What is marginal land (MagL)?

Marginal Land (MagL) is been defined by Jens Dauber (DAUBER et al. 2012) as a land on which cost-effective food and feed production is not possible under certain given site conditions. According to the SEEMLA approach, MagL can primarily be defined as an intersection of abandoned agricultural land, degraded land, reclaimed land, and wasteland.

Abandoned agricultural land was previously used for agricultural crop production or as pasture but has been abandoned and not converted to forest or urban areas.

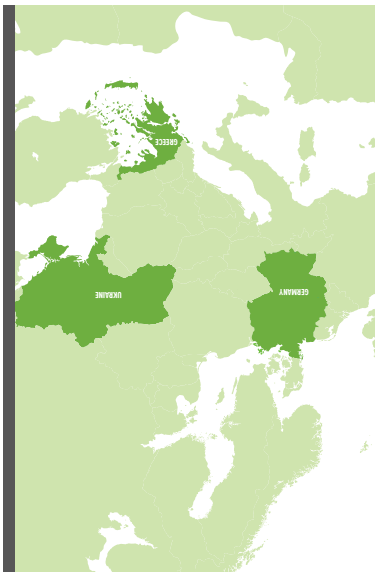
Degraded land has experienced a long-term loss of ecosystem functions and services caused by disturbances from which the system cannot recover unaided.

Reclaimed land enfolds post mining areas and land previously used for industrial purposes or certain commercial uses.

Wasteland is characterized by natural physical and biological conditions that are *per se* unfavorable for land-associated human activities.

Pilot Case Sites

The SEEMLA approach will be developed in the following European regions: Lusatia, in Germany, East Macedonia and Thrace, in Greece, as well as Vinnitsa, Poltava Volyn and Lviv in Ukraine. Proposals and feedback from regional stakeholders will be considered to refine the approach and to increase awareness of local supply chain actors. Main factors that will be taken into account are sustainability parameters, biomass productivity, economic balance, technical and financial resources for biomass exploitation, plant characteristics, and accessibility.



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Partner

Project coordinator

SeeLa

Sustainable exploitation of biomass for bioenergy from marginal lands in Europe

The SEEMLA Project

The main objective of the H2020 funded EU project SEEMLA (acronym for "Sustainable exploitation of biomass for bioenergy from marginal lands") is the establishment of suitable innovative land-use strategies for a sustainable production of plant-based energy on marginal lands while improving general ecosystem services. The use of marginal lands (MagL) could contribute to the mitigation of the fast growing competition between traditional food production and production of renewable bio-resources on arable lands.

Hence, SEEMLA will involve farmers and foresters directly to the process, in order to minimize conflict potentials with traditional agriculture, and will contribute to building up small-scale supply chains for biomass local sites.

An essential part of the project is ensuring the environmental and socio-economic sustainability of the foreseen actions: impacts on biodiversity, fauna, flora, soil and water will be analyzed by a life cycle assessment (LCA), as well as strategies, policy guidelines and handbooks will be elaborated.

OBJECTIVES

SEEMLA aims to assess the availability and suitability of MagL as alternative production sites for renewable resources in order to mitigate existing and potentially increasing conflicts between food production and nature conservation.

The identified MagL will be classified in order to develop specific land use options for different types of sites.

Political or administratively motivated restrictions to use MagL in the framework of an agri-environment scheme or as a mechanism to reduce food production, spacial planning or to safeguard socio-ecological developments (such as GHG savings, biodiversity etc.) will be assessed.

A set of specific indicators will be developed and implemented for assessing potentials for biomass production at MagL as well as ecosystem services provided like GHG savings or biodiversity by marginal sites and their valorisation due to land-use systems.

The project approach will be applied in 4 pilot areas, representing South, Central and Eastern Europe, in order to test the effectiveness of the methodology.

Bioenergy in Europe

Bioenergy plays a key role in future EU energy strategies, providing an important contribution in the long-term objective goal to develop a competitive, resource efficient and low carbon economy by 2050. In the European Commission's Roadmap 2050 and in accordance with Directive 2015/1513/EC, the European Union is committed to reduce GHG to 80–95% below 1990 levels by 2050 and to deliver a decarbonisation objective while ensuring security of energy supply and competitiveness at the same time. In compliance with this strategy, SEEMLA will design recommendations for a modified policy and suitable measures that aim at supporting investment in biomass production and conversion processes matching the sustainable production of biomass with socio-economic and environmental impacts.

Increasing the use of biomass in the EU can help diversify Europe's energy supply, creating growth and jobs, and lowering greenhouse gas emissions

The Renewable Energy Directive sets rules for the EU to achieve its 20% renewables target by 2020

The transition to a low-carbon society will bring health benefits and will make countries less dependent on imports of oil and gas