



# Forests and the forest-based industry in a volatile world

What are appropriate response measures to address future and diverse demands on forests?

2<sup>nd</sup> IUFRO–Mondi Think Tank Meeting, Vienna, 3 November 2022

Summary by the moderator  
Gerald Steindlegger, November 2022

The IUFRO-Mondi Partnership held its **2<sup>nd</sup> Think Tank Meeting** in Vienna, Austria, on the 3rd of November 2022. 25 participants representing science, forest industry and policy makers participated in the meeting to identify, discuss and articulate appropriate response measures at various levels. **This document** provides an overview of the topics presented and discussed at the meeting.

## KEY MESSAGES FROM THE 2<sup>nd</sup> THINK TANK

### POLICY

- needs to cope with conflicting Sustainable Development Goals (SDGs) challenges and balance diverse stakeholder demands on forests.
- should address trade-offs and improve coherence between different policies, goals and instruments affecting forests at the EU level, such as those related to climate change, biodiversity, and the bioeconomy/circular economy.
- should increasingly use scientific evidence as a basis for more effective policy interventions.
- should provide incentives to further motivate forest owners to actively manage their forest for the provision of ecosystem services.

### FOREST MANAGEMENT

- is increasingly challenged to meet diverse societal demands on forests while their ecosystems are significantly impacted by climate change.
- needs an increased focus on:
  - alternative species
  - innovative silvicultural management systems to cope with climate change
- technical support of forest owners can increase credibility by better demonstrating its critical role in ecosystem management.

### INDUSTRY

- is challenged by an insecure future supply of wood, policy developments, geo-political framework conditions, together increasing complexity and uncertainties for longer-term strategic planning and investments – will the EU wood processing sector be competitive internationally?
- needs to enhance preparedness (i.e., flexibility and innovation) in order to cope with anticipated changes in wood supply and the socio-economic environment (i.e., through adapting products and manufacturing processes to alternative tree species).
- can raise credibility on sectoral contributions to global challenges (i.e., SDGs and other climate change mitigation schemes) through science- based communication.

## SCIENCE

- needs to intensify evidence-based advisory services to forest management, policy, industry and stakeholders at the local, regional and national levels.
- should inform all stakeholders on how specific response options (i.e., increasing bio-energy production from forests) impact on other sectors. Trade-offs and synergies need to be better understood.
- should provide evidenced-based information on forests and products related to the carbon cycle (i.e., when are forests turning from a carbon sink into a carbon source?).
- can contribute to awareness raising on multifunctional forestry through intensified science-policy and science-society interactions, particularly on mechanisms for sustaining and enhancing ecosystem services.

## THE SCIENTIFIC BASIS FOR THE DISCUSSIONS

Dr Michael Kleine introduced the discussion by reflecting on “**Future diverse demands for goods and services from forests**”, summarizing key challenges and key findings as identified at the 1<sup>st</sup> Think Tank Meeting and the 1<sup>st</sup> Stakeholder Dialogue.



*... major climate-related changes and societal, economical, and political frameworks constantly influence the provision of forest services.*

Michael Kleine, IUFRO Deputy Executive Director

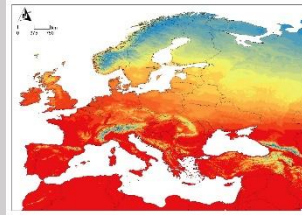
Dr Kleine emphasized that demands on forests have never been higher and more diverse. He noted that forests and forest products have an **interface with almost all SDGs**.

While it is commonly acknowledged that forests and forest products do have a big role in coping with climate change and can significantly contribute to the achievement of the SDGs, there remain different societal perspectives and some **incoherent policy frameworks** on how best to achieve this. Reconciling the different perspectives and jointly defining **future forest policy** and management strategies remain a major challenge.

Dr Kleine also addressed that major climate-related changes and evolving societal, economic and political frameworks significantly influence the provision of future goods and services from forests.

Further, he provided an **overview of facts and uncertainties** on themes relevant for the discussion, as listed in the tables on the following pages.

## CLIMATE CHANGE & FOREST CARBON COMPLEXITY



### What we know

- **Climate Change** is happening everywhere at different rates and intensities.
- **Different forest ecosystems** and **tree species** suffer different impacts/disturbances.
- The **below-two-degree target** agreed in Paris (2015) can only be achieved with active CO<sub>2</sub> reduction measures (IPCC Report AR6).
- Forests and forest soils are the **largest terrestrial carbon store** on earth.
- At the global level forests are **currently a carbon sink**.

### What we are uncertain about

- When will forests turn from a **carbon sink** to a **carbon source**?
- What are the rates of forest **growth reduction** and increasing **tree mortality**?

## FOREST STAND LEVEL







### What we know

- **The risks of disturbances**, including widespread bark-beetle outbreaks, storm damages and forest fires are increasing.
- **Conifers** such as Norway Spruce, particularly below 600 meters above sea level, seem to be more affected.
- **Changes in species composition** from conifers to hardwoods combined with greater species diversity is already happening.
- **Assisted migration** of drought-resistant (conifer) species and/or provenances is an option.
- **With adaptation** forests will likely become younger, more diverse and have a decreasing proportion of conifers.

### What we are uncertain about

- Which **alternative tree species** cope best with changing climate at a particular location?
- In the long-term, what role can **genetics** play as a tool for adaptation?

<b>BIODIVERSITY</b>		
<b>What we know</b>	<b>What we are uncertain about</b>	
<ul style="list-style-type: none"> <li>▪ <b>Older forests</b> are <b>important habitats</b> for biodiversity conservation but with increasing age, forests are <b>more susceptible to certain disturbances</b>.</li> <li>▪ <b>EU Biodiversity Strategy for 2030</b> supporting a green recovery.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>What are the impacts</b> of national and EU-level nature protection and <b>conservation policies</b> on <b>forest management for wood production</b>?</li> <li>▪ Are <b>additional costs</b> for enhanced biodiversity considerations in managed forests covered by <b>support schemes</b>?</li> </ul>	
<b>FOREST OWNERS</b>		
<b>What we know</b>	<b>What we are uncertain about</b>	
<ul style="list-style-type: none"> <li>▪ In the EU, <b>60% of forests are privately owned</b>. For millions of forest owners forest use (i.e., timber) provides a (sometimes major) income.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Are silvicultural and technological <b>adaptation needs affordable</b> to maintain a robust value chains?</li> <li>▪ <b>Implications caused by varied legislative frameworks</b> across countries on the future management of forests and use of wood are <b>unknown</b>.</li> <li>▪ Will the number of forest owners with non-economic motivations in forest management increase or decrease, and by how much?</li> <li>▪ Will there be <b>sufficient and tailored support</b> for forest owners for forest restoration and adaptation activities?</li> <li>▪ Will <b>new partnerships</b> between forest owners and industry evolve?</li> </ul>	
<b>POLITICAL FRAMEWORKS</b>		
<b>What we know</b>	<b>What we are uncertain about</b>	
<ul style="list-style-type: none"> <li>▪ <b>Policies, incentives and regulations</b>, particularly at the national and European levels, are <b>major drivers of future forest management</b> and significantly influence the provision of services from forests and trade-offs among them (wood production, carbon, biodiversity, energy etc.).</li> <li>▪ <b>Different perceptions</b> on the future forests <b>exist</b> among different stakeholders (forest owners, right holders, public).</li> <li>▪ <b>Geopolitical developments</b> can cause disruptions to national, regional and global economic activities.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>How to reconcile different perspectives</b> on future forest policy and management strategies.</li> <li>▪ <b>Predicting geopolitical risks</b> remains a difficult undertaking.</li> </ul>	

WOOD-BASED INDUSTRY	
	
What we know	What we are uncertain about
<ul style="list-style-type: none"> <li>▪ Heavy <b>reliance on Norway Spruce</b> as the preferred resource for many products.</li> <li>▪ <b>Substitution of spruce is a major technological challenge</b> (currently in its infancy).</li> <li>▪ <b>Competition for limited resources</b> within the sector between wood – pulp/paper – energy.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>When and where will significantly reduced availability</b> in softwood resources for particular industries occur?</li> <li>▪ What is the <b>timeframe for the required technological adaptation</b> to a new species mix (medium, long-term).</li> <li>▪ Will the <b>development and marketing of new products</b> align with changes in and accommodate wood resource availability?</li> </ul>

Science has a major role to play in embracing the complexity of the challenge of meeting future and diverse demands on forests. This includes the development of management strategies in the local context and the communication of the latest evidence and data for diverse audiences.

As an example of scientific work, Michael Kleine finished his presentation by introducing a **scientific study** to be managed by the partnership. This study is aiming to provide a comprehensive **synthesis of existing scientific and technical information** on the future supply of goods and services from European Forests. For the identification of **response options** for policy makers, the private sector and other stakeholders, factors of **biological production** as well as a range of relevant **policy-related** and **socio-economic factors** will be considered.

## KEY DISCUSSION POINTS IN PLENARY AND WITHIN SUB-GROUPS

Following Michael Kleine’s presentation, intensive discussions took place in the **plenary** and in **four working groups** regarding critical challenges and possible response options to address diverse demands on forests. The major points of these discussions are reflected in this summary.



**Incoherent policies** at the EU and national level, including favouring different and sometimes competing aspects of sustainability were identified as a major challenge. Specific policies (e.g., biodiversity policies) and their interactions and impacts on other sectors (such as agriculture, the wood-based industry, renewable energy and carbon) seem to be insufficiently addressed in discussions on future and diverse demands on forests. Clear communication by **science** to policy has been identified as a means **to assist policymakers** in their efforts to address different perspectives and in the formulation of consistent and coherent policies.

Some participants noted that the influence of relevant policies (such as the EU Green Deal) on future societal developments (including transport, residence, energy) have so far not sufficiently reached the local level.



The EU's and associated national policies on promoting renewable energy and the resulting **increased competition for forest biomass** were intensively discussed and mentioned as an important aspect of potentially reduced future wood availability for the other forest-based industries such as the wood construction and pulp and paper industry.

**Forest owners' capacity** to adapt, technically and institutionally, to climate change as well as their **motivation** to do so and actively manage their forests have been identified as important factors for the future availability of wood and provision of other ecosystem services.

Technical capacity (e.g., on silviculture techniques) can be increased through **communication of synthesized scientific consensus** by scientists and forest owner associations. It also was suggested to carry out scientific research on the question on why the market so far failed to sufficiently **establish market mechanism** for the provision of ecosystem services.

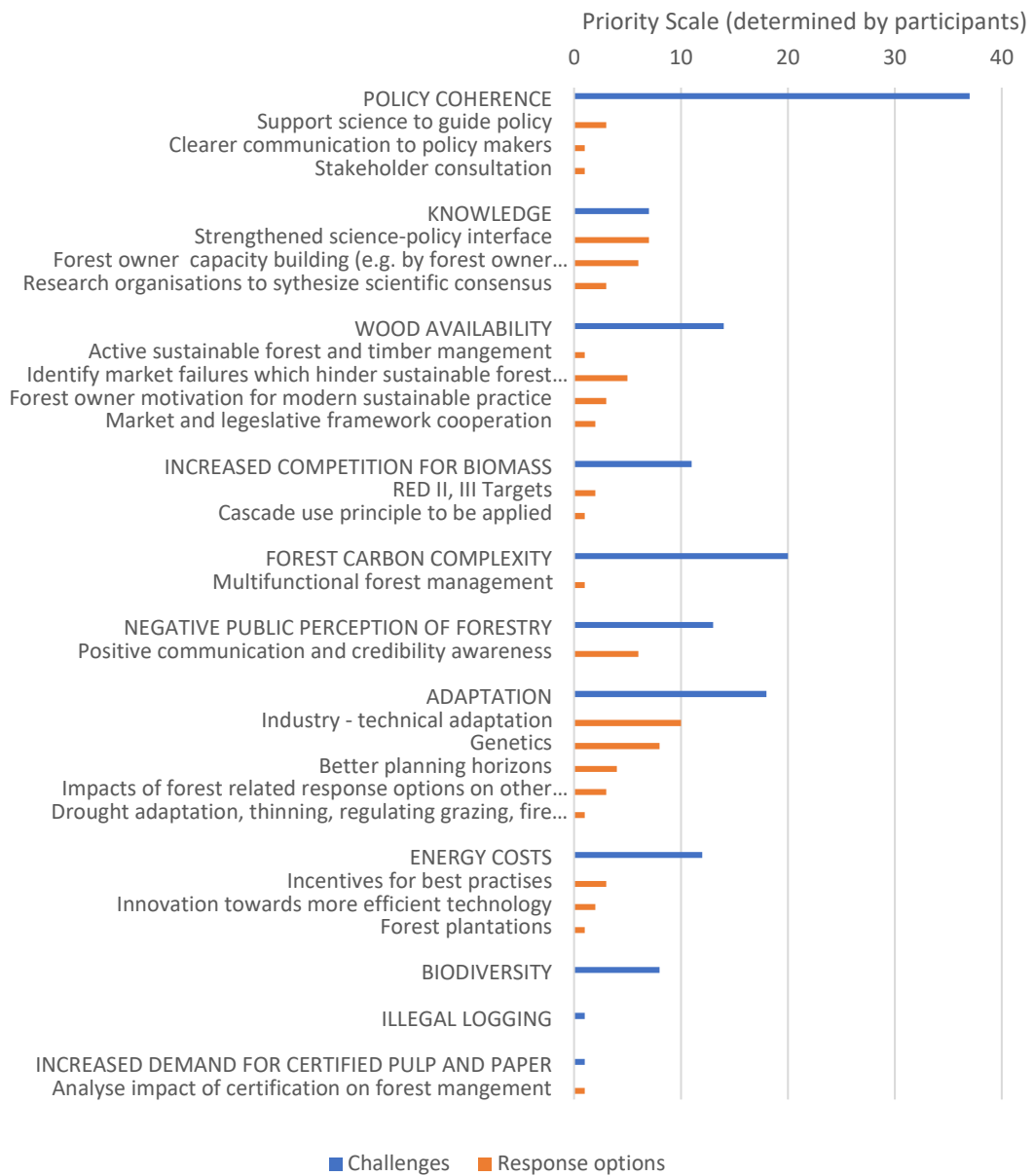
Positive **communication** and **public awareness rising** on the services provided by forest managers were identified to address the negative **public perception** and to increase the **credibility of forestry**.



The **industry** has high hopes regarding **genetically adapted** varieties of **tree species** better able to cope with climate change. At the same time, it was suggested that the forest-based industry should speed up their own adaptation efforts through developing **new technologies** for using alternative tree species (e.g., for replacing spruce) in their processes.

Science was challenged to better translate the **forest carbon complexity** by addressing questions such as “when will forests turn from a carbon sink to a carbon source” and by calculating carbon fluxes and balances. Topics such as **biodiversity** and **certification** were also addressed but not discussed in detail.

## Challenges & Corresponding Response Options

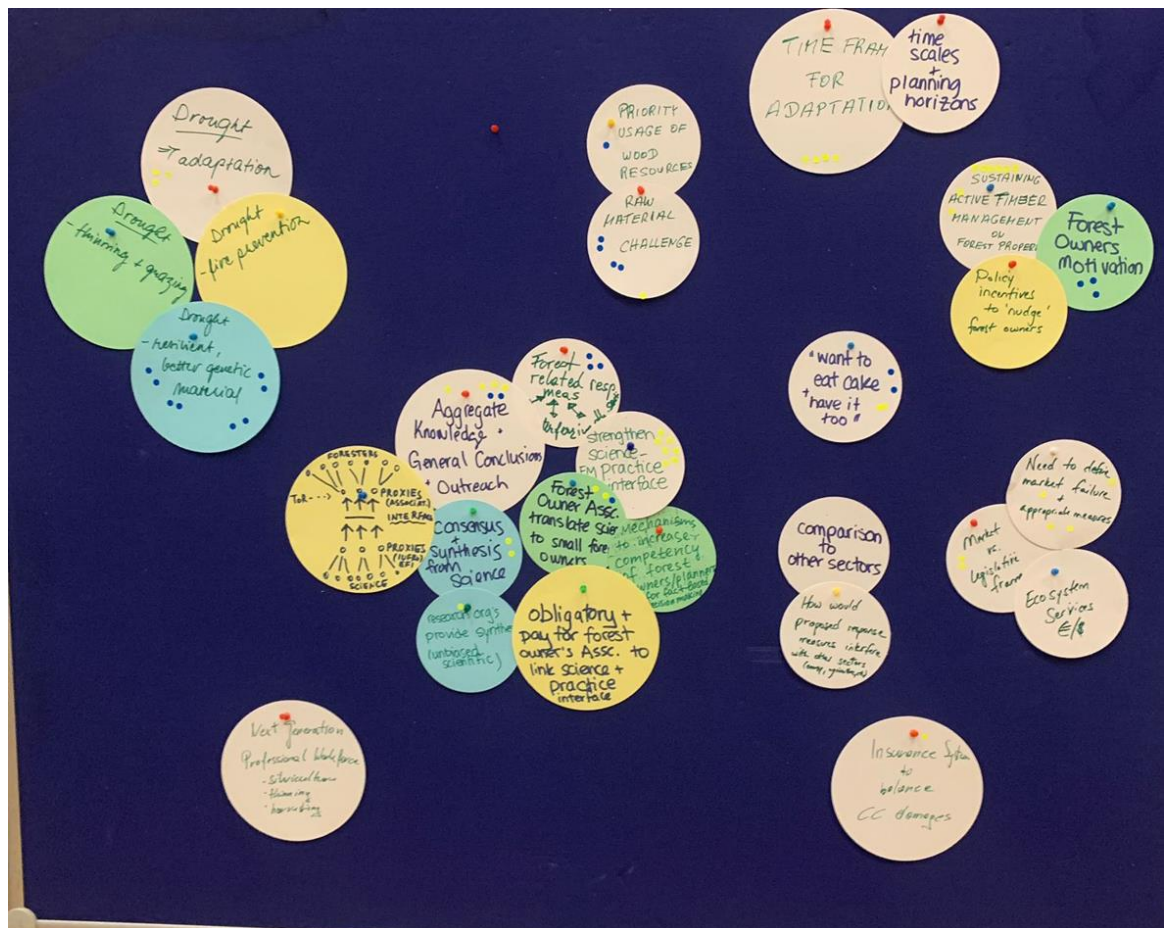
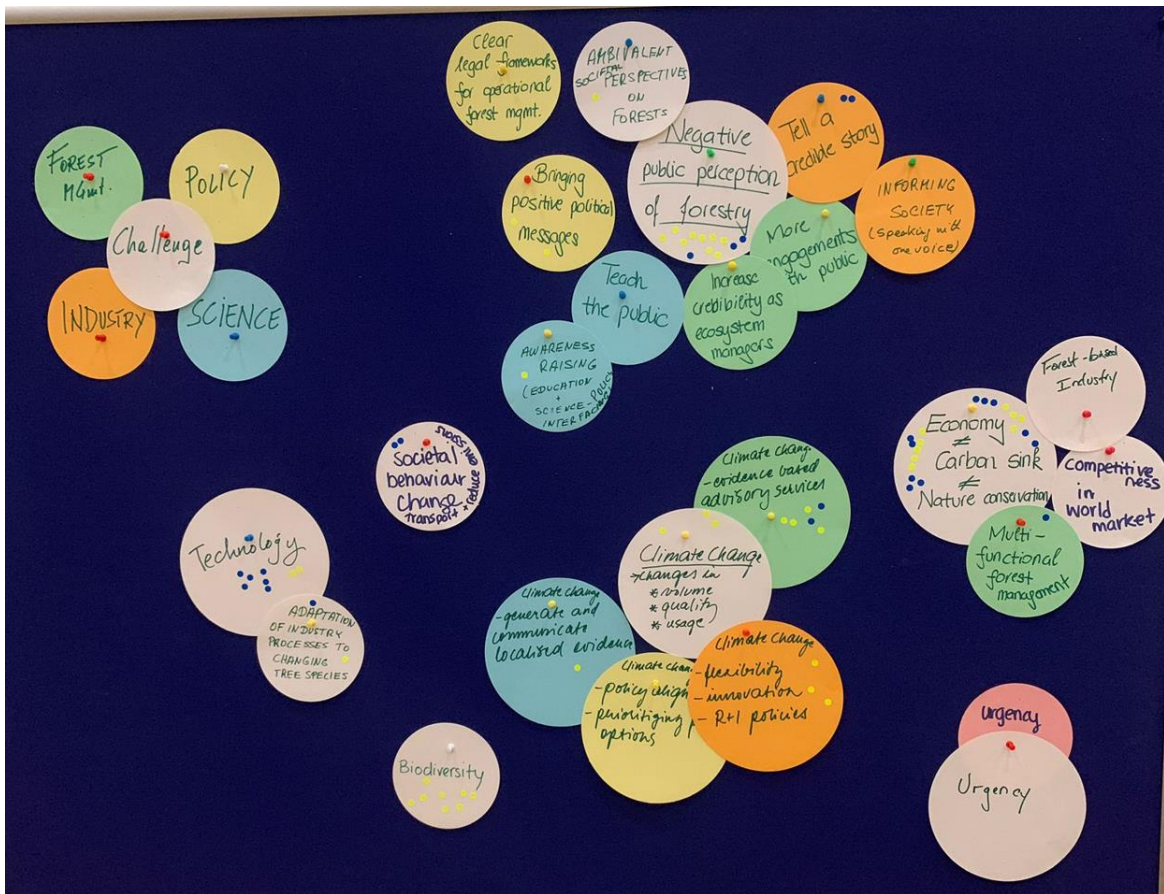


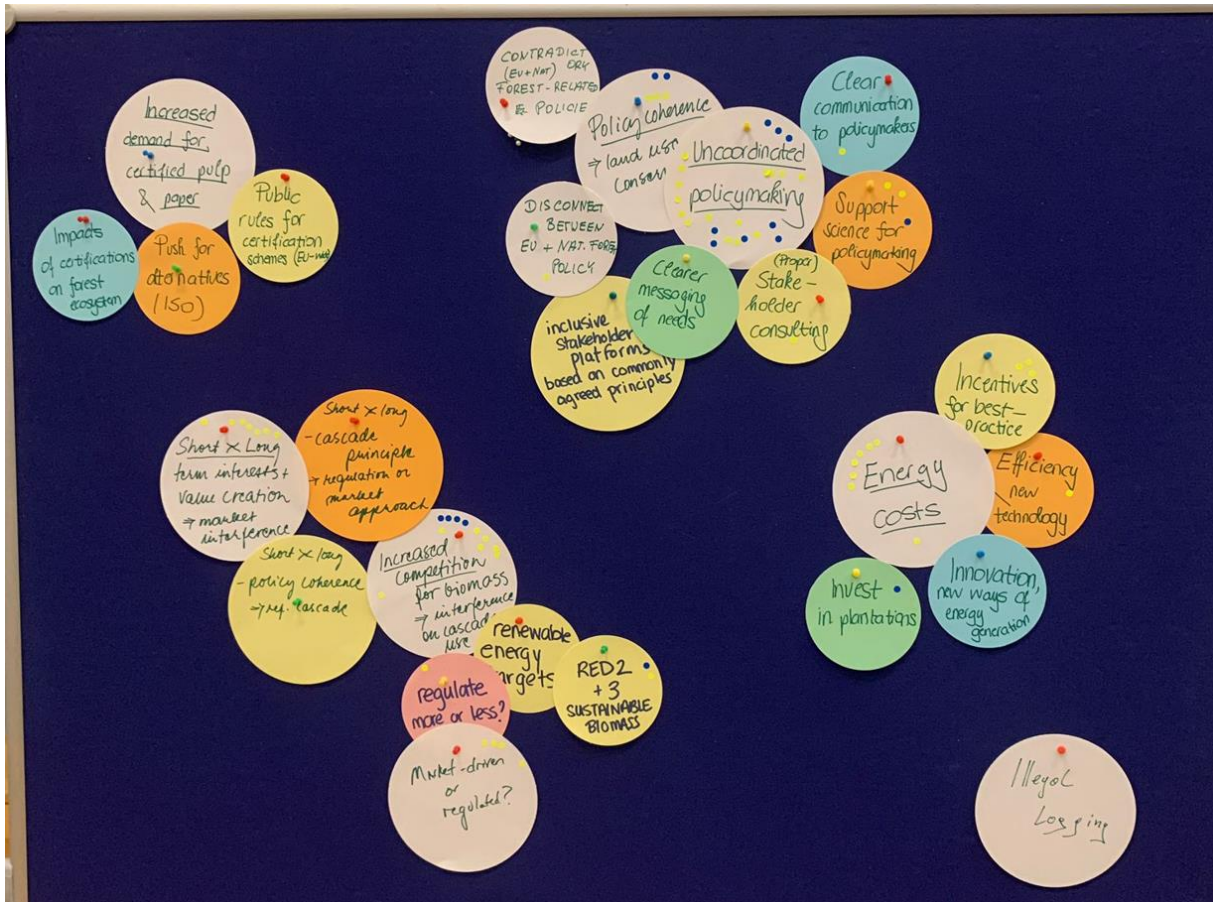
## PICTURES OF A VERY LIVELY MEETING





# THE THREE PINWALLS PRODUCED BY THE WORKING GROUPS IN DETAIL





## LIST OF PARTICIPANTS

Alexander Buck	IUFRO	Johannes Ressmann	SWISS KRONO
Amila Meskin	Eustafor	Jose Bolanos	IUFRO
Andreas Kogler	PHA	Lisa Lehner	BLRT, Austria
Björn Schmid	UPM	Meelis Seedre	Ministry of the Environment, Estonia
Daniel Boehnke	IUFRO-Mondi	Methodi Soritov	Univ. of FREIBURG
Dennis Popov	Mondi	Michael Kleine	IUFRO
Diksyha Devkota	IUFRO	Raisa Mäkipää	LUKE
Dirk Längin	Mondi	Manfred Lexer	BOKU
Doris Unterrainer	Mondi	Pekka Pesonen	COPA COGECA
Gerald Steindlegger	ISS	Susan Brunner	Mondi
Herbert Formayer	BOKU		
Herbert Pircher	Stora Enso		
Janice Burns	IUFRO		

**Watch a short video about the 2<sup>nd</sup> Think Tank Meeting:**

<https://youtu.be/tv1FLUBqwMU>