




D27- SHORTENED FINAL REPORT



Intelligent Energy  **Europe**

1. INTRODUCTION

The project Probio has been focused on encouraging the integration between production and consumption in the biodiesel supply chain in EU countries. This has been achieved by means of a three-pronged strategy based on the development of a concrete new market in the participant regions, promotion and training actions aimed at strengthening the weak points in the biodiesel supply chain.

To achieve these objectives, the project carried out in line with four strategic objectives:

- Improvement of raw material supply availability to the biodiesel plants.
- Supporting training initiatives for farmers and agricultural sector workers.
- New market initiatives concerning biodiesel use.
- Promotion of the final consumption of biodiesel among general public and specific sectors related to transport.

The main results obtained during the project are the following:

- Establishment of a **solid partnership** formed by the involved partners, which showed their commitment with the objectives of the project through a internal Consortium Agreement signed by the representatives of all these organizations during the kick-off meeting of the Project. The relationships between the different partners are excellent and they have been embodied in six transnational meetings celebrated in Burgos (Spain), Avila (Spain), Huelva (Spain), Pomurje (Slovenia) and Pescara (Italy).
- Establishment of **local “Expert Panels”** as internal bodies of the Project in the five participant areas, integrated by all relevant experts related to biodiesel: local authorities, energy agencies, associations and professionals (farmers, petrol stations, biofuel producers and distributors, drivers, consumers...). Their technical expertise enables the effective and correct execution of the different activities of the Project. Moreover, these “Expert Panels” act as meeting points for the different local actors of biodiesel supply chain.
- **Analysis of the present day situation** of biodiesel supply chain in participant areas. This analysis includes a comparative study of the current rate of biodiesel use in relation with total fuel used in transport sector and an analysis of all kind of barriers (technical, economic, legal and social) detected in the integration of the different links of biodiesel supply chain (production, distribution and consumption).
- Formulation of a **three-pronged strategy** on integration of raw material supply and final consumption based on three axes: training, market and promotion. This strategy, based on the results of the previous studies and analysis, has been formulated in the five participant areas through the exchange of experiences between the members of the local expert panels.
- An **in-depth analysis of the local raw material conditions** in each area. The local leaders have done exhaustive studies in order to know the main agriculture issues related to oilseeds energy crops (species, varieties, productivity, climate conditions, best agriculture practices, etc) as well as to analyze the local waste-oil collection networks.
- An intensive **promotion of local raw material** between farmers through the organization of different courses on energy crops aimed at agriculture professionals and the elaboration of information material like didactic text books and guides of best practices distributed between farmers in the participant areas and in other European countries.
- First contacts with local producers, distributors, city councils and potential consumers in order to prepare **commercial agreements and innovative legal measures** that will guarantee the increase of biodiesel consumption in the following years. 13 commercial contracts have been signed in the

participant regions and number and 342 legal measures have been prepared of which 255 have been approved.

- A **long awareness campaign** aimed at general public that has already started in different participant areas (itinerant exhibitions, promotion material, etc.).
- An intensive **communication and dissemination work**. The Project has been presented in several national and international events (congresses, fairs, exhibition, etc.), promotion material has been distributed also at European level and different specialized magazines and local Press have published several articles about the Project. Moreover, the main communication tool of the Project, the website www.probio-project.com, is available since April 2007. Most of the objectives established for communication and dissemination activities (number of articles published, presentations in events, etc.) have already been achieved during the Interim period.

The main lesson learnt in the Project are the following:

- **The media are very interested in these issues and partners have to take advance of this fact.** In all the participating regions, media are very interested in the renewable fuels due to the increasing awareness of general public in a sustainable economy and environmental issues. In PROBIO project, partners took advance of this fact, giving press conferences about all relevant actions of the project. Partners published several articles about the project and concrete actions related to the project in specialized publications, but PROBIO had news in several daily publications in all the participating regions.
- **Improve the image of biodiesel.** The low quality that biodiesel is associated should be eliminated with the establishment and control of quality standards and awareness.
- **European commitment.** Continuous confusing information provided by Media and the proposals of the European Commission Environmental Bodies to review and reduce the European objectives for biofuels have made the situation difficult for biodiesel.

Activities and impact after end of the action

Partners are really satisfied with the results of the project. The participating regions have detected an increase of the use of biodiesel at the end of the project and it is foreseen that this trend will continue in medium and long term. This will contribute to a reduction of the contamination rate in the participating regions in a medium/long term and a more sustainable economies in the regions. It is expected that these results will go further after the end of the project.

The awareness campaigns launched in the participating regions have helped to make aware people of the advantages of biodiesel. Partners used mass media to disseminate the project and the advantages of biodiesel to reach general public. The permanent exhibits were an important tool to make aware general public.

Ten of biodiesel stations have been opened during the project, which will stay offering this renewable fuel after the project. This gives an idea of the success of PROBIO.

Since the itinerant exhibition has have a big amount of visitors, the awareness to the general public of the use and benefits of biodiesel will remain in this public after the project. Also, because of the efforts made in the participating provinces in order to train professional in the energy crops aimed to farmers, it is foreseen a high job creation in a medium term,

The biodiesel point card system, will have had a big impact in the biodiesel consumption, since drivers who never have used biodiesel before have become aware of the benefit of this kind of fuel.

The market registered an expansion in the participating regions. The following actions have contributed to this result:

- ✓ Creation of grounds conditions for the easier application of the EU Directives, by means of the establishment and enactment of local ordinances about the use of biodiesel in the participating regions. Despite of the slowness of public administrations to enact new normative, PROBIO partners have reached agreements in their respective regions.
- ✓ Establishment of commercial contracts will allow the development of biodiesel use in the different regions.

2. THE PROJECT CONSORTIUM

The Project consortium is made up of various energy agencies and local administrations which act as local Project leaders (Agencia Provincial de la Energía de Burgos [Provincial Energy Agency of Burgos], Agencia Provincial de la Energía de Ávila [Provincial Energy Agency of Ávila], Diputación Provincial de Huelva [Regional Government of Huelva], Razvojna Agencija Sinergija and Regione Abruzzo/ARAEN), as well as an Italian university and a Slovenian university (University of Teramo and University of Maribor), which are responsible for leading the energy crop studies and courses in their regions, and the Centre for Business and Innovation of Burgos, which leads the Project communication and dissemination activities. As the general Project coordinator, the Agencia Provincial de la Energía de Burgos leads the general management of the Project. In order to properly carry out the Project activities and appropriately plan said activities, the partners are equipped with coordination and management tools and plans and periodically attend transnational meetings to define biannual lines of action.

All the partners have participated actively in the management task and co-ordination activities but Agencia Provincial de la Energía de Burgos, as Project coordinator, is obviously taking the role of lead partner. The most important tool used by the partners in these activities is the **Coordination, Management and Evaluation Plan**, which main objectives are:

- Outline the Project's principal goals and characteristics
- Identify the current partners and the concrete staff people who have intervened in the decision making and execution process
- Offer an overview of the approved budget
- Present a guide for the partners of projects activities along with their start/end date and the scheduled products
- Post the proposed activities calendar
- State the individual pre-assigned tasks, overall per/hr work load, corresponding budget and its category breakdown
- Serve as the negotiation ground for the proposed project's milestones

3. ACHIEVEMENTS OF THE PROJECT

In accordance with the Contract established between the Project partners and the European Commission, the activities carried out during the first half of the Project focused on the analysis of the current biodiesel situation, the study of the possibilities of obtaining local raw materials and communication and dissemination activities. The following are the primary actions which have been undertaken, broken down by work packages:

WP1. COORDINATION, MANAGEMENT AND EVALUATION

Coordination and management tasks have been assumed by the coordinator of the Project since all the partners agreed on not subcontracting external assistance for WP1.

General coordination activities during the reporting period can be summarized in:

- Establishment of a Consortium highly involved with the objectives of the Project
- Elaboration, distribution and continuous updating of the Coordination, Management and Evaluation Plan as an useful tool to organize partners' calendars, distribute budgets and implement activities
- Holding of six transnational meetings between the partners of the Project: the kick-off meeting (Burgos, March 2007), the second meeting (Pescara, July 2007), the third meeting (Huelva, January 2008), the fourth meeting (Ávila, June 2008), the fifth meeting (Pomurje, January 2009) and the last meeting (Burgos, June 2009) in which technical and financial aspects of the Project were discussed.
- Contacts with other related projects (PROBIODIESEL, BioDieNet, Bio-Nett, BIONIC) and organizations (DG ENTR, Acciona Biocombustibles, Agriculture Institutes, European universities, local authorities, etc.)
- Elaboration and delivery of the Progress Report and the Interim Technical and Financial Report.

WP2. ANALYSIS OF THE PRESENT DAY LEGAL, TECHNICAL AND MARKET BARRIERS

The main objective of this WP was doing an analysis of the current rate of integration in the biodiesel supply chain and its potential in participant areas (studying the current consumption rates and the main barriers detected in the development of the biodiesel supply chain) and formulating a three-pronged strategy based on market initiatives, training activities and promotion in order to overcome the detected barriers. WP2, leaded by Sinergija, was the first work package in being successfully concluded (months 3 to 9) although with a bit delay of some weeks (it was planned to finish in month 8 but due to summer holidays the last task was slightly delayed).

The main activities carried out in the framework of WP2 were the following:

- Establishment of local "Expert Panels"
- Comparative study of the current rate of biodiesel use.
- Analysis of barriers.
- Formulation of a three-pronged strategy.

WP3. IMPROVEMENT OF THE RAW MATERIAL SUPPLY TO BIODIESEL PLANTS

The main purpose of this WP is the analysis of the current situation with raw material in the biodiesel supply chain and the improvement of local raw material supply to biodiesel plants, the tasks of WP3 are directly related to agriculture sector (studies and courses aimed to farmers) and to the waste-oil collection networks (energy crops and waste-oil are the two types of raw material supplied in the participant countries). The participant universities (University of Maribor, Slovenia, and University of Teramo, Italy), by means of their Faculties of Agriculture, act as lead partners in this WP, although it's University of Maribor which has taken the role of the general leader. These Universities are the partners in charge of developing the main tasks in their respective regions (Pomurje and Abruzzo) and they give to the Spanish partners the guidelines for these tasks (there are not Spanish universities involved in the Project). The partner University of Maribor edited the *Guide of best practices* as a complementary material for farmers, a general document presented as a leaflet that includes the main results of the Comparative Study of the

Current Cultivation Practices and Energy Crops. This documents aims to be a general guide for farmers containing a general summary of the Study stressing sunflower, oilseed rape and soya. The development of WP3 hasn't been easy because of the international crisis of biofuels and the high scepticism of agriculture community about energy crops.

The main activities carried out in the framework of WP3 were the following:

- Comparative study of the current cultivation practices and energy crops.
- Training courses for farmers.

COURSE	DATE	PLACE	NUMBER OF ATTENDANTS	TAUGHT BY
BURGOS PROVINCE (SPAIN)	6 – 7 May 2008	Melgar de Fernamental (Burgos)	23	ITAGRA.CT
ÁVILA PROVINCE (SPAIN)	5 – 6 June 2008	Arévalo (Ávila)	32	ITAGRA.CT
HUELVA PROVINCE (SPAIN)	19 – 22 May 2008	Lepe (Huelva)	22	ADESVÁ
MARIBOR (SLOVENIA)	23 – 24 June 2008	Maribor	32	University of Maribor
ABRUZZO (ITALY)	31 May 2008 14 July 2008	Teramo	36	University of Teramo
BURGOS PROVINCE (SPAIN)	9 – 10 Sept 2008	Briviesca (Burgos)	14	ITAGRA.CT
ÁVILA PROVINCE (SPAIN)	2 – 3 Oct 2008	Muñana (Avila)	38	ITAGRA.CT
HUELVA PROVINCE (SPAIN)	05-feb-09	Trigueros (Huelva)	64	Agencia Provincial de la Energía de Huelva

- Analysis the waste-oil collection network.

WP4. SET UP AND ENACT INNOVATIVE MARKET INITIATIVES

This WP, led by Regione Abruzzo/ARAEN, is aimed at promoting new market initiatives and agreements at local level. It is being done by the local leaders with the support of the rest of partners. Local leaders (AGENBUR, APEA, Dip.Huelva, Sinergija and Regione Abruzzo) are continuously in touch with some local authorities, biodiesel producers, distributors and petrol stations and have started the preparation of commercial agreements and specific legal measures. The main activities carried out in the framework of WP4 are focused on creating favourable legal and market conditions to facilitate the introduction of biodiesel in transport sector. Nevertheless, the continuous confusing information about biofuels negative consequences, the possible review of European objectives for biofuels and the international crisis of agriculture and food is making the development of these tasks very difficult. These activities are the following:

- Commercial agreements between municipalities and biodiesel distributors.
- Adjustment, adoption and enactment of specific legal measures.
- Commercial contracts between large consumers and distributors.
- Dissemination Plan to promote the use of micro-installations

WP5. PUBLIC AWARENESS CAMPAIGN

WP5 is aimed at overcoming the awareness barriers widely extended amongst the general public. Taking into account the increasing bad reputation of biofuels and the scepticism of general public because of the international situation, this is a key objective for the Project. This WP is led by APEA, but the rest of local leaders (AGENBUR, Dip.Huelva, Sinergija and Regione Abruzzo/ARAEN) are in charge of the

development of local public awareness campaigns in their respective areas. Moreover, it is being performed in close cooperation with the rest of partners (both universities and CEEI-Burgos, local authorities, Expert Panels members and other local actors).

The main activities carried out in the framework of WP5 are the following:

- Creation of biodiesel and transport exhibition.
- Development of a “biodiesel points card”
- General promotion of biodiesel.

WP6. COMMUNICATION AND DISSEMINATION

In order to carry out a well prepared communication plan and achieve a high dissemination level of the Project’s activities, the partner which leads WP6 is CEEI-Burgos, a BIC Center with extensive experience in dissemination activities. AGENBUR and CEEI-Burgos have made an intensive communication and dissemination work during the the Project, always in close cooperation with the rest of partners, which have carried out several dissemination activities at national level. The main activities carried out in the framework of WP6 are the following:

- Dissemination and Communication Plan.
- Web page of the Project.
- Bulletin publications.
- Articles and conferences appearances.
- Information booklets and promotional material.

Some of the most important events are the following:

- European Congress “Avila Energy” (Barco de Ávila, Spain, April 2007)
- XV European Biomasa Conference and Exhibition (Berlin, Germany, May 2007)
- International Fair of Agriculture and Food (Gornja Radgona, Slovenia, September 2007)
- Expobioenergía International Fair (Valladolid, Spain, October 2007 and October 2008)
- Ecomondo International Fair (Rimini, Italy, November 2007)
- European Sustainable Energy Week (Sevilla, Spain, January 2008)
- Spanish National IEE Info Day (Sevilla, Spain, March 2008)
- Energy sustainable supply of the big farms (Gornja Radgona, Slovenia, August 2008)
- Universal Fair of Zaragoza in Renewable Energies Stand (Zaragoza, Spain, August 2008)
- Fair of companies that works in engineering and big project and events (Montesilvano, Italy, October 2008)
- Sustexpo International expo on renewables energies (Ianciano, Italy, November 2008)
- Sustainable Energy Week (Brussels, February 2009)
- Renewable energy sources and rational use of energy for Slovenia till 2030 (Slovenian Parliament, March 2009)

Probio Project has also been awarded with one of the prestigious **prizes EccoInnova 2009**, for the promotion of the development of biodiesel in the province of Burgos, Creating a local market structure more cohesive and integrated in the supply chain, aligning the objectives of producers, distributors and consumers. The prize has been collected by AGENBUR in Valladolid on 29th June.



WP7. EUROPEAN COMMON DISSEMINATION ACTIVITIES

La Agencia Provincial de la Energía de Burgos, as the Project leader, has contributed to the European dissemination activities of the Directorate-General for Energy and Transport and the EACI by providing these bodies with the necessary promotional material.

Furthermore, the PROBIO Project has received the membership certificate for the European Commission "Sustainable Energy Europe" Campaign.

Finally, PROBIO Project is member of the *Biofuel-Cities initiative*, a European partnership supported by the VI Research Framework Programme of the European Commission (www.biofuel-cities.eu) which aims to support biofuels stakeholders through information, events and publications.

Review of impact of the action

Performance indicators	Quantification of success	Related WP and/or deliverable
OVERALL INDICATORS OF THE PROJECT		
PI1. 5.000 entries in the project Web Site	9.845	WP6 D24
PI2. Increase the biodiesel Consumption up to 4-5% in 2010		ALL
INDICATORS OF THE PROJECT PER PARTICIPATING REGIONS		
PI3. 3 Comercial contracts signed Accepted	Burgos: 7 Huelva: 0 Avila: 2 Pomurje: 4 Abruzzo: 0	WP4 D13, D14, D15
PI4. 3 Tax cuts proposal modified/prepared	Burgos: 25 Huelva: 79 Avila: 248 Pomurje: 5 Abruzzo: ??	WP3 D13
PI5. 20 farmers attending to courses	Burgos: 37 Huelva: 86 Avila: 70 Pomurje: 32 Abruzzo: 36	WP3 D10
PI6. 500 attendants to the exhibition	Burgos: 20.273 Huelva: 7.000 Avila: 15.075 Pomurje: >100.000 Abruzzo: ??	WP5 D18
PI7. 500 users of the biodiesel Point Card	Burgos: 408 Huelva: ?? Avila: ?? Pomurje: ?? Abruzzo: 0	WP5 D22
PI8. 5 Biodiesel Stations stablished	Burgos: 6 Huelva: 1 Avila: 3 Pomurje: 0 Abruzzo: 0	WP4
PI9. Increase the biodiesel consumption up to 4-5% in 2010	Burgos: 206% Huelva: ?? Avila: ?? Pomurje:?? Abruzzo: 0	ALL
PI 10. Increase the rate of arable land dedicated to energy crops by 4-5 times in 2010	Burgos: 0 Huelva: ?? Avila: ?? Pomurje:?? Abruzzo: ??	WP3

Success stories

- Inauguration of Biodiesel Stations in Burgos:* In Burgos Province, led by Agenbur, every time a biodiesel station was inaugurated and/or promoted, a personality of the local authorities could be found in the act to support the use of this fuel. This helps to the impression of the general public.

- Ecoinnova Award 2009:* Burgos Provincial Energy Agency has won the Ecoinnova 2009 Award in its Provincial category for the Probio Project. for the PROBIO Project because it promotes the development of biodiesel in the province of Burgos, Creating a local market structure more cohesive and integrated in the supply chain, aligning the objectives of producers, distributors and consumers. The prize has been collected in Valladolid on 29th June. (*See other Deliverables*)

- Courses aimed to farmers:* These courses, which have taken place in the different participant regions, have been well received among the farmers. They show a big interest in the project and the organizers were asked for further information in energy crops. During the courses for farmers involved the introduction of new high yielding rapeseed varieties adapted to local pedological and ecological conditions and resistant to most important pests and diseases. The second problem often highlighted out by the farmers lies in the market prices of rapeseed which are mainly influenced by the wheat and maize market.