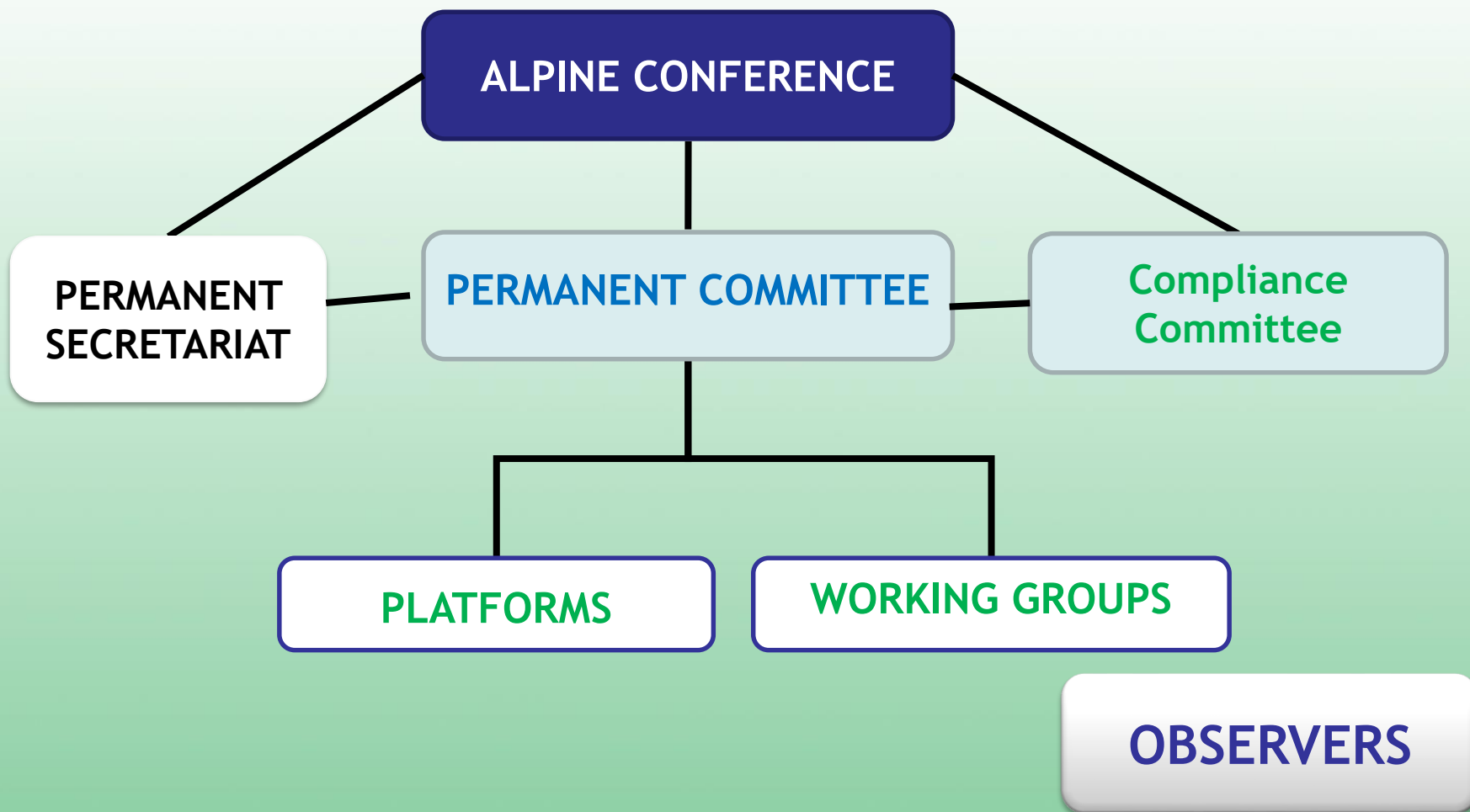
The Protocols regulate **concrete steps** to be taken for the protection and sustainable development of the Alps.

Signed and ratified Protocols are legally binding in the Contracting party.





Alpine Convention Organogram





Implementation on different levels

- Activities of the Working Groups and Platforms
- Multilateral projects of the Contracting Parties
- Cooperation with networks, regions and other partners
- Activities of the Permanent Secretariat
 - information and communication
 - observation and information system for the Alps (SOIA)
 - cooperation
 - exchange of experiences
- European macrostrategy for the Alpine region – EUSALP



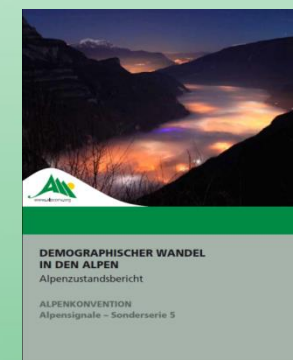
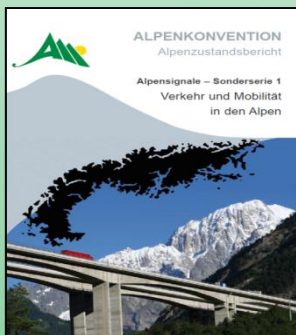
Activities of the Working Groups and Platforms

- In the biannual 2015-2016:11 Working groups and Platforms active:
 - Working Group Transport
 - [Natural Hazards Platform - PLANALP](#)
 - Ecological Network Platform
 - [Water Management Platform in the Alps](#)
 - Large Carnivores, Wild Ungulates and Society Platform - WISO
 - [Working Group Macro-regional strategy for the Alps](#)
 - Mountain Farming Platform Working Group
 - Mountain Forests Working Group
 - Sustainable Tourism
 - Ad hoc working group for the preparation of MAP 2017-2022
 - [Ad hoc expert group for the preparation of RSA6](#)
- Representatives of Contracting Parties and Observers
- Experts for the topic
- Preparing guidelines, recommendation, action plans for different topics



Reports on the state of the Alps

- Produced every 2 years on 1 specific topic
 - RSA1: Transport and Mobility
 - RSA2: Water Management
 - RSA3: Sustainable rural development
 - RSA4: Sustainable tourism in the Alps
 - RSA5: Demographic change in the Alps
 - RSA6: Greening the Economy (in preparation)
- Coordinated by an ad-hoc Working Group
- Experts by Contracting parties and observers
- In-depth research of one specific topic of importance for the Alps
- Concussions – policy recommendations, implementation in practice





Project

- Project for implementation and dissemination of the Alpine Convention are carried out by contracting parties (also bilaterally), observers and other stakeholders – to mention just a few:
 - Cross-border cooperation (upcoming conference on the Karawanks)
 - Youth Parliament of the Alpine Convention
 - Day of the Alpine Convention
- The Permanent Secretariat carries out several project for the promotion and implementation of the Alpine Convention, to mention just one – the **We are Alps tour**





- A week long travel across the Alps for a group of journalists
- Different topic every year (Family Farming, Climate Change, Green Economy)
- Different route every year
- Organized in close cooperation with local partners
- Showing good practice examples from the territory





EU level / EUSALP

- EU is a Contracting party of the Alpine Convention
- Protocols of the Alpine Convention are part of EU law
- Alpine Convention was one of the drivers of EUSALP
 - Decision and Declaration of the XI. Alpine Conference in Brdo on Alpine Strategy for the Alps
 - Contribution of the Alpine Convention to the process towards a Macro-regional Strategy for the Alps (an “Input paper”)
 - Closely followed the process of developing EUSALP
- Alpine Convention observer role in the EUSALP General Assembly and Executive Board
- Co-lead Action Group 6;
- Involvement in other AGs, especially 7, 8 and 9, attention to AG4



Action Group 6

LAND  KÄRNTEN

„To preserve and valorize natural resources, including water and cultural resources “

- 3 sub-topics:
 - Spatial planning and soil conservation
 - Future oriented farming and forestry (nature protection, socio-economic aspects)
 - Integrated and sustainable water management



EUSALP





Thank you for your
attention!

www.alpconv.org



Alpine Convention



alpconv

info@alpconv.org





Carpathian Region: From a Strategic Agenda on Adaptation to Climate Change to practical improvements

Harald Egerer¹, Matthias Jurek¹, Sandor Szalai²

¹ Head, UNEP Office, Vienna

² Chair, WG on Adaptation to Climate Change, Carpathian Convention

Content

- About the Convention
- The strategic agenda on climate change in the Carpathians
- Development of projects to adapt and mitigate climate change
- Recommendations how mountain areas in general can better adapt and mitigate climate change



History and main objective

- 7 State Parties
- Adoption: 22 May 2003 in Kyiv, Ukraine
- Entry into force: 4 January 2006
- 4 Meetings of the COP: 2006, 2008, 2011, 2014
- Current presidency: Czech Republic

Main objective:

- Protection and Sustainable Development of the Carpathian region

Policy Responses towards a Climate Proofed Carpathian Economy

- Public policy
- Mainstreaming of adaptation objectives
- Ecosystem management
- Increase transnational cooperation
- Ecoregional approach
- Action in framework of Carpathian Convention and of the EUSDR

Working groups

- WG on Conservation and Sustainable Use of Biological and Landscape Diversity
- WG on Spatial Development
- WG on Agriculture and Rural Development
- WG on Sustainable Forest Management
- WG on Sustainable Industry, Energy, Transport and Infrastructure
- WG on Sustainable Tourism
- WG on Cultural Heritage and Traditional Knowledge
- WG on Adaptation to Climate Change

Climate Change adaptation WG at Carpathian Convention

- Decision COP3/15 on Climate change of the COP 3 of the Carpathian Convention: a Working Group on Adaptation to Climate Change under the Carpathian Convention has been established
- Carpathian Convention aims at introducing a new Article on climate change because the topic is so important

Workplan

- Preparation of strategic agenda on adaptation in the Carpathians
- Planning of adaptation measures
- Realization of a clearing house for the Carpathians in the wider EU context

Eger Group

- Workshop on sharing of experiences on adaptation to climate change in mountain areas, Eger, Hungary, 22 October 2012
- Participation of representatives from Pyrenees, Alps, Carpathians, Balkans, Caucasus, Central Asia
- Main outcome: establishment of a platform for exchange of information and know-how and development of possible common activities
- On Facebook: Eger Working Group

Potential Priority Climate Change Adaptation Actions

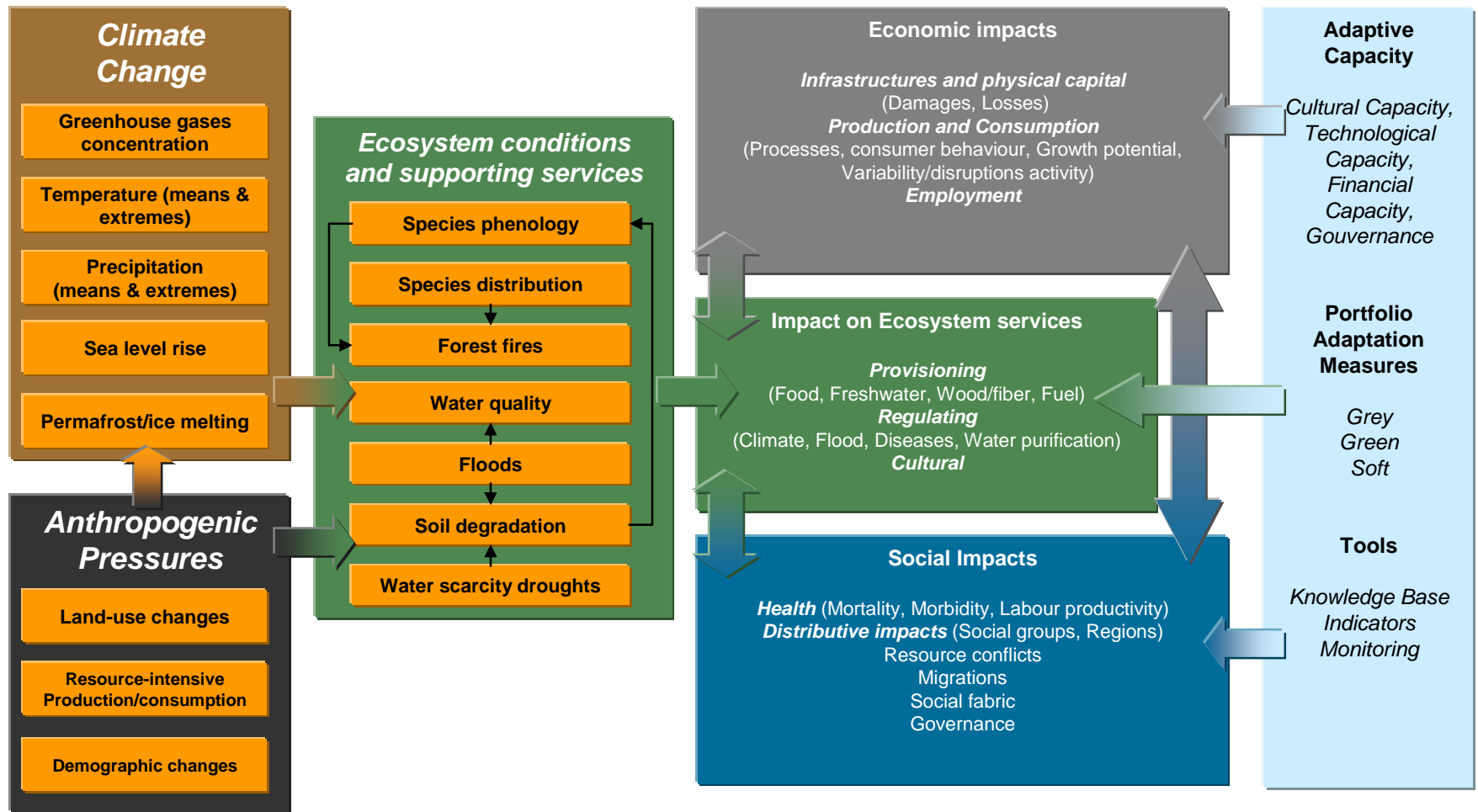
- Capacity building programme which draws on, and enhances the connectivity of the Region
 - Information management and awareness rising
 - Climate-proofing of infrastructure, investments and climate-cross compliance
 - Development of forestry measures for climate change adaptation
 - Making biodiversity management more dynamic
 - Evaluation of Carpathian ecosystem services
 - Capacity-building on proposal-writing for adaptation funding
 - Permanent Working Group on Climate Change

Strategic Agenda, content

1. Introduction
2. Background
3. Impacts of climate change in the Carpathians
4. Policy responses to create a Path to a Climate-Proofed Carpathian Economy
5. Institutional and organisational responses
6. Cross-Cutting Opportunities
7. Opportunity for the EU Funds from 2014-2020:
8. Steer the Region's Development Towards a Climate-Proofed Carpathian Space
9. Potential Priority Climate Change Adaptation Actions

Environmental pathway of vulnerability and adaptation

Jacques Delsalle, Evdokia Achilleos, DG Environment, Unit D1 – Protection of Water Resources



Preparatory actions

- Three projects:
 - Climate of the Carpathian region (CarpatClim)
 - Integrated assessment of vulnerability of environmental resources and ecosystem-based adaptation measures (Service contract CARPIVIA)
 - In-depth assessment of vulnerability of environmental resources and ecosystem-based adaptation measures (Framework contract CarpathCC)

CarpatClim project

- Climate of the Carpathian Region
- Led by the Hungarian Meteorological Service
- Harmonized long-term meteorological data (1961-2010)
- Daily, gridded database of more than 50 meteorological parameters
- Main aim: freely available common database to improve comparability of project results
- www.carpatclim-eu.org

Philosophy of CARPATCLIM

- No common database of raw data
- Each country provide the same work (hope for the availability of most possible data)
- Common softwares
- National and international consistency
- Near border data exchange (minimum number of data exchanged on equal basis)



CARPIVIA

- Carpathian Integrated Assessment of Vulnerability to Climate Change and Ecosystem-based Adaptation Measures (CARPIVIA)
- Assessed the vulnerability to climate change of the Carpathian region's main ecosystems
- Produced an inventory of climate change effects and ecosystem-based adaptation measures

- www.carpivia.eu

CarpathCC

- Carpathian In-depth Assessment of Vulnerability to Climate Change and Ecosystem-based Adaptation Measures (CarpathCC)
- Examined the vulnerability of water, forests, ecosystems and related production systems
- Proposed concrete ecosystem-based adaptation measures
- Assessed the costs and benefits of adaptation measures
- www.carpathcc.eu

Vulnerabilities of six important sectors 1/6

Water resources

- * Reduced snow cover
- * Sudden&heavy rainfalls
- * Changes in precipitation pattern → increase: the risk of floods, erosion, landslide risk
- * Declining river water levels → drought events
- * Declining groundwater level → availability&quaility of drinking water



(Source: Sakis Werner)

Adaptation measures 1/6

Water resources

- * Adjusting permits for water use or pollution discharge
- * Introducing smart irrigation systems
- * Planting forests and combating illegal logging in catchment areas in order to reduce nutrient loading and soil erosion
- * Restoring floodplains near rivers and streams to buffer extreme runoff and reduce flows of nutrients
- * Ensuring legal frameworks are in place to support planning and implementation of adaptation measures

Forests – vulnerability

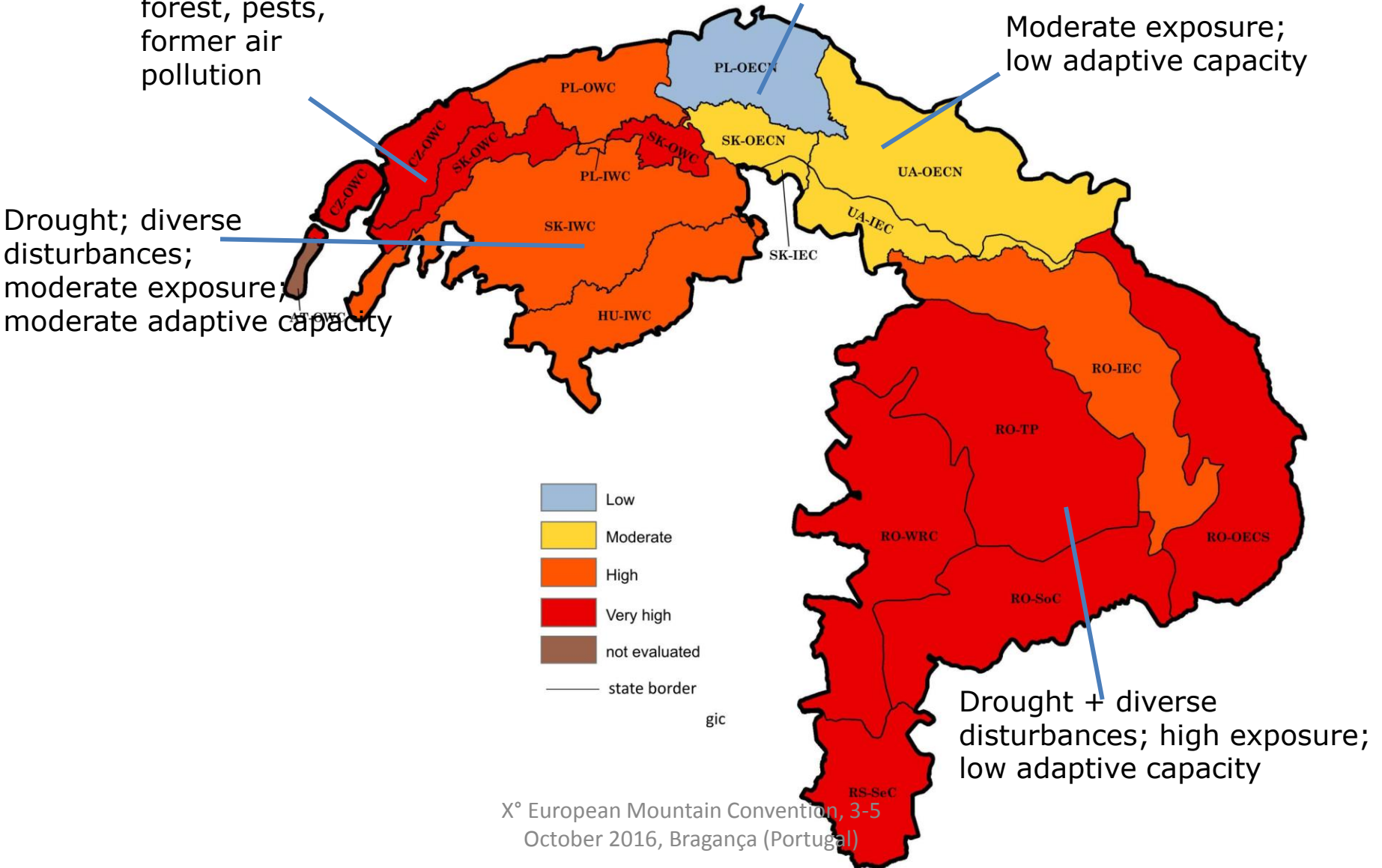
Secondary spruce forest, pests, former air pollution

Good forest structure, lower exposure, moderate AdCap

Moderate exposure; low adaptive capacity

Drought; diverse disturbances; moderate exposure; moderate adaptive capacity

Drought + diverse disturbances; high exposure; low adaptive capacity



Vulnerabilities of six important sectors 2/6

Forests and forestry

- * The way climate change affects forests: depend on forest structure, species composition, natural conditions, applied management, air pollution
- * Drought, windstorms → can trigger the pest outbreaks (bark beetles, defoliating species) and moving in of new species (Romania)
- * Forest decline → affects wood production, biodiversity and other ecosystem services



(source: sciencedaily.com)

Adaptation measures 2/6

Forests and forestry

- * Promote&encourage sustainable forest management
 - * Supporting and harmonizing regional and European forest monitoring schemes, including those tracking newly emerging pests and pathogens
 - * Increasing awareness about the role of forests in integrated watershed management
- particularly in biodiversity maintenance, water regulation and erosion control

Vulnerabilities of six important sectors 3/6

Wetlands

- * Increased temperature → dry out wetlands
- * Wetland loss → reduces habitat for plant & animal species, habitat fragmentation → threatened: migratory birds and amphibians
- * The most vulnerable wetland habitats: peatlands



(Source: wildlifetrust.org)

Adaptation measures 3/6

Wetlands

- * Developing monitoring systems for aquatic ecosystems in the region
- * Integrating wetland protection with flood control practices
- * Supporting programmes aimed at wetland and peatland restoration, floodplain rehabilitation
- * Creating new wetlands and lakes to enhance local water retention capacity and support biodiversity

Vulnerabilities of six important sectors 4/6

Grasslands

- * Increase in temperature, extreme events, tree line shifting upward, agricultural intensification → reduce the quality and coverage of grasslands → habitat fragmentation & species loss
- * Increased nutrient input (mulching & use of fertilizers) → increase the presence of invasive species & affect water quality → not suitable for grassland management



[Source: Barbara Scabo]

Adaptation measures 4/6

Grasslands

- * Implementing agro-environment measures and the EU nature & biodiversity Natura2000 management plans
- * Diversifying species and breeds of crops and animals
- * Managing through (extensive) grazing and mowing
- * Avoiding the abandonment of land or mulching or fertilizing techniques
- * Avoiding overgrazing

Vulnerabilities of six important sectors 5/6

Agriculture

- * Maize and wheat yields will decline (become feasible at higher altitudes)
- * Sunflower, soya and winter wheat yields might increase (due to higher temperature & migration of the northern limit of these crops)
- * Pest threaten is predicted to rise → productivity loss
- * Traditional mixed agro-ecosystems may disappear (due to land abandonment and land use change)



(Source: network.hu)

Adaptation measures 5/6

Agriculture

- * Supporting small-scale traditional farms as important economic activities delivering multiple ecosystem services
- * Supporting agro-environment programmes
 - to maintain&enhance biodiversity and viability of semi-natural grasslands&mixed agro-ecosystems

Vulnerabilities of six important sectors 6/6

Tourism

Positive effects from CC

- * Rising temperature in summer
→ bring additional tourists to the mountains

Negative effects from CC

- * Decline in snow depth&duration
→ limited winter sport possibilities



(Source: Andreas Beckman)

Adaptation measures 6/6

Tourism

- * Develop year-round, resilient destinations with good accommodations (e.g. wellness&conference hotels)
- * Develop ecotourism, health and active tourism
- * Evaluate investments in tourism infrastructure in the light of projected snow and water availability
- * Develop climate-friendly winter sport projects, relaxation and entertainment activities
- * Continue to diversify resorts and markets

Publications



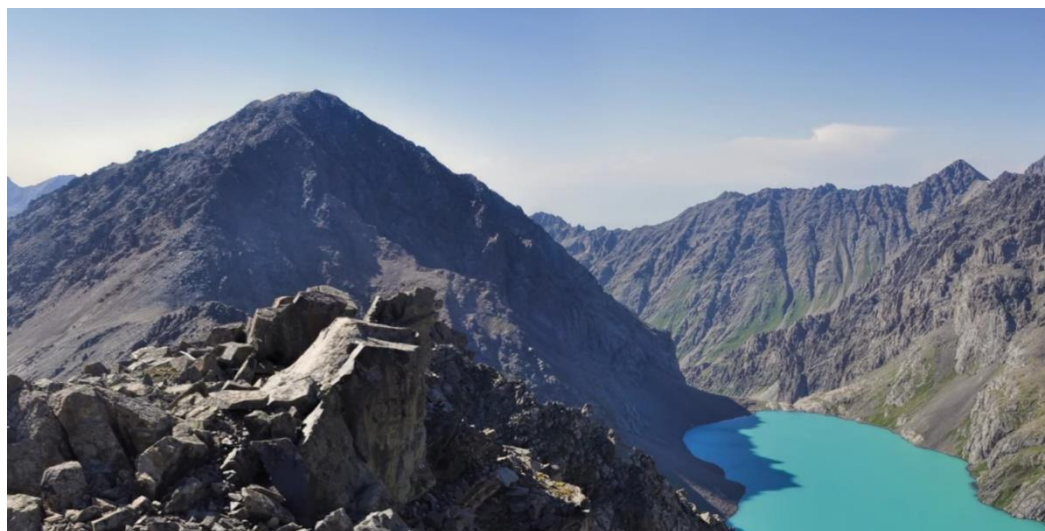
Recommendations

- Develop the green economy (having in mind the financial background, this is not a mass production)
- Strengthen the co-operation with the neighbouring territories (water tower role, mountains and rivers together)
- Need for adaptation at the local level
- Strengthen the co-operation among the mountainous areas (more similarity than near the sea level)

Thank you for your attention!

Pyrenees Climate Change Observatory OPCC-2 Project and Associated Projects 2016-2019

Bragança, 4 October 2016



Pyrenees Climate Change Observatory

1. Coordination between the different countries and /or regions in order to have a coordinated action
 1. Mountains: vulnerability and impacts
 2. Aims and approach of OPCC
2. Results OPCC-1 (20011-2014)
3. Action plan OPCC-2 (2016-2019)

<https://www.youtube.com/watch?v=zA96x0HN4CY> (2min30sec)

Mountains: vulnerability and impacts

- Mountains are amongst the regions where the effects of climate change are more evident.
- Some of Europe's less developed regions are in mountainous areas, yet mountains are among the most important providers of natural resources.



1



2



3

1. Areas of high emissions of CO₂
2. Areas of high consumption of energy and resources
3. Areas suffering the impacts of climate change



Mountains for Europe's Future

- Mountains beyond political borders.
- Cultural heritage.
- Natural water towers.
- Biodiversity reservoirs.
- Home of their inhabitants.
- Early observations of impacts
- Local economies.

Launch of the OPCC

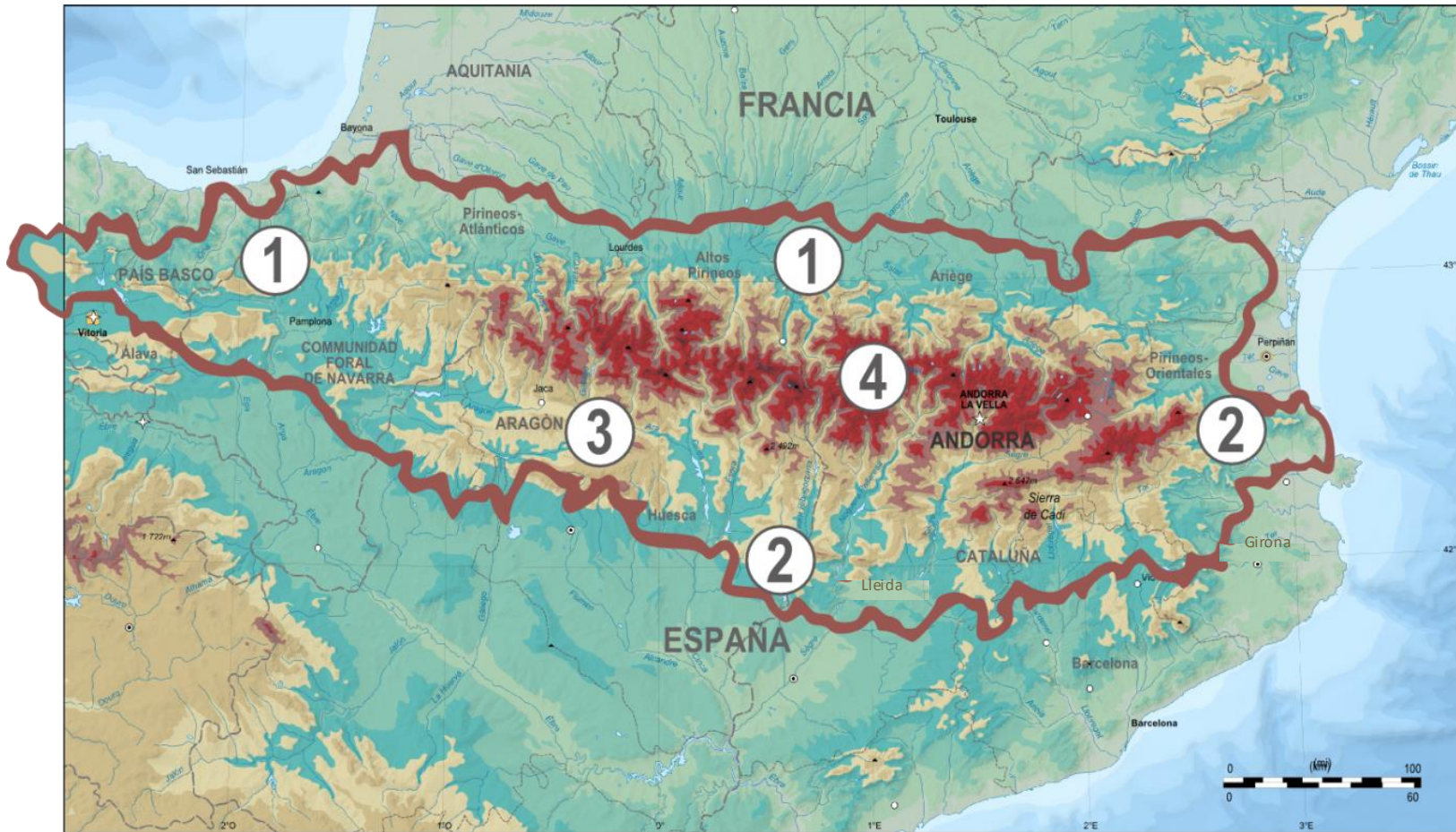
- ✓ Pyrenees, mountain region: high vulnerability to climate change
- ✓ Climate Change has effects in natural systems and main socioeconomic sectors in the Pyrenees.
- ✓ Climate Change is not about political borders. Individual work without cooperation has no sense in the frame of the Pyrenees bioregion.

In 2010, under the Presidency of the Midi-Pyrenees Region, the Consortium Pyrenees Working Community launched the Pyrenees Climate Change Observatory, OPCC.

Diversity of the Pyrenees



Diversity of the Pyrenees



Vision and goals OPCC

- **Vision OPCC:** to follow and understand the climate evolution in the Pyrenees with the aim of limiting the impacts and adapting to its effects by defining appropriate adaptation strategies
- **Goals OPCC:**
 - Knowledge about climate change impacts and vulnerability
 - Action on adaptation, decision making
 - Sharing experiences, benchmarking, evaluation

Proyecto OPCC-Poctefa



OBSERVATOIRE PYRÉNÉEN du Changement Climatique

Mutualisation de la connaissance sur l'impact
du changement climatique en montagne

Janvier - Septembre 2010



“ Les montagnes sont sensibles aux impacts des changements climatiques rapides, et fournissent des terrains intéressants pour la détection précoce et l'étude des signaux du changement climatique et de ses impacts sur les systèmes hydrologiques, écologiques et sociétaux. (Beniston, 2003) [1] ”



Proyecto del Programa europeo de cooperación territorial España, Francia y Andorra (POCTEFA): financiado en un 65% por el Fondo Europeo de Desarrollo Regional (FEDER).



Working areas of OPCC

> 5 grandes acciones :

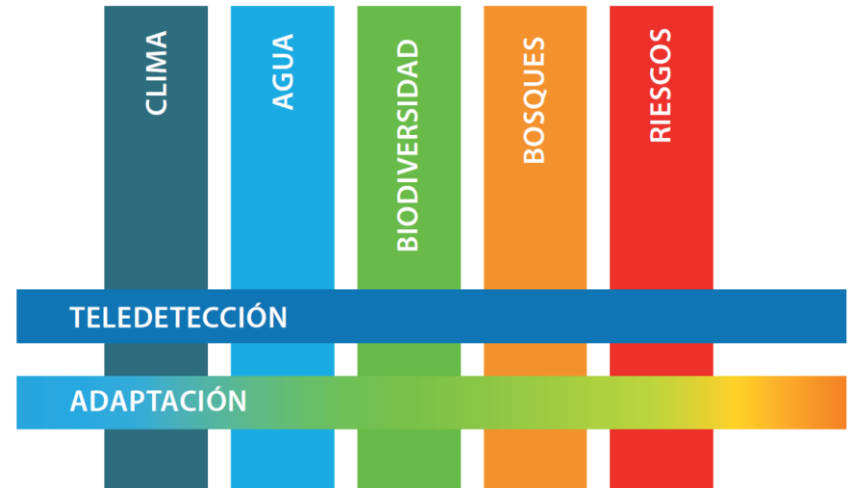
- Clima
- Agua
- Biodiversidad
- Bosques
- Riesgos naturales

> 2 acciones transversales:

- Teledetección
- Adaptación

> 1 plataforma de información:

- Geoportal



Main working areas of OPCC

Climate action in the OPCC's project: Development of a unique database of high quality climate series based on precipitation, temperature, and the definition of common indicators to all territories of the Pyrenees.

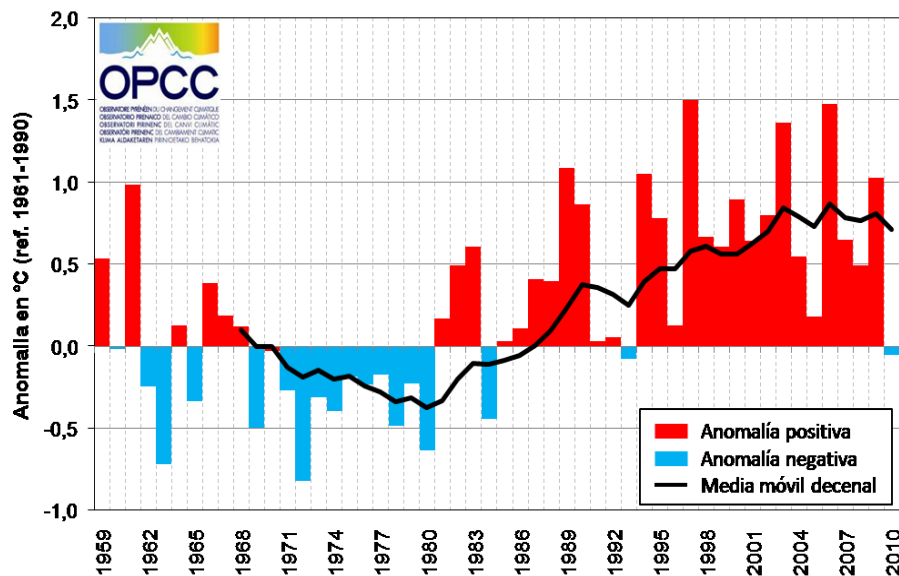
Biodiversity action in the OPCC's project: Network monitoring of species and populations of the vascular flora of the Pyrenees to detect the impact of climate change and to develop possible measures to control or adapt.

Forests and Natural Hazards in the OPCC's project: Understanding the potential impacts of climate change on natural hazards. Propose guidelines to improve the management of forests integrating climate change.

Water in the OPCC's project: Apply knowledge of the impact of climate change on water resources. Develop methodologies to integrate climate change in the Drought Management Plan.

Climate: temperature

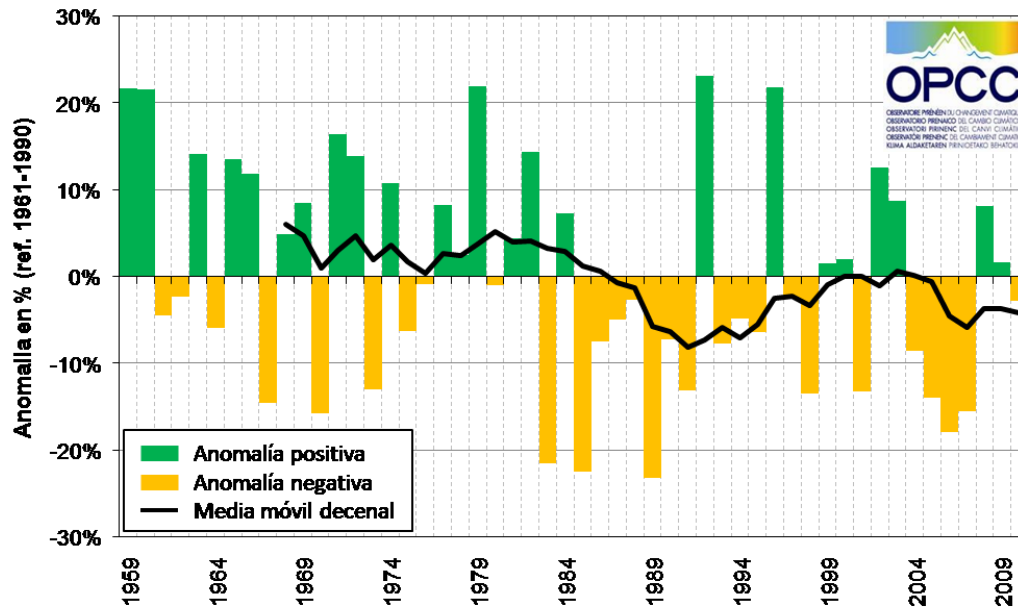
EVOLUCIÓN DE LA TEMPERATURA MEDIA ANUAL
MACIZO DE LOS PIRINEOS (1959-2010)



1959-2010	Tm		Tmax		Tmín	
	tend	sig. est.	tend	sig. est.	tend	sig. est.
Pirneos	0.21	sí	0.25	sí	0.16	sí
Pir, Norte	0.20	sí	0.24	sí	0.16	sí
Pir. Sur	0.22	sí	0.27	sí	0.17	sí

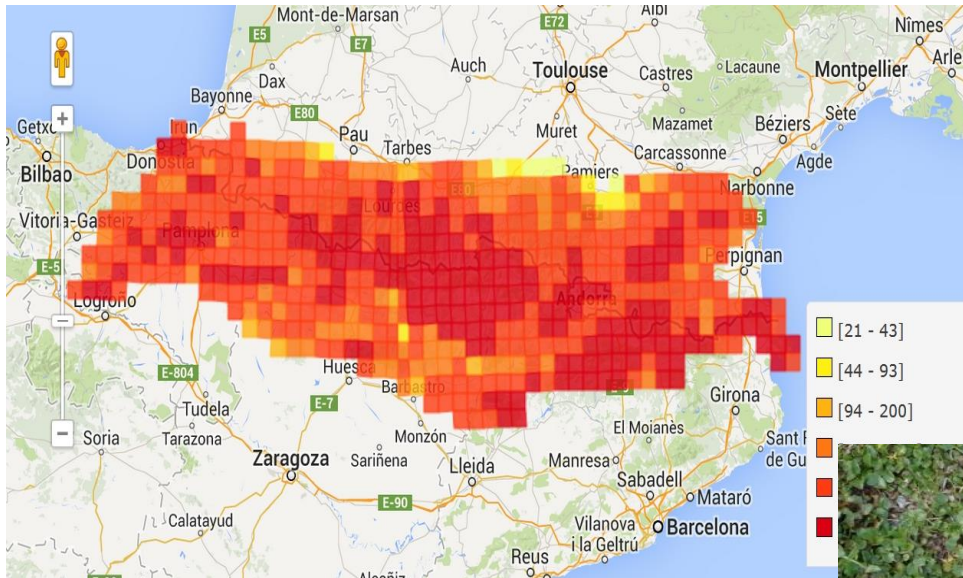
Climate: precipitation

EVOLUCIÓN DE LA PRECIPITACIÓN ACUMULADA ANUAL
MACIZO DE LOS PIRINEOS (1959-2010)



1959-2010	PPT	
	tend	sig. est.
Pirineos	-2.5%	sí
Pir, Norte	-1.3%	no
Pir. Sur	-3.7%	sí

Biodiversity: flore



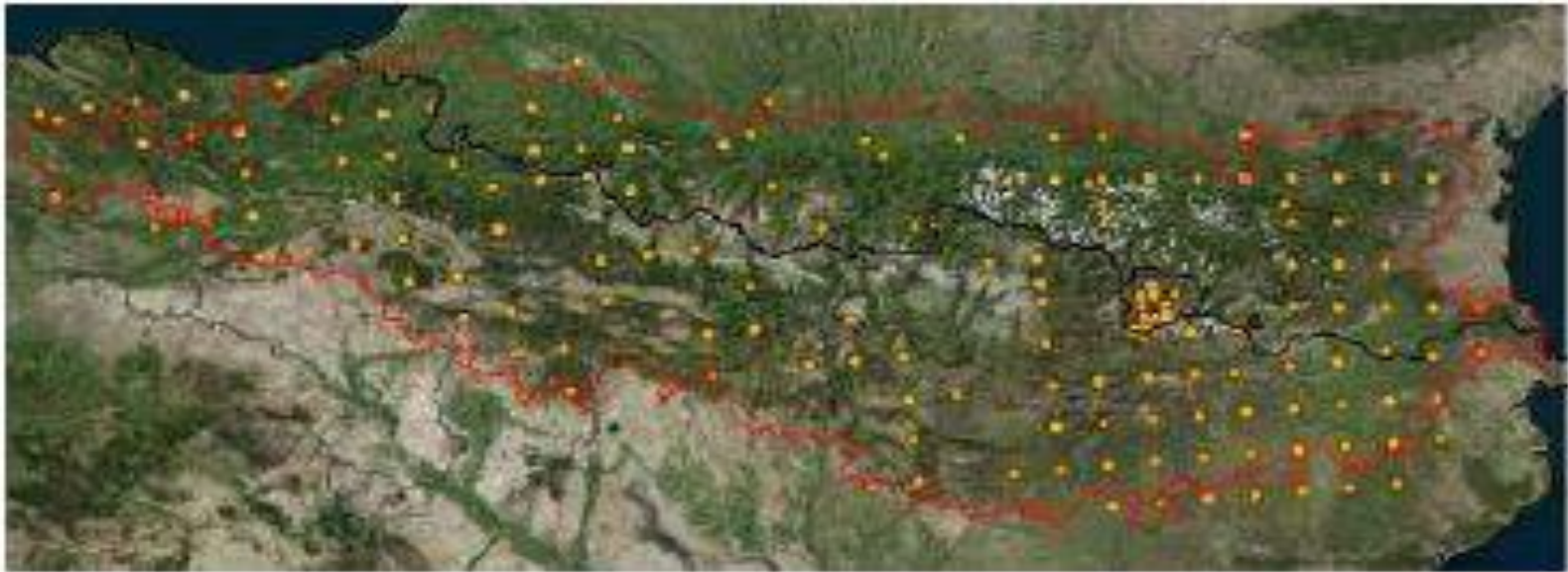
5.469 taxones
3980 autóctonas



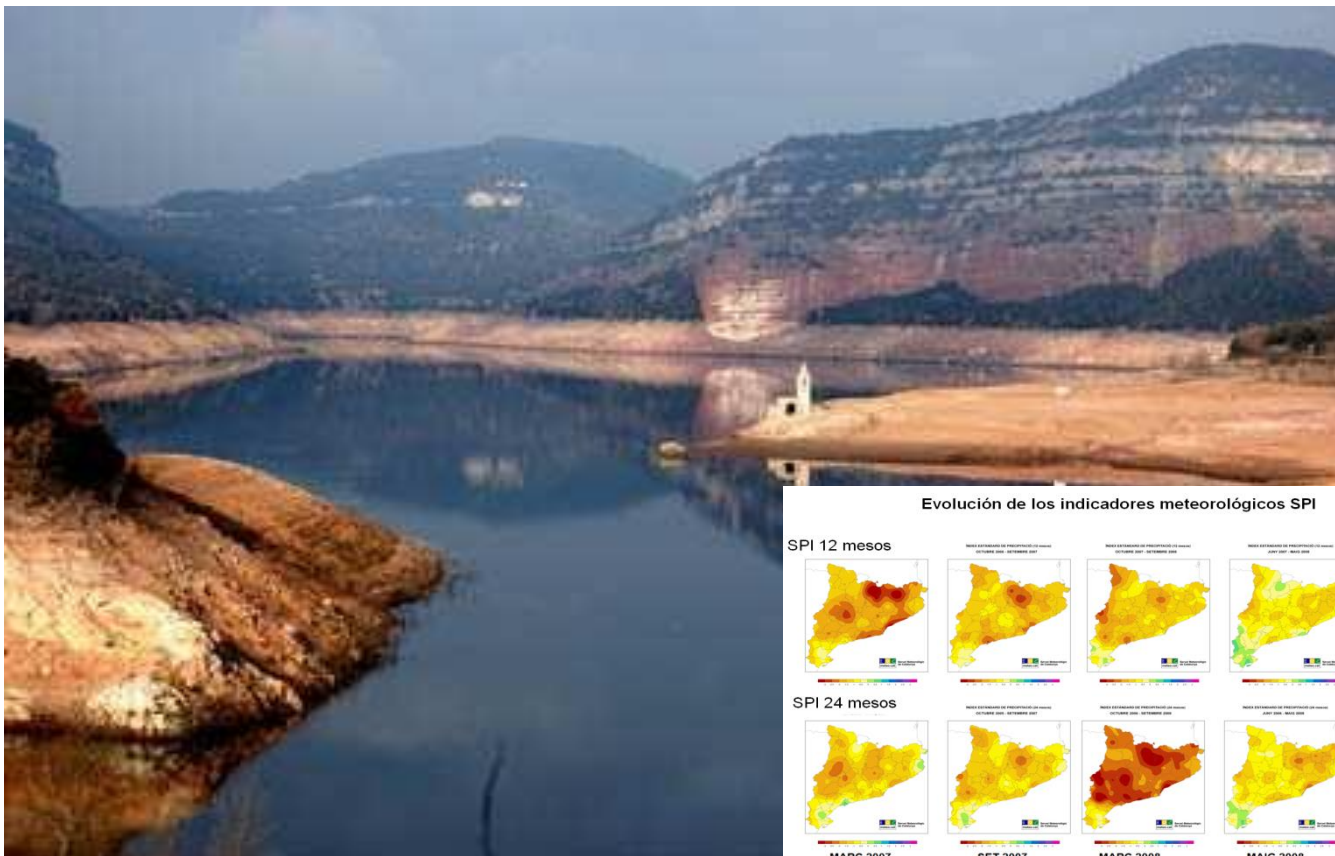
Biodiversity: neveras de *Salix herbacea*



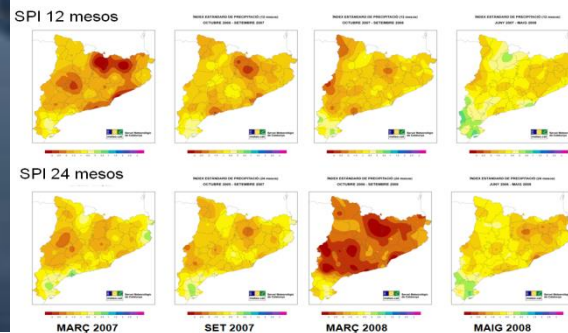
Forest



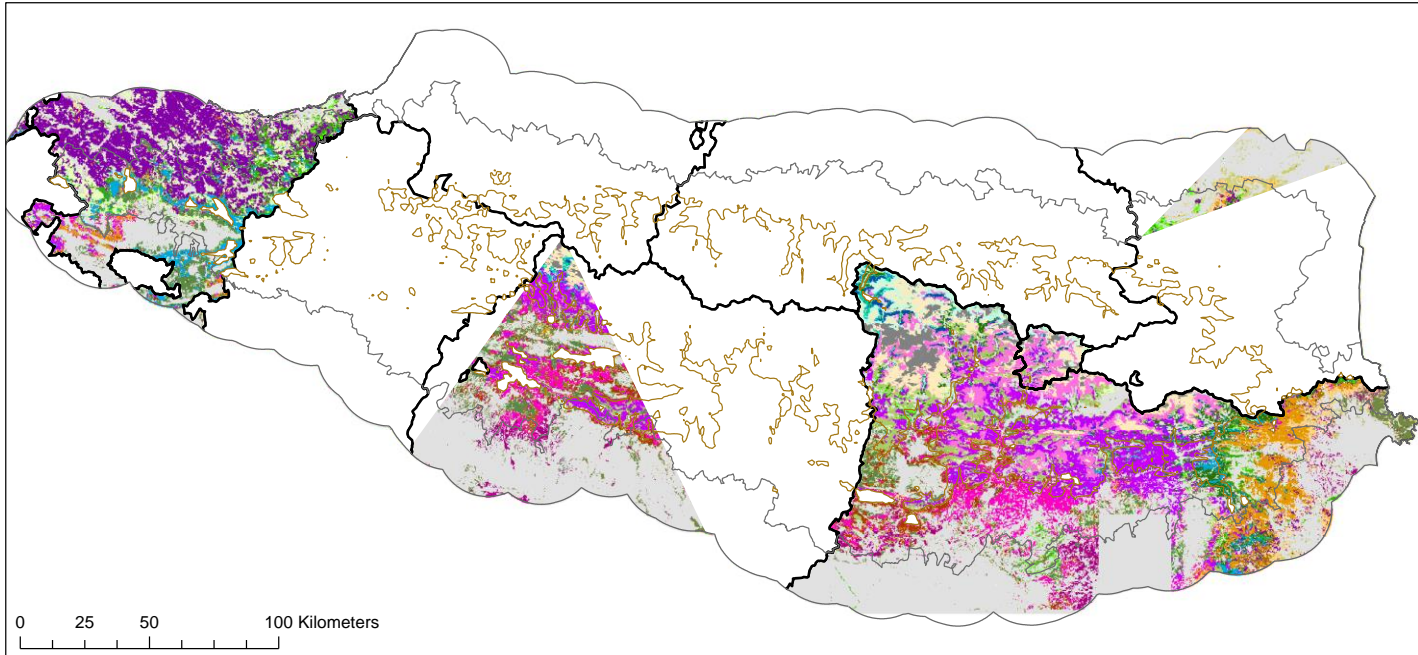
Water



Evolución de los indicadores meteorológicos SPI



Teledetección



Carte des formations forestières: formations majoritaires 2000-2006

11: Chênes à feuillage caduc	25: Chênes sempervirents	36: Pin de Monterey	58: Matorral montagnard
12: Feuillus	26: Chênes sempervirents et formations arbustives	38: Sapin pectiné	61: Pelouse, prairie
13: Feuillus (montagne)	31: Pin à crochets	43: Forêt mixte : hêtre-sapin	62: Grande lande montagnarde
15: Hêtre	32: Pin d'Alep	52: Garrigue ou maquis boisé	63: Lande alpine
17: Chêne tauzin	34: Pin noir	54: Garrigue ou maquis non boisé	64: Pelouse alpine
23: Chêne vert	35: Pin sylvestre	57: Matorral	81: Sol nu, rochers
			83: Eau

Adaptation Initiatives

Analyse of 85 adaptation initiatives in the Pyrenees and 18 in Europe:

Tourism: 25%-35% of Andorre GDP (13% winter tourism and 44% hotel bookings in French Pyrenees)

Winter sports – high impact of CC

Scampei: 25-55 days less without snow in 2030 and 50-100 in 2080

Agriculture: 7,4 % active population in 2000

80% surface in french Pyrenees to feed animals

More CO₂, higher productivity but more droughts

Less quality of wine, less productivity of fruits because of droughts

Forest: 50% of surface in the Pyrenees

Some of the species will lose favourable areas

More resilience, less vulnerability, less fire risk

Water: Pyrenees: Ebro, Garona, Adour

20-40% less in Garone debit in 2060

35% and 20% les in Ebro and catalan rivers

Publications

OBSERVATORIO PIRENAICO DEL CAMBIO CLIMÁTICO

OPCC

Conexión
Nombre de usu: [input type="text"] [input type="password"] [input type="button" value="OK"]

INICIO ¿QUIÉNES SOMOS ? ACCIONES SOCIOS NOTICIAS AGENDA AYUDA NEWSLETTER

El cambio climático
en los Pirineos

- › El territorio de acción
- › Impactos, vulnerabilidad
- › Observar, adaptarse

Herramientas
a vuestra disposición

- › Directorio
- › Cartographie
- › Datos
- › Estudios

El proyecto OPCC-POCTEFA
Los resultados

- › Una red de actores
- › La evolución del clima
- › Los indicadores

Publicaciones del OPCC

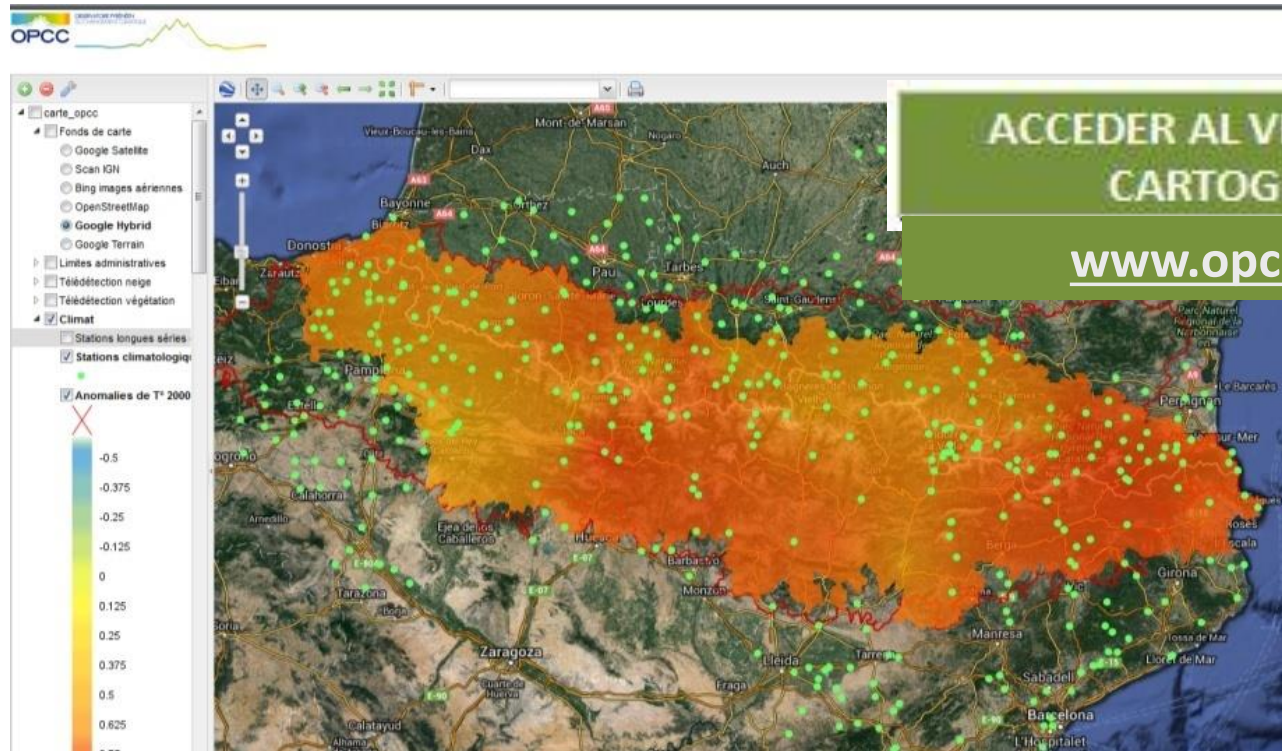
Compartir los conocimientos sobre el impacto del cambio climático en montaña. 2011

El clima cambia, los Pirineos se adaptan. Estudio sobre adaptación 2011-2012 - 1ª fase 2012

Integración de la adaptación al cambio climático en sus actividades y políticas.

Primeros resultados de las acciones Proyecto OPCC-POCTEFA

Geoportal



Comunicación

- Valorización de los resultados
- Directorio de organizaciones
- Base de datos de estudios
- **40.000** visitas a la página web
- **266** estudios publicados
- **29** capas de información geográfica
- **57** organismos censados en el directorio
- **11** contribuciones ciudadanos
- **74** metadatos
- **132** noticias



Redes internacionales

El OPCC se presentó ante otros macizos montañosos en Hungría

30 DE ENERO DE 2013

El pasado 23 de octubre, la Convención de los Cárpatos organizó un coloquio en Eger (Hungría) sobre las estrategias de adaptación al cambio climático en las zonas de montaña.

El OPCC a través de la presencia de Carlos Miró, representante del Gobierno de Andorra, representando el objetivo era compartir, entre actores de las regiones, las acciones de adaptación al cambio climático en los Píneos.

Los primeros elementos sobre los aspectos de OPCC: El clima cambia, los Píneos se adaptan, el estudio de adaptación al cambio climático se pu

La jornada contó con la participación de representantes de los Cárpatos, los Píneos, los Balcanes, el Cáucaso gracias al número y la diversidad de los macizos. En el próximo número de la newsletter del OPCC en estas jornadas.

Para saber más:
-Coloquio "Sharing of experiences on adaptation to climate change in mountain areas second conference" etc.) <http://www.carpathianconvention.org>
-Convención de los Cárpatos: <http://www.carpathianconvention.org>
-Adaptación al cambio climático en los Píneos: Fase I <http://www.opcc-cb.org/images/espacedocument>

El OPCC participa en el primer encuentro sobre el cambio climático en las zonas de montaña europeas



La Secretaría de Medio Ambiente y Sostenibilidad de la Generalitat de Catalunya acoge el próximo viernes un encuentro entre la Convención de los Cárpatos, la Convención de Trabajo de los Píneos (CTP) junto al Observatorio Pirineo del Cambio Climático (OPCC). Este es el primer encuentro entre los tres macizos y la Agencia Europea de Medio Ambiente para hablar de los impactos del cambio climático a las montañas europeas.

Con esta reunión se quiere profundizar en cuáles son los temas científicos técnicos de interés común, la viabilidad europea a través de la plataforma CLIMATE ICAP7 y las oportunidades para las iniciativas transnacionales en temas de cambio climático que ofrece la nueva Política de cohesión 2014-2020.

La reunión se realiza en el marco del encuentro final del proyecto CIRCLE 2 MOUNTAIN, que se celebra estos días, 29 y 27 de septiembre. Este proyecto forma parte del Climate Impact Research & Response Coordination for a Larger Europe (CIRCLE 2), un programa que tiene por objetivo cubrir el espacio entre la investigación sobre los impactos del cambio climático y los responsables políticos.

Se presentarán proyectos de los Alpes, Cárpatos, Píneos, y áreas de montaña de Suecia y de Asia Central. La Unidad de Adaptación de la Oficina Catalana del Cambio Climático (OCCC), como representante del OPCC, presentará los resultados del Estudio de Adaptación al cambio climático en los Píneos elaborado en el marco del Observatorio.

El OPCC en Hamburgo. Conferencia Europea de Adaptación al Cambio Climático

Por Gabriel Borrás*

Gracias a los contactos establecidos por el Observatorio a lo largo de su corta existencia, hemos invitado a explicar el proyecto del OPCC en la primera Conferencia Europea de Adaptación al Cambio Climático, coorganizada por el Ministerio de Educación e Investigación del gobierno alemán, la Comisión Europea, y la ciudad y la universidad de Hamburgo. Tres días muy intensos puesto que la Conferencia se estructuraba en 12 temas, que se iban desarrollando simultáneamente en las distintas aulas de la Universidad de Hamburgo: desde la teoría de la adaptación, hasta los casos prácticos de estudio, pasando por el papel del evento en adaptación, la evaluación de la vulnerabilidad, las estrategias de adaptación o los planes de acción. Una asistencia de 700 personas, en su mayoría del centro y norte de Europa. Una excelente representación del sur.

La participación del OPCC se realizó en el marco de una sesión titulada "Climate Change Research in Mountain Areas" y organizada por CIRCL2 (Climate Impact Research & Response Coordination for a Larger Europe, un proyecto EU FP7). Compartimos tiempo y discurso con Markus Wehrhahn, de la Agencia Medioambiental de Austria; Susanna Menzel, del Instituto Federal Suizo para el Medio Ambiente y el Territorio; y representantes de los Alpes, 1 de los Cárpatos y

de los resultados del estudio de vulnerabilidad, agua, biodiversidad, etc. de seguir existiendo como observatorio, se por parte de los asistentes. El moderador era Stéphane Issard, de la Unidad de Adaptación de la Oficina Catalana del Cambio Climático (OCCC). Naturalmente, durante los días de la conferencia, la Convención de los Alpes se ocupó de los trabajos que los tres representantes de los Alpes se acordaron por el hecho de la armonización de datos climáticos para todo el macizo pirenaico.

Hubo la ocasión para invitar al OPCC en la sesión previa al final del proyecto de adaptación que, en nombre del OPCC, acepté con mucho gusto. El punto focal del Consejo Científico del OPCC. Naturalmente, durante los días de la conferencia, la Convención de los Alpes se ocupó de los trabajos que los tres representantes de los Alpes se acordaron por el hecho de la armonización de datos climáticos para todo el macizo pirenaico.



Alpes

Cárpatos

Honduras



Agencia Europea de Medio Ambiente

LE 2 MOUNTAIN.
Cambio Climático del 23 de septiembre del OPCC en Cataluña.



COP21-CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE



MARRAKECH
COP22/2016/CMP12
UN CLIMATE CHANGE CONFERENCE

Socios y colaboradores



Generalitat
de Catalunya



GOBIERNO
DE ARAGON



Govern d'Andorra



Servei
Meteorològic
de Catalunya



Action plan OPCC 2016-2019

Technical Comité of the OPCC



OPCC-2

- **Knowledge**
 - Report on Climate Change for the Pyrenees
 - Monitoring indicateurs on natural systems: forest, flore (Floristic Atlas of the Pyrennes), lakes, water
 - Climate Database
 - Regionalised Climate projections and impacts
 - Geoportal
 - **Decission making**
 - Sectorial workshops
 - Synergies with new projets
 - Updating of initiatives on adaptation
 - Case studies
 - **Sharing experiences, evaluation**
-

OPCC-2 and associated projects

OPCC 
PIRAGUA

OPCC 
CLIMPY

OPCC 
CANOPEE

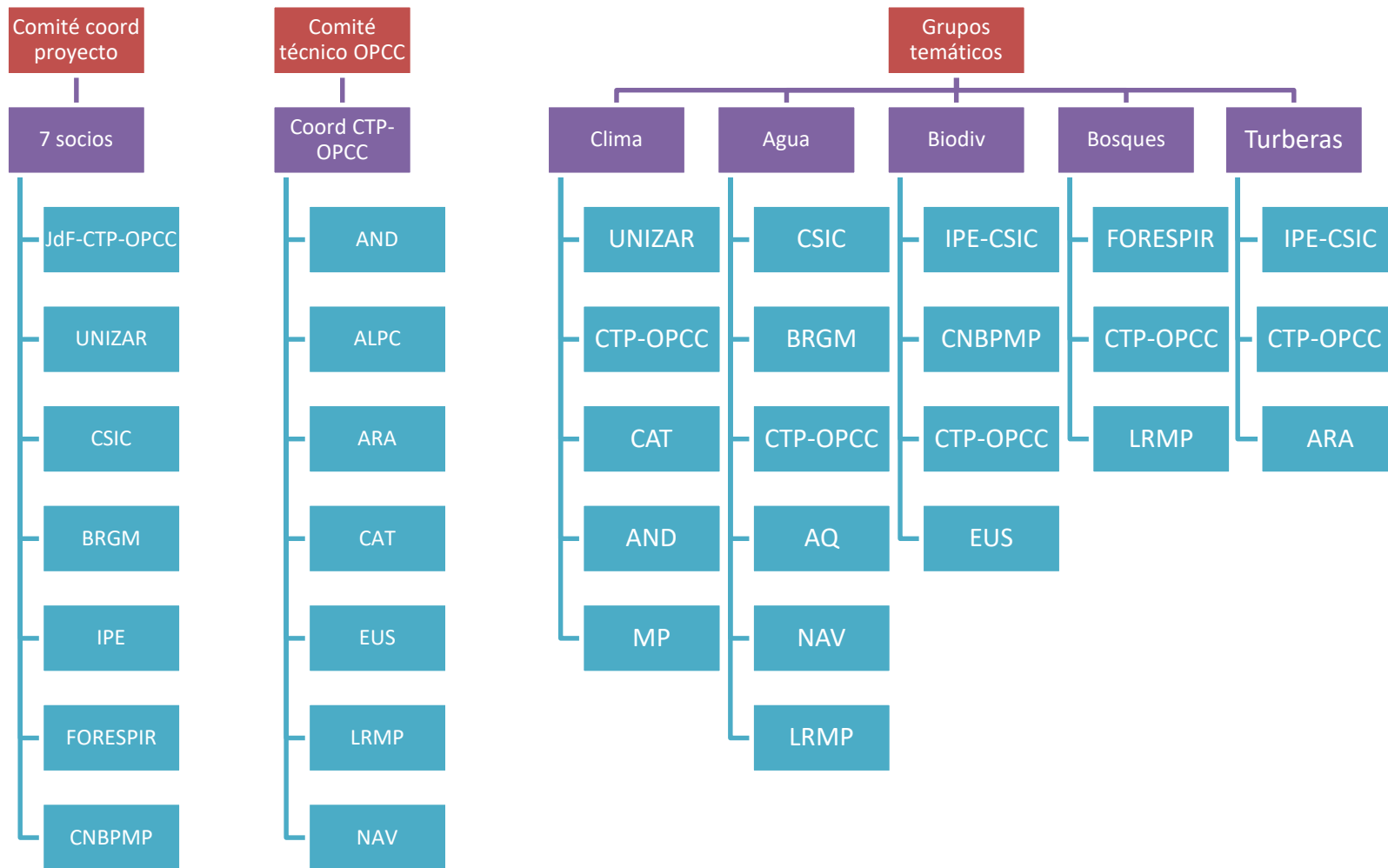


OPCC 
REPLIM

OPCC 
FLORAPYR



OPCC-2 y proyectos asociados



OPCC-2 y proyectos asociados



Observatorio Pirenaico de Cambio Climático (OPCC)

Cooperación en materia de cambio climático de los 7 territorios CTP

Thank you

Info_opcc@ctp.org



**Regional approaches to addressing climate change:
How are mountain ranges
mobilized at political level?**



Mountain Partnership

Martin Price, Braganca 4 October 2016



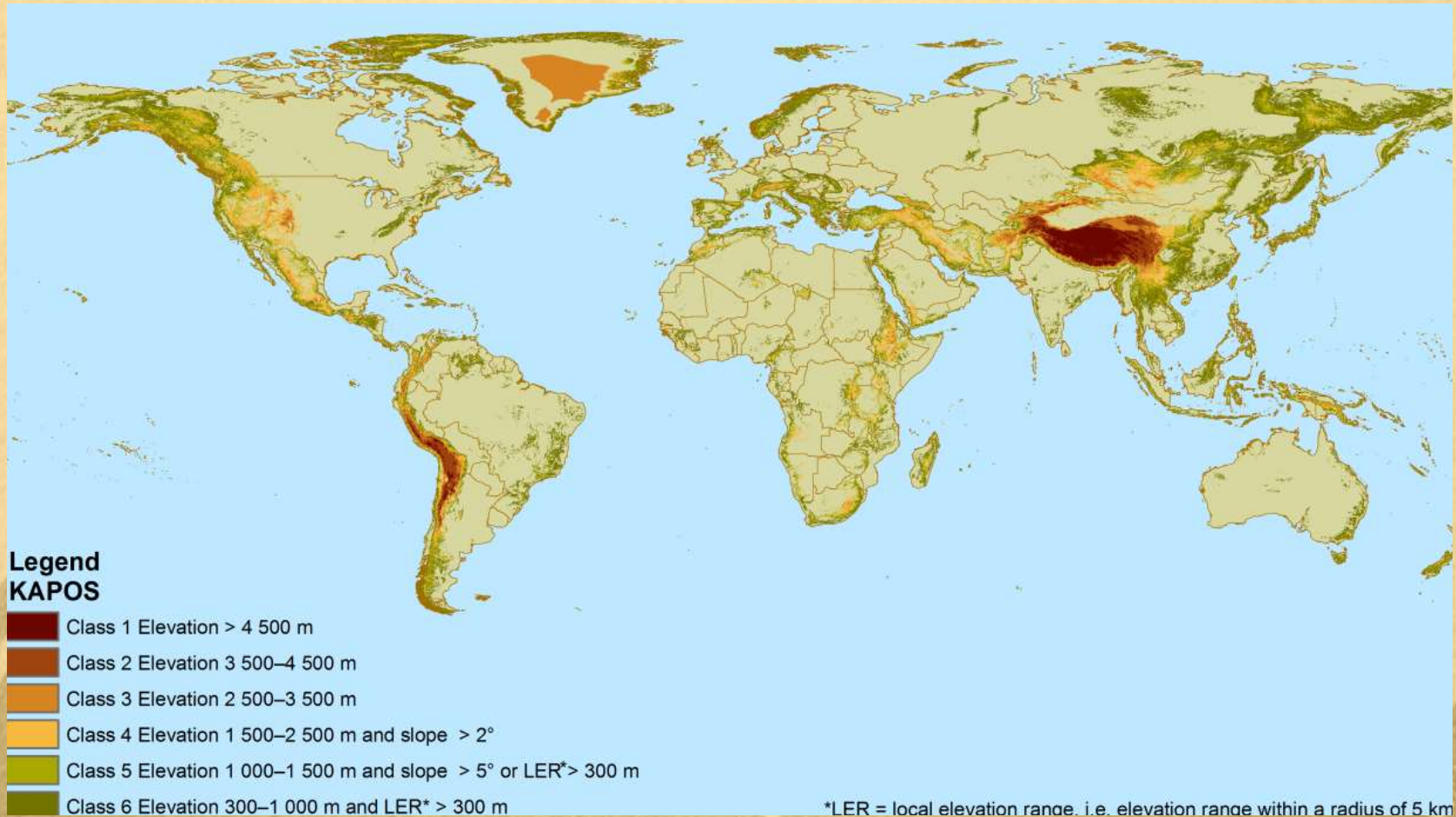
In this presentation:

- Mountain areas and peoples
- Why regional mechanisms
- Hindu Kush Himalayan Partnership
- Andean Mechanism
- Africa Regional Mountain Forum
- Conclusions



Mountain areas

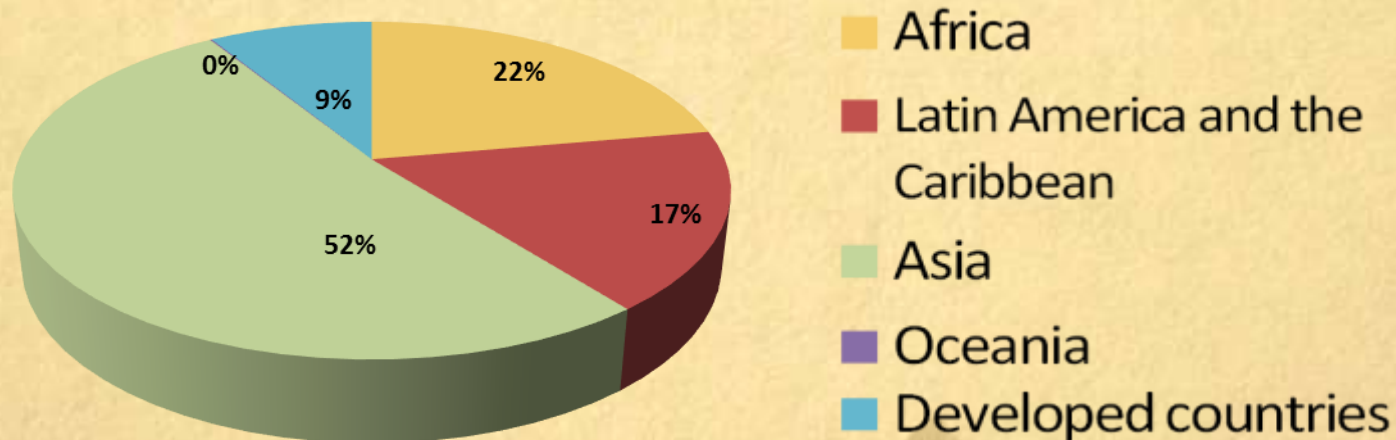
32 million km² = **22%** of earth's land surface



Mountain population (2012)

Mountain population by region:

91% in developing countries



Vulnerability to food insecurity

From 2000 to 2012, the vulnerability of mountain peoples to food insecurity increased from **35% to 39%**

The vulnerability to food insecurity of RURAL mountain populations increased from **38% to 45%**



1 in 3

mountain people in
developing countries
is facing hunger
and malnutrition.

Compare this number with the
global average of **1 in 8**

Why Mechanisms for Mountains?

Regional, interregional and transboundary cooperation in mountain regions is key for combating the adversities caused by climate change and promoting development



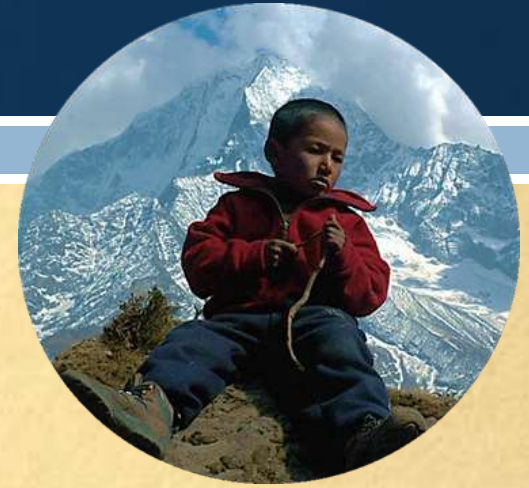
Why Mechanisms for Mountains?

- SDG17 of the UN 2030 Agenda for Sustainable Development calls for revitalizing global partnerships for sustainable development
- 2016 UNSG report on Mountains recommends to:
 - promote regional mechanisms for transboundary cooperation
 - support existing mechanisms, such as the Alpine Convention, the Carpathian Convention, and the Andean regional mechanism
 - promote the exchange of experiences and lessons learned



HKH Partnership

Hindu Kush Himalayan Partnership for Sustainable Mountain Development



- Launched on 24 May 2016 by the environmental ministries of ICIMOD's eight member countries: Afghanistan, Bangladesh, Bhutan, Myanmar, Nepal, and Pakistan
- Purpose: to promote the Mountain Agenda in the context of the UNFCCC Paris Agreement and the UN 2030 Agenda for Sustainable Development, particularly SDG17

HKH Partnership

Goals:

- ❑ Reduce climate change
- ❑ Mainstream disaster risk reduction into development
- ❑ Promote policies and programmes that alleviate poverty
- ❑ Reduce physical and social vulnerabilities
- ❑ Improve ecosystem services



HKH Partnership

Strategies:

- ❑ Forging new partnerships for devising integrated and innovative solutions
- ❑ Capacity building and technology transfer
- ❑ Engaging with the private sector
- ❑ Tapping new financial instruments such as the Green Climate Fund (GCF)
- ❑ Enhancing policy coherence

Andean Initiative

- 2014 - Argentina, Bolivia, Chile, Colombia, Ecuador and Peru established a regional mechanism to address mountain issues in the Andes within the Mountain Partnership, with financial support from FAO
- Aim: to provide for sustainable development of the Andes, strengthening of national institutions, and well being of mountain peoples.
- The **Andean Initiative was officially launched in San Miguel del Tucumán in September 2007. It has a Declaration and an Andean Action Plan.**



Andean Initiative outcomes

- **Argentina** – National Committee for the Sustainable Development of Mountain Regions since 2005
- **Bolivia** – Mountain Committee still being set up
- **Chile** – National Mountain Committee created in 2014 with a ministerial decree
- **Colombia** – Mountain Committee with an advisory role for Central Government since 2013
- **Ecuador** National Mountain Committee since 2006
- **Peru** – National Working Group on Mountain Ecosystem established for IYM2002, revitalised in 2013



Africa Regional Mountain Forum

- The first African Mountains Regional Forum, “Towards a Shared Mountain Agenda for Africa”, was held in Arusha, Tanzania, in 2014
- The Arusha Declaration established the African Sustainable Mountain Development Fund and the Africa Regional Mountains Forum to share knowledge and information and to promote inter-governmental policy dialogue



Africa Regional Mountain Forum

Objectives:

- ❑ Enhance understanding of conservation and development issues in the region
- ❑ Share lessons and experiences on conservation and development challenges including water, energy, food security and climate change
- ❑ Identify strategic actions to address major emerging issues such as climate change
- ❑ Promote collaboration between stakeholders for a regional framework on sustainable mountain development in Africa

Advocating for SMD globally

- Towards the creation of a mechanism to address mountain priorities under UNFCCC and other international processes
- Two side events at UNFCCC CoP 22 in Morocco, November 2016, will highlight mountain issues



Conclusions

- The 2030 Agenda for Sustainable Development pledges to **leave no one behind** and stresses the importance of reaching those furthest behind first
- **Mountain-specific policies** and the inclusion of mountain communities in decision-making processes and capacity development can **improve the livelihoods of communities** while also conserving and restoring mountain ecosystems
- Efforts should be made to **increase scientific knowledge** of mountains and **collect disaggregated data** for sound analysis, policy advice and, ultimately, for change.

Thank you for this opportunity!



www.mountainpartnership.org