

SUCELLOG: IEE/13/638/SI2.675535

D4.5

**Report of RAAs competences gained
and satisfaction**

30.09.2015



About SUCELLOG project

The SUCELLOG project - Triggering the creation of biomass logistic centres by the agro-industry - aims to widespread the participation of the agrarian sector in the sustainable supply of solid biofuels in Europe. SUCELLOG action focuses in an almost unexploited logistic concept: the implementation of agro-industry logistic centres in the agro-industry as a complement to their usual activity evidencing the large synergy existing between the agro-economy and the bio-economy. Further information about the project and the partners involved are available under www.sucellog.eu.

Project coordinator



Project partners



About this document

This report corresponds to D4.5 of the SUCELLOG project - Report of RAAs competences gained and satisfaction. It has been prepared by:

DREAM - DREAM Italia Soc Coop Agr. For.
 Via Giuseppe Garibaldi 3, Pratovecchio Stia
 E-mail: sucellog@dream-italia.it
 Tel: +39 575 529514 or +39 573 365967

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1. Introduction

SUCELLOG develops a feasibility study and a tailor-made business model for one agro-industry in each target country within WP4. An evaluation of their boundary conditions is carried out as to assess their opportunities and help decision making through the development of a feasibility study, in which different business options are presented. Finally, the agro-industry chooses the most convenient option according to their situation and their perspectives and a complete business model is built for the selected one.

In SUCELLOG, work for the agro-industries is carried out by the corresponding regional agrarian associations (RAAs) with the supervision of their national agrarian associations (NAA). Technical assistance of the partners, experts in each related topic, is provided through guidelines and criteria for the evaluation of results and solving specific doubts. Their expertise is therefore fed through an “action learning” approach.

This report gathers the satisfaction of the corresponding agrarian associations on carrying out WP4. After a short description of the future consultant, the survey tries to investigate on his/her degree of satisfaction of the support that has received from the project. Then the consultant is inquired about the specific skills gained and about the capacity achieved to provide support to an agro-industry willing to develop a logistic centre beyond the project. See the survey contents in Annex I.

Associations filling in this survey are:

- ✓ Spanish Cooperatives_Susana Rivera Pantoja
- ✓ Spanish Cooperatives Aragón_Jesús Abadias Ullod
- ✓ DREAm_Toscana_Claudia Pontenani
- ✓ DREAm_Toscana_Stefano Bracciotti
- ✓ SCDF_Camille Poutrin
- ✓ UCFF_Pilar Furente
- ✓ Lk Stmk_Alfred Kindler
- ✓ Lk Stmk_Klaus Engelmann

2. SUCELLOG experts information

2.1. Susana Rivera Pantoja

Nationality: Spanish

Organisation: Cooperativas Agro-alimentarias de España
(Agri-food Cooperatives of Spain (Spanish Cooperatives))



Qualification: Agricultural engineer with a degree on Food Technologies. Department of Services, Quality and Innovation of Cooperativas Agro-alimentarias de España

2.1.1. Short description of work experience in the organisation

The main purpose of Agri-food Cooperatives of Spain is to represent and defend the economic and social interests of the Spanish agricultural cooperative movement, towards the National Administration, the European Union and the rest of the sectors' social and economic agents in which the agricultural cooperatives develop their activities. SPANISH COOPERATIVES is composed by 17 Regional Federations. Regarding tasks distribution among the association and its members, SPANISH COOPERATIVES is focussed on definition of global strategies and on coordination activities; and the Regional Federations are in charge of the direct contact with the cooperatives, carrying out with them actions, projects and initiatives, coordinated and managed by SPANISH COOPERATIVES.

Members of the Quality, Services and Innovation Department of Cooperativas Agro-alimentarias de España (QSI) are being involved in the execution of the task related to WP4 of SUCELLOG.

The areas in which QSI is usually working are very broad (Quality, Food Safety, Environment, Energy, Innovation, Food Waste, etc), but almost always related to the coordination of many initiatives involving our Regional Federations. For example, being in charge of explaining and giving advice about national and European regulations, standards and rules related to energy (auditing methodologies, etc), quality, food safety, environment and organic farming regulations; managing the works coordinated by Spanish Cooperatives related to Energy Diagnosis and Energy Audits, carried out each year in a large number of Spanish cooperatives; technical support in cooperative agro-industries regarding economic and technical issues; fostering the participation of the Regional Federations and the cooperatives in research and innovative projects and in European projects, as well as the participation of Spanish Cooperatives itself in these kinds of projects.

In fact, over recent years this department has been working in projects related to energy. Spanish Cooperatives led a project carried out at national level, the

CO2OP project. This project involved Regional Federations, and was related to energy efficiency in agro-industry cooperatives. Their active participation in CO2OP project, as well as in the currently on-going projects (TESLA, EuroPruning, and SUCELLOG) proves their experience in managing and executing national and European projects.

Moreover, at European level members of this department are involved in several Advisory Groups organized by COPA-COGECA.

2.1.2. Short description of previous work experience on the biomass topic

In Spanish Cooperatives, there is a high awareness on energy issues, due to its economic and environmental consequences. It is showed in the mission that guides the organization: “Foster a business cooperative model profitable, competitive, professionalized, value added generating, and with a relevant dimension, thus contributing to sustainability of agro-food sector in Spain”. Ones of the most important biomass projects in Spain are run Spanish Cooperatives. Besides it is a renowned actor by Spanish administration on biomass issues, and it was member of the National Board for bioenergy and its working group.

Moreover, the QSI department is vice chairman of the Working Party on Research and also participates in other Working Parties organized by the COPA-COGECA such as Bioenergy, Biotechnology & Non-Food, and Environment.

Apart of these, this department is also involved in an European Project related to biomass called EuroPruning, with the main goal of developing and implementing of a new and non-existent logistics chain for biomass from pruning, in which is participating with the collaboration of the technician of their Regional Federations and cooperatives.

2.1.3. Lessons learnt in WP4

As an organization which represents and defends the economic and social interests of the Spanish agricultural cooperative movement, the participation in the whole project and, particularly, in this WP4 has been considered as an opportunity. It has been useful to bring together interested agro industries in developing a new business line related to biomass.

Secondly, a wide contact has been maintained with different stakeholders of the biomass chain in order to have an overview of the biomass market, both current and future. This way has allowed to make a more exhaustive diagnosis about the competitors but also to know the quality and quantity of the biomass that could be demanded by the market.

In the preparation of the feasibility study, it has been necessary to make a in deep analysis of important issues (mainly economic and technical) together with the

manager of the cooperative and with the collaboration of some associates that are currently involved in activities related to biomass and others who see this business line as a challenge.

The involvement of the Governing Board of the cooperative is being crucial to make important decisions through the process and the evolution of the works is being facilitated and boosted by them.

Finally, the selected cooperative to become a logistic centre will be a perfect example for other cooperatives that are currently thinking about this possibility.

2.2. Jesús Abadias Ullod

Nationality: Spanish

Organisation: Cooperativas Agro-alimentarias de Aragón
(Agri-food cooperatives of Aragón region)



Qualification: Biologist, and specialist in environmental technologies. Manage of Energy and Environment Department in FACA

2.2.1. Short description of work experience in the organisation

Agri-food cooperatives of Aragón (hereinafter FACA, previously called Federation of Agricultural cooperatives of Aragón) is the organization which represents and defends the economic and social interests of the agricultural cooperative movement in Aragón. Agri-food Cooperatives Aragón integrates 166 associated cooperatives, established all over this region. These cooperatives are dedicated to different activities: crops, winery, olive oil, fodder production, poultry, slaughterhouses, etc.

I manage the Energy and Environment Department in FACA, which supports the cooperatives in different tasks such as: activities related to energy efficiency (electric and thermal), implementation of environmental measures, agricultural and livestock advice on environmental issues, management of waste and by-products, bioenergy, etc.

Also, the Energy and Environment Department has worked and it is actually involved in different European R+D+I projects related to the reuse of waste to produce solid biomass, by-products, and the energy efficiency.

2.2.2. Short description of previous work experience on the biomass topic

My experience with the biomass, started when I began to work in FACA. At present, we are working in two different projects (R+D+I) related with solid biomass

production. Also, we have worked, with our associated cooperatives, in the management of solid biomass purchase in the national market.

2.2.3. Lessons learnt in WP4

Until now, during the project, particularly in WP4, I have learned to develop and elaborate an economic assessment about of a new business model in agroindustry.

I knew the world of biomass, their markets, their different qualities, the different problems caused for ash or chlorine in burners, etc, but I have improved my technique knowledge in this scope. On the other hand, I have learned to detect the needs to develop a techno-economic feasibility study.

2.3. Claudia Pontenani

Nationality: Italian

Organisation: D.R.E.Am. Italia Soc. Coop. Agr. For.

Qualification: technician (Doctor of Forestry)



2.3.1. Short description of work experience in the organisation

Since 1999, for D.R.E.Am. Italy, I deal with the preparation of specialist reports in Forest Management Plans, Forest Inventories, Forestry Territorial Plans, study of polluted sites, restore of quarries and agrarian reclamation; the drafting of soil maps, unit of land maps, attitudes maps, risk maps, etc. and the preparation of feasibility plans, landscape protection Reports and incidence Ratings on environment. As for the design and works supervision, the field of activity is mainly the environmental restoration for privates and public entities (including all project phases provided for in the Presidential Decree n. 207 of 5th October 2010 - Implementing Regulations of the Code of public contracts referred to in Legislative Decree no. 163/2006), as hydraulic-forestry and landslides adjustments, recovery and enhancement of the environment, silvicultural actions for firefighting in woods and restoring degraded forest formations, hydraulic and road extraordinary maintenance, reclamation of contaminated sites, control and eradication of invasive alien plant species in protected habitats.

Since 2004 I am Safety coordinator on temporary and mobile worksites under D.Lgs.81/2008, for the types of action outlined above.

2.3.2. Short description of previous work experience on the biomass topic

Participation in working groups for the realization of feasibility studies for the installation of forest biomass (wood chips) plant, heating facilities for small residential areas or commercial and agro-industrial activities. The studies concern with evaluation and dimensioning of supply basins (short chains), technical haul, sizing and location of storage facilities, equipment and machines for processing biomass, plant sizing and distribution network, costs, economic assessment for the supplier of biomass, the distributor and the final consumer.

Participation in a working group for the preparation of pre-feasibility study on the implementation of an integrated process aimed to the production of charcoal in the Republic of Cuba, consisting of: analysis of invasive plant species that could be used, types of equipment and techniques of production of charcoal, production, equipment and vehicles, yard set up, work and personnel management, safety at work in accordance with relevant legislation of Cuba, development of side chains, convenience and economic analyzes of payback time .

2.3.3. Lessons learnt in WP4

WP4 was very helpful to expand my knowledge in the field of biomass for energy purposes, as it contains the work tasks that require an analysis of the scale of the resources in the area, through interviews with potential suppliers of agricultural residues, but also of the market from the point of view of both plant manufacturers and of consumers and their needs. This allowed me to better understand the agricultural reality of the region and the problems and possible solutions for the management of waste from agricultural and agroindustry activity, while so far only had good knowledge in the field of forest biomass; at the same time, interviews with plant manufacturers and consumers have enabled me to be updated both on the characteristics and types of boilers currently on the market and on the quality of the products can be used, and on the specific requirements of consumers in terms of type and characteristics of various types of biofuel.

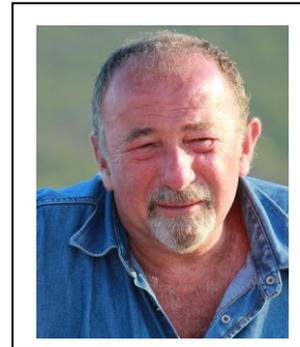
The summary reports of the Task 4.2-4.5, the Feasibility Studies and Business Model enabled me also to learn about the production cycles of the various types of agro-industries beneficiaries making the WP particularly interesting because it has highlighted the differences or similarities in business and market management of the biomass among the various partner countries participating in the project.

2.4. Stefano Bracciotti

Nationality: Italian

Organisation: DREAm Italia Soc. Coop. Agr. For.

Qualification: technician (Doctor of Forestry)



2.4.1. Short description of work experience in the organisation

For D.R.E.Am. ITALIA, he deals with hydrogeological state and defense, with particular reference to the nature of soil and forestry; design, Works Supervision and Coordination safety on temporary and mobile worksites; drafting of Reports on landscape protection and Ratings of environmental implications; in the field of environmental restoration he works for privates and public entities (for all project phases provided for by the Presidential Decree 554/99 - Framework Law on public works - and by the Presidential Decree n. 207 of 5th October 2010 - Implementing Regulations of the Code of public contracts referred to in Legislative Decree no. 163/2006) with regard to hydraulic-forestry and landslides adjustments, recovery and enhancement of the environment, accommodation of picnic areas, restoration of trails and historical routes, silvicultural actions for firefighting in woods and restoring degraded forest formations, hydraulic and road extraordinary maintenance. For D.R.E.Am. ITALY has played many roles relatively to design.

In recent years he has gained considerable experience in drawing up integrated plans of forest management and hydraulic-forestry accommodation for areas of several river basins in Tuscany, as well as projects in the renewable energy field.

2.4.2. Short description of previous work experience on the biomass topic

Realization of feasibility studies, design and consultancy relating to the production of energy from renewable sources, with particular reference to the development of projects in the field of biomass-fired power carrying out activities in the agro-forestry sector with feasibility studies for the creation of agro-forestry chain. Biomass supply plans, design of agro-forest energy chains, conversion business plans for dedicated energy crops, impact analysis, Strategic Environmental Assessment, landscape protection Reports, incidence Ratings on environment, monitoring supplies of biomass, brokerage and environmental integration activities, technical consultancy, advice on technical/commercial aspects related to the operations of the chain for the supply of fuel for the establishment and the management of production chains in Italy and abroad.

2.4.3. Lessons learnt in WP4

In the design of a logistic center he has acquired the ability to properly assess the possible raw materials that can be used, both for the amount available and necessary to ensure the production, and for the quality; he has then learned to properly assess any problems related to the harvesting and any changes in market prices. Among the skills developed there is also to be able to evaluate the equipment needed for the various production lines and the possible compatibility of existing equipment; their maximum capacity and the ability to properly use the idle time. He has also gained the ability to identify and assess any non-technical barriers to the development of activities.

As regards assessment of economic convenience, he learned to correctly detect the different components of total production costs (purchasing, pre-treatment, personnel and investment) and the potential prices of products generated by the logistic centre in the agro-industry, defining and identifying which scenarios are most interesting and feasible for the agro-industry and between all possible products considered (if more than one) which are achievable from economic point of view and what are the most interesting for the market, while exploring the major competitors.

In conclusion, he has acquired the competence to judge the global feasibility (technical and economical) of a new production line.

2.5. Camille Poutrin

Nationality: French

Organisation: Services Coop de France

Qualification: Biomass consultant



2.5.1. Short description of work experience in the organisation

Biomass consultant: French cooperatives' biomass referent for technical issues:

- Coordinating European projects for France (SUCELLOG, EuroPruning);
- Writing, initiating and managing a national project (on agricultural residues' properties and uses);
- Biomass technical group for agricultural cooperatives: support, contact with technical experts, leading meetings, communication;
- Representative of cooperatives at the French *Réseau mixte Technologique Biomasse et Territoires* (biomass network) coordination of the "biomass

logistic section” of this network (subsidised by the French Department of Agriculture);

- Technical support for French cooperatives on biomass issues: technical skills on biomass issues, pelletizing processes, agricultural residues and heating projects.

Corporate social responsibility consultant:

- Writing handbooks (The new indicators for corporate social responsibility. Social responsibility and agrarian cooperatives).
- Writing Social Responsibility report for cooperatives (legislation requirements).
- Audits.

2.5.2. Short description of previous work experience on the biomass topic

Student project - Analysis of a local green waste logistic chain (2014 – 6 months – Hauts-de-Bièvre, France): stakeholders’ interactions during all the biomass logistic chain.

2.5.3. Lessons learnt in WP4

In my opinion, the main opportunity for a non-logistic-centre expert in working on WP4 is the improvement of the understanding of the interactions between the raw materials and the quality needs by the consumers. This topic is the main important one to consider this special activity (whereas, for example for a biomass boiler feasibility study, the main topic will be the energy consumption, the boiler can be adapted to the quality).

Others important lessons:

- Improvement of the knowledge about the agro-industries operations (seasonality, organisation, equipment, price of the installation etc.).
- Gain of operational skills and real information (on fields) concerning the raw material (price estimation, harvesting method) important for any feasibility study on the biomass issue (generally, the biomass data are based on national estimation and are not concrete).
- Knowledge about the biomass market in France in general (type of consumers, which type of biomass for which consumers).
- Real information linking to the biomass development, market, raw materials in other European countries (cooperatives or associations are generally looking

for this kind of information to compare with the French case). Be able to compare with other countries is very important for our cooperatives.

- Information about local biomass market in Champagne but also how it is possible to boost a market, the potential consumers or stakeholders able to help us during a project.
- Understanding about the interactions between the different part of the logistic chain and economic impact of all of them.
- Interactions between quality – market and consumers' needs: how can we estimate the needs of the targeted market and how can we propose a production according to this market (including the raw materials and the price)
- To conclude: real skill to lead a feasibility study and reproduce it in France.

2.6. Pilar Fuente Tomai

Nationality: Spanish

Organisation: UCFF

Qualification: Project manager



2.6.1. Short description of work experience in the organisation

I am responsible of coordinating R&D projects in the fields of forestry management, forestry production and wood energy. The aim is to defend the interests and rights of forest owners through the forest cooperatives ensuring the advance on technology and knowledge.

2.6.2. Short description of previous work experience on the biomass topic

Only at university level.

2.6.3. Lessons learnt in WP4

During the WP4 I have learnt about:

- Limiting factors and opportunities on biomass availability both technical and cultural ones, from agricultural practices to price, format and seasonality.
- Overall view of biomass market situation for the target market. Requirements in terms of quality, seasonality and intended purchase prices.
- Biomass standards for bio-energy, especially those related to pellets.

I have gained technical skills on:

- boiler functioning;
- agro-pellets composition;
- dehydration agro-industries.

I will be capable of analyse and evaluate the overall situation in terms of biomass availability, market and agro-industry characteristics to detect strengths and gaps in order to determine the most promising business options for an agro-industry that is willing to start a new activity in the bio-energy sector.

2.7. Alfred Kindler

Nationality: Austria

Organisation: LK Stmk

Qualification: Senior Expert Bioenergy



2.7.1. Short description of work experience in the organisation

1989 – 1995 Expert and adviser for crop farming in the Chamber of Agriculture and Forestry in Feldbach

1996 – 2003 Head of the department of horticulture in the Styrian Chamber of Agriculture and forestry

2004 – 2012 Head of the local chamber of Agriculture and Forestry in Bad Radkersburg)

Since Nov. 2012 in the Energy department of the Chamber of Agriculture and Forestry with the main focus on the utilization of material and thermal agricultural residuals and energy law.

2.7.2. Short description of previous work experience on the biomass topic

He is an Expert for agricultural residuals (especially for corn Cobs) and for pelletising systems for agricultural residuals. He is also an expert for heating systems for agricultural residuals. He is also the expert for the current problems in the legal field of bioenergy

2.7.3. Lessons learnt in WP4

Motivation of SUCELLOG is to trigger the creation of agro-industry logistic centres in agro-industries bearing in mind the current opportunity for the sector and the existing synergies. The key for an agro industry to become an agro-industry logistic centre is to adapt its season activity to the production of solid biofuels in the idle periods of the year.

Based on these specifications, I learned a lot about agro-industries in Styria. Especially I now see them in a different perspective. I learned about various residues and I'm able to make a specific selection. I'm now able to perform technical and financial calculations. I also learned a lot about legal requirements which are very important for the creation of an agro-industry logistics center. It was particularly important for me that I met many new companies and persons that were interested in this topic.

Based on the things I learned in this work package, I'm now able to support interested companies willing to create a logistic centre for agro-fuels. I can help them, in their evaluation process and I can give them detailed advice.

2.8. Klaus Engelmann

Nationality: Austria

Organisation: LK Stmk

Qualification: Junior Expert Bioenergy



2.8.1. Short description of work experience in the organisation

Klaus Engelmann is within the LK-Stmk responsible for renewable energies and bioenergy. His main focus lies on the support of biomass district heating systems, biomass combined and power plants, biogas and small combustion plants. Within these topics he works in several national and international projects. Furthermore he acts as consultant for farmers and other stakeholders in the field of bioenergy.

2.8.2. Short description of previous work experience on the biomass topic

Despite the SUCELLOG project he is also working the EU co-funded project BioRes, about the creation of wooden biomass trade and logistic centres in Eastern Europe. He also did techno-economic feasibility assessments for biomass district heating systems (for new, planned facilities as well as for the adaption of existing ones).

2.8.3. Lessons learnt in WP4

Despite my already existing knowledge about the evaluation and creation of wooden biomass trade and logistic centres, this work package provided information about the crucial factors within an agro-industry to be considered for the evaluation and creation of an agro-industry logistic centre for agro-fuels. This work package closed the missing gap to use the knowledge of the evaluation of wooden biomass logistic centres and to apply it on agro-industries willing to create a logistic centre for agro-fuels.

In detail I learned to locate the most important aspects within an agro-industry to evaluate a company and its technological and economic feasibility creating an agro-industry logistic centre. I'm now able to evaluate raw materials and I know about several difficulties regarding quality. I'm now also able to calculate financial scenarios, to evaluate the whole feasibility of a project and to choose the best scenario for the agro-industry. Furthermore I now have a concrete step-by-step plan in mind to make a feasibility assessment and to create a business model for an agro-industry.

Based on this knowledge I'm now able to support agro-industries, interested in creating a logistic centre for agro-fuels, in their evaluation process and I can give them detailed advice.

3. Specific capacities developed by the experts

Experts have been deeply involved in the process of elaboration the techno-economic feasibility study in order to guarantee that the scenarios considered were realistic and that the results obtained could be useful for the agro-industry. Apart from the execution of a real case, the aim was also to provide them with capacities and technical skills to develop similar studies.

Here below are listed the new skills that have been developed by SUCELLOG experts in order to further support to agro-industries willing to develop a logistic centre

- ✓ Evaluation of the most important aspects when assessing the possible raw materials for the logistic centre (quantity, quality, harvesting problems and price);
- ✓ Detection of competitors and possible prices for the products generated by the agro-industry logistic centre;
- ✓ Assessing which equipment is needed for the new business line and which is the compatibility with the existing one;
- ✓ Detection of possible non-technical barriers for the development of the activity as biomass logistic centre;
- ✓ Evaluation of the maximum production capacity with the existing equipment and present idle period;

- ✓ Calculation of the amount of raw material needed for the amount of production established;
- ✓ Determination of the costs involved in the total production costs of the product (purchasing, pre-treatment, personnel, and investment);
- ✓ Detection of the most interesting and feasible scenarios for the agro-industry;
- ✓ Capacity to understand which are the most important quality issues to be determined in order to not generate a product that creates problems in the conversion equipment;
- ✓ Capacity to decide from all possible products considered (if more than one) which ones are feasible from the economic point of view and which are the most interesting ones for the market;
- ✓ Decision of the overall feasibility (technical and economical) of the new business line;
- ✓ Knowledge on the steps to be followed when building a business model.

4. General conclusions about the degree of satisfaction

Past work experience on the biomass topic of most of the future consultants concerned mainly wooden biomass. In this regard, the WP4 provided a deeper technical and economical knowledge on the agro-fuels, even for those who were already working in this topic.

In fact, the authors generally achieved a better and more complete knowledge of biomass market in their own territories in terms of competitors, prices, biomass quality needed and stakeholders of the biomass chain (suppliers and consumers).

Furthermore, almost everyone declares that has improved their own competences on equipment and general management of agro-industries involved, especially thanks to the realization of feasibility studies and business models, with the support of respective task leaders. Then, thanks to WP4 tasks, they are now able to choose the best scenario together with an agro-industry intended to carry out a logistic centre for agro-biomass production.

Finally, they affirm to be able to support and to provide appropriate advice to the agro-industries eventually interested in the chain of biomass from agricultural residues.

4.1. Level of involvement from the agro-industry

Within task 4.1, an agro-industry per country was selected to carry out a feasibility study on the possibility to develop a biomass logistic centre in their facilities and a further business model for the new activity was produced. The selection process of the agro-industry was performed by the national agrarian associations on the basis of fair and transparent criteria. Interest from the agro-industry in starting this new business activity was the most important criteria to be selected. As a matter of fact,

the involvement of the industry in the study is considered as essential when aiming to achieve interesting and realistic results to be exported to other similar facilities.

During the development of activities, the level of involvement of the agro-industry was good in Spanish and Austrian cases, thanks to their real interest in the concept of SUCELLOG project. Instead, in the French and Italian cases, the agro-industries were less involved making collaboration more difficult. In order to avoid this kind of problem and ensure an active collaboration of agro-industries, during the selection process it should had also be considered the existence of a customer-market for the agro-fuels in the region.

4.2. Guidelines and support to gather the information

Guidelines were provided to the future consultants to get information about the boundary conditions (biomass resources and market) and about the company (equipment, human resources and business plan). This information was the baseline to build the feasibility study. The degree of satisfaction with the guidelines and support from task leaders when gathering the information was good in general and considered as helpful to understand the current state of the agro-industry, on which to build the project idea for the creation of a new line of business.

The development of a business model was conceived as a complex activity and providing capacity to carry out this activity was not the object of the project, but solely to be conscious about what a business model involves.

4.3. Satisfaction of the agro-industry

The results of the feasibility study and business model have been explained to the agro-industry and complete reports (D4.3 and D4.4) have been built gathering all the aspects evaluated and results obtained. The agro-industries assessed have shown in general a satisfactory interest, especially because the scenarios chosen reach a good compromise between the need to make changes in the agro-industry, for the setting up of new production activities, with its economic, technical, organizational and managerial possibilities and means. In this regard, in addition to not considering significant investments, for example, it was investigated whether biomass resources belonged to the agro-industry itself or to their associates or the owner has already a link to the agro-industry, in order to avoid the risk of supply.

The evaluation of all possible issues where to increase the profit for the possible logistic centre has been really appreciated by the agro-industry and has increased their interest in becoming a biomass logistic centre.

5. Annex

The survey filled in by the corresponding agrarian associations on carrying out WP4 is the following.

Table 1: Level of involvement from the agro-industry, being 1 *large* and 5 *low*.

Level of involvement from the agro-industry	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
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Table 2: Evaluate the support and guidelines to gather information, being 1 *useful, clear and/or with a good level of detail* and 5 *unnecessary, unclear and/or shortly or overly detailed*.

Biomass procurement and competitiveness with other uses	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Biofuel market and consumers in the area	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Examination of existing equipment and human resources capacities	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Analysis of the present management and business plan	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Table 3: Evaluate the degree of satisfaction from the agro-industry on the following topics, being 1 *clear, realistic, useful and/or with a good level of detail* and 5 *unclear, unrealistic and/or shortly or overly detailed*.

Techno-economic feasibility study	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Business model	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Table 4: Set your level of knowledge in the following topics as to provide support to an agro-industry willing to develop a logistic centre, being 1 *adequate* to 5 *unsuitable*.

Evaluate of the most important aspects when assessing the possible raw materials for the logistic centre (quantity, quality, harvesting problems and price)	<input type="checkbox"/>				
	1	2	3	4	5
Detect competitors and possible prices for the products generated by the agro-industry logistic centre	<input type="checkbox"/>				
	1	2	3	4	5
Assess which equipment is needed for the new business line and which is the compatibility with the existing one	<input type="checkbox"/>				
	1	2	3	4	5
Notice possible non-technical barriers for the development of the activity as biomass logistic centre	<input type="checkbox"/>				
	1	2	3	4	5
Evaluate the maximum production capacity with the existing equipment and present idle period	<input type="checkbox"/>				
	1	2	3	4	5
Calculate the amount of raw material needed for the amount of production established	<input type="checkbox"/>				
	1	2	3	4	5
Determine the costs are involved in the total production costs of the product (purchasing, pre-treatment, personnel, and investment)	<input type="checkbox"/>				
	1	2	3	4	5
Value which are the most interesting and feasible scenarios for the agro-industry	<input type="checkbox"/>				
	1	2	3	4	5
Understand which are the most important quality issues to be determined in order to not generate a product that creates problems in the conversion equipment	<input type="checkbox"/>				
	1	2	3	4	5
Decide from all possible products considered (if more than one) which ones are feasible from the economic point of view and which are the most interesting ones for the market	<input type="checkbox"/>				
	1	2	3	4	5
Judge the overall feasibility (technical and economical) of the new business line	<input type="checkbox"/>				
	1	2	3	4	5
Be conscious on the steps to be followed when building a business model	<input type="checkbox"/>				
	1	2	3	4	5

Table 5: State the general degree of satisfaction with the development of WP4, being 1 *high* and 5 *low*

General degree of satisfaction with the development of WP4	<input type="checkbox"/>				
	1	2	3	4	5