



## Key data:

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### Best Practices and Technologies to Develop Green Wastes and Residues as Raw Materials for Variant Utilization

## “Success through Cooperation”

October 12<sup>nd</sup>-13<sup>rd</sup>, 2010 - Schloss Hohenerxleben

The Region of Saxony-Anhalt invited regional and national representatives from business, academia, research, politics and government to the first international conference on biomass logistics entitled “Success through Cooperation: Combine strengths. Exploit potentials. Transfer knowledge.” at Hohenerxleben Castle on October 12 and 13, 2010 to exchange experiences and jointly discuss topics and contents of interregional collaboration.

As a renewable raw material, biomass is distinguished by a multitude of properties that promise to facilitate the implementation of regional, national and European objectives related to cutting the consumption of fossil fuels and achieving climate protection goals. An integrated view of ecological, economic and social aspects during the production, supply and utilization of biomass is essential if biomass is to fulfill the great expectations vested in it.

Producers, consumers and service providers are increasingly realizing that only economically and ecologically expedient logistics will enable them to safeguard competitiveness and create sustainable employment. Intensified utilization of biomass and the increasing importance of logistical factors are accompanied by a growing need for innovation, both regionally and interregionally. This is but one more reason why interregional cooperation between professionals and governments is increasingly becoming a success factor.

Therefore, the two-day international conference aimed to raise different regional European actors' awareness of the opportunities to intensify their utilization of biomass and the particular challenges of biomass logistics when implementing EU climate protection targets. During the conference, top speakers delivered presentations on regional and European activities, potentials for cooperation and means of financing as well as trends, research and technical challenges and practical experiences.

Providing information on select European regions and specific European networks, bodies and funding, the first day of the conference was geared toward representatives from politics and government as well as companies and research organizations.

Directed at practitioners and anyone else involved in the production of agricultural and forest biomass and the recovery of material and energy from biomass and their service providers as well as academics and researchers, the second day of the conference featured international experts speaking on the state of research and development, experiences in projects and practicable solutions as well as the prospects, market opportunities and options for future cooperation.

In addition, the conference furnished the roughly 100 attendees from eight European regions platform for the exchange of experiences, discussions and networking. The attractive setting of Hohenerxleben Castle and the supporting program brought interested experts and government officials together and created opportunities for one-on-one conversations in a pleasant atmosphere.

Regional partners from Saxony-Anhalt particularly jumped at the opportunity to be actively involved in the conference by providing informational materials, exhibiting posters a generally presenting the region in-depth.

The Magdeburg CCI, Saxony-Anhalt Forest Owners Association, the State Timber Advisory Council, the Renewable Raw Materials Liaison Office, the Altmark project region and many others imparted information on their own activities, interregional projects and specializations.

The response to the two-day conference underscored the importance the attending regions attach to biomass logistics as they strive to achieve European and regional goals for the recovery and utilization of renewable energies. These regions already have specific experiences and even complementary expertise in technical fields, which are significant prerequisites for the initiation of European projects.



All the attendees considered the cultivation of collaborative relationships with concrete objectives, projects and networks to be an imperative. The desire to continue such professional collaboration in the field of renewable energies/biomass logistics and organize similar future conferences for partner regions to discuss their collaborative activities was voiced repeatedly. The varying intensity of the regions' integration in networks and the new EU candidate regions' need to catch up were also stressed. The future intensification of activities in existing specialized networks desired will require intensive interaction with regional partners through disseminators with professional expertise in order to incorporate business issues in these networks and involve businesses in future projects.

# First Field Test: Harvesting, Sampling, Analysis



In May 2010 the Oldershausen HOFOS GmbH (GER) has started the first field test for the Best4VarioUse-Project on a test area of about 0.11 ha in the Eastern Harz Region (GER).

The area mainly consists of beeches that are 20 years old on an average. Due to regeneration processes the beeches have a diameter at breast height between 3 and 16 cm. Biomass residues are being accumulated during the creation of skidder trails (width: 6 m, length: 180 m) with motor and brush saws for forestry use.

The main objective of the field test is to find out, whether the harvesting process – including the transport to a storage area and the following woodchip production – has a positive contribution margin. After comparing effort and benefit the whole process could gain profit without taking the planning costs into account.

To determine relevant properties for biomass recovery in the field test, samples are taken und analyzed in the laboratory of the LUS GmbH (GER). Of particular interest are typical combustion properties (elementary analysis, calorific value, etc.), environmental parameters (heavy metals, etc.) and other recovery-related characteristics (sieve analysis, leaf proportion, content of bark, etc.).

Samples are taken from the full tree at the beginning of harvesting and from wood chips after further processing. The determination of environmentally relevant properties offers normal results. Further experiments show an increasing leaf proportion for the biomass.







Moreover, a very high proportion of fine particles is being identified in the wood chips. Both parameters are generally critical for recycling.

For further investigations of combustion related properties the wood chips and the final results of measurement are being delivered to Fraunhofer IFF, Magdeburg (GER). Before the combustion experiments can take place the woodchips have to be prepared carefully to achieve useful results. The material has to be dried at 103 °C in an oven, followed by air drying process at room temperature. After that the dry substance is being shred and sieved in order to get a proper particle size for the combustion testing plant.

In comparison to other woody biomasses the examined biomass material shows normal combustion performances and flue gas concentrations.

### Partners Description:



The SDAX-listed Pfleiderer Group is one of the worldwide leading manufacturers of engineered wood, surface finished products and laminate flooring. The company and its approximately 5,600 employees operates 22 plants in North America, Western and Eastern Europe. The company delivers its comprehensive range of core materials and surface-finished products to customers in over 80 countries.



Founded in 1945, nationalized in 1972 and then privatized again in 1990 as a family firm, LEHMANN Mascgienenbau GmbH engineers and manufactures a wide range of plants and machinery for both the commercial sector and research purposes. Lehmann holds a number of patents for innovative developments in environmental applications since 1992.



For more than fifteen years, Oldershausen Holz&Forstservice HOFOS GMBH has been providing Consulting and Management services to larger private forestry operations throughout all of Germany. Currently manages 15,000 ha of forest for twenty owners in Lower Saxony, Saxony-Anhalt, Thuringia and Hesse.



Aidima is a non-profit private research association of companies founded as an industry initiative in 1984 with the support of IMPIVA (the Valencian SME association). Aidima's research, development and innovation services include applied research to develop new materials, products and manufacturing processes and well as IT projects. Aidima also assists in the implementation of ISO 9000 quality assurance systems and prepares assessments of improvements of industrial and distribution logistics.

Future

events

events

events



16 to 18 of February

**INTERNATIONAL FAIR ECOFIRA.**  
Coinciding with EGETICA - EXPOENERGETICA

18 of February

- Seminar at ECOFIRA: Dissemination of BEST4VARIOUSE
- Consortium Meeting at Feria Valencia(Spain)
- Working Lunch with Spanish Biomass Companies

## Best4VarioUse German Steering Committee Meeting

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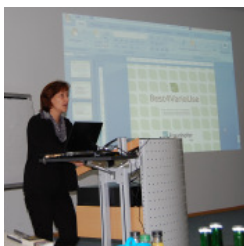


The involvement of stakeholders and the communication and dissemination of project information to an interested public is a major objective for the project consortium. To this end, the consortium invited policy, industry and research stakeholders in



the field of biomass to join separate Steering Committees in Germany and Spain. The 2010 meeting of the German Steering Committee was organized by the project coordinator, Fraunhofer IFF, on December 1, 2010 to keep the Committee members apprised of the project progress, to present preliminary results and to receive valuable external input for the final year of the Best4VarioUse project.

The invitation of Associated Partners which represent individual companies or representatives of related projects, such as the Interreg project RUBIRES, to the meeting further enhanced the application oriented focus of the meeting.



Project partners from Valencia and Germany presented the current state of the project's activities and demonstrated preliminary results to the stakeholders. The main aim of the consortium partners was to use these presentations to kick-start the discussions between the consortium members and the external stakeholders.

The Valencian partner AIDIMA presented its work on the establishment of a coherent Assessment System for Biomass wastes and residues in forestry and agriculture. Here, especially disparate data sets between the different countries led to difficulties to establish a System that is valid for both countries. The FCVRE presented its efforts in broadly disseminating project information on a regional but especially also

on an European level. In later discussions, this was identified by the Steering Committee as vital activities, which also have to address awareness raising with respect to the problems addressed by the project among stakeholders.

The German consortium partners put a focus on presenting information regarding the project's field tests. Here the emphasis was on laying the methodological groundwork for the field test planning as well as the planning process itself. Additionally the Partner LFB gave an impression on the execution of a specific field test, while the Partner HO-FOS presented implications from the evaluation of a completed field test.

In the ensuing discussion with the Steering Committee, five main points were identified as important issues, which should be further addressed by the consortium. These were:

- The availability of coherent information and data for planning measures.
- The characterization of biomass and their subsequent use.
- The mobilization of available biomass.
- The available technology for different measures and
- The evaluation of the first field tests, which were carried out in Germany.

Especially the availability of coherent planning information and data turned out to be a point, which not only increased the complexity of the Best4VarioUse project's activities but which often also proved to be obstacles in the daily work of the Steering Committee Members and the Associated Partners.

The Best4VarioUse consortium will take up the recommendations from the Steering Committee and the Associated Partners for its further activities in the final year of the project. Moreover, it will incorporate the identified priority areas and their implications in the final documentation of the project to give further recommendations on the improvement of the biomass residue supply chain and to promote an increased use of biomass wastes and residues as resource for material and energy use.

