



*Sustainable exploitation of biomass
for bioenergy from marginal lands*

SEEMLA Newsletter - July 2016

SEEMLA PROJECT AT A GLANCE

The H2020 funded project SEEMLA aims at the sustainable exploitation of biomass production for bioenergy on marginal lands (MagL) in Europe. With this newsletter, we would like to introduce this young project that started in January 2016, its multinational consortium, with partners from Greece, Italy, Ukraine and Germany, its objectives and goals.

Marginal lands are often man-induced degraded sites, eroded or poor in organic matter content, unprofitable and not suitable for cultivation of crops for food production, or naturally unfavorable sites, e.g. salt-affected, wet, shallow, vulnerable or acidic soils. Moreover, also former or recultivated industrial sites are marginal lands. Although such underutilized sites may show a low potential with regard to soil fertility and high yields, they can offer a higher potential for biomass production for bioenergy.

The SEEMLA approach is focusing on MagL sites and also includes sustainability - economic, environmental, social - aspects, which will be evaluated by conducting life cycle assessment (LCA). Existing legislation on regional and national level of the partner countries and the EU-28 level, e.g. NATURA 2000, as well as recent novelties in the EU policy framework, e.g. REDII will be considered.

In pilot case studies energy crops, i.e. woody and perennial biomass, including Poplar, Willow, or Miscanthus, are grown on selected, representative MagL sites. Data about soil characteristics, plant species, yields amongst other will be collected, analyzed, visualized in maps and thus incorporated to the SEEMLA approach. In active dialogues, the experience of national stakeholders and administrations besides of national and international experts will be considered.

With this project we are aiming at the long-term goals of the European Commission's Roadmap 2050, contributing to a reduction of greenhouse gas (GHG) emissions, to an EU wide environment protection legislation, taking the compartments soil, air and water into account, to a sustainable bioeconomy and society, and to networking between EU and non-EU partner countries. SEEMLA offers a promising approach on the recent bioenergy market and its future in a growing society.

On behalf of the SEEMLA consortium
Wibke Baumgarten
(FNR, SEEMLA Coordinator)

WHAT ARE 'MARGINAL LANDS' (MAGL)? By The Institute of Bioenergy Crops and Sugar Beet (IB&SB)

'Marginal' in its most common sense may be defined as not suitable for a non-profitable agricultural [food] production, or according to the FAO (2000) "land having limitations which in aggregate are severe for sustained application of a given use; [...] with inappropriate management, risks of irreversible degradation". Many agro-economists and bioenergy researcher have proposed the use of 'degraded', 'abandoned agricultural lands', and 'marginal', i.e. Wiegmann et al. (2008), Dauber et al. (2012), Kang et

al. (2013), Shortall (2013), or Miyake et al. (2015). Dale et al. (2010) identified the term 'marginal' as most commonly followed by 'degraded' lands, though in parallel with it widely used such terms as 'abandoned', 'idle', 'pasture', 'surplus agricultural land'. Thus, the majority of the scientific community identifies land as marginal linking them with a selective land use, and then may or may not relate them to soil quality. Among land categories defined as marginal are noted degraded, abandoned, reclaimed, natural wastelands. Categorizing and quantifying marginal lands for biomass cultivation is still underlying great uncertainties and requiring further studies. In the SEEMLA approach the definition of MagL as based on the theory of Dauber et al. (2012) is used and has been modified (**Figure 1**).

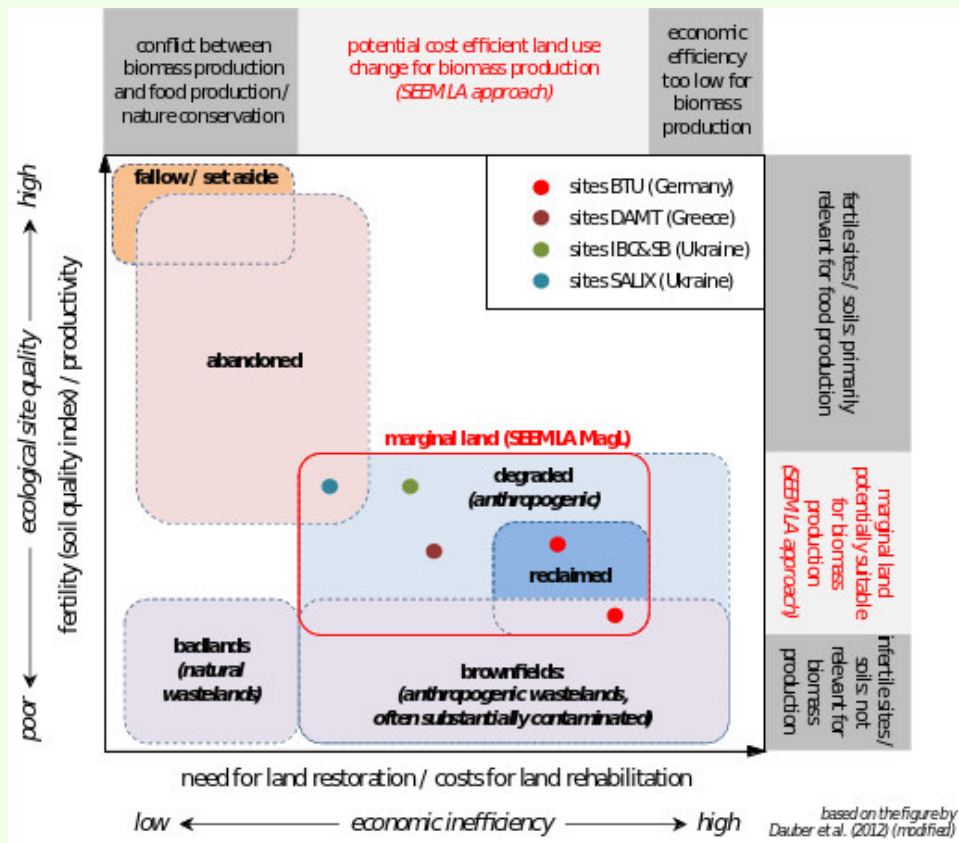


Figure 1. Classification scheme for marginal land in the SEEMLA approach context (developed by BTU-CS) modified after and adapted from Dauber et al. (2012).

Marginal land according to the definition of SEEMLA mainly includes sites which are affected by degradation processes, e.g. erosion, salinization, low organic carbon contents, in most cases triggered by anthropogenic impact. These sites exhibit clear economic inefficiencies with regard to agricultural usability and poor ecological site conditions, as indicated by obviously reduced low soil fertility. Marginal land in terms of SEEMLA does not include sites with potentially high productivity which were set aside or were temporarily abandoned due to certain socio-economic reasons. In addition, badlands with naturally extreme low soil fertility as well as most parts of non-recultivated lignite mines or anthropogenic wastelands are not within the focus of SEEMLA. The infertility of the latter sites is regarded as a clear obstacle for a profitable biomass production. Using this definition of marginal land, conflicts with other land use options, as well as with recent legislation regarding soil-water-atmosphere, nature and biodiversity, forestry or agriculture, should be minimized when marginal land is selected for sustainable biomass production for bioenergy in the future.

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NEWS

13 July 2016

Second SEEMLA project meeting took place in Germany on 22-23 June, 2016



The second SEEMLA project meeting was held on 22 and 23 June in Cottbus, Germany, hosted by the Brandenburg Technical University Cottbus-Senftenberg. On the first day of the internal event, the consortium discussed about the implementation of the actions and upcoming tasks. In particular, the discussion focused on a clear definition of MagL to be used for selecting sites generally considered as suitable for the SEEMLA approach. [READ ALL](#)

13 June, 2016

Greek Alternate Minister of Environment & Energy meets with the General Secretary of the Decentralised Administration of Macedonia Thrace



On 13 June, 2016 the Alternate Minister of Environment and Energy Yiannis Tsironis visited offices of the Decentralised Administration of Macedonia and Thrace (DAMT) in Thessaloniki. The Minister was welcomed by the General Secretary of DAMT, Nikita Fragkiskakis. A general meeting of the Alternate Minister and the General Secretary of DAMT with the directors of the Forest Service of the Decentralised Administration of Macedonia – Thrace was organized. Amongst other subjects Alternate Minister Yiannis Tsironis was informed by the General Secretary about the European Projects in which the Decentralised Administration of Macedonia and Thrace is involved (SEEMLA, LIFEENMON & FORESTMIT). With regard to SEEMLA, General Secretary Nikitas Fragkiskakis presented the project's consortium, objectives, expected results, upcoming tasks and future events. [READ ALL](#)

10 June 2016

A delegation from SEEMLA project participated at TEAM relay in Berlin



A team from the Agency for Renewable Resources (FNR), the project coordinator of SEEMLA, participated in the 17th 5x5 km TEAM relay in Berlin on 3rd June, 2016, besides two other FRN-teams. In total approximately 5,500 teams and 28,000 runners were taking part in the 3-day-event; 1530 teams were participating on the last day, including the FNR-SEEMLA-team. [READ ALL](#)

26 January 2016

SEEMLA project launched in Bruxelles at the end of January 2016

Has been launched in Bruxelles on January 26th, the project for the sustainable exploitation of biomass for bioenergy from marginal lands, whose acronym is SEEMLA. The Horizon 2020 funded project puts together eight partners from Germany, Ukraine, Greece and Italy and it will last until December 2018. Three years that will be focused on the reliable and sustainable exploitation of biomass from marginal lands (MagL), which are used neither for food nor feed production and are not posing an environmental threat. [READ ALL](#)

Project partners

Project coordinator



Brandenburg
University of Technology
Cottbus - Senftenberg



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