

## Annex I

### Forest products market statement

#### I. Overview of forest products markets in 2014-2015

1. The general condition of forest products markets in the UNECE region continued to improve in North America and Europe in 2014, which is substantiated by the overall positive economic developments, upward trends in housing and construction, and increasing consumption of roundwood (raw materials) and wood products.
2. The CIS experienced mixed results, with growth in industrial roundwood and pulp and paper consumption in 2014, while sawnwood and panels consumption contracted, each by more than 4%. Production, however, was up for all the major product categories of the CIS, with exports increasing, supported by a much weakened Russian ruble.
3. Currency fluctuations are impacting forest products trade across the UNECE region. A strong US dollar against a weakened Russian ruble, Canadian dollar, Brazilian real and euro has and will continue to influence trade flows.
4. Structural changes in the pulp and paper sector are likely to have wide-reaching ramifications. People are changing the way that they correspond, read media and books, and pay bills, which is having profound effects. Consumption of paper and paperboard has fallen by about 10% in North America and 5% in Europe between 2010-2014 r years, with a structural change between printing and writing paper, and paperboard.
5. For 2015, the Committee on Forests and the Forest Industry (COFFI) forecasts that the consumption of forest products in the UNECE region is expected to decline at an annual rate of 0.2%. 2016 is expected to show a growth of 0.8% on a roundwood equivalent basis, with the strongest growth in wood pellets. The subregional breakdown is as follows: the CIS is the only subregion with growth in both years (1.4% in 2015 and 2.1% in 2016), Europe is flat in 2015 and increase 1.1% in 2016 and North America decline of 0.6% in 2015 and growth of 0.3% in 2016.

#### Economic developments with implications for the forest sector

6. In the UNECE region, there are also sharp variations in current growth rates and economic prospects across its members. The decline in oil prices has supported the global recovery but also contributed to the growth divergence. For a number of energy-exporting economies in the Commonwealth of Independent States (CIS), notably the Russian Federation, weaker oil prices represented a significant shock.
7. In the European Union (EU), countries outside the eurozone have experienced rapid growth. This is a pattern that is expected to continue in 2015-2016. The improvement of economic performance in the new EU member States in Central Europe has been driven by the new dynamism in the euro area, stronger domestic demand and the use of EU structural funds.
8. In south and eastern Europe, structural factors continued to hold back the recovery. Falling oil prices were the main factor affecting economic performance in the Russian Federation but Western economic restrictions increased financing costs. Diminished economic prospects in the largest economy in the CIS had a negative impact on other countries in this subregion through the trade, investment and remittances channels. In Ukraine, the conflict in the east and contractionary policies are severely depressing economic activity. As a result of these negative influences, output in the CIS is expected to contract in 2015 and stage only a limited recovery in 2016.
9. Employment growth has accelerated in advanced economies, in particular in the US.

However, unemployment remains elevated in many countries, in particular in the eurozone, where unemployment is expected to remain high, which will limit income growth.

10. Construction spending in the US bottomed out in 2011 and has continued to climb since then, but it remains well below pre-crisis levels. In the European Union, the decline of the construction sector was deeper and more protracted but in 2014, the sector initiated a recovery, making a positive contribution to employment growth for the first time since the financial crisis. Housing prices have been growing well above inflation in many countries in the region.

11. A weaker euro to US dollar exchange rate has contributed to the improved outlook for the eurozone. Currencies in the CIS weakened sharply in late 2014 and early 2015, as a result of lower energy prices and capital outflows.

12. Overall, investment in advanced countries has gained little traction, despite accelerating growth and a supportive financial backdrop. This depresses current demand but also undermines long-term growth prospects.

13. Economic prospects in the ECE region are mixed. Activity is expected to accelerate further in the advanced countries but significant fragilities remain from the legacies of the global financial crisis. In the CIS, geopolitical tensions are having a dampening effect on activity, despite some limited recovery in commodity prices.

#### **Policy and regulatory developments affecting the forest products sector**

14. The use of wood and the management of the forest resource from which it is derived have influence across policies, markets and economies. The EU Forest Strategy, which was adopted on 20 September 2013, responds to the challenges facing the forest sector and key policy developments in the EU. The EU Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan has been in force since 2003. As of November 2015, six exporting countries had voluntary partnership agreements (VPAs). The EU Timber Regulation (EUTR) came into effect on 3 March, 2013. A recent assessment concluded that its implementation remains challenging and inconsistent across EU member states. Some countries reported that initial checks of proof of legality had revealed that, in 1 out of 3 cases, operators did not have an adequate due care system in place. In other countries, reported illegal logging has dropped significantly: for example, in Estonia, where there had been 800 cases in 2002 there were only 8 in 2014.

15. The Transatlantic Trade and Investment Partnership (TTIP) trade agreement between the EU and the US is still under negotiation. Negotiations began in July 2013 and are expected to continue through 2015. A separate agreement between the EU and Canada was concluded in September 2014.

16. Fiscal policy can also affect wood use. In Sweden a tax deduction (ROT) on labour and materials for home improvement has stimulated the domestic demand for sawn wood.

17. The upcoming climate discussions at COP-21 in Paris will have a potentially significant impact on the forest products sector, in particular the extent to which carbon will be credited to harvested wood products, both for storage and for avoided emissions by substituting wood for more carbon-intensive materials.

18. A number of countries in eastern and western Europe are considering limitations of log exports. Such bans would primarily affect countries with high import dependency from Belarus and Ukraine. Latvia, Lithuania and Poland, in their national market statements, indicated this was a possible issue for their wood processing industries. In other countries (for example in Slovakia) forests are being withheld from production until their ownership under restitution laws has been settled.

19. The world's total certified forest area as of May 2015 was about 439 million hectares, which is 10.9% of the total global forest area. The growth of certified forest area

is slowing and it may be time for diversification and new approaches to certification, including opportunities to address regulatory needs for monitoring and providing accountability benefits. The issue of double-certification of forests by PEFC and FSC seems to be larger than has previously been reported. Poland, for example, reported 6.9 million ha certified under both schemes. Chain-of-custody certificates increased by 4.7% in 2014-2015 to reach a total of 39,609.

### **Institutional forestland ownership**

20. Worldwide, financial investors hold close to 24 million hectares of timberland, at an estimated value of close to \$100 billion. This group of forest owners represents a growing share of the world's industrial timber supply. Financial investors have changed the way in which the forest industry operates; many forest companies in the US no longer control their raw material sources, and the same is happening in other regions.

21. The institutional ownership of forestland is still limited in Europe, where state ownership and small-scale private ownership (family forestry) are the dominant ownership types.

22. There are four basic types of financial investment in forestry:

(a) Timberland investment management organizations (TIMOs) – companies that acquire and manage forests on behalf of institutional investors;

(b) Real estate investment trusts (REITs) – companies in the US that pass at least 90% of their income to investors, and which earn at least 75% of their income from the sale of raw material;

(c) Direct investment by institutional investors – which can take several forms;

(d) “Retail” investment companies – which offer individual investors the opportunity to invest in forests at a very small scale.

23. Forests have several characteristics that distinguish them from other asset classes, and analyses of return drivers for forestry investments show that 65% - 75% of returns are derived from biological growth. A second distinguishing factor affecting returns on forest investments is variation in timber prices, typically ranging between 25% and 30% of the total return. Finally, changes in forest land prices contribute 2% - 5% of overall investment returns. It is logical to argue, therefore, that forests grow and produce returns even if economic and market circumstances are challenging, as they have been in the last few years.

24. The impacts of timberland investment on forest products markets vary by region and the type of forests. In general, financial investors in North America adjust their harvest levels in response to market demand. A high level of timberland ownership among financial investors reduces the tendency of some integrated companies to continue harvesting and processing timber, even in weak markets, and the misallocation of logs (e.g. sawlogs being processed in integrated company pulpmills) is mostly avoided.

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

### **Wood raw materials**

25. Of the total roundwood removals in the UNECE, approximately 16% of logs were used for fuel. The 201 million m<sup>3</sup> of fuelwood were consumed predominantly in Europe, which accounted for almost 60% of the total fuel consumption in the UNECE. Although the data for roundwood volumes removed from forests for fuel are highly unreliable, it is clear that a fairly large share of forest removals is used for energy purposes.

26. Total consumption of roundwood in the UNECE continued its upward trend to reach

1.26 billion m<sup>3</sup> in 2014. This was an increase of 1.1% from 2013, and was more than 5% higher than in 2010. The biggest relative increase was in the CIS subregion.

27. The usage of roundwood in the CIS subregion reached 182 million m<sup>3</sup>, which was almost 20% higher than in 2010.

28. In Europe, total log consumption, including industrial roundwood and fuelwood, was up 2.4% in 2014 from 2013, with hardwood log usage by the forest industry increasing the most.

29. Log consumption in North America increased least among the three UNECE subregions, rising by only 0.7% between 2013 and 2014. The major reasons for the limited growth in North America as compared to the other two subregions included a decline in log usage by the pulp industry in the US and practically no change in the demand for sawlogs by the sawnwood sector in Canada from 2013 to 2014.

30. Global trade of softwood roundwood in 2014 remained practically unchanged from 2013 at approximately 84 million m<sup>3</sup>, according to estimates by Wood Resources International. Trade slowed towards the end of 2014 and log shipments in the first five months of 2015 have continued to be slow. The biggest falls in imports in 2015 were seen in China and Japan, where import volumes during the first five months fell 23% and 30%, respectively compared to the same period in 2014.

31. The UNECE region is a major net exporter of logs with Asia being the major destination for wood raw-material. In 2014, net exports of softwood logs to destinations outside the region reached 28 million m<sup>3</sup>, while hardwood log net exports were close to two million m<sup>3</sup>. The major trade flows of logs all involve shipments of softwood logs to China with New Zealand, Russia, the US and Canada being the largest supplying countries in ranking order. This is affecting many countries in the region – in France, for example, log exports to China have risen from 30,000 m<sup>3</sup> in 2000 to 600,000 m<sup>3</sup> in 2014.

32. Domestic demand in some cases continues to be strong: for example, a rise of 4% is expected in Finnish pulpwood in 2016 to supply new pulp mills. Afforestation in Ireland has increased the forested area by one-third in the past 25 years while in the UK softwood removals have increased by 31% since 2007.

33. COFFI forecasts that removals of industrial roundwood are expected to increase in the UNECE region at an annual rate of 0.4% in 2015 and 0.8% in 2016. The subregional breakdown is as follows: Europe showing a decline of 0.2% in 2015 and a rise of 1.1% in 2016; CIS is expected to increase 1.8% in 2015 and then 1.9% in 2016; and North America to increase 0.2% in 2015 and fall 0.2% in 2016.

## **Sawn softwood**

34. As was the case in 2013, 2014 continued on a slow and unsettled trend of improving economic outcomes for sawmills. Recovery was ongoing in North America and the first increase in consumption in four years occurred in Europe. The CIS countries suffered a setback in 2014 as economic conditions and depreciating currencies negatively impacted sawn softwood demand. Sawn softwood consumption in 2014 increases by 4.6% in North America and 2.5% in Europe while the CIS countries recorded a decline of 3.7%. Though volatility in currency exchange rates impacted countries differently, all regions posted gains in production: North America (3.5%); Europe (3.0%); and the CIS (0.9%).

35. The European market reported an apparent consumption in 2014 of 86.4 million m<sup>3</sup> (increasing by 2.2 million m<sup>3</sup> since 2013) while results were mixed depending on the country. The Nordic countries, and particularly Sweden, contributed more than half of the net European apparent consumption increase (1.2 million m<sup>3</sup>). Strong domestic and export markets allowed European production to grow by 3% in 2014 reaching 100.9 million m<sup>3</sup> - the highest recorded level since 2011. Prices in euros increased for European sawn softwood in some overseas markets, whereas prices dropped in Japan and remained stable

in Europe. Middle East and North African markets experienced some price appreciation.

36. Sawn softwood consumption in the CIS region decreased by 3.7% (to 17.6 million m<sup>3</sup>) over 2013, while gains in production were 0.9% as compared to the previous year totalling 36.1 million m<sup>3</sup> in 2014. The dramatic devaluation of the rouble in early 2015 made exports of sawn softwood from Russia extremely attractive. Although the rate of growth has slowed, China remained the largest export market for sawn softwood from Russia. In 2014, Russian sawn softwood shipments to China were 8.4 million m<sup>3</sup> - an increase of 11% compared with 2013. Aided by a weakening rouble, Russian producers enjoyed a weighted average price increase of 24% (in rubles per m<sup>3</sup>) during 2014 compared with 2013.

37. The slow and steady improvement of new residential housing starts and repair and remodelling activity continued in North America. North American sawn softwood consumption increased by 4.6% in 2014. US consumption rose to 72 million m<sup>3</sup> (a gain of 6.4%) while Canada's apparent consumption decreased for the second straight year to 14.4 million m<sup>3</sup> (a decline of 3.6%). US sawn softwood production grew by 5.4% in 2014 reaching 53.8 million m<sup>3</sup> with 2015 consumption forecast to gain 6% while Canadian production gained 1.1% in 2014 to 41.9 million m<sup>3</sup>. Production gains outpaced growth in demand in domestic and export markets and prices suffered on most products. Currency swings favoured Canadian producers, although there is some uncertainty regarding the Softwood Lumber Agreement which expired in October 2015. Canadian-based companies have also invested heavily in the US southeast and now own 30% of production capacity in construction-grade sawn softwood there.

38. COFFI forecasts that production of sawn softwood will increase in the UNECE region at an annual rate of 1.0% in 2015 and 1.6% in 2016. The subregional breakdown is as follows: Europe with a gain of 0.6% in 2015 and 1.5% in 2016; CIS is expected to increase 1.9% in 2015 and another 0.8% in 2016; and North America will gain 1.1% in 2015 and 2.0% in 2016.

39. After difficult market conditions in 2015, the market is expected to improve in 2016.

### **Sawn hardwood**

40. Total apparent consumption of sawn hardwood in the UNECE region increased to 34.4 million m<sup>3</sup> in 2014, a 3.3% rise compared with 2013. This was the second consecutive year of increase, a sign that the upward trend may be sustainable.

41. Sawn hardwood production in the UNECE region increased by 5.8% in 2014, to 39.1 million m<sup>3</sup>. Production had increased in the CIS and North America in 2013 and declined in Europe, but it increased in all three subregions in 2014.

42. The downturn in sawn hardwood imports in the UNECE region in 2012 and 2013 ended in 2014 when imports increased by 7.7%, to 6.7 million m<sup>3</sup>. The UNECE region exported 11.4 million m<sup>3</sup> of sawn hardwood in 2014, up by 15.2% over 2013, with exports increasing in all three subregions.

43. China continued to dominate the global sawn hardwood trade in 2014. Its sawn hardwood imports increased by 32% in 2014, to \$4.2 billion, and its share of total global trade value increased from 33% to 39%. The continued rise in Chinese consumption was the major factor driving sawn hardwood supply shortages and price increases in 2014, especially in the first half of that year. There were signs of a slowdown in the growth of demand in China towards the end of 2014, and these signs were also evident in the first quarter of 2015.

44. European oak prices rose in 2014. In addition to strong overall demand, this was driven by price hikes for competing American white oak assortments. French sawn oak prices climbed by 1% - 13%, depending on specification, in the first seven months of 2014. Prices for European sawn beech also increased in 2014 after stagnating for most of 2013.

45. The pallet industry is a significant user of hardwoods. Even countries with a minimal forest products sector benefit from pallet mills to assist local industry. Spain has seen improvements in capacity in this area.

46. Hardwood is a significant underused resource in the European forest with engineering values that far exceed softwood (up to 400% more strength). There is increasing interest in using hardwood for load-bearing construction. For example, for this end use in Switzerland the Omega House in Biel has used beech timbers and in Germany LVL for flooring and construction purposes is now being produced from beech.

47. Prices for kiln-dried US hardwood increased sharply between October 2013 and June 2014, triggered by strong demand, particularly in Asia and domestically and intensifying due to weather-related shortages in the 2013-2014 winter.

48. COFFI forecasts that production of sawn hardwood will decline in the UNECE region at an annual rate of 1.0% in 2015 and then rise slightly by 0.4% in 2016. The subregional breakdown is as follows: Europe is expected to gain 1.4% in both 2015 and 2016; CIS increases 3.1% in 2015 and stays flat in 2016; and North America with a decline of 3.2% in 2015 and a further decline of 0.3% in 2016.

#### **Wood-based panels**

49. 2014 saw continued growth in North America, driven largely by the US, while economic growth in Europe and the CIS region remained stagnant. Consumption of wood-based panels exhibited moderately strong growth in both North America (5.0%) and Europe (4.7%) although it declined by 4.4% within the CIS region. Plywood consumption increased by just 1.2% across the region although it grew by an impressive 3.9% in the Europe subregion. Particleboard consumption grew by just 2.1% across the region and was up by 8.5% within North America and down by 8.3% within the CIS region. In the case of OSB, consumption growth was strong across all three subregions, growing by 7.6%. Finally, fibreboard consumption, with strong growth in North America (4.2%) and in Europe (6.6%), declined within the CIS region (1.0%).

50. Wood-based panel production in the UNECE region increased by 3.5% in 2014. While production volumes increased across all panel types, both plywood and particleboard experienced small increases (1.0% and 1.8%, respectively). In contrast, both OSB and MDF exhibited strong growth in production (5.4% and 3.4%, respectively). Looking ahead to 2015, plywood, particleboard and MDF are projected to display minimal growth in production volumes, ranging between 0.5% and 2.3%. In contrast, the rapidly emerging OSB industry in the Russia Federation is expected to propel strong growth in OSB production within the UNECE region in 2015, although OSB production in the other subregions is also projected to display healthy growth.

51. Both the US and the CIS region reported panel trade deficits in 2014, while Europe showed a slight trade surplus (although this was down substantially from 2013). In the case of North America, the trade deficit in wood-based panels increased by 62% whereas the trade deficit in the CIS region actually narrowed by 39%.

52. COFFI forecasts that production of wood-based panels will increase in the UNECE region at an annual rate of 1.2% in 2015 and by 1.4% in 2016. The subregional breakdown is as follows: Europe is flat in 2015 and will grow 0.8% in 2016; CIS should increase at 2.6% in 2015 and 4.2% in 2016; and North America is forecast to grow 2.0% in 2015 and 2.9% in 2016.

#### **Paper, paperboard and woodpulp**

53. The pulp, paper and paperboard market was once again in flux, as large concentrations of graphic paper capacity continued to be rationalized in Europe and North America – a development that has persisted for well over a decade now. South American expansions of chemical market pulp capacity continued to affect UNECE producers, with tonnage easily absorbed by first the tissue and packaging segments, and second by

consumers wanting to reduce their use of higher-cost softwood kraft grades. Southeast Asia remained the favoured target market, despite a marked slowdown in the level of investment in new paper and paperboard installations to serve rapidly growing economies. The ramifications of these and other changes are being felt on a global basis.

54. Despite significant capacity closures across several graphic paper grades throughout Europe, Japan and North America in 2014, excess production capacity remains when measured against falling or static demand and, as a result, prices have deteriorated. Apparent consumption in Europe rose in 2014, aided by stronger economic activity, but fell in North America due to ongoing negative impacts of the growth in electronic media, which affected graphic papers. Graphic paper and chemical wood pulp output fell across Europe and North America. In the CIS, both production and apparent consumption increased due to ongoing investment in capacity.

55. While global demand for pulp and paperboard grew in 2014, graphic paper consumption fell. Electronic communication continued to play a major role in the evolution of the pulp and paper segments, while paperboard actually benefitted from increased online shopping.

56. In the pulp sector, expansions of bleached hardwood kraft capacity in South America continued to be by far the most important factor influencing the market in 2014 and 2015. In the paper sector, the current trend continues to be to convert production to paperboard and packaging grades.

57. Prices in the pulp sector corrected in general in 2014, while hardwood kraft grades rebounded on a significant price advantage over higher-priced softwood-based pulps; by mid-2015, pulp prices appeared to have stagnated on poor pricing of end-use products downstream – in particular graphic grades – and unfavourable currency plays against the rising US dollar; however, weaker currencies have provided export opportunities and improved margins for pulp and paper producers.

58. COFFI forecasts that production of pulp is expected to decline in the UNECE region at an annual rate of 0.8% in 2015 and then stay flat in 2016. The subregional breakdown is as follows: Europe is flat in 2015 and is expected to gain 1.5% in 2016; CIS is expected to increase 1.5% in 2015 and then decline -0.8% in 2016; and North America is forecast to decline at 1.7% in 2015 and a further 1.0% in 2016.

59. COFFI forecasts that production of paper and board will decline in the UNECE region at an annual rate of 1.0% in 2015 and increase 0.2% in 2016. The subregional breakdown is as follows: Europe is declining 0.7% in 2015 and expected to gain 0.7% in 2016; CIS is forecast to gain 0.8% in 2015 and stay flat in 2016; and North America would decline 1.5% in 2015 and gain 0.3% in 2016.

### **Wood energy**

60. Wood energy markets are developing strongly. Wood remains the single most important source of renewable energy in the UNECE region though wood's share in renewable energy is falling as wind and solar energy develop.

61. Data from the Joint Wood Energy Enquiry (UNECE/FAO, 2015) show that the forest-based industry is the largest consumer of wood energy (43.9%), followed by the residential (35.8%) and power-and-heat (17.3%) sectors. Wood for energy (by volume of wood used) in 2013 was derived mainly from wood-processing co-products (57.8%) and direct (36.4%) sources, including trees in and outside forests.

62. The wood-pellet manufacturing sector is the most dynamic and underwent important organizational restructuring in 2014, including downstream expansion into retail and distribution. Exports are increasing rapidly for a number of countries in the region – Latvia for example increased exports by 22% in 2014 and is forecast to export 1.6 million tonnes by 2016. Latvia is now the third leading exporter in the UNECE region after Canada and

the United States. The JWEE 2013 indicates that per capita wood-pellet consumption in the UNECE region increased significantly between 2011 and 2013, from 25.9kg to 38.8kg. Pellet market expansion is supported by standardization and the International Organization for Standardization issued standards for solid biofuels directly relevant to wood energy under ISO 17225. Expected growth in wood-pellet demand, which some estimate will reach about 50 million tonnes by 2024, is driving investment in new manufacturing capacity.

63. Public policy plays an important role in the current use and future expansion (or contraction) of wood energy markets as issues including legality assurance of fibres, minimum combustion efficiency and maximum levels of particulate matter or net greenhouse-gas emissions are incorporated into regulatory frameworks at national and regional levels.

64. For the first time, COFFI has collected forecast data for wood pellets. The COFFI forecasts that production of wood pellets will increase in the UNECE region at an annual rate of 2.7% in 2015 and 4.9% in 2016. The subregional breakdown is as follows: Europe is forecast to increase by 6.3% in 2015 and a further 4.9% in 2016; CIS is expected to increase 0.4% in 2015 and 10.5% in 2016; and North America is estimated to decline 2.5% in 2015 and then to rise by 3.7% in 2016.

#### **Value-added wood products**

65. The value of global furniture production was estimated at \$480 billion in 2014, an increase of almost 10% over 2013. The global economic recovery led by the US is fuelling construction demand, which, in turn, is the major driver of increased furniture consumption. Furniture manufacturing is increasingly taking place inside the UNECE region as the benefits of producing furniture in lower-cost countries decline. For example, in the Czech Republic, furniture production rose by 8% in 2014 with Slovenia seeing similar increases.

66. Builders' joinery and carpentry (BJC) markets are recovering swiftly in Germany and the US, but other markets in Europe are flat. German imports grew by 9.5% in 2014, and the US market experienced a third consecutive year of solid growth. BJC markets are typically local, and manufacturing abroad is not as profitable as it is for wooden furniture. Nevertheless, about one-third of UK and US imports originate from Asia.

67. Profiled-wood markets continue to recover in the US. Import growth increased by 58% from 2010 to 2014, concentrated in a few producer countries with comparative advantages. Profiled-wood markets in Europe, which are more local, continued to stagnate in 2014.

68. Global wood laminate flooring production increased from 925 million m<sup>2</sup> in 2013 to 940 million m<sup>2</sup> in 2014. The largest producers were China, which accounted for 27% of production in 2014, and Germany, which accounted for 25%. Turkey's production is growing in importance, accounting for 10% of global production in 2014, replacing the US as the world's third-largest producer.

69. The consumption of engineered wood products (I-beams, finger-jointed sawnwood, glue-laminated beams, laminated veneer lumber and cross-laminated timber) in North America has recovered modestly, following the trends in housing construction of housing and other buildings) since the bottoming of building construction activity. Unfortunately data for most engineered wood products were not available for Europe this year, but information on cross laminated timber (CLT) was available.

70. About 90% of CLT production worldwide is located in Europe, with a total production volume of 560 thousand m<sup>3</sup> in 2014, forecast to increase to about 630 thousand m<sup>3</sup> by the end of 2015. The global distribution of CLT production is likely to change, however, with new planned capacity in, for example, Japan and North America. National CLT production volume is not necessarily proportional to national consumption – the central European timber industry is strongly export-oriented, supplying other parts of

Europe as well as overseas markets. CLT has become an important material in urban multi-storey residential and public buildings.

71. Worldwide, the use of CLT as a building product is expected to grow at rates in the double digits. Within the next decade, CLT could become as important as glue-laminated timber, and CLT is likely to permit the construction of taller wooden buildings. The current record holder is “The Tree” in Bergen Norway at 15 floors. In Austria a building permit was granted for a 25-floor high-rise timber building, which will start construction in spring 2016. In August 2015, the province of Quebec in Canada became the first jurisdiction in North America to officially allow the construction of tall mass timber buildings up to 13 floors. There is some concern that the race to build ever-higher buildings is moving too fast and the focus of wooden construction should be on 4-6 floor buildings in order to gain efficiency, develop standards and avoid a competition for ever taller buildings until the time is right.

### **Housing**

72. The housing construction sectors in North America and Europe are improving, but have yet to fully recover from the global financial crisis of 2008. The Russian housing sector is improving steadily, with record units put in place in 2014. All the subregions’ construction sectors are affected by tepid or declining aggregate economies.

73. The Euroconstruct area housing is still hindered by sluggish economies. All subsectors of housing construction are forecast to remain steady through 2017. In order, Germany, France, Italy, United Kingdom and Spain are projected to have the largest combined new construction and remodelling markets (value basis) through 2017.

74. In North America, the United States housing market has yet to fully recover; primarily a result of a tepid economy. Multi-family housing continues to exceed average permit and start levels for the past 20-years; single-family housing starts are about 60% of their historical average. New housing sales have improved but remain at some of the lowest levels recorded since the early 1980’s. Total residential construction spending has improved: single-family has increased the most since 2013, and remodelling and multi-family construction appear to have levelled off. The United States forecast is for incremental improvement through 2016. Canada’s housing market has remained steady and projections are for a gradual improvement in starts and sales through 2016.

75. Housing completions in the Russian Federation reached record levels in 2014, with a total of 1,080,300 new residences completed, a year-on-year increase of 20.3%. Residential floor area put in place increased 18.6% more than in 2013. The number of residences put in place and their total floor space were both the highest in Russian history. Additionally, residences put in place from January to May 2015 were nearly 25% greater than in the same period in 2014. The share of wood as a building material for housing in Russia is forecast to increase significantly.

76. Many analysts see opportunities for the forest products manufacturers to control more of their value chain rather than just supply raw materials. An example of this is the growing trade in prefabricated wooden housing where Estonia is showing 13% annual growth in exports and Latvia saw 20% growth in exports in the first half of 2015. Prefabrication of housing components in industrial sites is another way to increase efficiency in a sector which has traditionally lagged behind in productivity gains.