EUSALP EU STRATEGY FOR THE ALPINE REGION
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CURRENT ISSUES OF ALPINE WATER MANAGEMENT

AG6 – Resources

Shaping future together

The following Policy Recommendations have been elaborated by the members of the Actions Groups of EUSALP, reflect the expertise of the AGs members and are meant for voluntary implementation by the decision makers when it comes to the Alpine Region.

EXECUTIVE SUMMARY

Alpine water bodies face growing challenges from climate change, overuse, and mismanagement. While the EU Water Framework Directive (WFD) (2000/60/EC) and the Swiss Water Protection Act (GSchG) provide a solid legal framework, in the Alpine macro-region progress in environmental quality and sustainable water management are often hindered by fragmented governance, insufficient monitoring, and weak source-control measures.

These policy recommendations identify five key domains requiring action, considering both their feasibility and the potential role of EUSALP in facilitating their implementation. Since water management involves different levels of governance, the policy recommendations address diverse stakeholders.

EUSALP can play a valuable role by promoting macro-regional cooperation in shared basins, supporting the replication and upscaling of successful projects, leveraging the newly adopted Water Resilience Strategy as a call for macro-regional action, and thereby highlighting the strategic role of the Alpine region for European water resilience.

The following recommendations are proposed:

1. **Step up action to reduce pollution**
   Target: National authorities
2. **Increase investment in Alpine water basin monitoring and early warning strategies for Alpine source areas**
   Target: National and Regional authorities
3. **Promote regionally coordinated Nature-based Solutions (NbS) in Alpine water bodies**
   Target: Regional and Local authorities
4. **Strengthen macro-regional governance for water management**
   Target: Regional and Local authorities
5. **Provide tailored funding for water resilience in the Alps**
   Target: National and Regional authorities

INTRODUCTION

Alpine water bodies face consistent challenges such as climate change impacts on availability, rising pollution levels from nutrients, pesticides, and persistent chemicals (e.g., PFAS), and competing demands from industry, tourism, energy and agriculture. Despite the **EU Water Framework Directive**'s (WFD) goal of achieving good status for all water bodies by 2027, many remain under pressure due to insufficient monitoring coverage, fragmented governance, and inadequate source control measures.[1]

The transboundary nature of Alpine rivers, lakes, and groundwater systems makes cross-border cooperation essential, as hydrological processes and pollution sources frequently cross political boundaries. It must be ensured that interventions are harmonised and mutually supportive.

While existing policies such as the WFD provide a solid legal framework and the newly adopted **EU Water Resilience Strategy (WRS)** sets ambitious targets, they do not yet fully address the need for better collaboration across strategic sectors (such as agriculture, urban planning, and energy), harmonised monitoring systems, comprehensive early-warning systems in Alpine water bodies, and integrated, multi-level governance mechanisms **that ensure that new policies or land-use decisions do not exacerbate water stress or pollution**. Furthermore, a Commission's review in 2020 concluded that the water legislation has room for improvement related to investments, implementation, integrating water into other policies, chemical pollution, administrative simplification and digitalisation.[2]

While the WRS does not specify the role of the Alpine region in water supply and management, **EUSALP** can contribute to its implementation by addressing specific regional challenges and leveraging regional expertise and resources. The benefits consider a broader geographical scale in the Alpine region's role as *"Europe's water tower"*.

The following policy recommendations respond to these gaps and aim to enhance the sustainable management of Alpine water resources by improving monitoring systems and reducing pollution. Targeted towards policymakers, water authorities, economic sectors dependent on water, and local communities, the recommendations aim to **ensure long-term water resilience**, protect ecosystem health, improve governance structures, and foster integrated territorial development.

POLICY RECOMMENDATIONS

1. **Step up action to reduce pollution**
   Target: National authorities

Strengthen national regulations and their enforcement on harmful pollutants, improve source-control for industries and agriculture, and adopt innovative wastewater treatment where needed, prioritising upstream prevention. These measures protect public health reducing social costs, enhance biodiversity protection, reduce treatment costs, support recreation and tourism, and uphold the Polluter Pays Principle.

[1] European Commission (2025): REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT on the implementation of the Water Framework Directive (2000/60/EC) and the Floods Directive (2007/60/EC) Third river basin management plans Second flood risk management plans (https://environment.ec.europa.eu/topics/water/water-framework-directive/implementation-reports_en)

[2] European Commission (2020): Fitness check of the Water Framework Directive and the Floods Directive (https://commission.europa.eu/publications/fitness-check-water-framework-directive-and-floods-directive_en)

2. **Increase investment in Alpine water basin monitoring and early warning strategies for Alpine source areas**
   Target: National and Regional authorities

Design and finance comprehensive monitoring strategies for Alpine water basins to provide early detection of changes in water quantity, quality, and ecological status. This includes installing advanced sensors, expanding sampling networks, and improving data interoperability across borders.

Improving both – monitoring and early warning strategies – will become more important for the management of droughts, floods, and pollution incidents, which leads to lower economic losses from extreme events. Moreover, it helps early detection of regime shifts like glacier melt or snowpack changes. A co-benefit are better-informed water allocation decisions.

3. **Promote regionally coordinated Nature-based Solutions in Alpine water bodies**
   Target: Regional and Local authorities

Scale up projects such as rewetting, forest and soil restoration, removal of small weirs and constructed wetlands to increase upstream retention and water quality, with common selection criteria and co-funding mechanisms. Prioritise measures that naturally retain water in the landscape, supporting both flood and drought resilience.

Restoring the water cycle benefits increased buffering against extremes, improved habitat connectivity, and long-term cost savings in flood and water treatment management.

4. **Strengthen macro-regional governance for water management**
   Target: Regional and Local authorities

Strive to ensure transparent and integrated water governance at the macro-regional level, considering inclusive mechanisms for water allocation especially in the event of scarcity, as emphasised in the principle of “Water efficiency first”. Reaffirm the commitment to implement the WFD principles within the different governance levels.

5. **Provide tailored funding for water resilience in the Alps**
   Target: National and Regional authorities

Highlight the importance of European funding and insist that the LIFE Programme be continued in the next Framework Programme 2028-34. Encourage the European Investment Bank and other institutions to prioritise projects enhancing nature-based solutions in funding strategies.

Furthermore, align the implementation of the Nature Restoration Regulation with water and climate resilience objectives while emphasising the role of the Alps in European water resilience.

IMPLEMENTATION

The effective implementation of these recommendations requires coordinated action across governance levels. Responsible actors include the European Commission, national governments, regional and local authorities, river basin authorities, research institutions and civil society. In addition, representative from

strategic economic sectors should be involved in the implementation process to engage constructively in decision-making and compromise in favour of long-term benefits and sustainability.

Potential enablers are EU funding instruments (LIFE, Horizon Europe, Interreg, Cohesion Policy funds), as well as loans and guarantees from the European Investment Bank earmarked for water resilience. Public-private partnerships, citizen science, and digital monitoring platforms can further accelerate uptake.

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