



# Water in Mountains

## 4th International Conference

MEGEVE (FRANCE) - 8, 9, 10 OCTOBER 2014

## INVITATION

On 8, 9 and 10 October 2014, the Alpine resort of Megève will host the  
4th International Conference  
on Water Management in Mountains.

Local elected officials, economic stakeholders, managers, association leaders, scientists from all countries of the Alpine Arc, from France, Switzerland, Italy and all over Europe, are invited to meet and join us in Megève to discuss, debate and promote solutions to transform the constraints on water resources, related to global warming and other major global changes, ... into real assets for mountains in the future!



**Anticipate the consequences of climate change:**  
***In mountains more than anywhere else!***

During the previous three conferences held in Megève in 2002, 2006 and 2010, an alert had been launched on the need for adapting strategies to the effects of global warming on water resources.

**Today, the scientific community confirms the reality of global warming and agrees on the fact that the preservation of water resources is closely linked to the development of mountain areas.**

In the Alps, the average temperature has increased more than twice the overall global warming in the past century: The models are forecasting an increase in temperature ranging between 2.6 and 3.9 °C by 2100.

While they have already lost between 20 and 30% of their volume since 1980, **the Alpine glaciers could still see their volume diminishing by 30-70% by 2050 and almost all the smaller of them will have then disappeared!** The Pyrenean glaciers have lost 80% of their volume since 1850 and those in the Alps 40% on average.

**With climate change, the form (snow or rain) and the seasonal distribution of precipitations will also be heavily modified in the mountains.**

## **Management of upper river basins, *a challenge for people and economy ... in the plains!***

All the large European rivers, the Ebro, Rhone, Po, Rhine, Danube, Vistula ... and their main tributaries have their headwaters in mountains and have mainly a snow-glacier regime, heavily dependent on snow cover and glaciers. Mountains today make an essential contribution to the flow rate of all these large rivers: **They act as "regulators"**.

**With the effect of climate change being already very significant in the mountains, with less snow cover and melting glaciers, the water regimes of all these large rivers are changing ...**

However, the flow regularity of these rivers is crucial for the supply of drinking water to downstream populations, and for the economic development at the foothills and in the plains: it is essential for hydropower, inland navigation, irrigation, for the cooling of thermal or nuclear power plants ...

**Meeting water needs in the future and for all purposes, is thus everybody's business from the upstream to downstream areas of rivers! It is now essential to act quickly if we want the mountains to continue being the "World's water towers".**

## **Small torrents make large rivers ... *A strategy on the mountain scale.***

Today the time has come to rethink water and land management in mountains taking into account, as a priority, the strategic constraints linked to the supply of water to the populations and the economies at the foothills and in the plains located downstream. Thinking must be based on the principles of solidarity on the basin scale and better consideration of the services provided by mountain ecosystems: Preservation and storage of water resources, development of land slopes to retain water, management of plant cover and forests, wetland protection, protection zoning, reducing soil waterproofing ... The new land planning policies must contribute, in the form of very local but coordinated actions, to optimize available water supply and prevent natural hazards.

**Because the sum of small local actions in mountains will determine a coherent management of all river basins: let's encourage and value good practices!**

## **Good practices already exist: *Let's quickly implement them!***

**Many effective measures have already been successfully tested; the Megève conference will present them and explore ways of applying them to all mountain areas.**

**Stormwater management and control of soil water sealing**, as part of an overall development policy on the basin scale, have been proven in many flood-prone areas and appear decisive for protection against risks in urban foothill areas.

**Wetland protection in ski resort and alpine farming areas** is now compatible with the development of tourism and farming practices and satisfies both economic stakeholders and managers of natural areas.



*Example of water peatland restoration on ski slopes in Les Gets*

**Proper snow grooming on ski slopes** extends the tourist season while ensuring water retention in upper areas to help regulate flow rate at spring time.

**The development of micro-power on drinking water systems and wastewater treatment plants** appears as an alternative without compromising the ecological continuity of rivers.

**Concerted agro-forestry and pastoral practices** allow better retention of water resources and protection of drinking water intakes ...

**Let's transform constraints into assets!**

This 4th International Conference of Megève is a unique opportunity to raise the stakeholders' awareness on these important and yet poorly understood issues, to retransmit all these examples of good practice, and many others, and to give voice to the mountaineers who wish to participate actively in the sustainable development of their lands, while preserving natural resources for everyone's benefit.

**Any information and registration online at:**  
[www.egem2014.org](http://www.egem2014.org)



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