ESF Research Conferences

Rapporteur Report

<table>
<thead>
<tr>
<th>Partnership:</th>
<th>ESF and COST supported by IUFRO and BFW</th>
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<tbody>
<tr>
<td>Conference Title:</td>
<td>Future role of bio-energy from tree biomass in Europe</td>
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<tr>
<td>Dates:</td>
<td>6-11 November 2011</td>
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<tr>
<td>Chair:</td>
<td>Niels Elers Koch - President of IUFRO;</td>
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<td></td>
<td>and Rolf Björheden - Skogforsk Uppsala, SE</td>
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<td></td>
<td>Elspeth MacRae - Scion, NZ</td>
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<td>Peter Mayer - BFW, AT</td>
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<td>Dominik Röser - Chair COST Action FP0902; METLA, FI</td>
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<td>Rapporteur:</td>
<td>Malgorzata Tkatchenko (ESF representative)</td>
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General Comments

Any general comments you might have concerning the conference, your role, the scientific area covered by this conference, etc.

The conference took place on the Europahaus Wien site located close to western limits of Vienna (Austria), from Sunday 6th (night) to Friday 11th (morning) of November 2011. It involved 57 participants from 34 countries (6 continents), presenting a total of 40 talks (18 invited talks among them) principally of about 30 minutes (including questions and discussions). The first day all the participants were invited to Klosterneuburg for listening of officials’ speeches and the visit of the heating power plant and the monastery. The importance that was given to this conference by the Austrian officials can be assessed by the presence and the talk given by the Austrian Minister of Agriculture and Forestry, the Austrian member of European Parliament, the Provincial Counselor for Agriculture of Lower Austria and the President of the Chamber of Agriculture of Burgenland. The President of IUFRO and Director of the Cost Office were there also.

The technical visit (power plant) and cultural visit (monastery) were very much appreciated by all the participants.

The scientific area covered by this conference: Availability of biomass, Biodiversity, landscape ecology and soil water quality, Supply chain and system evaluation, Forest biomass as feedstock for the energy and biorefinery sector.

The conference was very well structured, and this for following reasons:
- All the participants stayed during complete time of the conference
- The visit of electric plant the first day of the conference gave occasion to young participants to start discussions and ask questions from the beginning
- The established experts were very open to the explanations and knowledge transfer to early stage researchers
- There was some very trainer speeches
- Nearly all participants could present their research domain through speeches, posters, discussions
- The participants were asked to argue in interactive discussion whether to install or not bioenergy plant, this gave them the good understanding of decision making process in this type of negotiation.

The organization was very good; this localization apart from central part of Vienna was the guarantee of availability of participants. The reporter has very good and positive impression from this conference. It was very useful.
BUDGET
COST: 40000,00 EUR
IUFRO: 7170,00 EUR
TOTAL: 47170,00 EUR

Quality of Scientific Programme, Presentations and Discussion
Comments on the balance and scope of the scientific programme, the scientific quality of the presentations and discussions.

42% (in yellow in program below) of conference time was dedicated to discussions (lunch time excluded), that gave the opportunity to participants to really benefit from exchanges. The subject is timely in connection with EU engagement for 20% renewable energy share by 2020. The conference was supported by IUFRO and BFW and high scientific level of chair and vice chairs of this conference and of the chairs of sessions had principal influence on the quality of the established program and the quality of discussions.

Informal Networking and Exchange; Atmosphere
Was the schedule and the atmosphere conducive to an easy exchange of information? Was there time and space for an informal discussion? Were younger researchers integrated?

Nearly 10 hours in 3 days were dedicated to discussions, exchanging experiences and point of view and I would say even training given by experienced researchers to the young generation of researchers.

There have been many lively discussions, during the talks, the breaks and at the conclusion of each day. An informal atmosphere, favoured by the relatively small number of participants, has characterized the entire conference.

Balance of Participants
Was there an appropriate balance between young and senior participants? Was a balance of national groups and researchers from different (sub)fields achieved?

Age structure: more than half of the participants were in their early thirties. Gender repartition: out of 57 participants, 20 (35%) were women and 37 (65%) were men. Industry: there was one representative from industry (Semillas Montaraz, S.A.) Countries of work: The participants were from 34 different countries (listed in the table below together with number and gender of participants from each country). They represented six continents. There was large participation in discussions and The large majority of participants were speakers or/chairs (34 (32% of women) out of 54) and all others contributed to general exchange through the posters (31). Young researchers were very active (18 out of 31 authors of posters are less than 36 years old).

<table>
<thead>
<tr>
<th>SPEAKERS/PARTICIPANTS</th>
<th>Total</th>
<th>male</th>
<th>female</th>
<th>under 36</th>
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<tr>
<td>No. of Chairs/Speakers</td>
<td>34</td>
<td>23</td>
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<tr>
<td>No. of Participants</td>
<td>57</td>
<td>37</td>
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<td>No. of short talks</td>
<td>14</td>
<td>9</td>
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Outlook and Future Developments

Will new collaborations emerge from this conference? (How) could the conference outcomes be utilized further? Are there suitable (ESF) programmes or instruments to further the work of the conference?

All the strategy has been built and the roadmap for future issues has been assessed. The next step could be exchange of trainees for a long period stay.

Follow-up

What immediate and long term follow-up would benefit collaborations and dialogues that may have begun at the conference?

Immediate and long term follow up:
- Increased collaboration in order to help developing knowledge of each partner
- Discussion on a few new COST Action proposals
- There is a need to establish database to argue when dealing with media or/and policy makers
- Preparation of examples of practical cases to teach about the cases that educate, that warn or inspire
- There is the need to build the strategy of communication, the template will be provided with an example.

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<th>Female</th>
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Organisation and Infrastructure

Were venue, catering and accommodation appropriate for this conference? Were participants satisfied with the on-site administration and support?

The place of the conference was well chosen to promote the exchange and discussions. The organization was perfect, the accommodation appropriate. Everybody was satisfied and the network between participants has been established. Everybody knows that can ask for help and will be accompanied but has to contribute also.

COST-ESF High-level Research Conference on The Future Role of Bio-energy from Tree Biomass in Europe

PROGRAMME

Sunday 6 November
17:00-19:30 Registration at the ESF desk

Monday 7 November
9:00-11:15 Registration at the ESF desk and Transfer from Hotel Europahaus to Monastery of Klosterneuburg
11:15-11:30 Abtprimas Bernhard Backovsky - Stift Klosterneuburg, AT
Stefan Schmuckenschlager - Mayor of Klosterneuburg, AT
Monica Dietl – Director COST Office, BE, Words of welcome

Opening session

Chaired by: Peter Mayer - Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BWF), AT
11:30-12:30 Tattersall Smith (EN) University of Toronto, CA
Forests as a source of bioenergy - ecological sustainability and soil productivity
Franz Stefan Hautzinger (DE) Provincial Counsellor of Burgenland, AT
Bioenergy from the perspective of Burgenland
Niels Elers Koch (EN) President - IUFRO, DK
Forests as a source of bioenergy - operational and economic challenges
Stephan Pernkopf (DE) Provincial Counsellor of Lower Austria, AT
Bioenergy from the perspective of Lower Austria
Nikolaus Berlakovich (DE) Minister of Agriculture and Forestry, AT
Austria on the road to energy autarchy: Which role of Agriculture and Forestry

12:30-14:00 Lunch break - Invitation by the Austrian Minister of Agriculture and Forestry
14:00-14:20 Paul Rübig (DE) European Parliament, INT
The climate and energy policy of the European Union

Guided Tour

14:20-18:00 Hubert Fladl (DE&EN) Monastery of Klosterneuburg, AT
Presentation of the bioenergy plant Klosterneuburg
18:00-20:00 Wine tasting & Finger food buffet
20:00 Transfer from Monastery of Klosterneuburg to Europahaus

Tuesday 8 November
9:00-9:10 Peter Mayer Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BWF), AT
Words of welcome
9:10-9:25 Monica Dietl Director COST Office
Introducing COST
9:25-9:45 Sjur Baardsen Norwegian University of Life Sciences, NO & Chair of the COST Domain Committee
"Forests, their Products and Services (FPS) "  Introducing the COST Domain on Forests, their Products and Services (FPS)
9:45-10:00 Malgorzata Tkatchenko Commissariat à l'énergie atomique et les énergies alternatives (CEA) & ESF Rapporteur
Introducing ESF
Session 1: Availability of biomass
Chaired by: Robert Jandl - Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BWF), AT
10:00-10:30 Markus Lindner European Forest Institute (EFI), FI
Forest energy potential – Results from the EU Wood Project
10:30-11:00 Gerhard Mannsberger Ministry of Agriculture and Forestry, AT
Implementing a national strategy on biomass mobilization
11:00-11:30 Coffee break
11:30-11:50 Antti Asikainen METLA, FI
Impact of annual felling, CO2 prices, national subsidies on forest fuel availability in Finland
11:50-12:10 Toru Terada University of Tokyo, JP
Wood Energy from Satoyama Woodlands
12:10-12:30 Klemens Schadauer Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BWF), AT
How much biomass can be mobilized for energetic use - Central Europe
12:30-13:00 Discussion
13:00-14:30 Lunch break

Session 2: Biodiversity, landscape ecology and soil water quality
Chaired by: Tattersall Smith - University of Toronto, CA
14:30-15:00 Inge Stupak Møller University of Copenhagen, DK
Forest energy and soil sustainability
15:00-15:30 Hillevi Eriksson Swedish Forestry Agency, SE
Sustainability criteria in practice
15:30-15:50 Berthold Heinz Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BWF), AT
Dealing with genetic variability of willows and poplars in short-rotation plantations
15:50-16:20 Coffee break
16:20-16:40 Hans Langeveld Bioresearch, NL
Land use questions / sustainability
16:40-17:00 Hannes Böttcher IIASA, AT
Projection of the EU27 forest carbon sink and effects of recent bioenergy policies using two advanced forestry models
17:00-17:20 Paul Schmidt-Walter University of Göttingen, DE
Groundwater recharge and nitrate leaching rates of short rotation coppices from poplar and willow
17:20-17:40 Karin Eklöf Swedish University of Agricultural Sciences, SE
Does logging, stump harvesting and site preparation lead to leakage of mercury?
17:40-18:30 Poster Session
19:00 Dinner

Wednesday 9 November
Session 3: Supply chain and system evaluation
Chaired by: Rolf Björheden - Skogforsk Uppsala, SE & IUFRO Task Force "Forest Bioenergy", INT
9:00-9:30 Raffaele Spinelli Trees and Timber Institute IVALSA, IT & Vice Chair FPS COST Action FP0902
Technical and economic evaluation of supply systems
9:30-10:00 Hans Heinimann ETH Zurich, CH
Environmental performance assessment of biofuel supply chains - state and perspectives
10:00-10:20 Karl Stampfer University of Natural Resources and Applied Life Sciences Vienna, AT & MC
Member FPS COST Action FP0902
Regional wood chip supply networks for the Alps
10:20-10:40 Paula Jylhä Finnish Forest Research Institute (METLA), FI
Whole-tree harvesting of small-diameter Scots pine for integrated pulp and energy production in a kraft pulp mill
10:40-11:10 Coffee break
11:10-11:30 Rolf Björheden Skogforsk Uppsala, SE & IUFRO Task Force "Forest Bioenergy", INT
Critical factors for forest fuel supply chains
11:30-11:50 Antti Asikainen Finnish Forest Research Institute (METLA), FI
Simulations vs Empirical studies as forest fuel systems analysis tools
11:50-12:10 Walter Warkotsch Technische Universität München, DE
Contribution of precision forestry to improve supply chains
12:10-12:30 Victoria Lerma AIDIMA, ES

Prediction system for availability of biomass
12:30-12:50 Mohammad Ghaffariyan University of Tasmania, AU

Optimising chipping of pine residues in Victoria (Australia)
12:50-13:10 Discussion

13:10-14:30 Lunch break

14:30-14:50 Erhan Caliskan Karadenyz Technical University, TR
Optimising forest biomass transports
14:50-15:10 Mika Yoshida University of Tokyo, JP
Relation between chipping site and transportation cost
15:10-15:30 Peter Rauch University of Natural Resources and Life Sciences Vienna, AT
Evaluating procurement risks of the biomass feedstock in Austria
15:30-16:00 Coffee break
16:00-17:00 Poster Session - For accepted posters, please refer to the list of posters
17:00-17:20 Inge Stupak Møller - University of Copenhagen, DK
Dominik Röser – Finnish Forest Research Institute (METLA), FI & Chair of FPS COST Action FP0902
Presentation of Multidisciplinary COST Action proposal
17:20-18:00 Discussion
19:00 Dinner

Thursday 10 November

Session 4: Forest biomass as feedstock for the energy and biorefinery sector
Chaired by: Elspeth MacRae - Scion, NZ & IUFRO Task Force "Forest Bioenergy", INT
9:00-9:30 Elspeth MacRae - Scion, NZ & IUFRO Task Force "Forest Bioenergy", INT
Biorefinery processes and products using trees
9:30-9:50 Birgitta Strömberg - Thermal Engineering Research Association, SE
Forest biomass as a feedstock for thermal conversion
09:50-10:10 Suzanne Wetzel - Canadian Wood Fibre Centre/Canadian Forest Service, CA
Heterogeneity of forest harvest residue from Eastern Ontario Biomass Harvests
10:10-10:30 Daniel-Calin Ola - Transylvania University, RO
Energy or insulation from fibre plants
10:30-11:00 Coffee break
11:00-11:20 Carmen Guedes - University Londrina, BR
Lignocellulosic derived Bio-oil for petroleum blends
11:20-11:40 Patricia Bubner - University of Technology Graz, AT
Cellulases dig deep
11:40-12:10 Anna Suurnakki - VTT Technical Research Centre, FI
The green biorefinery
12:10-12:30 Discussion
12:30-13:30 Lunch break

Session 5: Summary and Research Strategy
Chaired by: Johannes Schima - Ministry of Agriculture and Forestry, AT
13:30-14:00 Tattersall Smith - University of Toronto, CA
Research Priorities for Mobilizing Sustainable Supply Chains
14:00-14:30 Dominik Röser - Finnish Forest Research Institute (METLA), FI & Chair of FPS COST Action FP0902
Raffaele Spinelli – Trees and Timber Institute IVALSA, IT & Vice Chair of FPS COST Action FP0902
The Importance of International Research Collaboration
14:30-15:00 Rolf Björheden - Skogforsk Uppsala, SE & IUFRO Task Force "Forest Bioenergy", INT
Visionary documents on Forest Energy cases and Outlook on the role of bioenergy 2050 and 2100

Forward Look Session
Chaired by: Rolf Björheden - Skogforsk, SE
15:00-15:30 Discussion about future developments in the field
15:30-16:00 Coffee break
16:00-18:30 Susanne Schidler, AT
Interactive session for early researchers on Sustainable Biomass-Use
20:00 Conference dinner

Friday 11 November
Departure after breakfast

Summary & Overall Assessment

Was the conference successful; were its aims achieved?

It was very successful conference and its aims were achieved. The great effort was done by experienced researchers to solicitate the contributions of young researchers, to introduce them to international collaborations and to transfer them the passion of research in these domains.
# About ESF Research Conferences

## The Scheme
This conference is part of the European Science Foundation’s (ESF) Research Conferences Scheme. The Scheme aims to promote scientific excellence and frontier level research throughout Europe and the rest of the world. Conferences aim to provide leading scientists and other participants, including young researchers, with a platform to present their work, to discuss the most recent developments in their fields of research and to network.

## Conference Format
The core activities should be based on lectures by invited speakers, who are leaders in their respective fields, followed by extensive discussion periods. An informal exchange of ideas, both inside and outside the lecture room, should be encouraged, and the number of sessions in the daily timetable should be limited in order to allow sufficient time for interaction between the participants. Time should be reserved for a ‘Forward Look Plenary Discussion’ about future developments in the field.

Participants can take all their meals together to encourage further contact and networking, which can be particularly beneficial to younger researchers who may be less outspoken in the formal lecture room setting. In order to gain optimum benefit from the conference, both the speakers and the participants are asked to stay for the whole duration.

## Division of Tasks
The Conference Chair is responsible for ensuring the quality of the scientific programme through the selection and invitation of speakers, and through the selection of participants.

The ESF Conferences Unit is responsible for managing all the logistical aspects of the conference organisation, including the provision of an on-site secretariat.

Further information: [www.esf.org/conferences](http://www.esf.org/conferences)