



Fostering sustainable feedstock production for advanced biofuels on underutilised land in Europe



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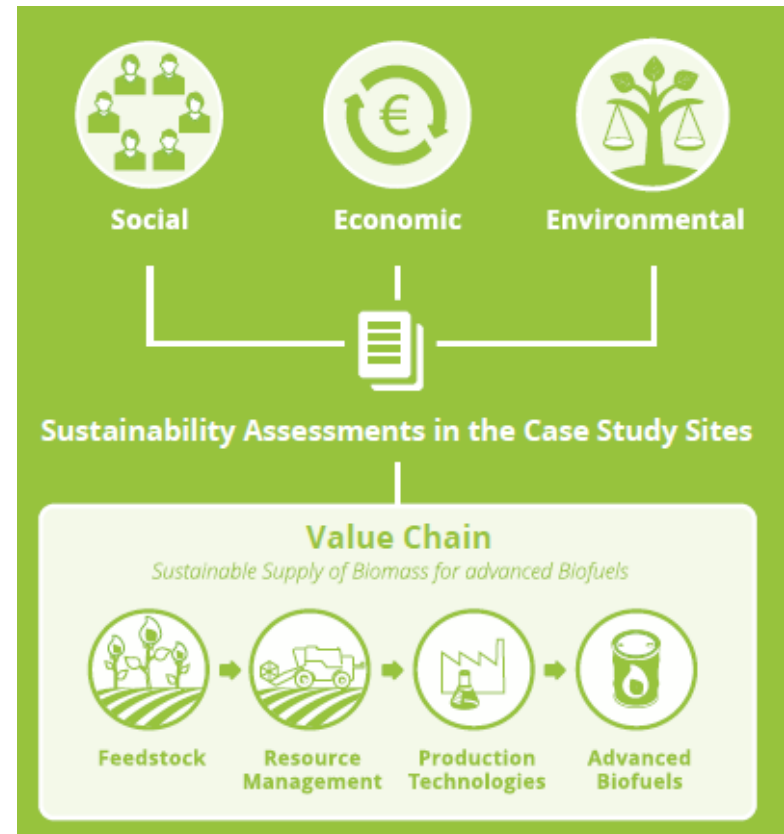
Project idea

Assess the viability of using underutilised land (contaminated, abandoned, marginal, fallow land etc.) for sustainable bioenergy feedstock production

Develop a strategy for building up competitive and sustainable local supply chains

No effect on the supply of food and feed

No interference with land used for recreational and conservation purposes



Objectives

Identify social, economic, environmental and governance-related opportunities and challenges

Evaluate agronomic and techno-economic potential of the selected bioenergy value chains

Assess environmental, social and economic sustainability

Analyse economic and non-economic barriers to the market uptake

Develop strategies to remove the barriers

Encourage European farmers to produce sustainable biomass feedstock

Build capacity of stakeholders for setting up sustainable bioenergy supply chains



Selected case studies

CASE 1

ITALY

Sulcis, Portoscuso

Contaminated land from industrial activities

22,000 ha



CASE 2

UKRAINE

South of Kiev

Underutilised marginal agricultural land

10,000 ha



CASE 3

GERMANY

Metropolis region
Berlin & Brandenburg

Lignite mining & sewage irrigation fields

25,000 ha



Outreach countries: Romania, Poland, Hungary, UK and Ireland



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Sustainability

Reference tool: GBEP Sustainability Indicators for Bioenergy

Development of a tailored set of sustainability indicators for bioenergy based on the specific conditions of each of the case study sites

Compilation of existing environmental, social and economic data and data gaps analysis

Measurement of the set of sustainability indicators for bioenergy in the case study sites



Challenges

- ✓ Reliable data on underutilised lands
- ✓ Little awareness regarding the advantages of using underutilised lands for RES projects
- ✓ Lack of local strategies regarding RES development and valorization of underutilised lands
- ✓ Legal and administrative procedures for getting necessary permits
- ✓ Available investments for new projects



Added value of FORBIO

- ✓ Data collection via agronomic and techno-economic feasibility studies in Italy, Germany and Ukraine (Agronomic reports available by December 2016)
- ✓ Sustainability assessments
- ✓ Knowledge transfer, capacity building actions (trainings, study tours, webinars)
- ✓ Roadmaps for the removal of the main economic and non-economic barriers
- ✓ Sharing best practices which allow the most sustainable and energy efficient use bio-resources
- ✓ Mainstreaming new opportunities on the local level



Results so far in FORBIO

- ✓ Preparation of Agronomic Feasibility Study for Italy
- ✓ Preparation of Agronomic Feasibility Study for Germany
- ✓ Preparation of Agronomic Feasibility Study for Ukraine
- ✓ Preparation of Technical and Economic Feasibility Study for Italy
- ✓ Preparation of Technical and Economic Feasibility Study for Germany
- ✓ Preparation of Technical and Economic Feasibility Study for Ukraine



Results so far in FORBIO

- ✓ Report on best practices for bioenergy policy, regulations and support schemes
- ✓ Preparation of dissemination and informational materials, participation in related events and stakeholder consultation
- ✓ Online media presence, Web2.0, social media activity



Results so far in FORBIO

✓ Italy case study

In Italy, 22.000 ha Sulcis area in Sardinia were identified for the case study. The area used to have intensive industrial activities and so far, no restoration measures were implemented here. In bits of this land agricultural cultivation is forbidden due to high levels of contamination. The areas experienced de-industrialization and abandonment of industrial production.

Sustainable biomass feedstock production could be a solution for the restoration of abandoned areas. Arundo Donax was identified as potential feedstock for second generation bioethanol production.



Results so far in FORBIO

✓ Germany case study

In Germany reclamation sites of lignite mining in in the Eastern German Lignite District (Lusatia, South Brandenburg and North-East Saxonian Lowlands) and former sewage irrigation fields in the Federal States Berlin, Brandenburg, and Saxony were identified as target areas.

Reclamation sites of about 15.000 ha are designated for agricultural land use and are suitable for the cultivation of conventional energy crops. Sewage irrigation fields of more than 10.000 ha are designated for phytoremediation through the cultivation of special undemanding energy crops and woody biomass species. The case study areas are scattered, which creates a challenge for economic biomass feedstock production.



Results so far in FORBIO

✓ Ukraine case study

In Ukraine about 4 million ha are under the status of set-aside land. 10% thereof (400.000 ha) could be used to produce advanced biofuels from willow and the rest could be used to produce solid biofuels and biogas.

The case study area (2.000 ha) is in the region of Kyiv, Ivankiv municipality.



Project meetings with stakeholders in FORBIO

- ✓ Stakeholder meeting in Sardinia, Italy (12-14 October 2016)
- ✓ Stakeholder info day and study tour in Finsterwalde, Germany (5-7 September 2017)
- ✓ Stakeholder info-day and study tour in Kyev, Ukraine (19-21 September 2017)



Thank you for your attention!

www.forbio-project.eu



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