Small Hydropower in the EU-27

✓ In general, small hydropower (SHP) stands for a hydropower plant with an installed capacity of up to and equal to 10 MW.

✓ With 13,000 MW of total installed capacity in the EU-27, SHP can supply electricity for 13 million households.

✓ SHP plays a key role in the reduction of greenhouse gas emissions, contributing to around 8% of electricity production within the renewable energy mix, demonstrating the best performances when it comes to GHG emissions measured on a life-cycle basis.

✓ SHP does not consume nor pollute water when producing electricity.

✓ SHP is one of the most efficient, reliable and cost-effective forms of electricity production, providing steady, secure and local source of electricity supply. It provides compensation for intermittent energy sources.

✓ Through its multipurpose applications, SHP can benefit local communities (water supply, flood control, irrigation, etc.).

✓ The SHP industry has an important economic value for Europe (at least 29,000 direct employees and 4,200 companies working in the sector). SHP represents very often a significant revenue opportunity for inhabitants of remote areas.

✓ SHP has a large development potential. If the current conditions are improved, new SHP could annually produce additional 50 TWh in the EU-27. There is also a considerable potential for refurbishment of older SHP sites.
Challenges

✓ Despite its benefits and long history, SHP is being many times overlooked and kept away from the European and national policy agendas.

✓ SHP has been negatively impacted by European environmental legislation (Natura 2000, Directives on Environmental Assessment, Water Framework Directive, etc.) and national implementing laws. In order to take advantage of the economically feasible potential of the SHP, a greater consensus and cooperation between the energy and environmental policies is necessary.

✓ The sector faces too many administrative barriers. The licensing procedure for SHP is currently an extremely time consuming, highly bureaucratic procedure and with too many uncertainties.

✓ SHP developers and investors lack fair and stable market rules.

✓ Research lacks adequate funding in order to develop the sector to reach its full potential.
Recommendations

✓ European and national policy makers should consider SHP as an **equally important component of the renewable energy mix**.

✓ **EU and national environmental policies must be based on sound scientific assessment, cost-benefit analysis and site specific approach.** Besides the environmental aspects, the sustainability analysis should also consider the **social and economic benefits** of SHP – the other two pillars of sustainable development.

✓ Licensing procedures and issuing permits should rely on **simple, fair, solid & transparent procedures** (‘One-stop shops’).

✓ **Fair support mechanisms should take into account the multipurpose features of hydropower** and the growing costs arising from environmental obligations.

✓ **Funds should be allocated to research** in green and fish-friendly technologies as well as river restoration and habitat improvement.

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Picture source: Kleinwasserkraft Österreich
The Stream Map Project and the EU-27 SHP Road Map

Stream Map is a project coordinated by the European Small Hydropower Association (ESHA) and co-financed by the Intelligent Energy Europe (IEE) Programme of the European Commission under the responsibility of the Executive Agency for Competitiveness & Innovation (EACI). It ran from 09/2009 to 05/2012. Stream Map gathered for the first time ever detailed energy, market and policy data on small hydropower to a central HYDI (Hydro Data Initiative) database which is free of access to the public. On the basis of this collected data, the first-ever EU-27 Roadmap for the small hydropower sector has been drafted.

The Roadmap and further information on the Stream Map project are available at http://streammap.esha.be/ and info@esha.be.

Supported by:

ESHA - European Small Hydropower Association, Renewable Energy House, Rue d’Arlon 63-67
B-1040, Brussels, Belgium, Tel: +32 2 546 19 45, Fax: +32 2 546 19 47, E-mail: info@esha.be