Markets for woody biomass and wood-based energy around the Baltic Sea Region

- EFINORD coordinated project: 2013–2015
- Collaborating partners: METLA, SLU, UMB, Latvia University of Agriculture, Forest Research Institute in Poland, Aleksandras Stulginskis University, Lithuania, University of Hamburg, and the working group for renewable energy at NCM

Partners in Denmark, Estonia, and Russia not determined yet
Composition of renewable energy in European Union, 2011 (Data source: Eurostat)

- Wood and wood waste: 48%
- Hydro power: 16%
- Liquid biofuels: 9%
- Wind power: 9%
- Biogas: 6%
- Municipal solid waste: 5%
- Geothermal energy: 4%
- Solar energy: 4%
- Other: 0%
Bioenergy markets and policies in EU

– the Renewable Energy Directive of 2009 is driving the demand for biomass on a steep upward curve

– the new European Commission proposal for 2030 climate and energy goals for a competitive, secure and low-carbon EU economy = strong commitment to develop a long term policy framework

– market forces and policy decisions, two inter-connected driving factors
Wood based bioenergy in EU (2011)

- Fuel/fire wood from forests: 49%
- Solid by-products from forest industry: 17%
- Black liquor: 15%
- Other wood and wood waste: 20%
  (e.g. recycled wood)
Questions to be examined

- How will the markets for renewable energy develop in the Baltic Sea countries (BSCs)?

- Supply, demand, price and trade flows for wood biomass under alternative policies and future scenarios

- The competition for wood biomass across the BSCs, and among alternative uses (energy carriers, raw material forest industry)

- The resulting future role of forest biomass in the energy supply in the BSCs?
Users of forest industry products and wood based energy carriers (represented by demand functions)

Producers using wood biomass

Sawmills & Plywood production

Particleboard & fibreboard production

Pulp (and paper) production

Heat, power and biofuels production

Particleboard & fibreboard production

Pellet production

Forest resources Increment and drain of the growing stock

Biomass supply (supply of roundwood affected by price and growing stock, forest chips supply connected to roundwood harvests)

Production factors from other sectors (prices)

Demand for and supply of wood/forest biomass and products made of them in other BSCs and RoW
Some ideas about the model for the Baltic Sea region
Collaboration among involved partners

– METLA, SLU, UMB (responsible for model development)

– Partners in Latvia, Poland, Lithuania, Germany (country specific studies)

– Above partners jointly responsible for developing platform for data collection

– The working group for renewable energy at Nordic Council of Ministers (development of policy scenarios)
The seed money from Nordic Council of Ministers

– A prototype model is under test at UMB

– All the collaborating partners to sit together to
  • assess the prototype model
  • review the specific case studies to be run in different countries
  • initiate the formation of a common platform for data collection

– Thereafter: case studies in different countries and a number of reports, 1-2 more meeting(s), a comprehensive research proposal, a full scale comprehensive model