



SHP in the Alps



2020 targets & Stream Map project

*Sara Gollessi – ESHA & APER
Trento – 28th January 2011*

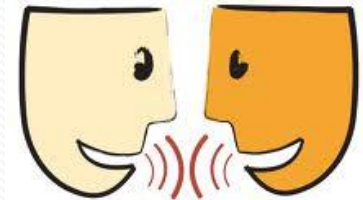


ESHA – an umbrella organisation for the promotion of SHP in Europe

1. Lobbying



2. Promotion, information and communication



3. European projects



Headquarters: Renewable Energy House in Brussels

APER

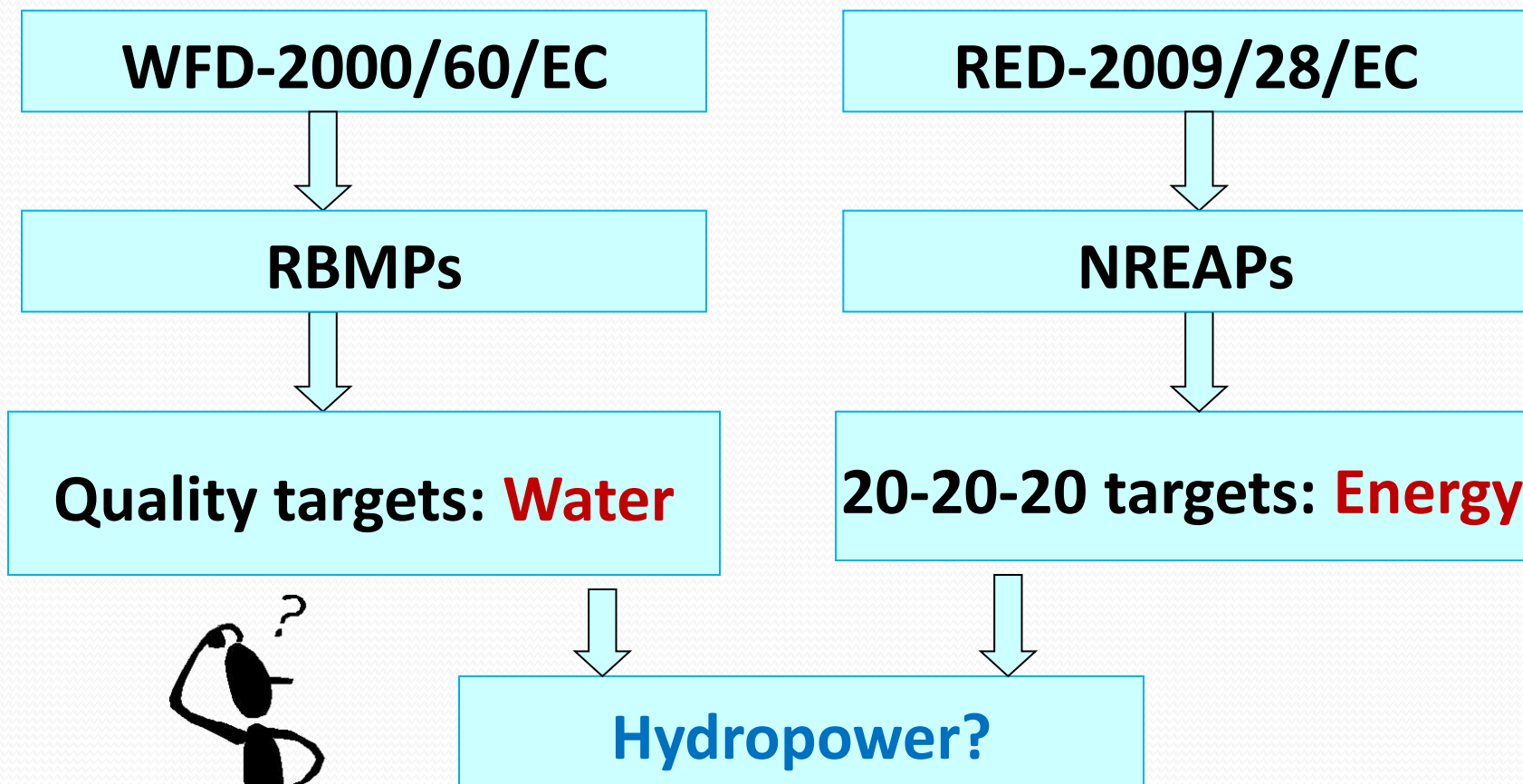
Associazione Produttori di Energia da fonti Rinnovabili



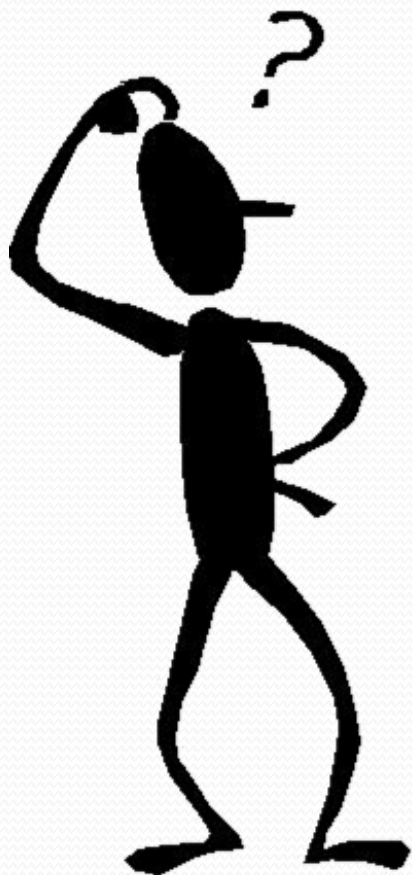
- ✓ membro di ESHA, EWEA, EPIA
- ✓ promozione delle energie rinnovabili (tutte le fonti!)
- ✓ attività di lobby a livello nazionale e internazionale
- ✓ organizzazione di workshop e corsi di formazione
- ✓ supporto agli associati sulle procedure autorizzative e l'accesso agli incentivi
- ✓ partecipazione e Progetti Europei



Policy framework



Hydro or Power ??



**Assessment, at river basin level,
of possible hydropower productivity
with reference to objectives and targets
set by WFD and RES-e directives**

Small hydropower in figures

definition of SHP → max. installed capacity of **10 MW***

name	capacity
MICRO	$P < 100 \text{ kW}$
MINI	$P < 1.000 \text{ kW}$
SMALL	$P < 10.000 \text{ kW}$
BIG	$P > 10.000 \text{ kW}$

- SHP in the world: $\approx 65.000 \text{ MW}^{**}$
- SHP in EU-27: $\approx 13.000 \text{ MW}$
- SHP in Italy: $\approx 2.655 \text{ MW}$

* For China SHP is up to 50 MW!

** Source: REN21 – Global Status Report 2010

Leading SHP countries in the EU-27

Leading six countries:

- ➔ Italy (21%)
- ➔ France (17.5%)
- Spain (15.5%)
- ➔ Germany (14%)
- ➔ Austria (9.4%)
- Sweden (7.7%)

(% of the total SHP installed capacity in the EU-27)



Largest capacities in the new Member States are in Romania (3%), Czech Republic (2.4%) and Poland (2.3%)

Small hydropower in Italy (Alps)

	31/12/2008		31/12/2009		Var % 2009/2008		
Regione	N°	MW	N°	MW	N°	MW	P _{media}
Piemonte	486	2.435,4	498	2.455,8	2,5	0,8	1,7
Valle d'Aosta	64	882,1	64	882,1	0,0	0,0	0
Lombardia	341	4.918,8	351	4.951,2	2,9	0,7	3,24
Trentino Alto Adige	380	3.104,8	392	3.112,5	3,2	0,2	0,6
Veneto	193	1.099,0	201	1.100,2	4,1	0,1	0,15
Friuli-Venezia Giulia	142	457,1	144	473,6	1,4	3,6	8,25
Liguria	41	72,9	42	74,8	2,4	2,6	1,9

Positive aspects of SHP

ECONOMIC BENEFITS



- technological exports (Alpine Countries)
- positive net fiscal contribution
- new job opportunities
- base load production & grid stability
- stability of other intermittent RES
- independency in energy generation (avoidance of fossil fuels imports)

ENVIRONMENTAL BENEFITS



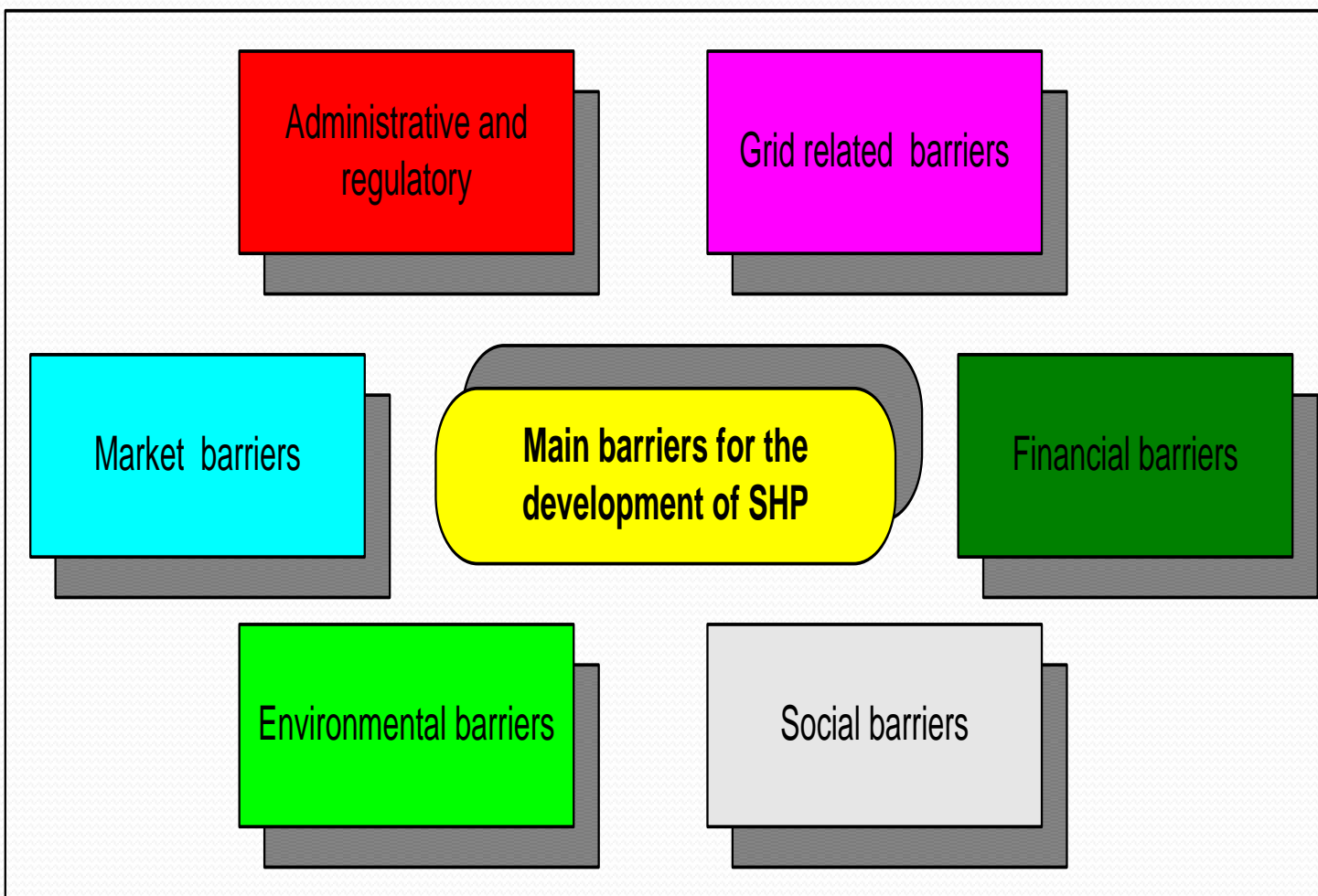
- climate change mitigation
- contribution to flood controls
- Removal of waste (trashrack)

SOCIAL BENEFITS



- rural and remote areas development
- benefits for human health due to the avoidance of CO₂, SO₂ and NO_x gases
- efficient and independent energy management
- involvement of the community in the project offering financial, market, industry and employment opportunities at local level.

Policy framework and non technological barriers



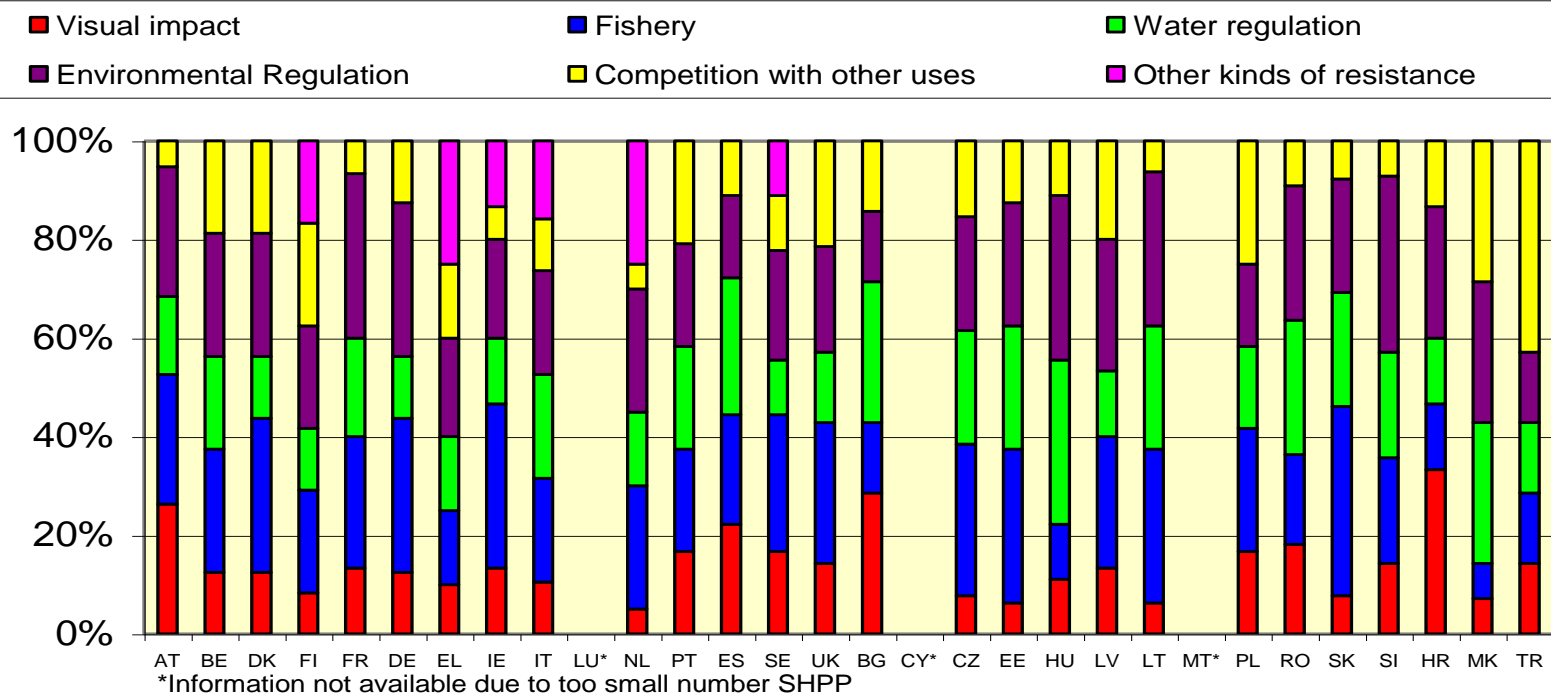
Key barriers to SHP development

- **Environmental concerns** - ecological impact
- **Regulatory barriers** – WFD, Eels regulation, Natura 2000, river classification, no go areas
- **Administrative barriers** – long, costly & complicated licensing procedures
- **Lack of financial incentives and clear regulatory framework**
- **Grid connection barriers**
- **Negative image**



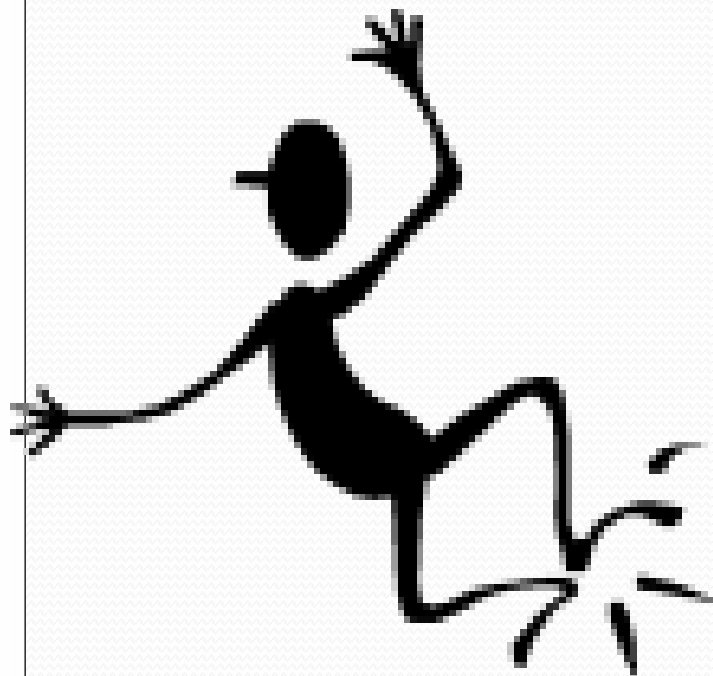
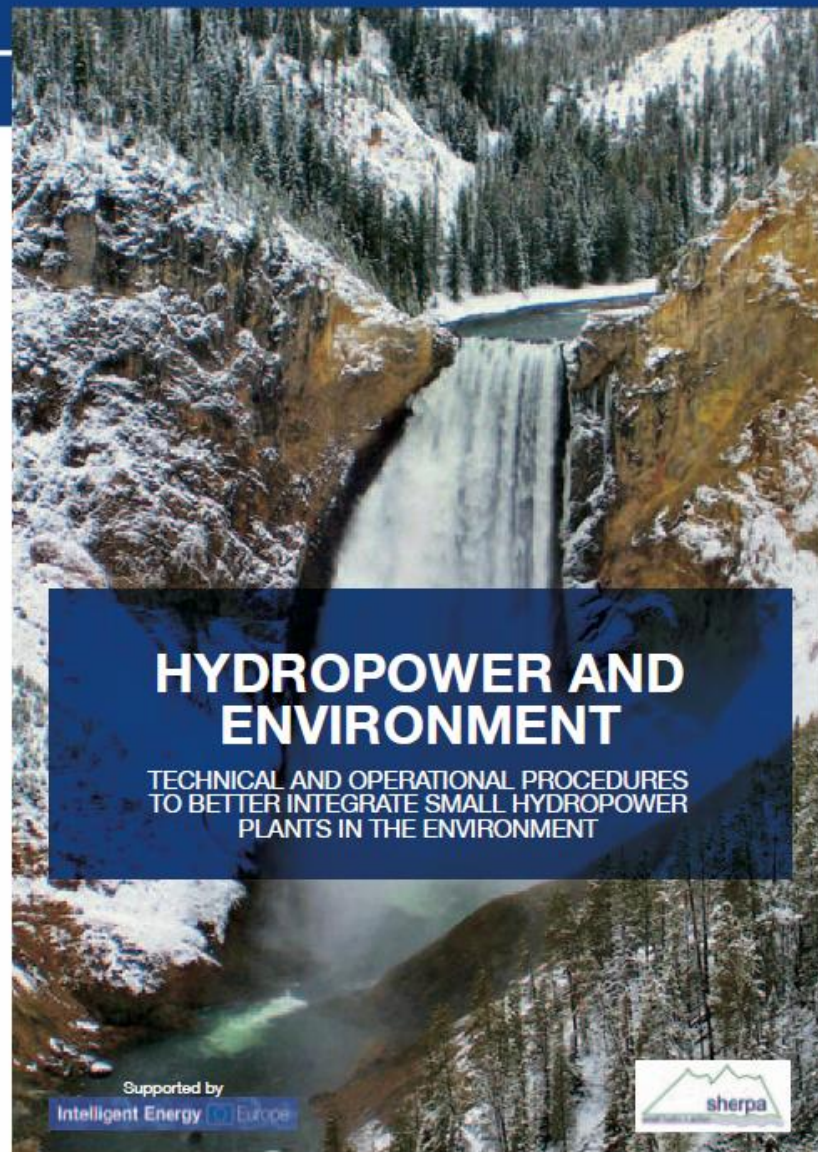
Environmental barriers

Environmental Integration - Resistance to SHP development EU-27 & CC



Source: SHERPA Project – www.esha.be/sherpa

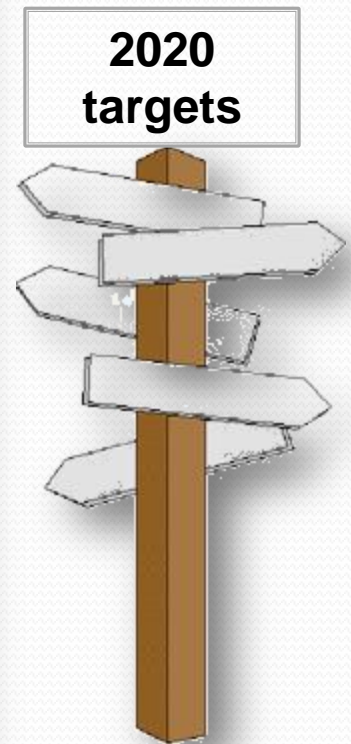
Environmental barriers



Administrative barriers

- average **length** of administrative procedures vary from 12 months in the best-case scenario (Austria) to 12 years (Portugal)
- **no coordination** between different authorities
- **not transparent**, objective or non-discriminatory rules
- **high cost** for permits required (hydrological & environmental assessment, water, land use and construction, land rights, interconnection studies, power purchase agreements, etc)
- **low approval** rates
- “neverending” changes in the law framework (uncertainty)
- **illegittimal** requests (documents or procedures)

Should I stay or should I go ?

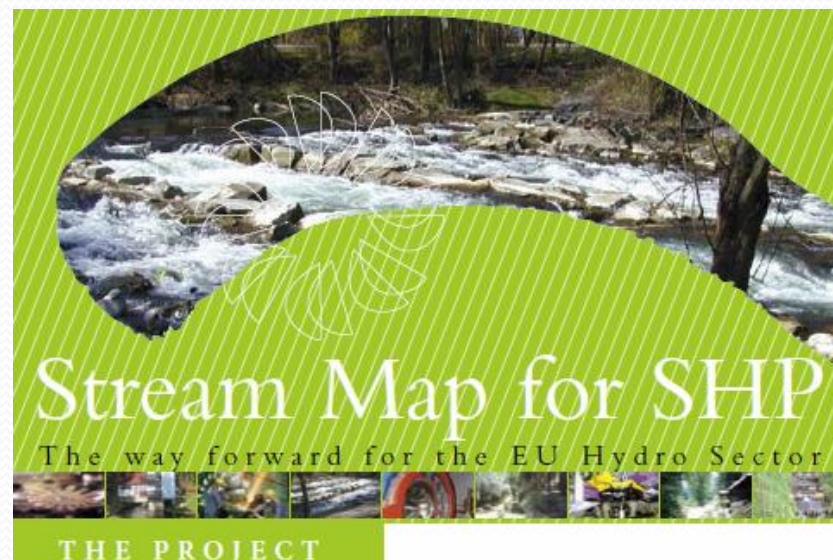


We don't have a "ROAD MAP" for hydropower sector

SHP Stream Map



- Intelligent Energy Europe (1/6/09 al 1/6/12)
- Coordinator: ESHA
- Partner: APER, LHA, FHE, SSHA, SERO, IHSD, BHA, APREN, PHA & EDORA
- Advisory Board: ESHA, Eurostat, Eurelectric, EREC, Observ'er & HEA-E
- Copertura: EU-27



THE PROJECT

Stream Map is a project co-ordinated by ESHA and co-funded by the IEE Programme of the European Commission under the responsibility of the EACI. It will run from 2009 until 2012.

• What is the Stream Map?

The objective is to create a Roadmap for the future of the SHP sector with a view of the 20% targets set in the RES Directive by:

1. Creating a central database HYDI which will compile the relevant information on Hydropower for the EU-27 as from 2007 on annual basis.
2. Analyzing the current status of the sector.
3. Drawing recommendations for the future development of the sector.

4. Influencing National Renewable Energy Action Plans on the RES mix.
5. Offering regular advice and information at local and national level on the sector development and needs.

• HYDI:

The European Hydro Database

HYDI (Hydro Data Initiative) will provide statistics and information on energy, market and policy data for all users covering the entire Hydro sector in EU-27 Member States for the first time in history. The access to the database will be free of charge and user friendly. This database will incorporate information as from 2007 with a yearly update in the form of CD ROMS and News Releases.



SHP Stream Map



Formulate a Road map for the SHP sector by

- A) Gathering information (energy-policy-market)
- B) Creating HYDI: unique EU database compiling Hydro info for the EU-27 and on yearly basis
- C) Analyzing current status and potential development derived from data collection
- D) Drawing scenarios and policy recommendations on SHP in the energy mix (2020 targets)

www.streammap.esha.be



S T R E A M M A P

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HYDI

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Search Energy Data - Current data

Countries

☐ Austria ☐ Belgium ☐ Bulgaria ☐ Czech Republic ☐ Denmark ☐ Estonia ☐ Finland ☐ France ☐ Germany ☐ Greece ☐ Hungary ☐ Ireland ☐ Italy ☐ Latvia ☐ Lithuania ☐ Luxembourg ☐ Netherlands ☐ Poland ☐ Portugal ☐ Romania ☐ Slovakia ☐ Slovenia ☐ Spain ☐ Sweden ☐ United Kingdom

Variables

- ☐ Number of power plants
- ☐ Installed gross capacity (MW)
- ☐ Gross electricity generation (GWh/year)
- ☐ Electricity consumption - Pumped storage power plants (GWh/year)
- ☐ Normalised Electricity Generation (GWh)

Years

- ☐ 2007
- ☐ 2008
- ☐ 2009

You are here: [Home](#) > [HYDI](#) > [Market data](#) > [Industrial data](#)

Search Market Data - Industrial

Countries

☐ Austria ☐ Belgium ☐ Bulgaria ☐ Estonia ☐ Finland ☐ Germany ☐ Greece ☐ Ireland ☐ Italy ☐ Latvia ☐ Lithuania ☐ Portugal ☐ Romania ☐ Slovakia ☐ Slovenia ☐ Spain ☐ Sweden ☐ United Kingdom

Variables

☐ Number of companies
☐ Employment - Equipment suppliers
☐ Employment - Engineering activities
☐ Employment - Maintenance services
☐ Employment - Manufacturers
☐ Employment - Others
☐ Civil works (estimation)

Years

☐ 2009

Search Policy Data - Legislation

Search in Reference and Summary/Impact

Type

- ☐ Energy
- ☐ Environmental
- ☐ Other

Countries

- ☐ Austria ☐ Belgium ☐ Bulgaria ☐ Czech Republic ☐ Denmark ☐ Estonia ☐ Finland ☐ France ☐ Germany ☐ Greece ☐ Italy ☐ Latvia ☐ Lithuania ☐ Poland ☐ Portugal ☐ Romania ☐ Slovakia ☐ Spain ☐ Sweden

Years

- ☐ 2007
- ☐ 2008
- ☐ 2009

Submit

Challenges for the future: administrative barriers

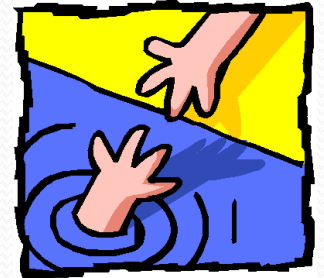
- Decrease the barriers for developing SHP by setting up clear and transparent rules in the licensing process => simplification & homogenization with respect to timeframes
- Measures for fast-track planning procedures & one-stop shops
- Increase public awareness & improve acceptance at local level => info on best practice & win win solutions



Challenges for the future: environmental barriers

Ambitious time frame for the fulfillment of WFD goals

- lot of work has to be done to adapt old facilities
→ high costs and significant losses
- there is the need for positive incentives for a smooth and efficient adaption / “transformation” of the sector



No classification into “go and no-go areas”!

- project based evaluation is more appropriate within the authorization process
- it has to be considered that different project concepts result in different ecological impacts.





SHP is compatible with a good ecological status of our rivers!

Thank you!

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