



Olive plantation residue in Spain

NEWS AND REPORTS

Within the SMIBIO project widespread dissemination and exploitation of results is achieved through promotional material, a website, publications, work-shops and conferences in Europe and Latin America.

The project website provides project news, information about events in the research field and available reports and specialist literature.

www.SMIBIO.net

NATIONAL FUNDING ORGANISATIONS

Support to SMIBIO is provided by the following funding organisations:

BMBF/DLR, Germany
COLCIENCIAS, Colombia
CONACYT, Mexico
CONICYT, Chile
FCT, Portugal
MINECO, Spain

SMIBIO PARTNERS

The SMIBIO consortium includes 10 partners from Latin America and Europe.

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|------------|-------------------------|
| Argentina: | INTA |
| Chile: | PUCV |
| Colombia: | UNC, COLSNACKS |
| Germany: | WIP |
| Mexico: | UNAM |
| Portugal: | LNEG, CADOVA, STRADALUX |
| Spain: | CIEMAT |



The SMIBIO Consortium at INTA in Buenos Aires; Argentina

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An EraNet-LAC project

SMIBIO
SMALL-SCALE
INTEGRATED
BIOREFINERIES

www.SMIBIO.net



The SMIBIO project is implemented in the framework of ERANet-LAC, a Network of the European Union (EU), Latin America and the Caribbean Countries (CELAC) co-funded by the European Commission within the 7th Framework Programme for Research and technology Development (FP7).

THE SMIBIO PROJECT

The SMIBIO project aims to find sustainable solutions to develop small-scale integrated biorefinery units capable of processing different kinds of biomass produced in short radius catchments rural and small urban areas, both in Europe and in CELAC (Community of Latin American and Caribbean States).

Compared to large-scale biorefineries small-scale biorefineries require a significantly lower investment (capital expenditure, CAPEX) and less biomass supply. Such concepts thus promise new opportunities for rural development and job creation. However, numerous challenges still hamper the commercial development of small-scale biorefineries.

CHALLENGES

Technological

The heterogeneity of the biomass to be converted into bio-products in a multi-feedstock biorefinery requires the use of different technological transformation processes. These are lignocellulose conversion to sugars and then conversion to biofuels and/or added value chemicals, and wet biomass to biogas through anaerobic digestion.

In the SMIBIO project these different (bio-)conversion processes are integrated into a unique modular small-scale biorefinery concept. These processes are capable of transforming dry and wet biomass residues by means of different process units and unit operations to produce a vast array of biomaterials and bio-products maximizing the use of resources and energy efficiency.

Numerous technological challenges are addressed such as optimal fractionation and separation of lignocellulose, development of improved bio-catalysts, production of high added value bio-fertilizers, as well as implementation of smart solutions for near-zero waste and enhanced output/input energy ratio.

Strategic

An important challenge addressed in this project is to determine how the new biorefinery can be integrated into existing agro-industrial and agro-food processing value chains.



Feedstock supply at biorefinery in Puertollano, Spain

The SMIBIO project proposes highly innovative measures to merge the production of bio-based products and biomaterials into agro-food chains to achieve a win-win situation.

Business Cases

Altogether six business cases are elaborated within the SMIBIO project in Europe and in Latin America based on locally available sustainable feedstock.

In Europe case studies are conducted in Germany, Portugal and Spain. In Latin America case studies are located in Chile, Colombia and Mexico. The case studies are developed in close cooperation with the following local stakeholders:

Bioenergy Region Straubing-Bogen from Germany, CADOVA and STRADALUX from Portugal, INTA, Bio4 and Bioelectrica from Argentina, IVICAM from Spain and COLSNACKS from Colombia.

These local stakeholders ensure that the different actors' interests as well as perceived risks are identified and addressed. Thus the benefits of the new bio-based economy are maximized.



1st SMIBIO Workshop in Buenos Aires, Argentina

Within the SMIBIO project several workshops are planned, in which stakeholders of the biorefineries sector can get in touch with experts and learn about the latest research results.