

Knowledge Base

Renerfor

Implementation in Aosta

Development of renewable energy sources - wood and water

KEYWORDS:

- Building culture
- Construction
- Closed loops
- Governance
- Planning Tools
- Ecology
- Energy efficiency
- Indicators
- Mobility
- Technology transfer

TARGET GROUP:

- Architects
- Builders
- Citizens
- Craftsmen
- Home Owners
- Planners
- Politicians
- Policy Makers



Results and outcomes (use cases):

The Renerfor project aims to promote renewable energy sources, energy savings and the reduction of emissions in the Italy - France cross-border area. The project primarily focuses on the possibility to exploit the local renewable energy sources, such as water and wood particularly diffused in the rural and mountain areas involved.

The specific project objectives in the Aosta Valley have been the following:


1. Definition of a methodology aimed at updating the energy balances of the Region with the assessment of consumption, use of renewable sources and updating of gas emissions.
2. Analysis of the availability of forest biomass with the identification of logistic solutions for the timber supply and the planning of the wood chain as energy source; statistical survey on average consumptions

and on the types of fuel with a focus on the use of wood biomass; Moreover, a sample survey among the population has been conducted in order to determine:

- the number and types of wood heating systems present in the territory (boilers, thermal chimneys, fireplaces, stoves, etc.);
- varieties of biomass used (pellets, chips, logs, etc.), quantities consumed and origin.


3. Assessment of the availability of water resources and study of the environmental impact generated by hydroelectric plants; definition of criteria for the construction of new plants and for the rationalization of the sector development.

4. Promotion and dissemination of the project activities, realisation of publications on the activities and the results achieved by the project in the Region.

 **Description:** The strategic project Renerfor "Cooperation initiatives for the development of renewable energy sources (wood and water) in the western Alps, energy saving and emissions reduction" is part of the program of cross-border cooperation between Italy and France "Alcotra" 2007-2013. The primary objective of the Renerfor project has been to improve the effectiveness and the coordination of public action for the promotion of renewable en-

ergy sources, energy saving and emissions reduction.

The cooperation allowed to share the knowledge heritage and the coordination of the existing methodologies in Italy and in France, in order to improve policies and initiatives for sustainable development, in particular, of the wood-timber-water chain and of the production of hydroelectric energy.

 **Relevance for inter-municipal planning (AlpBC):**

The data collection of the Renerfor project covers all the Regional territory of the Aosta Valley, giving also a set of data and a detailed energy characterization of the Mountain Community Monte Cervino (AlpBC inter-municipal pilot area).

The analysis conducted in the project could be one of the main tools to set-up the inter-municipal energy balance of the AlpBC pilot area, focusing in particular on biomass and hydro-power. In a second step, the results of the project could give some insights into the

elaboration of the strategy for the integration of energy and territorial planning (considering wood, energy, air and water). Another important part of the Renerfor project related to the evaluation of the wood potential for energy uses and for a sustainable use of biomass is that it could form the content for analysis on Regional Closed Loop Economies developed in the AlpBC project and provide an important contribution to develop instruments and prescriptions to up-grade the inter-municipal planning.

 **Relevance for policy goals (Alpine Space, Europe and the region):**

The Renerfor project allows for an evaluation, at a regional level, of the possible interaction with the regional energy balance (BER) and with the regional energy and environmental planning (PEAR).

The results of the project give the possibility to define the potential of the development of wood biomass, with a technical and economical evaluation for the realisation of a wood-timber-water chain at a regional level. Moreover some evaluations have been made for a further develop-

ment of the mini-hydro plants in the regional territory. The studies conducted during the project can orient the local actions and objectives in order to satisfy the European goals of 20-20-20, providing the decision makers with important data for the energy and territorial planning.