Enhancing the Long-term Competitiveness of the Forest Sector in a Green Economy:

Policies for Forest-based Bioeconomy in Europe

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WORKSHOP REPORT
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This report was compiled by FOREST EUROPE Liaison Unit Bratislava summarizing the views and facts provided in presentations as well as in following discussions among the panellists, moderators and other participants at the workshop, and do not necessarily reflect views of the organizers. In any case, the report does not represent position of FOREST EUROPE signatories.

Presentations delivered at the workshop are available at the FOREST EUROPE website at:
https://foresteurope.org/13981-2/
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Acknowledgments

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Special thanks go to the panellists and the moderators who provided the content for the workshop and this report:

Session on Current and future role of the forest sector and wood based products in a green economy
Moderator: Gunnar Olofsson, Chair of the Board of Statskog SF, Norway
Panellists: Pekka Leskinen, Head of Bioeconomy Programme, European Forest Institute
           Piotr Borkowski, Executive Director, European State Forest Association
           Leire Salaberria, Managing Director, Union of Foresters of Southern Europe
           Silvia Melegari, Secretary General, European Organisation of the Sawmill Industry
           Florian Steierer, Economic Affairs Officer, UNECE/FAO Forestry and Timber Section

Session on Policies and governance needed to enhance forest-based bioeconomy
Moderator: Aljoscha Requardt, Federal Ministry of Food and Agriculture, Germany
Panellists: Daniela Kleinschmit, Chair of Forest and Environmental Policy, University of Freiburg
           Jeremy Wall, DG GROW, European Commission
           Herman Sundqvist, Director General, Swedish Forest Agency
           Luis Elizondo, Delegation of the Basque Country to the EU

Session on Barriers and drivers for the long-term competitiveness of the forest sector in bioeconomy value chains and effective policy measures
Moderator: Huber Paluš, Secretary of PEFC Slovakia
Panellists: Jaana Korhonen, Researcher, University of Helsinki
           Niklas Gilmark, Business Director, Alvar (Sweden)
           Simon Speigner, Architect, sps+architekten zt gmbh (Austria)
           Johan Elvnert, Managing Director, Forest-based Sector Technology Platform

The organizers would also like to express sincere thanks to all the participants and those who contributed to the discussions.
Political background

This workshop was held as a follow up to the Madrid Ministerial Resolution 1: Forest Sector in the Centre of a Green Economy endorsed at the 7th FOREST EUROPE Ministerial Conference for the Protection of Forests in Europe held in 2015 in Madrid. Organisation of the workshop constitutes a set of FOREST EUROPE activities for the period of 2016-2020 adopted by European countries in 2016.

Objectives and the scope of the workshop

In order to promote long-term competitiveness and viability of the whole forest sector and its contribution to the overall Green Economy, the workshop was aimed at:

- exchanging views on future policy making and governance to support development of a forest-based bioeconomy in European sub-regions;
- discussing drivers and barriers for long-term economic viability and competitiveness of forestry and forest-based industries, which provide a sound basis for the bioeconomy, to enable relevant and effective policy response;
- identify possible topics for intergovernmental cooperation at pan-European level focused at maintaining and increasing economic viability and competitiveness of the forest-based sector.

The workshop discussed the long-term competitiveness of the forest sector value chains that contribute to sustainability of the overall economy, especially highlighting the role of wood and other forest-based products and materials from sustainable sources. The workshop addressed the competitiveness mainly at sectoral level as an ability of the European forest sector to compete with other sectors in Europe as well as at global market. However, as the competitiveness of firms, sectors and whole economies are closely interrelated it has not been entirely possible to draw a clear borderline between these different levels and focus solely at sectoral level.

Issues of forest ecosystem services (though they are important for the competitiveness of the primary producers, whole forest sector and a coherent part of the forest-based bioeconomy) were excluded from the overall thematic scope of the workshop as this area is tackled in its complexity under another activity of the FOREST EUROPE Work Programme.

Regarding the geographical scope, the workshop focused on the pan-European region.

As the main outcome, the workshop strived to formulate recommendations for FOREST EUROPE signatories, by identifying relevant topics for further cooperation at the pan-European level, which are summarized in this report.
Challenges, barriers and drivers

A shift towards a circular bioeconomy is first and foremost an opportunity for the forest sector, and can be a driver towards expanding the markets for forest based products. The workshop highlighted several challenges, barriers and drivers that needs to be addressed in order to promote this process and secure the long-term competitiveness of the forest sector.

There is currently no common definition of the concept of bioeconomy. The understanding of bioeconomy varies across Europe. Similarly, there are significant differences in the phase of development of a forest-based bioeconomy across Europe.

Capital-intensive primary production due to long regeneration periods (investments have to last for decades) pose challenges to the competitiveness of the forest sector. Besides these factors resulting from nature, there are other external or internal challenges, which firms as well as the whole sector has to adapt to for maintaining its competitiveness. Blurring political, social, environmental and economic boundaries, changing and incoherent policies and regulations, as well as several megatrends such as technological advances and changing customer values and preferences, globalizing the demand and market competition, demographic changes and urbanisation are examples of such internal factors. Climate change phenomenon and related biotic disturbances (storms, drought, fire, pests) pose further risks to competitiveness of the forestry and forest-based industries. Sustainable supply of wood as a raw material as well as other forest products and services depend on healthy and resilient forest ecosystems, while many European forests or forest tree species, whether indigenous or not, may not be adapted to future conditions under the climate change.

Moreover, forest ownerships are often very small and fragmented. Just within the EU, forests are in the hands of over 16 mil private owners, who are increasingly urban-based (and some even unidentified), often unaware of or not motivated by the need to harvest wood.

Forest harvesting is becoming more costly and negatively influenced due to ageing, informal, transient, untrained, uninsured workforce and skills shortage. Forest sector has to compete with other sectors also for workforce, both, highly skilled talents as well as manual forest workers. And even further, there might be an intra-sectoral competition e.g. if new jobs in bio-energy will be at the expense of the traditional forest-based industry.

Several panelist highlighted the fact that among public, the image of the sector is often negative, which might pose certain barriers to exploiting potential of annual increment, wood mobilisation as well as substitution potential of innovative wood based products. Despite the environmental problems bound with unsustainable and still growing consumption of materials with a higher environmental footprint (e.g. plastics, cotton or cement) and the need to decouple economic activity from resource use and environmental impact, people often have negative attitudes to forest harvests that provide renewable resource of raw material. The negative perception is relatively frequent mainly among urban citizens.

As the forests and forest sector influences and is influenced by many aspects of human society, coordination is another challenge crucial for sector functioning. Coordination is needed:

- Across multiple levels - improving sectoral connectivity and bioeconomy initiatives at all levels (local, regional, national, EU, pan-European, global) exploiting the existing international processes, platforms and institutions such as FOREST EUROPE
- Across different sectors - i.e. at national level coordination among relevant ministries including other land use sectors. Two
examples from Sweden were showcased – an initiative “Bioenergy done right”, where cooperation among four government agencies (agriculture, energy, environment and forestry) has been applied in order to provide input to government with more unified approach to bioenergy; and “Fossil Free Sweden”, joint programme by the forest industry sector and eight other sectors.

- Across different policies/policy goals/policy instruments - to tackle policy inconsistencies and ensuring coherence across the forest-based bioeconomy and other on-going discourses (climate change, sustainability).
- Across multiple actors - to facilitate a multi-stakeholder cooperation and dialogue among state actors, private sector and science such as forest-based bioeconomy networks at different levels. Forest owners and managers should be appropriately involved in decision making. Swedish “Strategic cooperation programme on circular and bio-based economy” was provided as an example of such cooperation of multiple actors.

Besides the overall economic cycle and the external and internal challenges listed above, development of the forest-based bioeconomy is driven by numerous factors at firm as well as sectoral levels:

- At firm level: firm characteristics and capabilities to innovate, collaborate and network, risk perception;
- At sectoral level: strategic decision making related factors - innovation and differentiation strategies, feedstock supplies and sustainability issues, education systems. The common limitations for developing any kind of bioeconomy is availability of natural resources and the need to keep the sustainability standards.

Countries have established a long term cooperation at the pan-European level involving stakeholders. This comprehensive cooperation has resulted in development of a set of criteria and indicators for sustainable forest management (SFM) as well as other tools and guidelines (going well beyond the amount of harvests) providing the framework for the implementation of SFM in European forests embracing ecological, social and economic functions of forests. Similarly, the sector has been massively engaged in the climate, biodiversity and other forest related discourses at various levels and gained rich experience in tackling the respective compliance issues. This cooperation and engagement could be used actively for contributions to the development of forest based circular economy in Europe in the future.

Moreover, European forests are increasing in area and growing stock and age (e.g. in the EU, over 90% of the raw wood processed into materials and products each year by the EU’s forest-based industries comes from EU forests, using just 60 % of their net growth), so there is a potential for sustainable wood mobilisation. However, LULUCF regulation at the EU level and various carbon schemes could limit forest harvest emphasising the role of forests as carbon sink. There is a need to constantly adapt the framing of the forest-based bioeconomy to ongoing developments (e.g. climate change, circularity) as the policy targets are moving and the science feeds iterative policy processes. Coherent forestry policy and coordination is needed to ensure that all policy domains take into account the fact that the main role of forestry is not to offset carbon emissions, and that the wood products also fulfil the function of carbon storage and substitute more climate negative energy sources and materials.

However, in any case, not all potential bioeconomy markets can be met from the forest
resources - or any biomass source. Therefore, development of any bioeconomy must be connected to sustainability of biomass supplies. Demand for wood supplies comes not only from traditional forest-based industries themselves but also from growing bio-energy sector, and in future it might also likely raise from chemicals, textiles and other innovative bio-based technologies. Will therefore the new bio-economy technologies (e.g. bio-refineries) represent an increased competition for the existing forest based industries? Global consumption is likely to be increased due to growing population and mainly shifting the large part of the population to the middle class - that might be the case especially in India and China but also in other parts of the world including a gradual rise of the consumption potential at African continent. All those developments can bring opportunities for forest sector, but also influence European and global forest resources.

The major societal challenges and developments bring the challenges for the European forest sector, but at the same time, also offer major opportunities for mainstreaming usage of the forest products in other sectors such as construction, textiles or packaging. Higher usage of wood in constructions (replacing concrete and steel by wooden structures) including in multi-storey buildings and urban development can offer opportunities to reduce footprint of construction industries as well as to provide opportunities for the forestry, sawmill industry and other innovative wood based industries to increase demand for their products. Each ton of wood used instead of concrete may prevent 2 tons of CO2 emissions.

Similarly, many other innovative wood-based products can find its niches and markets offering more sustainable alternatives to traditional fossil based or natural materials, which production causes major environmental and even social issues.

Forest sector can provide raw material for textile industry thus alleviating many land-use issues bound with cotton production including land degradation, food security, water scarcity and related social aspects as well as reducing carbon footprint of synthetic fibres. Share of wood based fibres in global textile fibre market is currently about 6.6% (2016). It was stated that there is a potential to almost triple this share till 2050 and consequently mitigate the above listed impacts of the textile industry if delivered sustainably. In addition to the opportunities resulting from substituting synthetic fibres in textile industry, replacing plastics as such, opens other opportunities for the forest sector in sustainable packaging. Plastic economy with its huge impact and resource consumption is now resulting in 390 Mt of CO2 emissions and 8 Mt of plastic waste ending up in oceans every year, and yet the demand for plastics is expected to grow four times till 2050. Current attention to plastic pollution provides a momentum to mainstream sustainable forest based products also towards this direction.

In addition to the mitigation effect of the forest products, application of new management tools and approaches such as climate smart forestry can provide additional mitigation impact to already existing carbon sink in European forests.

Of course, exploiting these enormous opportunities based on circularity principles and renewable forest-based materials cannot be achieved without the acceptance and even active involvement of society with positive attitudes to wood based products and sustainable forest management.

Despite the existing barriers, there are various success stories, which prove that building the competitive forest-based bioeconomy value chains forming a sound basis for broader green economy is possible. Further efforts should therefore be paid to upscale these new business applications, and to promote synergies with other key sectors.
Workshop conclusions

1. Coherent and stable policy framework as well as coordination across different levels, sectors, policies and actors is needed to facilitate the basis for developing the forest-based bioeconomy.

2. Intergovernmental cooperation on the forest-based bioeconomy should be facilitated (possibly creating a kind of (pan-)European "bioeconomy hub"). Potential of the existing institutions and processes, such as Forest Europe, should be considered for this purpose to build on established cooperation, developed relationships and trust (incl. public and private forest actors) as well as to take into account the criteria and indicators for Sustainable Forest Management developed at the pan-European level.

3. Participatory approach to intergovernmental cooperation should be maintained to provide a platform for sharing experiences across borders and regions.

4. When developing bioeconomy strategies, different expectations and understanding of the bioeconomy should be carefully considered - the concept of forest-based bioeconomy should be refined, clarified and systematized, however without denying its intrinsic diversity so that solutions can be adapted for local/regional conditions incl. societal aspects.

5. To eliminate distortions at the market (beyond the sector), policy making should aim at maintaining stable and predictable operational environment as well as setting equal conditions for all the sectors - e.g. set appropriate price of carbon emissions equal for all the sectors (including plastic and petrochemical sectors) and develop other standards needed to create level playing field for the bioeconomy. Creating such a level playing field should be superior to subsidies in order to encourage long-term healthy competition and innovation.

6. To promote wood as building material, appropriate common European standardisation on fire protection, water protection, and sound insulation for wooden constructions should be developed. New public buildings built from wood can encourage and rise trust in wooden construction, especially in those areas without long-term tradition of building with wood.

7. In connection to promoting and strengthening wood-based textile value chains, several possible common standards or certifications were highlighted (potentially applicable also in other value chains) such as certification of local source (e.g. "Made of country’s wood"), or certification of European value chains (e.g. "Completely made in Europe"), common standards for LCA-analyses (parameters and weighting), environmental impact certification on textile value chains at European level. Support and investments in such local production is another important factor to scale up these innovative technologies and products.

8. To better understand forest dynamics as the basis for adequate, sustainable wood supplies, from the European forests as well as beyond, more resource information as well as research is needed. Especially the "carbon issue" needs to be more extensively examined and resolved (incl. carbon sequestered not only in trees but also stored in soil and wood-based products). There may not be a convenient "one-size-fits-all" solution. Coordination among policies is needed to apply coherent approach also to this issue.

9. From the market view, the sector should look for where the consumption will be in the future (which products and which regions of global market), e.g. growing middle-class at the global level can significantly influence these developments.
10. In order to maintain the innovation potential, technological development and use of enabling technologies should be promoted, e.g. to find new uses for hardwoods, to apply innovative digital technologies for effective data collection, effective logistics, controlling operations, or for applications in new value chains such as automated sewing etc.

11. Policies should be supportive to the internal factors influencing the long term competitiveness through accounting for the entire innovation system including education, R&D as well as risk capital (products, processes and business models).

12. Collaboration along the whole forest-based value chains as well as creating enabling business ecosystems around large production facilities are important to exploit potential of by-products or residues and exploit potential of innovative wood uses. Entrepreneurship and stimulating business ecosystem should be promoted also through removing unnecessary regulations and reducing bureaucratic burden for entrepreneurs.

13. Despite a possible growing demand for wood supplies in future, the sector should maintain the integrity of forest resources – ensure meeting the principles of Sustainable Forest Management. Developed sustainability standards should be utilized also in public procurement including local sourcing, which can help controlling the risks related to sustainable supply chain management.

14. Support is also needed for the base of the value-chains – motivate forest owners and managers as well as forestry workers and contractors:
- To mobilize wood from European forests; it is necessary to identify, inform and motivate especially small private forest owners to sustainably harvest wood from their forests. Existing tools for sustainable wood mobilisation should be exploited (e.g. Good practice guidance on the sustainable mobilisation of wood in Europe).
- To secure availability of skilled workforce for the competitive and sustainable industry; it is necessary to make forests, forestry and forest-based industries safer, better paid and connected, hence more attractive to recruits, both young and old. This can be done through better life-long learning, education and training as well as recognition and transparency of competences and qualifications, especially for wood harvesting.

15. It is needed to get acceptance and even active involvement of society with positive attitudes to wood based products, and to attract the imagination and interest of young people.

16. Sustainable supply of wood and the development of the bioeconomy depend on healthy, dynamic and resilient forest ecosystems. It is therefore necessary to anticipate climate change impacts and to adapt forest structure and management as well as to adapt forest industry to changing quantity and quality of the European wood supply.