

ESHA intensifies action on key issues for European hydropower development

The European Small Hydropower Association (ESHA), reports that 2009 has been a year of particularly intense activity at European level, with several major projects having been co-financed by the European Commission to promote and improve small hydropower development and production across the European Union.

The main aims and activities of the current programmes have been summarized by Secretary General Gema San Bruno as follows:

- **SHAPES:** This stands for Small Hydro Action for the Promotion of Efficient Solutions, and brings together EU projects partially funded by the European Commission (DG-TREN) and coordinated by ESHA, including nine partners from Austria, Poland, Lithuania, Spain, UK, India and Switzerland. The main goal of the project is to create a network and infrastructure of R&D actors and priorities, with a view to improving SHP technology and thus achieving better access to new market opportunities. The project will facilitate the creation of a Research Agenda for SHP to be included in the European Research Area. The themes covered by SHAPES include Research and Development, Education, Refurbishment, Rural Electrification and New Technological Solutions (multi-purpose plants).
- **HYDROACTION:** This is an EU project partially funded by the European Commission (DG-Research) on advanced optimization procedure for the design of small hydro turbines. The overall concept of the project is to develop a methodology for optimizing the design of small hydro turbines with regard to productivity and cost. The standardization and application of the methodology will contribute to the development of cost-efficient, tailor-made turbines (up to 5 MW), for small hydro plants with optimum performance. The automated, generic methodology will be validated on three different turbine types (Pelton, Turgo and Matrix) by constructing and laboratory testing of reduced-scale models for all of them. By the application of the proposed procedure, a 3 to 5 per cent increase of productivity is foreseen, thanks to the increase of the efficiency and the extension of the operating range, as also due to the tailor-made design. The consortium includes nine partners and is coordinated by the

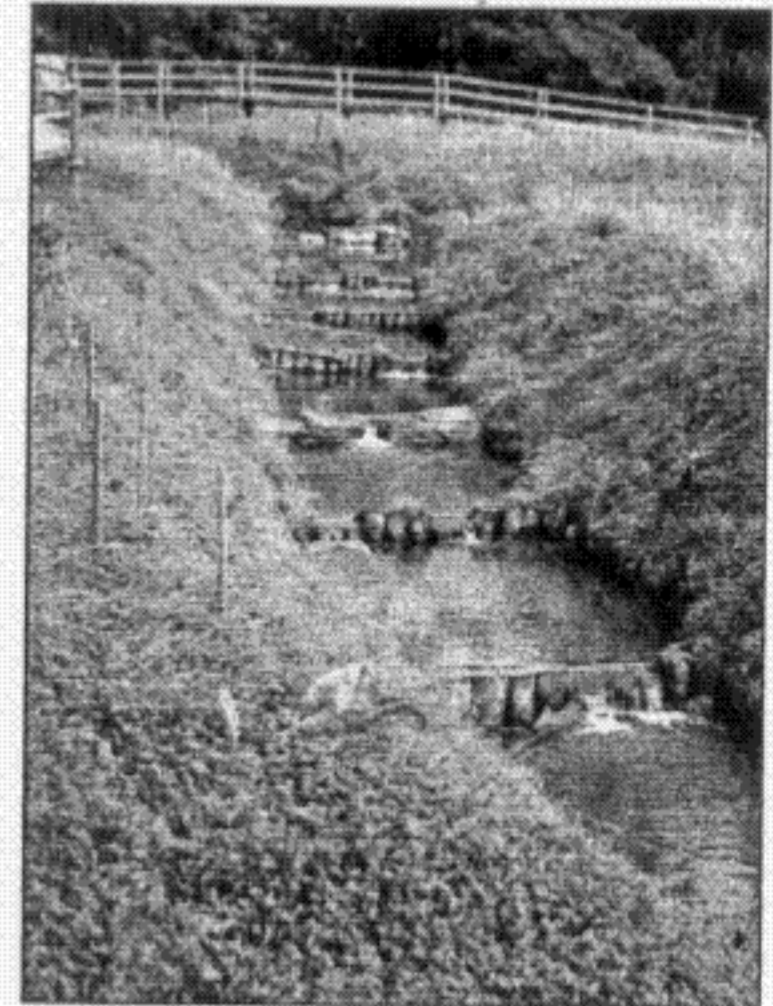
National Technical University of Athens, Greece. ESHA is participating in this project as partner.

- **CHOICE:** This proposed action aims at developing a technically and economically feasible certification procedure for hydropower generation facilities of a high environmental standard, in accordance with the requirements of the Water Framework Directive (2000/60/EC). This will lead to the implementation of 'green labelled' electricity products, integrated, as much as possible, with existing EU tools, such as Ecolabel, EMAS, EIA and SEA.

This certification and label is to be tested in Italy and Slovenia. ESHA is participating in this project, which is funded partly by the EACI under the Intelligent Energy Program. It includes 12 partners from Italy, France, Slovenia and Slovakia. The project is coordinated by Ambiente Italia from Italy.

- **RURAL-RES:** This EU project is also partly funded by the EACI under the Intelligent Energy Program, and promotes the use of renewable energy small scale systems in mountain territories. The objective of this action is to encourage good practice in the use of small-scale renewable energy systems in terms of mini hydro and wind power in mountain areas in the EU. It will also identify the potential in each area for the use of mini hydro and wind power. To raise awareness of the advantages of the use of small-scale systems for energy use. To train specialists in companies, municipalities, farmers in the use of small-scale mini-hydro and wind power installations in mountain areas. The project is coordinated by the County of Huelva, Spain and ESHA is participating as partner. The consortium includes seven partners from Spain, Italy, Greece, Sweden, Czech Republic and Romania.

- **STREAM MAP:** This is another EU project partly funded by the EACI under the Intelligent Energy Program and coordinated by ESHA. This one includes 11 partners from Portugal, France, Germany, Belgium, Lithuania, Sweden, Slovenia, Poland, Romania and the UK. The objective of this project is to draft a 'Road Map for the SHP sector' with recommendations and a vision for the future of the sector as regard the fulfillment of the 2020 RES targets set out in the EU Directive and the National Energy Action Plans for the

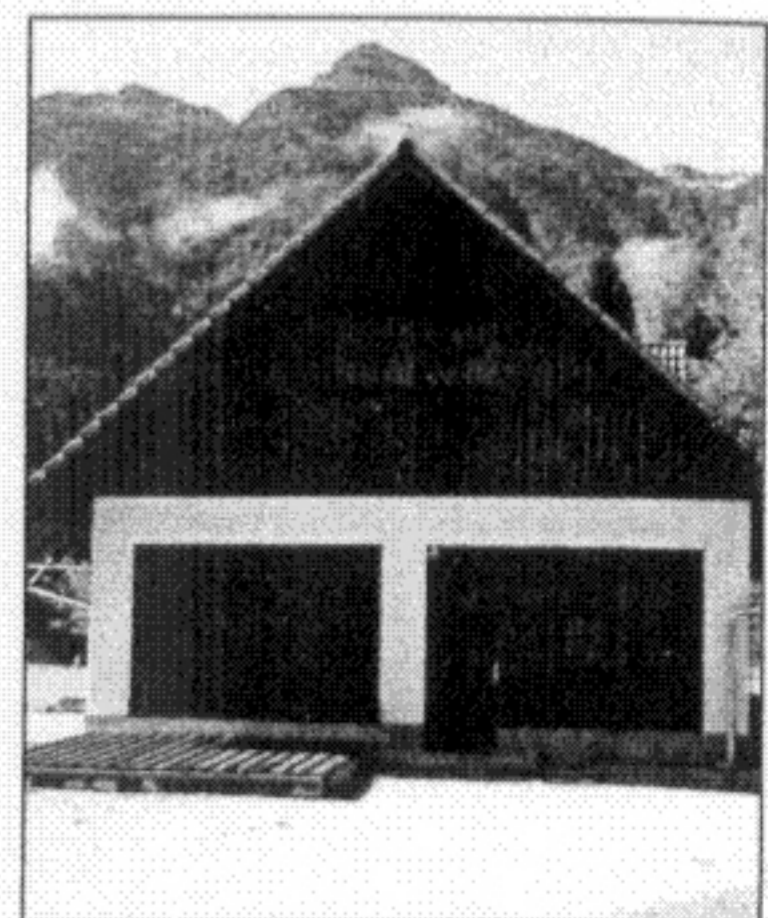


A fish pass at a mini hydro scheme in Switzerland; an example of an efficient solution to enhance the environmental acceptability of hydro schemes.

national and local policy makers as target groups. To evaluate and forecast the future of the sector, the so-called HYDI database will be developed, offering for the first time ever a complete register of hydropower information at all levels (energy, market and policy data) for the entire EU (27 Member States).

Each of the projects described above has its own web site, and details can be found via the main ESHA site, at www.eshabe.be.

More detailed information on all these current projects will be presented at the HYDRO 2009 conference in Lyon, within a series of sessions on small hydro, planned and organized in conjunction with ESHA, which will run throughout Tuesday 27 October.



The Bistrica small hydro station in Slovenia. Slovenia is a partner in the CHOICE and STREAM MAP projects.