

Project Description

AQUATERRE promotes the cooperation between research centres, business and other stakeholders in Europe devoted to the research, development and application of biomass and bio-fuel production and valorisation. It aims for integration and unification of efforts and the exchange of knowledge and expertise between partners, to promote the creation of a network for improving biomass and waste reutilisation.

In this direction, **AQUATERRE** is focused on developing the following ideas:

- To provide the first European inventory of best aquatic and terrestrial biomass sources (amount, type, area, land available, etc.);
- Identification of synergic effects in biomass production in order to encourage the determination of best sources of biological feedstock and, at the same time, in order to establish recommendations for final users;
- Initiate the first on-line public European Biomass Database (EUBIDA) based on Geographical Information Systems (GIS);
- Set up a discussion paper and board with the European Commission to steer and advice future guidelines for farmers and policy makers;
- Spread of biomass use and improving the job creation and employment in rural areas.

AQUATERRE has a biomass expert consortium in order to coordinate and contribute with their expertise to the aim of identifying best sources and practices, gaps in knowledge and barriers for further growth in biomass production and valorisation. In addition, proposing strategies of implementation and steering further research activities and possible future new policies about biomass reutilisation.

Objectives

The **specific strategic objectives** of the **AQUATERRE** Co-ordination Action are:

- To encourage the establishment of permanent communication links between research centres, business and other stakeholders in Europe, promoting the know-how exchange and expertise in relation to biomass reutilisation;
- To develop good practices in order to get future EU sanctioned guidelines for farmers and policy makers to make the most of biomass sources and their possibilities;
- To disseminate and promote an improved biomass reutilization as a sustainable energy source option;
- To make available all data related to European biomass sources by merging existing information into a new free accessible data-base.

The **scientific and technological objectives** of the **AQUATERRE** Co-ordination Action are:

- To quantify the potential, and identify the best sources, of European biological feedstock for industrial use;
- To provide an overview of different tools within current research activities for i.e.:
 - Assessing the suitability of different types of land for different types of biomass/bio-fuel production
 - Assessing the implementation of new crops in potential countries
 - Assessing socio-economical impacts for exploiting new biomass sources in different environments
- To evaluate the sustainability of biomass and bio-fuel production with respect to their:
 - Availability;
 - Production;
 - Supply cost;
 - Environmental impacts.
- To identify the optimum scenario for biomass production under a Life Cycle Assessment perspective;
- To include in the study economic and environmental schemes;
- To identify the gaps in knowledge and barriers for cooperation of R&D activities in European scope, taking into account on-going research activities in biomass;
- To identify barriers for the best biomass sources implementation in the most favourable locations.

Activities

Mainly, **AQUATERRE** aims to make an inventory of existing biomass feedstock in Europe and quantify the potential and identify of the best ones. In addition, to study the best possibilities for implementing different biomass sources in different environments to improve their utilisation. Pursuing this target, literature and data survey and current research review will be carried out.

Furthermore, the scope of **AQUATERRE** consists also in mapping European biomass feedstock using different tools as Geographical Information Systems (GIS) in order to capture, store, analyze and manage data and associated attributes which are spatially referenced to the earth. This system will be integrated as a part of the website in order to provide visual and referenced information about biomass feedstock in Europe.

Additionally, **AQUATERRE** expert members will identify economic and environmental impacts schemes to define the optimum **Life Cycle Assessment** scenario (LCA). LCA is a standardized and structured method for calculating the environmental load of a product, process or activity throughout all its phases. The implementation of a new bio-product/bio-fuel in the market requires the analysis of economical, social and environmental aspects, with the objective of attaining enough information for the decision making progress. The contribution of a LCA study to this project can be framed in the identification of best sources of biomass feedstock as well as other agricultural waste for the sustainable obtaining of bio-fuels and other added value products.

Project Title

Integrated European Network for biomass and waste reutilisation for Bio-products (AQUATERRE)

Contract Number

212654

Duration

24 months

Global Project Cost

775 048,00 Euro

European Commission Contribution

Maximum contribution : 775.048 Euro

EUBIA Contribution

EUBIA as Task leader, with the help of the consortium, identifies the Biomass sources for industrial use to produce Bioenergy and maps the best biomass sources. EUBIA contributes to the Identification of the Environmental Impact schemes of the Optimum Life Cycle Assessment. Finally, EUBIA contributes to disseminate the results of this research by publication, organisation of conferences and writing a "white book".

Project Website

<http://www.aquaterre.info>

Participants

- 1 Akureyri University (UNAK), Iceland, Coordinator
- 2 European Forest Institute (EFI), European
- 3 Ente per le Nuove tecnologie, l'Energia e l'Ambiente (ENEA), Italy
- 4 North Wales Mouldings (NWM), UK
- 5 Procede Biomass BV (PRO), Netherlands
- 6 University of Santiago de Compostela (SCU), Spain
- 7 CENTIV CENTrum für Innovative Verfahrenstechnik GmbH (CENTIV), Germany
- 8 Plant Science Services GmbH (PSS), Germany
- 9 Lithuanian Energy Institute (LEI), Lithuania
- 10 Technical University of Cluj-Napoca (UTCN), Romania
- 11 Bulgarian Biomass Association. Plovdiv Agricultural University (BBA), Bulgaria
- 12 Technical University of Denmark, Institute of Environment and Resources (DTU), Denmark
- 13 Biozoon GmbH (BZN), Germany
- 14 European Biomass Industry Association (EUBIA), Belgium
- 15 The Ukrainian Scientific Research Institute of Ecological problems (USRIEP), Ukraine
- 16 Université of Kristianstad (HKR), Sweden
- 17 Chambre Régionale d'Agriculture du Centre (CRA), France
- 18 University of Natural Resources and Applied Life Sciences (BOKU), Austria



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