

SUCELLOG: IEE/13/638/SI2.675535

D5.4

**Report of RAAs competences gained
and satisfaction**

30.03.2017



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 D5.4 of the SUCELLOG project - Report of RAAs competences gained and satisfaction. It has been prepared by:

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1. Introduction

SUCELLOG supports the creation of biomass logistic centres inside agro-industries covering the gap of knowledge faced when willing to start this new activity. Within WP5, SUCELLOG supports concrete start-up activities from agro-industries. Starting point for this activities were the business models and feasibility studies created in WP4. To complement these studies, WP5 focusses on the practical implementation of those results.

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, has been provided.

This report gathers the satisfaction of the corresponding agrarian associations on carrying out WP5. 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 capacity building achieved to provide support to an agro-industry willing to develop a logistic centre beyond the project.

RAAs filling in this survey are:

- ✓ Spanish Cooperatives Aragón
- ✓ DREAM_Toscana
- ✓ UCFF-GCF
- ✓ Lk Stmk

2. SUCELLOG experts information

2.1. 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

2.1.1. 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.

2.1.2. 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.

2.1.3. Lessons learnt in WP5

The project has allowed us to be trained in the development of a new line of business related to solid biomass realising about the importance of previous tests before starting a real business line. The project has also served to learn how to start up a solid biomass manufacturing process.

2.2. Chiara Chiostrini

Nationality: Italian

Organisation: D.R.E.Am. Italia– Toscana Region

Qualification: Environmental Engineer



2.2.1. Short description of work experience in the organisation

She has experience in water resources, flood risk and soil erosion risk management. As part of Cooperation in Urban Development and Dialogue (CIUDAD) between Pisa and Jericho (Occupied Palestinian Territory) municipalities she was responsible for drafting Surface Water Management Master Plan of Jericho Municipality and designer and manager of hydraulic works.

In the field of energy efficiency: consulting engineer of Pisa municipality on sustainable urban drainage systems and storm water management as part of E2Stormed project in MED Program; energy auditor of agri-food cooperatives of wineries, olive oil mills, animal feed factories and fruits and vegetables processing plants as part of TESLA European project.

In Dream Italia she works as assistant to the design and construction management for public works hydraulic forestry for Italian Municipalities, Regions, Land Reclamation Consortium, etc.

She works mainly in Toscana but, as a consultant to private companies, also in other Italian Regions, such as Marche, Puglia and Sardegna.

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

In last five years, she has been involved into different European Projects, such as TESLA Project, E2Stormed Project, SCOoPE Project, in particular concerning the Energy Saving in smart cities and in the agro-food sector and in bioenergy. In these projects, starting her activity as assistant and now managing the main parts of the technical activities of the projects, she has achieved a high level of knowledge and competence in the evaluation or convenience for the investments in the field of renewable energies, energy and costs saving.

2.2.3. Lessons learnt in WP5

The concreteness of the WP5 allowed us to verify the results obtained with the feasibility study and the business model for the implementation of a logistics center in agro-biomass in the agro-industry.

The importance of the qualitative aspects of the biomass has been well understood and the level of quality has been quite detailed during the WP5. The implementation of biomass test also allowed establishing contacts with new stakeholders.

The logistical arrangements organizing the space of the existing structures, the simultaneous operations of the new business with regular activities, finding the adequate raw materials and, in part, negotiating with suppliers have led to greater difficulties and a very specific characterization among the study cases addressed in partner countries of SUCELLOG project.

2.3. Marine Leblanc

Nationality: French

Organisation: UCFF-GCF

Qualification: R&D officer



2.3.1. Short description of work experience in the organisation

R&D officer: projects management, animation of a R&D working-group gathering cooperatives of our network, managing network development and collaboration with other partners on important initiatives, R&D global strategy, promotion of the group.

Forestry-timber sector, biomass issues, environmental and technical-economic issues, innovations

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

UCFF has been working on different programs involving biomass issues such as:

- [BIOMASUD](#) project, RESOBIO project, [GAYA project](#), AMI DYNAMIC projects, Gerboise project.
- Organizations related to biomass UCFF belongs to/works with : member of Coop de France (Energy working group), member of Fibres Recherche Développement (FRD), member of Syndicat Energies Renouvelables ([SER](#)) and president of France Biomasse Energie (working group within SER), ONF Energy (business partner)

2.3.3. Lessons learnt in WP5

- ✓ It has been interesting to follow the whole process from the theoretical feasibility study (WP4) to production and combustion tests and finally help the agroindustry to go further by promoting its pellets among new potential consumers. Working on a real case is essential.

- ✓ It has been useful to compare reality of logistic and market issues on the field to feasibility theoretical recommendations. The combination of agroindustry's experience of its environment and SUCELLOG expertise is important.
- ✓ Agroindustry with a good pelletization process experience will be more effective in integrate a new production line of pellet fuels and will thus need support for business development/marketing above all. Especially when demand is not really there and competing products are numerous.
- ✓ WP5 allows interactions with many stakeholders from the production side (suppliers, others cooperatives, etc.) to the consumption side (local authorities, associations) but also institutional side (national agency for environment and energy, financing organizations, etc.). Exchanges with other SUCELLOG partners (from Italy, Spain, Austria) would have been useful in order to compare feedbacks from the field, expertise on a regular basis.
- ✓ Business situation in France has been quite difficult these past few years when considering biofuels market. Helping the agroindustry to develop its logistic center activities is thus quite complicated as demand is very low. Agropellet still has to prove itself as a competitive and economically viable product compare to chips or wood pellet.

2.4. Alfred Kindler

Nationality: Austria

Organisation: LK Stmk

Qualification: Senior Expert Bioenergy



2.4.1. 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.

2.4.2. 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

2.4.3. Lessons learnt in WP5

The implementation of the project into practice was very difficult and entailed major problems, but lots of new knowledge could be gathered on how to support and agro-industry in creating a logistic centre. I met many manufacturers of machines and boilers, with the mutual exchange of information being extremely important for my personal knowledge development. The different levels of experience for the thermal utilization of agricultural fuels were particularly important and a lot of knowledge could be learned from the experience of the manufacturers. The legal components of the new development proved to be almost insoluble. But after persistent talks to policy makers we could find a solution.

3. Specific capacities developed by the experts

Experts have been deeply involved in the process of the implementation of a logistic centre within an agro-industry in order to implement the tailor made business model into a real case. 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

- ✓ Being able to make several tests (production, combustion) and interpret the results of those;
- ✓ Understand requirements for equipment modifications and change of organizational structures for implementing the logistic centre;
- ✓ Establish contacts with stakeholders related to: biomass logistic, equipment manufacturing, energy project developing, policy makers, etc.;
- ✓ Capacity to provide information about quality issues to ensure homogenous quality bio-fuels;
- ✓ Capacities to support the agro-industry in marketing and sales activities for the new business line;

4. General conclusions about the degree of satisfaction

During WP5 the SUCELLOG experts supported the agro-industries in the implementation of the logistic centre for agricultural residues. In this regard, the WP5 provided a deeper technical and economical knowledge on the agro-fuels, and on how to implement a logistic centre within an agro-industry.

In fact, the authors generally achieved a better and more complete knowledge about biomass quality needed, stakeholders of the biomass chain (suppliers, consumers, boiler manufacturers), producing and burning agro-fuels.

Furthermore, almost everyone declares that has improved their own competences on making production and combustion tests, on quality issues of agro-fuels and on equipment adaptations for starting a logistic centre.

Finally, they affirm to be able to support and to provide appropriate advice to the agro-industries eventually interested in using biomass from agricultural residues and creating a logistic centre.

4.1. Level of involvement from the agro-industry

In each participant country one agro-industry was selected during WP4 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. In WP5 the implementation of a logistic centre within this agro-industry was supported. As a matter of fact, the involvement of the industry in the study is essential when aiming to achieve interesting and realistic results to be exported to other similar facilities. Furthermore the level of involvement is one crucial key for a successful implementation of a logistic centre.

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.

4.2. Guidelines and support to gather the information

A guideline about the start-up of a logistic centre within an agro-industry was provided to consultants to support the selected agro-industries. Furthermore pelletizing and combustion protocols were provided for making first tests at the facilities. Moreover instructions for making quality trainings were provided. Additionally individual support was provided to the agro-industries according there different needs.

The degree of satisfaction with the guidelines and support from task leaders when gathering the information was different in the different countries. They were considered as good helpful to support the agro-industry on first tests and on the start-up process

in Spain and Austria. In France and Italy they were considered as not that helpful. Especially the difference of the different cases was mentioned. Therefore it is hard to provide general guidelines which are useful for each different scenario. Furthermore the exchange of experience between the project countries suffered because of the very different cases.

4.3. Satisfaction of the agro-industry

During WP5 several support activities have been carried out by the regional project partners to implement a logistic centre within an agro-industry. The results of those activities have been documented in a start-up reports (D5.2). The supported agro-industries have shown in general a satisfactory interest. Especially the support provided for the different test (production, combustion) where highly appreciated by the agro-industries. Also the general support, which was individually adapted to the needs of each agro-industry and their personnel, was satisfying. The degree of satisfaction with of the quality training strongly depended on the knowledge of biomass quality from the agro-industry. The companies which already high quality found the training less satisfying.

4.4. Overall satisfaction of the development of WP5

The overall degree of satisfaction with the development of WP5 was quite good. But there were also some remarks about the very different cases and preconditions at agro-industries. Therefore focusing just on agro-industries which already had experience would have been a good option for the development of first logistic centres. Nevertheless the new skills and contacts are very helpful for future activities of the project partners. Now they can provide a more accurate support to potential agro-industries willing to use residues and to start and logistic centre. Furthermore more detailed work with other stakeholders involved is possible, especially with boiler manufacturers for the development of suitable boilers.

5. Annex

The survey filled in by the corresponding agrarian associations on carrying out WP5 is the following.

Table 1: General 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: General degree of satisfaction from the agro-industries 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*.

Support for the tests	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
General support	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Quality training	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Table 3: Evaluation of support and documents to gather information during the start-up process, being 1 *useful, clear and/or with a good level of detail* and 5 *unnecessary, unclear and/or shortly or overly detailed*.

Contents of the documents	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Degree of usefulness for the audit	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Support received by the team of the project	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Table 4: 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.

Make several tests (production, combustion) and interpret the results of those tests	<input type="checkbox"/>				
	1	2	3	4	5
Understand the equipment modification and change of organisational structures required for implementing the logistic centre	<input type="checkbox"/>				
	1	2	3	4	5
Interact with stakeholders related to: biomass logistic, equipment manufacturing, energy project developing, policy makers, etc.	<input type="checkbox"/>				
	1	2	3	4	5
Provide information about quality issues to ensure homogenous quality bio-fuels	<input type="checkbox"/>				
	1	2	3	4	5
Support marketing and sales activities for the new business line	<input type="checkbox"/>				
	1	2	3	4	5

Table 5: General degree of satisfaction with the development of WP5, being 1 high and 5 low

General degree of satisfaction with the development of WP6	<input type="checkbox"/>				
	1	2	3	4	5