

ESF RESEARCH CONFERENCES

Rapporteur Report

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

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/and 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).

SPEAKERS/PARTICIPANTS

	Total	male	female	under 36
No. of Chairs/Speakers	34	23	11	
No. of Participants	57	37	20	30
No. of short talks	14	9	5	10

No. of posters	31	21	10	18
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	Female	Male	Country
1	2	13	Austria
2	1		Australia
3	2	1	Belgium
4	1		Brazil
5		1	Belarus
6	1	1	Canada
7		2	Switzerland
8	1		Cameroon
9	1	1	Denmark
10	1	4	Germany
11	3		Spain
12	2	6	Finlande
13	1		France
14		1	Ghana
15		1	Croatia
16		1	Hungary
17		1	India
18		2	Italy
19	1	2	Japan
20		1	Latvia
21	1		Nigeria
22		1	Norway
23		1	Nepal
24		1	Netherlands
25	1		New Zealand
26	1	1	Pologne
27		1	Romania
28	1		Russia
29	4	3	Sweden
30		1	Turkey
31		2	Taiwan
32	2	1	Ukraine
33		1	United States
34		1	Zimbabwe

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.

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 ESFdesk 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 Rübiger** (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 Heinze** 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 Goettingen, 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 IVALSIA, IT & Vice Chair FPS COST Action FP0902

Technical and economic evaluation of supply systems

9:30-10:00 **Hans Heinemann** 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** Karadeniz 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: **Elsbeth MacRae** - Scion, NZ & IUFRO Task Force "Forest Bioenergy", INT

9:00-9:30 **Elsbeth MacRae** Scion, NZ & IUFRO Task Force "Forest Bioenergy", INT

Biorefinery processes and products using trees

9:30-09:50 **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 IVALSÀ, 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