Marginal sites in for biomass production – case study sites in northern Greece. Obstacles and solutions

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In 2016, D.A.M.T, the Hellenic Forest Service for northern Greece (Macedonia and Thrace Regions), with the support of BTU Cottbus-Senftenberg Reseach Center Landscape Development and Mining Landscapes experts and following common standard protocols of the SEEMLA project, established three plots, in the northeastern part of Greece, in Rodopi prefecture (main forest species for biomass production: Pinus Nigra, Pinus Brutia and Robinia Pseudacacia). Nearby productive ecosystems (including forests etc.) or successional sites will be used as references for estimating the potentials of MagL. Further existing plantations of energy crops on similar MagL, will be used to assess potential crop yields.

These plots represent different types of marginal lands, they were specifically selected for SEEMLA purposes (reliable and sustainable exploitation of biomass) and are entirely different from other inventories, used for typical forest operations in Greece.

The main differences are:

- an intensively studied core area,
- Soil Quality Rating (SQR) method measurements,
- Soil Classification Maps - parameters estimation (land capability classes and landforms),
- tightly spaced plantations (1,5 m x 1,5 m),
- cropping systems,
- shorter rotations and
- the need for special forest management study.

The combination of these requirements with the soil conditions of the area has created significant issues on plots establishment and accurate recording of supply chain stages.

Main expected SEEMLA impacts are:

- provide a substantial amount of EU energy needs from marginal/degraded land,
- avoidance of land use conflicts by strengthening the ability to use MagL for biomass production for energy,
- reduction of EU-wide greenhouse gas,
- mitigation of conflicts regarding sustainability and biodiversity for the utilization of MagL for biomass production,
- growth of plantations of bioenergy carriers from MagL at competitive costs,
- expansion of economic opportunities for farmers, foresters and rural regions in general through biomass production on MagL and related processing activities,
- investments in new technologies and the design of new policy measures.