

## INTERREG EUROPE PROJECT PROPOSAL

### Title

**MASS-FOR-GROW** - SUSTAINABLE AND EFFICIENT EXPLOITATION OF LOCAL BIOMASS AND PROMOTION OF AN ASSOCIATED BUSINESS MODEL FOR SMART GROWTH IN SMEs AND RURAL AREAS

### Description/Issue addressed

The aim of the project is to facilitate a sustainable and efficient exploitation of the biomass in order to obtain renewable energy and high added valuable products, boosting thus the economies of the SMEs from the European regions producing it, especially in their rural areas.

In order to achieve this main aim, the following specific objectives are proposed:

- To study the management of biomass (focused on forest and agri-food industry) and their potential valorizations.
- To determine whether optimum practices are adopted and which models of biomass valorization are technically, economically and environmentally more sustainable and profitable.
- To develop a business plan for the whole chain of biomass recovery, transformation, transport and end use, to be replicated in other regions of the EU.
- To promote the best identified practices through mentoring programmes targeted to the stakeholders (valorization companies, agri-food industries, forestry exploitation consortia), focused mainly on SMEs.
- To identify the impact of the project in terms of smart energy, improvement of the SMEs competitiveness and rural development.
- To provide policy recommendations and suggest joint future actions in biomass legislation.

In order to tackle existing barriers the initiative must involve the various active stakeholders who must take a direct benefit from the project. The implementation of this project in the target regions will provide a valuable alternative to farmers, forestry companies and agri-food industries that currently dispose their low value biomass residues often through uncontrolled burning, for instance.

### *Empleo - Employment*

1

Diputación Provincial de Jaén, España (Spain)  
Plaza de San Francisco, 2 - 23071 Jaén  
Tel. +34 953 248000, ext. 1052 Fax: +34 953 248 030

C-e: [acastillo@dipujaen.es](mailto:acastillo@dipujaen.es)  
[www.dipujaen.es](http://www.dipujaen.es)

## Andalusian Region

In Mediterranean countries, a major contribution in biomass is originated from the olive trees cultivation and olive oil processing (pruning, leaves, two-phase olive wastewater - TPOMW-, three-phase pomace,...etc.). According to the Spanish Agency for Food Information and Control, an area greater than 60% of total Spanish olive grove is located in Andalusia. In the current model of Andalusian olive exploitation the only product on the market and therefore the only source of income for farmers is olive oil. However, the process of growing and olive oil extraction generates large amounts of biomass that are currently treated in most cases as a waste, not bringing in any profit for the farmer and even assuming a cost. This situation requires a new orientation of the olive grove to maintain its competitiveness.

Forests are another important source of biomass in Andalusia. According to Andalusian Forestry Plan 2015, the forest represents more than 50% of the land surface in this region. For that reason, biomass is one of exploitations with the most future perspective in Mediterranean areas, combining economic interest with aspects such as the environmental benefits involving its use as a source of renewable energy, its impact on improving the forest fire prevention and the boost on the economy and industrial companies related to forest.

The available biomass potential in Andalusia can be valued in 3,327 ktOE/year (Andalusian Sustainable Energy Plan -PASENER- 2007-2013), distributed among farming waste (43%), energy crops (17%), forestry waste (4%) and industrial waste (18%), but only 30% of them are exploited. Of the various renewable energies, biomass comes to 6.3% of the total primary energy consumption and 78.7% of the renewable energy consumption (García- Maraver et al., 2012). This potential allows the region to opt for a scientific and industrial leadership and become a model for the development of technologies for renewable energies. (Provisional; an update is required with latest data)

The integrated use of biomass as a renewable energy source would result in a reduced dependence on foreign energy and emissions of greenhouse gases from fossil fuel use. Also, the advantage of the appreciation for other purposes such as obtaining high value added products would improve environmental aspects and would increase exploitation profit. In both cases this use can boost job creation, especially in rural areas of Andalusia.

Thereby, the rural economic development would be one of the major benefits of the exploitation of the biomass, in addition to the increase of incomes and market diversification, enhancement of the competitiveness, revitalization of retarded rural economies and the reduction of negative environmental impacts. The new incomes for SMEs and rural population would improve the material welfare of rural communities and this might result in a further activation of the local economy. At the end, this will mean a

*Empleo - Employment*

2

Diputación Provincial de Jaén, España (Spain)  
Plaza de San Francisco, 2 - 23071 Jaén  
Tel. +34 953 248000, ext. 1052 Fax: +34 953 248 030

C-e: [acastillo@dipujaen.es](mailto:acastillo@dipujaen.es)  
[www.dipujaen.es](http://www.dipujaen.es)

reduction in the emigration rates to urban environments, considering the current economical crisis that forces many people to leave the rural areas where the job opportunities are scarce. Finally, other advantages would be providing farmers stable income, new market diversification and strengthening the local economy.

## D.1 PHASE 1 'Interregional learning' Detailed work plan per period

### a) Exchange of experience

#### -Analysis of existent technologies in biomass recovery.

Identification of previous developed technologies (with special focus on public funded projects) and those currently in use for biomass recovery. Likewise, regional and national plans, projects, programs and activities related to biomass recovery in the regions participating will be collected and discussed, with the contribution of all the project partners. Additionally, it will be identified the main actors, the regional capabilities and infrastructures around which research is currently carried out and analyzed the RTD and industrial offer and demand on each region and across the Europe.

Deliverables (to be replicated in each country):

- Working methodology
- Database of biomass recovery technologies
- Database of valorizing companies and facilities in the region
- Analysis of regional and national plans related with biomass

#### -Exchange of experience (among countries and in each participating region) to select the best existing methodologies according to criteria of technical and economic feasibility.

This will be performance through i) the organization of meetings and interviews with stakeholders in each participating region, ii) the organization of workshops among each participating country in the project, inviting to specialized speakers in biomass valorization, with special focus on those participating in European projects, and iii) the development of market analysis. At the end, this task will identify the key know-how and the best practices for guiding regions to more efficient and profitable use of their own resources and, based to this, an Action Plan will be developed.

#### *Empleo - Employment*

3

Diputación Provincial de Jaén, España (Spain)  
Plaza de San Francisco, 2 - 23071 Jaén  
Tel. +34 953 248000, ext. 1052 Fax: +34 953 248 030

C-e: [acastillo@dipujaen.es](mailto:acastillo@dipujaen.es)  
[www.dipujaen.es](http://www.dipujaen.es)

Deliverables (to be replicated in each country):

- Working methodology
- Report from meetings and interviews with regional stakeholders
- Report from workshops among countries: learned lessons in the region
- SWOT analysis of biomass recovery
- Market analysis and associated business model
- Action Plan development
- A mentoring programme will be run out by each public body in the consortium targeted to the stakeholders.**
- Mentoring programme content

**b) Communication and dissemination**

**c) Project management**

**D.2 PHASE 2 Detailed work plan per period**

**a) Action plan implementation follow up**

- Monitoring the implementation of the action plan**

Deliverables (to be replicated in each country):

- Implementation of the action plan
- Action plan monitoring

**b) Communication and dissemination**

**c) Project management**

**Partners involved**

Project leader: Diputación de Jaén (regional public authority, Spain)

CITOLIVA-The Olive Grove and Olive Oil Technology Centre (private non-profit foundation, Spain),

*Empleo - Employment*

4

Diputación Provincial de Jaén, España (Spain)  
Plaza de San Francisco, 2 - 23071 Jaén  
Tel. +34 953 248000, ext. 1052 Fax: +34 953 248 030

C-e: [acastillo@dipujaen.es](mailto:acastillo@dipujaen.es)  
[www.dipujaen.es](http://www.dipujaen.es)

### Main policy instruments addressed (Andalusia)

The aims of the project are aligned with the following thematic priorities in the Operational Programme for Andalusia:

- TO1 - Research and innovation
- TO10 - Education and training
- TO3 - SMEs competitiveness
- TO4 - Low-carbon economy
- TO5 - Climate change and risk prevention
- TO6 - Environment and resource efficiency
- TO7 - Transport and energy networks
- TO8 - Employment and labour market

Additionally, the existence of a national or regional Research and Innovation Strategy for Smart Specialisation (RIS3) is the 'ex-ante conditionality' for the use of European Structural and Investment Funds to support R&I. Energetic innovation, biomass recovery and renewable energy are aligned with the smart specialization RIS3 in Andalusia.

### Type of partner looking for

-Regional and national public authorities acting in the field of agriculture, forest, environment and/or food industry.

-Universities or other kind of research organizations specialized in biomass recovery.

-“Advisory partners” are welcome.

### Contact people:

- o Antonio Castillo, Diputación Provincial de Jaén, Spain, [acastillo@dipujaen.es](mailto:acastillo@dipujaen.es) , +34 953248000, extension 1052
- o Carmen Capiscol, CITOLIVA, [ccapiscol@citoliva.es](mailto:ccapiscol@citoliva.es) , Spain, +34 953221130