

Value chains : Prime mover and Main Characteristics

- Stakeholder Type
- |   |  |
|---|--|
| <input type="checkbox"/> Farmer                       | <input type="checkbox"/> Agrarian Cooperative        |
| <input 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 checked="" type="checkbox"/> Biomass Supplier |
| <input checked="" type="checkbox"/> Residues retailer |  |

Location of Prime Mover

Municipality : Alcantarilla (Murcia)

Latitude : 37.969517

Longitude : -1.219342



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

Total Plantation Area involved in the Value Chain (ha) \_\_\_\_\_

Typical APPR biomass production (tonnes/year) 20000

Start Date of the APPR value chain (Month-Year) 2012











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 cosumers/traders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Private investment for entepreneurs 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

SOLAMUR is a residues retailer company sited in Alcantarilla (Murcia Prvince), in South-Eastern Spain. The company offers services of collecting agricultural pruning and performing plantations removals under the payment of a fee. The company also gather other types of residues and offers several fuel products like: sawdust, board wood, forestry woodchips and APPR biomass. The main source of APPR biomass is the wood from up-rooted plantations. They receive in their facilities the up-rooted trees brought by farmers, though the company performs also up-rooting services. In such case they cut the trees and separate the upper and lower part of the tree. The biomass brought to their facilities is then shredded. In case of roots they have a specii process for cleaning they have developed after years of practice. They offer wood processed through chippers and shredders, and object of sieving, and thus the size distribution os more even and appealing for industrial facilities consuming biomass. They have local consumers, though a large share of their products are being exported to other EU countries through the harbour terminal of Cartagena. They have achieved an annual volume of 20,000 t/year.

## Actors and Roles in Value Chain

VALUE CHAIN ACTORS		Farmers	Farm cooperative / agro productive organization	Agro machine builder /seller	Agro services Company	Residues retailer (SOLAMUR)	Biomass energy plant builder /dealer	Energy service company	Biomass consumer / energy user
VALUE CHAIN PROCESSES	APPR biomass producer	1		(A)					
	Plantation removal	1				2			
	Biomass 1 <sup>st</sup> Haulage / Transport	1		(B)		2			
	Pre-treatment & storage					2			
	Biomass further processing					2			
	Biomass transport to harbour					2			
	Energy conversion in large industrial / power plants								3 4

- 1 Local farmers     
 2 SOLAMUR     
 3 Local consumer     
 4 Large consumers (exported through Cartagena harbour)



## Fuel Specifications

Final form of Biomass prior to Exploitation

- Bales of branches  
 Hog fuel-shredded

- Wood chips  
 Pellets

Moisture content (%) :

20

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

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

### Value Chain Details and Prices of fuels

End-users

- Self-consumption  
 Industrial heating  
  
 Public-private buildings  
 Distributed heat networks  
  
 Biomass to Market

Distance between biomass production and its final use (km) : 1000 km (export through harbour)

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  
 Farmer's community

- Leasing  
 Municipality-public

3rd party-private

The company (residues retailer)

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)

\_\_\_\_\_

exporting 40-60 €/t

\_\_\_\_\_

\_\_\_\_\_

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

Contact Data

Name : Daniel García Galindo

Email : daniel.garcia@fcirce.es

Phone : \_\_\_\_\_

Company/Organisation : CIRCE Foundation

Website (of the company or the APPR initiative) : www.fcirce.es

Logo of the company : \_\_\_\_\_

Country : Spain

References-External

links:Provide references on which the information is based on or highlight any comments

<http://solamur.es/>



This project has received funding from the European Union's Horizon 2020 research and



SOLAMUR RECICLADOS OFRECE UNA AMPLIA VARIEDAD DE SERVICIOS



**Corte de árboles frutales y limpieza integral de fincas**  
Nuestra empresa se ocupa tanto de cortar los árboles, gestionar las raíces como las ramas, como de limpiar la finca lista para replantar.



**Recogida de podas**  
Aceptamos podas en nuestras instalaciones o las recogemos en su finca.



**Contenedores para residuos**  
Disponemos de más de 300 contenedores de 30m<sup>3</sup> para residuos de madera. Ofrecemos también un servicio de sustitución del contenedor a petición del productor del residuo.



**Máquinas pretrituradoras y trituradoras**  
Disponemos de máquinas pretrituradoras y trituradoras para astillado de madera, para alquilar.

EN SOLAMUR RECICLADOS PRODUCIMOS ...



**Astilla de biomasa agrícola**  
De árboles frutales y cítricos. Hemos conseguido una gran calidad en toda la biomasa de esta procedencia, gestionada en las medidas que la UE ha estandarizado, ofreciendo un alto poder calorífico y una humedad por debajo del 20%.



**Astilla de biomasa forestal**  
De origen forestal, con una calidad excelente, porque ofrece un porcentaje de humedad más bajo que la media debido al clima de nuestra región.



**Astilla de reciclaje**  
La materia prima de este producto es de origen residual, tales como palets rotos, residuos de serrías etc... Este producto en la actualidad se utiliza principalmente para la fabricación de talleres, aunque en los últimos meses también algunas empresas con calderas de vapor lo están consumiendo.



**Virutas y serrines**  
Ofrecemos una viruta de alta calidad que procede de serrías principalmente, y serrines utilizados generalmente para empresas de biocombustibles.



**Briquetas**  
Ofrecemos unas briquetas de alta calidad de fabricación totalmente natural, usado para estufas de leña y para hornos de panaderías. Es un material fácil de agitar y limpio para uso doméstico.