

Experience in the demo region of Rotenburg/Wümme (Germany)

Regional activities and co-operation

At the outset, the Main stage project was fortunate to have the opportunity to join an existing bioenergy network in the county of Rotenburg (Wümme). The bioenergy initiative here was founded in 2007 and focused on biogas and wood-based bioenergy. For the wood biomass sector, a working group was established, with stakeholders from private forestry, forestry professionals, environmental services, agrotechnical service contractors and regional planners. In the Extension stage project, results from Main stage were also disseminated to other regions outside the demo region of Rotenburg (Wümme).

The main activity, however, was the integration of recent research, carried out by the Northwest German Forest Research Institute, into the strategies that had been developed in the Main stage. Those new results referred to an exact assessment of the logging residues' potential, using parameters to be applied in the standing forests. The relevant formulas are now integrated into the standard forest inventory programme. Exact calculations for the potential, which can be expected in the next decade, are a crucial asset when attracting investment into wood biomass heat plants in the region. Previously, the only available rules of thumb came from Scandinavia. But these had been developed under forestry and management structures essentially different from those in the Rotenburg (Wümme) region.



The same research work also highlights the role of nutrient extraction through biomass utilization, especially when thin twigs and needles are removed from the site. Tree species behave quite differently in this respect. The second factor here relates to soil properties. Strategies for the use of biomass from logging residues must consider the

combination of species-specific parameters and the nutrient supply from the soil. On critical sites, wood ash recycling might alleviate this problem.

A central event was a conference with regional and national stakeholders, arranged in the Rotenburg (Wümme) county on 28 February 2013. The conference, with more than 70 participants, presented previous and current work of Bioenergy Promotion 2, the previously

mentioned new research results and the challenge of how to include them in future forestry biomass strategies, forest policy, certification systems and transfer to the forest owner through the extension service.

The German regional project manager used various opportunities to communicate project results in neighbouring regions within the federal state of Lower Saxony. The main opportunity to exchange experiences, however, was a joint Danish-German transfer initiative and a corresponding transfer workshop held in April 2013 in the region of Latgale (Latvia) (cf. in more detail chapter 5).

Results, challenges, future plans

Future plans and challenges now involve the integration of biomass estimation equations into the forest inventory system, which, as a consequence, has to be kept updated. It will be a political challenge to secure financing for this measure in future. Parallel to this, an interface will be developed by researchers, which will allow nutrient extraction parameters to be applied to the forest soil mapping system. A major challenge here is that a full site inventory must be carried out in Rotenburg (Wümme). Once again, funding for this measure is a matter of political priorities. Additionally, the option of wood ash recycling must be explored in detail, since current approaches from Scandinavia are not applicable in North Germany. This is because, unlike Sweden and Finland, clear-cut logging is not utilized, and the amount of wood ash returned to the forests is rather low for each single operation. This reveals a demand for new technological solutions that are financially feasible.

Tasks for the future have also been identified in the field of hedgerow management along public roads, as current approaches are not feasible in financial terms. The Chamber of Agriculture now forms part of a consortium for a new project, dealing with biomass from landscape maintenance, and if approved, Rotenburg (Wümme) will again be the demo region.