Projects and activities on Climate Change Adaptation in the Alps

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1. Alpine Space - A financial program for the mountain areas (The Alps)

The **Alpine Space Programme** is the EU transnational cooperation programme for the Alps. Partners from the seven Alpine countries work together to promote regional development in a sustainable way

During the period 2007-2013, the programme invested 130 Mio € in impact-oriented **projects** in which key actors developed shared solutions on specific Alpine issues, along three thematic priorities:

Priority 1: Competitiveness and Attractiveness

Priority 2: Accessibility and Connectivity

Priority 3: Environment and Risk Prevention

The Alpine Space Programme guiding principles

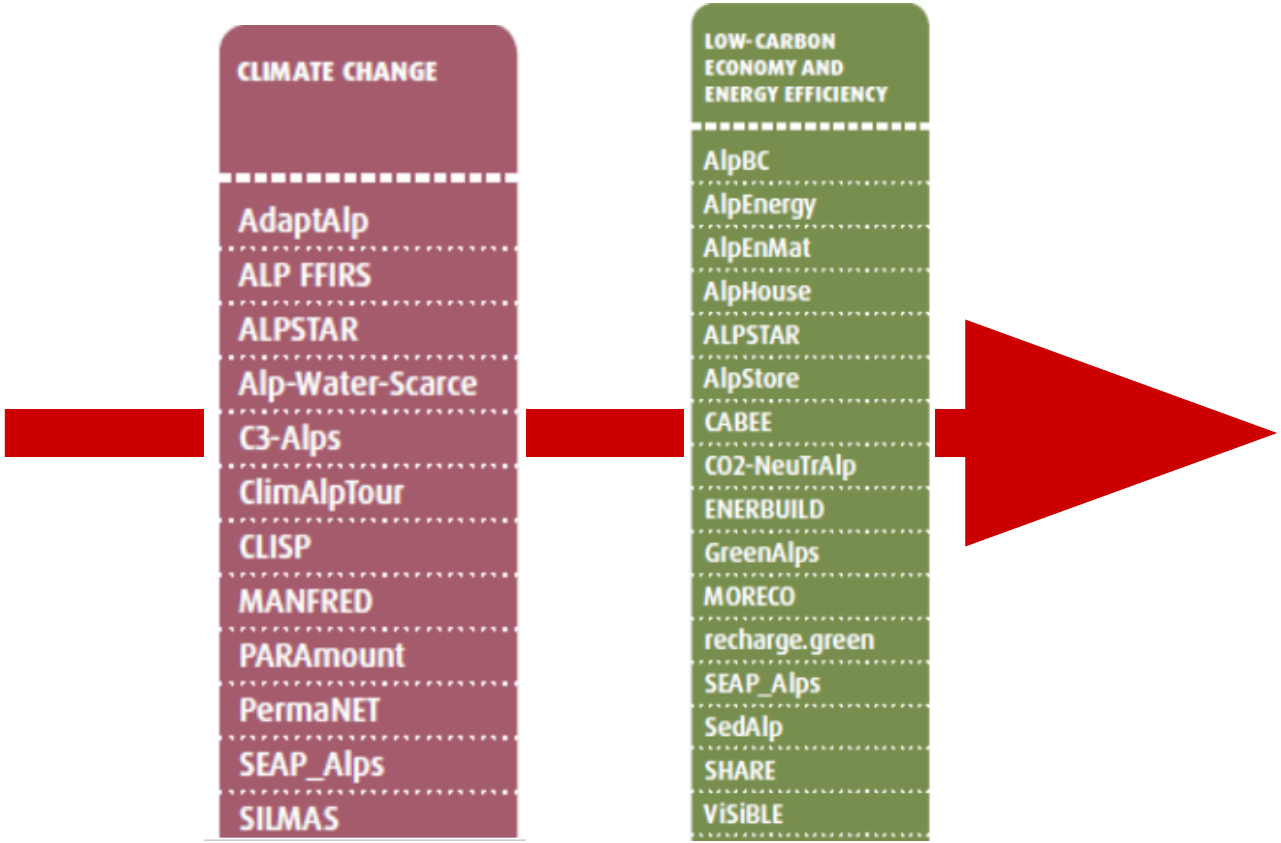
- the **innovation oriented approach**: fostering innovative approaches, partnerships, methodologies, tools and use of new technologies;
- the **mountain oriented approach**: giving special attention to needs and/or demands of mountain areas;
- the **integrated approach**: enabling the cooperation with other programmes enhancing sustainability and equal opportunities

Alpine Space Program's priorities

Priorities

Competitiveness and Attractiveness of the Alpine Space	Accessibility and Connectivity	Environment and Risk Prevention
▪Strengthening innovation capabilities of SMEs, creating appropriate environments for their development and fostering stable cooperation between R&TD centres and SMEs ▪Enhancing development options based on traditional sectors and cultural heritage as well as on emerging sectors at transnational level ▪Strengthening the role of urban areas as engines for sustainable development ▪Strengthening rural-urban relations and the development of peripheral areas	▪Securing a fair access to public services, transport, information, communication and knowledge infrastructure within the programme area ▪Promoting and improving access and use of existing infrastructures in order to optimise the economical and social benefits, and to reduce environmental consequences ▪Enhancing connectivity for the reinforcement of polycentric territorial patterns and for laying the basis for a knowledge-driven and information society ▪Promoting sustainable and innovative mobility models with specific regard to environmental, human health and equality related issues ▪Mitigating the negative consequences of traffic flows crossing the Alps	▪Enhancing cooperation in environmental protection issues ▪Stimulating integrated approaches to planning and management of natural resources and cultural landscape ▪Stimulating the development of resource efficiency with respect to water, energy, land use, raw materials and other natural resources ▪Coping with the effects of climate change ▪Forecasting, mitigating and managing the impacts of natural and technological hazards

Climate change: a cross-cutting issue in the past programming period



2. The outcomes - projects financed on climate change: main results delivered

Alpine Space CC project achievements on adaptation to and management of climate change, risk prevention and disaster resilience include different types of outcomes, often with direct policy relevance for regional and local policies:

- **Recommendations for policy-makers**
- **Guidelines for practitioners**
- **Tools and decision support systems**
- **Studies and analyses**
- **Education material (kits, software etc.)**

3. A few examples from the experience of the Italian Ministry for the Environment (Alpine Convention)

- Direct participation in Alpine Space Program projects on different topics
- Focus on climate change since ClimChAlp (2005)
- Following international advice and outcomes on adaptation in mountainous regions (e.g. OECD, 2007: Climate change and winter tourism in the European Alps - Submission on Italian Alpine regions), IMELS promoted studies and policies focussed on adaptation
- Identification of main sectors where a particular need for sound adaptation policies and measures was perceived across the Alps (*tourism, spatial planning, natural hazards, forests*, etc.)
- Construction of synergies with WGs and PFs of the Alpine Convention since 2005 (WP8 ClimChAlp - WG Natural Hazards AC, later: PLANALP)
- Promotion of innovative concepts for integrated climate policy (*co-benefits, climate neutrality, local adaptation guidelines*)

ClimChAlp
Interreg III B Alpine Space

Climate Change, Impacts and Adaptation Strategies in the Alpine Space

- First comprehensive project on climate change in the Alpine region
- Overview of the main scientific outcomes of research and impacted physical sectors (extended scientific report)
- First attempts of assessing economic and social consequences of climate change in the Alps
- Identification of policy priorities for the regions in the domain of climate change for decision makers and funders (Common Strategic Paper)
- Identification of main gaps in CC science and policy/science interface to set the agenda for future research initiatives
- First example of cooperation between an institutional WG of the Alpine Convention (NH / Planalp) and a EU-financed cooperation project (WP8)
- Starting point for several projects focussed on specific sectors

AdaptAlp

Adaptation to Climate Change in the Alpine Space

Adaptation to climate change in the Alpine Space

- Harmonized cross-sectoral hazard assessment, hazard mapping or risk management
- provision of reliable data and design events for the Alpine Space (floods and droughts).
- Enhancing transnational exchange and cooperation regarding risk prevention and risk management methods; provision of input to the EU Floods and INSPIRE directives.
- Improving efficiency of transnational risk management by elaboration of a common transnat. understanding (i.e. glossary) concerning the assessment of risks and harmonization of different approaches of geological hazard mapping and other natural hazards
- Raising awareness and supporting adaptation on local, regional, national and transnational level
- Elaboration of a sound decision basis for adaptation measures + pilot activities

Deliverables:

- Final and Sectorial Reports: "Water Regime", "Hazard Mapping", "Risk management and Risk prevention", "Pilot Activities"
- Common Strategic Paper: provides policy-makers and decision-makers with information on strategies and good practice examples for natural hazard management in a changing climate
- Practitioners' results: e.g. Education, Handbooks, Tools

MANFRED
Management strategies to adapt Alpine Space forests to climate change risk

Management strategies to adapt Alpine Space forests to climate change risks

Main Goals:

- Protection and sustainable long-term management of forest ecosystems,
- Effective forest management by means of knowledge-based adaptive strategies.

Main Outcomes:

- Forest Tree Species Atlas
- Handbook of "Alternative, Adapted Seed Sources"
- Monitoring network for pests and pests complexes and "Pest Management Guide”
- Extreme events and hazard scenarios (storm, fire, drought) maps
- Web-GIS and database of extreme forest damage events due to climate change

Tools aiming to support forest management decisions by local authorities and decision-makers, forest owners and practitioners involved in the project's development.

Strong incentive to establishing a **WG on Mountain Forests** of the Alpine Convention

(Alpine Conference Decision B7.2, Poschiavo, CH, 2012)

climalptour

Climate Change and its impact on tourism in the Alpine Space

- Following OECD Report “Climate change in the European Alps: Adapting Winter Tourism and Natural Hazards Management”
- Model regions across the Alps with different physical, economic, social and tourist features
- Identification of concrete adaptation strategies in model regions (regional reports)
- Development of a methodology and a tool for impact analysis and participatory development of adaptation strategies
- Raising public awareness on the impact of climate change on regional and local tourist strategies
- Strong cooperation with local authorities in setting up the adaptation strategies and stakeholder dialogues

Policy outcomes:

- Contribution to the 4th Report on the State of the Alps (RSA4) on Sustainable Tourism
- Integration of climate change policies and actions within a specific economic sector of vital importance for mountain areas (tourism)

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Climate Change Adaptation by Spatial Planning in the Alpine Space

Climate Change Adaptation by Spatial Planning in the Alpine Space

- Challenges to spatial planning under climate change
- Provision of climate-proof spatial planning solutions.
- Positioning spatial planning as a key player for future sustainable development under climate change
- Concept and methodology of regional spatial vulnerability assessment
- Evaluating the 'climate change fitness' of spatial planning systems (legal & institutional framework, instruments, procedures)
- Promoting risk governance approaches to managing climate-related risks (risk communication)
- Transnational expert network on spatial planning and climate change
- Raising awareness of policy and decision-makers, planning authorities, stakeholders and the public for climate-related risks and the need for adaptation
- Stimulating implementation processes, and transferring results

Policy outcomes:

- C3Alps (running) capitalisation project
- Institutional meetings on adaptation strategies and plans for Alpine and mountain areas

4.Climate policy, co-benefits and green economy: policy consequences and future directions

Co-benefits approach: coupling mitigation and adaptation measures within comprehensive regional and local strategies to tackle climate change and its impacts. A consistent and integrative approach can be a response to the difficulty of differentiating mitigation and adaptation measures, often strictly related

Why?

- Neat division into mitigation, impact and adaptation is simplistic
- Several measures are a mix of adaptation and mitigation-oriented actions
- Economic resources employable in the fight against climate change are limited
- Synergies with other economic, environmental and social policies are possible (CBA)
- Climate-oriented measures can be added to existing sectorial policies, to improve cost-effectiveness

Co-benefits delivered in domains other than climate change, to make easier to politically support and fund climate measures. A balance of mitigation and adaptation on a single territorial unit/region can be pursued.

Climate neutrality aims at achieving a peculiar form of territorial neutrality to climate change, unfolding along the two concomitant dimensions of mitigation and adaptation. It would require to strike the balance between adaptation and mitigation - a field of action whose effectiveness and features are still largely unexplored

The **Climate Neutrality Paradigm** is characterised by:

1)Flexibility in order to adapt to the uncertainty of climate science
2)Path-dependency to supranational CC policies, innovation, political agenda,
3)Geographical sensitiveness: consistency to specific regional / local resilience and adaptive capacity to CC
4)Resource and economic efficiency of the implemented policies,
5)Moderate substitutability between mitigation & adaptation measures
6)Search for co-benefits unfolding from synergetic actions between CC and coherent policies
7)Sustainability approach

Climate adaptation policies and Green Economy

Consistent actions:

- establish regional centres and networks to implement adaptation actions, plans, programmes and projects
- protection measures/tools for property, people and economic sector exposed to climate risks
- better protecting the ecosystem from CC pressures
- unveiling the regional natural and economic capital and its value

They can prove of substantial strength within a Green Economy due to:

1. smaller dispersion of resources (win/win)
2. increased economic efficiency or cost-effectiveness
3. side effects (positive spillovers / externalities)
4. targeted public spending (green growth)
5. approach to innovation in technology and policy design (Acemoglu)

5. Addressing Climate Change in the Alps in the future ASP financial program

- **Climate change adaptation:** issue to be mainstreamed in every project and not an objective per se.

- **Priority Axis 3 “Liveable Alpine Space”** addressing IPs 6c and 6d "explicitly dedicated to environmental protection, resource efficiency, climate change action and risk prevention and management":
  - 6c.1 Sustainably valorise Alpine Space cultural and natural heritage
  - 6d.1 Enhance protection, conservation and ecological connectivity of Alpine Space ecosystems

- **Horizontal Principle 8.1: Sustainable development:** also including "Integration of climate change adaptation and risk management provisions"

- No longer priorities and main axes dedicated openly to climate change, seen as a topic already investigated by specific projects. In the future programming period the key seems to be the **“integration of climate change across other policies”**

6. Mainstreaming Climate change measures in Strategic regional policies: EU Macroregional Strategies

EU 2020 Strategy (2009): smart, inclusive and sustainable growth.

Climate change as one of the 5 key priority objectives

EU Macro-regional Strategies:

1) integrated framework relating to Member States and third countries in the same geographical area;

2) address common challenges;

3) benefit from strengthened cooperation for economic, social and territorial cohesion

Objective: coordinated response to issues better handled together than separately. Prominence should be given to issues which are of strategic relevance, for a region, providing genuine value-added in relation to horizontal community policies

(Report from the European Commission on the added value of macro-regional strategies, Brussels, 27.6.2013; COM(2013) 468 final)

Towards a EU Macroregional Strategy for the Alpine region: room for climate change?

The European Council (20th December 2013) invited the EU Commission, together with the Member States, *to elaborate a Macroregional Strategy for the Alpine Region by June 2015*;

The Political Resolution *"Towards a Macroregional Strategy for the Alpine Region"* approved in the Conference of the Alpine States and Regions (Grenoble, 18th October 2013) includes *climate change among the challenges to be commonly addressed by the EU Strategy for the Alpine Region*

Need for *integrated, cross-cutting approach to policies and measures to address climate change* within the EU Macroregional Strategy framework

7. Conclusions

- Climate change was perceived and investigated as a major topic for the Alps since the issue of some scientific and political statements on the matter
- Public-funded projects contributed to deliver instruments and studies on adaptation to and management of climate change, risk prevention and disaster resilience, often with direct relevance for regional and local policies
- New trans-sectorial, cross-cutting approaches are available to deal with climate change within other economic, environmental and social policies in the Alps (co-benefits; climate neutrality)
- Green Economy provides a promising framework for the development, implementation and funding of integrated climate policies, suitable to be applied to Alpine and other mountain territories
- Recent EU initiatives to steer funds for territorial policies (e.g. ASP 2014; EUSALP) tend to treat climate change policies as a cross-cutting issue to be mainstreamed within other policies