

# Project brief

## Balancing river ecosystems and hydropower requirements

**The purpose of SHARE** is to develop, test and promote a decision support system (DSS) to merge, on an unprejudiced base, both river ecosystems and hydropower requirements. **The project openly pursues integrated river management aims.**

### **The approach: merging scientific tools, local specificities and operational requirements**

In that intent, the DSS will include economic and environmental standards, thus triggering a new generation of hydropower planning mitigating its impacts on water bodies' quality. This approach will be led using existing scientific tools adjustable to transnational, national and local normative and carried on by **permanent technical panels** of administrators and stakeholders. It will also be tested in **11 Pilot Case Studies** on various mountain basins in 5 alpine space countries.

**SHARE - Sustainable Hydropower in Alpine Rivers Ecosystems**  
<http://www.sharealpinerivers.eu>

Project reference number: 14-2-3-IT

Priority 3 – Environment and Risk Prevention

Project duration: 36 months – 1/08/2009 – 31/07/2012

## The issues

In Alps, hydropower is the most important renewable energy source. It shows clear advantages for the global CO<sub>2</sub> balance, but has significant ecological impacts, therefore threatening water bodies' health. Administrators of mountain areas face an increasing demand of water abstraction but lack reliable tools to rigorously evaluate the effects on environment and on society. Consequently, consumers, producers and decision makers don't have all the necessary inputs to reach decisions about their use of hydropower resources.

### **Sustainable way to hydropower appears as a strategic challenge for alpine regions.**

River users and defenders face a daily contradiction:

- ▶ On the one hand, the Directive on Electricity Production from Renewable Energy Sources obliges EU member states to increase the share of renewable electricity production, in order to reduce greenhouse gases emissions.
- ▶ On the other hand, the Water Framework Directive obliges EU member states to reach and maintain a "good" ecological status of water bodies by 2015.

**The decision is for local public bodies to make; SHARE will provide them with means to strike a balance between the needs of hydropower and the health of water bodies**, thus contributing to the local implementation of these directives and upgrading the current standard of problem solving attitude.

## The project

SHARE – Sustainable Hydropower in Alpine Rivers Ecosystems – is a running project in line with the European Territorial Cooperation Alpine Space programme 2007-2013. As such it has been early approved and co funded by the European Regional Development fund. The project will formally take place from August 2009 to July 2012.

## Future available tools

### **Software & online tools**

to weight and balance all river-related issues.

### **A guidebook for policy-makers**

to take transparent and well informed decisions where hydropower is involved, thanks to a multicriteria approach (MCA) methodology that will include scientific knowledge related to HP and river management.

### **The MCA will be applied to assess different management alternatives**

where a single-criterion approach (such as cost-benefit analysis) falls short, especially where environmental, technical, economic and social criteria can't be quantified by monetary values.

### **Databases focussed on the alpine region**

to quickly identify applicable laws and competent authorities, from a local to an international scale;

to characterize alpine rivers typologies and to assess their vulnerability to hydropower installations;

to classify scenarios of water use optimisation.

### **A set of generally applicable and comparable indicators & monitoring standards**

to assess hydropower effects on dissimilar water bodies' health.

## The partnership

SHARE is supported and implemented by 13 partners (universities, local authorities, NGOs). The leading partner is ARPA (Regional Agency for Environment) Valle d'Aosta. The project partnership embodies 5 different alpine countries & hydrosystems, profiles, status, end users, networks, expertises and concerns of all stakeholders in water management issues, such as: regional and local authorities, policy makers, hydropower companies, water authorities, nature protection agencies, NGOs, water suppliers. They can take part in and benefit from the project results as members of the national **Permanent Technical Panel**. The official observers represent the links with the outside of the project.