

# Final Forest Products Market Statement as adopted

## I. Overview of forest products markets in 2016 and 2017

1. The general condition of forest product markets in the ECE region improved in 2016, with all major subsectors (industrial roundwood, sawnwood, wood-based panels, and paper and paperboard) showing higher consumption levels and growth rates. This growth has continued in 2017.

2. There were slight contractions in the consumption of wood-based panels in the CIS (-0.6%) and of paper and paperboard in North America, but these were offset by gains in those subsectors in the other subregions. The aggregated year-on-year growth rates in consumption in the ECE region in 2016 ranged from 0.9% (for paper and paperboard) to 4.0% (for sawnwood) (table 1), with differences between subregions.

3.

TABLE 1  
*Apparent consumption of industrial roundwood, sawnwood, wood-based panels, and paper and paperboard in ECE region, 2012-2016*

		Million	2012	2013	2014	2015	2016	Change (volume) 2015- 2016	Change (%) 2015- 2016	Change (%) 2012- 2016
<b>Europe</b>										
Industrial roundwood	m <sup>3</sup>		375.7	381.8	394.7	401.1	407.1	6.0	1.5	8.4
Sawnwood	m <sup>3</sup>		97.0	96.9	101.4	104.2	107.0	2.8	2.7	10.2
Wood-based panels	m <sup>3</sup>		64.7	66.3	68.1	70.7	72.5	1.9	2.7	12.2
Paper and paperboard	m.t.		90.9	89.6	89.8	89.2	90.3	1.1	1.2	-0.6
<b>CIS</b>										
Industrial roundwood	m <sup>3</sup>		173.7	175.1	182.4	185.0	192.0	7.1	3.8	10.6
Sawnwood	m <sup>3</sup>		19.7	20.4	19.2	17.8	18.1	0.2	1.4	-8.3
Wood-based panels	m <sup>3</sup>		17.7	17.8	17.5	17.6	17.5	-0.1	-0.6	-1.4
Paper and paperboard	m.t.		9.4	9.4	9.4	9.1	9.6	0.5	5.6	2.7
<b>North America</b>										
Industrial roundwood	m <sup>3</sup>		481.2	486.8	490.2	494.2	501.5	7.3	1.5	4.2
Sawnwood	m <sup>3</sup>		95.5	101.1	106.3	112.6	119.0	6.4	5.7	24.7
Wood-based panels	m <sup>3</sup>		46.4	48.0	49.9	52.0	53.8	1.8	3.4	15.9
Paper and paperboard	m.t.		77.1	75.0	76.1	75.7	75.6	-0.1	-0.1	-1.9
<b>ECE region</b>										
Industrial roundwood	m <sup>3</sup>		1030.5	1043.6	1067.3	1080.3	1100.7	20.3	1.9	6.8
Sawnwood	m <sup>3</sup>		212.2	218.3	226.9	234.6	244.1	9.5	4.0	15.0
Wood-based panels	m <sup>3</sup>		128.8	132.1	135.5	140.2	143.8	3.5	2.5	11.7
Paper and paperboard	m.t.		177.3	173.9	175.3	173.9	175.5	1.6	0.9	-1.0

Source: ECE/FAO TIMBER database, 2017.

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

4. Amid a global recovery, overall economic trends were positive in the ECE region in 2016. Although significant country differences persisted, the pace of expansion was sustained and became more synchronized. In 2016, there was steady growth in GDP in the US. However, the appreciation of the US dollar had a negative impact on net exports. In contrast, the euro area showed signs of increased dynamism, driven by the lagged effects of euro depreciation, relatively low oil prices, and a policy mix that has become more conducive to growth.

5. A heavy political calendar and the decision by the United Kingdom of Great Britain and Northern Ireland (UK) to leave the European Union (EU) did not derail the growing confidence. In the new EU member countries, an economic slowdown was temporary and related to the pattern of disbursement of EU funds, following years of very strong activity. After the output contraction in 2015, growth started returning to the CIS as oil prices bottomed out and the macro-economic framework became less volatile.

6. In the US, unemployment declined further and the rapid pace of job creation continued into early 2017. Wages have been growing more slowly than employment in the post-crisis period, but improvements in the labour market have eventually translated into moderately rising wages. In the euro area, employment creation accelerated significantly, but unemployment is still high in some European countries, in particular for the young and the low-skilled. Job creation was supported by limited wage increases and, in some countries, by labour market reforms.

7. Overall, the recovery of the labour market remained uneven and was characterized by growing job polarization and precarious forms of unemployment in some countries. Labour market dynamics were relatively resilient in the CIS, despite weak output trends. A sharp adjustment of real wages, combined with underemployment, prevented unemployment figures from climbing higher.

8. Lending to households and non-financial corporations continued to grow in the euro area, amid declining interest rates and a reduction in financial fragmentation. The banking sector has increased its capacity to support the recovery, but country fragilities remain. In the CIS, on the other hand, poor economic performance and the impact of past currency depreciations have constrained lending, although the worst is now behind.

9. In some advanced economies, the extended period of low financing costs has led to rapid growth in asset prices, including housing. Relatively weak demand continued to dampen overall investment in the euro area, but rising incomes and low mortgage rates have supported a more dynamic housing sector, with increases in construction output and house prices. Much faster price increases have been observed in other European countries and the US.

10. Following a rapid expansion, gross residential fixed investment slowed in the US. On the other hand, such investment picked up in many European countries. After returning to growth in 2015, construction investment accelerated further in the euro area in 2016. In contrast, construction contracted sharply in the new EU member countries, resulting in a slowdown in the EU as a whole.

11. Rising but still moderate inflation, prompted by growing demand and higher energy prices, led the US Federal Reserve to hike interest rates in 2016 and early 2017. Additional rate increases are expected, but a rapid tightening of monetary policy is unlikely because price pressures remain moderate. A very loose monetary policy continued in the euro area, but deflation is no longer a concern there and, given the improved economic prospects, the monetary authorities have signalled a change in tone.

12. The appreciation of the US dollar versus the euro in late 2016 was reversed in the first half of 2017 as the European recovery firmed and expectations of monetary policy divergence receded (graph 1). Inflation declined in the CIS as the impact of past currency depreciations wore off,

exchange rates recovered and demand remained weak. This allowed monetary authorities to cut interest rates gradually.

13. Fiscal policy was broadly neutral in the US in 2016 but some loosening is anticipated, which would be delivered through a combination of increased spending and lower taxes. In the euro area, improved economic performance and very low interest rates supported public finances amid a broadly neutral fiscal policy stance. In contrast, fiscal consolidation was widespread in the CIS. Energy producers, including those that started the downturn with significant buffers, have undertaken measures to put public finances on a sustainable path.

14. The economic outlook in the region remains positive. Although the US economy underwent a soft patch in early 2017, growth is projected to accelerate. The recovery appears well entrenched in the euro area, but persistent fragilities remain in some countries.

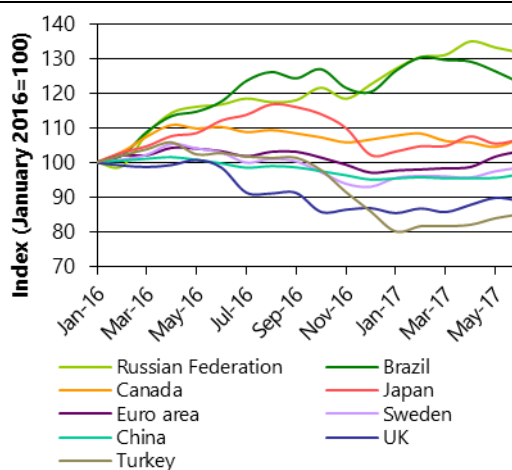
15. Increased investment will again be a major driver of economic activity in the newer EU member countries in the new EU funding cycle. The expansion is likely to be modest in the CIS, amid continued downside risks. Energy-exporting countries are facing the reality of protracted low energy prices and the need to search for new engines of growth.

16. Although economic performance is expected to remain favourable, certain risks and challenges cloud the horizon. Low levels of investment in the post-crisis period have contributed to the sluggish productivity growth observed across the ECE region, limiting economic potential. The expected gradual normalization of monetary policies may expose hidden vulnerabilities in financial sectors.

GRAPH 1

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

January 2016-May 2017



Source: IMF, 2017.

Note: 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.

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

17. Governmental and non-governmental actions continue to have significant impacts on forests and forest product markets. Continued trade negotiations and recent policy actions have created uncertainty for trade in forest products. New challenges and opportunities are arising in many areas of forest policy and environmental programmes.

18. A referendum was held in the UK on 23 June 2016 in which a majority of voters voted to leave the EU. As a result, the UK government activated Article 50 of the Lisbon Treaty, the official mechanism for withdrawing from the EU, on 29 March 2017, in a process generally referred to as Brexit. If no agreement is reached within two years and no extension is agreed, the UK will leave the EU automatically, and all existing agreements – including access to the single market – will cease to apply to the UK from 29 March 2019.

19. In North America, the Softwood Lumber Agreement between Canada and the US expired on 12 October 2015. In April 2017, the US government announced tariffs of 3-24% on imported lumber from Canada, in addition to an anti-dumping duty.

20. There are significant areas of forest with multiple certificates (16% of certified forests globally). The Forest Stewardship Council and the Programme for the Endorsement of Forest Certification have committed to reporting estimates of these overlaps annually to help improve data accuracy. Similar transparency in the reporting of market and trade activities is also needed to provide reliable estimates of the economic impacts of certified wood products.

21. The Paris Agreement on climate change, which aims to accelerate action to mitigate climate change, entered into force on 4 November 2016. As of 10 October 2017, 168 countries had ratified the agreement, although the US has indicated an intention to withdraw. The EU and its member states have committed to a binding minimum target of a 40% domestic reduction in greenhouse gas emissions from 1990 levels by 2030, as well as to renewable energy and energy-efficiency targets.

22. To continue efforts to combat illegal logging, the European Commission reported on 22 February 2017 that 27 EU member states had complied with obligations in the EU Timber Regulation to appoint competent authorities, establish penalties for non-conformance, and start carrying out checks of operator compliance. The Russian Federation is also improving measures to reduce illegal logging. From July 2017 the Unified Federal Automated Information System (EGAIS) tracks domestic and foreign transport and trade of sawnwood.

23. There is continued policy action and growing interest in innovations in tall wood buildings. The US Green Building Council reported that 84 projects have registered to use the new pilot credit in the LEED green-building programme designed to address illegal wood and promote the use of verified-legal, responsible and certified wood in buildings.

24. There are increasing organizational commitments to combating deforestation. The principal aim of the New York Declaration on Forests, which was released at the UN Climate Summit in September 2014, is to halve natural forest loss by 2020 and end it by 2030. In September 2016, the Declaration had 190 endorsers comprising 40 governments, 20 subnational governments, 57 multinational companies, 16 groups representing indigenous communities, and 57 non-governmental organizations.

25. Significant and diverse opportunities exist for forests and forest products to provide environmental and societal benefits. In order to fully realize these goods and services, however, requires a supportive political and economic environment.

## **C. Forest product trade barriers affecting the ECE region**

26. ECE countries account for more than 60% of the world trade in forest products. The region's share of world forest product exports has decreased steadily in the last decade however, losing market share to emerging economies.

27. Tariff and non-tariff measures restrict trade. In 2016, the cross-border trade in primary products (excluding roundwood) in the three ECE subregions, as measured by the share of imports in total consumption, ranged from 16% (for paper and paperboard from North America) to 62% (for paper and paperboard in Europe). The share of roundwood imports in total consumption was lower, ranging from negligible in the CIS to 13% in Europe.

28. Overall, furniture, secondary products and panels have higher tariffs because they are seen as making bigger contributions to domestic economies through value-added processing and employment; roundwood, pulp and sawnwood have among the lowest tariffs.

29. The softwood lumber dispute between Canada and the US is probably the most visible trade-related dispute over forest products in the ECE region. One of the biggest elements in the allegation by the US Department of Commerce, and a basis for subsidy rates, is the issue of log export restrictions (LERs) on Canada's government-owned forestlands countrywide, and notably on private lands in British Columbia.

30. The most noteworthy recent example of an export tariff related to forest products was in July 2007, when the Russian Federation raised its export tariff on roundwood exports from 6.5% to 20%, followed by an increase to 25% in April 2008, a measure designed to stimulate domestic processing. The net result of the export tax was a steep reduction in Russian log exports, with importers – namely China and Finland – having to look for alternate sources of logs.

31. Before the Russian Federation became a member of the World Trade Organization in 2012, it agreed to allow the tax to fall progressively to less than 10%. The Russian Federation then implemented a tariff-related, species-specific quota system, which has trigger points beyond which exports attract higher tariffs. In Canada, British Columbia also has an export fee ("fee in lieu of manufacture"), whereby exporters who have permission to export must pay a fee based on the difference between domestic and export values. Currently, more than five other countries in the ECE region have introduced trade restrictions on log exports.

32. Non-tariff measures (NTMs) are generally defined as policy measures other than ordinary customs tariffs that can potentially have an economic effect on international trade by changing the quantities of goods traded, or their prices, or both. NTMs are prevalent among forest products because pathogens can easily be transported across borders; governments and consumers do not want to contribute to deforestation and illegal logging; and the protection of rural livelihoods often has a high policy profile.

33. In the ECE region, LERs are perhaps the most discussed and debated of all trade measures. They are widely used within and outside the region, including by key trading partners of ECE member countries. The three biggest roundwood producers in the ECE region (Canada, the Russian Federation and the US) have LERs; together, these countries account for about two-thirds of the region's industrial roundwood harvest.

34. The cross-border trade of forest products is increasing. Tariffs are not particularly high in the ECE region for forest products originating in the region, but NTMs are becoming increasingly important. Many are put in place for environmental reasons and to address legality, and others are used to protect domestic industries.

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

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

35. The total consumption of roundwood – comprising logs for industrial uses and fuel – in the ECE region was estimated at 1.3 billion m<sup>3</sup> in 2016, an increase of 1.7% from 2015 and the fourth consecutive year of growth. The apparent consumption of logs for industrial purposes has trended upward in the past five years, reaching 1.1 billion m<sup>3</sup> in 2016, a 1.9% increase over 2015 and 6.8% higher than in 2012. Woodfuel consumption increased by 1.0 million m<sup>3</sup> in 2016, to 204.0 million m<sup>3</sup>.

36. Of the total roundwood harvested in the ECE region in 2016, about 15% was used for fuel (204.0 million m<sup>3</sup>), a share that was unchanged from 2012. Europe accounted for almost 57% of total woodfuel consumption in the ECE region in 2016. Estimates of roundwood volumes removed from forests for fuel are highly unreliable because few countries have consistent methods for collecting relevant data on this increasingly important end use; nevertheless, it is clear that a fairly large share of forest removals is used for energy purposes.

37. The ECE region is a net exporter of both softwood and hardwood logs, with total net exports of 24.1 million m<sup>3</sup> in 2016. 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.

38. Sawlog costs for lumber producers declined faster in the past few years in Europe than in most other world regions. In Europe and the Russian Federation coniferous sawlog prices stabilized or increased in 2016-2017.

39. Sawlog prices have been relatively flat in the southern states of the US but have almost doubled in the western US since the lows of 2009. The biggest price increases (in local currency) in North America have been in western Canada, where average sawlog prices were 21% higher in early 2017 than in the three previous years and 56% higher than in early 2012. Sawlog values have trended slowly downward in eastern Canada.

40. Softwood-fibre costs have declined for pulpmills worldwide since 2011, and this trend continued in 2016 and early 2017.

41. The Committee and the Commission forecasts that removals of industrial roundwood are expected to increase in the ECE region at an annual rate of 1.7% in 2017 and 0.8% in 2018. The subregional breakdown is as follows: Europe showing an increase of 1.8% in 2017 and a rise of 0.5% in 2018; CIS is expected to increase 2.2% in 2017 and then 2.1% in 2018; and North America to increase 1.5% in 2017 and then 0.5% in 2018.

### **B. Sawn softwood**

42. In 2016, for the first time in about a decade, all the major sawn-softwood producing and consuming regions recorded increased demand and production. Total apparent consumption in the ECE region was 208.4 million m<sup>3</sup>, up by 4.8% over 2015. The recovery in North America continued for the seventh consecutive year, with sawn softwood consumption increasing by 8% in 2016. Sawn softwood consumption was up by 2.5% in Europe, and the stabilization of economic conditions in the CIS enabled an increase in consumption of 0.9%.

43. Sawn softwood production increased in North America by 4.7% (+6.2% in Canada and +3.4% in the US) in 2016, in Europe by 2.7% and in the CIS by 6.7%. Total sawn softwood production in the ECE region was 250.4 million m<sup>3</sup> in 2016, up by 4.1% compared with 2015.

44. European sawn softwood exports increased by 3.8% (at a total volume of 49.5 million m<sup>3</sup>) in 2016, compared with only a 1.0% gain in 2015. This increase is remarkable given that exports decreased by 10% to North Africa and by 7% to the Middle East. European sawn softwood exporters gained in other key markets, including China (+37%), Japan (+15%) and the US (+31%, albeit from a small base).

45. Sawn softwood production in the Russian Federation increased by 6.7% in 2016, to 34.3 million m<sup>3</sup>, and Russian sawn softwood exports increased by 7.9%, to 24.9 million m<sup>3</sup>. These figures are in the process of being revised upwards.

46. US housing starts increased by 5.6% in 2016, to 1.17 million units, and are expected to increase again in 2017, to about 1.25 million units.

47. There were no export duties on Canadian lumber exports to the US in 2016, and Canadian exports soared by 13.5%. US sawnwood prices (in US dollars) gained 4% in 2016 and were higher by 19% in the first half of 2017. The US introduced countervailing export duties of 19.9% on Canadian exports of sawn softwood to the US in late April 2017, and antidumping duties of 6.9% were initiated in late June 2017. This was the main reason for higher sawnwood prices in the first half of 2017, although market conditions were also very good.

48. The countervailing and antidumping duties on Canadian lumber are preliminary, and final duties will be announced in early January 2018. The duties will change global sawnwood trade; with fewer Canadian exports to the US (and more European exports to the US), meaning more offshore exports from Canada, especially to Asia.

49. The Committee and the Commission forecasts that production of sawn softwood will increase in the ECE region at an annual rate of 2.2% in 2017 and 0.6% in 2018. The subregional breakdown is as follows: Europe with a gain of 2.2% in 2017 and 0.7% in 2018; CIS is expected to increase 4.3% in 2017 and another 2.9% in 2018; and North America will gain 1.6% in 2017 and decline -0.4% in 2018.

## **C. Sawn hardwood**

50. After five years of growth, the apparent consumption of sawn hardwood decreased by 1.2% in the ECE region in 2016, to 35.4 million m<sup>3</sup>. Falling consumption in North America in 2016 was offset only partly by a slight rise in consumption in Europe and the CIS.

51. Sawn hardwood production was flat in the ECE region in 2016, at 41.2 million m<sup>3</sup>. Production was stable in Europe, and a fall in North America was offset by an increase in the CIS.

52. After two years of growth, sawn hardwood imports decreased by 0.6% in the ECE region in 2016, to 6.5 million m<sup>3</sup>. Countries in the ECE region exported 12.3 million m<sup>3</sup> of sawn hardwood in 2016, up by 3.4% compared with 2015.

53. There has been strong demand for European oak, including demand from China. Prices increased for European oak in 2016 and the first half of 2017. This was driven by the relative weakness of the euro against the dollar, which encouraged exports from Europe and increased prices for imported American oak.

54. Russian hardwood regulations led to a 6% increase in sawn hardwood exports from the Russian Federation in 2016, to 1.46 million m<sup>3</sup>. Exports to China were 1.27 million m<sup>3</sup>, an increase of 9% over 2015. This was the largest quantity of Russian sawn hardwood ever shipped to China.

55. China accounted for 51% of US sawn hardwood exports in 2016, Canada for 13%, Southeast Asia for 12%, Europe for 9% and Mexico for 8%. The US imported 356,000 m<sup>3</sup> of sawn hardwood from Canada in 2016, down by 2% compared with 2015. Canada imported 521,000 m<sup>3</sup> of sawn hardwood from the US in 2016, down by 0.7%.

56. The Committee and the Commission forecasts that production of sawn hardwood will decline in the ECE region at an annual rate of -0.3% in 2017 and then rise slightly by 0.6% in 2018. The subregional breakdown is as follows: Europe is expected to gain 0.2% in 2017 and 0.5% in 2018; CIS increases 2.7% in 2017 and 2.8% in 2018; and North America with an expected decrease of 1.0% in 2017 and an increase of 0.3% in 2018.

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

57. Trends in the production and consumption of wood-based panels were mixed in 2016, although they generally showed continued growth across the ECE region.

58. Growth in the production and consumption of wood-based panels in Europe was somewhat slower in 2016 than in 2015. Both the plywood and oriented strand board (OSB) subsectors rebounded strongly, with production increasing by 5.3% and 9.6%, respectively. Particle board production was stagnant for the second consecutive year, increasing by just 0.5% in 2016.

59. The production of wood-based panels increased by 8.4% in the CIS in 2016, with an even stronger increase in exports. The resultant apparent consumption of wood-based panels in the CIS subregion decreased slightly (-0.6%) in 2016 compared with 2015. There were large production increases in the OSB (+32%) and fibreboard (+12.2%) subsectors in the CIS as new plants continued to expand production and exports began to take off.

60. The market for wood-based panels in North America increased by 3.4% in 2016 (the same rate as in 2015). Wood-based panel production was mixed in the subregion, with particle board production declining by 2.2% and plywood and fibreboard remaining stable (at +1.6% and +0.3%, respectively). In contrast, OSB production in North America jumped by 7.5% in 2016.

61. In all three subregions, the trade (both imports and exports) of wood-based panels increased in 2016. Europe had a slight trade surplus; the CIS has a substantial trade surplus; and North America has a substantial trade deficit, notably the result of US imports of plywood from China, which now account for about half of all plywood imports into the US.

62. The Committee and the Commission forecasts that production of wood-based panels will increase in the ECE region at an annual rate of 0.9% in 2017 and by 1.3% in 2018. The subregional breakdown is as follows: Europe will grow 0.5% in 2017 and 1.3% in 2018; CIS should increase by 3.1% in 2017 and 4.3% in 2018; and North America is forecast to grow 1.2% in 2017 and 1.4% in 2018.



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

63. Paper and paperboard production increased in Europe and the CIS in 2016 but declined in North America. Production of paper and paperboard edged 0.1% higher in Europe, increased by 5.5% in the CIS, and dropped by 0.8% in North America.

64. The industry was again challenged due to overcapacity in graphic papers and chemical woodpulp throughout the ECE region. Capacity closures and conversions (e.g. to packaging-grade paper) in the graphic-paper segment continued in Europe and North America as prices remained under pressure. Production and apparent consumption of sanitary and household papers, along with packaging grades, were stronger in 2016 than in 2015. Packaging-paper production was generally higher in the ECE region, aided by stronger apparent consumption in Europe and the CIS. Woodpulp production was stronger across the ECE region in 2016 due to growth in the apparent consumption of packaging and tissue, as well as in exports.

65. Chemical market woodpulp capacity continued to expand, primarily in low-cost regions outside the ECE region. Prices for chemical pulps were challenging in mid-2016 but began to improve thereafter as a result of stronger Chinese imports and a series of unplanned outages that caused a curtailment of supply. Prices improved in all global markets in early- to mid-2017, despite a series of planned capacity additions that will mainly begin to enter the market in the second half of the year.

66. China's economic output continued to hover around 7% in 2016, as it had done in the previous four years, despite government policies aimed at combating lethargic domestic consumption and exports. Economic and social reforms – including looser credit markets – implemented in 2014, 2015 and 2016 have resulted in modest growth; however, excess manufacturing capacity and weak exports (negatively affected by lacklustre global economic growth) continued in 2016 and early 2017.

67. The on-going growth of electronic communication continues to play a major role in the evolution of the pulp and paper segments, while paperboard has benefited from increased online shopping. The rationalization of capacity through the closure and conversion of high-cost mills continues in the pulp, paper and paperboard segments; low-cost chemical woodpulp, tissue and packaging capacities continue to be added, however.

68. In the pulp sector, the expansion of bleached hardwood kraft capacity in South America and Asia continued to be the most important factor by far influencing the market in 2016 and the first half of 2017.

69. The Committee and the Commission forecasts that production of paper and board will increase in the ECE region at an annual rate of 0.8% in 2017 and decline by - 0.4% in 2018. The subregional breakdown is as follows: Europe is gaining 1.0% in 2017 and is expected to gain a further 0.5% in 2018; the CIS is forecast to gain 0.5% in 2017 and gain 0.5% in 2018; and North America is expected to increase by 0.5% in 2017 and decline by 1.6% in 2018.

## **F. Wood energy**

70. Wood energy markets in the ECE region are being significantly affected by public policies, weather fluctuations and changes in production capacity, particularly for wood pellets.

71. The most recent available data show that the primary production of “solid biofuels (excluding charcoal)” in the EU28 grew by 6% in 2015 compared with 2014, to about 3,829 petajoules (PJ). Wood pellet consumption reached 22.3 million tonnes in the

European subregion in 2016, a 6.6% increase over 2015. Wood pellet production increased by 2.5% and imports grew by 4.4%.

72. Demand for wood energy is increasing in the CIS as the consumption of wood fuels grows in the subregion and among neighbouring countries. Wood energy consumption increased in the CIS in 2016 but at a slower pace than in 2015. Total wood pellet production in the CIS increased by 2% in 2016, reaching 2 million tonnes. Half the production was in the Russian Federation, which surpassed 1 million tonnes in 2016.

73. The total production of wood pellets in North America was about 9.2 million tonnes in 2016, up by 6.7% over 2015. Canada consumed about 536 PJ of wood energy in 2016, which was 1% less than in 2015; of this, 225 PJ was derived from solid wood waste, 273 PJ from spent pulping liquor, about 30 PJ from fuelwood and 9.0 PJ from wood pellets. Wood energy consumption accounted for about 4.5% of Canada's total primary energy supply in 2016. The US consumed 2,066 PJ of wood energy in 2016, down by about 6% from 2015.

74. Prices for wood pellets traded across the Atlantic show an overall declining trend, possibly reflecting ample supply as well as demand that has not grown at expected rates (except in the UK). Nonetheless, the share of solid-biofuel (excluding charcoal) imports in the EU28's primary production has grown threefold since 2005. North American wood pellet exports to the EU28 reached 6.6 million tonnes in 2016.

75. The Dutch "stimulation of sustainable energy production incentive scheme" (SDE+) – an incentive scheme for the production of renewable energy in the Netherlands – might spur a new market for utility wood pellets in the EU28.

76. Changes in public policy remain one of the largest sources of uncertainty in wood energy markets. The planned withdrawal of the UK from the EU could affect the role played by wood pellets in the UK's renewable energy portfolio, thereby affecting trade.

77. The announcement by the US of its intention to withdraw from the Paris Agreement on climate change and to begin negotiations either to re-enter the agreement or on a new agreement could affect US domestic wood energy consumption and pellet exports to the EU.

78. The proposal for a revised Directive of the European Parliament and of the Council on the Promotion of the Use of Energy from Renewable Sources (RED II) could affect the eligibility of biomass sourcing and the establishment of risk assessments, with uncertain consequences for established interregional supply chains.

79. The Committee and the Commission forecasts that production of wood pellets will increase in the ECE region at an annual rate of 9.8% in 2017 and 4.7% in 2018. The subregional breakdown is as follows: Europe is forecast to increase by 10.5% in 2017 and a further 3.4% in 2018; CIS is expected to increase 9.3% in 2017 and 6.8% in 2018; and North America is estimated to increase 8.6% in 2017 and then 6.4% in 2018.

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

80. Global furniture production was worth \$420 billion in 2016, up moderately from 2015. The value of global furniture trade was estimated at \$140 billion, with France, Germany, the UK and the US the largest import markets.

81. Furniture has become a large global trade flow as the industry has globalized and production has moved to lower-cost countries. China is now the world's largest furniture producer and exporter. In the ECE region, Poland's furniture production increased by more than 10%.

82. Furniture companies in the ECE region are looking for ways to expand furniture production in their home countries, exploring design, service and custom-made concepts, such as integrated electronic features, as ways of competing with imported Asian furniture. The furniture giant IKEA was the largest single buyer of wood in Europe in 2015, consuming 16.2 million m<sup>3</sup> of solid-wood equivalent and an estimated 3.8 million m<sup>3</sup> of paper and paperboard for packaging.

83. The market for builder's joinery and carpentry products (BJC) has developed strongly in the US in the last five years. This market is expected to continue developing in North America as housing markets strengthen (the value of imports of BJC in the US alone now exceeds \$2.1 billion per year). In contrast, there has been no significant change in import volumes in the last several years in the largest European countries.

84. Profiled-wood imports to the US declined in 2016, despite the strengthening housing market. Profiled-wood markets in Europe, serviced mainly by European producers, also declined slightly in 2016.

85. North American production of glulam, wooden I-beams and laminated veneer lumber made consistent gains in the period from 2010 to 2017 (forecast), mainly the result of increased new housing construction. Glulam data are unavailable for Europe, but there has been significant growth in production in Austria, the subregion's largest producer; Italy is the largest consumer. Europe provides the majority of Japan's 771,000 m<sup>3</sup> of imports of glulam (and cross-laminated timber – CLT), with Finland, Romania, Austria, Estonia and Sweden (in descending order, by volume) the biggest suppliers.

86. CLT production is still largely concentrated in Europe. The DACH countries (Germany, Austria and Switzerland) accounted for about 80% of global production in 2015 (Austria alone produced about 60%). European production was estimated at 680 thousand m<sup>3</sup> in 2016, and this is forecast to increase to about 1.25 million m<sup>3</sup> by 2020. New production facilities are either completed (Latvia has two newer facilities) or in the planning stages. Despite hype around the use of CLT in the construction of tall wooden structures, small and medium-sized buildings are still the focus of most producers in Europe.

87. CLT has become increasingly popular in North America, echoing the long-established trend in Europe. Production in North America, which, to date, has been oriented more towards platforms used in mining and the oil industry, is expected to increase significantly in coming years, with greater use in the building sector. Five CLT plants are in operation in North America (three in Canada and two in the US). It is estimated that the potential market for CLT in the US alone could be 2 million - 6 million m<sup>3</sup>, far outstripping the entire current global supply.

## H. Housing

88. Housing markets in the Europe and North America have partially recovered from the 2008-2009 global financial crisis. However, housing construction and sales have not yet attained their historical averages. Gross domestic product (GDP) forecasts for many advanced economies in the ECE region suggest that housing construction and sales in 2017 and beyond might be at similar levels to those reported in the past few years.

89. In the US, housing construction and sales have increased from the lows of 2009, but aggregate new single-family housing construction remains below its historical average. All subsectors of the US housing market increased in 2016. Beginner or starter housing remains subdued, and the quantity of dwellings constructed is insufficient to meet increasing demands due to population growth. Residential investment accounted for 6.1% of US GDP in 2005 but for only 3.8% in 2016, a sign that the new-housing construction market has additional opportunity to grow. The Canadian housing sector remains stable.

However, there is growing concern about rapidly escalating housing prices in Vancouver and in the greater Toronto area.

90. The Russian Federation experienced a decline (of nearly 3.4%) in commissioned houses in 2016, to 1.15 million units. Overall, 79.3 million m<sup>2</sup> of floor space was put in place, a decrease of 6.7% compared with 2015. A Government programme on wooden housing construction is currently being developed.

91. Euro-area construction increased by 7.1% between February 2016 and February 2017, due primarily to improvements in the building construction and civil engineering sectors. Residential remodelling was the largest component (about 58%) of euro-area residential construction expenditures in 2016, although new residential construction is forecast to increase at higher rates than remodelling to 2019. New residential spending (new residential construction + residential renovation) is forecast to increase by 8.0% from 2016 to 2019, with civil engineering construction increasing by 9.4% and non-residential construction by 5.4% (euro basis). There will be robust demand in Europe in the near term due to revived consumer confidence, increasing household incomes, demographic growth, and the housing needs of asylum seekers.

---