

## CASE STUDIES OF SELECTED GOOD PRACTICES

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### 1. GENERAL INFORMATION

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- a. **Case Study Title:** Promote biomass actions in closed management processes on a local scale in the region of Berguedà (Catalonia)
- b. **Location:** Berguedà, Barcelona



- c. **Priority theme:** Forest management, marketing, logistics, promotion and demand management

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### 2. CONTACT INFORMATION

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### 3. CONTENT: Collection and analysis of information

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*In the first phase, the available information from the selected good practices is analysed. This will include:*

**a. Type of practice:**

**Extraction**

**Transformation**

**Demand**

- b. **Positioning in the value chain:** global management of resources, from the planning of actions to the delivery of the product at its destination

**c. Structure:**

- o **Size of the company:** Local Entity, composed of seven municipalities

- **Existence of other business lines:** Sale of wood, sale of chips, production of thermal kW.
- **Required investments:** The total budget for the construction of the high temperature power plant was 2,750,000 €, and for the forest management machinery and chipper was 180,000 €.
- **Sources of financing:** The Barcelona Provincial Council has made a contribution of 1.5 million euros to the plant construction Project. The Government of Catalonia has collaborated in different work processes and the rest has been carried out with the benefits of the forest management.
- **Work team:** 6 people specialized in all the activities of the Commonwealth, plus the technical direction of the Government of Catalonia.
- **Agents involved:** Commonwealth of Berga Municipalities for biomass (7 municipalities owning Public Utility Forests) and Government of Catalonia.

**d. Scope of:**

- Insertion of disadvantaged groups**
- Entrepreneurship and business creation**
- Corporate social responsibility**
- R+D+i Research**
- Equal opportunities for women and men**
- Other:**

**e. Business model implemented:**

- **Idea / business opportunity:** Consortium of 7 municipalities to supply biomass in 32 municipal facilities through 13 biomass boilers (power of 4.3 MW and consumption of 1,350 t/year of chips), and to an industrial area in Berga through two boilers of 2.3 MW each (3,750 t/year of chip consumption with only one boiler in operation).
- **Marketing model**
- **Customer profile:** The customers of the 13 biomass boilers are the same municipalities of the Commonwealth, while the boilers of the industrial area serve private companies through two heat networks (one with thermal oil and another with hot water).

**f. Economic impact:** Generation of around 40 direct jobs (depending on the season) plus indirect ones. These jobs are carried out in rural areas in all phases of the project.

**g. Degree of innovation:**

- **In products or services: Novel products or services (do not exist previously):** The two 2.3 MW boilers each heat a thermal oil capable of reaching 300°C to supply energy to companies through two networks, one with high temperature (thermal oil) and the other with hot water. The use of thermal oil at high temperature allows the versatility of supplying heat between 60° and 300°C to the different production processes of the companies in the industrial estate.
- **In products or services: Improved products or services:** A more professional system of work has been achieved in the forest and continued throughout the year, whereas previously it was seasonal. The quality and quantity of wood supplied to the industries has also been improved.
- **In organizational methods:** The wood is not auctioned standing, but is auctioned directly to industry, according to market qualities. The wood is the result of actions defined to achieve different objectives, is classified in the forest according to their qualities and technological conditions to optimize economic performance and is supplied to each industry according to their characteristics. Work in the forest is paid according to the type of timber in order to motivate productivity and capacity to obtain types of wood with added value. For the use of biomass, in accordance with the cascade principle, only wood that does not have any other commercial use is used.
- **In marketing and commercialization:** Due to the use of thermal oil, an important range of temperature supply is opened to the industrial estate with exclusively forest biomass, which confers an enormous singularity to this small industrial estate.

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#### 4. RESULTS

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- a. **Effectiveness or degree of compliance with objectives:** High
- b. **Effectiveness or achievement of results in relation to resources used:** High
- c. **Scope or extent of the influence of the practice. Practice has influenced:** An average of 40 workstation are settled in rural areas with small possibility of generating employment in the primary sector.
- d. **Degree of effectiveness:** Every year, between 400 hectares and 12 000 tones of Wood are implemented, quality and quantity of the Wood supplied to industries has been improved and better management of mountains is fostered.
- e. **Degree of sustainability:** The Project is based in the sustainable forestry management. This is why they are small facilities, fuelled by biomass in accordance with the regeneration capacity of the mountain.
- f. **Transferability:** An innovative and repeatable system has achieved.
- g. **Products:** Wood sale, chips sale, heat kW production.

## 5. CONCLUSIONS

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- a. **Impact and usefulness of good practice:** It is an example for other industries and companies that perform timber harvesting activities and supply wood chips.
- b. **Main lessons learned:** Facing a new management system in the forest and the creation of a complete infrastructure of biomass consumption to produce a product with a dubious market, has generated great distrust for all sectors (including local). In addition, it has been generated by small local entities in a mountainous territory without many economic resources.