

# ME 04 An integrated framework to assess spatial and related implications of increased implementation of biomass delivery chains

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## Context / Social problem

Though the global biomass potential is large, the bulk of this potential awaits active development. The actual volume of biomass supply will vary with the timing in adoption of efficient agricultural management rate of population growth and other trends. Also, changes in land use, land use management and sustainable production and integration of biomass production for energy (and biomaterials) need to be aligned with regional conditions. Therefore the selection and implementation of biomass production and utilisation chains (both regional and world market) is a regional issue.

## What do we know/not know?

At the regional level understanding about biomass potentials and biomass production and utilisation systems is less well developed. This is particularly true when a variety of sustainability criteria (with ecological, economic and social dimensions) need to be taken into account. Most studies focus on biomass potential but do not specify how to turn potentially available biomass into actually available biomass. Tapping into the national and regional potential is quite difficult. We suggest that the biomass potential can be mobilized if innovative regional biomass delivery chains are designed.

## What is being studied?

The overall objective of the ME04 research project is to develop an integrated framework to assess and analyse the spatial implications and related opportunities and consequences of an increased implementation of biomass

delivery chains for energy, biofuels and biochemicals at different geographical levels.

## What are the results, and who are they for?

- A design of sustainable regional biomass delivery chains and assessment of their spatial implications including their effects on land use, social and economic development, environment and landscape
- An integrated framework and related analysis tools in WP2 will identify and quantify uncertainties that result from competition for biomass or land, national and international developments and trends. It can be used to facilitate realistic designing, planning and incorporation at a regional level
- A strategic scenario analysis that will address the national and supranational developments that affect the performance, potential and impacts of biomass production. Scenarios will serve to determine the uncertainties, variability and potential choices that can be made when incorporating European and national agricultural policies, nature conservation, environmental standards, developments in the energy system and various markets for biomass conversion. 'Biomass maps' will be produced indicating the main land use changes to take place when implementing these chains at the national level
- Key to successful implementation is information and integration. This will be achieved through stakeholder involvement, viz a collaborative effort and interaction with stakeholders in a joint process

