

# 987 - PILOT APPLICATIONS PROPOSAL FOR SUSTAINABLE WOODY BIOMASS SUPPLY CHAINS

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## ABSTRACT

The Region of Western Macedonia has a great potential of forest biomass but lacks in wood resources management and exploitation. **The present study identifies six pilot concepts based upon regional needs to be developed in order to raise awareness and to attract the attention of shareholders.** These pilot plans aim to identify concrete measures for wood mobilisation and to explain their applicability in different conditions.



## ANALYSIS OF PILOT PROJECTS

### 1. Biomass investor's toolkit

I) **supply side:** locate areas with adequate biomass potential and estimate the associated costs for biomass intermediary steps

II) **demand side:** identify end-users with an existing infrastructure for the utilization of procured biomass fuels and estimation of operational costs

III) **comparison and marketing:** coupling of bioenergy products to end-users, energy costs being calculated and compared to other energy alternatives.

### 2. Development of a traceability procedure for biomass energy chain

- define a protocol of reference, following CEN 15234: Solid biofuels – Fuel quality assurance, EU biofuel sustainability policy and independent certification schemes, like FSC or PEFC to trace the origin of wood biomass.

### 3. Guide for educating personnel in timber harvesting, safety and insurance

- educate timber harvesting operators with information needed related to appropriate mechanized harvesting methods and respective safety guidelines. Specific problems or needs, such as equipment setup and other relevant information needed for efficient harvesting along with information required regarding the safety and precaution measures

during harvesting activities will be addressed and presented.

### 4. Development of a guide/toolkit for the next generation forest management plans

- use of GIS tools, 3D landscape information, logistic model and economic evaluation of suggested actions. A “logical diagram” will be developed, along with appropriate GIS tools and a best practice example of a municipal forest. More accurate estimation of expected wood mass and improved cost/budget modeling is expected.

### 5. Logistical/Value-added Vignettes

- a suite of scenarios will be developed to cover different aspects of forest biomass exploitation. Each scenario will be presented by a preamble/motivation, a series of thematic maps output from a GIS system, an assessment of the economic potential and a conclusive part. All options will be studied, evaluated in financial terms, the recoverable woody biomass will be calculated.

### 6. Overview of options for utilization of biomass ashes

- promote different kinds of utilization options of biomass ash (fly ash or bottom ash from co-firing or stand-alone firing) to enhance the awareness of the value of biomass ash for various applications, to increase ash utilization and reduce costs, making ash utilization more favourable over disposal.

## CONCLUSIONS

Pilot applications were proposed based on the regional needs and will be evaluated based on criteria such as **public policy, capacity, environmental and social impacts, technology availability and operational considerations** both in the region which proposes the pilot application as in the region to be transferred. The applications/solutions will be demonstrated under new conditions such as different terrain, climate, soil and other structural conditions to relevant stakeholders of the countries involved.

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