

INTRODUCTION

PROFORBIOMED promotes renewable energies in Mediterranean areas by developing an integrated strategy for the use of the forest biomass as a renewable energy source (RES), recovering the forest biomass potential, developing technical and legal aspects and promoting the use of forestry biomass for energy. The project focuses on the current weak points that prevent forestry biomass to be relevant for a sustainable development of territories, developing technical issues, supporting tools and policies, involving all stakeholders and creating structures that support the cooperation between public and private actors.

Situation report presents the current situation, problems and opportunities for the development of the forestry biomass chains in PROFORBIOMED partners countries. This report can be used as a background document for estimations of possibilities for mobilization of additional forest biomass on sustainable way as a contribution to overall renewable energy sources. Each county or region provides information about national energy policies (focused on wood biomass), wood biomass market situation, production of wood biomass from forests, wood biomass production chains, use of wood biomass, socio-economic constrains, existing policy measures and barriers for development of wood biomass sector.

In this document situations regarding wood biomass potentials, production and use in Slovenia, Spain (Valencia, Catalonia and Murcia region), Portugal, France, Italy and Greece (Patras, Western Greece and Western Macedonia region) are presented. In next paragraphs we present only some main points from participating countries or regions.

Wood is the most important renewable energy source in **Slovenia**. In 2009 more than 40 % of Slovenian households used wood for heating. Firewood is traditionally used for heating, in recent years also use of wood chips and pellets has grown. In addition to the use of wood in households there is also increase of district heating systems. The market of wood fuels is developing rapidly. The State has also contributed to this trend with co-financing the initial investments in modern boilers for central heating and support for the promotional projects. For Slovenia it is determined that within the framework of EU objectives by 2020 should reach at least 25-percent share of RES (renewable energy sources) in gross final consumption. Share of RES in the year 2010 in final energy consumption, calculated according to EU methodology, was 19.4 %.

Spain, like most of the developed countries, replaced most of the biomass-based consumption, first for coal in the late nineteenth century and then by petroleum fuel or electrical appliances during the twentieth century. In fact, this consumption was

relegated to only some sectors directly related to biomass such as forestry and agro-forestry in some cases or ceramics. Apart from these sectors, the most consumption of biomass is focused on traditional systems for heating, DHW heating and cooking, as the old fireplaces or wood stoves. Spain should reach at least 20-percent share of RES (renewable energy sources) in gross final consumption in the frame of EU objectives by 2020. Currently, over 80% of energy supply comes from fossil fuels, 13% nuclear, and about 6% of renewable energy. This 94 % non-renewable sources has important environmental implications heavily dependent on external supplies. Most of the biomass comes from the forestry sector, which has traditionally been used in the domestic sector through inefficient systems (use of firewood), but also boilers in forest industries.

The biomass plays a major role in the energy production in **Portugal**. At the last decade the use of biomass as an energy source for heat and electricity production has been growing on industrial field, and decreasing at the level of the domestic uses. The Directive 2009/28/EC sets the goal of 31,0% for the share of renewables in final gross energy consumption, implying an increase of 11,3% over the value recorded in the base year 2005, which was 19,8%. At present, more than 40% of the electricity produced in Portugal is based on the use of RES and around 20% of the final energy consumption is achieved with the use of renewable energy. Portugal imports about 85% of its energy, a percentage well above the EU average.

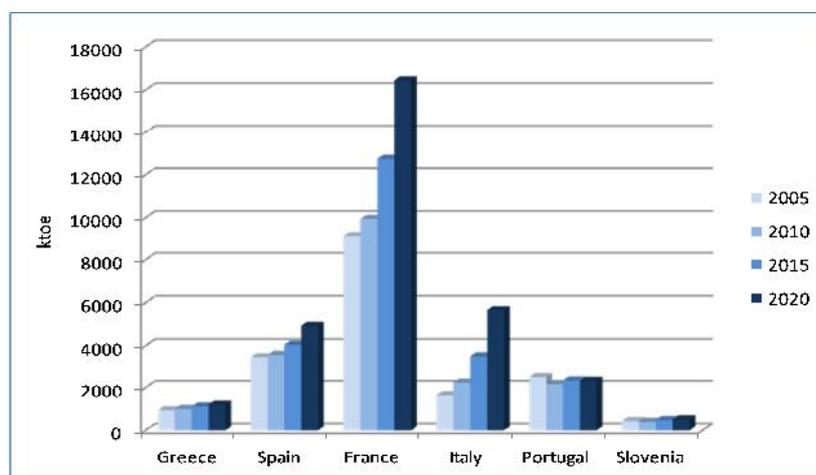
For **France** national target for the share of renewable sources in gross final consumption of energy in 2020 is 23%. To reach this objective, the annual national renewable energy production has to double from 17 Million tons of oil equivalent (Mtoe) to 37 Mtoe. French experts have estimated that biomass should represent 45 % of the overall renewable energy effort. In 2010 in the PACA Region 172 wood energy installations have been identified. These facilities consume 38 000 tons of biomass each year: 20.000 tones coming from forest and 13 000 tons of wood recovery. 113 new projects are under consideration or in progress.

According to the European Commission proposal by 2020, **Italy** is committed to a 17% share of renewable energy in final energy consumption. These targets are, on the whole, really challenging. In 2009 the use of biomass for energy purposes contributes for just 3.5% to the final national energy consumption. Among renewable energies, wood (which includes firewood, chips and pellets) is already the second source in term of primary energy contribution (30 % of RES). Only for example, annual pellet consumption has grown from 150,000 in 2001, to approximately 850,000 tons in 2008, such as the production from 160,000 tons in 2001 to approximately 650,000 tons in 2008.

The energy policy of **Greece** is heavily depending on imported oil for household purposes, industries operation, production of electricity in non-connected islands, transport etc. On the other hand, the production of electricity is mainly based on lignite,

due to its extensive deposits found mainly in Western Macedonia and, at a smaller scale, in Peloponnesus. The late introduction of natural gas has initiated a diversification of the energy mixture, where the renewable energies share still remains low. Greece has set a national target for the contribution of RES in final energy consumption to 20%. The rate of energy production from biomass in Greece is approximately 5% (9% bioenergy in general), mainly due to the use of firewood for heating. Greece is using for heating mainly firewood and wood pellets. The Greek pellet market just started to develop. There are very few companies operating at the moment in Greece in the field of pellet production. This situation is expected to change, due to the ongoing economic crisis that forces people to seek cheaper ways to heat their households.

The situation in participating Mediterranean countries distinguishes significant but there are some common development opportunities and some common barriers to be removed. In general all this countries has goals to enlarge the share of wood biomass in total energy consumption till 2020 and PROFORMBIOMED project represents an important initiative that can help to reach mentioned goals. In this status report data about current situation is presented by each participating country or region, barriers for further development are identified. The report is prepared for all those who are interested in production or use of wood biomass.



Projected total biomass heat energy [ktoe] for the period 2005 – 2020 in participating countries (Data from national renewable energy sources action plans)

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