



# **COST Action FP0902**

## **IEA Bioenergy Task 43**

**Portugal / September 2012**



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## **COST Action FP0902**

Within the scope of the COST framework (European Cooperation in Science and Technology), the European Union has launched a new network for stimulating cooperation between the most important European research centres dealing with biomass for energy harvesting and supply. The goal of this initiative is to further reinforce Europe's leading role in the field of sustainable forest biomass utilization, since this huge resource is still largely unutilized due to the technical difficulties of establishing economically and environmentally viable supply chains.

In October 2009, COST launched Action FP0902 "Development and Harmonisation of New Operational Research and Assessment Procedures for Sustainable Forest Biomass Supply", which supports intensifying communication and cooperation among the most important research institutions dealing with the subject, through a joint work program, meetings, exchanges and conferences.

At present, the Action gathers Institutes from 29 COST member countries, as well as from Australia, Brazil, Canada, Japan, New Zealand, South Africa and the USA. The intense presence of Non-European experts puts this Action among the most "global" among those launched by the COST Domain Forests, their Products and Services.

Further information about COST Action FP0902 is available on the website:

[www.forestenergy.org](http://www.forestenergy.org)



## **IEA Bioenergy Task 43**

IEA Bioenergy Task 43 (Biomass feedstocks for energy markets) seeks to promote sound bioenergy development that is driven by well-informed decisions in business, governments and elsewhere. This will be achieved by providing to relevant actors timely and topical analyses, syntheses and conclusions on all fields related to biomass feedstock, including biomass markets and the socioeconomic and environmental consequences of feedstock production. The Task 43 work programme covers all aspects of feedstock, its markets and environmental as well as socio-economic impacts. It has a global scope and includes commercial, nearcommercial and promising production systems in agriculture and forestry. The primary focus is on land use and bioenergy feedstock production systems, including their markets. The Task will be concerned with issues related to the linking of sustainable biomass feedstocks to energy markets, explicitly considering environmental and socioeconomic aspects.

For more information see:

[www.ieabioenergytask43.org](http://www.ieabioenergytask43.org)

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## 1 Abbreviations

WG Work Group

MC Management committee

### Lisbon meeting COST FP0902

## 2 Day One

### 2.2 conference “Economic Sustainability of Forest Fuel Supply Chains” – 18<sup>th</sup> of September

The conference started at 9:00, on the 18th of September, and was opened by Catarina Resende representing the Portuguese Science and Technology Foundation ( FCT, Fundação para a Ciência e Tecnologia) who gave a warm welcome to the participants and speakers.



Figure 1 – Opening Session

After this, as local host, Elsa Nunes welcomed the participants. Afterwards, Antti Asikainen made an introduction to the IEA Bioenergy task 43. Further to Antti's presentation Robert Prinz introduced the COST Action FP0902.

### 2.2.1 Session I: Challenges to Economic Sustainability across Europe

First session panel:

<p><b>Forest biomass in the <u>Nordic countries</u>:</b> How much is available and what are the challenges to economic sustainability?</p> <p><i>Rolf Björheden, Skogforsk, Sweden</i></p>
<p><b>Forest biomass in <u>Central Europe</u>:</b> How much is available and what are the challenges to economic sustainability?</p> <p><i>Jörg Schweinle, Johann Heinrich von Thunen-Institute, Germany</i></p>
<p><b>Forest biomass in <u>Eastern Europe</u>:</b> How much is available and what are the challenges to economic sustainability?</p> <p><i>Nike Kranjic, Slovenian Forestry Institute, Slovenia</i></p>
<p><b>Forest biomass in <u>Southern Europe</u>:</b> How much is available and what are the challenges to economic sustainability?</p> <p><i>Eduardo Tolosana, Polytechnic University of Madrid, Spain</i></p>
<p><b>Panel Discussion &amp; Coffee break</b></p>

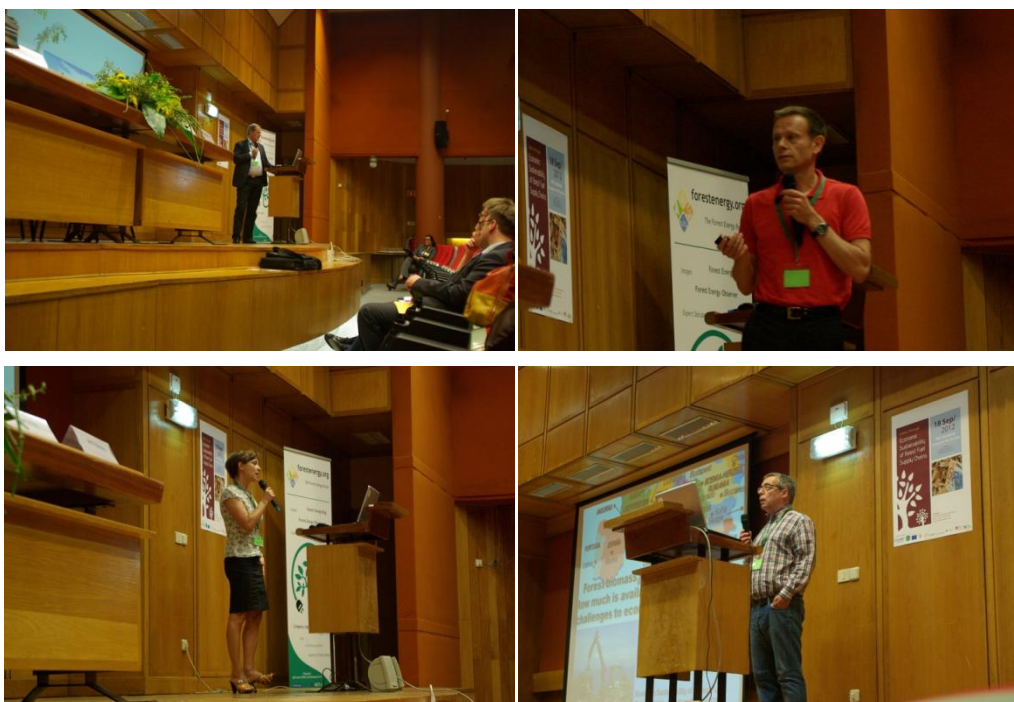


Figure 2 – First panel speakers



Figure 3 – Coffee break

## 2.2.2 Session II: Methodologies to evaluate economic sustainability & costs

Second session panel:

<b>Early evaluation of cost-efficiency of new ideas</b> <i>Ola Lindroos, Swedish Agricultural University SLU, Sweden</i>
<b>COST Action FP0902 Working Group 3: Calculation model</b> <i>Pierre Ackerman, Stellenbosch University, South Africa</i>
<b>Effects of shift schedules and relocation costs on total work costs</b> <i>Lars Eliasson &amp; Henrik von Hofsten, Skogforsk, Sweden</i>
<b>Selecting between wood fuel supply chains on the basis of economic performance and robustness – evaluation approach and decision criteria</b> <i>Helmer Belbo &amp; Bruce Talbot, Norwegian Forest and Landscape Institute, Norway</i>
<b>Discussion &amp; Lunch</b>



Figure 4 – Second panel speakers

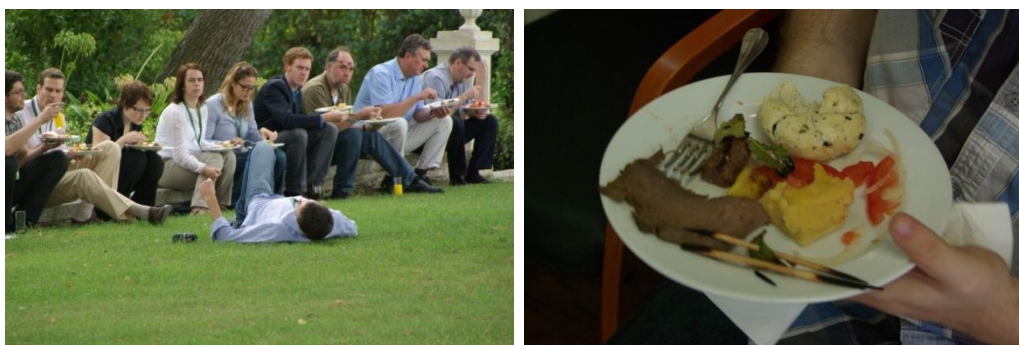


Figure 5 – Lunch

### 2.2.3 Session III: Improving economic sustainability of supply chains - case studies

Third session panel:

<b>Biomass for co-firing electricity production in Ireland - challenges in developing economical transport supply chains</b> <i>Ger Devlin, University College Dublin, Ireland</i>
<b>Integrating forest and biomass supply chains for sustainable forest residue bioenergy in Australia</b> <i>Mark Brown, University of the Sunshine Coast, Australia</i>
<b>Traceability, carbon footprint and logistic centers promotion in Catalonia, Spain</b> <i>Ignacio Lopez &amp; Pere Navarro, Forest Sciences Center of Catalonia – CTFC, Spain</i>
<b>Fossil fuel use in biomass supply and delivery of wood pellets from Canada to the EU</b> <i>Mark Ryans, FP Innovations, Canada</i>
<b>Panel Discussion &amp; Coffee break</b>



Figure 6 – Third panel speakers

### 2.2.4 Session IV: Multidisciplinary efforts to mobilize sustainable forest fuel supply chains

Fourth session panel:

<b>Four dimensions of sustainability in forest energy supply</b> <i>Lauri Sikanen, University of Eastern Finland, Finland</i>
<b>Efforts in The Netherlands to mobilize sustainable forest supply chains for energy production</b> <i>Joop Spieker, Wageningen UR (University &amp; Research centre), The Netherlands</i>
<b>Complex analysis of forest biomass resources in Latvia on the base of the National statistical forest inventory</b> <i>Andis Lazdiņš, Latvian State Forest Research Institute SILAVA, Latvia</i>
<b>Woodfuel supply in the Highlands and Islands of Scotland; How and why a multidisciplinary approach is being implemented</b> <i>Melanie Smith, Inverness College -University of Highlands and Islands, UK</i>



Figure 7 – Fourth panel speakers

### 2.2.5 Session V: Quo Vadis – where do we go from here?

Fifth session panel:

<p><b>IEA Bioenergy Task 43 efforts in “Mobilizing economically sustainable supply chains”</b></p> <p><i>Tanja Ikonen, Finnish Forest Research Institute, Finland</i></p>
<p><b>Panel Discussion</b></p> <p>Moderated by Mário Costa, IST, Portugal</p>
<p><b>Closing words</b></p> <p><i>Raffaele Spinelli, CNR-IVALSA, Italy</i></p> <p><i>Alexandre Safont, ISG, Portugal</i></p>



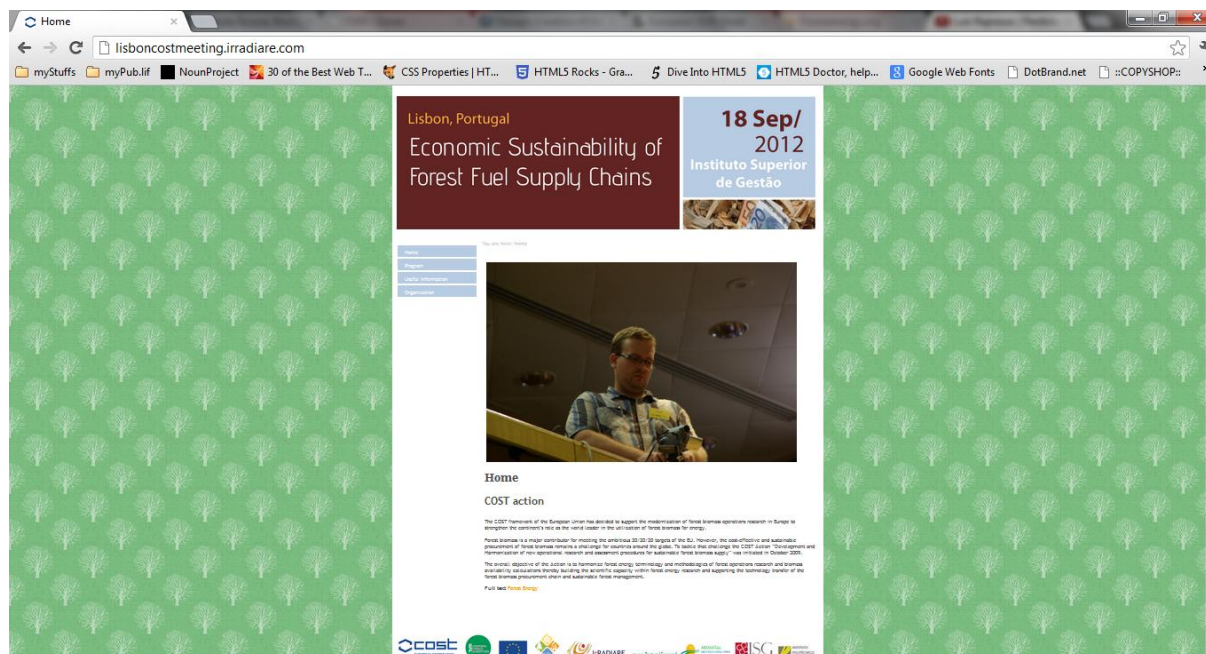
Figure 8 – Fifth panel speakers and conference room

## 2.3 On line stream

The conference was broadcasted live at the following web address:

<http://lisboncostmeeting.irradiare.com/>

Around 30 people follows the conference broadcast.



The web page was also useful to give conference participants information such as:

- Conference program / details
- Transports
- Accommodation
- Important contacts

## 2.4 Conference Participants

Abel Martins Rodrigues  
 Afonso Motta Cardoso  
 Alain Thivolle-Cazat  
 Alberto Azevedo Gomes  
 Alexandre Miguel Cordeiro Magrinho  
 Allar Padari  
 Álvaro Teixeira  
 Ana Coelho  
 Ana Lourenço  
 Andis Lazdins  
 André de Oliveira Baptista  
 André de Oliveira Baptista  
 Aníbal Sousa Reis Costa  
 Anjo de Jong  
 António Fraga Miranda

António Goulão  
António Marques Pinho  
Antti Asikainen  
Artur Fernandes da Costa  
Bruce Talbot  
Carla Filipa Da Silva Vieira  
Carla Nati  
Carlos Amaral Netto  
Célia Miguel  
César Fonseca  
Christian Kanzian  
Clara Alexandra Geraldês Fernandes  
Cláudia Sousa  
Cristina Matos  
Cristina Monteiro  
Daniel Cardoso Vaz  
Daniel Montes  
Daniela Tavares Silva  
David Silva  
Diogo Neves  
Dragi Pop-Stojanov  
Duarte Alves  
Eduardo Lopes  
Eduardo Tolosana  
Elca Gonçalves  
Elena Canga Libano  
Elsa Nunes  
Ender Makineci  
Enrico Marchi  
Eric Jessup  
Fernando Reboredo  
Filipa Araújo  
Flávia Duarte  
Florian Zormaier  
Francisco Leitão  
Francisco Telles Varela  
Ger Devlin  
Gil Patrão  
Giulio Sperandio  
Hardi Tullus  
Haun Santer Udo  
Helena Freitas  
Helmer Belbo  
Henrik von Hofsten  
Ignacio Campanero  
Ignacio López Vicens  
Inês Marques  
Isabel Lufinha

Jaap van den Briel  
Jaime Reis  
João Lourenço  
Joaquim Verdasca  
Johannes Windisch  
John Lyons  
Joop Spijker  
Jörg Schweinle  
Jorge Gabriel  
Jorge Gominho  
Jorge Miguel Marques Brito  
José de Melo Bandeira  
José Maria Oliveira  
José Rafael  
Julia Milne e Carmo  
Karl Stampfer  
Kjell Suadicani  
Kristaps Makovskis  
Krzysztof Jodlowski  
Lara Ferreira  
Lars Eliasson  
Lauri Sikanen  
Leire Iriarte  
Liana Sadauskienė  
Luís Miguel Baptista Calado Nunes  
M. Helena Lopes  
Madeuz Mosxalix  
Marek Irdla  
Maria da Conceição Fernandes  
Maria Hermínia Sousa  
Mário Costa  
Mário Pozzetti  
Mark Brown  
Mark Ryans  
Marta Carneiro  
Martin Opferkuch  
Maryse Bigot  
Mateuz Mihelic  
Mehmet EKER  
Melanie Smith  
Michał Kalinowski  
Miguel Duarte  
Miguel Silveira  
Milica Peric  
Mirko Komatina  
Miroslav Kleibl  
Mónica Rogério  
Murat Demir

Natascia Magagnotti  
Nevzat Gürlevik  
Niclas Scott Bentsen  
Nike Krajnc  
Nuno Filipe Pancada  
Nuno Pereira  
Ola Lindroos  
Patrick Azevedo da Graça  
Paula Raposo Borges  
Paulo Fontes  
Paulo Preto dos Santos  
Pedro Campilho  
Pedro Gomes  
Pedro Ramos  
Pedro Rodrigues  
Peeter Muiste  
Perttu Anttila  
Piedade Roberto  
Pierre Ackerman  
Pilar Alonzo  
Radomir Klvac  
Raffaele spinelli  
Ricardo Diogo  
Ricardo Mateus  
Robert Prinz  
Rodrigo Rodrigues  
Rolf Björheden  
Ruben Laina  
Rui Pedro Heriques  
Rui Pulido Valente  
Sandra Sánchez García  
Sara Maria Tranquada Boléo  
Servet Caliskan  
Sotir Gluschkov  
Susana Isabel de Alão Oliveira  
Tanja Ikonen  
Teresa Fonseca  
Thomas Purfürst  
Tiago Oliveira  
Tom Kent  
Tomas Nordfjell  
Valeria Reva  
Vanessa Daniela Lopes Bandarra  
Vera Moraes dos Santos  
Vlatko Andonovski  
Witold Zychowicz

## 2.5 Conference dinner

After the conference all participants were invited to participate in the Conference dinner. The dinner took place in VIP Executive Barcelona Hotel, where most of the COST members were staying.

## 3 Day Two

### 3.1 Field trips and WG sessions

On the second day of the COST Action in Lisbon, in 19<sup>th</sup> September 2012, there were two field trips:

- A. Grupo Portucel Soporcel, Setúbal
- B. Biomass field operations - Alpalhão - Altri, Grupo Portucel Soporcel

Also during the afternoon the working groups had one work session in Escola Superior de Tecnologia e Gestão in Instituto Politécnico de Portalegre.

To finish the day a dinner was provided in a cosy restaurant, with a terrace and garden. A typical Portuguese meal was served.

#### 3.1.1 Grupo Portucel Soporcel, Setúbal

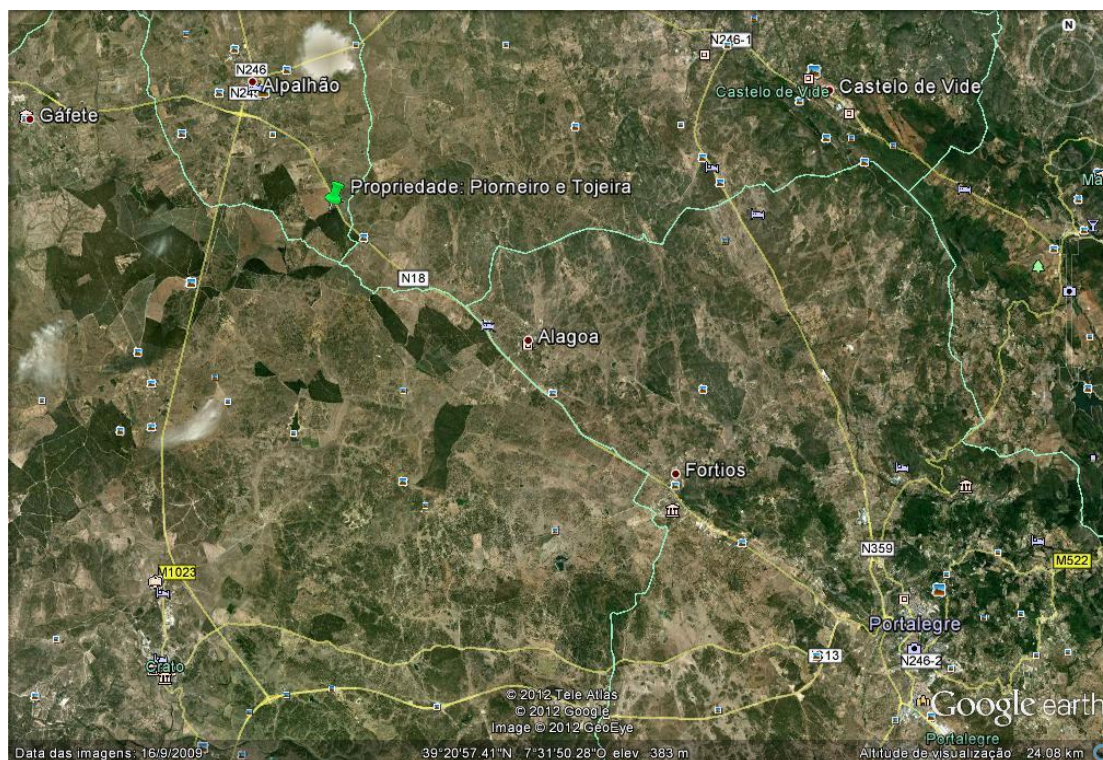
In Setúbal, the COST members had the opportunity to visit the Portucel Soporcel paper factory. It was possible, with this visit, to acknowledge all the process from which the paper is obtained.

It was a very interesting visit that allowed everyone to get to know the “backstage” of the different types of paper.

#### 3.1.2 Altri, Grupo Portucel Soporcel, Alpalhão

Altri is a leading Portuguese pulp producer and one of the most efficient being listed on Euronext Lisbon and a member of it's main index the PSI20.

The forest is one of Altri's main assets. The company has about 80,000 hectares of forest under management in Portugal and a self-sufficiency ratio of about 50%. Sustainable management of the forest and the surrounding environment is a key part of the company's strategy.



## 4 Day Three

### 4.1 WG sessions & MC meeting

On the third day of the COST Action event, 20<sup>th</sup> September 2012, the group continued on the WG sessions and the MC members meeting in the Escola Superior de Tecnologia e Gestão do Instituto Politécnico de Portalegre.

## 5 Conclusion

This COST meeting was a very interesting experience for all the participants because it made possible the interaction with all the members and it also allowed to know the Portuguese reality.

The COST members had the opportunity to be in Lisbon, Setúbal and Portalegre region allowing among other aspects the knowledge of Portuguese forestry management.

## **6 ANNEXES**

## ANNEXE 1

## Conference Program

# Lisbon, Portugal

## Economic Sustainability of Forest Fuel Supply Chains

# 18 Sep/ 2012

## ISG | Instituto Superior de Gestão

Address:  
Palácio de Santa Clara  
Rua Vitorino Nemésio, nº 5  
1750-306 Ameixoeira, Lisboa



### Program

- 09:00 - 09:30** **Welcome session**  
Miguel Seabra, President of Instituto Superior de Gestão e Tecnologia, Portugal  
Welcome by the local host  
Elsa Nunes, INIAADARE Science for evolution, Lda., Portugal  
Introduction to IEA Bioenergy Task 43  
Antti Ahtolahti, Finnish Forest Research Institute, Finland  
Introduction to COST ACTION FP0902  
Robert Prins, Finnish Forest Research Institute, Finland
- Session I: Challenges to Economic Sustainability across Europe**
- 09:30 - 09:45** Forest biomass in the **Nordic countries**: How much is available and what are the challenges to economic sustainability?  
Alof Altheden, Skogforsk, Sweden
- 09:45 - 10:00** Forest biomass in **Central Europe**: How much is available and what are the challenges to economic sustainability?  
Jörg Schweink, Arbora Heinrich von Thünen-Institute, Germany
- 10:00 - 10:15** Forest biomass in **Eastern Europe**: How much is available and what are the challenges to economic sustainability?  
Nikolaj Kozlov, Slovenian Forestry Institute, Slovenia
- 10:15 - 10:30** Forest biomass in **Southern Europe**: How much is available and what are the challenges to economic sustainability?  
Edoardo Tolosana, Polytechnic University of Madrid, Spain
- 10:30 - 11:00** Panel Discussion & Coffee break
- Session II: Methodologies to evaluate economic sustainability & costs**
- 11:00 - 11:20** Early evaluation of cost-efficiency of new ideas  
Olo Lindroos, Swedish Agricultural University SLU, Sweden
- 11:20 - 11:40** COST Action FP0902 Working Group 3: Calculation model  
Pieter Acheveron, Stellenbosch University, South Africa
- 11:40 - 12:00** Effects of shift schedules and relocation costs on total work costs  
Lars Eliasson & Henrik van Hylstén, Skogforsk, Sweden
- 12:00 - 12:20** Selecting between wood fuel supply chains on the basis of economic performance and robustness – evaluation approach and decision criteria  
Helmer Bebo & Bruce Talbot, Norwegian Forest and Landscape Institute, Norway
- 12:20 - 12:30** Discussion & Lunch
- Session III: Improving economic sustainability of supply chains - case studies**
- 13:30 - 13:50** Biomass for co-firing electricity production in Ireland - challenges in developing economical transport supply chains  
Ger Devlin, University College Dublin, Ireland
- 13:50 - 14:10** Integrating forest and biomass supply chains for sustainable forest residue bioenergy in Australia  
Mark Brown, University of the Sunshine Coast, Australia
- 14:10 - 14:30** Traceability, carbon footprint and logistic centers promotion in Catalonia, Spain  
Ignacio Lopez & Pere Navarro, Forest Sciences Center of Catalonia - CTFC, Spain
- 14:30 - 14:50** T&O  
Mark Ryan, FP Innovations, Canada
- 14:50 - 15:00** Panel Discussion & Coffee break
- Session IV: Multidisciplinary efforts to mobilize sustainable forest fuel supply chains**
- 15:30 - 15:50** Four dimensions of sustainability in forest energy supply  
Lauri Skomsvold, University of Eastern Finland, Finland
- 15:50 - 16:10** Efforts in The Netherlands to mobilize sustainable forest supply chains for energy production  
Joop Splinter, Wageningen UR (University & Research centre), The Netherlands
- 16:10 - 16:30** Complex analysis of forest biomass resources in Latvia on the basis of the National statistical forest inventory  
Andis Lazdiņš, Latvian State Forest Research Institute SILVIA, Latvia
- 16:30 - 16:50** Woodfuel supply in the Highlands and Islands of Scotland; how and why a multidisciplinary approach is being implemented  
Melanie Smith, Inverness College - University of Highlands and Islands, UK
- Session V: Quo Vadis – where do we go from here?**
- 16:50 - 17:05** IEA Bioenergy Task 43 efforts in "Mobilising economically sustainable supply chains"  
Touko Ruusu, Finnish Forest Research Institute, Finland
- 17:05 - 17:30** Panel Discussion  
moderated by Maria Costa, ISG, Portugal
- 17:30** Closing words  
Raffaella Spinesi, CNR-IRNISA, Italy  
Carlos Neto, ISG (member of the board), Portugal

#### Promoters and sponsors

