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E DELLA TUTELA DEL TERRITORIO E DEL MARE

THE ALPINE CONVENTION IS THE FIRST INTERNATIONAL TREATY FOR THE PROTECTION AND PROMOTION OF THE SUSTAINABLE DEVELOPMENT OF A CROSS-BORDER MOUNTAINOUS REGION
italian presidency 2013-2014
alpine convention

Climate Action Plan of the Alpine Convention

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Alps: the Water Tower of Europe

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The Alps are usually defined the Water Tower of Europe.

With a population of nearly 14.000.000 inhabitants, they retain the water supply for about 55.000.000

With their water reserves and their capital for biodiversity, have a key role to play towards other territories.

Therefore, their protection goes beyond the supra-national dimension.

Name	Area (10 ³ kmq)	Population in the basin (Millions)	Mean contribution of the Alps to total discharge (%)	Areal Proportion of total Alps (%)
Danube	801	81	26	10
Rhine	185	55	34	15
Rhone	95	16	41	23
Po	74	16	53	35

Second Report on the State of the Alps, 2009



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Adaptation plans for mountain areas: why?

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The Alps are vulnerable...

- The **increase of temperature** in the Alpine area in the last thirty years is **three times higher** than the average increase in the northern hemisphere.
- The **rainfall pattern is changing** in terms of reduction of rainy days and increase in intense rainfall events.
- The higher temperatures are accelerating the **cryosphere melting processes** (glaciers, permanent snow and permafrost) and increased the associated risks.
- Acceleration of melting processes and changes of the rainfall patterns, will cause significant **changes in the hydrological regime** (reduction of the summer run-off and increase in winter run-off) with consequences in the **geological risks** and **future availability of water resources**.
- The Alpine region is characterized by valuable **social and ecological features** by **high vulnerability to natural hazards** and it is also subjected to growing **anthropogenic and environmental pressures**.

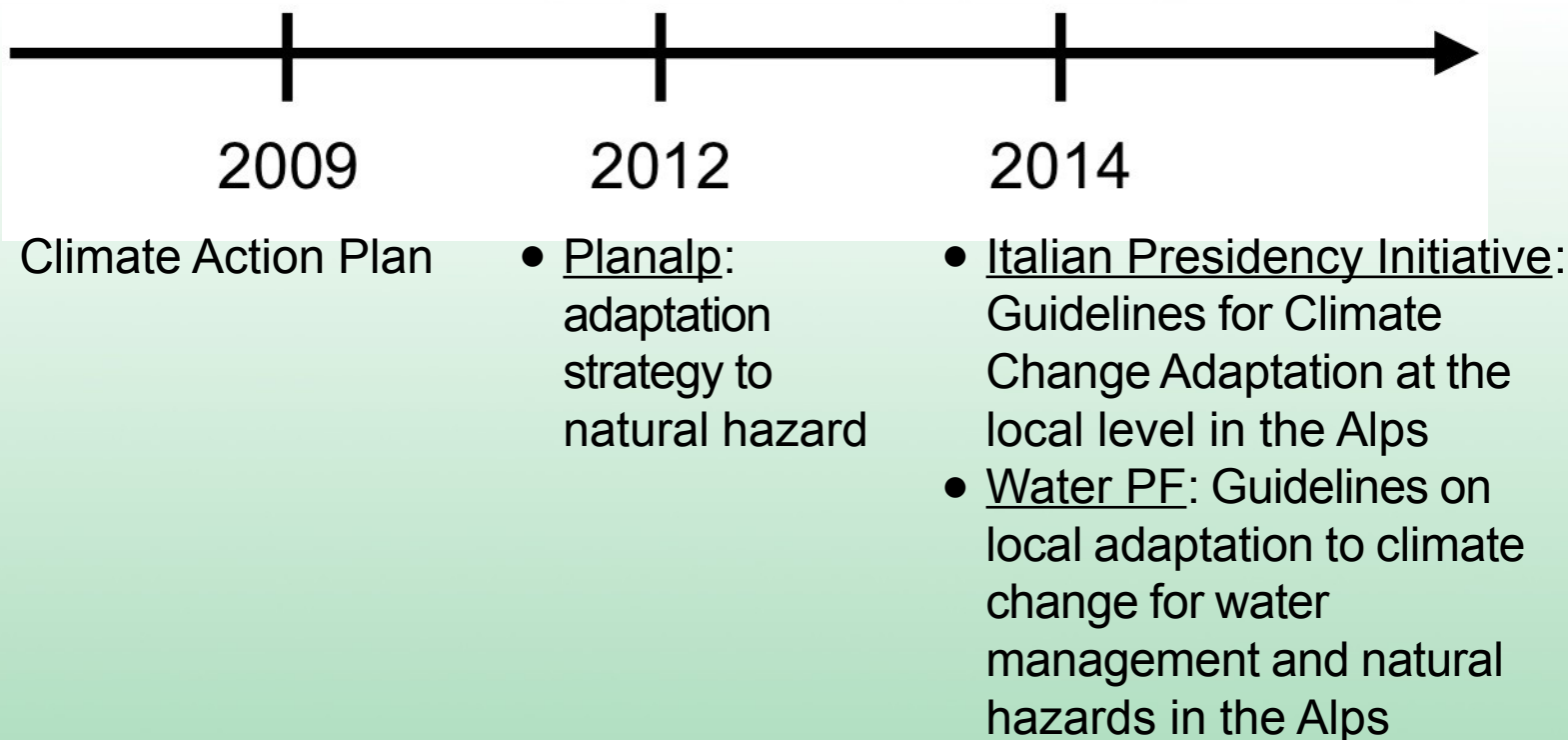


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The time line of the Adaptation Plans

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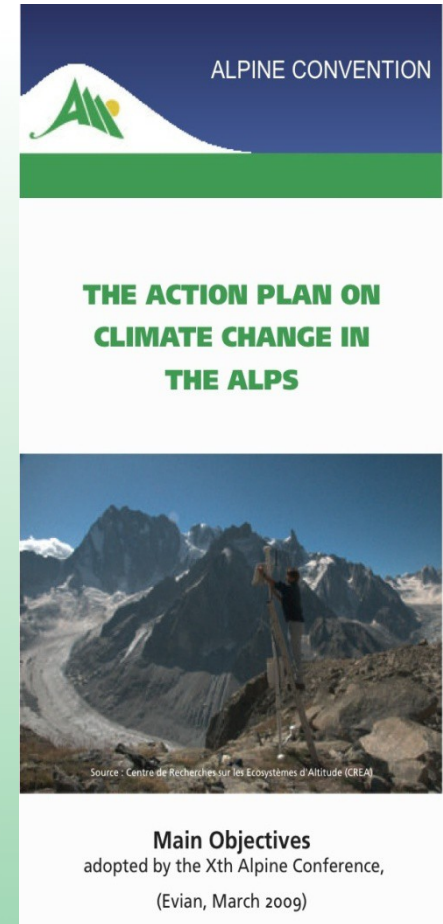


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The Climate Action Plan (2009)

- Adopted by the X Alpine Conference (Evian, March 2009), as a result of reflection initiated in 2006 at the IX Alpine Conference (Alpbach Declaration)
- Aim is to go beyond the general framework to offer concrete measures that are specific to the Alps by promoting measures that could trigger regional co-operations in the frame of the Alpine Convention and support specific research projects
- Both mitigation and adaptation strategies
- 9 strategic areas, 24 objectives
- <http://www.alpconv.org/en/ClimatePortal/default.html>

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The Climate Action Plan

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Mitigation strategies

Spatial planning (efficient space management and urbanization):

- Cavalese (Italy) takes into account bioclimatic criteria (maps indicating solar exposure, prevailing winds, etc.) when selecting building land.



Heating Energy (reduce CO2 emissions):

- Diex (Austria) made big investments in a photovoltaic programme for residential buildings and street lighting)



Transport to more eco and climate-friendly solutions (reduce CO2):

- In November 2005, the town of Gap (France) decided buses would be totally free for its 39000 inhabitants.



Tourism (promote Alpine “climate neutral” vacations):

- Arosa (Switzerland), a resort accessible by train, set up a system of « carbon offset » for CO2 emissions generated by tourist travels and offers a large array of eco-friendly activities.



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Adaptation strategies

Spatial planning (natural hazards):

- In Bavaria (Germany), coordinated measures have been implemented to optimise water retention by combining reservoirs for exundation, renaturalisation of peatlands and wetlands



Enhancement of mountain forests and wood industry:

- The “Protective forest of Hinterstein” (Germany) aims at safeguarding the protective function of the forest thanks to implementation of a specific zoning and choice of tree species



Preservation of biodiversity:

- The Iserre department (France) launched the «Iserre ecological network» project to identify the breakdowns (over 300) in the ecological continuum.



Tourism (adapt winter tourism and diversify the offer):

- The PACA region (France) initiated spatial redistribution of tourist flows by making not easily accessible areas more attractive by associating sport, adventure, cultural assets in the offer



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Adaptation strategies

Water resources (prevent water shortage and develop hydropower plants according to the ecology of water streams):

- The LEADER project in the Mariazellerland, Mürztal and Eisenstrasse region (Austria) aims at making the population aware of the importance of water, thus encouraging its sustainable exploitation.



Mountain farming (autochthonous species, seek for excellence products):

- The « BIO ALPE ADRIA » project (Italy, Slovenia and Austria), associations of organic producers have created a cross-border macro area in which natural diversity in organic farming can be preserved and various initiatives in the eco-sector can be networked



Applied research to the Alpine Range (improve knowledge at local level on water and natural hazards):

- The PERMAdataROC project (Aosta, Italy) provides a database on gravitational phenomena in periglacial environment on pilot sites by searching a link between weather conditions (thermal regime) and stability



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PLANALP Platform

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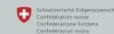
Alpine strategy for adaptation to climate change in the field of Natural Hazards (2011-2012)

- The first alpine-wide framework for climate change adaptation in the field of natural hazards.
- The strategic goals and recommendations follow an integrated, foresight- based and participatory approach and lay the foundations for efficient risk management solutions under changing climate conditions



Alpine strategy for adaptation to climate change in the field of natural hazards

Developed by the Platform on Natural Hazards of the Alpine Convention PLANALP



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Water Management Platform

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Guidelines on local adaptation to climate change for water management and natural hazards in the Alps (2013-2014 in preparation)

- Impacts of climate change identified for water resources and natural hazards)
- Adaptation actions divided in “grey (mitigation, efficiency, DSS)”, “green” (re-qualification) and “soft” (planning, management, communication, legislation, incentives)
- Focus on EU projects and national initiatives dealing with adaptation plans



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Italian Presidency Initiative (2012-2013)

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Guidelines for Climate Change Adaptation at the local level in the Alps (2nd draft version)

Physical environment

- 1) Water resources (quantity and quality)
- 2) Air and soil quality
- 3) Extreme events and hazards

Human health and ecosystems

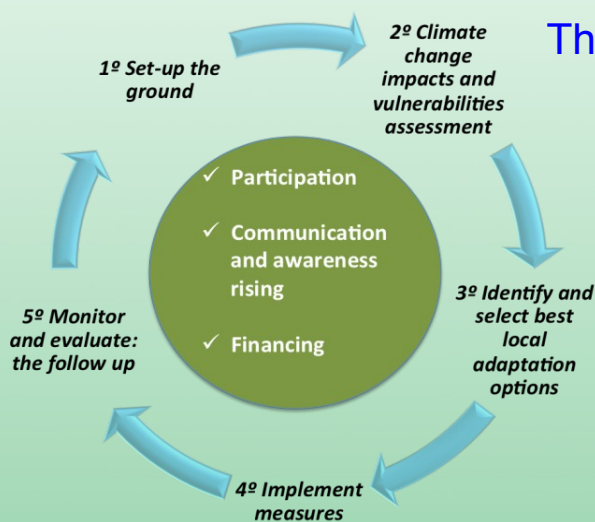
- 4) Human health
- 5) Terrestrial ecosystems
- 6) Water ecosystems
- 7) Forests

Economic activities

- 8) Agriculture and food production
- 9) Energy
- 10) Tourism

Assets and infrastructures

- 11) Transport
- 12) Cultural heritage
- 13) Spatial/landplanning



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Mitigation + Adaptation: the “glocal” approach

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- **Mitigation works at the global level** and can ensure climate stabilisation (GHG reduction). Need global commitment and works in the long timescale.
- **Adaptation acts at a regional/local level**. Its effectiveness depends on the local impacts of climate change, the vulnerability of the area itself and its resilience. The benefits appear in the short run.
- **Adaptation and mitigation show a strategic complementarity**. Within a wise policy mix, the two strategies can reinforce each other.
- Introducing adaptation policies decreases the need to mitigate, and viceversa. Furthermore, **it can reduce global residual damage**. (Carraro, 2009)



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The advantages of adaptation

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- **Lives, livelihoods and property are at risk** with or without CC and appropriate adaptation can help protecting them.
- Adaptation takes place, to a large extent, **privately**, but it is suitable for **public policy**.
- Adaptation raises immediate **awareness** that the impacts to be faced are produced by global pressures (GHG emissions) exerted outside the affected region , thereby calling for shared responsibilities and responses.
- A comprehensive climate-neutrality approach should consider also the ability of a region to show an **overall resilience to the impact of climate change** resulting from a merge of both mitigation and adaptation measures.
- A wise and forward-looking balance between adaptation and mitigation in the Alps is capable to produce cost-effective policies and **co-benefits** (e.g. air pollution control).



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Finance for adaptation: a problem of scarcity and innovation?

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- **Financial constraints** as one of the main barrier to adaptation
- **Regional variability on costs**: adaptation costs can be high for some regions depending on the need for measures and vulnerability level
- Risk of **discouraged administrations** and high inaction costs
- Potential use of **innovative funding** measures for adaptation both private and public (e.g insurance schemes, SMEs support etc.)
- Climate Change Adaptation also as a **business opportunity**: room for public-private partnerships and trigger for safety and value creation
- Consideration of the instruments of cross-border and **international cooperation** to deal with trans-boundary or cross-border issues
- **EU funds**: European Social Fund, CAP-EU Agricultural Fund for Rural Development, Horizon 2020 (35% on climate research), LIFE, EU Solidarity Fund



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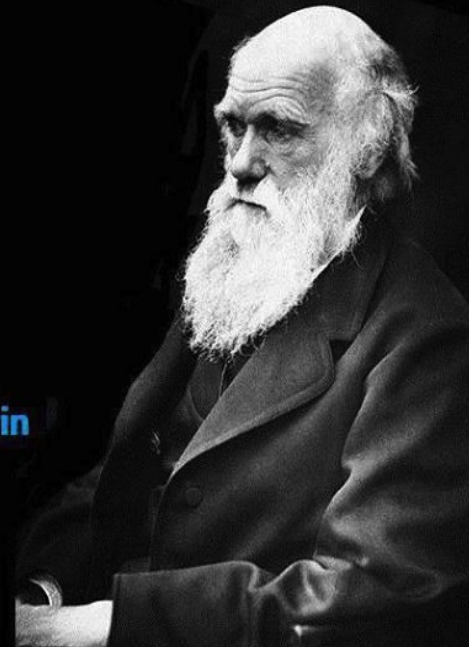


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“It is not the strongest, nor the most intelligent of the species that survives. It is the one that is he most adaptable to change”

C. Darwin



THANKS FOR YOUR ATTENTION



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