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Seventy-fourth session

Geneva, 18-20 October 2016

Report of the seventy-fourth session of the Economic Commission for Europe Committee on Forests and the Forest Industry

Introduction

1. The seventy-fourth session of the ECE Committee on Forests and the Forest Industry (COFFI) was held in Geneva, Switzerland, from 18 to 20 October 2016. More than 120 participants from the ECE region attended the session. The session was followed by a workshop on 21 October 2016 on measuring the value of forests in a green economy.

Attendance

2. Delegations from the following 30 ECE member States participated: Austria, Belarus, Belgium, Bosnia and Herzegovina, Canada, Croatia, Czech Republic, Estonia, Finland, France, Germany, Ireland, Latvia, Montenegro, the Netherlands, Norway, Poland, Portugal, Republic of Moldova, Romania, the Russian Federation, Serbia, Slovakia, Slovenia, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom and the United States of America.

3. Representatives of the European Commission and European Environment Agency participated in the session.

4. The following United Nations (UN) bodies and agencies attended the session: Food and Agriculture Organization of the United Nations (FAO), International Labour Organization (ILO), United Nations Forum on Forests (UNFF), United Nations Environment Programme (UNEP) and UN-REDD Programme Secretariat.

5. The following intergovernmental organizations were present: Group on Earth Observations Secretariat.

6. Representatives of the Liaison Unit Bratislava of Forest Europe attended the session.

7. Representatives of the following non-governmental organizations attended the session: Connecting Natural Values and People Foundation, Forest Stewardship Council

(FSC), Programme for the Endorsement of Forest Certification (PEFC) Council, Québec Arbres, Sustainable Forestry Initiative (SFI) and Urbasofia/Internal Society of City and Regional Planners (ISOCARP).

8. Representatives of the educational organizations were present: Bern University of Applied Sciences, ETH Zürich, Lycée agricole de Poisy, Polish Wood Technology Institute, Institute of Forests of Russia, University of British Columbia, University of Helsinki, University of the Highlands and Islands, and University of Washington.

9. Representatives of the following private sector companies and associations attended the session: Canadian Wood Council, Climate-KIC Switzerland, Danzer, dedaLEGNO, European Panel Federation, Forest Economic Advisors, Forest Industries Intelligence Ltd., Idaho Forest Group, Ilim Timber Industry, Kastamonu Entegre, Le Commerce du Bois, Ilim Group, Pan Bern AG, PHBois Forest and Timber Consultancy Office, Rhomberg Bau GmbH, RVR Service AG – Clean Forest Club, Union of Timber Manufacturers and Exporters of Russia, Swedish Forest Industries Federation, Timber Design Initiatives Ltd., Valois Vision Marketing and World Business Council for Sustainable Development.

Opening of the meeting

10. Mr. Christoph Dürr (Switzerland), Chair of COFFI, welcomed the delegates to the seventy-fourth Committee session and introduced the key elements to be discussed.

11. Ms. Ivonne Higuero, Director of the Forest, Land and Housing Division, ECE, recalled the essential contribution of forests and the forestry sector to the ongoing transition towards a green economy. As the recently appointed Director of the Division, she expressed her commitment to continue efficient work in this direction.

12. Mr. Roman Michalak served as secretary of the Committee.

I. Adoption of the agenda

Documentation: ECE/TIM/2016/1

13. The meeting adopted the provisional agenda as contained in document ECE/TIM/2016/1.

II. Forest ownership, and employment in the forest sector

A. Forest ownership in the region – preliminary results of the thematic study

Documentation: ECE/TIM/2016/Inf.1

14. The secretariat provided a short introduction on forest ownership in the region. It recalled that during the seventy-second session of the Committee in Kazan, Russian Federation, it had presented the plan for a joint questionnaire that would be developed and disseminated in cooperation with the COST Action “Forest Land Ownership Changes in Europe: Significance for Management and Policy” (FACESMAP). The secretariat briefed participants on the progress achieved with this enquiry during the thirty-seventh session of the Joint Working Party on Forest Statistics, Economics and Management, held on 18-20 March 2015 in Geneva, Switzerland, and thanked the Russian Federation for their support for this activity.

15. Ms. Anna Lawrence, Honorary Professor at the University of the Highlands and Islands in Scotland and Vice Chair of the COST Action FACESMAP, provided a synthesis of this programme. She highlighted the increasing research activity on forest ownership since 1990. Most of the global research activity has been undertaken in North America and Europe. The FACESMAP Action covered 30 participating countries and, in the implementation of the programme, members compiled 28 expert country reports and produced a new forest ownership map for Europe. She highlighted the good cooperation with the ECE/FAO Forestry and Timber Section, which resulted in the joint questionnaire on forest ownership and the upcoming study on forest ownership in the ECE region.

16. Ms. Lawrence ended her presentation by highlighting some of the conclusions of the FACESMAP Action. The diversity of types of forest ownership was noted as a positive feature. However, this diversity may pose some challenges in terms of harmonization of reporting and formulation of relevant policies. She concluded that the outcome of the Action could provide support to advisory services and organizations that work with forest owners. She noted that the programme has increased awareness amongst owners, and suggested that a next step could be to evaluate the policies related to forest ownership and advisory services.

17. Member States emphasized the importance of enhancing information on different types of forest ownership to improve policies targeting forest owners. They stressed that modern information technology could be used to better communicate with forest owners.

18. The secretariat briefly presented the survey replies received, and highlighted the balanced geographical coverage. However, the response rate varied widely depending on the questions. The secretariat informed the Committee that it had participated in the final conference of the COST Action FACESMAP, held on 7-8 September 2016 in Vienna, Austria. The structure of the future study, the availability of experts as authors and co-authors, and the potential timeline for this study were discussed with the experts. The future study will be developed with authors and co-authors drawn from the members of the FACESMAP Action.

19. The secretariat announced that, according to the timeline, it would present a draft version of the study at the thirty-eighth session of the Joint Working Party on Forest Statistics, Economics and Management, and would invite member States to comment on the study before it is finalized in summer 2017. The Committee was informed that results should be made available at the joint sessions of COFFI and the European Forestry Commission (EFC) in 2017. Some delegates stated that the questionnaire on forest ownership had triggered increased collection and availability of relevant data at national level.

20. While member States welcomed the process of data collection, which included the involvement of the Team of Specialists (ToS) on Monitoring Sustainable Forest Management and consultation with member States, delegates advised the secretariat to balance the reporting needs with the capacity of the member States to provide data for the questionnaires. They also highlighted that, in future, a high response rate would be needed to increase the value of the study as well as the efficient use of invested resources. Several delegates noted that definitions concerning forest ownership varied amongst member States, and highlighted the need for better guidance on the use of international definitions as well as the need for harmonization and linking with the FAO Forest Resources Assessment.

21. Delegates took note of the outcomes of the COST Action FACESMAP and appreciated the successful cooperation with this programme. The Committee further acknowledged the progress made in the study, and welcomed the intention by the secretariat to present the results in the upcoming sessions of the Joint Working Party and COFFI and the EFC in 2017.

B. The forest sector workforce and future green jobs in the region – preliminary results of the study

Documentation: ECE/TIM/2016/3

22. Ms. Lawrence presented the discussion paper on “Social aspects of the forest sector workforce: a review of research in support of the implementation of the Rovaniemi Action Plan”. The research indicates that the forest workforce is ageing, but it is also a trend which can be observed in other sectors. More specific forest sector characteristics include low representation of women and high diversification of forest jobs.

23. Ms. Lawrence noted that green jobs research is mostly carried out at the national level. Therefore, it is difficult to establish trends at the international level. Only the matter of safety has received significant attention internationally as a major topic relevant to the forest sector. Health and well-being are often considered separately from safety. The aspect of mental health appears to be an increasing problem.

24. As regards the amount of workforce employed, Ms. Lawrence stressed that the trends are not uniform across countries. In most countries, traditional forest jobs are in decline. However, some countries are experiencing an increase of interest in forest education and new types of forest jobs. Jobs in the forest sector are often perceived as destructive towards natural resources, even though sustainably managed forests contribute to preserving ecosystems and other ecological functions of the forest.

25. Mr. Michal Vančo, Policy Advisor at the Liaison Unit Bratislava for the Forest Europe process, briefed the participants on the work on green jobs included in the Forest Europe Work Programme. Activities include the creation of an expert group on green jobs, education and training systems, the organization of a workshop on new skills and green jobs, and the preparation of pan-European guidelines for the promotion of green jobs in the forest sector. He expressed the interest of Forest Europe in working jointly with the ECE/FAO Forestry and Timber Section in this area.

26. Ms. Kelly Sharp, Junior Technical Officer at the International Labour Organization (ILO), updated the Committee on ILO work on green jobs in the forest sector and the collaboration on this topic with other international agencies and initiatives. She highlighted the ongoing cooperation with the ECE/FAO Forestry and Timber Section in the area of implementation of the Rovaniemi Action Plan (RAP) for the Forest Sector in a Green Economy, and the participation of the ILO in the ECE/FAO/ILO ToS on Green Jobs in the Forest Sector.

27. Mr. Josef Herkendell, Head of the European Affairs Unit for the Ministry for Climate Protection, Environment, Agriculture, Conservation and Consumer Protection of the State of North Rhine-Westphalia, Germany, presented the current and planned work of the ECE/FAO/ILO ToS on Green Jobs. He welcomed the opportunity of joint work in the area of green jobs with Forest Europe, and suggested inviting the World Health Organization as a partner for future work on health and well-being in the forest sector. He highlighted the importance of green jobs in the context of achieving a green economy and the Sustainable Development Goals (SDGs), as well as the need for further work on developing statistics for green jobs for better policymaking.

28. The Committee noted the need to further specify what a green job in the forest sector is, based on existing green job definitions. It agreed that the joint ECE/FAO Timber and Forestry Section will continue its work on green jobs. Delegates stressed the difficulty of working on green jobs indicators in the context of scarce data, and suggested tailoring ambitions to available information. The Committee requested that the ToS considers other jobs in the current programme, such as: forest firefighters, forest contractors, and other jobs

indirectly linked to the forest sector such as ecotourism. They also requested adding the analysis of other aspects of forest work such as working conditions, social inclusion, illegal forest employment, and the need for innovation and training in this area. The Committee, in addition, suggested showcasing examples where downward trends of forest employment were reversed, with a focus on success factors driving such changes. Furthermore, delegates recommended recognizing the contribution of forests and the forest industry towards reaching the SDGs, in particular SDG 9, “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”.

29. The Committee recommended the continuation of work in the area of green jobs, building on synergies with Forest Europe and the ILO. It welcomed the proposal to present the study by the ECE/FAO ToS at the joint COFFI and EFC sessions in 2017. The Committee supported the organization of the workshop on forest jobs, to be organized in cooperation with Forest Europe in 2017, leading to preparation of further studies and guidelines.

III. Forest products and markets

A. Forest products market discussions, including panel discussion: opportunities for and barriers to forest products from the perspective of the private sector

Documentation: ECE/TIM/2016/4

30. The market discussions were opened by the Chair of the Committee. The secretariat introduced the topic and drew attention to the background documents.

31. Mr. Rupert Oliver, Forest Industries Intelligence Ltd., provided an overview of European production and consumption trends for key forest products markets. Currency exchange rates were a key driver of forest products trade. Europe has a net trade surplus of forest products. Construction trends are improving slowly as a result of low consumer confidence but are quite varied across Europe, with Germany, the Netherlands and Spain showing the strongest growth. The wood furniture manufacturing sector in Europe continues to show resilience and is growing, with 84% of furniture consumed in Europe produced domestically. Despite a cautiously optimistic outlook for forest products markets, manufacturers have the perception that there is a lack of sufficient raw materials.

32. The reviews of the EU Timber Regulation (EUTR) and the EU FLEGT Facility (FLEGT) indicated that these trade related measures had a positive impact on legislative compliance and sustainable forest management practices, but the application of the measures varies amongst the member States. There has been a slight revival of imports of tropical wood into Europe.

33. Mr. Nikolay Ivanov, Vice President of the Union of Timber Manufacturers and Exporters of Russia, updated delegates on the economic situation in the Russian Federation, which has experienced a devaluation of the ruble and falling oil prices. The falling ruble has helped the forest products sector by increasing exports of Russian forest products, while imports of most forest products into the Russian Federation have declined. Additionally, domestic consumption has remained stable on the back of growth in new residential construction. Wooden buildings account for 20% of low rise buildings in the Russian Federation. Public spending on, and support for, wood construction is increasing.

34. Mr. Paul Jannke, Principal, Forest Economic Advisors LLC, presented an overview of North American markets. Production and consumption of wood products in North America have been increasing since the global financial crisis in 2008 and has been averaging about 6% growth per year since 2011. However, production and consumption levels remain far

below the pre-crisis levels. A slow steady growth of wood products consumption, of about 4% per year, is forecast for the next five years. This growth will be driven by new residential construction. Several factors underpin this expectation, including: increasing employment and wages, housing affordability, favourable demographics, and pent-up demand as a result of the lack of construction in the years immediately following the economic crisis. Additionally, the average age of houses in the United States has increased to 37 years, indicating a potential need for renovation. These trends are not the same in Canada, where construction has kept up with or exceeded demand. On the other hand, in some key areas home prices have gone up at rates beyond historical norms.

35. Mr. Jannke anticipated a continued decline in exports of forest products from the United States, for example to China, as a result of the strength of the dollar and because domestic demand is increasing. Regarding the softwood lumber agreement between the United States and Canada, Mr. Jannke pointed out that prices spike and volatility increases during the periods whenever the agreement expires.

36. These market overviews and the ensuing discussion, which address the key developments and drivers of change for the forest sector in the ECE region, were reflected in the market statement attached to this report (Annex I).

B. Trends and perspectives for selected forest products (pulp and paper, pallets and wooden packaging)

Documentation: ECE/TIM/2016/5 and ECE/TIM/2016/6

Wooden packaging

37. Ms. Gunilla Beyer, Swedish Forest Industries Federation, presented the wooden pallet and packaging sector. This sector is a large and reliable wood customer, with annual production of more than 400 million pallets in Europe, 740 million in the United States, about 18 million in the Russian Federation and more than a billion in China. Much of the pallet production uses recycled wood from old pallets. The wooden packaging industry is concerned about compliance with international phytosanitary standards. She mentioned both advantages and disadvantages of circular economy initiatives. On the one hand, using renewable materials like wood is encouraged by the circular economy; but on the other hand, the advantages of recycling plastic could result in wooden pallets losing market share compared to other materials.

38. The impact of health regulations for food packaging on the wooden packaging industry, as well as the quality of the sawn wood used for pallets, were topics of discussion.

39. The Committee took note of the information provided.

Panel discussion on “Opportunities for and barriers to forest products from the perspective of the private sector”

40. The discussion was moderated by Mr. Sylvain Labbé, founder and Chief Executive Officer of the Quebec Wood Export Bureau (Q-WEB), founder and Vice-President of the Canada Wood Group, and Board member of the UNEP Sustainable Buildings and Climate Initiative. Invited speakers were: Mr. Marc Brinkmeyer, Chairman and co-owner of the Idaho Forest Group, Mr. Hans-Joachim Danzer, Chief Executive Officer of Danzer Holding AG, Mr. Sviatoslav Bychkov, Managing Director of Communications at Ilim Timber Industry LLC, and Mr. Naci Güngör, Brand and Corporate Communications Manager at Kastamonu Entegre A.S. The details of the presentations are summarized in Annex II.

41. Discussions covered the need to create a level playing field by internalizing external costs. If the ecological footprint of products was reflected in the price of the final product,

wood would become highly competitive. This could be achieved on the product side (e.g. carbon tax) or at the level of the production (e.g. payment for ecosystem services). The ongoing work of the FAO Advisory Committee on Sustainable Forest-based Industries on bio-based packaging was mentioned and it was suggested to consider its outcomes.

42. The industry expressed its wish to develop consumers' trust in wood as a material, and called for its increased promotion. In addition to communicating to others outside the forest sector, there is a strong need to improve coordination and communication among different forest products subsectors. For instance, producers of sawn softwood and sawn hardwood could express their demands jointly to policymakers.

43. The panel highlighted the importance of legislation to allow for successful business in, and efficient use of, forest resources at the same time. For example, they called for legislation that works for small and medium-sized enterprises, as well as legislation that is consistent, coordinated and applied in the same way across countries (i.e. EUTR).

44. When asked by the moderator for policy recommendations, the panellists proposed the following:

- a) introduce a "carbon inside quota";
- b) reduce taxes and fees on wood, to become more competitive with the global market;
- c) provide government support for research and development;
- d) internalize external costs into the final price of products (e.g. payment for ecosystem services);
- e) discourage maintaining wood stock (i.e. introduce a tax);
- f) raise the acceptance of the use of timber by society;
- g) determine whether carbon stored in wood products is an effective means of climate change mitigation;
- h) let the private sector manage and utilize private and public forests (i.e. to minimize forest health issues and the risk of forest fires).

45. The Committee took note of the discussion.

Pulp and paper

46. Mr. Michel Valois, President and Chief Executive Officer of Valois Vision Marketing, informed the participants on global trends and developments in the pulp and paper industry, focusing on North America, Brazil and China. He presented the past trends in pulp, paper and paperboard production in North America and highlighted a significant shift in their production capacity that has taken place in recent years. North American and European producers reduced their production capacities by 86 million metric tonnes, while producers in China increased production capacity by over 93 million metric tonnes in the past ten years. He also highlighted that wood pulp industries from Brazil and the Russian Federation are further increasing their exports to China, while exports from North America are likely to decrease significantly by 2019.

47. Mr. Valois stressed some key issues for the industry. While automation may be a solution to compete with low-wage countries, it will significantly reduce employment in the sector in the long term. Certification, green economy and high environmental standards could be conducive to maintaining production in the ECE region and could limit a further shift in production. New ways of accounting, such as green accounts, could make the sector more attractive for investors again. This could mean including non-monetary values in the financial analysis and in accounting for earnings per share. Mr. Valois concluded his presentation with

a discussion on competitiveness between countries, focusing on issues such as overly devalued currencies, different accounting practices, and the provision of subsidies, loans and grants.

48. Mr. Bernard De Galembert, Innovation and Bioeconomy Director at the Confederation of European Paper Industries, briefed the participants on trends and developments in the pulp and paper industry from a European perspective. The overall market situation and outlook on pulp and paper in Europe seems to be less bleak compared to North America, with production remaining relatively stable in the last years. Europe remains a net exporter of pulp and paper, even if, lately, imports have increased and exports decreased. Consumer behaviour is changing in Europe as well, and has negatively impacted consumption and production of graphic paper. Packaging and tissue paper are experiencing positive trends. Mr. De Galembert highlighted that the future of the sector lies in innovation, sustainability and bio-based products. In this regard, he further pointed out that some products recently developed are not included in the statistics of the sector.

49. Mr. Eduard Akim, Head of Department at the Saint Petersburg State University of Industrial Technologies and Design, provided an overview on “Research and Innovation in the Russian Pulp and Paper Industry”. First, he presented the “BioTex2030” project, which aims at creating and implementing innovative models of development for the Russian pulp and paper industry. He then briefed participants on the “Larch” project, which focuses on developing innovative technologies for complex processing of larch wood to produce a new kind of pulp for the world market. The Siberian and Dahurica larch are widespread in western, central and trans-Ural Russia. A new technology has been developed that allows for the obtention of purified wood pulp along with arabinogalactan and other water-soluble hemicelluloses on an industrial scale. Mr. Akim reported that this complex processing has been applied in the Bratsk Pulp and Paper Mill since 2014, resulting in the production of 1 million tonnes of pulp.

50. The Committee took note of the information provided.

C. Wood construction in the region: what can forest industries do to help nurture a paradigm shift to using wood for green construction?

Documentation: ECE/TIM/2016/Inf.2

51. In view of the discussions in the last meeting of the Joint Working Party on cooperation with the Committee on Housing and Land Management (CHLM), Ms. Ivonne Higuero, Director of the Forest, Land and Housing Division, ECE, was invited to give an overview of the seventy-seventh session of the CHLM. She mentioned the establishment of the Joint Task Force on Energy Efficiency in Buildings, the opportunity for the Committees to work together on the promotion of wood construction, and the importance of the Habitat III New Urban Agenda in this regard.

Panel discussion on wood construction in the region

52. The discussion was moderated by Mr. Peter Moonen, Manager, National Sustainability, Canadian Wood Council. Invited speakers were: Mr. Ivan Eastin, Professor at the University of Washington and Director of the Center for International Trade in Forest Products, Mr. Michael Klippel, Senior Scientist and Research Leader, “Fire in Timber Group”, Institute of Structural Engineering, Timber Structures of the Swiss Federal Institute of Technology (ETH), Zurich, Ms. Katrin Hauser, Programme Manager, Accelerator Program, Climate-Kic, Zurich, Mr. Harald Professner, Global Business Development, Rhomberg Group, Mr. Maurizio Follesa, Co-founder of the Timber Engineering design

studio, dedaLEGNO, and Mr. Peter Wilson, Managing Director, Timber Design Initiatives Ltd.

53. Discussions covered the major obstacles to increasing the use of wood in construction, and included the following suggestions to overcome them:

- a) enhance the education of architects and engineers on the physical and design properties and use of wood;
- b) harmonize and update regulations, products standards, and building and fire safety codes;
- c) improve communication with insurers and financiers about actual risks and cost effectiveness;
- d) adopt lifecycle analysis of buildings including embodied emissions;
- e) promote increased public funding for wood construction;
- f) set up a taskforce to engage with the construction sector to promote wood construction.

54. The Committee took note of the above suggestions. In addition, the delegates expressed the need to carefully consider the objectives and financial implications of the establishment of a taskforce as suggested in paragraph 53 f.

55. The detailed report of this panel discussion is available in Annex III of the present report.

IV. The global and regional policy context

Documentation: ECE/TIM/2016/7

A. The role of forests, their goods and services, and the forest sector in the implementation of the 2030 Agenda for Sustainable Development

56. Ms. Monika Linn, Principal Adviser and Chief of the Sustainable Development and Gender Unit at the Office of the Executive Secretary, ECE, presented the implementation and follow-up by the ECE of the 2030 Agenda for Sustainable Development. She informed the delegates about the findings of the regional survey on the 2030 Agenda that was conducted among the ECE member States at the end of 2015. Most countries in the region already have national strategies for the implementation of SDGs and are adapting the review and follow-up mechanisms based on existing systems. Many of them still face the challenge of implementation of the SDGs in a more integrated manner, and how to measure progress in achieving the goals remains difficult.

57. Ms. Linn highlighted the recognition of the need for follow-up and review mechanisms for the 2030 Agenda at the regional level, and the potential contribution of the UN Regional Commissions to the High-Level Political Forum review at the global level. She noted that regional reviews provide a good opportunity for peer learning, exchange of good practices and addressing transboundary issues. At a regional meeting for the ECE region in May 2016, countries discussed how they might wish to set up the regional process of reviews, and concluded that they should build on existing mechanisms. That process is still shaping up and ECE Sectoral Committees will have a role to play in it. Ms. Linn also briefly outlined the UN-wide work on SDG indicators.

58. The Committee took note of this information. Delegates highlighted the need to include foresters in the overall process of the formulation of forest-related indicators, and for collaboration with the FAO in that area.

59. Mr. Gerben Janse, International Coordinator at the Policy and Analysis Division in the Swedish Forest Agency, informed the participants on the implementation of the 2030 Agenda in Sweden. The Swedish Government established a coordinated strategy at the national level, which involves all ministries and all levels of administration. The Swedish Forest Agency will mainstream the SDGs in all of its activities. In addition, coordination with the National Forest Programme is foreseen, especially in the context of international cooperation.

60. The Committee took note of this information and recommended that the secretariat continue monitoring the developments and work together with other actors to provide relevant inputs to this process. The next briefing should be prepared for the upcoming session of the Working Party.

B. The United Nations Forum on Forests (UNFF) – the status of the 2017-2030 Strategic Plan

61. Ms. Mita Sen, Programme Officer, UNFF Secretariat, updated the Committee on the status of the UNFF Strategic Plan for the period 2017–2030. The Committee was briefed on the outcomes of the first meeting of the UNFF Ad Hoc Expert Group for the preparation of the Plan, held in New York, and subsequent developments. The proposal for the Plan is currently under consultation, with written comments being provided by member States to the UNFF Secretariat. The second meeting of the UNFF Ad Hoc Expert Group for the preparation of the Strategic Plan will take place in October 2016 in Bangkok, and the outcome will be provided to UNFF members for discussion in January 2017 in New York.

62. Ms. Sen highlighted that the Plan has been developed in close connection with the SDGs, and efforts were made to align the International Arrangement on Forests' objectives with the SDGs. The High-Level Political Forum may be an opportunity to showcase the role of forests, and member States are willing to provide voluntary contributions to it; however, Ms. Sen stressed that it should be done with no additional reporting burden. She noted that the process recognized the need for strengthening the role of regional stakeholders in its implementation. At the Teheran meeting on regional cooperation, held on 26-28 September 2016, a proposal to develop an interregional coordination mechanism was made.

63. Delegates supported the process and highlighted the need for paying attention to reporting burdens and the appropriate reflection of the regional institutions in the IAF, especially in the SDG context.

64. The Committee took the note of this information and requested the secretariat to closely follow up on this process and report on it to the Working Party.

C. Forest Europe - Programme of Work and possible synergies in the region

65. Ms. Ludmila Marušáková, Head of the Liaison Unit Bratislava for the Forest Europe process, updated the Committee on the development of the Forest Europe's Work Programme and highlighted possible synergies in the region. The Programme reflects the SDGs, the Paris Agreement on Climate Change and the UNFF process, and will be carried out in cooperation with relevant regional and global actors, including the ECE and the FAO. The key topics will include: further development and updating of SFM tools; monitoring, assessment and reporting on the state of Europe's forests; contribution to the work on the transition to a green economy including social aspects and the valuation of forest ecosystem services; protection of forests and adaptation to climate change; and forests and human well-being. Ms.

Marušáková also updated delegates on the follow-up to the Madrid Extraordinary Ministerial Conference.

66. The Committee took note of Ms. Marušáková's presentation on the Programme of Work of Forest Europe. It also supported the coordination of work between Forest Europe and other relevant actors in the region, and encouraged continued and strengthened cooperation between Forest Europe and the ECE/FAO Forestry and Timber Section.

D. Developments in other relevant organizations and processes

67. Mr. Peter Csoka, Secretary of the Committee on Forestry, Forestry Department of the FAO, briefed the Committee on the outcomes of the twenty-third session of the FAO Committee on Forestry (COFO), held on 18-22 July 2016 in Rome, Italy. He mentioned the manifold agenda, and noted that, among several important decisions, COFO had established a Working Group on Dryland Forests and Agrosylvopastoral Systems, adopted the Voluntary Guidelines on National Forest Monitoring, and decided that the FAO would elaborate a new strategic document fully aligned with the FAO Strategic Framework and Strategic Plan of the IAF.

68. Amongst the highlights, Mr. Csoka further mentioned that COFO had welcomed the publication of the State of the World's Forests 2016 (SOFO 2016) and had recognized that the sustainable management of both forests and agriculture, and their integration in land-use plans, strongly contribute to achieving SDGs, ensuring food security and helping to tackle climate change. COFO requested the FAO to continue and enhance cooperation on implementing the 2030 Agenda including between FAO's technical committees, namely the Committee on Agriculture, the Committee on Fisheries and COFO. It also requested the FAO to support countries, align the global Forest Resources Assessment Strategy as needed, and work with members of the Collaborative Partnership on Forests in order to streamline global reporting.

69. As regards climate change strategy and forest financing, Mr. Csoka informed the Committee that the FAO was requested to support countries in improving governance, policy development and the integration of forestry into Nationally Determined Contributions; Measuring, Reporting and Verification; and REDD+ readiness. COFO also recommended that the FAO update guidelines, coordinate with the thirteenth meeting of the Conference of Parties to the Convention on Biological Diversity (CBD COP13), and strengthen partnerships in order to help countries access international climate finance, including from bilateral sources and multilateral institutions such as the World Bank, the Green Climate Fund and the Global Environment Facility (GEF), as well as NGOs and the private sector.

70. The Russian Federation mentioned that, during COFO, they had recommended establishing a working group on boreal and temperate forests, for which preparatory work is underway. They asked countries with boreal forests to support this proposal during the next session of COFO. Finland asked for further information on the process and the potential role of the joint ECE/FAO Forestry and Timber Section in it, and proposed to include it as an agenda item for the next joint COFFI/EFC session.

71. Mr. Csoka recalled that, according to the decisions, the FAO will elaborate a proposal as specified in Rule XXXI of the General Rules of the Organization. Preparing such a proposal requires consultation with member nations through appropriate mechanisms, and the regional forestry commissions were identified as potential fora. Mr. Csoka noted that the expansion of the thematic scope to also include temperate forests would require further consideration. He recalled that the final decision on establishing such a group lays with member countries.

72. Mr. Christoph Dürr (Switzerland) briefed delegates on CBD COP13, to be held on 4-17 December 2016 in Cancun, Mexico. He indicated that the main forest-related subject would be the mainstreaming of biodiversity into other sectors, including forestry. A High-Level Panel is planned to discuss how to mainstream biodiversity into forestry and agriculture policies, plans and strategies.

73. Mr. Csoka informed delegates that the FAO Committee on Agriculture also considered biodiversity mainstreaming, and requested that this issue be addressed, as a cross-cutting issue, by the FAO Technical Committees in 2018. A recommendation will be brought to member countries, including through the regional forestry commissions in due course.

74. Mr. Heikki Granholm (Finland) informed delegates that the twenty-second session of the Conference of the Parties (COP22) would take place on 7-18 November 2016 in Marrakech, Morocco. He specified possible agenda items, including the Paris Climate Agreement, the Kyoto Protocol, and transparency.

75. Ms. Christine Farcy (Belgium, on behalf of the European Forest Institute (EFI)) briefed delegates on the EFI structure, organizational vision for 2025, and strategic goals, work programme and activities, including a road map for implementing the new EFI strategy.

76. The Czech Republic proposed to celebrate the seventieth anniversary of the ECE/FAO joint work on forestry in Mariánské Lázně, Czech Republic, where the first European Timber Conference was held in April-May 1947. The Committee welcomed this proposal, and the secretariat announced that it would discuss the issue with the joint COFFI and EFC bureaux.

V. Reporting on and implementation of the 2014-2017 Integrated Programme of Work (IPoW) and related decisions

A. Report of the ECE/FAO Working Party on Forest Statistics, Economics and Management

Documentation: ECE/TIM/EFC/WP.2/2016/2

77. Mr. Jeff Prestemon, Chair of the Joint ECE/FAO Working Party on Forest Statistics, Economics and Management (JWPSEM), presented outcomes and decisions of the thirty-eighth session of the JWPSEM held on 23-24 March 2016. He focused on the activities of the ToSs and the in-session round-table discussion on “The potential implications of the UNFCCC COP21 (30 November-11 December 2015) for forests and the forest sector”.

78. Mr. Prestemon informed the Committee that, at the end of the thirty-eighth session, Mr. Johannes Hangler, Austria, the Chair of the thirty-seventh and thirty-eighth sessions, was elected Vice-Chair. Mr. Jeff Prestemon, United States, Vice-Chair of the thirty-seventh and thirty-eighth sessions, was elected as the new Chair. Mr. Matthias Dieter, Germany, was elected as Vice-Chair. They will hold office until the end of the thirty-ninth session.

79. The Committee was informed that the thirty-ninth session of the JWPSEM will be held on 3-5 May 2017 in Geneva.

80. The Committee applauded the activities of the JWPSEM and for its broad coverage of items, and highlighted the JWPSEM's ability to take on current developments into their ongoing work. The need for both financial and human resources from the secretariat to support the ToSs was also highlighted. The Committee expressed its appreciation for the work of the JWPSEM and the ToSs as a valuable platform for the exchange of technical expertise among countries and stakeholders.

B. Review of 2016 activities, and activities planned for 2017

Documentation: ECE/TIM/2016/8

81. The secretariat briefed the Committee on 2016 activities, and activities planned for 2017.

82. Countries congratulated the secretariat for the amount and quality of work implemented, and expressed their gratitude for the support received from the secretariat. They also requested the secretariat to ensure that the core activities will not suffer under the upcoming workload. The Committee called for avoiding overlap with other processes and welcomed the good cooperation with Forest Europe and other partners and processes as reported during this session.

83. The Committee welcomed the efforts undertaken to achieve results, and called for the further improvement of broader dissemination of the outcomes. On the question that the report on “Promoting sustainable building materials” was missing from the list of activities, the secretariat explained that it was published last year but only released this year and had already been reported on in the last session.

84. Delegates congratulated the secretariat for bringing back the industry and private sectors to the Committee sessions and expressed the wish to continue this in the future. The Committee congratulated the secretariat for the timely publication of the Forest Products Annual Market Review. The Committee asked the secretariat to issue the Joint Wood Energy Enquiry and to inform delegates about the game meat survey.

85. The Committee took note of the information provided and acknowledged and appreciated the work carried out in 2016. The Committee indicated that they looked forward to the implementation of the activities listed for 2017, as well as those activities that emerged from the discussions by the Committee during the session.

C. The ECE evaluation on the assessment of the relevance of the 2014-2017 Integrated Programme of Work (IPoW)

Documentation: ECE/TIM/2016/9

86. The secretariat presented the results and recommendations of the ECE evaluation of the 2014-2017 IPoW which was prepared as part of the overall ECE Evaluation Workplan. The Committee took note that the evaluation report was compiled using information collected from the respondents and thus does not necessarily reflect the views of the ECE or the Committee.

87. The Committee noted that it could not agree with some recommendations and findings but recognized the information as useful input in, amongst others, preparing the future IPoW, and is looking forward to receiving the management response.

D. Strategic Review (SR) of the IPoW

Documentation: ECE/TIM/2016/10

88. The secretariat presented the SR process, including its road map, the upcoming workshop for member States and stakeholders on 22 November 2016, and the results of the stakeholders’ survey.

89. The Committee welcomed the results as an input to the discussions at the upcoming workshop. It asked the secretariat to update the website regularly to allow member States to

plan and attend the meetings, as well as to circulate questionnaires in all three UN official languages.

VI. Election of officers

90. The Chair introduced the elections and explained the Committee's practices to the delegates.

91. He noted the departure from the COFFI Bureau of Mr. Heikki Granholm, Finland, and warmly thanked him for his excellent service from October 2010 to October 2016. A certificate honouring his service was presented by the Chairs of COFFI and EFC to Mr. Granholm in a small ceremony.

92. The Chair informed delegates of the nomination by the Russian Federation of Ms. Maria Sokolenko as a candidate for Vice-Chair of the COFFI Bureau, to replace Mr. Granholm.

93. The following individuals were then elected by acclamation to hold office until the end of the seventy-fifth (2017) session: as Chair, Ms. Marta Gaworska (Poland), and as Vice-Chairs: Mr. Christoph Dürr (Switzerland), Mr. Guy Robertson (United States) and Ms. Maria Sokolenko (Russian Federation).

94. The Committee warmly thanked Mr. Christoph Dürr for his excellent service as its Chair.

VII. Date and place of the next session

95. The Chair informed delegates that, at Silva2015, the Committee had agreed to hold the seventy-fifth session of the Committee jointly with the thirty-ninth session of the FAO EFC in 2017.

96. The representative of Poland, Ms. Marta Gaworska, reiterated its intention to offer to hold the joint sessions ("Lasy2017") in conjunction with the 4th European Forest Week. She proposed that the joint sessions take place in Warsaw during the week of 9-13 October 2017.

97. The Chair announced that the proposal had been discussed and agreed with the FAO EFC Executive Committee. The Committee agreed with the proposal by Poland, and again expressed its appreciation for this generous offer. They supported celebrations of the seventieth anniversary of the joint work of the ECE and the FAO at the joint sessions in Warsaw next year. It was stressed that, in the organization of the programme for the joint sessions, EFC matters should be given due consideration.

VIII. Any other business

98. None.

IX. Adoption of the report

99. The Committee adopted the present report in session.

100. The Chair thanked the delegates for their input into the report and their participation in the session. The Chair also thanked the secretariat for the excellent organization of the seventy-fourth session. The secretariat informed the participants that the final edited report would be issued in the coming days.

101. The meeting was closed on Thursday, 20 October 2016, at 18.20.

Annexes

[English only]

Annex I

Committee on Forestry and Forest Industry market statement

I. Overview of forest products markets in 2015 and 2016

1. The general condition of forest products markets in the ECE region remained relatively stable in 2015. With the exception of the paper and paperboard industry, consumption of all other forest products in 2015 increased by between 1.3 and 2.6% year-on-year (Table 1). There were, however, wide differences between subregions.

TABLE 1
Apparent consumption of industrial roundwood, sawnwood, wood-based panels, and paper and paperboard in the ECE region, 2011-2015

| | million | 2011 | 2012 | 2013 | 2014 | 2015 | Change (volume) 2014- 2015 | Change (%) 2014- 2015 | Change (%) 2011- 2015 |
|---|----------------|-------|-------|-------|-------|-------|-------------------------------------|--------------------------------|--------------------------------|
| Europe | | | | | | | | | |
| Industrial roundwood | m ³ | 385.5 | 375.7 | 381.8 | 393.8 | 401.6 | 7.89 | 2.0 | 4.2 |
| Sawnwood | m ³ | 103.4 | 97.0 | 96.8 | 100.8 | 101.1 | 0.34 | 0.3 | -2.2 |
| Wood-based panels | m ³ | 66.9 | 64.6 | 71.4 | 67.9 | 68.4 | 0.45 | 0.7 | 2.2 |
| Paper and paperboard | m.t. | 92.5 | 90.7 | 92.9 | 89.4 | 88.0 | -1.45 | -1.6 | -4.8 |
| Commonwealth of Independent States (CIS) | | | | | | | | | |
| Industrial roundwood | m ³ | 166.8 | 173.7 | 175.1 | 181.6 | 185.3 | 3.69 | 2.0 | 11.0 |
| Sawnwood | m ³ | 19.0 | 19.7 | 19.9 | 19.0 | 18.1 | -0.89 | -4.7 | -4.7 |
| Wood-based panels | m ³ | 16.0 | 17.7 | 17.8 | 17.6 | 16.8 | -0.81 | -4.6 | 4.5 |
| Paper and paperboard | m.t. | 9.5 | 9.4 | 9.4 | 9.3 | 9.0 | -0.34 | -3.6 | -5.9 |
| North America | | | | | | | | | |
| Industrial roundwood | m ³ | 487.2 | 481.2 | 486.8 | 490.2 | 494.3 | 4.14 | 0.8 | 1.5 |
| Sawnwood | m ³ | 89.8 | 95.5 | 101.1 | 106.3 | 112.7 | 6.43 | 6.0 | 25.5 |
| Wood-based panels | m ³ | 42.0 | 46.4 | 48.0 | 49.9 | 52.0 | 2.09 | 4.2 | 23.7 |
| Paper and paperboard | m.t. | 79.7 | 81.1 | 75.3 | 76.1 | 75.9 | -0.13 | -0.2 | -4.8 |
| ECE region | | | | | | | | | |
| Industrial roundwood | m ³ | 1,039 | 1,030 | 1,043 | 1,06 | 1,081 | 15.71 | 1.5 | 4.0 |
| Sawnwood | m ³ | 212.2 | 212.2 | 217.9 | 226.1 | 232.0 | 5.88 | 2.6 | 9.3 |
| Wood-based panels | m ³ | 125.0 | 128.7 | 137.2 | 135.4 | 137.1 | 1.73 | 1.3 | 9.8 |
| Paper and paperboard | m.t. | 181.7 | 181.2 | 177.7 | 174.8 | 172.9 | -1.91 | -1.1 | -4.9 |

Note: Sawnwood does not include sleepers.

Source: ECE/FAO TIMBER database, 2016

2. North American and European markets experienced moderate consumption growth, benefitting from generally positive economic developments and improvements in the housing and construction industry. In contrast, deteriorating economic conditions and currency depreciations primarily accounted for a more than 4% contraction of sawnwood and panels consumption in countries of the Commonwealth of Independent States (CIS).

3. As in the past years, currency volatility played an important role in the trade of forest products. In particular, imports of wood products jumped about 10% in the United States, while exports declined by about the same ratio, as a result of the strong US dollar. In the CIS countries, a weakened ruble pushed exports to record highs for all major product categories, in many cases more than countering the lack of domestic demand and thus increasing production.

4. The pulp and paper sector continues to undergo major structural changes. Increased use of electronic media and competitive pressure from outside the region led to reduced consumption and production in all subregions of the ECE region.

A. Economic developments with implications on the forest sector

5. The world economy slowed down in 2015, driven by weakened performance in emerging economies. In the ECE region, growth rates differed widely. The gap between the pace of expansion in the United States and the European Union (EU) narrowed, as economic activity in the euro area picked up significantly. Growth in the new EU member countries was much faster than the expansion observed in the rest of the EU, so convergence with income levels in older EU members continued, albeit at a slower rate than before the global financial crisis. By contrast, the adverse trends observed in the CIS in late 2014 became stronger, and sluggish growth was followed by an outright output contraction. A major factor explaining the diversity of economic performances in the ECE region was the decline in oil prices, which almost halved, as this impacted energy-exporting and -importing countries differently. Lower oil prices also negatively affected investment in the energy sector in some advanced countries.

6. In the United States, job creation has been fast but wage growth has only recently picked up. As unemployment approaches levels close to what could be considered full employment, wage increases are likely to accelerate. Conditions improved in the euro area, driven by the continued output recovery in a context of moderate wage increases. However, the unemployment rate remains well above pre-crisis levels, and the aggregate figure masks significant differences, with unemployment being still very high in some countries. Labour market reforms have brought increased flexibility but employment growth has often been dominated by low quality jobs. In the CIS, the labour market has been relatively resilient, given the scale of the decline in economic activity, but unemployment has increased and remittances, which are sizeable in the poorest economies, have shrunk sharply.

7. The improvement in labour markets and easier financing conditions have boosted housing prices and residential investment in some advanced countries. In the United States, construction performed particularly well, soaking up pent-up demand and being supported by an acceleration in the rate of household formation. In the euro area, investment in construction turned positive after years of sustained decline. Rising real incomes and low mortgage rates have driven this turnaround but, in some countries, including Portugal, Spain and Finland, high levels of household debt continue to have a dampening influence on construction investment. In the euro area as a whole, housing prices have increased but they continued to fall in some countries, including France, Finland, Greece and Italy.

8. Overall investment (i.e. including residential and non-residential investment) in advanced countries has remained relatively weak, amid lingering concerns over the strength of global demand, bouts of financial turbulence and, in some countries, still high levels of indebtedness.

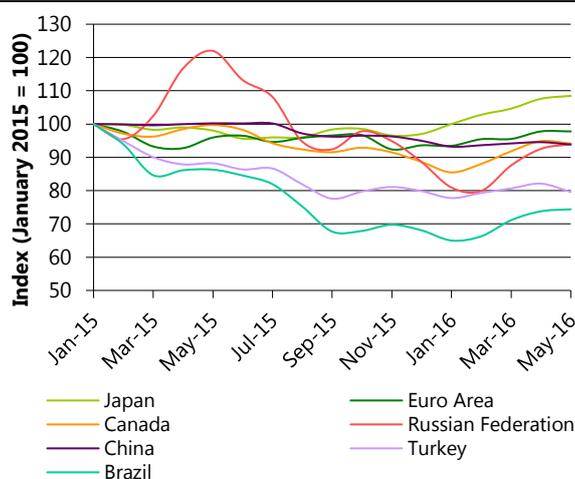
However, easier financing conditions have facilitated deleveraging and debt refinancing, while low oil prices have been positive for corporate profitability.

9. A more sustained and robust recovery in the United States than in the euro area has reflected the divergence of monetary policies. While the US Federal Reserve increased rates after seven years of no change in December 2015, the European Central Bank announced further easing measures in March 2016. However, rapid tightening in the United States seems implausible, given renewed concerns over growth and the easing bias signalled by monetary authorities in other advanced countries. Past expectations on the direction of monetary policy drove movements in exchange rates, with a sharp appreciation of the US dollar in 2014 that dampened recent export performance. The euro strengthened in relation to the US dollar from recent lows in early 2016 but appreciation has been limited. In the CIS, large exchange rate depreciations have taken place, as the shocks in energy-exporting countries have been transmitted to other economies in this subregion (Graph 1). In early 2016, some recovery in commodity prices was accompanied by currency strengthening.

10. The different role of fiscal policy in supporting the recovery after the 2008-2009 financial crisis in the United States and the euro area contributes to explaining the differences in economic performance in recent years. In the euro area, past tighter fiscal policy has now been replaced by a more relaxed stance. In a number of EU countries, the refugee crisis has been a source of additional fiscal outlays and is expected to provide further impetus to the construction sector. In the CIS, energy exporters were forced to undertake significant fiscal adjustments, as oil prices were expected to stay low for some time.

GRAPH 1

**Major currencies used to trade forest products, indexed against the US dollar,
January 2015-May 2016**



Source: IMF, 2016.

11. Overall, the pattern of weak recovery from the global financial crisis will continue in 2016. Some moderation in the pace of economic expansion in the United States and the EU is expected. Output in the CIS is expected to shrink for a second consecutive year. Prospects are improving in line with the firming of oil prices but vulnerability to further shocks remains.

12. There are a number of risks that cloud the horizon. Geopolitical tensions, which have disrupted trade and undermined confidence in the CIS, have not yet disappeared. The refugee crisis, while providing a short-term boost to economic activity, is creating strains in a number of European countries. The United Kingdom vote to leave the EU has added a source of uncertainty that is unlikely to dissipate in the immediate future.

B. Policy and regulatory developments affecting the forest products sector

13. Policy initiatives such as the EU Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan, due diligence procedures for conformance to the US Lacey Act and the EUTR, and the continued expansion of the certified forest area worldwide, demonstrate that the forest products sector is playing a leading and innovative role in developing the green economy.

14. An evaluation of the EU FLEGT Action Plan found that it had contributed to improving forest governance globally, and helped – alongside the EUTR – to reduce European imports of illegal timber. It concluded that the Plan needs to be adapted to address new challenges, particularly forest conversion, and more focus is needed on private-sector engagement and communication. A review of the first two years of operation of the EUTR indicated that, while implementation has been uneven, the regulation is already contributing to significant changes in trade attitudes, structures and distribution networks.

15. Canada and the EU have concluded negotiations on the Comprehensive Economic and Trade Agreement (CETA), while the Transatlantic Trade and Investment Partnership (TTIP) – a trade agreement between the EU and the United States – is still under negotiation. Both the CETA and the TTIP should encourage transatlantic trade, particularly in value added forest products.

16. The Softwood Lumber Agreement (SLA) between Canada and the United States has expired. The SLA is not likely to be settled in 2016. However, Prime Minister Trudeau and President Obama committed to resolving the issue. There is some expectation that agreement might be reached before the second quarter of 2017.

17. In 2015, Armenia and Kyrgyzstan officially joined Belarus, Kazakhstan and the Russian Federation in the Eurasian Customs Union, which is designed to reduce barriers to the movement of goods, services, capital and labour, and is expected to increase the trade in forest products among these countries.

18. The two major certification schemes (the Forest Stewardship Council - FSC - and the Programme for the Endorsement of Forest Certification - PEFC) report a combined total of 462 million hectares of certified forests globally, an increase of 15.8 million hectares (3.5%) over the previous reporting year. This includes more than 50 million hectares of overlap due to double certification, according to ongoing research. Excluding the double-counting of forests certified under both schemes, the certified forest area worldwide amounts to 11% of the global forest area. The share of roundwood production that is certified is estimated to account for about 29% of global production.

19. The Paris Agreement - the main outcome of COP21 to the UN Framework Convention on Climate Change (UNFCCC) - signaled that cutting emissions from deforestation and promoting sustainable forestry are now recognized globally as among the most efficient ways to address climate change.

20. Active engagement by the forest sector in trade policies, environmental and climate initiatives, and voluntary programmes is contributing to increased recognition of the benefits of wood. However, policy uncertainties associated with ongoing debates and extended negotiations have the potential to hinder further progress on several fronts, such as forest carbon trading, sustainability rules for biomass, transatlantic trade agreements, FLEGT licensing, and green building efforts. Greater alignment of these diverse efforts is needed to realize the full benefits of forests and forest products.

C. Pallets and wooden packaging

21. Wooden pallets, crates and packaging cases play important roles in the movement and storage of goods worldwide. Proper design and quality standards ensure that performance is

sufficient to protect the goods transported. When the economy booms, so too does the pallet and wooden packaging industry.

22. Pallets and wooden packaging are well positioned to flourish under policies and laws aimed at a low-carbon economy and sustainability because they have very high rates of reuse, repair and recycling, and they can be used for wood energy or the manufacture of particle board at the end of their useful lives. The sector is aware of the importance of proper phytosanitary measures to ensure that no invasive pests and diseases are spread via pallets and wooden packaging.

23. Pallets are by far the most common type of wooden packaging. They provide a safe, effective transport and storage platform throughout the handling and distribution process. Pallet construction is becoming more standardized in Europe, with a migration to the EUR-pallet; the 800 x 1,200 mm unit is most prevalent. In contrast, pallet sizes and designs are much less standardized in North America, where most pallets in use are custom-designed to suit transport and shipping configurations.

24. It is estimated that there are about 4 billion pallets in circulation in Europe and about 2 billion in North America. In Europe, the pallet and wooden packaging industry consumed more than 20 million m³ of sawnwood (mostly softwood) in 2015. Similar data for North America refers to 2011 production of 800 million pallets (both new and rebuilt units), using about 16.5 million m³ of new lumber and 12.6 million m³ of reclaimed lumber. Pallet pools – whereby companies rent, lease or share the use of pallets – are increasingly used. Many companies are finding benefits in pooling, such as consistent quality, flexibility, the avoidance of capital expenditure, the reduction of costs, more cost certainty, and a reduction in the loss of assets, especially in closed pools (where pallets remain the property of the pooler). In North America, rental pallets are expected to facilitate the movement of food and consumer goods between the United States, Canada and Mexico.

25. France and the United States dominate global barrel exports, with France accounting for about \$807 million and the United States for \$450 million of the value of barrel exports in 2015.

II. Summary of regional and subregional markets for key forest products

A. Wood raw materials

26. The total consumption of roundwood – comprising logs for industrial uses and fuel – in the ECE region was estimated at 1.28 billion m³ in 2015, an increase of 1.2% from 2014 and the third consecutive year of growth. Total log usage reached its highest level in almost ten years in each of the three ECE subregions in 2015 due to increased demand from the sawlog sector.

27. Removals of industrial roundwood in the ECE region were up by 0.9% in 2015, with the biggest increase in Europe (+2%) and practically no change in North America. Although log production in the CIS subregion was only 1.1% higher in 2015 than in 2014, the longer-term trend is more impressive, with 2015 removals almost 10% above those in 2011. Almost all the increase in the timber harvest in the ECE region in 2015 was of coniferous logs, with removals of non-coniferous logs continuing steady.

28. Of the total roundwood removals in the ECE region in 2015, approximately 16% (204 million m³) were used for fuel. This volume was consumed predominantly in Europe, which accounted for almost 58% of total woodfuel consumption in the ECE region.

29. The ECE region continues to be a net exporter of logs, with globally significant trade flows of softwood logs from North America and the Russian Federation to China and the

Republic of Korea. Of the top five trade flows of softwood logs worldwide, shipments to China from New Zealand, the Russian Federation and the United States were all lower in 2015 compared with 2014.

30. Wood raw-material costs for the forest industry in the ECE region trended downward in much of 2015 and in early 2016, with sawlog and pulpwood prices, in US dollar terms, reaching their lowest levels in more than six years in the first quarter of 2016.

31. Wood costs, which account for approximately 60% of the production cost when manufacturing pulp, have also fallen steadily in many countries of the ECE for almost five years, with wood fiber costs generally declining more in Europe than in North America.

32. COFFI forecasts that removals of industrial roundwood are expected to increase in the ECE region at an annual rate of 1.2% in 2016 and 1.4% in 2017. The subregional breakdown is as follows: Europe showing an increase of 0.6% in 2016 and a rise of 1.7% in 2017; CIS is expected to increase 3.1% in 2016 and then 1.4% in 2017; and North America to increase 0.9% in 2016 and then 1.1% in 2017.

B. Sawn softwood

33. As in 2014, 2015 saw generally mixed and unsettled global economic trends. Total sawnwood consumption in the ECE region increased by 2.5% - from 191.5 million m³ to 196.4 million m³. The recovery in North America continued for the sixth consecutive year, and sawn softwood consumption increased by 6.1%. Sawnwood consumption was steady in Europe, but economic conditions and depreciating currencies in the CIS countries resulted in a decline in sawn softwood consumption of 2.2% in that subregion. The US dollar strengthened against most currencies in the first half of 2015, and volatile exchange rates affected countries differently.

34. The optimism and anticipated growth forecast a year ago in Europe levelled off in 2015, with apparent consumption in Europe remaining at the 2014 level of 89 million m³. Economic conditions are highly variable between countries, and this is reflected in the wide range of growth rates in softwood sawnwood consumption in 2015. Europe produced 102.6 million m³ of sawn softwood in 2015, a small decrease (0.7%) over 2014. Producers lacked an incentive to increase production, given sluggish demand in Europe and key overseas export markets.

35. Apparent sawn softwood consumption decreased by 2.2% in the CIS subregion in 2015, to 16.7 million m³. However, the production of sawn softwood was estimated at 36.3 million m³ in 2015, up by 0.4% from 2014. The devaluation of the Russian ruble enabled them to achieve large sales margins and high profitability, despite the strong decline in global prices (in US dollars) in the key sawn softwood export markets. Russian sawn softwood production increased slightly (by 0.2%) in 2015, to 32.1 million m³, but domestic consumption fell by 9%, to 9.8 million m³. The volume of sawn softwood exports from the Russian Federation achieved a record high of 22.4 million m³ in 2015, up by 5% from 2014, with China representing 44% of Russia's export volume.

36. Apparent North American sawn softwood consumption increased 6.1% to 90.8 million m³ in 2015. An increase in US housing starts resulted in US consumption of 75.0 million m³ (up by 4.2%, year-on-year) and, in Canada, consumption reached 15.8 million m³ (up by 16.6%). US sawn softwood output was 54.3 million m³ in 2015, an increase of 1.0% compared with 2014. Canadian sawn softwood production soared by 8.3% in 2015, to 45.4 million m³. The Canadian dollar has been depreciating against the US dollar since 2014, providing Canadian producers with a competitive advantage in shipments to the US market.

37. COFFI forecasts that production of sawn softwood will increase in the ECE region at an annual rate of 2.6% in 2016 and 0.3% in 2017. The subregional breakdown is as follows: Europe

with a gain of 2.3% in 2016 and 1.5% in 2017; CIS is expected to increase 1.5% in 2016 and another 1.4% in 2017; and North America will gain 3.5% in 2016 and decline 1.3% in 2017.

C. Sawn hardwood

38. Sawn hardwood production in the ECE region increased by 1.8% to 40.7 million m³ in 2015, with production increasing in all three subregions during the year. Consumption of sawn hardwood in the ECE region also increased to 35.6 million m³ in 2015, a 0.9% rise compared to 2014 and the fourth consecutive year of increase. Falling consumption in Europe and the CIS in 2015 was offset by rising consumption in North America.

39. European consumption of sawn hardwood decreased 2.8% to 12.2 million m³ in 2015, mainly due to a significant decline in Turkish consumption. Sawn hardwood consumption in the CIS subregion fell 25.9% to 1.46 million m³ in 2015 following a 3.6% fall the year before. However, hardwood production in the CIS increased 2.3% to 3.4 million m³, with exports taking up the slack. The weakness of the ruble encouraged a 50.5% increase in sawn hardwood exports by the Russian Federation to 1.4 million m³. The Russian Federation exported 1.2 million m³ to China in 2015, 49% more than in 2014 and by far the highest level ever recorded.

40. North American sawn hardwood consumption increased 5.7% to 22.0 million m³ in 2015, with domestic sales in North America benefitting from rising new homes construction in the United States. However, there are signs of slowing consumption in some sectors, notably pallets, flooring and board roads. US sawn hardwood exports to countries outside the subregion decreased 8.4% to 3.0 million m³ in 2015, following five consecutive years of growth. Exports slowed to all the leading markets in 2015 including (in order of export volume) China (accounting for 47% of all exports by volume), Vietnam, Mexico, the United Kingdom, Japan and Italy.

41. Outside the ECE region, China continued to dominate the sawn hardwood trade. China's imports of tropical and temperate sawn hardwoods were valued at \$4.1 billion in 2015, marginally less than the previous year, when imports had increased 32% by value compared with 2013. Key innovations in the hardwood sector aim to extend its use into new applications, notably structural applications through the development of new hardwood Cross Laminated Timber (CLT), glulam and Laminated Veneer Lumber (LVL) products.

42. COFFI forecasts that production of sawn hardwood will decline in the ECE region at an annual rate of 2.1% in 2016 and then rise slightly by 1.3% in 2017. The subregional breakdown is as follows: Europe is expected to gain 2.5% in 2016 and 0.9% in 2017 (excluding Turkey); CIS increases 1.6% in 2016 and 3.1% in 2017; and North America with expected increase of 0.1% in 2016 and 1.3% in 2017.

D. Wood-based panels

43. The geographic development of the wood-based panel sector varies significantly across the ECE region. Plywood production in North America (at 11.2 million m³) is almost three times greater than in both Europe and the CIS region. Similarly, Oriented Strand Board (OSB) production in North America (at 18.8 million m³) is three times greater than in Europe and more than 23 times greater than in the CIS region. Particleboard production in Europe (at 36.6 million m³) is four times greater than in the CIS region and more than 6 times that in North America. Finally, medium density fibreboard (MDF) production in Europe (at 16.3 million m³) is about four times greater than in North America and almost 6 times greater than in the CIS region.

44. Overall, wood-based panel production was generally stable in Europe and North America, while it was up strongly in the CIS region. However, the trend in production differed substantially across different product categories. Both particleboard and plywood production trends were

lacklustre across the entire ECE region. Particleboard production was down slightly in both Europe and the CIS region and up very slightly within North America. Plywood production showed little growth within Europe and the CIS region and was down within North America. Production trends for OSB and MDF panels were slightly more positive, particularly in the CIS region where significant increases were reported. OSB production showed moderate growth in both Europe and North America, while production was up by almost 120% in the CIS region where the OSB industry has only been established since 2012. Finally, MDF production, which was essentially stable in Europe, grew by over 3% in North America and by 26% in the CIS region.

45. The trade situation was also interesting as currency valuations sharply affected trade patterns for wood-based panels across the ECE region. For example, the weak ruble contributed to double digit growth in exports across all product categories for the CIS region as well as double digit declines in panel imports. Overall, the CIS region remained a net exporter of wood-based panels in 2015. Within Europe, the trend was mixed, with exports of plywood and MDF moderately up, and imports of plywood and OSB also rising moderately. Overall, European trade of wood-based panels was up by almost 5% over 2014, and Europe maintained a slight trade surplus in wood-based panels. By and large, North America displayed a trade deficit in wood-based panels across almost every product category, with the exception of OSB where there was a slight trade surplus. Overall, the North American trade deficit increased by 20% in 2015.

46. COFFI forecasts that production of wood-based panels will increase in the ECE region at an annual rate of 1.6% in 2016 and by 1.7% in 2017. The subregional breakdown is as follows: Europe will grow 1.3% in 2016 and 1.2% in 2017; CIS should increase by 4.3% in 2016 and 3.8% in 2017; and North America is forecast to grow 2.0% in 2016 and 1.6% in 2017.

E. Paper, paperboard and wood pulp

47. Paper and paperboard production fell in Europe and North America in 2015, largely as graphic paper capacity continued to be closed, itself the result of increased electronic communication including the internet. Wood-pulp production rose in the CIS due to new investment into market pulp capacity.

48. Overcapacity in the pulp, paper and paperboard segments led to closures and consolidation in 2015 and in the first half of 2016. However, a series of strategic investments, mainly in tissue, specialty packaging and dissolving pulp, in recent years breathed life into the pulp and paper sector in the ECE region. Wood-pulp production in the ECE region declined in 2015 due to closures of integrated paper machines, longer maintenance downtime as a result of unplanned mechanical issues and as market pulp capacity was permanently removed. Currency exchange rates and increased competition from market pulp mills outside the ECE region were in part the cause.

49. Capacity closures in graphic grades in Europe and North America continued as a result of declining demand. Prices that had been on the decline for years finally appeared to bottom, and a recovery was underway in early 2016. Large-scale rationalization and concentration of the paperboard sector was largely over by the end of 2015. However, a series of expansions by converting idled newsprint capacity was still viewed as a financially viable option.

50. Emerging markets and increased standards of living provided the impetus for further expansions in sanitary and household tissue capacity, while research and marketing opportunities allowed for strategic investments into specialty packaging assets.

51. Outside the ECE region, major ongoing investments into chemical pulp, tissue and specialty packaging papers continue to have a profound influence on Europe, North America and the CIS. Continuous investment into research and innovation is allowing industries to thrive.

However, challenges remain as companies in the ECE region face mounting pressures from outside competitors, many of which enjoy favourable exchange rates, advantageous production and cost structures, as well as financial assistance from state-run development banks and financial institutions. These pressures exerted on ECE mills have often led to trade sanctions including the imposition of import tariffs.

52. The global pulp, paper and paperboard industry is constantly evolving, and the challenges facing the ECE region are vast and complex. Nonetheless, innovation, research into new products, and entrepreneurship are leading the way to maintaining a vital industry for so many stakeholders.

53. COFFI forecasts that production of pulp is expected to increase in the ECE region at an annual rate of 0.8% in 2016 and 1.0% in 2017. The subregional breakdown is as follows: Europe will increase 2.1% in 2016 and is expected to gain 2.2% in 2017; CIS is expected to increase 1.6% in 2016 and then a further 2.4% in 2017; and North America is forecast to increase 0.1% in 2016 and the same in 2017.

54. COFFI forecasts that production of paper and board will decline in the ECE region at an annual rate of 0.1% in 2016 and in 2017. The subregional breakdown is as follows: Europe is gaining 0.1% in 2016 and is expected to gain a further 0.5% in 2017; CIS is forecast to gain 0.4% in 2016 and gain 1.0% in 2017; and North America would decline 0.4% in 2016 and decline by 1.0% in 2017.

F. Wood energy

55. Wood energy consumption shows year-on-year variations associated with the fluctuation of weather patterns and competing energy sources. The expectation of future demand for wood pellets, for instance, continues to drive growth in installed manufacturing capacity, but 2015 saw prices for industrial and residential pellets decline in Europe and North America as a result of oversupply and lower demand linked to mild seasonal temperatures. Wood pellet trade continues to expand, and North America exported 6.2 million tonnes to the EU in 2015, with the United Kingdom being the largest importer of industrial pellets. Demand for wood energy feedstock (including pellets, briquettes and chips) is increasing within the CIS, and the depreciation of the Russian ruble might enhance opportunities for increased exports - although geopolitical dynamics might counter that effect.

56. The UNFCCC's Paris Agreement to curtail greenhouse gas emissions could support the expansion of wood energy use but the role that wood will play toward meeting targets will depend on many external factors, including the frameworks adopted by each nation for carbon accounting. Sustainability guidelines for the use of wood for energy continue to evolve after many years of collaboration between public and private stakeholders, and standards might be adopted in the near future. Changes to the policy environment, ranging from an international climate agreement to regional renewable energy efforts such as a post-EU2020 agenda (2009/28/EC), add significant uncertainty to wood energy markets. The public policy renewable energy framework seems to be in flux with potential amendments to eligibility rules and financial incentive programmes. Small-scale, highly efficient combined-heat-and-power (CHP) units using woodfuels present opportunities for the expansion of wood energy, and some seem close to commercial feasibility, but low-priced fossil fuels and the enhanced cost-effectiveness of other renewables pose significant barriers.

57. COFFI forecasts that production of wood pellets will increase in the ECE region at an annual rate of 6.8% in 2016 and 3.1% in 2017. The subregional breakdown is as follows: Europe is forecast to increase by 6.6% in 2016 and a further 0.6% in 2017; CIS is expected to increase 11.4% in 2016 and 13.6% in 2017; and North America is estimated to increase 6.3% in 2016 and then 4.6% in 2017.

G. Value-added wood products

58. Value-added wood products markets are recovering unevenly, depending largely on housing and renovation expenditures. Accordingly, US import markets have grown rapidly to reach pre-crisis levels, but European markets growth was more moderate or even stagnant. Trade flows have been strongly impacted by the strength of the US dollar against all major currencies.

59. Global furniture production was \$410 billion in 2015, down slightly from 2014. Similarly, the volume of furniture trade declined slightly to an estimated \$140 billion in 2015, but the overall trend is for increasing furniture exports. About 65% of furniture is consumed in the countries in which it is manufactured, and the other 35% is exported. The furniture industry has changed dramatically in recent decades, with domestic producers seeking to retain competitiveness and market share by improving their ability to serve the marketplace in terms of quality, customization and quick delivery.

60. US imports of builders joinery and carpentry (BJC) have continued a strong increasing trend, reaching \$2 billion in 2015, driven by increased remodelling spending. In contrast, European imports were essentially flat. However, the strong devaluation of the euro translated into much lower import values in US dollar terms.

61. Profiled-wood markets have been growing at a slower rate. Many larger suppliers to the US markets have increased production capacity, while a large share of the existing production is now targeted at other markets, principally China. Profiled-wood markets in Europe declined in 2015 and are supplied mainly by regional producers.

62. North American production of engineered wood products (EWP) such as glulam, wooden I-beams and LVL have made significant gains from 2010 through to the forecast for 2016. This is tied to the increase in new housing construction. In contrast, European glulam production has been more uneven, with some countries' output heavily affected by their exports to Japan (e.g. Austria, Finland and Romania) while others benefit from sustained domestic demand (Germany and Sweden).

63. CLT production is expanding globally, with new production facilities outside the DACH countries – Germany, Austria and Switzerland – where production originally began. Global production in 2015 was estimated at 650,000-700,000 m³. In DACH countries, production growth has been slowing in the past year partly because of slowing exports and softer domestic demand. In Europe, CLT construction is 10-15% more expensive than masonry or cement construction, but it is hoped that costs will come down with the further development of the industry and the standardization of products. In contrast, in North America the use of CLT for building is quickly gaining momentum, thanks in large part to interest shown in west-coast cities with strong wood cultures (e.g. Portland, Seattle and Vancouver), the newly established quality and performance standards, and investment in manufacturing the product.

H. Housing

64. The European and North American housing markets are still recovering from the 2008 financial crisis. In general, subdued economic forecasts for many advanced countries in the ECE region suggest that housing construction and sales in 2016 and 2017 might be similar to those reported in the past few years.

65. In Europe, construction increased by 0.1% between March 2015 and March 2016, primarily thanks to improvements in the building construction sector, while the civil engineering sector declined, year-on-year. On a monetary basis, remodelling is the largest component (about 60%) of euro-area residential construction. New residential construction is forecast to increase at a higher rate than remodelling in the immediate future. The key factors positively affecting the

residential sector are financing and improved economic prospects, consistent with a slowly recovering European economy. Belgium, France, Germany, the Netherlands and Spain currently account for 73% of total residential output, and these countries are forecast to lead housing starts in the short term. The renovation of buildings to reflect changing demand requirements and preferences in light of demographic ageing will also become an essential aspect of future housing construction.

66. The US housing market has continued its ascent from the 2009 trough, while the Canadian market has remained steady, despite recent declines in oil prices and revenues. All sectors of the US housing market improved in 2015. Beginner or starter housing is weak, however, and the number of dwellings built is insufficient to match population growth. Residential investment (new homes, remodelling, manufactured homes, brokers' fees) is a crucial contributor to US GDP: it accounted for 6.1% of GDP in 2005 but was only 3.0% in 2014 and 3.2% in 2015, an indication that the new-housing construction market has further room to expand.

67. Just over 280,000 residential buildings were built in the Russian Federation in 2015, a decrease of 1.1% over 2014. Overall, 418.2 million m² of floor space was put in place, an increase of 3.4%, year-on-year, indicating an increase in the average floor area of new buildings. Subdued short-term economic growth is expected to result in sizeable budget cuts and delays in residential construction programmes.

68. Overall construction investment (i.e. including both residential and non-residential investment) in advanced countries has remained relatively weak amid lingering concerns over the strength of demand, bouts of financial turbulence and, in some countries, continued high levels of indebtedness.

Annex II

Panel discussion on "Opportunities for and barriers to forest products from the perspective of the private sector"

1. Mr. Sylvain Labbé, founder and Chief Executive Officer of the Quebec Wood Export Bureau (Q-WEB), founder and Vice-President of the Canada Wood Group, and Board member of the UNEP Sustainable Buildings and Climate Initiative, was the moderator of the panel. He opened the discussion by introducing the speakers.

2. Mr. Marc Brinkmeyer, Chairman and co-owner of the Idaho Forest Group, briefly presented his company within the context of the US economy. Various factors were cited as major influences on the still slow economic recovery including: the political cycle, the stagnating purchasing power of the middle class, the low employment participation rate, and growing public and private debt. Focusing in particular on challenges for the timber sector, Mr. Brinkmeyer cited: the difficulties in attracting skilled young staff, concerns about the health of government-owned forests, the need for stable housing demand, the pending Softwood Lumber Agreement between Canada and the US, the economic situation in Asia, and increasing the market share of wood amongst all other construction materials (for example using wood as a material for constructing mid-rise wood buildings instead of concrete or steel). The uncertainty in the market has been responsible for little investment in new capacity in the timber industry. He also mentioned that current prices for gas and other fossil fuels have not justified the wide-scale investment in wood-based energy generation that many had hoped for in the US.

3. Mr. Hans-Joachim Danzer, Chief Executive Officer of Danzer Holding AG, presented his company, pointing out the differences in cost and organizational structures for hard wood companies. He then showed the participants some of the innovations his company developed and the difficulties it had to find markets for them due to the strong competition of products made from other materials. In fact, while the use of wood is heavily regulated and certified regarding its environmental footprint, other materials with a much heavier environmental footprint are not required to declare their environmental footprint nor absorb the real costs of their production (when the costs of environmental mitigation and disposal/recycling are factored in. He then indicated some of the measures policymakers could take to help level the playing field for wood as a construction material, such as: developing prices that include end-of-life costs of recycling and reclamation, fostering free trade, simplifying regulations and making them more consistent and certain in their application, introducing truth labelling of products, and having public entities take the lead in promoting the use of wood.

4. Mr. Sviatoslav Bychkov, Managing Director of Communications at Ilim Timber Industry LLC, gave an overview of his company's production and operational developments. He then highlighted the main difficulties for private companies to operate in the timber sector in Russia: the lack of infrastructure with a particular focus on access to remote areas, the low investment attractiveness coupled with the difficulty in obtaining financial resources, and the difficulty in coordinating the supply chain given the vast area and geographical disruptions in the country. However, he explained that the Russian Government is sustaining the wood sector by investing in woodworking capacity, giving financial support for wood housing

especially in disadvantaged areas, and developing a programme to monitor log flow and systems to promote intensive forestry.

5. Mr. Naci Güngör, Brand and Corporate Communications Manager at Kastamonu Entegre A.S., presented his company, a top producer of wood-based panels in the world. He explained that his company's rapid growth was enabled by the young population in Turkey, resulting in high levels of new home construction, and thus a high demand for wood-based panels. Kastamonu recently increased its production capacities in eastern Europe and in the Russian Federation. The main markets for its exports are concentrated in emerging markets (recently Iran, North Africa, Georgia and the CIS) where the demand is still strong. He further pointed out that his company uses FSC-certified wood.

6. The moderator, Mr. Labbé, asked the panellists for policy recommendations to help grow the market. Mr. Danzer explained that, to make wood competitive and level the playing field, it would suffice to incorporate in the price of all products the manufacturing costs of used resources, carbon emissions and end-of-life reclamation/recycling costs. Mr. Bychkov suggested incentives to motivate forest owners to harvest and manage their forests, and promoting a "carbon inside quota". Mr Güngör suggested removing taxes on wood to lower the cost of raw materials, and to provide government support for research and development and marketing activities. Mr. Brinkmeyer noted that, in the United States, discussions were still ongoing about whether carbon stored in wood products is an effective means of climate change mitigation. He further indicated some issues that need to be addressed: the very high cost of raw materials (delivered logs), the management of forests in relation to forest health and fire risks, and society's acceptance of logging activity.

Annex III

Panel discussion on wood construction in the region

1. The panel was moderated by Mr. Peter Moonen, Manager, National Sustainability, Canadian Wood Council.
2. Mr. Ivan Eastin, Professor at the University of Washington and Director of the Center for International Trade in Forest Products, presented Japan's roadmap to increase the production and use of Cross Laminated Timber (CLT). He explained that, in a very short timespan, Japan managed to define and pursue a very efficient strategy for the promotion of CLT. This would attain several objectives, such as revitalizing rural and mountain areas, encouraging the use of local timber species such as the sugi and hinoki, increasing CLT production capacity by 50,000 m³ annually, and reducing CLT production costs. The different stages of this strategy include: the collection of material strength data (product specifications based on engineering and design requirements); experiments and testing of CLT buildings; the use of demonstration buildings to encourage innovation; the introduction of subsidies of up to 50% of the investment costs to develop the CLT industry; the development of CLT construction methods; and the promotion of wood construction for public buildings.
3. Mr. Michael Klippel, Senior Scientist and Research Leader of the "Fire in Timber Group" at the Institute of Structural Engineering of the Swiss Federal Institute of Technology (ETH), Zurich, presented the fire behaviour of wood. He explained that it is comparable to, and in certain aspects better than, that of steel components. This is possible because the external char layer formed during a fire protects the residual cross-section from high temperatures, and enables timber beams to maintain residual load-bearing capacity. He further explained that there are strategies to improve wood fire resistance, such as the use of massive cross-sections and protecting the timber elements with non-combustible materials. He noted that the fire behaviour of timber is a key barrier for wood construction if the right regulations and expertise are not in place. In Switzerland, new fire safety regulations allow for timber to be used as a construction material in all categories of buildings, and there are updated standards and handbooks to help engineers design wood buildings.
4. Ms. Katrin Hauser, Programme Manager for Climate-Kic, Zurich, presented the building technologies accelerator. Climate-Kic is a public private partnership addressing climate change. The building technologies accelerator aims at significantly reducing GHG emissions by disseminating innovative low carbon building solutions, stimulating investments in refurbishments, and establishing a network of investors. This entails the collection of evidence on market needs and possible innovations/solutions, showcasing the innovations, finding investors, and upscaling the project by bringing in as many cities as possible. She then showed some of the innovations developed by the accelerator programme: a post-tensioned timber frame, hybrid composite slabs, the wood facade surface protection, a lightweight building envelope (called second skin), and insulation for subtropical regions.
5. Mr. Harald Professner, Global Business Development Manager for Rhomberg Group, started his presentation explaining the ecological footprint of the construction industry. The high levels of resources consumed clash with sustainability objectives, requiring a revolution in the construction industry. He then presented the solution designed by his company called CREE building technology. This is a timber-based construction system for multi-storey buildings, industrially pre-fabricated, and energy- and resource-efficient. The design is

integrated in the process, and allows for a high standardization and simplification of the process. As the components are highly standardized, they can be produced with a local workforce and timber. The assembly is fast and requires few workers. He then showcased several projects implemented with this technology.

6. Mr. Maurizio Follesa, Co-founder of the Timber Engineering design studio, dedaLEGNO, made a presentation on the seismic resistance of wood buildings. He showed the results of full-scale seismic tests in Japan, indicating that, even in the case of strong events, wood buildings are safer compared to other materials, suffering only limited, easily-reparable damage, and allowing immediate post-disaster occupancy. Nevertheless, the share of timber construction for residential buildings in Europe, and in particular in high seismicity areas, is very low. He listed a number of reasons for this low use of wood: lack of education and training for architects and engineers, complicated and lengthy standards for some wood-based products such as CLT, the lack of connection systems for taller buildings (especially for seismic zones), structural building codes and design rules that are outdated, lacunose and inconsistent across countries.

7. Mr. Peter Wilson, Managing Director of Timber Design Initiatives Ltd, explained that, in Europe, most architects do not know timber. As architects are a key figure in determining the material of construction, it is very important to train them in the use of wood. He further explained that most use of wood in construction is conventional and low value. Because 80% of the world's population will live in cities by 2050, society needs to invest in innovation and make tall residential wood buildings a reality. To address these challenges, Mr. Wilson presented a pan-European programme of continuing professional education in timber for architects.

8. Mr. Eduard Akim, Head of Department at the Saint Petersburg State University of Industrial Technologies and Design, intervened in the discussion, indicating that the Russian Federation would be ready to cooperate in an international training programme in timber for architects and engineers.

9. Many delegations (Germany, Ireland, Portugal, Norway, Russia) expressed their satisfaction with the market discussions, and presented their experiences with wood construction. While there was general agreement on the interest of setting up a taskforce to engage with the construction sector to promote wood construction, some concerns were raised about aligning objectives and resources.
