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## Annex II

### Forest Products Market Statement

#### I. Overview of forest products markets in 2017 and 2018

1. General conditions in forest products market in the ECE region were positive in 2017, with consumption increasing in sawnwood (+1.7%) and wood-based panels (+5.2%). Consumption was flat in industrial roundwood (-0.1%) and decreased in paper and paperboard (-0.9%). The consumption of paper and paperboard decreased in every subregion in 2017 (table 1).

TABLE 1  
*Apparent consumption of industrial roundwood, sawnwood, wood-based panels and paper and paperboard, ECE region, 2013-2017*

	Thousand	2013	2014	2015	2016	2017	Change (volume) 2016- 2017	Change (%) 2016- 2017	Change (%) 2013- 2017
<b>Industrial roundwood</b>									
Europe	m <sup>3</sup>	379,526	395,019	401,065	408,587	408,812	225	0.1	7.7
CIS	m <sup>3</sup>	175,074	181,822	185,471	194,311	196,822	2,511	1.3	12.4
North America	m <sup>3</sup>	486,764	490,150	494,222	498,494	494,358	-4,136	-0.8	1.6
ECE region	m <sup>3</sup>	1,041,364	1,066,991	1,080,758	1,101,392	1,099,992	-1,400	-0.1	5.6
<b>Sawnwood</b>									
Europe	m <sup>3</sup>	96,894	101,368	104,522	107,955	108,889	934	0.9	12.4
CIS	m <sup>3</sup>	20,356	19,247	17,219	16,674	17,768	1,094	6.6	-12.7
North America	m <sup>3</sup>	101,090	106,274	112,603	117,570	119,623	2,053	1.7	18.3
ECE region	m <sup>3</sup>	218,340	226,889	234,345	242,200	246,280	4,080	1.7	12.8
<b>Wood-based panels</b>									
Europe	m <sup>3</sup>	66,494	69,001	70,289	73,231	75,272	2,041	2.8	13.2
CIS	m <sup>3</sup>	17,904	17,530	17,547	17,527	19,323	1,796	10.2	7.9
North America	m <sup>3</sup>	47,538	49,459	51,580	52,403	56,034	3,631	6.9	17.9
ECE region	m <sup>3</sup>	131,936	135,990	139,415	143,161	150,630	7,468	5.2	14.2
<b>Paper and paperboard</b>									
Europe	m.t.	89,485	89,814	88,933	89,402	88,248	-1,154	-1.3	-1.4
CIS	m.t.	9,386	9,397	9,106	9,561	9,501	-60	-0.6	1.2
North America	m.t.	74,954	76,053	75,651	75,602	75,181	-421	-0.6	0.3
ECE region	m.t.	173,825	175,264	173,690	174,566	172,931	-1,635	-0.9	-0.5

**Note:** Sawnwood does not include sleepers.

**Source:** UNECE/FAO, 2018

#### A. Economic developments with implications on the forest sector

2. The pace of economic activity accelerated in the ECE region in 2017 amid a stronger world economy. For the first time since the 2008 global financial crisis, economic growth was observed in all ECE countries, albeit with marked differences. In the US, increased

consumption and exports and a turnaround in investment led to relatively rapid growth. In the euro area, a broad-based recovery gained momentum and became more synchronized. In the new EU member countries output expanded at the fastest rate in a decade, driven by the upturn in the rest of the EU, supportive policies, and increased EU transfers. Data for early 2018, however, suggest a slowdown in the EU as a whole, due partly to temporary factors (e.g. strikes and weather disruptions). In the CIS, a return to growth in the Russian Federation after a two-year contraction had a positive impact throughout the subregion, supported by better terms of trade and less-volatile macroeconomic conditions.

3. Continued expansion led to improved labour market dynamics in the ECE region. In the US, unemployment fell to a level below that observed before the global financial crisis, and the strong momentum for job creation continued in early 2018. Despite falling unemployment, wage growth remains relatively muted although there are some signs of a pickup. In the euro area, unemployment continued to decline, but the pick-up in earnings was limited. Significant differences exist in the EU as a whole. Labour shortages in particular sectors in some countries are in sharp contrast with double-digit rates of unemployment in others, and there are large differences between age groups. In the CIS, the economic recovery resulted in growing wages, a reduction in involuntary adjustment mechanisms, and falling unemployment.

4. Economic prospects in the ECE region remain generally positive, buoyed by improving investment and productivity trends and by growth-supportive policies. Overall, output is expected to increase in 2018 at a similar pace to 2017. There are, however, significant downside risks and sources of uncertainty that could have a detrimental effect on economic performance. Movements in financial markets have started to reflect a more complicated outlook. After a long period of lax financial conditions, the normalization of monetary policy in advanced countries may reveal hidden fragilities. In some countries, low interest rates have fuelled very rapid increases in house prices. In some others, the need for large external financing is a source of vulnerability that rising interest rates could exacerbate. Geopolitical tensions have not disappeared. The prospect of trade conflicts has emerged, with damaging implications for confidence and investment and potentially large negative spillovers.

5. The improvement in economic conditions has been accompanied by increasing house prices and construction activity. In Europe and the US, the growth of house prices – which are now above previous peaks – accelerated slightly in 2017. In the euro area, house prices rose in early 2018 at rates not seen since before the global financial crisis. Although increased overall investment was the main driver of accelerating economic activity in the US in 2017, new residential investment continued to trail behind. The growth of building construction picked up in the EU, mainly as a result of sharp increases in new EU member countries. Housing activities were supported by an expansion in lending. The health of banking systems in euro-area countries improved, in line with the economic situation. In some EU countries, however, the fast growth of house prices led monetary authorities to introduce constraints on housing loans. Lending to households picked up in the CIS; the banking sector there remained in poor shape, however, thus limiting credit growth.

6. Despite continued economic expansion, price pressures have remained muted in the US. Authorities tightened monetary policy gradually (amid expectations of higher inflation as the economy powered ahead), raising interest rates three times in 2017 and three times in 2018 with a further increase anticipated. Further rate increases are anticipated in the US in the second half of 2018. In contrast, the European Central Bank has signalled its intention to keep the existing low rates unchanged this year. It has, however, started withdrawing its massive monetary stimulus by reducing net bond purchases because the inflation outlook for the euro area has changed. Higher energy prices and a weaker exchange rate drove headline inflation higher in early 2018 in the euro area (graph 1). Despite rising interest rates, the

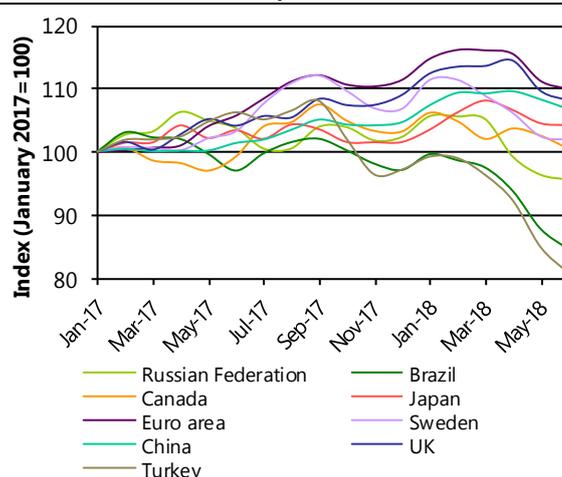
nominal trade-weighted dollar exchange rate slid through 2017 and early 2018; this trend reversed recently, however, supported by perceptions of growing divergence in monetary policy. In some CIS countries, the weakening of price pressures amid moderate growth allowed a cautious loosening of monetary policies.

7. In the US, fiscal policy is becoming more expansionary, with investment, at least initially, reacting positively to cuts in corporate and personal income tax. The impact on growth of a fiscal loosening in the US economy, which is already very close to full employment, may be partly offset, however, by a faster-than-anticipated normalization of monetary policy. Differences with the euro area on fiscal policy would have implications for future monetary policy paths. The fiscal position of the euro area continued to improve in 2017 due to the cyclical recovery and persistently low financing costs. Fiscal policy, which has been broadly neutral since 2015, is becoming slightly expansionary. In some countries, the improvement of the economic situation is allowing a reduction in social transfers while increasing public investment. In the CIS, higher oil prices boosted public finances in energy-exporting countries, which have nevertheless embarked on paths of fiscal consolidation.

GRAPH 1

**Major currencies used to trade forest products indexed against the US dollar**

January 2017–June 2018



**Notes:** A diminishing index value indicates a weakening of the currency value against the US dollar; an increasing index value indicates a strengthening of the currency value against the US dollar.

**Source:** IMF, 2018.

## B. Policy and regulatory developments affecting the forest products sector

8. Various recent economic and political decisions have direct and indirect implications for the forest sector. Trade agreement negotiations and discussions on tariffs are having an impact, as is continued uncertainty about government positions and policy changes, either proposed or realized.

9. The Comprehensive Economic and Trade Agreement (CETA) entered into force provisionally in September 2017 with the aim of expanding transatlantic trade between the EU and Canada. No progress has been made in the last year, however, on negotiations for the Transatlantic Trade and Investment Partnership (TTIP) between the EU and the US. Both parties agreed in mid-2017 to set up a joint delegation to increase trade cooperation, but no

subsequent activity has been reported. It is expected that the Economic Partnership Agreement between the EU and Japan will take effect in 2019. Tariffs on forest products will be progressively eliminated.

10. On December 30, 2018, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) will enter into force. The CPTPP's entry into force was triggered by the sixth member country to ratify the agreement (Australia) on October 31, 2018. The CPTPP is a major trading block comprising 11 Pacific Rim countries representing 495 million people. Once the CPTPP enters into force, it will be one of the largest free trade agreements in the world and will provide enhanced market access to key Asian markets. Member countries will enjoy a reduction in forest product tariffs. Many forest products will enjoy duty-free access upon entry into force, while tariff reductions on other forest products will be phased in over time.

11. The United States–Mexico–Canada Agreement (USMCA) is the pending free trade agreement between Canada, Mexico, and the United States. Negotiations have been concluded, but the agreement has not been signed or ratified. The USMCA will ensure certainty and improved trade stability between Canada, Mexico and the US.

12. The Softwood Lumber Agreement between Canada and the US expired in 2015, having been in place since 2006. In May 2017, the US levied 3-24% tariffs on Canadian sawn softwood (antidumping and countervailing duties). The Government of Canada disputes the US allegation that it is subsidizing Canadian forest products and has taken its complaint to the World Trade Organization.

13. Log exports to China from Russia in 2017 were less than half of ten years earlier while sawnwood exports increased ten times. This was the intent of policy measures (namely export tariffs) implemented by the Russian Government which will increase from 25% to 40% in 2019 in the Russian Far East. There has been significant growth of Chinese investment within the Russian Federation to produce sawnwood for export to China.

14. The EU Forest Law Enforcement, Governance and Trade Action Plan, adopted in 2003, is an initiative to address illegal logging and the economic, social and environmental harm it causes through measures in the EU and in countries that export timber and timber products to the EU. The Review highlights some of the outcomes of enforcement of the EU Timber Regulation by member states.

15. EU tropical sawn hardwood imports declined to 875,000 m<sup>3</sup>, a reduction of 18% from 2016 and about one-third the volume prevailing before the global financial crisis. The situation is less dire for some other products; nevertheless, the ECE region is losing significance as an export market for tropical producers.

16. The US Lacey Act, enacted in 1900, now requires that import declarations accompany certain plants and plant products, including a wide range of forest products. Effective from November 2016, all shipments of plants and plant products entering or leaving the US are subject to Lacey Act declaration requirements.

17. The Russian government has placed a two-year moratorium (from 1 December 2017) on the public procurement of furniture produced outside Eurasian Economic Union countries (Armenia, Belarus, Kazakhstan, Kyrgyzstan and the Russian Federation). The moratorium could lead to increases in wood-furniture production in the Russian Federation and other Eurasian Economic Union countries.

18. The US Environmental Protection Agency issued a statement of policy that biomass from managed forests will be treated as being carbon neutral when used for energy production at stationary sources. The policy is expected to increase opportunities for investment in biomass energy and to reduce uncertainty around biomass regulations.

19. Another major policy change affecting US forests was the passage of a “wildfire funding fix” to address problems in the US Forest Service budget associated with having to shift funding to fight wildfires, thus reducing the funds available for other management activities. The policy change will allow federal agencies to use disaster funding to pay a portion of wildfire suppression costs.

20. The US Congress is debating the Agriculture and Nutrition Act, 2018 (also referred to as the Farm Bill), the most significant legislation affecting management and conservation activities in private and family-owned forests in the US (US Congress, 2018). It is estimated that the previous Farm Bill, passed in 2014, has facilitated more than \$1.8 billion of investment in forest-owner assistance programmes for activities associated with wildlife habitats, tree planting and reforestation, insect and disease management, the removal of invasive species, water-quality protections, and other conservation measures.

21. The European Commission published a proposal for a revised Renewable Energy Directive in late 2016 with the aim of ensuring that renewables constitute at least 27% of final energy consumption in the EU by 2030. In June 2018, the European Parliament and the Council agreed on a revised share of energy from renewables of at least 32 per cent by 2030.

22. The world’s two major forest certification schemes – the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC) – reported a combined certified forest area of 503 million hectares. The two organizations concluded that the area of double-certified forest (i.e. forest certified under both schemes) amounted to 70.1 million hectares in December 2016 and 71.1 million hectares in mid-2017; in both cases, this was 16.5% of the global certified forest area. The total global certified forest area, with double-counting subtracted, was 427.7 million hectares in December 2016 and 431.4 million hectares in mid-2017, with the area of double-certified area increasing by almost 1 million hectares. The FSC reported that, in June 2018, it had more than 200 million hectares of certified land area.

23. Both the Sustainable Forestry Initiative (SFI) and the American Tree Farm System have gained access to federal procurement recommendations in the US; previously, only FSC-certified materials were recognized. The revised approach is intended to align with purchasing requirements for federal agencies established in the US Department of Agriculture’s BioPreferred Program, which recognizes the various forest certification programmes equally.

24. Reported participation in chain-of-custody (CoC) certification continues to grow; however, data on this aspect of certification are known to include overlaps, with companies often holding multiple CoC certificates. The International Organization for Standardization is developing a CoC standard (ISO/PC 287) for wood, wood-based products and wood-related materials.

25. The Sustainable Biomass Program (SBP) reported that it had 139 certificate holders as of March 2018, up by 88% from December 2016. The SBP estimated that there were more than 5 million tonnes of SBP-certified wood pellets and chips in the market in 2017, representing 46% of the EU28’s wood pellet consumption.

26. On 14 May 2018, the Council of the European Union adopted a regulation committing all EU member countries to compensate for their greenhouse gas (GHG) emissions and removals from land use, land-use change and forestry against a country’s specific reference level. The regulation is known as a no-debit rule, meaning that all countries commit to offsetting their GHG emissions from land-use change and deforestation that occur between 2021 and 2030. This is also in line with the EU’s 2030 emission-reduction targets (GHG emissions should be cut by at least 40% by 2030) and the Paris Agreement on climate change.

27. The Government of Canada has committed to put a price on carbon across all provinces and territories by 1 January 2019. Some jurisdictions have already implemented a carbon price, while others have expressed their opposition to the plan.

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

### **A. Wood raw materials**

28. The total consumption of roundwood – comprising logs for industrial uses and fuel – in the ECE region was estimated at 1.35 billion m<sup>3</sup> in 2017, almost unchanged (up by 0.1%) from 2016. The apparent consumption of logs for industrial purposes trended upward in the ECE region in the five years to 2017, reaching 1.10 billion m<sup>3</sup>, 5.6% higher than in 2013. Woodfuel consumption increased by 3.0 million m<sup>3</sup> in 2017, to 221.5 million m<sup>3</sup>.

29. Of the total volume of roundwood harvested in the ECE region in 2017, about 17% was used for fuel (224.4 million m<sup>3</sup>), an increase of 18 million m<sup>3</sup> (+8.9%) from 2013. Europe accounted for almost 54% of total woodfuel consumption in the ECE region in 2017. Estimates of roundwood volumes removed from forests for fuel are highly unreliable, however, because only a few countries have consistent methods for collecting relevant data on this increasingly important end use. Nevertheless, it is clear that a significant share of forest removals is used for energy purposes.

30. The ECE region is a net exporter of industrial roundwood (both softwood and hardwood), with total net exports of 29.5 million m<sup>3</sup> in 2017. The biggest shipments from countries in the ECE region were from the Russian Federation to China and Finland and from the US to Canada and China.

31. Sawlog prices increased in many countries in 2017 due to strong demand for softwood lumber in key markets worldwide (including the US, Europe and China), increasing prices for lumber, and a growing international log trade. With the exception of the US South and Brazil, sawlog prices moved up in the world's major lumber-producing regions in 2017 and early 2018. The biggest increases were in eastern Europe, the Nordic countries and western North America.

32. Softwood-fibre costs increased in 2017 and early 2018 for the first time since 2011, thus ending a seven-year declining trend.

33. The Committee forecasts that removals of industrial roundwood are expected to increase in the ECE region at an annual rate of 1.2% in 2018 and 0.2% in 2019. The subregional breakdown is as follows: Europe is showing an increase of 3.8% in 2018 (partly driven by removals due to bark beetle infestation in central Europe) and a small rise of 0.1% in 2019; CIS is expected to increase 1.7% in 2018 and then 1.6% in 2019; and North America to decrease -1.1% in 2018 and a further -0.4% in 2019.

### **B. Sawn softwood**

34. For the second consecutive year, the three ECE subregions recorded gains in the consumption and production of sawn softwood, the result of continuing favourable global economic conditions and improving markets worldwide.

35. Apparent sawn softwood consumption grew by 1.5% in Europe in 2017, with some countries increasing strongly, such as the UK (+9.7%), the Netherlands (+7.8%) and France (+6.4%). Germany is Europe's largest market for sawn softwood, with a 20% share of

consumption, followed by the UK (11%). Europe's sawn softwood production increased by 1.2% in 2017, to 109.7 million m<sup>3</sup>. Notable gains were in Germany (+0.9 million m<sup>3</sup>), Finland (+0.3 million m<sup>3</sup>) and Poland (+0.2 million m<sup>3</sup>).

36. European sawn softwood exports increased by 3.4% (to a total volume of 51.5 million m<sup>3</sup>) in 2017, compared with growth of 4.1% in 2016. China became Europe's largest overseas sawn softwood export market in 2017, overtaking Egypt and Japan and compensating for weak demand in the Middle East and North Africa.

37. Sawn softwood production in the Russian Federation increased by 10.3% in 2017, to 37.8 million m<sup>3</sup>, accounting for 86% of the CIS subregion's output of 43.8 million m<sup>3</sup>. The Russian Federation exported 28.0 million m<sup>3</sup> of sawn softwood (+10%) in 2017, a new record. China remained the largest consumer of Russian sawn softwood in 2017, increasing purchases by 20% compared with 2016, to 16.1 million m<sup>3</sup>. The CIS showed the strongest increase in apparent consumption in the ECE region (+6.2%).

38. The economic recovery in North America continued in 2017 for the eighth consecutive year. US housing starts increased to more than 1.2 million units (up by 3.0%), pushing North American apparent sawn softwood consumption to 99.2 million m<sup>3</sup> (+2.9%). Canadian sawn softwood production was unchanged in 2017, at 48.2 million m<sup>3</sup>, but the US increased output by 3.5%, to 57.6 million m<sup>3</sup>. Combined, North American output amounted to 105.8 million m<sup>3</sup> (+1.9%).

39. A multitude of supply shocks (including reduced Canadian production), as well as import duties on Canadian sawn softwood to the US, created all-time record-high sawnwood prices in the US in 2017 and especially the first half of 2018. This caused a ripple effect on prices in most major global markets, continuing a positive cycle that started in late 2015. However there has been a sharp dip since June 2018 in North American prices that is likely to be short lived as there are strong indications that demand will increase, raising prices again.

40. With strong domestic demand in 2017 and no growth in production, Canadian shipments to the US fell by 1.4 million m<sup>3</sup> (-5.8%) in 2017, to 22.7 million m<sup>3</sup>, despite soaring prices. Overseas exports declined by 5.0%, to 6.7 million m<sup>3</sup>.

41. The Committee forecasts that production of sawn softwood will increase in the ECE region at an annual rate of 2.1% in 2018 and 1.3% in 2019. The subregional breakdown is as follows: Europe with a gain of 3.1% in 2018 and 1.3% in 2019; CIS is expected to increase 2.6% in 2018 and remain flat in 2019; and North America will gain 0.9% in 2018 and increase 2.0% in 2019. Limited mill capacity in US South and Canadian roundwood supply constrain the opportunity for responding to market growth.

## C. Sawn hardwood

42. After five years of growth, the apparent consumption of sawn hardwood decreased by 3.2% in the ECE region in 2017, to 34.4 million m<sup>3</sup>. Consumption increased rapidly in the CIS (+11.1%), in contrast to Europe and North America, where it decreased by 3.8% and 3.6%, respectively.

43. Sawn hardwood production was relatively flat (up by 0.6%) in the ECE region in 2017, at 41.7 million m<sup>3</sup>. Production was stable in Europe and North America and increased in the CIS.

44. Sawn hardwood imports by ECE countries decreased by 3.2% in 2017, to 6.4 million m<sup>3</sup>. Sawn hardwood exports amounted to 13.7 million m<sup>3</sup>, up by 9.6% compared with 2016 and by more than 40% compared with 2013.

45. Oak is still highly sought-after, and exports of oak logs increased to China. The strong Chinese demand further increased prices for European oak in 2017 and the first half of 2018.

46. The Committee forecasts that production of sawn hardwood will increase in the ECE region at an annual rate of 3.9% in 2018 and 0.6% in 2019. The subregional breakdown is as follows: Europe is expected to jump 7.0% in 2018 (driven by a very strong forecast increase for Turkey) and 0.5% in 2019; CIS increases 1.0% in 2018 and 4.1% in 2019; and North America with an expected increase of 2.5% in 2018 and an increase of 0.1% in 2019.

## **D. Wood-based panels**

47. The production and consumption of wood-based panels increased in all three ECE subregions in 2017. In Europe, production increased by 1.6% overall and grew for all types of wood-based panels except veneer sheets.

48. The production of wood-based panels increased by 12.3% in the CIS in 2017, with an even stronger increase (+15.1%) in exports; apparent consumption was also up (by 10.2%). There were large increases in the production of fibreboard (+19.4%) and OSB (+17.7%) in the CIS, but plywood production contracted slightly in the Russian Federation due to a shortage of raw materials.

49. The apparent consumption of wood-based panels increased by 6.9% in North America in 2017, led by an increase in net imports (exports grew by 4.5% and imports were up by 17%). Total wood-based panel production in North America increased by 3.0% in 2017, to 48.6 million m<sup>3</sup>. The consumption of structural wood-based panels (OSB and plywood) increased by 5.5% in North America in 2017, with demand for OSB and plywood increasing by 7.6% and 3.2%, respectively. The consumption of non-structural panels (particle board and medium density fibreboard – MDF) in the North American market increased by 0.9% in 2017, with MDF growing by 2.0% and particle board flat.

50. The trade (both imports and exports) of wood-based panels increased in all three subregions in 2017. Europe and the CIS have trade surpluses in wood-based panels but North America has a substantial trade deficit.

51. The Committee forecasts that production of wood-based panels will increase in the ECE region at an annual rate of 2.2% in 2018 and by 1.0% in 2019. The subregional breakdown is as follows: Europe will grow 0.9% in 2018 and 0.8% in 2019; CIS should increase by 2.0% in 2018 and 2.5% in 2019; and North America is forecast to grow 3.0% in 2018 and 3.3% in 2019.

## **E. Paper, paperboard and woodpulp**

52. The global pulp, paper and paperboard industry experienced a turnaround in 2017, driven by a much tighter supply–demand balance for woodpulp and continued strong demand for packaging and sanitary and household products.

53. China was the engine of growth in global demand for market pulp in 2017. Tighter rules surrounding imports of recovered paper caused demand for other fibres to grow and prices to rise.

54. Increased use of electronic communication continued to play a major role in the evolution of the pulp and paper segments, with graphic-paper capacity declining due to lower demand. Further rationalization is anticipated in 2018, albeit at a slower pace.

55. Pulp prices increased in 2017, due mainly to unplanned supply disruptions, and higher prices have continued into 2018. The expansion of bleached hardwood kraft capacity in South

America and Asia was by far the most important factor influencing pulp markets in 2017 and the first half of 2018. This was countered by several bouts of unplanned downtime due to major mechanical failures, slow start-ups during the commercialization periods of new pulp lines, and transportation strikes in Brazil and Chile.

56. As a result of increased input costs for non-integrated producers, prices for graphic paper and sanitary and household items rose throughout 2017.

57. Global chemical market-pulp capacity grew by 4.5 million tonnes (6.9%) in 2017, with increases mainly in South America and Asia. Unplanned downtime among pulp producers caused significant supply disruptions in woodpulp production, negating much of the incremental increase in capacity.

58. Graphic-paper production and apparent consumption continued to decline in almost every market in 2017 as end-users reduced advertising budgets for print media and swung towards electronic communication. The apparent consumption of graphic paper fell in every ECE subregion as end-users moved increasingly to electronic communication. The ongoing increase in raw-material costs, including pulp, could further exacerbate the reduction in demand for graphic-paper grades.

59. The Committee forecasts that production of woodpulp will increase in the ECE region at an annual rate of 0.7% in 2018 and at the same rate in 2019. The subregional breakdown is as follows: Europe gains 2.3% in 2018 and 1.6% in 2019; the CIS is forecast to gain 0.2% in 2018 and gain 1.7% in 2019; and North America is expected to decrease by -0.2% in 2018 and remain flat in 2019.

60. The Committee also forecasts that production of paper and board will increase in the ECE region at an annual rate of 0.3% in 2018 and by 0.5% in 2019. The subregional breakdown is as follows: Europe gains 0.8% in both 2018 and 2019; the CIS is forecast to gain 0.3% in 2018 and 1.0% in 2019; and North America is expected to decrease by 0.4% in 2018 and remain flat in 2019.

## **F. Wood energy**

61. There was little change in wood energy consumption in the ECE region in 2017. Nevertheless, the slower-than-expected expansion of production capacity, combined with greater demand (especially in the UK, Denmark and the Netherlands) and higher fossil-fuel prices, contributed to significant increases in wood pellet prices in 2017 and early 2018; other factors were production issues in the Russian Federation, fires in Portugal, and relatively low year-on-year growth in installed production capacity. Higher fossil-fuel prices and continued interest in replacing older commercial and residential heating units, upgrading existing district heating units and replacing coal-fuelled power plants with biofuels are expected to spur new demand.

62. Some analysts expect wood pellet demand to reach 45 million tonnes by 2025 for power generation and 24 million tonnes for heating in the residential and commercial sectors. This would mean an increase in pellet consumption above 2017 volumes of about 15 million tonnes for power generation and 14 million tonnes for heating.

63. The primary production of “solid biofuels (excluding charcoal)” in the EU28 grew to about 3,941 petajoules in 2016, up by 2.5% compared with 2015. Wood pellet consumption was 23.4 million tonnes in Europe in 2017, a 4.6% increase over 2016. Wood pellet production increased by 5.4% to 16.4 million tonnes and imports by 4.4% to 14.6 million tonnes.

64. The production of wood pellets in the CIS increased by 21.5% in 2017. Production grew by 20% in the Russian Federation, to 1.3 million tonnes, due to improvements in logistics and new infrastructure. Wood pellet consumption declined by 5.8% in the CIS in 2017, with all the increase in production exported (wood pellet exports rose by 31.9%, to 1.8 million tonnes).

65. North America produced 9.6 million tonnes of wood pellets in 2017, up by 3.4% over 2016. Wood energy consumption accounted for about 4.5% of Canada's total primary energy supply in 2017, which was largely unchanged from 2016. Wood energy consumption in the US was only about 0.6% higher in 2017 than in 2016, at 2,262 PJ. Wood consumption for energy is expected to remain flat in the US through 2019.

66. The price of wood pellets increased in Europe in 2017 and early 2018, with prices for industrial wood pellets at Antwerp, Amsterdam and Rotterdam up by 50% in January 2018, year-on-year. The price of wood pellets exported from the Russian Federation was down slightly in 2017 due to increased production capacity. There was little change in prices in North American firewood and pellet markets in 2017.

67. The Committee forecasts that production of wood pellets will increase in the ECE region at an annual rate of 3.5% in 2018 and 5.5% in 2019. The subregional breakdown is as follows: Europe is forecast to increase by 1.8% in 2018 and a further 4.3% in 2019; CIS is expected to increase 13.4% in 2018 and 3.9% in 2019; and North America is estimated to increase 4.1% in 2018 and then 7.9% in 2019.

## **G. Value-added wood products**

68. Global furniture production was worth \$440 billion in 2017, up by \$20 billion from 2016. The value of the global furniture trade in 2017 was estimated at \$145 billion, with the US, Germany, France, the UK and Japan the largest importers.

69. The trend of furniture producers shifting production to lower-cost regions is slowing due to the increased use of automation, increasing costs in previously low-cost regions, and demands from customers for shorter delivery times. China is still by far the biggest producer and exporter in the global furniture market, and the US is the largest furniture importer. China's domestic furniture market is increasing by 10% per year.

70. Furniture producers in high-cost countries such as Germany and Italy have started exporting "high-end" furniture products with high-quality materials, finishing and design. Prospects for furniture markets seem bright after a positive 2017, and orders were up in the first few months of 2018: for example, orders were 5% higher in the US in February 2018, year-on-year. There are increasing trends towards the online sale of furniture and away from durable hardwood furniture towards low-cost, owner-assembled, semi-disposable furniture.

71. Markets for builders' joinery and carpentry (BJC) have grown steadily in the US, with imports doubling from 2011 to more than \$2.2 billion in 2017. The increased demand is the result of a strong housing market, economic growth, consumer confidence and good employment figures. BJC imports are also growing in the European market, mainly from neighbouring countries.

72. Improved housing markets in the ECE region are causing strong demand for imports of profiled-wood products, although volumes are still well below their peak in 2006.

73. North American production of glulam, wooden I-beams and laminated veneer lumber made consistent gains from 2010 to 2017, mainly the result of increased new-housing construction. The trade flow of glulam and cross-laminated timber (CLT) from Austria to

Italy – the biggest trade flow of these products in Europe – fell by 12% in the first three months of 2018, year-on-year.

74. The production of CLT is still concentrated in Europe and, within Europe, in Germany, Austria and Switzerland, which together accounted for about 70% of global production in 2017. European production is projected to increase dramatically to about 1.78 million m<sup>3</sup> by 2020. Despite the hype around CLT for the construction of tall wooden structures, most usage in construction in the near future is likely to be for low- and mid-rise buildings.

75. CLT is increasingly popular in North America, echoing the long-established trend in Europe. As of early 2017, there were two CLT producers in Canada and three in the US, but numerous CLT manufacturing plants are in start-up, under construction or in planning. It is estimated that the potential market for CLT in the US alone could be between 2 million and 10 million m<sup>3</sup> – bigger than the entire global market today.

## H. Housing

76. In many countries, housing (new construction and remodelling) is the largest value-added market for wood products. Housing is considered a primary indicator and catalyst of economic activity for overall economies. Thus, economic projections and house-price analysis may provide insights into housing construction and remodelling markets.

77. The number of residential buildings put in place in the Russian Federation declined by 3.2% in 2017, even though the area of newly installed residential space of 78.6 million m<sup>2</sup> was similar to the area installed in 2016. Although the Russian housing market is improving, house prices fell in 2017, possibly due to the steadily increasing construction market. The goal of the “Housing for Russian Family Programme” is to build 500,000 two-room apartments, beginning in 2018.

78. Construction spending increased by 1.8% in the euro area and by 0.9% in the EU28 between April 2017 and April 2018. Construction output grew by 3.9% in the Euroconstruct region in 2017, led by residential construction (+10%). Residential remodelling is also looking promising, especially in western and northern Europe. New residential construction accounted for 42.6% of total new construction spending in the Euroconstruct region in 2017, non-residential construction for 34.4% and civil engineering for 23%, a similar breakdown to previous years. The outlook for the construction sector in the Euroconstruct region is positive, with spending projected to grow in all subsectors (new residential, residential remodelling, new non-residential, non-residential remodelling, new civil engineering and civil-engineering remodelling) in 2018 and through to at least 2020.

79. House construction and sales have been improving in the US from the low-point in 2009, but aggregate new single-family house construction remains well below its historical average. All sectors of the US housing market improved in 2017. Beginner or starter housing remained subdued, however, and the quantity of dwellings being constructed is insufficient to meet the potential demand due to population growth. In Canada, federal, provincial and local governments introduced regulations in 2017 designed to dampen rising prices and valuations, including a nationwide mortgage stress test, a foreign buyer’s tax, and rent controls. By the first quarter of 2018, the effect of these regulations had been a decline of 10% in the average sales price of Canadian houses and a sharp decline in house sales.

80. The Joint Center for Housing estimated that \$306 billion was spent on remodelling in the US in 2017 and forecast this to rise to \$327.9 billion in 2018 and \$341 billion in 2019. The aging stock of housing will likely keep repair and remodelling an important consumer of wood products.

## **I. Conclusion**

81. Conclusions from the Market Discussions forecast increased demand for sawn softwood, the result of a pent-up need for housing in the US and significant growth potential in Asia. While the market potential of China is widely recognized, and Japan and Korea are seen to be reliable destinations; India is seen as having a strong potential as a market. Per-capita sawn softwood consumption in the ECE, at roughly 0.3 m<sup>3</sup> per person per year, is ten times the level of china.

82. Significant demand comes from the construction sector. There is a growing consensus that off-site production of housing (modular, prefabricated and mass timber components) will become much more important, driven by productivity, cost and quality factors. An emphasis on wood in construction in countries where this has not been common is also expected to lift demand over the medium and long-term.