

Value chains : Prime mover and Main Characteristics

- Stakeholder Type
- | | |
|--|---|
| <input type="checkbox"/> Farmer | <input type="checkbox"/> Agrarian Cooperative |
| <input checked="" type="checkbox"/> Public Institution | <input type="checkbox"/> Agro-Services |
| <input type="checkbox"/> Final Consumer | <input type="checkbox"/> Farmer Association |
| <input type="checkbox"/> ESCO | <input type="checkbox"/> Agro Industry |
| <input type="checkbox"/> Pellet Producer | <input type="checkbox"/> Biomass Supplier |

Location of Prime Mover

Municipality : Serra

Latitude : 39.685859

Longitude : -0.427837



- Type of Residue used in value chain
- Pruning Plantation Removal Both
- Crop Species used in Value Chain
- | | | | |
|---|---|-------------------------------------|---|
| <input checked="" type="checkbox"/> olives | <input checked="" type="checkbox"/> vineyards | <input type="checkbox"/> apples | <input type="checkbox"/> pears |
| <input type="checkbox"/> peaches | <input type="checkbox"/> apricot | <input type="checkbox"/> nectarine | <input type="checkbox"/> plum |
| <input type="checkbox"/> cherries | <input checked="" type="checkbox"/> oranges | <input type="checkbox"/> tangerines | <input checked="" type="checkbox"/> lemons |
| <input type="checkbox"/> grapefruit | <input type="checkbox"/> hazelnuts | <input type="checkbox"/> chestnuts | <input checked="" type="checkbox"/> almonds |
| <input checked="" type="checkbox"/> cherry, carob | | | |

Total Plantation Area involved in the Value Chain (ha) _____

Typical APPR biomass production (tonnes/year) 60

Start Date of the APPR value chain (Month-Year) 2011

Factor Group	Description	Check the influence in success:(0)-Not relevant;(1)-May have influenced;(2)-Important for success;(3)It was crucial;(?)-Unknown					Check the 3 most crucial factors in WHOLE table
		0	1	2	3	?	
Logistics Chain	There were pre-existent collaborations established between farmers sector and biomass consumers/traders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The introduction of new technologies (machine, handling systems, logistic chain) supported the implementation of new chains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Private investment for entrepreneurs was incentivised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Short summary of the initiative (<100 words)

Summary of the value chain

The implementation of this biomass initiative in Serra started in 2011 with an ambitious project leaded by its Town Hall to harness the abundant forest over the Sierra Calderona. The main idea was to convert the wood biomass resulting from the forest into pellets with the aim to be used to the boiles in public buildings of facilities. At that moment, the costs of handling the green residue of Serra spending were 90,000 euro per year and lots amounts of agriculture, forestry and gardening residues are wasted while they could be used as a fuel suitable for the local administration. The first step was to convert the local administration in a consumer of the generated fuel, replacing the traditional heat sources fed by electrical energy with biomass boiles and hot water circuits and radiators. The municipal management raised the renewal of a line of support of the provincial administration towards acquiring a forest chipper and mounting a heating circuit with fed by a multifuel 35kW biomass boiler to install it in the Municipal Nursery. Moreover, a multifuel 65kW biomass boiler was acquired to be used in the offices of the municipal building of the Town Hall. Considering both phases and after three years of the project the municipality of Serra has allowed a total annual savings, waste management nd electricity bills of more than 37,000 euro per year, and a reduction in CO2 emissions over 250 tonnes per year. The next goal for them is to change the current production system to aa semi-industrial process reaching 600-1000 kg/hour.

City council of Serra (Serra)

VALUE CHAIN ACTORS		Farmers	Farm cooperative / agro productive organization	Agro services Company	Techno-logistics services in agriculture	Biomass energy plant builder /dealer	Energy service company	Biomass consumer / energy user
VALUE CHAIN PROCESSES	APPR biomass producer	1						
	Harvesting & conditioning							2
	Biomass 1 st haulage/ Transport							2
	Pretreatment & Storage							2
	Biomass further processing							2
	Biomass transport							2
	Energy conversion							2

1 Farmers

2 Town Hall of Serra (public buldings used as end users)

Fuel Specifications

Final form of Biomass prior to
Exploitation

- Bales of branches
 Hog fuel-shredded

- Wood chips
 Pellets

Moisture content (%) :

Max Content of Ash (% a.r.) :

Min LHV (kj/kg a.r.) :

Value Chain Details and Prices of fuels

End-users

- Self-consumption
 Public-private buildings
 Biomass to Market

- Industrial heating
 Distributed heat networks

Distance between biomass production
and its final use (km) :

Storage options

- On-farm storage
 Intermediate storage prior transporting to end user
 Direct delivery and storage at final user
 No storage

Ownership of the APPR harvesting
machinery

- Farmer
 Leasing
 3rd party-private

- Farmer's community
 Municipality-public

Prices of fuels sold
to final consumers

Price of APPR biomass (€/t)

Price of regular woodchips (€/t)

Price of ENPLUS pellets (bulk-€/t)

Price of domestic heating gasoil (€/l)

Have you filled the questionnaire about
mechanized pruning/plantation removal ?

Yes

No

If yes, please provide the name or e-mail you have
used on that questionnaire



Photos

