



Project SHARE Sustainable Hydropower in Alpine Rivers Ecosystems

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SHARE - Sustainable Hydropower in Alpine Rivers Ecosystems is a running project early approved and co funded by the European regional development fund in the context of the European Territorial Cooperation Alpine Space programme 2007 – 2013: the project is formally ongoing from August 2009 and it will end July 2012.

Hydropower is the most important renewable resource for electricity production in alpine areas: it has advantages for the global CO₂ balance but creates serious environmental impacts. RES-e Directives require renewable electricity enhance but, at the same time, the Water Framework Directive obliges member States to reach or maintain a water bodies "good" ecological status, intrinsically limiting the hydropower exploitation.

Administrators daily face an increasing demand of water abstraction but lack reliable tools to rigorously evaluate their effects on mountain rivers and the social and economical outputs on longer time scale.

The project intends to develop, test and promote a decision support system to merge on an unprejudiced base, river ecosystems and hydropower requirements.

This approach will be led using existing scientific tools, adjustable to transnational, national and local normative and carried on by permanent panel of administrators and stakeholders.

Scientific knowledge related to HP & river management will be "translated" by the communication tools and spent as a concrete added value to build a decision support system.

In particular, the Multicriteria Analysis (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.

All the existing monitoring databases will be used and harmonized with new information collected during the Pilot case studies. At the same time, all information collected will be available to end users and actors of related projects.

The project openly pursues integrated river management aims (environmental and economic):

- define, share and test a decision making framework based on validated methodologies in order to allow public decision makers to take transparent decisions about planning and management of HP concessions, taking account resulting effects on river ecosystems and on all different stakeholders
- creation of a technical panel including public decision makers, stakeholders and PPs to promote & transfer the SHARE approach to local, national & transnational level to concretely upgrade the actual standard of problem solving attitude;
- classify scenarios of water use optimization, taking into account the different actor needs;
- establish a set of generally applicable and comparable indicators & monitoring standards based on transferable guidelines and metrics considering the specific disparities among power stations, diversity of technical approaches and different river ecosystems;
- designation and mapping of alpine hydro systems more vulnerable typologies;
- designation and mapping of the most convenient sites and typologies of "low impact" new plants;
- contribute to the concrete local integration implementation of WFD and RES-e directives.

The project partnership embodies different alpine countries & hydrosystems, profiles, status, end users,

networks and previous experiences. At the same time the project official observers represent the links with outside the project networks, end users & stakeholders.