

SUCELLOG: IEE/13/638/SI2.675535

D7.7
Report on meetings with policy makers

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 biomass 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

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This project is co-funded by the European Commission, contract N°: IEE/13/638/SI2.675535. The sole responsibility of this publication lies with the authors. The European Union is not responsible for any use that may be made of the information contained therein.

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1. Introduction

The purpose of the SUCELLOG project is to trigger the creation of biomass logistic centres by the agro-industry aiming to use agricultural residues for the production of solid biomass which will be then used for energy purposes.

Besides techno-economic and sustainability requirements which can be adjusted and overcome by the agro-industry, some non-technical barriers related to market approaches, policy regulations and laws can arise hindering the creation of biomass logistic centres in the agro-industries. This report gives an overview of the meetings carried out with policy makers in four SUCELLOG target countries. The purpose of the meetings was to identify non-technical barriers in targeted countries at both – national and regional levels, and to collect feedback from policy makers regarding recommendations about how they could be overcome.

This report describes the meetings with 70 policy makers. The meetings were held during SUCELLOG project national and regional dissemination events as well as organised separately for discussion of dedicated topics. Identified barriers and potential solutions are further summarized in D7.8 - Summary on non-technological barriers and policy recommendations.

2. Meetings with policy makers in Austria

2.1. Discussion with policy makers in Lower Austria, 04-08.04.2016

Date: 04.-08.04.2016

Type of meeting: Site visit to alternative energy plants in Upper and Lower Austria and face-to-face meetings where policy makers were participants

Participants: 4 policy makers

From 4 to 8 April 2016, an alternative energy field trip was conducted by the AGRAR PLUS GmbH. Agenda of the event is provided in Figure 1. Besides policy makers, several representatives from Moldova participated in the study tour.

 Die Projektentwickler in Niederösterreich		 Die Projektentwickler in Niederösterreich	
			
Alternativ-Energie-Exkursion in Österreich vom 4. bis 8. April 2016			
Programm:			
Montag 4.4.2016		13.15 Uhr Landesregierung Niederösterreich – Wald-Weinviertelsaal (Haus 1A)	
Ankunft der Gruppe in Wien Begrüßung und Information durch Vertreter der WKÖ Information durch den Österreichischen Biomasseverband – DI Christoph Pfelemer Nächtigung in Wien		<ul style="list-style-type: none"> • DI Herbert Haneder - Landwirtschaftskammer NÖ Forstsituation und Biomasseaufbringung Aufgaben der Landwirtschaftskammer im Zusammenhang mit Bioenergieheizungen • Ing. Franz Patzi - Landesregierung NÖ Energiesituation in NÖ Anteil der Bioenergie Rahmenbedingungen bei der Realisierung von Biomasseheizwerken • DI Josef Pelschko - AGRAR PLUS Aufgaben und Tätigkeiten bei der Projektbetreuung vor Ort Modellvorstellung „Bioenergie Niederösterreich“, EU- Projekt Suceoog alternative Energieträger zur Wärme und Stromerzeugung 	
Dienstag 5.4.2016		16.00 Uhr Abfahrt nach Großsienring 16.30 Uhr Besichtigung Biomasseheizwerk Großsienring 330 kW, versorgt 72 Wohnungen, Tankstelle mit Kaufgeschäft, Gewerbebetrieb	
08.30 Uhr Abfahrt vom Quartier in Wien nach Stetteldorf 09.30 Uhr Biomasseheizwerk Stetteldorf, Starnwörth 130, 3463 Starnwörth Strohheizwerk 2,5 MW versorgt 300 Objekte in der Gemeinde		17.30 Uhr Abfahrt nach Emmersdorf 17:45 Uhr Emmersdorf – Hotelbezug Hotel Donauhof Familie Pichler Emmersdorf 40 3644 Emmersdorf	
11.00 Uhr Abfahrt nach St. Pölten 12.00 Uhr Mittagessen in der Landesregierung in St. Pölten			
Mehr Informationen zu unseren Leistungen, Referenzen und über AGRAR PLUS finden Sie auf www.agrarplus.at		Mehr Informationen zu unseren Leistungen, Referenzen und über AGRAR PLUS finden Sie auf www.agrarplus.at	
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Figure 1: Agenda of the study tour in Austria

At the excursion alternative energy producers were visited in Upper and Lower Austria. Visited companies included RZ-Pellets, Bioenergie NÖ-Anlage in Groß-Sienring, district heating plant operated with straw in Stetteldorf and PV plant in Euratsfeld (see **Error! eference source not found.**).

During the excursion, AGRAR PLUS explained the idea and concept of the SUCELLOG project. The project is very important for the region because in the northeast of Lower Austria

and also in Moldova there are very few forests. SUCELLOG project concept demonstrated that also agricultural by-products have potential for heating and power generation.

The following barriers were identified during discussions and recommendations for solutions were given:

Barrier: *Slagging of boilers.* Similar to the region of Carinthia a major issue with the combustion of agricultural by-products is the low ash melting point, which causes problems with the slagging of the boilers.

Possible solutions or recommendations: Improvement of the boiler technology and discussion with technology producers for providing a guarantee regarding the slagging of the ash.

Barrier: *Competition with wood pellets/wood chips.* In the region there is a strong competition with woody-pellets, but not only because of the price, but also because of convenience: pellet boilers run nearly fault free. Small biomass boilers, fired with biomass by-products are so far not failure free. There are big amounts of wood-chips available on the market for the price of 80-100 €/t (including transportation to the boiler). Agricultural by-products (e.g. corn-cobs) often have low energy content per volume (low energy density) and are very cost-intensive for the transportation. The solution would be biomass pelletizing, however, this kind of pre-treatment brings significant increase of the product costs (100 €/t).

Possible solutions or recommendations: Further development for small biomass boilers is recommended. The decreasing prices for pellets and woodchips are difficult to influence since they are depending on the market situation.

Barrier: *New regulation for flue gas emissions.* Although agricultural by-products are almost CO₂ neutral during combustion, they are problematic in NO_x, particulate matter (PM) and SO₂ emissions. The new EU regulation regarding emission limits impose the use flue gas treatment technologies (e.g. filters) to decrease PM, SO₂ and NO_x emissions. Thus the expected investment costs for combustion of agricultural by-products are significantly higher.

Possible solutions or recommendations: No possible solutions have been found so far.

2.2. Meeting with policy makers in Styria, 30.05.2016

Date: 30.05.2016

Type of meeting: Face-to-face meeting with mayors in the region of southern Styria

Participants: 6 policy makers

The following barriers were identified and recommendations for solutions were given:

Barrier: *The use of agrarian residues in private households is forbidden by law in Styria.*

Possible solutions or recommendations: Lobbying for the new law.

Barrier: *There are no particular funds available for the development of a new logistic center for using agrarian residues.*

Possible solutions or recommendations: Lobbying for the funding of agro-biomass logistic centers and for the marketing of new alternative bio-fuels.

2.3. Meeting with policy makers in Carinthia, 09.06.2016

Date: 09.06.2016

Type of meeting: Regional workshop in which policy makers were attendants, face-to-face meeting after the workshop

Participants: 3 policy makers representing the Chamber of Agriculture and Forestry in Carinthia, Grafenstein municipality and the company BIG-KO Handelsgesellschaft (network of 2.800 farmers and trading partners)

After the regional workshop, a face-to-face meeting with regional policy makers has been organized. During the meeting the following barriers were identified and discussed:

Barrier: *Slagging – Guarantee issues:* A major problem that was stressed is the increased slagging of ash when using plant residues as fuel. It is in particular important to respect the characteristics of plant residues with respect to the ash and chlorine content.

Possible solutions or recommendations: Testing and cooperation with boiler technology providers is needed in order to include corn cobs as acceptable fuel and to discuss the original guarantee applications for existing boilers. New equipment compatible with using agro-fuels should be purchased in new locations to use corn cobs as fuel.

Barrier: *No funds for the development of a new logistic centre for agrarian residues.*

Possible solutions or recommendations: Based on the experiences with similar issues in Styria, it is necessary to do more lobbying work for the funding of agricultural logistic centres and for the marketing the new fuels.

Barrier: *Decreasing prices for woody-pellets:* Currently the prices for woody pellets are decreasing. Since this development is strongly affected by the situation in local market, no particular recommendation or solution can be given.

2.4. 2nd meeting with policy makers in Styria, 09.06.2016

Date: 09.06.2016

Type of meeting: Face-to-face meeting during the discussion of amendments in combustion law in Styria

Participants: Two policy makers representing the Office of the Styrian Provincial Government and the Chamber of Agriculture and Forestry

The meeting has been organized as the follow-up of the discussion with policy makers on 30.05.2016 in Styria. During this meeting one of the identified barriers was related to the use of agrarian residues in private households.

The meeting was held at the energy department of the Styrian Provincial Government. This was the first meeting after the final implementation of the new law, which now allows also the private use of corn cobs as fuel. The new law came into force on the 1st of June 2016.

The new law is introducing legal provisions for using new types of fuels in household size boilers and stoves. In addition to number of new specifications an extension of the permissible range of fuels for combustion is provided. With this law the conditions for the thermal utilization of other biogenic fuels like straw miscanthus and corn cobs are described.

During the meeting the attention was drawn to the SUCELLOG project, which is strongly supporting the use of agrarian biomass. The representative from Styrian Provincial government was very interested in the practical approach proposed by SUCELLOG and welcomed this initiative. Additionally the practical approach of the new law – the single site inspections – has been discussed. More details about site inspections will be discussed in further meetings.

Furthermore, the issues regarding the feeding of the boilers with fuel mixtures were discussed.

In the end of the meeting it was concluded, that the use of agricultural biomass is very important for achieving the climate targets of the region.

2.5. Meeting with policy makers in Upper Austria, 14.07.2016

Date: 14.07.2016

Type of meeting: Personal meeting

Participants: 2 policy makers representing the council of the agricultural chamber and regional council of the municipality St. Martin im Mühlkreis.

The purpose of the meeting was to have clear answers or recommendations for each barrier detected during the regional workshops.

The following barriers have been identified and recommendations provided:

Barrier: *There is not enough information about using corn cobs in heating plants*

Possible solutions or recommendations: Independent information about using corn cobs in heating plants and promotion for the use of corn cobs shall be made available. It would be also beneficial if funding initiatives for using corn cobs in heating plants were provided.

Barrier: *There are no funds for the development of a new logistic center based on agrarian residues.*

Possible solutions or recommendations: Lobbying work for the funding of logistic centers and for the marketing of new agro-fuels shall be implemented.

Barrier: *It is not clearly defined by the legislation if roadside wood is a waste or not. If it is waste, the local heating plant is required to obtain a special permission to be allowed to use it.*

Possible solutions or recommendations: Experts and the government should come together and decided that roadside wood is no waste and that it can be used in local heating plants without restrictions.

3. Meetings with policy makers in Spain

3.1. Meeting with policy makers in Madrid, 28.10.2015

Date: 28.10.2015

Type of meeting: Meeting with the Spanish Ministry of Agriculture, food and environment: SOSTENIBILIDAD INTEGRAL Y COOPERATIVAS AGROALIMENTARIAS

Participants: 6 policy makers representing the Ministry of Agriculture, Food and Environment.

The SUCELLOG project was represented by 3 persons from the Spanish Agri-food Cooperatives.

The meeting was focused on the activities developed by Spanish Agri-food Cooperatives (Spanish Co-ops) related to the sustainability.

One part of the meeting was dedicated to explain the projects in which Spanish Co-ops was involved. In this regard, the main goals of SUCELLOG project were presented, highlighting the importance of this issue for the agro-food cooperatives because of the environmental benefits that represents for them among other aspects.

The representatives of the Ministry of Agriculture and Fisheries, Food and Environment were very interested in this project and asked for additional information. They pointed out the importance of the communication activities in connection with the biomass issues since there was a big lack of knowledge about it.

In this way, they offered their collaboration to disseminate the main information about SUCELLOG through their own information channels and, particularly, through their own website addressing sustainability www.redsostal.es.

Moreover, since at that moment they were working in the elaboration of a report about tools to asses issues related to the sustainability, they decided to include the assessing of the documents delivered by SUCELLOG in this regard.

Spanish Cooperatives promised to send additional information about SUCELLOG project. In this sense, the video about the project has been recently sent to the person in charge of the web www.redsostal.es and will be uploaded in the coming days.

3.2. Meeting with policy makers in Madrid, 17.06.2016

Date: 17.06.2016

Type of meeting: Bilateral meeting after the national workshop

Participants: 4 policy makers representing Energy Agency of Granada, the Ministry of Agriculture – Fishing and Environment and Asaja (agrarian association of young farmers).

The following barriers have been identified and recommendations provided:

Barrier: *Lack of a Government group discussion about biomass*

Possible solutions or recommendations: Creation of a permanent Inter-ministerial Commission is needed, in which the autonomous regions and the sector is represented; Which addresses the development of the sector as a whole, not only from an energy point of view but also considering the agricultural, forestry, livestock, industrial, rural areas; and always in accordance with regional policies; and which would establish a specific regulatory framework that recognizes the socio-economic contribution and external benefits like primary job creation, savings of greenhouse gas emissions and prevention of forest fires.

Barrier: *Lack of promotion of the contribution of the biomass to the achievement of the 2020 goals*

Possible solutions or recommendations: A commitment to achieve the 2020 goals through sustained support to the sector shall be made. Promotion of biomass should be a priority of the public policy, since it contributes to achieving the goals in several sectors, including the rural development, circular economy, climate change, etc.

Barrier: *Difficulties in setting the boundaries of the biomass sector with regard to the economic and social activities*

Possible solutions or recommendations: Biomass sector can contribute to the re-industrialization of Spain. The Absence of an enabling framework for the sector is hindering significant job creation and economic activity that is induced linked to it, a reality at local, regional and regional level.

Barrier: *Policies are not enough adapted to the needs of biomass sector.*

Possible solutions or recommendations: Coherence between policies that are implemented in energy, environmental and tax matters shall be ensured.

Barrier: *National biomass market is not enough mature*

Possible solutions or recommendations: Promotion of a national biomass market, bringing together micro-markets existing today.

3.3. Meeting with policy makers in Galicia, 30.06.2016

Date: 30.06.2016

Type of meeting: Roundtable discussion after regional workshop in which policy makers were attendants

Participants: 2 policy makers representing public administration, one responsible for planning and coordination of Rural Development Funds, another one – working for the district agricultural office.

Other participants of meeting included technical experts from Agrimer and Tragsa, sales agents of boilers and biomass pellets representing Saneamientos Antonio Díaz, SL and representative of AGACA (Asociación Galega de Cooperativas Agroalimentarias).

After regional workshop a roundtable discussion among policy makers, technical experts and combustion technology and fuel providers has been organised. The following barriers have been identified and recommendations provided:

Barrier: *Lack of public support for the installation of Biomass Logistic Center*

Possible solutions or recommendations: Implementation of the measures included in the RDP 2014/2020 (Rural Development Plan), for the promotion of the use and promotion of investments in biomass processing technologies. It is foreseen that support for machinery and construction of warehouses is given – up to 40% subsidy and 130,000 € per company.

Barrier: *Lack of information and specific training in development and operation of Biomass Logistic Center*

Possible solutions or recommendations: Measures are included in the RDP 2014/2020 to support the development of skills in areas related to the agriculture and biomass sectors.

Barrier: *Problems encountered in the installation of the boiler.*

Possible solutions or recommendations:

- Capacity building of boiler installers, operators and heat consumers;
- Promotion of improvements in fuel feeding systems of biomass boilers;
- Reduction of downtime of the facility for maintenance and cleaning (e.g., by using better quality fuels and where possible by installation of multi-fuel biomass boilers).

Barrier: *Lack of the experience in operation of technologies for Biomass Logistic Center*

Possible solutions or recommendations: Encourage training sessions in this technology with specific skills development and learning practical techniques and processes to optimize production and processing of agricultural biomass.

Barrier: *Difficulties to integrate of biomass logistic centers in existing urban settlements*

Possible solutions or recommendations:

- Study specific modifications in the municipal urban planning to facilitate the settlement and development of the biomass logistic center;
- Public administrations should facilitate the management of administrative procedures for implementation of such a kind of innovative initiatives.

3.4. Meeting with policy makers in Castilla León, 03.11.2016

Date: 03.11.2016

Type of meeting: One to one meeting after regional workshop in which policy makers were attendants

Participants: 1 policy maker on behalf of Somacyl (Public Society of Infrastructures and Environment), representative of Natural Resources.

Other participants included 2 persons from URCACYL.

After regional workshop a one-to-one meeting with a policy maker has been organised. The following barriers have been identified and recommendations provided:

Barrier: *Ignorance of the behaviour of the agricultural wastes, which would work as biomass raw material for heat and/or electricity generation*

Possible solutions or recommendations: work with expert professionals in the field, as well as specific formation for the professional technicians related with the sector.

Barrier: *Difficulty in the continued supply of raw material to valorise*

Possible solutions or recommendations: Collaboration agreements signing between various suppliers of raw material in order to assure the availability in time and quantity.

Barrier: *Price fluctuation of biomass raw material*

Possible solutions or recommendations: Collaboration agreements signing between various suppliers.

Barrier: *Lack of more stable regulatory framework*

Possible solutions or recommendations: Study of application of the included measures in the RDP (Rural Development Plan) 2014-2020.

Barrier: *Lack of social awareness*

Possible solutions or recommendations: Awareness talks to the population and increase of advertising campaigns.

3.5. Meeting with policy makers in Catalonia, 23.11.2016

Date: 23.11.2016

Type of meeting: Bilateral meeting at Catalan Institute of Energy (ICAEN)

Participants: 4 policy makers – one representing FCAC and three from ICEAN.

The aim of the meeting was to obtain responses and/or recommendations given the different detected obstacles for the use of agricultural residues and its valorisation as biomass. The meeting has been initiated by FCAC to present the SUCELLOG project and to be able to

assess the current vision of the agricultural biomass for this administration, and the detected barriers. It took place in the ICAEN headquarters, in Barcelona.

The meeting has started with an introductory explanation about what FCAC and the cooperatives represent.

Afterwards the FCAC explained which are the most frequent problems of the cooperatives regarding energy efficiency, costs, discontinuity of demand, liberalization of services, fulfilment of legal requirements and other issues raised by the cooperatives. SUCELLOG project have been presented, including the activities and so far achieved results.

ICAEN made the following comments:

- SUCELLOG project is very interesting for them. They mentioned that the first company producing pellets initially came from the agricultural sector and not from the forestry (ENERBIO).
- They showed interest in CIRCE activity, from which they had some previous knowledge.
- After reviewing the Miralcamp case for the corn cob utilization, they found it very interesting by the great potential volume of this resource.
- They agreed that there is a great potential of the biomass of agricultural origin. It is true that forestry biomass has a major role and still articulate the biomass sector, but also has problems with the extraction expenses, not everything is so easy, and it has been promoted a lot because the fire prevention.
- They are interested in the possibility of consulting the project diagnosis, audit and conclusions documents.

The following potential barrier has been identified:

Barrier: *Depending of the type of fuel and installed capacity it can be that the plant is a subject of emissions control and verification could be required*

Solution: If the plant falls under the strict emission control requirements depends on the parameters set by the European Directives, and it is not going to be more restrictively regulated, but in accordance to what the European Standard sets.

3.6. Meeting with policy makers in Aragon, 20.01.2017

Date: 20.01.2017 in Mercazaragoza, Zaragoza

Type of meeting: Discussion on non-technical barriers on the occasion of the regional workshop in Aragon with participation of policy makers and technical experts

Participants: 2 policy makers – representatives of Innovation and Agrifood Transfer, Government of Aragon.

The aim of the meeting was to obtain responses and/or recommendations given the different detected barriers during the regional workshop. The following potential barriers have been identified and recommendations to overcome them were given:

Barrier: *The price volatility of both agricultural biomass and fossil fuels means that agro-industries and other potential producers and consumers of biomass of agricultural origin do not take the step to get involved in this sector*

Recommendations and solutions: There is no solution which could influence in a big way the market price of fossil fuels and solid fuels of agricultural origin. The strong competition for a certain type of surplus raw materials in the area, ease of handling, logistics and infrastructure, and availability of technology for its combustion are considered as possible solutions. This decision must be maintained over time to reach the expected profitability and interest to make investments. In addition from the Regional Government, it is also thought that it could be useful to install a system working with fossil fuels supporting the main system feed with biomass, to give greater flexibility when the prices of one or the other are not high.

Barrier: *Concerns of potential product contamination when drying with direct air from the combustion of some type of agro-biomass that could carry high concentrations of chlorine for example and possible long-term problems in the emission of particles into the atmosphere, and the need to install emission control devices (e.g. filters).*

Recommendations and solutions: At the drying operation temperatures it is impossible for the chlorine to condense and mix with the product to be dried. The combustion process and the technology have to be adapted to decrease emissions as much as possible. To date there are no environmental barriers in terms of emission limits, but from now on they will get stricter. It has been pointed out that if in other European countries such technologies are working, in Spain, since there are fewer restrictions on contaminants, they also have to be implemented.

Barrier: *In the rural and agrarian sector new initiatives are sometimes restrained by the fear of not correct, and some investments are post-put until some another stakeholder takes the initiative and demonstrates its functionality. On the other hand, the comfort of natural gas or diesel is perceived as irreplaceable. In order to be replaced they really need the biomass to be much more convenient in price.*

Recommendations and solutions: Advantage of the cooperative benefits should be taken by considering joint initiatives and diversifying the risks among all the partners for a common good.

Barrier: Agribusinesses are reluctant to invest because of the volatility of fuel prices, both – solid agricultural biofuels and fossil fuels. A fundamental factor to ensure the operation of agro-biomass self-consumption facility is the maintenance of supply, price and quality, and to use a technology that suits with it for the cost-effective operation of the facility, but also the maintenance of technology, social consolidation of the cooperative operating the entire management, and compliance with environmental regulations related to the new combustion process installed.

Recommendations and solutions: From the Regional Administration point of view, solutions are proposed through the realization of innovative projects in the management of agricultural

residues for their use as biomass, and during the meeting possible ways of financing have been quoted. This could be a solution, as there is currently no direct aid for investment in energy efficiency improvements through the installation of biomass-based combustion equipment and substitutes for fossil fuels.

Finally it has also been commented that due to the climatic conditions in Spain, there are large amounts of agricultural waste available, and the ones that are generated in the summer season, can be collected practically dry. This is perhaps an advantage over other climatic areas in Europe, and that is why the use of agricultural waste for the generation of heat should be supported. It is also a way of reducing costs to the partners of agro-industries, while solving the problem of waste management generated, both on farms and in the own agro-industries.

3.7. Meeting with policy makers in Extremadura, 26.01.2017

Date: 26.01.2017

Type of meeting: Dedicated meeting to discuss non-technical barriers which were identified in the regional workshop few days earlier

Participants: 2 policy makers – one representing Extremadura Agro-food Cooperatives and one from Agrarian Production Service of the Counselling of Environment and Rural, Agricultural Policies and Territory of the Board of Extremadura.

The aim of the meeting was to present the results of SUCELLOG project in the region and to discuss different barriers and solutions for the development of the concept in region.

The meeting was held with the Head of Agrarian Production Service to discuss the project content as well as the auditing results of the Troil Vegas Altas agroindustry.

The main point of discussion was how to raise awareness about the importance of the energetic use biomass residues and tree prunings. The following potential barriers have been identified and recommendations to overcome them were given:

Barrier: *Lack of training and low awareness of farmers and agro-industries*

Recommendations and solutions: Training of implicated agents should be triggered and training activities can be targeted to the counselling and entities dedicated to the formation. Contact with specialized companies in using their experience shall be established.

Barrier: *Legal restrictions for using residues as solid biomass*

Recommendations and solutions: Currently, there is no knowledge about any barrier technical or legal for the use of residues as biomass in Extremadura. Perhaps it is because there is not so much development in this matter by now.

Barrier: *Challenges in establishing feasible collection logistics system for pruning residues*

Recommendations and solutions: Cooperatives could be responsible for the start-up of collection system with own equipment, which would make the logistics cheaper. Pruning and

harvesting residues shall be treated as products and energy in terms of their marketing. Some temporal support to incentive this activity could be introduced.

Barrier: *There is a social pressure, which promotes other uses of the raw material of interest (e.g. food vs fuel debate)*

Recommendations and solutions: This did not happen in Extremadura, perhaps because the use of agricultural biomass for energy purposed is not so widespread. In some occasion, a drought has caused a lack of feed for cattle and this has raised the price of the feed in such manner that affected the use of harvest residues for other purposes.

4. Meetings with policy makers in Italy

4.1. Meeting with policy makers in Toscana, 05.04.2016

Date: 05.04.2016

Type of meeting: Regional workshop in which policy makers were attendants

Participants: 4 policy makers – councillors for agriculture in Cerreto Guidi Municipality, Capraia e Limite Municipality, Montelupo Fiorentino Municipality and Empoli Municipality.

After a regional workshop in Toscana, a discussion among policy makers on the one hand, and farms or agro-industries on the other was carried out. The discussion was facilitated by workshop speakers, experts of the European funding programs in favour of SMEs/Cooperatives.

Only those non-technical barriers which are relevant to the territory represented by the politicians in attendance have been discussed in details. Therefore, proposed recommendations do not constitute necessarily valid solutions for whole Toscana region, but rather for the Empoli-Valdelsa area.

Barrier: *Issue of social acceptance:* in Italy, dark pellets are considered as a bad quality product and cannot find a market. Pellets must be white (light colours)

Possible solutions or recommendations: Policy makers suggested actions for consumer's awareness and information during local fairs of agricultural products in the area and inside events and/or places provided by ASEV (i.e.) for similar topics. They also call for the drafting and dissemination of scientific articles and news about the quality comparison between light and dark pellets that disprove the prejudice.

Barrier: *Lack of funding for investments in the farm/agro-industry by the SUCELLOG project*

Possible solutions or recommendations: Policy-makers point out that they very much appreciate the possibility to receive free technical advice from SUCELLOG project. Funding for investments in equipment or facilities might be sought from the regional development plan. Policy makers are in favour of this win-win strategy, when in this type of funding programmes companies are connected with experienced consultants, as well as when they are brought together as in this workshop.

Barrier: *Difficulties in securing signed commitments for the purchase or supply, in terms of quantity and price of materials, due to the period of economic crisis and due to the uncertainty that characterizes the agricultural sector in its production. The integrated supply chain agreements between farms often require more time than the duration for funding, or in this particular case, the lifetime of the SUCELLOG project.*

Possible solutions or recommendations: Policy-makers point out that most of the European financing programmes supports clusters among companies and integrated chain projects (private) or territorial projects (public-private). In response, farms argued that difficulties are decreasing if, before setting up a logistic chain, trustful relationships (commercial or cooperation) between parties are already established. Discussion participants also criticized the absence of trade associations at the workshop. They could facilitate the links among agro-industries. Policy makers recommended breaking-down the mistrust and increasing the confidence among companies with their participation in future meetings organised in the area, of which this meeting was the first one. The public-political party can organize, coordinate and facilitate these interactions among private entities, in order to increase the competitiveness and attractiveness of its territory, involving trade associations too.

4.2. Meeting with policy makers in Puglia, 16.04.2016

Date: 16.04.2016

Type of meeting: Regional workshop in which policy makers were attendants

Participants: 2 policy makers – one from the municipality of Orsara di Puglia, one – the Councillor for Agriculture in Molise Region.

After the workshop presentations, a discussion among policy makers and farms or agro-industries took place.

The discussion on the non-technical barriers was deeply faced developing only those related to the territory concerned.

Barrier: *The trend to use mainly wind and solar energy as renewable sources*

Possible solutions or recommendations: Policy makers refer back to the Regional Energy Plan, in which it is suggested to construct district heating by solar thermal and biomass, and to the new “Conto Termico” Decree, in which there are simplifications in access to incentives, both for large biomass plants and for domestic boilers.

Barrier: *The lack of woody biomass in the Region that has not allowed the knowledge and confidence in biomass as energy source*

Possible solutions or recommendations: The lack of wood in Puglia, with the exception of the area further north, is bypassed with the importation of forestry biomass from the bordering regions, Campania, Basilicata and Molise. In light of this, companies owning equipment such as pelletizers and chippers are uncommon in Puglia. In this regard, the Regional Energy Plan calls for inter-institutional cooperation at regional, inter-regional and national levels. In addition, policy makers admit the existence of legislative addresses still limited expressed (particularly at regional level), to which however it is possible to follow up, as suggested by

the Regional Energy Plan, with the establishment of efficient agro-energy chains through inter-professional agreements, e.g. A.P.E.A. (Ecologically Equipped Productive Areas).

Barrier: *The difficulty of abandoning farming practices rooted in the territories, such as burning or chopping and leaving agro-prunings in the fields*

Possible solutions or recommendations: Policy makers suggested actions for farmers' awareness and information during local fairs, events, meetings on agricultural products or equipment in the region. They also call for the drafting and dissemination of scientific articles and news about the quality comparison between agro-prunings chips or pellets and competitors. On the side of the farms comes the suggestion of a reduction on taxes for the transport of waste, as an incentive to deliver farm waste to a logistics platform of agro-biomass production.

4.3. Meeting with policy makers in Marche, 23.01.2017

Date: 23.01.2017

Type of meeting: Phone call

Participants: 1 policy maker - President of UNCEM Marche Region and President of the Unione Comuni Montana del Montefeltro

Thanks to the interest of the Regional Consortium Marche Verdi, for the care of the regional environment and biomass production, a phone call has been made to discuss about the situation in the region in regard to the development of biomass production and consumption.

The following barriers and solutions have been discussed:

Barrier: *The trend to use mainly woody forestry biomass is very evident in the region, in particular in the mountain areas. This affects negatively the possibilities to develop different types of biomasses.*

Possible solutions or recommendations: Wood biomass is generally considered as the most available, also because of cultural and historical reasons. The production of woody biomass is also considered strictly connected with the maintenance of the landscape, in particular in a region, as Marche region is, subject to a high level of hydro-geological weakness. The Unione dei Comuni itself fosters the production of woody biomass from the forestry managed by the public body. In light of this, it is evident that the interest in the production of different kinds of biomass is low. We should also take into account that the region has a good road network from the internal and mountainous areas to the coastal and flat area, and this facilitates the commercialization of woody biomass from inland. After the last episodes of earthquake, the regional resources are mainly addressed to the internal and mountainous areas, and this also increases the capacity of presence in that part of the region. The woody biomass has currently quite high prices due to the mature market of this product. Two strategies are possible and both should be carried out to achieve a development of the market of the agricultural biomass: low prices and self-consumption. Low prices could foster a large number of consumers that complain about the high prices of the woody biomass, in particular the price of pellets. Self-consumption is a good possibility for the agro-industries that produce agricultural residues and also need to disposal them.

Barrier: *The resources allocated by the Region to develop the biomass market are mainly addressed to the woody biomass production.*

Possible solutions or recommendations: This is mainly due to the low interest shown by the regional market for different kinds of production. In this regard, the Regional Energy Plan follows the vocations of the local realty and considers the most interesting biomass sources. A strong interest is needed firstly by the private subjects that after will be followed by the regional regulations. We are aware that there are some spot initiatives for production of biomass from agricultural residues (Alpha-Alpha in particular), but it is currently evident that the main interest from the private stakeholders is in the production of biogas. This is the sector where we can see the largest amount of investments from the private sector. If an interest from private persons is evident, the Region can modify the next planning of the funds of the Rural Development Plan, addressing a higher amount for the production of biomass from agricultural residues. This would be easier if the residues are used for self-consumption, in order to simplify the procedures to distinguish between agricultural residues and waste.

Barrier: *The market is poorly informed about the potentials of different biomasses and often looks with suspicious to new initiatives.*

Possible solutions or recommendations: This is a problem that affects not only the local realty but a large part of our society. Every time when a public body or, moreover, a private actor promotes an initiative in this specific field there is the concrete possibility that a local community tries to stop the new activity. This relates to both – for the production and the consumption of biomass. The suspect is that, behind the word biomass, some strange activity could be hidden. The solution must be the transparency, for every decision taken by the involved actors, at any level. Also a strong activity of informed involvement of the population for any decision is needed.

5. Meetings with policy makers in France

5.1. Discussion with a policy maker from Rhône-Alpes, 13.04.2016

Date: 13.04.2016

Type of meeting: phone meeting

Participants: 1 policy maker representing ADEME Auvergne Rhône Alpes.

The aim of the phone meeting was to discuss the development of SUCELLOG concept in Rhône-Alpes region and to get feedback about expected barriers. The following non-technical barriers were identified:

Barrier: *ADEME already met with a company interested in producing pellets from wood prunings. However, the ADEME has been hesitating to support this project, while wood pruning pellets should be combusted in boilers fitted with exhaust gas treatment system, which is not the case with households.*

Possible solutions or recommendations: combustion tests of respective pellets in household boilers should be carried out and emission performance values shall be compared with the limits set by the regulation (according to the ISO 17-225).

Barrier: *The ADEME does not fund projects using corn cobs, because this feedstock has competitive uses (national position).*

Possible solutions or recommendations: the use of seed corn cobs is not possible; however the use of grain corn cobs would be possible. Competitive use concerns only seeds. New logistic chains may be thus produced.

Barrier: *The ADEME is not convinced about using silos dust for agropellets production. Indeed, this residue is already used in animal feeding.*

Possible solutions or recommendations: Agropellets sector is very small (few hundred tons in whole France) and at the moment there is no risk of competition. In the future, it could be interesting to develop both sectors, gathering new unused resources: the energy sector is economically more attractive than animal feeding.

Barrier: *The use of agricultural biomass for combustion is not a priority for the ADEME. SUCELLOG project should carefully consider and include competitive uses of targeted agricultural by-products and residues.*

Possible solutions or recommendations: More explanation and information shall be provided to explain the benefits and possibilities in developing both – wood biomass and agricultural biomass sectors – in parallel.

5.2. Discussion with a policy maker from Rhône-Alpes, 20.05.2016

Date: 20.05.2016

Type of meeting: e-mails exchange and phone meeting

Participants: 1 policy maker representing ADEME Rhône Alpes

During the phone discussion the following non-technical barriers were identified:

Barrier: *Since agropellets has different characteristics compared to wood pellets, specific boilers should be used or existing wood pellet boilers should be adapted. The boilers shall be equipped with moving grate (to avoid clinker). Agropellets can be better consumed in large scale boilers (especially if mixed with wood), but in this case the price of agropellets should be competitive with the price of wood chips – around 22 €/MWh (excluding tax).*

Possible solutions or recommendations: depending on the sector, the indicated price range can be reached – mainly in animal feeding sector. From the technical point it is possible, but more communication efforts are needed to inform potential consumers about agropellets. The awareness level among consumers is very low.

Barrier: *There is a lack of appropriate technology and experience of using alternative pellets in the area. There are two larger capacity (>300 kW) boilers in Bourgogne working with pellets (one is installed in a high school and another one in retirement home), but none of them is adapted for using agropellets. In the region there are installed more boilers with smaller capacity (<100 kW), which are technically able to use agropellets (equipped with volcano, specific burner). Less than 5 are using miscanthus as fuel. Market activity in the*

area is very low, almost no-existent. Company Bourgogne pellets is working on developing this market, but without significant success for the moment

Possible solutions or recommendations: The market in the region should be developed step-by-step, including more commercial issues and more communication about agropellets and specific technologies.

The regional branch of ADEME is interested in SUCELLOG concept. They have been already contacted by some cooperatives which are looking for new uses for their silos dust.

5.3. Videoconference with policy makers in Rhône-Alpes, 28.06.2016

Date: 28.06.2016

Type of meeting: videoconference

Participants: 2 policy makers – officer and energy advisor of PÔLE ÉNERGIE 11.

Other participants included representatives of La CAVALE cooperative, pelletizing unit PAN SAS and energy task officer from CDF RAA (responsible of SUCELLOG audits).

The aim of the discussion meeting was to have a clear vision of the biomass market in the Aude department (Cooperative La CAVALE). The following non-technical barriers were identified:

Barrier: *The POLE ENERGIE 11 does not advise / help individual projects but only collective ones. It thus cannot advise La CAVALE for selling agropellets to farmers already owning multi-fuel boilers via PAN SAS company.*

Possible solutions or recommendations: La CAVALE should work with PAN SAS, using its consumers' networks and the gardening shops network of the cooperative.

Barrier: *Agropellet production needs high quantity of sawdust. According to PÔLE ÉNERGIE 11, it will not be possible to find this resource on the territory (1700 t/y ex-factory 60% MC). Instead, there is not enough sawdust on the territory and available resources are already used.*

Possible solutions or recommendations: according to PAN SAS, non-identify (by PÔLE ÉNERGIE 11) sawmills may be sited on the territory. Sawdust can also be replaced by shredding palettes.

Barrier: *competitors prices used in the audit reports are not precisely exact.*

Possible solutions or recommendations: PÔLE ÉNERGIE 11 will send to CDF-RAA more precise information about fuel prices (ex-factory) on the territory, including quality properties. This information will be compared with the ones included on the report.

Barrier: *PÔLE ÉNERGIE 11 confirmed that high ash content is an obstacle for agropellets development.*

Possible solutions or recommendations: ash content implied a quick ash cleaning process. Tests have to be realised to identify this ash cleaning speed. It is possible but can

demotivate some potential consumers who do not want to adjust the boiler calibration for each supply. Ash content can be reduced with an additive.

Barrier: *PÔLE ÉNERGIE 11 insisted on the fact that atmospheric emissions monitoring, including flue gas emission has to be done.*

Possible solutions or recommendations: tests on flue gases and emission limit values are not compulsory for < 2MW boilers. This information has to be validated because it can influence this consumers segment.

5.4. Discussions with policy makers in Rhône-Alpes-Auvergne, 15.09.2016

Date: 15.09.2016

Type of meeting: discussion among Coop de France Rhône-Alpes Auvergne and several policy makers during the development of regional biomass strategy in Rhône-Alpes-Auvergne.

Participants: 5 policy makers representing DREAL, DDT 01, DDT 26 and DRAAF Auvergne Rhône-Alpes.

The following barriers have been identified and recommendations provided

Barrier: *Not all biomass residues are available for energy production. There is a competition for using most of the biomass resources in other sectors as well. However, it is difficult to define competitive uses because there is not enough detailed information available.*

Possible solutions or recommendations: Data from the National Biomass Observatory are not available at a detailed scale and statistical secret may limit the data availability. Availability of data depends on the type of biomass. The credibility of data should be increased with specific actions at a local / regional scale. Recommendations should be included in the National biomass plan from the Agricultural Ministry. Priorities of uses of different types of biomass have to be defined.

Barrier: *Agricultural biomass market is undeveloped.*

Possible solutions or recommendations: The supply and the demand (energy or other possible uses of agricultural biomass) have to be developed in the same time. This has to be the key point of national reflection for biomass mobilization and uses.

Barrier: *project developers do not possess good arguments why agricultural biomass should be used instead of other fuels. Positive externalities are not enough emphasized.*

Possible solutions or recommendations: Estimation of greenhouse gas emission savings or a life cycle assessment should be performed for agricultural biomass products.

Barrier: *Political strategies are not clear even if national strategies are currently in progress in France.*

Possible solutions or recommendations: concrete perspectives have to be realized to support the market. A strong political commitment and position would be appreciated by biomass stakeholders. The way to transpose the national strategies at a regional lever has to be analysed.

5.5. Discussions with policy makers from Normandy, 29.09.2016

Date: 29.09.2016

Type of meeting: face-to-face meetings with people attending the regional workshop in Normandy (meetings have been organised in specific stands where the event was taking place)

Participants: 2 policy makers representing NOVEATECH (an association which develops innovative projects with biomass for chemistry, energy and material) and Energie Normandie (an association in Normandy working on the energy sector – with EDF, TOTAL, EXXON, ENGIE, small supply companies, producers and territories).

Other participants included representatives from VALBAE (a company specialized in additives for solid biomass in order to improve the environmental balance of emissions, directly on coal or mix of agricultural raw materials (only or with petroleum residues)), ALBEDO (company working on thermic study, heating for buildings) and CERTAM (researchers in thermal engineering).

The following barriers have been identified and recommendations provided:

Barrier: *Pelletizing is expensive*

Possible solutions or recommendations: The use of loose biomass may be easier for agro-industry with a coal mix.

Barrier: *Comparatively low quality of agricultural biomass*

Possible solutions or recommendations: Mixing agricultural biomass with higher quality components reduces SO_x and NO_x concentrations and increases ash softening temperature.

Barrier: *The low price of fossil fuels (oil and coal) is a barrier for the development of biomass use for energy.*

Barrier: *Local support and global vision on agricultural biomass in France is missing.*

Possible solutions or recommendations: The creation of a national network for the agricultural sector is necessary to support the sector.

Barrier: *The market is not developed*

Possible solutions or recommendations: Avoid targeting small scale applications (households) because for them the quality of the fuel is very important.

Barrier: *Agropellets are competing with the wood for energy. As wood chips are less expensive and the logistic is operational, being competitive is not always possible with agricultural biomass.*

Possible solutions or recommendations: The price of agricultural biomass has to be lower or agricultural biomass needs to prove that it can satisfy large application demands and large agricultural biomass logistic chains can be developed. Some efficient examples are needed in France.

Barrier: *In Normandy only wood boilers can receive support from the regions.*

Possible solutions or recommendations: local biomass may be included in each supply plan - both agricultural and wood biomass. But financiers have to be convinced.

Barrier: *Agricultural biomass has to be structured for the energy supply*

Possible solutions or recommendations: creation of an interest group on solid agricultural biomass.

Barrier: *Agricultural biomass is not well known, project developers do not know that they can use it and there are no references.*

Possible solutions or recommendations: More communication is needed. Agricultural biomass producers have to apply for the calls for applications to get known and to create references. Agricultural biomass producer should create a network and answer call for application to create new projects.

Barrier: *Innovative projects are not always known and the communication about results is not large enough*

Possible solutions or recommendations: Within next few months, Energie Normandie will make an overview about new projects on energy and technologies to study the opportunity of development of poly-fuels boiler technology in Normandy.

5.6. Discussions with policy makers from Picardy, 17.11.2016

Date: 17.11.2016

Type of meeting: roundtable discussion during a biomass workshop (regional workshop on the National strategy on biomass mobilisation)

Participants: 1 policy maker representing Ingénieur filières EnR électriques - EMR - filière bois ADEME.

The aim of the meeting was to discuss the development of SUCELLOG concept within the future National strategy on biomass mobilisation (national French action organised at the regional level). The following non-technical barriers were identified:

Barrier: *Biomass costs are high therefore energy from biomass is less interesting than that resulting from the natural gas.*

Recommendation: Two elements could change this situation to the benefit of renewable energies: the VAT is more advantageous for biomass (10 % for biomass and 20 % for gas) and the new tax Climate energy contribution, which taxes fossil energy.

Barrier: *Agriculture seems to be less organized than wood sector for providing biomass for energy production. The wood energy managed to develop in 7 to 10 years, which is quite fast.*

Recommendation: Biomass energy from agriculture needs to be able to bring sustainability and financial advantage to communities. If the agricultural cooperatives get involved in the organization of the sector, it could work well. The main difficulties encountered are the disparity between the agricultural parcels, which increases the cost of collection, and the duration of agricultural contracts (up to 5 years), different from those of energy producers which are up to 25 years.

Barrier: *There is a lack of knowledge regarding the quantities of agricultural biomass which can be mobilized.*

Recommendation: A study should be carried out answering to the question what are the most reliable biomass resources in terms of quality and quantity to supply the energy sector? We must get better view on the different biomasses that could supply the sector on the region.

Barrier: *There is a lack of support and monitoring of biomass projects at the community level.*

Recommendation: A stronger long term political commitment should be requested. There is in particular the change of mayor every 5 years which slows down the development of biomass projects.

Barrier: *There is a lack of information regarding biomass energy and the diversity it offers. It is not well known to the general public, the industries and the communities.*

Recommendation: The agricultural community must communicate on a clear position regarding the supply of biomass energy. This vision must complement the wood supply which benefits from very active dissemination on the territory. To reach these audiences, the agricultural community should also target prescribers, energy unions, advisers and project promoters.

5.7. Discussions with policy makers in Paris, 16.12.2016

Date: 16.12.2016

Type of meeting: The meeting was organised during the meeting of the third steering committee of a project about biomass logistic issues organized by Services Coop de France.

Participants: 3 policy makers – two representing FranceAgriMer (National institution working with observatory on biomass which is taken as reference in the country), one from RMT biomasse et territoires (national biomass network-lobbying group).

The following barriers and recommendations have been discussed:

Barrier: *Competitive uses are a very important point to be assessed when building a feasibility study.*

Possible solutions or recommendations: in France, the main recommendation is to speak about “use hierarchy” and not about “use competitiveness” as the choice between has to be organized regionally.

Barrier: *Project developers need precise data on available biomass when building a feasibility study. There is a problem of statistical analysis of biomass resources, difficulties to gather real information on the field.*

Possible solutions or recommendations: FranceAgriMer is working on the national biomass observatory and can propose regional data. Nevertheless, they are very interested in having specific results from the fields. Indeed, a part of their data is coming from literature and not directly from the field.

Barrier: *People are speaking about “agricultural residue competition with wood” but they are not competitors but are both competitors with fossil fuels.*

Possible solutions or recommendations: Agricultural biomass project developers have to be careful when speaking about competition between agricultural and forest biomass.

Barrier: *It can be interesting to compare sustainable impact of agricultural biomass with competitive fuels.*

Possible solutions or recommendations: a greenhouse gas emission analyses or a life cycle analysis of agricultural biomass should be organized to compare its use to the fossil fuel one. What is its ratio of fossil fuel saved when using agricultural biomass?

Barrier: *The proposition to compare mineral content according to produced kWh and not per tonne is relevant.*

Possible solutions or recommendations: This proposition was done in a previous SUCELLOG workshop but was really appreciated by policy makers attending the meeting.

Barrier: *In the French law, the difference of product and waste is really not clear when related to biomass.*

Possible solutions or recommendations: This law should be changed after consulting people working with residues as solid biomass.

Barrier: *Ash content regulation limits development of some projects.*

Possible solutions or recommendations: The ash content regulation is drastic and limits some projects. More flexibility should be included for biomass projects;

Barrier: *Some companies are planning to propose standards for biomass in biogas production or combustion for agricultural biomass.*

Possible solutions or recommendations: This is really not a good thing for the sector development as producers will have to pay to comply with the standards to find a market even if their project is not profitable for the moment.

Barrier: *To support the sector organisation, stronger lobbying activities are necessary for the agricultural solid biomass.*

Possible solutions or recommendations: The RMT is already representing the agricultural biomass sector in the biomass commission but do not realize lobbying. Another organization, representing whole agricultural sector (farmers, cooperatives, agro-industries) should be created.

Barrier: *Agricultural biomass projects are organised as grain harvesting systems and not as a different product.*

Possible solutions or recommendations: A logistic specific to agricultural biomass should be created, not based on the cereal sector but taking into account the sector specificities.

Barrier: *There are difficulties to homogenise practices*

Possible solutions or recommendations: Each project is very different from others and even if projects are generally looking for general organization to advice project developer, in reality, this is quite impossible.

5.8. Discussions with policy makers in Paris, 17.01.2017

Date: 17.01.2017

Type of meeting: discussion with policy makers was organised during the national workshop in Paris.

Participants: 6 policy makers – two representing ADEME, two from FranceAgriMer, and two from the Agricultural Ministry.

The main barriers gathered during the SUCELLOG national workshop were presented before the round table in order to open a discussion. Lots of technical points were highlighted and discussed.

Barrier: *There is not enough detailed information about road network available, some small roads are not referenced, which limits logistics modelling and mathematical optimization tasks*

Possible solutions or recommendations: Analysis of existing small roads should be made in France and they should be integrated in the specific software.

Barrier: *In some areas there is a limitation on using certain roads for trucks loading biomass. Trucks are not allowed as well on Sundays.*

Possible solutions or recommendations: This regulation has been made to avoid disturbance of the neighbourhood and to reduce noise. Potential project developers should be aware of this regulation and should take it into account. In order to make the process more transparent, the roads to which some limitations apply have to be identified and available on map / biomass logistic software.

Barrier: *There is a lack of equipment for densification which could be efficiently used directly on the field. Existing ones in the market, such as the KRONE pelletising equipment, have low production output (it takes much time).*

Possible solutions or recommendations: This barrier is a technical one. Densification directly on field could be considered to optimise the logistic chains. However, there are no solutions available on the market with acceptable price and high speed performance. Technological development in this sense is needed.

Barrier: *Low awareness about benefits of using agricultural biomass among local stakeholders.*

Possible solutions or recommendations: There is a need for a comprehensive and structured communication to develop the agricultural biomass sector, especially targeted to end users.

Barrier: *There is a lack of dedicated logistic companies specialized on working with biomass and who could bring together biomass suppliers with biomass consumers.*

Possible solutions or recommendations: there is, for the moment, in France, only few logistic organisations / companies able to gather biomass and sell it (working as a cereal trader for example in the cereal sector). Development of logistic companies working as biomass traders would facilitate the development of this sector because logistic companies can take time to answer the calls of application, have a large amount of resource and can develop a large market with several consumers.

Barrier: *Construction of storage facilities for biomass requires large initial investment which is not eligible for existing funding and support programmes.*

Possible solutions or recommendations: A potential solution would be to develop combined projects, e.g. combining solar panels on the storage facility to fund the needed investment. Specific national support programmes and knowledge from consultants may be explored to combine the use of different renewable energy sources on the same sites.

Barrier: *Wood and agricultural biomass are competing with each other for the land use.*

Possible solutions or recommendations: the two sectors should be seen complementary to each other and not as competitors. Together they should compete with the fossil fuels, but not with each other.

Barrier: *There is a lack of knowledge on the agronomic issues regarding the use of biomass, e.g. respecting the structure of soil while choosing the machinery on the field, returning part of residues to the soil to maintain the organic content of it etc.*

Possible solutions or recommendations: farmers, project developers and policy makers have to be aware of the agronomic issues. Communication and rising of awareness have to be performed to respect the sustainability of the soil.

5.9. Discussions with policy makers in Aquitaine, 24.03.2017

Date: 24.03.2017

Type of meeting: discussion during the SUCELLOG regional workshop organised in Aquitaine.

Participants: 2 policy makers representing ADEME Bordeaux

The following main barriers were discussed and solutions provided:

Barrier: *A problem to develop projects because of difficulties to reach a profitable threshold.*

Possible solutions or recommendations: it would be interesting to develop territorial projects, integrating wider range of stakeholders, in order to reach this threshold. Models or studies may be lead to estimate to minimum quantity to be produced / sold / consumed for a profitable project.

Barrier: *Who has to support the project? Who is in capacity to organize a large logistic chain and sell agricultural biomass? Who is the good project developer? It is not the role of municipalities to support large logistic chains in agriculture, agricultural stakeholders seem more relevant.*

Possible solutions or recommendations: the sector's stakeholders have to work together to develop biomass projects. If municipalities have an important role for the consumption development (investment in local and sustainable projects), business actors also have to accept to take risk and develop structured projects with several stakeholders in the territory (one production, synergies, one organisation). The solid biomass cost will nevertheless determine the sector development. It is essential to find the good combination of stakeholders to develop the project at the local scale: ADEME, municipalities but also economic actors which are generally not really involved in projects.

Barrier: *agricultural biomass is generally considered as a competitor to wood sector.*

Possible solutions or recommendations: Objectives of the biomass sector are not to be a competitor to the wood sector but to supply different kinds of boilers: big boilers have to be supplied with wood chips when middle ones can be used with agricultural solid biomass, particularly when wood is not locally available. The wood sector is a first step to structure the solid biomass market. As wood sector is now developed, a second generation of fuels from agricultural products can be developed, particularly in area where wood is rare and expensive. Agricultural biomass has to be developed in new boilers and not in already existing wood ones.

Barrier: *Examples of unsuccessful case block the development of new projects and create negative image of the sector for years.*

Possible solutions or recommendations: Necessity to develop and communicate on successful examples.

Barrier: *Standards and certification labels for agricultural biomass are not developed*

Possible solutions or recommendations: Labels for agricultural biomass are not clear. A certification linking a type a solid biomass with a type of boilers can be interesting (need of standard products). Nevertheless, the needed investment for the project developer to label its product at the beginning of its projects is an additional economic burden which can stop the project development.

Barrier: *The use of agricultural biomass for energy generation is not always profitable.*

Possible solutions or recommendations: It is not relevant to study only the energy sector. Chemical use of agricultural biomass can be a solution to use a part of the resource with a high economical value. Residues of this chemical transformation can be then used for energy purposes.

Barrier: *Equipment available for combustion is not always known in territory (numbers of boilers in areas)*

Possible solutions or recommendations: An inventory of the numbers of existing boilers and the regional scale is sometime realised but has to be done at a national level.

Barrier: *Vine stocks cannot be used, methods to separate iron and wood are not effective, concentration of metals, silica, solid in this biomass products.*

Possible solutions or recommendations: Working with complete sector and equipment manufacturers is needed to develop new solutions to use vine stocks.

Barrier: *Competitive uses are an important issue for agricultural biomass development*

Possible solutions or recommendations: The non-competitive use is organized with “biomass cells” in each region. This group of state representative analyses the supply chain of new big boilers and analyses the existing competitive use. They can block a project if needed.