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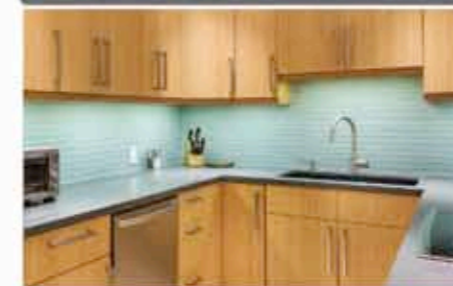
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The Russian Forest Industry: Cautious Growth for Exporters, Survival Mode for the Rest

The key developments within the Russian forest industry during 2014 were almost exclusively unrelated to the industry itself: the conflict in Ukraine, sharp devaluation of the ruble (losing nearly twice its value against the US dollar between July 2014 and January 2015), rising cost of capital and overall increasing uncertainty in the mid-term. As a result, prospects for 2015 are not upbeat: cautious growth in export oriented sectors, stagnation-to-decline for the bigger non-exporting players, and an overall tenuous atmosphere fueling an adjustment towards survival mode amongst smaller players.

MACROECONOMIC SCENARIO, GDP FORECAST: -5 per cent in 2015 and -2 per cent in 2016

In 2014, the macroeconomic situation in Russia developed along the general line of: "OK, we have a full scale crisis... again". However, the speed of that development was a surprise even for sceptics. The conflict in Ukraine and growing unpredictability, together with a sharp decline in oil prices (115.06 USD/bbl for Brent Crude at its highest point in June 2014 as opposed to 46.59 USD/bbl at its lowest point at that time in January 2015), led to:

- a sharp devaluation of the national currency (USD/RUB=34.7 in July 2014 and 63.8 in January 2015);
- growing inflation (11.4 per cent per cent as a preliminary figure in 2014 vs. 6.5 per cent per cent a year earlier);
- growing uncertainty and decline in capital investment volume (a decline of some 3.4 per cent as a preliminary figure for 2014).

Historically, in the period from 2000 to 2014, each 1 per cent change in Gross Domestic Product (GDP) in Russia corresponded to a change in investment volume of some 2.4 per cent. If we look at 2013–2014, the cumulative drop in investment volume during those two years was nearly 5 per cent while GDP grew by 1.9 per cent. Leaving the political situation aside, the "scissors" effect of -5 per cent in investment volume with +1.9 per cent GDP growth in those two years might lead to a decline in GDP of at least some 4 per cent in 2015–16. As it is, the political situation does not necessarily alter this prediction optimistically. However, there are clear opportunities in the current situation due to the fact that the crisis is localized to Russia and several of its neighbors: it provides opportunities for exporters, and for consolidation and cost reduction (fig. 1).

The short-term prospects for the domestic market remain quite dim. To quote the International Monetary Fund's World Economic Outlook report released

Fig. 1: GDP development vs. capital investment, 1999–2014

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GDP with deflator, % to the previous year	-3,6	1,4	-5,3	6,4	10,0	5,1	4,7	7,3	7,2	6,4	8,2	8,5	5,2	-7,8	4,5	4,3	3,4	1,3	0,6
Capital investment with deflator, % to the previous year	15,6	-2,0	-46,0	20,6	44,7	8,7	1,8	10,8	14,8	13,6	22,8	26,9	15,4	-16,5	5,5	13,6	7,0	-1,1	-3,4
GDP in current RUB, billion	2007,8	2342,5	2629,6	4823	7306	8944	10831	13208	17027	21610	26917	33248	41277	38807	46309	55967	62147	66194	70976
Capital investment in current RUB, billion	376,0	408,8	407,1	670	1165	1505	1762	2186	2805	3534	4730	6716	8782	7976	9152	11036	12586	13256	14254
GDP deflator, %	145,8	115,1	118,6	172,5	137,6	116,5	115,6	113,8	120,3	119,3	115,2	113,8	118,0	102,0	114,2	115,9	107,4	105,2	106,6
Inflation, %	121,9	111,0	184,5	136,6	120,1	118,8	115,1	112,0	111,7	110,9	109,0	111,9	113,3	108,8	108,8	106,1	106,6	106,5	111,4

Source: Russian Statistics Committee, IMF

in January 2015: "Russia's economic outlook is much weaker, with growth forecast downgraded to -3.0 percent for 2015, as a result of the economic impact of sharply lower oil prices and increased geopolitical tensions". The current GDP forecast from the IMF for 2015 is -3 per cent, while, looking at the rather poor historical accuracy of predictions made by the IMF (due to the fact that it tends to rely too much on predictions made by national statistic committees as well as a current "snowballing" of negative effects), it is easy to assume a further update into the negative later this year: down to 5 to 6 per cent per cent as a realistic forecast in 2015 and down to 2 to 3 per cent in 2016 (fig. 2).

Fig. 2: Russian GDP development forecast by IMF, Apr 2013–Jan 2015

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Apr 2013	4,5	4,3	4,0	3,3	3,6	3,9	3,8	3,8	3,8	
Oct 2013	4,5	4,3	3,4	1,5	3,0	3,7	3,6	3,6	3,6	
Apr 2014		4,3	3,4	1,3	1,3	2,3	2,5	2,5	2,5	2,5
Oct 2014		4,3	3,4	1,3	0,2	0,5	1,5	1,8	2,0	2,0
Jan 2015 update			3,4	1,3	0,6	-3,0	-1,0			

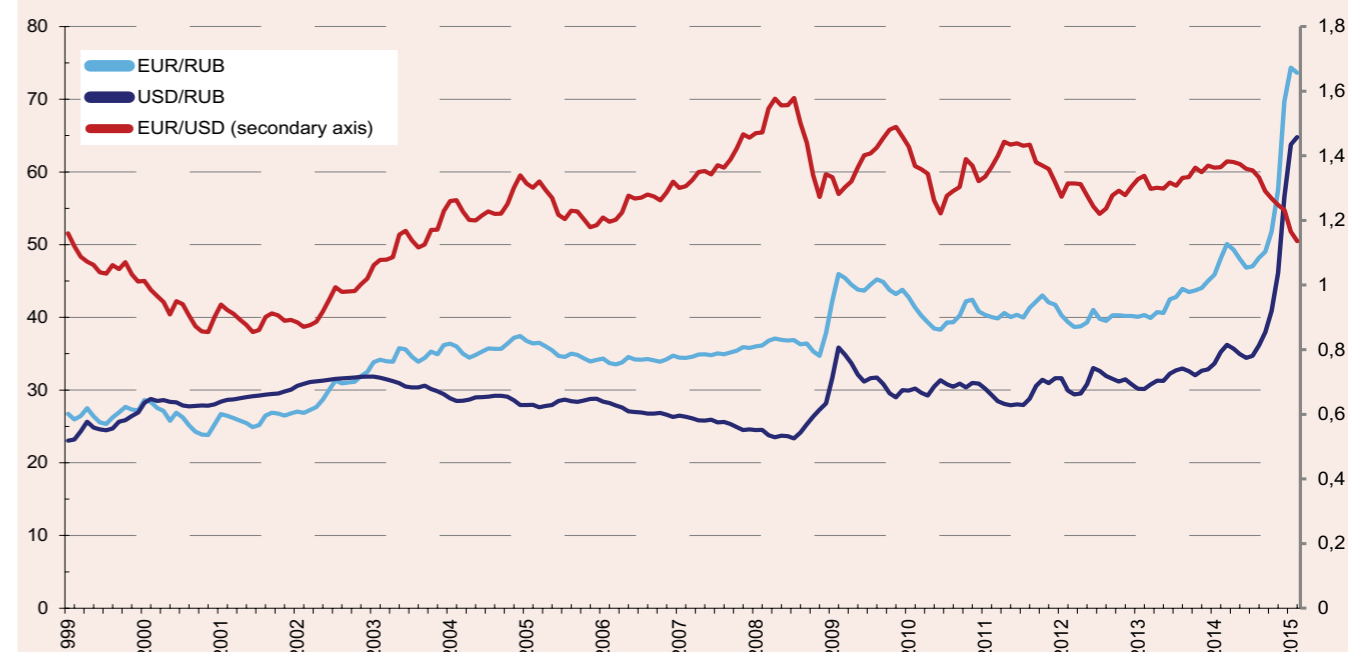
Source: IMF

Since the last quarter of 2014, the situation is developing faster down than during the whole year of 2014, and it is beneficial to compare "January 2015 vs. January 2014" to see the current picture rather than the "whole year of 2014 vs. the whole year of 2013". In January 2015, retail went down by 4.4 per cent (compared to January 2014) while in 2014 retail volume was some 2.5 per cent up compared to January 2013. Transportation services were down by 4.1 per cent, as was construction activity, by 3.5 per cent. With all this, industrial production development is still above zero: +0.9 per cent. Two explanations for the last figure are: the devaluation of ruble (and thus the improved competitiveness of domestic producers both on domestic and export markets) and an increase of stocks throughout the value chain (note the "scissors" effect between retail and transportation on one side, and production volume on the other) (fig. 3).



Ruble (RUB) exchange rates against the euro (EUR) and the US dollar (USD) affect trade flows from Russia (domestic market vs. export) as well as trade flows to Russia (domestic supply vs. import). At the same time, the growth in value of the USD against the EUR leads to relatively higher supply flows to Russia from Europe, as compared to Asia and the United States. On the other hand, a low ruble exchange rate puts pressure on new projects with loans in EURs or USDs and revenue in RUBs – blocking a significant part of potential capital expenditure in harvesting, sawn timber, panels, and pellet and pulp-and-paper production. To summarize roughly, we can see that most large projects at the early stages of development have been put on hold. On the other hand, the current crisis (as distinct from what was seen during the financial crisis of 2008/2009) is local and specific to Russia only – thus export-oriented

Fig. 3: Devaluation of Russian ruble in 2014



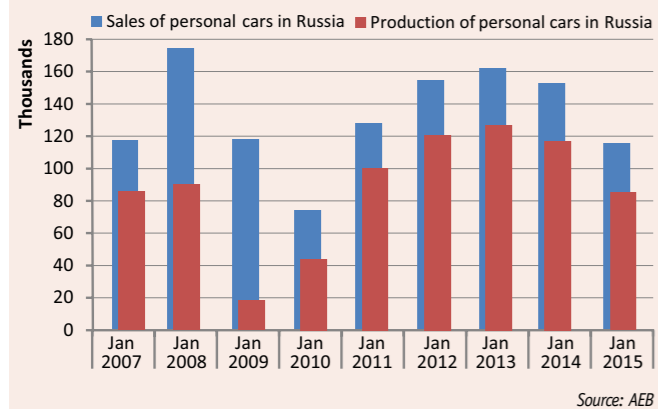
Source: FxHistory

products have a good potential for investors and some investment activity for these products is likely to occur.

The devaluation of ruble led to another significant, if temporary, consequence for the industry: an increase in consumption at the end of 2014 and probable higher demand in the first quarter of 2015, as people are trying to convert the declining ruble into "solid goods" such as cars, home improvement, furniture, white goods etc. With this factor, current retail volume is still higher than it might have been (and higher than it is expected to be in the second half of 2015). Judging by the sales of cars, it is as if we are in "2009 again" in 2015 – but with two significant differences: the first is that 2014 was "a little bit like 2009" as well; the second is that car producers are more optimistic now (yet) than they were in 2009 (fig. 4).

A similar dynamic to car sales (with much fewer extremes, however) was seen

Fig. 4: Sales and production of cars and light commercial vehicles in Russia, January to January, 2007–2015



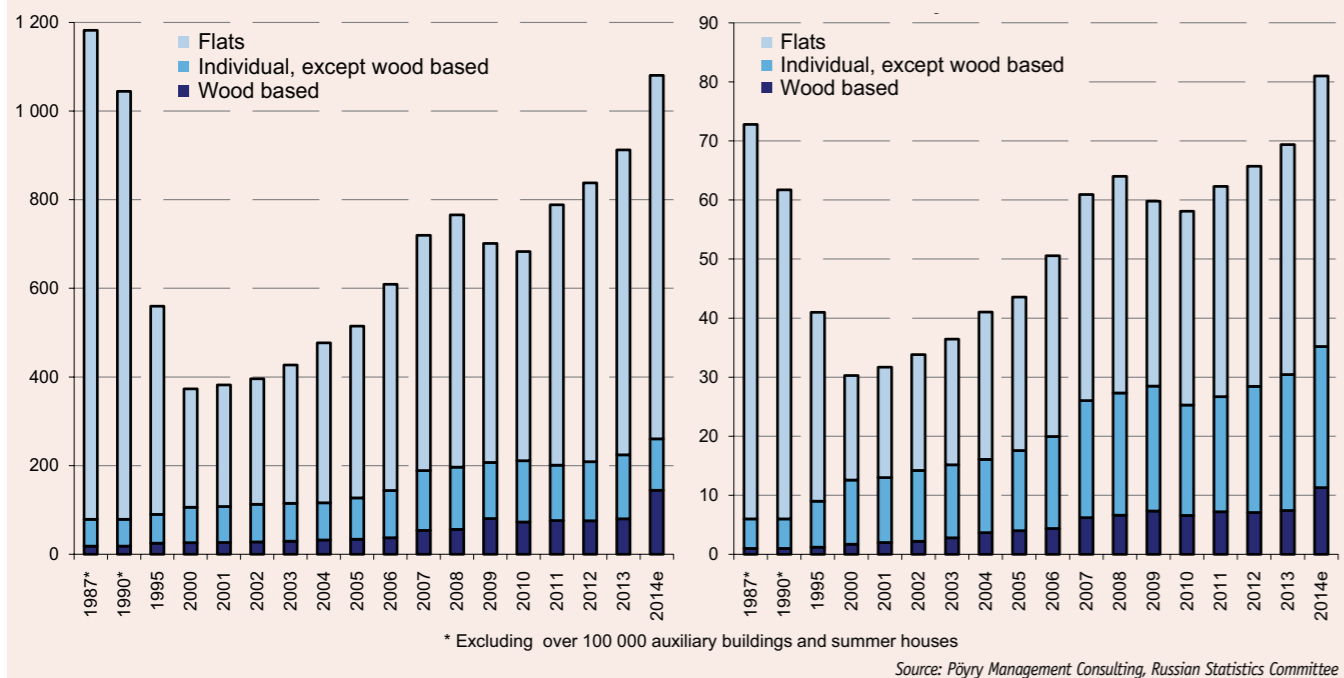
in furniture consumption and in home improvement and renovation activity. Furniture consumption naturally supports domestic furniture production and thus the level of demand for particleboard, plywood and MDF while renovation activity supports demand mainly for OSB, HDF (in the form of laminate flooring consumption) and plywood.

In 2014, the increase in new residential housing was staggering – up by nearly 30 per cent in the first half of the year and some 15 per cent by the year's end (measured in m²). It should be noted, that even 15 per cent growth looks a bit counterintuitive (which raises some concerns about the quality of the data). However, the drivers here were about the same as in 2008/2009 – namely, the anticipation of growth in the first half of 2008, the start of a large number of new construction projects, and then (once the crisis became apparent) the urge to finish and sell all ongoing projects as fast as possible – to overtake falling demand and the rising cost of capital. In 2015, we are likely to see a significant decline, following the pattern of 2010, as the urge to finish current projects goes hand in hand with less than little interest to start new projects – those which could have accounted for the bulk of volume in 2010 (and 2015) (fig. 5).

Over 75 per cent of total residential housing and over 80 per cent of individual (low-rise) housing is built in Western Russia, i.e. all of Russia excluding the Siberian, Ural and Far East Federal Regions. The share of construction across the country is relatively stable year-to-year and the concentration of demand in Western Russia dictates the location of the new projects focused on the domestic market, and hence, for example OSB and MDF production.

Furniture production is not easy to track as most of it does not appear in the statistics at all (small manufacturers, some "gray" production) or it appears as services, especially for built-in and fit-in furniture. It is easier to estimate the dynamic of furniture production through consumption of wood-based panels (below) and through the import-export of furniture. The import of furniture predictably went down (by some 7 per cent) in 2014 compared to 2013, while imports from CIS countries accounted for some 15 per cent of the total import volume. This segment actually grew – up 6 per cent in 2014 as compared to 2013.

Fig. 5: New residential housing in Russia 1000 dwellings (left) and million m²/a (right), 1987–2014



HARVESTING OPERATIONS: opportunistic growth

On the global scale, the situation in the forestry and harvesting business might be evaluated through sales of harvesting machinery – the larger the sales, the healthier the business and the brighter the prospects. Sales of harvesting machinery developed from rather gloomy in 2011–2012 to cautiously optimistic in 2013 and on to quite positive in 2014. Europe is recovering (mostly due to Scandinavia). Sales to South America (specifically, Brazil) and Russia were increasing rapidly in 2013 and – at a slower pace – in 2014. The main driver here, understandably, is growing mechanization due to greater pressure on production, including per-person production (fig. 6).

The key forestry markets on the global scale are stable, and changes do not happen overnight. However, relatively greater activity is expected in South America, Oceania, South Africa and Russia in the mid-to-long term. In the latter case we can probably only talk about the longer term, due to the current investment climate and position of the Russian currency, as well as due to lack of infrastructure to make the volumes grow fast.

Russia has the world's largest "deposit" in terms of forested area (some 800 million ha, approximately 22 per cent of the global total) and growing stock (app. 24 per cent). About one third of the growing stock (some 29 billion m³ out of 83 billion m³) is concentrated in mature and overmature industrial forests. Softwood forests account for approximately two thirds of the forested area. Annual allowable cut (AAC) of some 650 million m³ is utilized by only some 30 per cent due to the poor commercial availability of many areas (a lack of forest roads, difficult terrain, and a lack of consumers nearby, as well as a lack of other roads). Actual cuts differ significantly from region while remaining more or less stable inside given regions. The greatest harvesting is seen in Siberia, the North-West and the Volga Federal Regions. Those three regions make up approximately three-quarters of the total volume in Russia. Out of the three main regions, AAC utilization is the highest in the North-West (over 35 per cent of the annual allowable cut) and the lowest is in Siberia (some 15 per cent).

In Russia, official harvesting volume in mature and overmature forests grew in 2014 by over 4 per cent compared to the previous year, reaching nearly 120 million m³. Total harvesting volume, including thinning, was close to 200 million m³. "Gray" and illegal harvesting is likely to add up to some 20 per cent to this number (World Bank and WWF estimates). Exports grew from 19.0 million m³ in 2013 to 20.9 million m³ in 2014, a 9.8 per cent increase. In monetary terms, export volumes increased by 8.3 per cent in current USD. In the first half of 2014, export volumes grew even faster – some 17.7 per cent compared to the first half of 2013 by volume.

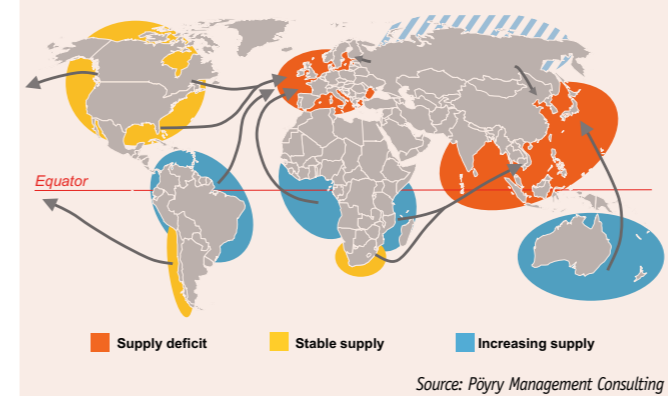
The highlight of the year for the sector was the ruble devaluation followed by better margins for exported wood and thus a push towards growing export volumes and growing ruble prices, especially in regions like Russian Siberia and the Far East. However, non-integrated harvesting companies remain quite cautious and the favorable situation is not likely to lead to significant growth in harvesting capacity due to general unpredictability in the legislative field as well as due to the sharp increase in the cost of capital. On the other hand, we are likely to see an increase in harvesting capacity for integrated players – and thus further rise in the share that the big integrated players have in the harvesting sector in Russia.

Some further efforts to decrease the level of illegal cutting was seen on the part of the Russian government in 2014, specifically the legislative act 415 FZ. It was introduced on July, 1st 2014 to be in full force from January, 1st 2015 and tightens rules concerning illegal harvesting (larger fines, the introduction of a unified information system, unified lease agreements etc.). Other promising changes in the forestry sector included the introduction of pilot regions in Russian Siberia and the North-West to move away from extensive forestry (large areas, clear cutting, low maintenance) to intensive forestry (Scandinavian model) as well as larger spending on improving the accuracy of forest resources data – with the goal of reaching a frequency (of data gathering) of no less than once-a-decade for the key regions. It should be noted however, that many initiatives in Russia develop from "best intentions and right words" to "just additional uncertainty, bureaucracy and burden for the forest industry players" with amazing speed. The fresh results in this area have yet to be seen.

In general, over the last decade, wood supply developed from the notion that "there is enough wood in this country for any project" to significantly restricted in some geographical areas and industries (specifically, sawmilling and plywood production in Western Russia) – and it keeps tightening. Now we see that wood supply prospects are the first-priority "must-check" for almost any project of any scale in any locality. The most significant restrictions are seen in Western Russia (Central, North-West and South) while their effects are felt a bit less in Siberia and the Volga Federal Region.

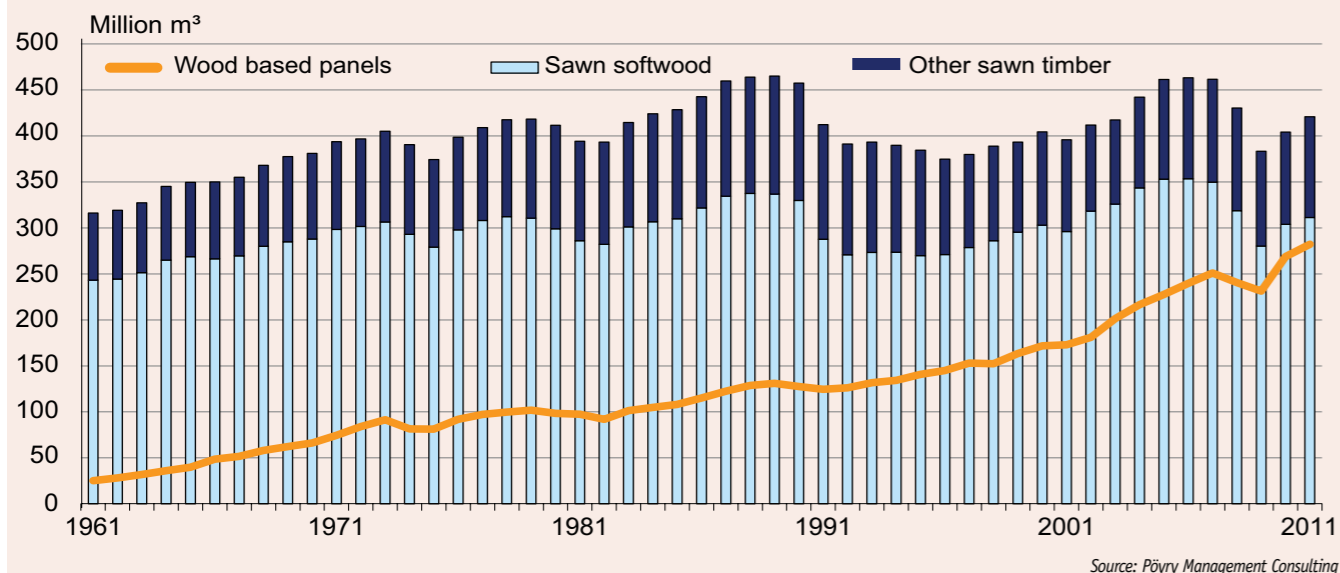
The situation differs significantly from product to product and from the macro-scale to the micro-scale. Sawlogs and plylogs are in the highest demand almost everywhere, while the situation with pulpwood varies from one end of the spectrum to the other: in some regions leaving pulpwood in the forest is not regarded as an embarrassing practice while in some others the price of pulpwood goes hand in hand with small-diameter sawlogs. As an example, short-radius delivery pulpwood is in high demand around pulp mills in Siberia and in the North-West – up to the point that cooking small and medium diameter sawlogs is not a rare practice.

Fig. 6: Global wood supply and demand: the growing economy and demand for traditional forest products in Asia and the bioenergy sector in Europe create massive trade flows



Annual allowable cut is increasing in line with (estimated) growing stock in mature and overmature industrial forests: in example, AAC was on the level of 510.6 million m³/a in 2002 and grew to some 633.4 million m³/a in 2010 vs. growing stock of 23.1 billion m³/a in 2002 increased to 28.6 billion m³/a in 2010 (a 24 per cent increase in eight years in both cases). However, the quality of the data is not up to the best standards.

Fig. 7: Global production of sawn timber and wood based panels, 1961–2011



SAWN TIMBER: go for export!

Global sawn timber production can be seen as having been nearly stagnant in the last half a century: since the 1970s global production and consumption volumes are relatively stable at some 400-450 million m³/a (fig. 7). At the same time, the production of wood based panels grew several fold – from lower than 70 million m³/a in 1970 to over 280 million m³/a in 2011. Today, global production of wood based panels roughly equals the global production of sawn softwood.

In Russia, the official statistics cover only relatively small number of sawmills, and this part is dominated by large export oriented mills. Mid-sized and small sawmills (serving almost exclusively the local market) are nearly completely left out of the statistics. It leads to underestimations in official production and thus – since 2013, negative (!) apparent consumption in the country: the volume of official export is larger than official domestic production while the volume of import is practically non-existent. Real sawn timber consumption in Russia is estimated at somewhere between 15 and 25 million m³/a which means that something like a third to a half of total production is not covered by the official statistics (fig. 8).

However, the largest players are well known and visible – big mills, big volumes, big exports, big plans. In 2014, we saw some new capacity come on stream. The largest starts were Kraslesinvest (in the Boguchansky district; test production in 2014), TSLK (Ust-Kut) and Lesosibirsky LDK-1 (Lesosibirsk) – all these mills are high-capacity mills located in Russian Siberia. Together the three mills add over 1.5 million m³/a capacity to output in Siberia – which means significant pressure to traditional export markets for all Siberian mills. Large-scale plans include the Sibles mill in the Krasnoyarsk Krai, the Asia Les sawn timber and pellet mill in the Khabarovsk Krai. Apart from that, the devaluation of the ruble has led to an increase in deliveries of sawlogs to markets such as China – which led to growing ruble prices for domestic mills. However, it should be noted that the price increase was significantly lower than the magnitude of the ruble devaluation.

The largest beneficiaries of the ruble devaluation were traditional sawn timber exporters to high-price markets (such as Europe and Japan). Among these, an even better position is seen among the mills with integrated wood supply. On the other hand, high-price markets experience ever fiercer competition as they became much more attractive buyers. Europe remains

a place with significant overcapacity at least in the short term. In 2014, there were no large-scale start-ups (an example of a mid-scale start was the commissioning of a 200,000 m³/a mill by Ikea Industry in Poland) but no significant closures either – apart from closure of the 800,000 m³/a Stora Enso mill in Austria's Sollenau municipality. In addition, there was no major M&A activity in Europe, and only one clearly noticeable insolvency – that of machinery supplier Jartek Oy in Finland.

In lower-price-lower-quality markets such as China and Egypt, the situation for sellers is not easy due to lower than expected growth in demand, as well as some increase in competition. Markets where Russian suppliers

Fig. 8: Official apparent consumption of sawn timber in Russia: ...negative

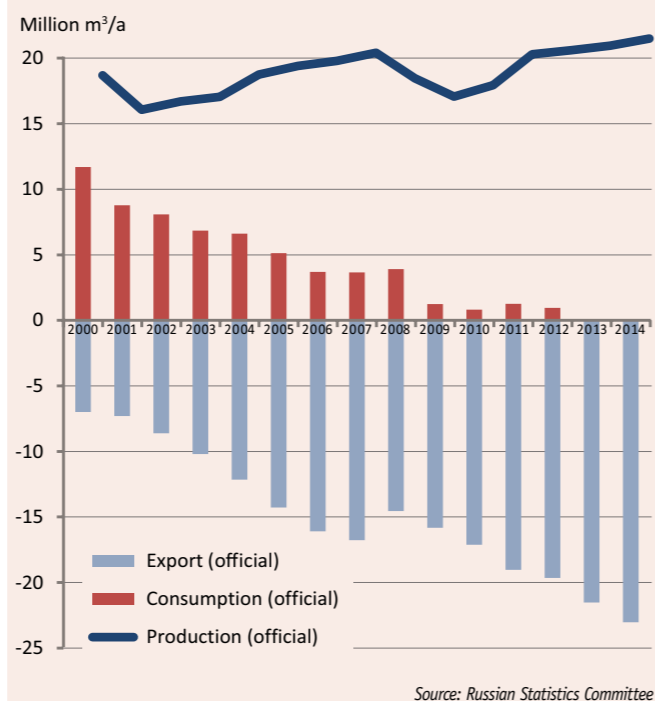


Fig. 9: Regions with sawn timber import exceeding 750,000 m³/a in 2013



were traditionally strong, due to either logistics or long-developed ties, experienced much less tension. This group includes such countries as Uzbekistan, Azerbaijan and even Iran (however, these markets lost part of their attractiveness as many of the deals are traditionally concluded in rubles). In general, important markets for Russian producers are the same as the key importers globally, with the US as one possible exception (fig. 9).

Another highlight of the year (apart from the falling ruble and new capacities) were ownership changes. Most notable were the divestment of Rusforest mills in Archangel and Boguchany (North-West Russia and Siberia respectively) as well as a change in ownership of the Arkaim mill (Russian Far East).

WOOD BASED PANELS: go for export and push imports away!

For wood based panels the situation is much more diverse – both in terms of products and geography. In 2014, new capacity came on stream in the production of MDF: Kastamonu (Tatarstan, 480,000 m³/a capacity, plans to increase MDF production capacity up to some 850,000 m³/a and add particleboard production with capacity of some 750,000 m³/a) and PDK Apsheronk (Krasnodar Krai, 300,000 m³/a capacity). Kastamonu has integrated production of laminate flooring with capacity of 20 million m²/a, while PDK Apsheronk plans to have laminate flooring production with capacity of some 10 million m²/a. Two more MDF lines might come on stream in 2015–2016: the Russian Laminat line in the Smolensk region (400,000 m³/a capacity) and Roskitinvest mill in the Tomsk region (200,000 m³/a capacity). In 2014, two mills started in Belarus: Gomeldrev (part of Bellesbumprom, 215,000 m³/a capacity, 3–40 mm thick MDF) and Mozyrsky DOK (350,000 m³/a capacity, 20–240 mm thick insulation fiberboards).

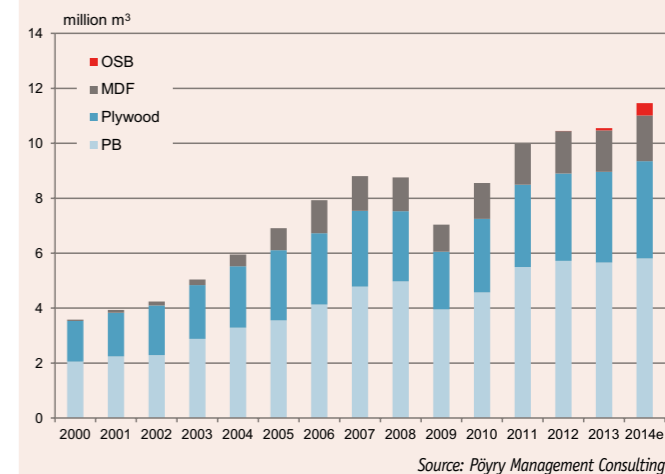
The 2 million m³/a MDF market is dominated by domestic producers. The share of imports in this market is already low, additional capacity of 0.8 million m³/a started this year and planned starts equating about the same volume in 2015–2016 would put a lot of pressure on the market. More positively, the market is diverse: MDF/HDF is used in the production of doors, mouldings and wall panels, in furniture production and in laminate flooring production. Laminate flooring production is experiencing a full-scale boom now – after the devaluation of the ruble there is a need to substitute some 35 million m²/a (which means: over 300,000 m³/a of HDF) of European and Chinese laminate flooring on the Russian market (fig. 10).

OSB production began in Russia in 2012. Since then the number of investment projects in construction and installation phase has grown. Current installed

capacity in OSB production in Russia is more than 1 million m³/a (at the following enterprises: DOK Kalevala, Hillman, Novovyatsky Ski Combine, and Kronospan Egoryevsk), and the relevant machinery that already resides in Russia accounts for 500,000 m³/a (at Oris, although there is some uncertainty about its realization). Apart from Oris, there are several other high-capacity projects which might start OSB production in the country soon. These include Kastamonu in Tatarstan, Kronospan near Ufa, Swiss Krono in the Perm Krai, Ugra-plit in the Khanty-Mansiysk region and Taleon Terra in Tver region. Even with some delays and cancellation of yet-to-be-built mills, Russia is facing some 2.5–3 million m³/a of installed capacity by 2020 as a possible scenario, which significantly exceeds projected demand.

Short-term prospects are good for all manufacturers as already installed capacity will enable local manufacturers to substitute imported OSB (and some low grade plywood) on the domestic market and have healthy capacity utilization. However, in the mid-term, capacity utilization might be significantly lowered by ongoing projects as well as by deliveries from the new Kronospan mill in Belarus, which came on stream in 2014 with capacity of some 600,000 m³/a. The position of European OSB producers on the Russian market is not good due to the sharp devaluation of the ruble: currently delivered prices in Russia from the Russian/Belarusian mills for

Fig. 10: Wood based panel production in Russia





key distributors are lower than European mills can offer even on an EXW basis. On the other hand, export opportunities to Europe for the Russian mills are also limited by a planned increase of Eastern European capacity (with a new mill under construction in Poland: Kronospan), by modernized mills in the UK/Ireland (Norbord, Smartply), and by additional volumes freed from deliveries to Russia mostly from Latvia, Romania, Poland and Czech Republic. In 2014, the export volume was at the level of 10,000 m³/a, and most of the boards were sold to Kazakhstan and Kyrgyzstan.

Particleboard (PB) production increased in Russia by 2.7 per cent in 2014 compared to production in 2013 according to preliminary numbers by the Russian statistics committee. Particleboard remains both the most produced and the most consumed type of wood based panel in Russia. Short-term prospects for the industry are not particularly bright as most of the boards are targeted at domestic furniture production – which might be under pressure from lowering demand. Industry players predict a decrease in production for 2015 of some 5–10 per cent. On the bright side, nearly one-third of total particleboard production capacity in Russia is more than 30 years old, with an average age in this group of 45 years (!). New, cost-efficient players might achieve healthy capacity utilization by pushing some of the older mills from the market. This process has already started – but not yet on a large scale, as most of the outdated PB capacity is integrated with plywood production and thus it is used as a wood residues utilization option.

In 2014, several high capacity mills started PB production in Russia and in Belarus, including Rechitsadrev (part of Bellesumprom, capacity 215,000 m³/a, Belarus) and Uvadrev (capacity 315,000 m³/a, Udmurtia, Russia). Construction is on the way at a Kronospan Bashkortostan project in Ufa, Russia, with a capacity of some 500,000 m³/a. Earlier, PB production started at a Kronospan site in Elektrogorsk, with a capacity of 250,000 m³/a. The largest Russian plywood producer, Sveza, is developing particleboard project in Verkhnyaya Sinyachikha. According to the general director of the mill Ilya Radchenko, the project is on hold until at least mid-summer 2015 due to the unstable economic situation, however, the first payment to the machinery supplier was already made, and the planned capacity of the line is 500,000 m³/a.

Plywood production in Russia grew by some 6.3 per cent in 2014, reaching 3.54 million m³/a, according to preliminary numbers from the Russian statistics committee. Plywood remains a heavily exported product, with some 1.97 million m³ exported in 2014. This represented volume growth of 11 per cent compared to 2013, and an 18 per cent increase in dollar terms (1.17 billion USD in 2014). The Russian plywood market has grown from half-a-million m³/a in 2000 to nearly 1.4 million m³/a in pre-crisis 2007. In 2009, consumption dropped to 0.8 million m³/a, but quickly recovered to exceed pre-crisis levels. In 2011–2014, consumption of plywood in Russia was rather stable at a level of just above 1.5 million m³/a, of which some 90 per cent was birch plywood. In the mid-term, further growth in the domestic market is likely to be restricted by the growing supply of OSB, stagnating furniture production and the overall weak economic situation. On the bright side, the position of Russian producers in key export markets (the EU, the CIS

and the US) became stronger with the devaluation of the ruble in addition to the quite unique abundance of birch in Russia which confers a natural advantage from the raw material point of view.

There are only two high-capacity softwood plywood mills in Russia – EFK (currently idle) and the ITI Bratsk mill. Some softwood plywood is produced by LVL-Ugra mill as well. All other mills produce almost exclusively birch plywood. The largest player is Sveza, with a plywood production capacity of nearly 1 million m³/a – several times more than the next largest players. The most modern high-capacity plywood mills produce large-size birch plywood, including phenolic film-faced products. And, after the ruble devaluation, almost all Russian mills are rushing to the European market: prices at the beginning of 2015 plummeted by some 5–6 per cent. In case of smaller players, prices fell even lower than that.

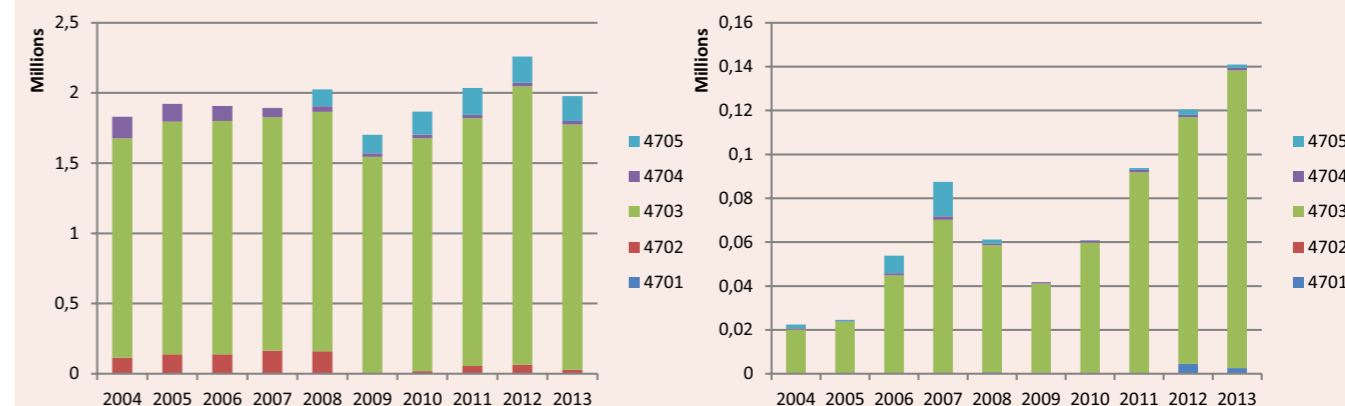
Globally, birch plywood is produced mostly in Western Russia, Finland and Baltic countries. Of the three regions, investment activity in 2014 was seen in the Baltics (Latvijas Finieris has plans in Kurzeme, Latvia) and in Scandinavia (Latvijas Finieris has restarted the former Visuvesi mill in Sastamala, Finland). Large investments in Russia are possible even in the current economic situation, due to the fact that plywood remains a high-margin export oriented product. In the Russian Far East there are two high-capacity veneer producers – Terneyles (Sumitomo) and the RFP Group. Apart from plywood, there was some remarkable activity in the production of LVL in Europe (Steico SE in Poland, Pollmeier in Germany, and Stora Enso in Finland) and in the US (Georgia-Pacific). Some possible capacity increase was announced for Taleon Terra LVL mill in Russia as well. With all that, the European LVL capacity is likely to overcome the demand in the short term.

PULP AND PAPER: some developments

While plans for a new pulp mill in the Vologda region by Sveza are slowly shaping up, some brownfield investments in the pulp-and-paper sector already took place in 2013–2014: the production of pulp at the new line in Bratsk by Ilim Group exceeded 50 per cent capacity utilization in 2014 (the “Big Bratsk” project, with a capacity of 720,000 t/a); coated wood-free paper production was started in Russia for the first time by Ilim Group in Kotlas (some 20,000 t/a out of a 70,000 t/a capacity); and LWC paper production started by the Kama mill (formerly Investlesprom) in 2013, the only such production in Russia, with a capacity of 86,000 t/a.

There was also some M&A activity: Investlesprom’s holding was sold by the Bank of Moscow (which is controlled by VTB Bank), with most of it ending up in the hands of Vladimir Yevtushenkov’s AFK Sistema in mid-2014. Earlier in 2013, the Kama mill was sold by the Bank of Moscow to a group of investors including the management of the mill. Smaller scale M&A activity included acquisition of Selenginsky CCK by the owner of the Baikal Wood Company, Yevgeny Pruidze, in late 2013.

Fig. 11: Pulp exports (left) and imports (right) from/to Russia, commodity tariff numbers 4701–4705, million t/a



Source: UN Comtrade

Pulp production in Russia was up by 4 per cent in 2014 after a decline of some 5.8 per cent in 2013. The 2014 level of 7.5 million t/a of pulp production is approximately the same as the average production volume in Russia in the period 2000–2014, and it is the same as the volume of production in the Soviet Union in 1990. So, roughly speaking, export opportunities and growing segments have balanced the negative factors over the last decade. Exports are more or less stable at some 1.9–2.0 million t/a, and the trend is toward its increase. Imports are increasing but the level is much smaller. In 2014, export grew by 4.2 per cent in volume and some 7.1 per cent in dollar terms (fig. 11). Paper production in Russia was at some 4.9 million t/a in 2014, and average growth since 2010 was some 1.3 per cent while newsprint paper production declined by average 4.2 per cent/a (1.6 million t in 2014, 3.1 per cent growth in 2014 after 12.6 per cent decline in 2013). Paperboard production reached 3.1 million t in 2014, 1.6 per cent growth compared to the previous year.

BIOENERGY: burning hot for pellets

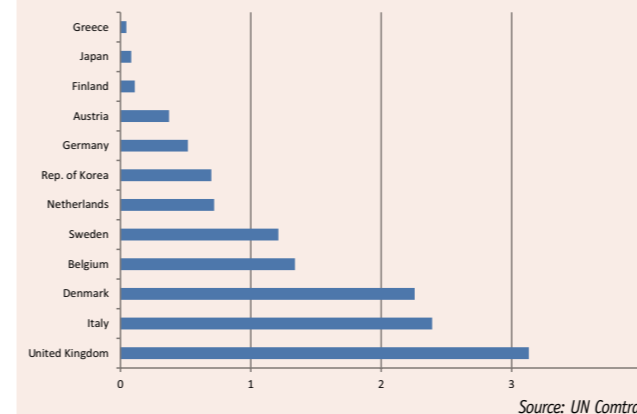
In recent years, the pellet business became a large-volume game mostly between Europe and the US. Both the US and Europe are by far the largest

global producing regions while in the US production is much more concentrated than in Europe and the share of industrial pellets in total production is overwhelmingly greater. The US players are currently the largest in terms of cumulative exports as well as investment plans. On the other hand, Europe remains not only important producing region but by far the Number One consuming region globally (fig. 12).

Globally, the pellet business is undoubtedly one of the fastest growing segments in the forest industry. All “basic issues” such as whether we should fight global warming, whether burning wood is a good way to fight global warming and whether subsidies are a good way to promote wood as an energy source to fight global warming have already been addressed, at least in the key global market, in Europe. The risks for investors are now mostly in the details: what kind of subsidies and in which volume/time are going to be in place in the long run, how the wood is going to look among other renewable sources, are there going to be any geographic or technological limitations, etc. The countries which have set the clearest long-term “rules of the game” are expected to grow the fastest. Among those: the UK, Belgium, the Netherlands and Denmark.

So the main basic risk for the business so far is the risk that it is fairly limited by geography (with Europe as by far the most important key consumer) and

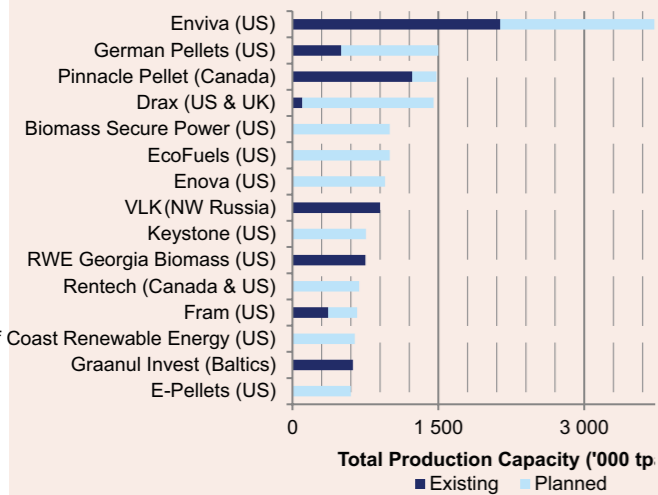
Fig. 12: Top-12 largest net-importers of pellets and briquettes in 2013 globally, commodity tariff numbers 440131 and 440139, million t/a



Source: UN Comtrade



Fig. 13: Existing and planned pellet capacity, targeting the European market – Top-15 players



Source: Pöyry Management Consulting

its development is largely dependent on subsidies. Specifically, those risks might hit Russian exporters in some way or other as Europe is currently subsidizing pellet production development abroad: in the US South and in Russia in the first place – which might be not a good selling point for a politician. Apart from that, the sector is booming and the prospects are bright. In 2014, the only large cloud on the horizon was the decline in oil prices – which made the dependence on subsidies even larger. The fastest growth in production volume was seen on the eastern seaboard of North America, while the fastest consumption growth (by volume) was seen in Europe.

The list of Top-15 pellet producers is changing quickly, with large capacities in the pipeline (fig. 13). The planned new capacity for the Top-15 companies on the chart is over 10 million t/a – and those are only plans/shares which target the European market, i.e. excluding the pellets which are likely to be sold outside of Europe. And, of course, the Top-15 players and plans are only the top of the long list of manufacturers. The next 15 largest producers-and-plans include over 3 million t/a of additional planned volumes (by far the most of them from the US) and about the same volume of already installed capacity (with over a half of it in the US). Needless to say that there is a risk of oversupply if those plans are developed quickly. The key buying criteria in the industrial pellet market are: security of supply, volume (as a rule of thumb, the larger the volume the higher the price) and price. In all of these criteria most Russian mills are not in the best position – which should be taken into account while planning new investments, at least in the industrial pellets sector.

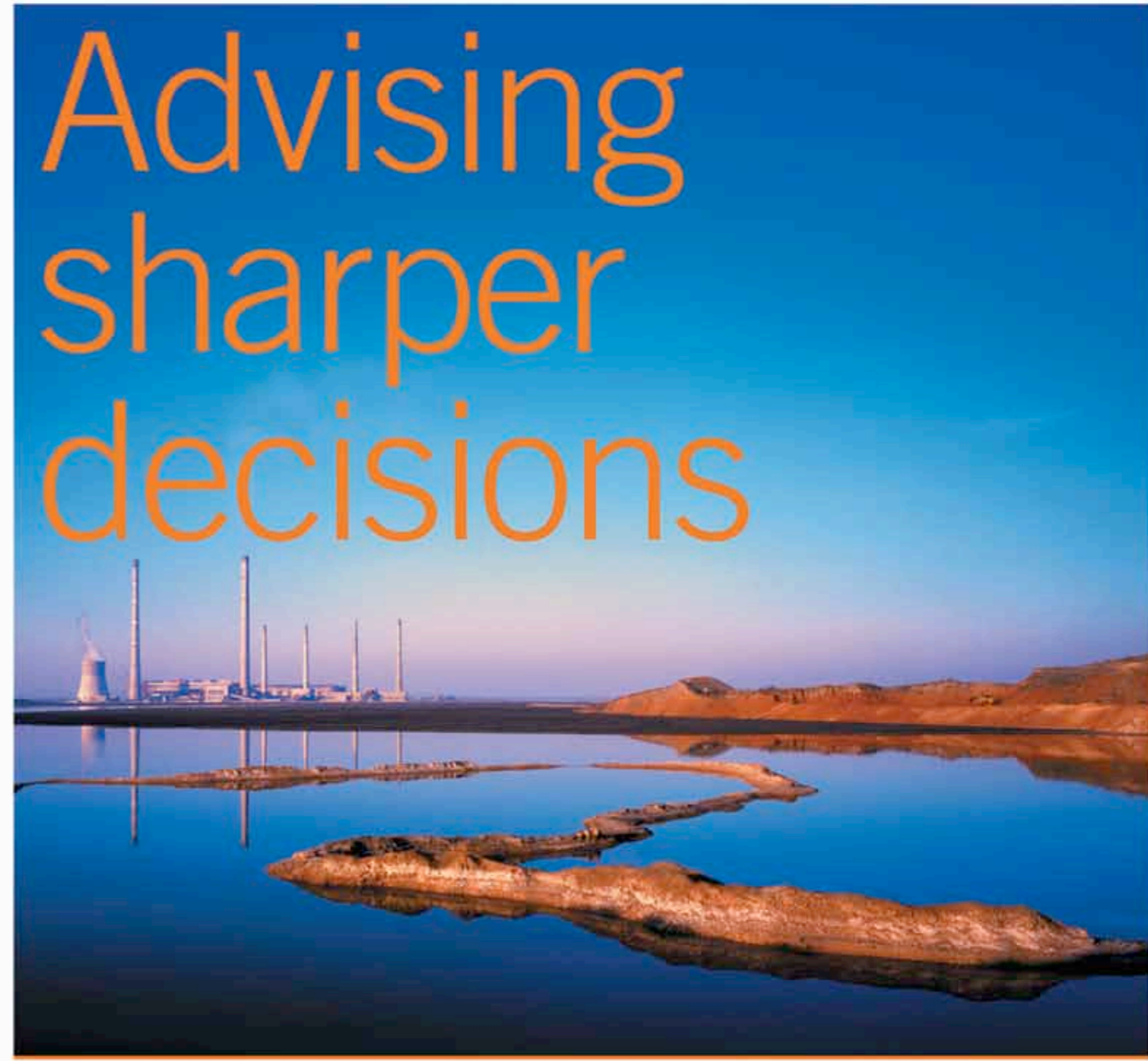
RUB devaluation (and the devaluation of EUR against USD), as well as the overall important problem of wood residues and low grade wood utilization, has resulted in numerous plans in Russia recently: Rusforest installed a 100,000 t/a pellet mill in Arkhangelsk (prior to selling the mill) and plan to install 30,000 t/a mill in Magistralny (Irkutsk region); Lesresurs commissioned a 30,000 t/a pellet mill in Novaya Igirma (Irkutsk region). In 2013–2014, there were several other starts as well.

In the list of projects there is no lack of mills with capacity of “about and over” 100,000 t/a: Lesozavod-25 (in the Arkhangelsk region, with trial production scheduled for March 2015), TSLK and Russian Timber Group (both in the Irkutsk region), Asia Les (Khabarovsk Krai), GS Group (Pskov region), Bionet (Arkhangelsk region), GK Sintez (Bryansk region) and so on.

Overall, the main investment activity is drifting from the Russian North-West toward Siberia.

In addition, there is drift in the key markets. Domestic consumption grows, however the volumes are not yet large enough to compete with exports. Europe remains the Number 1 export market for Russian mills, and specifically two countries in Europe: Sweden and Denmark. Sales to those countries accounted for two-thirds of total Russian pellet exports in 2014 (75 per cent in 2013; 74 per cent in 2012). In the mid-term, Asian countries like South Korea, Japan and China are expected to grow for the Russian suppliers both in volumes and in importance. However, deliveries to the largest Asian market for Russian mills so far – South Korea – were below 50,000 t in 2014 out of total export of nearly a million t/a (73,000 t in 2013; 47,000 t in 2012).

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Improvement of Russia's Forest Legislation in 2013–2014, and Current Changes

The years 2013-2014 can be described as a period of very high law-making activity in respect of the forest legislation of the Russian Federation. Before that, changes had not been frequently made in the Forestry Code, and most of them had a very limited influence on the forest industry and its investment attractiveness. Based on the results of a number of polls, the professional community named the poor development of forest legislation as the main cause of the industry's inefficiency.

The meeting of the State Council under the President of the Russian Federation held in Ulan-Ude (Republic of Buryatia) on the 11th of April 2013 was a stimulus to change the situation. The state of affairs in the forest industry of Russia was seriously criticized at the meeting of the State Council, after which the President prepared a number of instructions concerning the use, conservation, protection, and regeneration of forests. The instructions of the President of the RF concerning legislation improvement can be divided into several main areas. They are aimed at increasing the investment attractiveness and efficiency of the business, improving the forestry management system and fighting illegal logging and illicit timber trafficking.

The Department of State Policy and Regulation in the Field of Forest Resources of the Ministry of Natural Resources and Environment of the Russian Federation, that was newly established in 2012 became the head organization in charge of

implementing the instructions to make changes in the forest legislation (before that, the Federal Forestry Agency performed the functions of forest legislation execution). Working out strategic decisions in the area of forestry relations and statutory regulation in the forestry area became the main task of the Department.

In September 2013 the Government of the RF approved the Basics of the State Policy in the Field of Use, Conservation, Protection and Regeneration of Forests in the Russian Federation for the Period up to 2030. Before that, there had been no documents of such a format in the forest legislation at all, for which legislators had been constantly criticized by the professional community: the country of the world richest in forests had had no strategy for the management of such forests. The basics of the state policy determined, albeit in the form of a declaration set forth in theses, the strategic benchmarks for the development of forest legislation through to

2030. In addition, the legislation now contains such concepts as: intensive model of forest management and use, national heritage forests, environmental potential of forests, green economy, bioenergy and so on. Practical application of these basics means that all future legislative initiatives must be brought in line with this declaratory instrument.

In 2014 Russia's logging volume for all forms of use amounted to about 197 million cu. m. Taking into account that over three-quarters of that volume are logged by forest plot leaseholders, the most interesting aspect of an analysis of the legislation are the innovations aimed at the development of business. Such changes manifest themselves in an easier access to resources with the creation of equal and fair conditions, in the availability of certain guarantees from the state for bona fide forest users, in the support of small and medium businesses and in fighting illegal logging.

Therefore, I would like to start the review of the changes made in the Forestry Code of the Russian Federation over the last two years with the Federal Law No. 415-FZ of 28.12.2013 adopted in December, in respect of timber turnover and transactions with timber. This law has set a precedent, having changed the provisions of the Forestry Code to a considerable degree. Firstly, the boundaries of the Forestry Code have been expanded from a forest plot (felling area); the Code became also applicable to the turnover of round timber up to its processing or exports in the round form. Secondly, the Code now covers not only those who use forests directly, but also all those involved in the turnover of round timber.

The provisions of the Federal Law 415-FZ take effect stage by stage. To enable all participants of forestry relations to adapt their accounting systems, the Law provides for administrative liability for a breach of a certain requirement of the law only 6 months after it takes effect. For example administrative liability for a missing or noncomplying shipping document for the carriage of timber took effect from the 1st of January 2015, whereas the requirement itself of having a shipping document of the established standard has been in effect from the 1st of July 2014.

Several basic parts of the law concerning accounting, transportation, marking of timber and declaration of transactions with timber should be distinguished.

The Unified State Automated Information System *Accounting of Timber and Transactions With Timber* (EGAIS) must become the core of the timber accounting system. As planned by its developers, the system will be an information portal on the Internet, to which all participants of forestry relations will have access according to their powers and functions. Thus, forest management bodies must enter in EGAIS all primary information on forest plots (data of the National Forest Inventory, data on the forest plot and so on); and persons using forests, that is forest users, must enter in it the data from the forest use report, on logged timber and transactions with it (an electronic declaration is opened for each transaction, and as timber is shipped to a buyer, respective volumes of timber are written off from the total volume stated in the declaration). On the other side of a transaction, the buyer must confirm such volumes.

To ensure the transparency of information on cut timber, access to EGAIS is provided for all interested parties, including those purchasing timber and products made of it. This, among other things, must facilitate the application of their DDS (Due Diligence Systems) by importers of Russian timber who are residents of the EU regarding obtaining information on its origin and verifying that the volumes meet the requirements of Timber Regulation No. 995/2010.

The said law has created a basis for implementing a unique tool for accounting timber and, more importantly, transactions with it, which, in its turn, creates a financial basis for fighting the turnover of illegally cut timber.

Another new important law for the forestry industry is the Federal Law No. 250-FZ of the 21st of July 2014, which has conferred on the Government of the RF the powers of approving the standard agreement of forest plot lease and set forth the possibility of changing the terms and conditions of the agreement in certain cases. Before that, each entity of the Russian Federation could use the fact that the Forestry Code mentioned a model form of an agreement of forest plot lease as an excuse and could introduce unfavorable, and sometimes even discriminatory, provisions in regard to the leaseholder. From the moment of approval of said law, regions no longer have this possibility and must use the standard form, which is the same for the entire country. The standard form itself, ensuring a balance of interests of all participants of forestry relations, will be approved by separate acts of the Government of the RF for each type of forest use.

The Federal Law No. 69-FZ of 02.04.2014 provides for an increase in the period of limitation for the institution of administrative proceedings against forest users for a violation of the legislation of the Russian Federation in the field of nature management to one year from the moment an offense is committed. The adoption of the Law will make it possible to preclude the current practices when those who have violated the forest legislation can evade responsibility, on the ground that it is impossible to make the necessary documents confirming the fact of such violations without delay.

As for improvement of the efficiency of forestry, the Federal Law No. 27-FZ approved in March 2014 cannot go unmentioned. The Law has granted the state budgetary or autonomous institutions in regions (in fact, these are the former forestry enterprises, *leskhoz*) the priority right of taking measures aimed at the protection and regeneration of forests that have not been leased out. Thus forestry sections are being strengthened in Russia's regions. This step has been mentioned as necessary many times since the moment of the adoption of the Forestry Code, i.e. since as early as 2006. Before the adoption of said law, the work of the protection and regeneration of forests that have not been leased out could be performed by any organization that won that right at an auction. That scheme had a lot of disadvantages, as those who offered a lesser price became winners of an auction, and, as a result, the quality of work was lower and some contractors just did not perform their obligations. The one-year cycle of work organization did not allow long-term planning of forest protection and regeneration in the region, while forestry sections were left without work.

The fact that now the preferential right of performing that work belongs to the state budgetary or autonomous institutions that have been established within forest management bodies has returned the possibility of forming their material resources and preserving valuable specialists. Another important fact is that now the income from the sales of timber obtained in the course of work of forest protection and

regeneration goes mainly to the regional budget, which makes entities interested in a more efficient management of their forest resource.

In addition, the Law has made it possible to solve a number of problems in the field of forest seed farming. With its adoption, the forestry switches over to evaluating the forest regeneration activities by the final result, which consists in transferring the forest reserve lands to the forested area. In 2014 a separate subordinate act established the procedure of forest plant seed procurement, treatment, storage and use.

As for measures aimed at restricting illicit trafficking of expensive timber, it should not go unmentioned that Mongolian oak has been included in Appendix III to CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). It is common knowledge that the unregulated legislation allowed predatory logging of that fine wood in the Far East. Oak is a species forming the habitat of the Amur tiger. After the oak was entered in Appendix III to CITES upon proposal of the Ministry of Natural Resources and Environment of Russia, the export of that kind of timber became significantly more difficult, which drastically reduced the profitability of its illegal logging and made life easier for bona fide forest users.

All in all, about 40 subordinate acts (Resolutions of the RF Government, Decrees of the RF Government, and Orders of the Ministry of Natural Resources and Environment of Russia) were adopted for the two years starting from 2013. They were adopted both as a follow-up to the above Federal Laws and as independent regulatory acts, e.g., "On Approving the Russian Federation State Program The Development of Forestry for the Years 2013-2020," "On Approving the List of Forest Site Zones of the Russian Federation and the List of Forest Regions of the Russian Federation," "On Approving the Rules for Extinguishing Forest Fires," etc.

In pursuance of the above FZ-415 on the accounting of timber and transactions with timber, about 20 subordinate acts have been adopted. Among them such acts should be noted as, for example, Resolutions and Executive Orders of the Government of the RF "On Approving the Rules for Timber Accounting", "On the Accompanying Document for the Shipment of Timber", "On Approving the Rules for Submitting Information to the Unified State Automated Information System for the Accounting of Timber and Transactions with Timber", "On Approving the List of Information Contained in the Unified State Automated Information System for the Accounting of Timber and Transactions with Timber, Published in Public Data Networks, including the Internet, and of Information Published in the Form of Open Data."

In the discussion of innovations in the forest legislation, the initiatives worked on at the moment cannot go unmentioned. It is the support of forestry entrepreneurship that many of the bills are aimed at, and some of them are of great interest for business.

The bill "On the Development of Small and Medium Entrepreneurship in the Russian Federation" creates a foundation for legal access to forest resources by small and medium business. In fact, the bill returns to the Forestry Code short-term (up to one year) contracts of sale of forest stands. It will become possible for regions to form small forest plots and to hold auctions, including the measures of forest conservation, protection and regeneration in the initial phase of timber. Thus regions will get another tool for increasing the income from using forests, small business will get access to the forest resource at a transparently formed price and big forest users will get additional protection against dumping in the market of round timber (at the moment, unlike the small business "buying" cutting areas, a leaseholder incurs extra costs for the conservation, protection and regeneration of forests).

A bill being developed at the moment on making amendments in Article 74 of the Forestry Code is one of the most important for the currently operating lessees. Its provisions are aimed at forming a transparent mechanism of making a contract of lease for a new period for bona fide leaseholders, while in the current situation a lessee whose contract of lease has expired has no advantages when the forest plot is put on a new auction, which gives rise to various speculations and, in some cases, blackmailing such a lessee.

The title of another draft federal law aimed at the support of the forest industry is "On Introducing Amendments to the Forestry Code of the Russian Federation in Respect of Holding Tenders for the Right of Making Contracts for the Lease of Forest Plots for Logging Purposes." One of the valuable innovations of the draft is that tenders for the right of forest plot lease will be held for enterprises that have their own added-value wood processing facilities that are not sufficiently provided with raw materials.

The procedure of forming plots for tenders and the criteria, according to which the winner will be determined, must be set forth in subordinate acts to be worked out as a follow-up of said bill.

Thus, while at the moment there are two methods of access to forest resources for enterprises of the forest sector of the economy in Russia, with the adoption of the above draft federal laws, tenders for added-value wood processing enterprises and short-term auctions of sale of forest stands – for small and medium businesses – will be added to the current auctions and priority projects in the field of forest exploitation.

Here the leading role of regions in the implementation of bills should be noted – without the correct "zoning" of forest plots for various types of access, the adopted laws will remain just on paper.

Perhaps, the most discussed subject in the context of forest legislation improvement is the intensification of forest use and regeneration as a measure of improving the efficiency of the forestry complex. It is common knowledge that the quality of forest plots accessible to transport is worsening significantly due to the depletion of

the exploitable volumes of wood and deterioration of the species composition.

Besides, the depletion of accessible forest plots pushes forest users to go further to get timber, which entails more and more frequent conflicts with non-governmental environmental organizations opposing the pioneer exploitation of low-disturbed forest territories.

The model being discussed now makes it possible to achieve a high economic efficiency in the forest sector and an increase in the total volume of logging on a unit of the area of a forest plot with fundamentally new scopes of forest care measures. A system of forest planning based on an economic evaluation of the efficiency of the entire cycle of forest management, taking into account the environmental and silvicultural requirements and the principles of sustainable and permanent forestry, is used in the development of the concept.

A road map has been prepared for implementing the intensive model, according to which as early as in the first half of 2015 pilot projects for its implementation in some regions must be prepared. Based on the allocation of new forest regions, implementation of pilot projects is planned for developing and testing the standards of the intensive model in the Republics of Komi and Karelia, Krasnoyarsk Territory, Arkhangelsk, Leningrad and Irkutsk Regions. Sites for the long-term observation of the dynamics of forest stands under the influence of the intensive model standards and for testing the technologies of intensive forest regeneration and forest growing will be created there with the participation of timber companies.

Based on the results of such testing, which will be evaluated by appropriate field studies, the standards will be finalized and spread to other forest regions of the Russian Federation.

Later, it is planned to change the forest planning documents of entities of the Russian Federation (forest plans) to allocate zones that would have good prospects for intensive forestry. After that, lessees of forest plots that will be included in the intensive forestry zone are to suggest their own forest exploitation projects according to the standards of the intensive model and the Region's Forest Plan.

Thus, the implementation of the intensive model of forest use and regeneration during 2015-2017 will mean an important step towards sustainable forest management and forest use in the Russian Federation, the need for which has been discussed for as long as 15 years.

Several draft acts should be distinguished among the bills aimed at forestry system improvement. As to the improvement of the legal regulation of forest pest control, there are provisions that forest users will be in charge of forest protection arrangements. The provisions being developed will make it possible to significantly simplify all necessary procedures and to considerably reduce the period of salvage felling to 1.5 months after finding a growing stand disturbance. In addition,

the bill introduces the definition of "wind-fall trees", which will make it possible to procure and collect them as a non-timber resource for the own needs of citizens.

To improve the efficiency of fighting forest legislation violations, a bill is being discussed aimed at founding an institute of operational forest inspectors, the body of which will be formed from among officials of the organizations of the industry and lessees. A system of "walkthrough supervision" with respective powers to be assigned to officials of the Federal Forestry Agency is being introduced.

A draft law is being considered, which introduces to the Forestry Code changes in the definitions of the categories of protective forests and designated sites of forests and in the provisions on the improvement of their conditions. The essence of the bill consists in establishing the general principles of including forest plots in protective forests and designated sites of forests. The bill establishes a ban on industrial harvesting in protective forests and designated sites of forests.

To conclude, it should be noted that the work of improving Russia's forest legislation has been and will be done with the direct participation of the professional forestry community and all interested parties. For that purpose, the Forestry Council and Public Council operate at the Ministry of Natural Resources and Environment of Russia. Besides, a Task Group for the Improvement of Forest Legislation with the participation of representatives of the forest business has been separately created at the Department of State Policy and Regulation in the Field of Forest Resources (unfortunately, it has not started its operation yet).

A Public Council has been created at the Federal Forestry Agency and operates with the active participation of environmental organizations. An interesting format of engaging experts in solving a particular application task has been implemented in the form of a separate Task Group for the Implementation of the Federal Law No. 415-FZ, which has also been created at the Federal Forestry Agency.

The most reputable deliberative body operates at the Government of the RF, and this is the Council for the Development of the Forestry Complex, chaired by Alexander Khloponin, Vice-Premier of the Russian Federation Government.

Thus, it can be stated that the process of forest legislation improvement is taking place in Russia with the active participation of as many interested parties as possible, and each participant may express his or her opinion concerning any regulatory legal act, if he or she wishes to do so.

Summing up, it should be noted that it is over the last two years that most changes have been made in Russia's forest legislation, aimed mainly at supporting the forestry business and improving the forestry system in Russia.

Pavel TRUSHEVSKY,
Director of Forest Certification LLC

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Where Can Accessible Forest Resources Be Found for Investment in Russia's Forest Sector?

According to the forecast of the Russian Federation's forest sector development through to 2030 prepared by the UN Food and Agriculture Organization, the potential of the Russian forest sector is far from being fully exploited. Moreover, according to the moderate scenario, the timber harvesting and processing level can be increased several-fold.

A comparison of the forecast scenarios with the actual statistic data for 2010-2014 prepared by the Natural Resources Institute of Finland shows that even the moderate scenario of the forecast showing a timber harvesting increase to 240 million m³ per year is too optimistic (Fig. 1).

According to Rosstat (2014), the timber reserves in the forests of the Russian Federation are 83 billion m³. On the other hand, the timber harvesting in 2013 was 193 million m³ (0.23 percent of the reserve). Transport accessibility is the only restraint in the development of timber harvesting. Some priority investment projects have faced the problem of raw timber procurement. As many forest sites are inaccessible for transport, the allowable cut cannot be utilized in full all over the country. The mapping of harvested timber quantities done by the service www.forestrycloud.com confirms that the primary reason for harvesting reduction in some regions in 2001-2015 is the transport infrastructure restraints.

The timber volume that can be harvested on a forest site in Russia for one year without breaking the law is called the allowable cut (Fig. 2). The figures for commercial forest allowable cut by Russian region were obtained from published forest plans of the regions. Allowable cuts are defined at the level of regions, forest districts, and leased sites. Still, allowable cut is just an indicator of potential maximum quantity harvested, since it does not consider the sites' transport accessibility.

In 2013, Russia's allowable cut was utilized by 27.7% (Fig. 3), and in 2014, by 29.2%. To estimate the existing potential for investment in Russia's forest sector at the regional level we assessed the transport accessible allowable cut.

Using the abilities of the forest resource assessment service, www.forestrycloud.com a map of the scale 1:50000 was prepared for the entire area of Russia using space photos. The map contains all the changes in the forests from 1974 to 2015 including cuts, wildfires, and forest reclamation; it is available upon request.

Fig. 1. Comparison of the actual data of timber harvesting and processing in Russia to the forecast

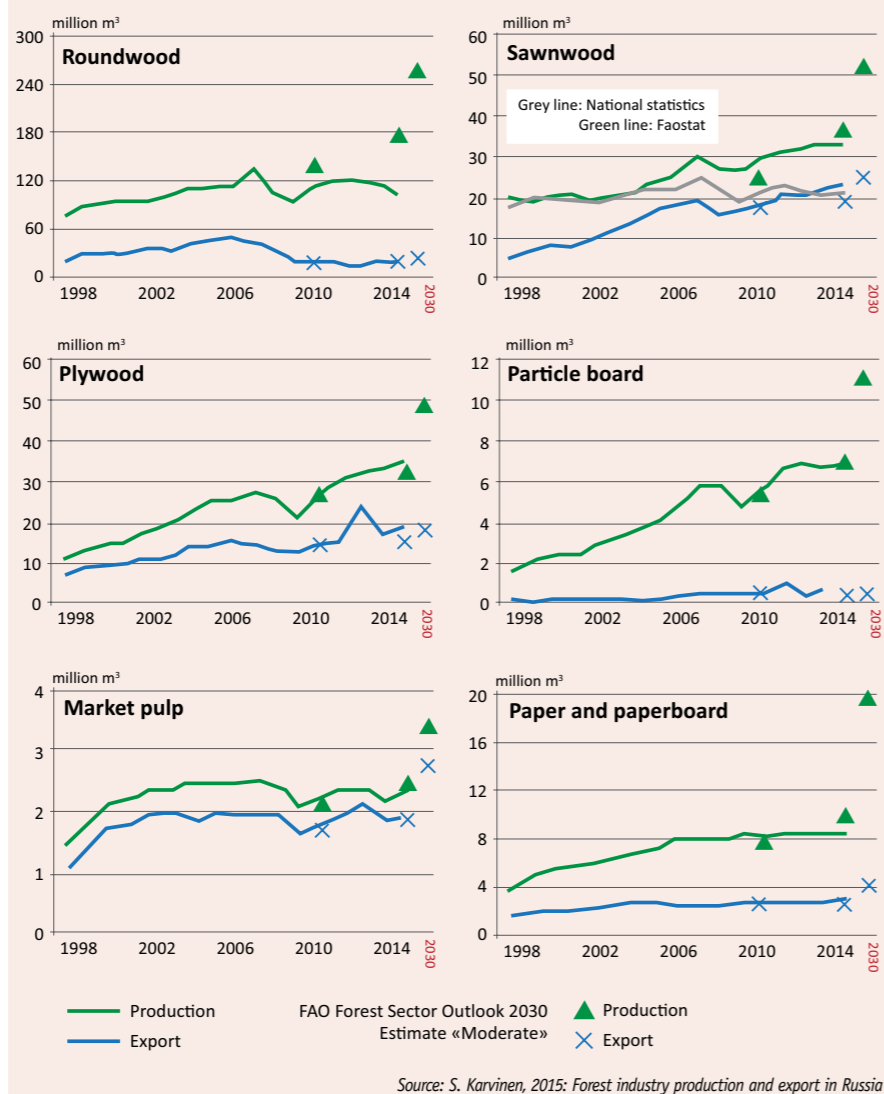


Fig. 2. Allowable cut in commercial forests by Russian region, according to forest plans and regulations. Large cities are shown by dots

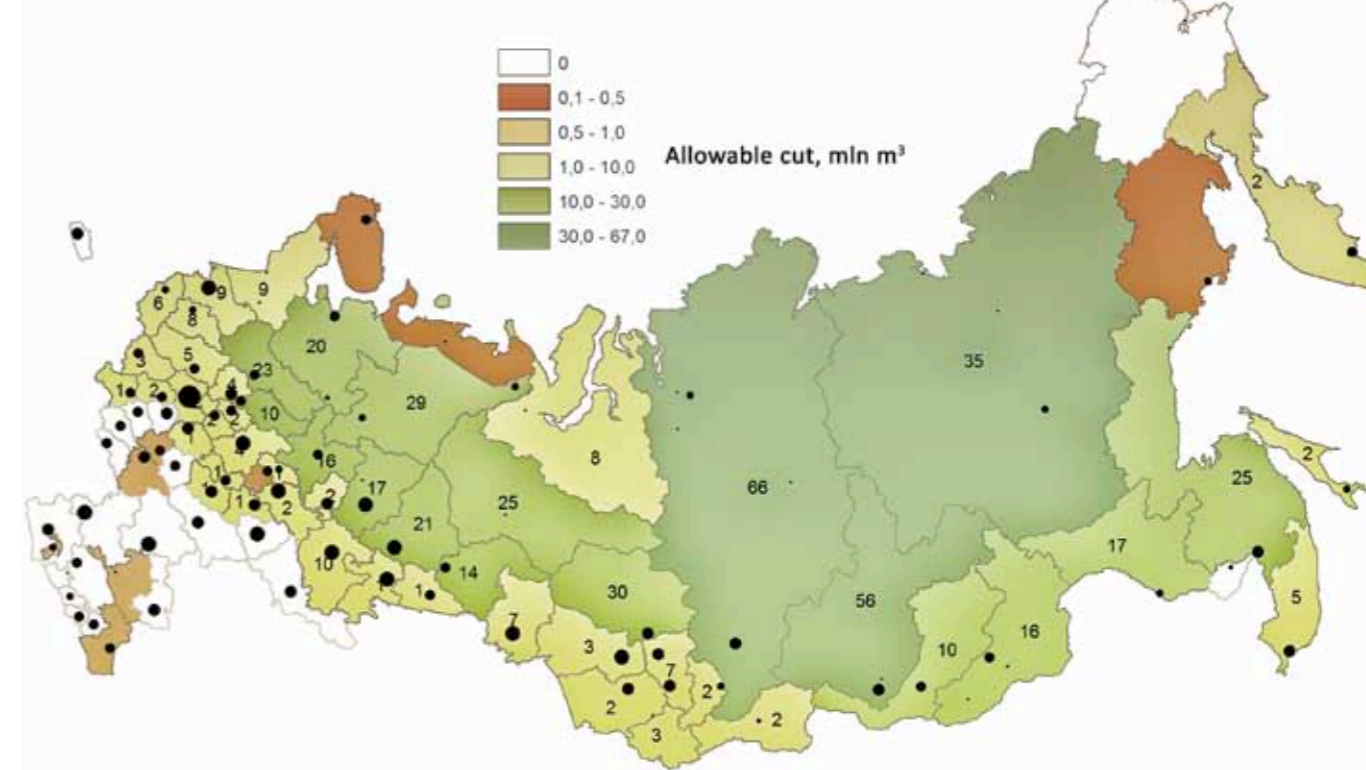


Fig. 3. Utilization of the allowable cut in 2013. The figures show potential abilities to increase timber harvesting in commercial forests in millions of m³, given investment in road construction

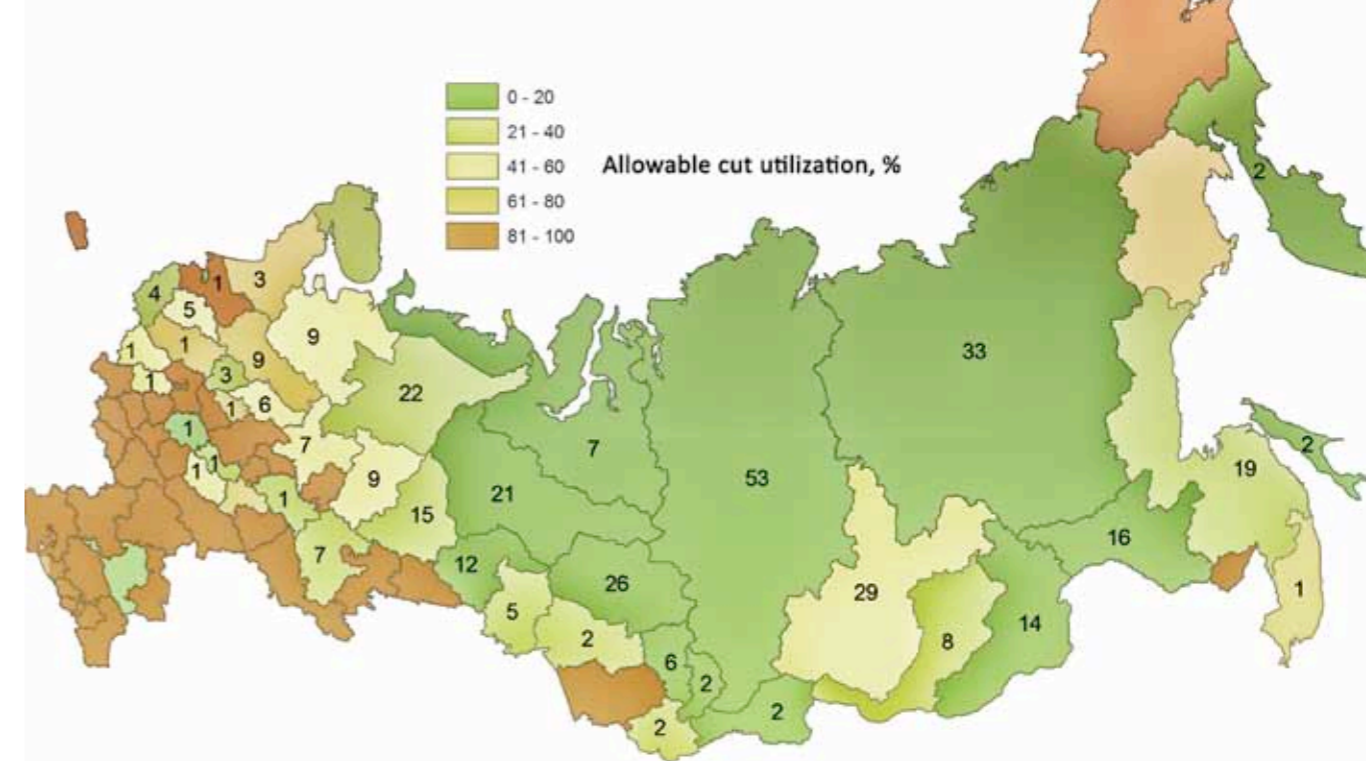
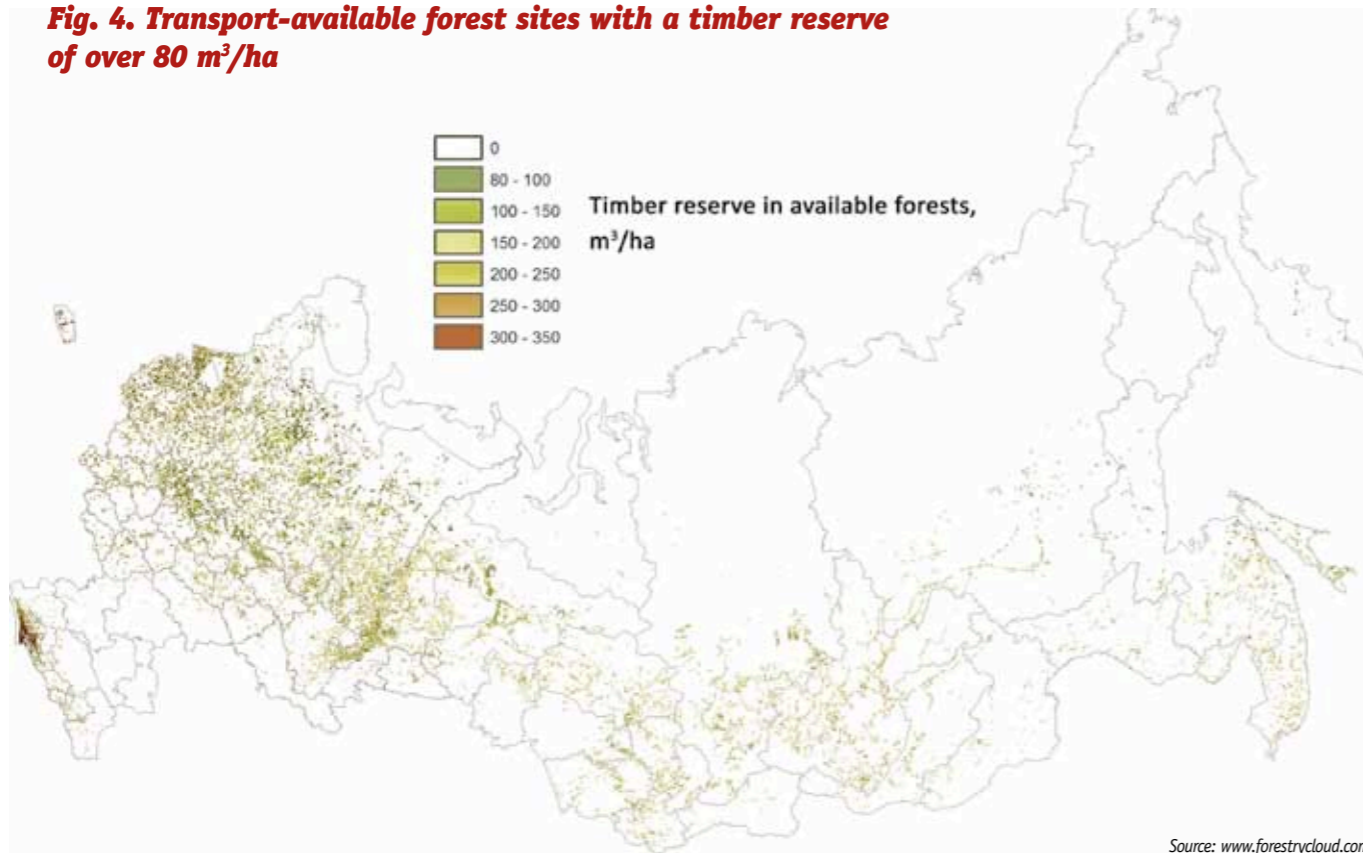
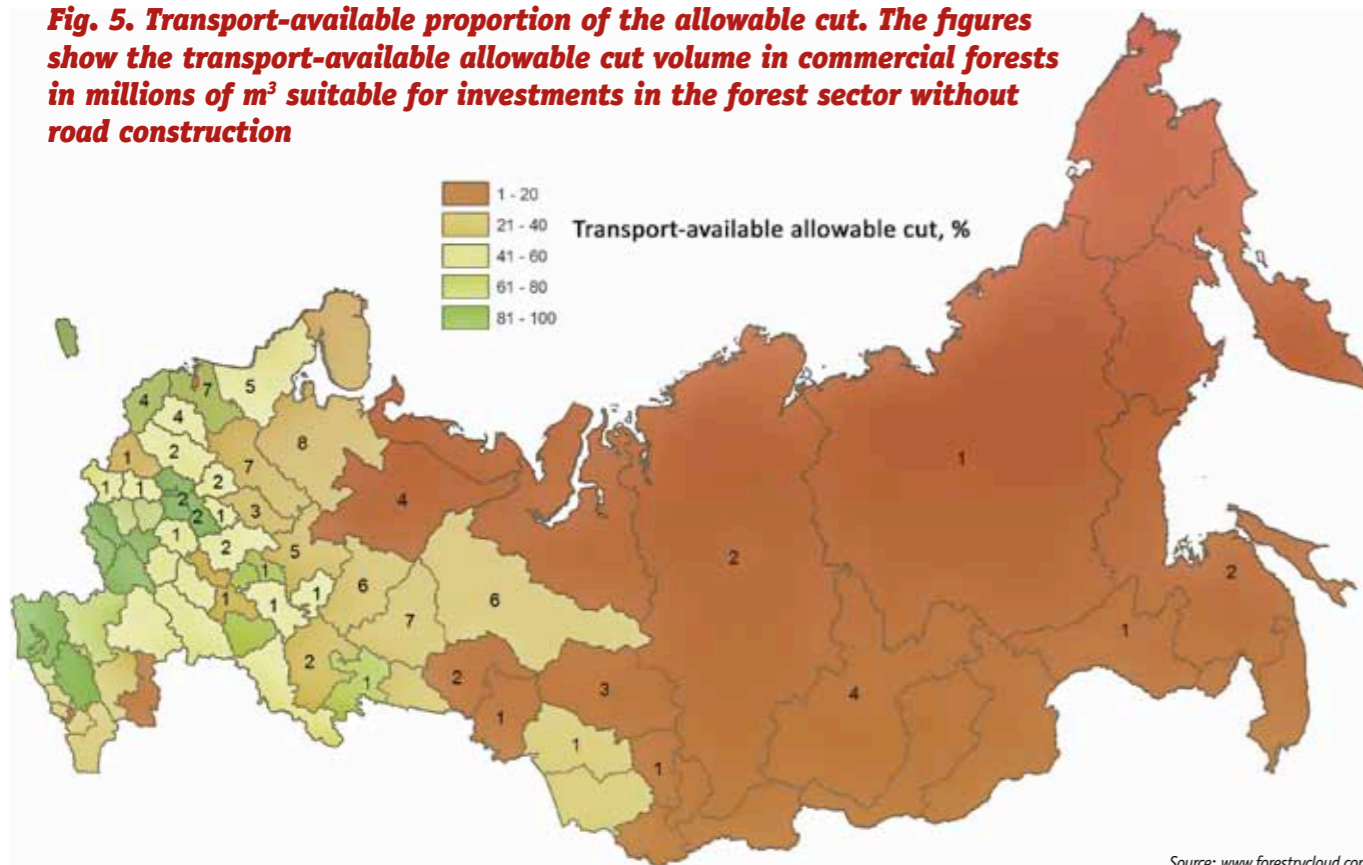


Fig. 4. Transport-available forest sites with a timber reserve of over 80 m³/ha



Source: www.forestrycloud.com

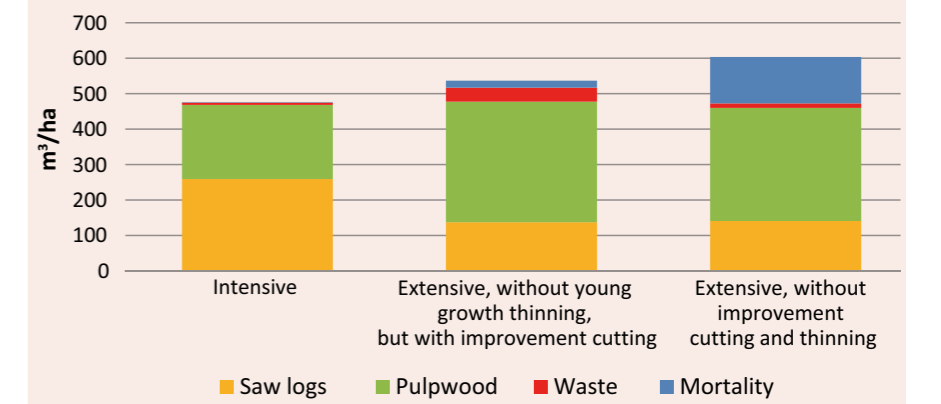
Fig. 5. Transport-available proportion of the allowable cut. The figures show the transport-available allowable cut volume in commercial forests in millions of m³ suitable for investments in the forest sector without road construction



Source: www.forestrycloud.com



Fig. 6. Results of modeling for intensive forestry, extensive forestry, and extensive forestry with improvement cutting but without young growth thinning for 29 stands in the Republic of Karelia



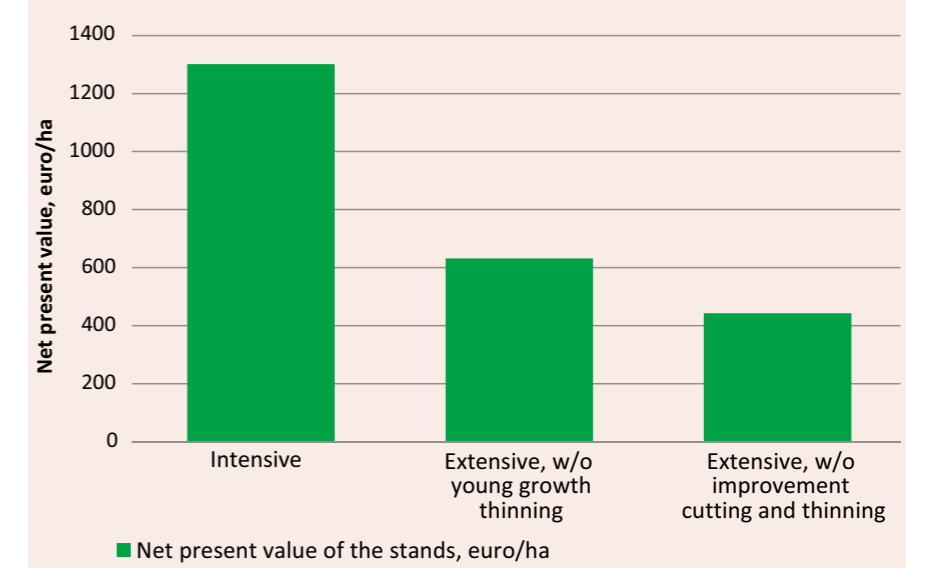
Our previous studies showed that harvesting is profitable with a stand reserve over 80 m³/ha, therefore sites with a reserve over 80 m³/ha were chosen from the map (see page 111–112). To consider transport availability, sites within the 1,000-meter radius from the existing road network were selected (Fig. 4). The proportion of the transport-available allowable cut was calculated using the ratio of the total reserve of forest sites with a reserve of over 80 m³/ha and the total reserve of transport-available forest sites with a reserve of over 80 m³/ha (Fig. 5).

Investments in timber processing is profitable in regions with a transport-available allowable cut. It should be noted that in some regions of Russia, the most attractive forest sites are already leased. Therefore, the only way to get access to these resources is assignment of lease contract rights. As a result of our studies, we collected a database on leased forest sites and approved allowable cuts for several regions. This database is available upon request. A comparison of the transport-available allowable cut volumes and the calculated cuts for leased sites enables calculation of the transport-available allowable cut and its actual location.

When investing in regions without a transport-available allowable cut, the construction of a logging road network. Investment in intensive forestry may become an alternative to investment in logging roads.

Our studies in the Republic of Karelia have shown that by transition from an extensive forestry model to an intensive model, the yield of saw logs greatly increases, resulting in a higher value of stands. If the complete cycle of intense forestry is not performed, but only improvement cutting is done instead (as it is currently done in most regions), quality will be transformed into quantity, i.e. saw logs will be replaced by pulpwood. In the case of extensive forestry without young growth thinning and several stages of improvement cutting, some of the timber will be left in the forest unused (Fig. 6).

Fig. 7. Comparison of the net present value of stands for extensive and intensive forestry in the Republic of Karelia



The comparison of the net present value of the stands for the period of the current status to final felling showed that switchover to intensive forestry enables a threefold increase of the income per unit area. In fact this means that in the case of extensive forestry, a forest user could earn €442 per hectare. If the user invests in forest management efforts, the net present value can be increased to €1,300 per hectare (Fig. 7).

Currently, investments in the construction of a logging road network and intensive forestry remain risky, because mechanisms of accounting of investment in State-owned forest resources have not been created yet. Still, active work in this field is ongoing. The model of transition to intensive forestry is stated in the fundamentals of the governmental policy of the Russian

Federation. It is planned to implement this model in each constituent, with regard to its needs and regional features. Still, separation of forest sites at the stratum level for intensive and extensive forestry remains a crucial task. Today, the Forest Code provides for approval of regional forest use and regeneration rates, which enables the regions to develop their regulations for intensive forestry. The intensive forestry concept developed to date provides all the necessary prerequisites for the practical implementation of the intensive model.

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Wood Supply Operations in Russia – From Sawlog Mining to Sustainable Forest Management

Sawn softwood continues to be the most traded Russian forest product in the international markets and the domestic output is continually increasing. The growth in volume has been gained through increasing exports primarily to China, European exports have not increased in recent years. Now in a short time span the weakening ruble has improved the competitiveness of Russian mills notably and exports to all markets are increasing. On the other hand, factors hindering the development of wood processing industries in Russia continue to exist below the surface. The Russian pulp industry has not been able to expand capacity even though there have been several green field investment plans. Many wood product industries are unable to operate all year and convince customers of a stable delivery of high quality products. The proximity of the Chinese market offers a permanent competitive advantage while the other advantages, such as the low cost of wood and labour are receding. Sustainable and feasible raw material procurement continues to present a challenge.

Wood supply based on extensive forest management methods with little effort put to successful stand regeneration, silviculture and thinning harvests have resulted in a reduced yield and lower quality of roundwood, and an increased share of deciduous stands. Harvesting sites with sufficient volumes of good quality roundwood close to mills are being rapidly depleted, especially in Western Russia. The trend is also evident in Siberia where wood consuming industries are forced to move to new harvesting areas, which are further away and in previously unaccessed locations.

As the bulk of Russia's wood consuming industries located inland are already burdened by relatively high costs of transporting processed goods to the market, they cannot afford the erosion of traditional competitive advantages, low raw material and labour costs. A realistic analysis of operational methods and the most economical supply chains is needed – for both new investments and for existing operations. Too often the analysis is based on best case scenarios and lacks a long term view.

Traditional Russian wood supply operations are based on wintertime logging where the frozen ground provides accessibility for wood transportation. Roundwood transportation has been based on clearing and building simple winter roads and trails. Since the winter roads

and trails need to be renewed every year, the increasing transport distances increase the annual costs of wood supply that is already burdened by low efficiency. Considerable space exists for new ways of establishing and organizing wood supply operations, utilizing the modern tools available and bringing economic analysis into the planning process.

The majority of Russian forest industry companies conduct harvesting operations in winter but only a few have considered investments to facilitate year-round operations, including an access road network with proper foundations, surface and drainage that can withstand transport almost all year round. Naturally, the schedule and level of investments is different between year-round and winter operations. Roads in year round use require larger upfront investment, making it more painful for the investor. After the construction is completed and the roads are properly used, only regular annual maintenance of the main road network is needed.

In the winter harvesting method the initial road constructions costs are lower in the beginning but the same roads need to be rebuilt every year. The machinery fleet size needs to be almost double due to the limited harvesting season and lower transport productivity. The fleet has to be adjusted to the peak season, or otherwise

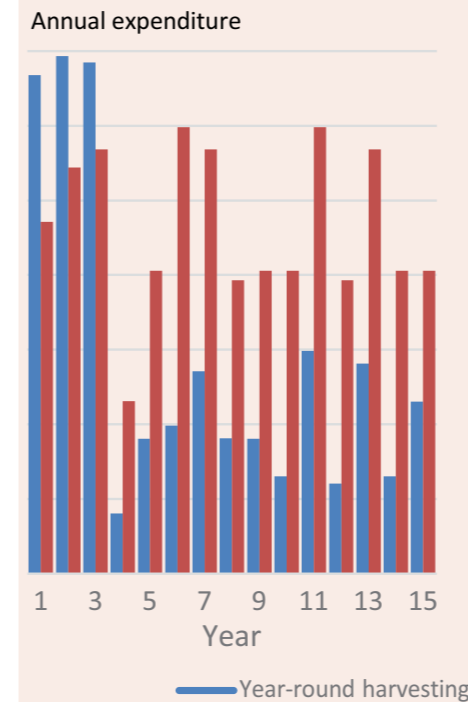
the company cannot deliver products in time and risks losing valuable customers.

Comparing cumulative investments in year-round and winter-only operations often shows that winter harvesting is a cheaper option in the short term. However, in the long run the year-round wood supply operation requires lower investment inputs. A recent Indufor study showed that permanent road network investment has more favorable rates of return already after 5 years (including discounting). A permanent access road network supports also the execution of stand regeneration and further silvicultural activities related to intensive forest management. Thus, the rate of return with each option must therefore be carefully analysed, prior to choosing the operating mode.

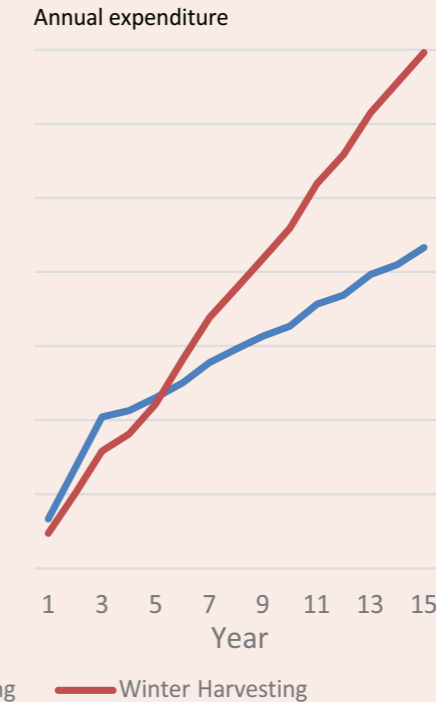
The variable costs of harvesting, transportation and loading operations are not dependent on delivered volumes, even if these operations also carry fixed costs. Fixed costs allocated to the millgate cost, such as road construction, roundwood terminal, depreciation, lease fee and overhead costs will occur in full regardless of the volume of roundwood supplied. This means that if a company is not capable of reaching production targets, or is willing to harvest only certain tree species or assortments, the relative mill gate cost per cubic meter increases.

Comparison of investment flows in year-round and winter harvesting modes

Annual investments in year-round and winter harvesting



Cumulative investments in year-round and winter harvesting



Source: Indufor

In the example below, it can be seen that even if Forest area 2 has a significantly lower millgate cost than Forest area 3, in case the operation does not perform well during the year the wood delivered to mill from Forest area 3 is more economic. This is due to lower road construction costs (fixed cost) and a large share of barging costs (variable cost). If annual harvest targets are not met, the mill gate cost for wood rapidly increases. This has to be understood when determining the order of preference for forest lease areas.

It can be argued that a large upfront investment in infrastructure is a discouragement, especially if the investor is looking for short term returns. However, considering the development of Russia's forest sector and the improving competitiveness of wood consuming industries, a new approach based on long term business planning needs to be adopted. The mentality needs to be shifted from sawlog production towards investing in the realisation of forestland growth potential, and securing a stable flow of good quality wood raw material at the same time. This is the only way the forest sector can become sustainable in the long term.

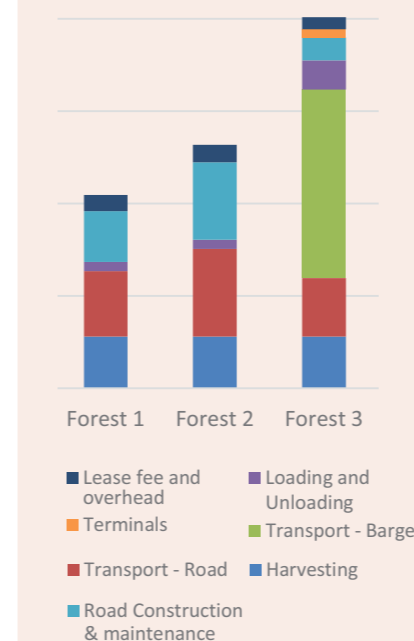
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Matias PEKKANEN,
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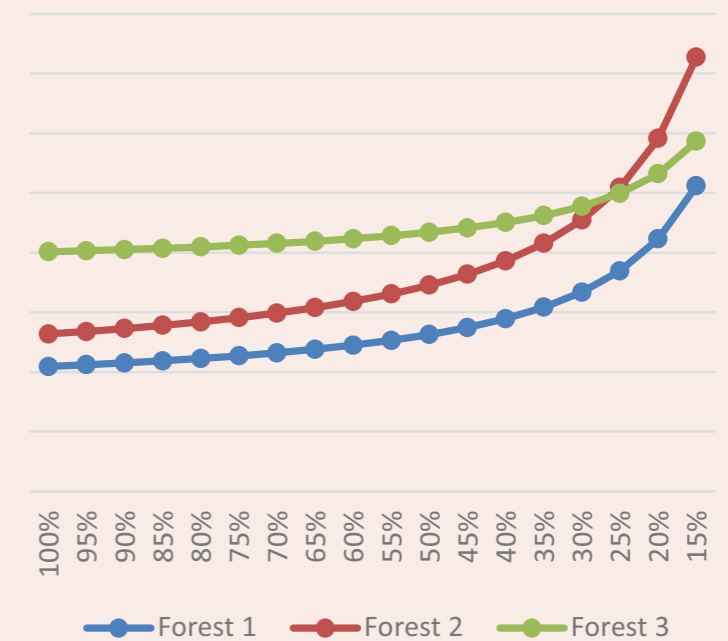
Tapani PAHKASALO,
Head of Forest Investment
Services Consulting, Indufor

Example of millgate cost breakdown in cost components and sensitivity analysis

Millgate cost per harvesting area



Millgate price sensitivity to AAC utilization rate



Source: Indufor

Brief Overview of the Status of Sawn Softwood Markets

The state of sawn timber sales from Russian mills in early 2015 could be called moderately critical. After the devaluation of the ruble from October to December 2014, many Russian mills entered 2015 with planned raw material stock and a balanced portfolio of contracts. Due to the rapid drop of the ruble during stable export demand and currency receipts, many mills saw no prospect for profitable ruble sales on the domestic market, and re-oriented their sales efforts toward export markets to the maximum, while actively stocking up on raw materials.

In January 2015, and later during the first quarter of 2015, many unpleasant surprises were visited on Russian sawn timber makers. Among them were: the 10 percent increase in the railway rate from January 2015; dropping consumption of sawn wood and sliced products on the domestic market (to my estimates, the average sales of export-oriented mills to the domestic market may reach 20 per cent of their production output); price falls in the Egyptian sawn timber market, and; a surplus of sawn products on South-East Asian markets resulting in a drop in prices in that important region.

RUSSIA

In early 2015, Russian sawn timber processors and users on the domestic market had to adapt to a rise in the ruble prices of export-oriented sawmills as a result of political and economic factors that prevailing in Europe and Russia.

Most of Russia's largest sawmills intentionally work for both the export and domestic markets, with the export sales share being about 80 per cent. Although the ruble has declined in value by 30 percent over three months, with prices on the domestic market unchanged, export sales bring an additional ruble gain (the decline in the value of the ruble has continued to become nearly 100 per cent, as of the date of issue – Ed.). With the domestic ruble prices of export-oriented mills calculated using an average-weighted currency-to-ruble exchange rate, most of these mills have not changed their policy of selling sawn timber products on the domestic market after the decline in the value of the ruble.

Of course there are mills working solely for the needs of the domestic market. Among such mills are facilities belonging to some holdings that satisfy in-house processing needs, for instance in the laminated beam manufacturing or in wooden house construction. Another type of mill is small and medium timber-sawing facilities having no access to exports. Most probably such companies have their own approach to pricing. The quality, stability of deliveries, and outputs of domestic market-oriented facilities cannot be compared to up-to-date export oriented "giants".

Sliced product makers traditionally oriented at selling finished products in Russian retail chains had to reduce their outputs in January 2015 or temporarily close down due to the abrupt drop of demand. The reasons for this were lower demand by retail chains and problems with forecasting ruble prices for the raw materials to be processed. (NB: Retail chain contracts suggest unchanged prices for a period of up to six months).

To maintain their own processing rates, wooden frame house manufacturers and laminated log house manufacturers, who have to reduce the prices for the off-season period (January to March), had to look for 2014 price offers

from sawn timber makers, or to reduce their internal rate of return when selling their in-house products due to higher costs attributable to the purchasing price rise. In extreme cases, the sawn timber processor had to choose between losses from closing down its business and losses from the purchasing price growth.

THE BALTICS

The Scandinavian and Baltic countries making sawn timber and products of further wood processing faced a drop in the exports due to harsh price competition in the European construction industry. The high supply of sawn timber on the European construction market due to the activity of Scandinavian, Russian, and Baltic sawmills against a relative slowdown of the new housing supply rates in Europe has become determinative in the drop of domestic sawn timber prices in the Baltic states. On the average, the decline was €10 to €15 per square meter. The high sawn timber stock levels in the processors' warehouses, which had accumulated by the end of 2014, prevented Baltic enterprises from increasing the consumed product quantities in the period from January to March 2015.

The increase in the truck freight rate from the Baltics to Central Europe due to lower supply of transit road transport operating on the traffic between Europe and Russia, along with unchanged European purchasing prices, also contributed to a considerable reduction of domestic prices for sawn timber made in the Baltic States. For Russian sawn timber makers partially oriented at the Baltics in their exports, the price pressure inside the Baltic market affected the purchasing price for sawn timber from Russia. The dry sawn timber prices of mills in the north-west of the Russian Federation oriented at exports to the Baltics also dropped on the average by €10 to €15 per square meter in the first quarter of 2015 compared to the prices of the last quarter of 2014.

CENTRAL EUROPE

Prices also declined on the European sawn timber supply market. The reason was a stepped-up offering by Scandinavian, Baltic, and Russian sawmills. As a result, in some cases, the price reduction against the last quarter of 2014 was up to €20 per square meter. In their turn, German and Austrian mills had to drop their price levels to sell products to Central Europe's internal market. European processors orienting at the construction segment had to reduce their purchase prices for products consumed, while the furniture and packaging industries were ready for the acceptance of Q4 2014 prices. It should be said that the sawn timber consumption market in Europe remains basically unchanged.

SOUTH-EAST ASIA

After a certain reduction in the purchase of imported sawn timber, and subsequently in the price, Japan is gradually increasing prices and scope for the Laminu and Mabasiru materials that are traditional for that region. The market is revitalizing from the point of view of consumed materials and higher demand in the construction industry.

Exporters oriented at the Chinese market are feeling harsh price pressures due to Chinese sawn timber importers' jam-packed warehouses. Thanks to a more active offering from Scandinavian and Russian sawmills in China, the Q1 2015 prices went down by \$20 to \$40 compared to the contract prices of Q4 2014, and there is a continuing price-dropping trend against the increasing supply of imported sawn timber into the Chinese market.

South Korea remains a stable consumer of high quality sawn softwood. There is a high demand for sawn timber for the packaging industry. The South Korean market also shows a surplus of offers by Scandinavian and European wood processors, which in its turn leads to a temporary drop of prices for imported sawn timber.

Other sawn softwood buyers in South-East Asia are supporting stable demand for niche products. These are mainly sawn timber products to be used in the packaging industry.

MIDDLE EAST AND NORTH AFRICA

The sawn timber market in these regions is sufficiently stable despite the political, confessional and ethnic disagreements in the region, although there has been some reduction in the scope and price of imported sawn timber over recent months.

Real property prices in the United Arab Emirates show a stable growth due to demand by settlers migrating there from areas of where hostilities are taking place. The development of public infrastructure projects (railroads, subways, airports and so on) has not stopped. The region is being completely redeveloped in advance of such events as Dubai Expo 2020 and Qatar World Cup 2022. According to concrete-using construction technology (tunnels, bridges etc.), sawn timber is a fastening and formwork component.

Saudi Arabia has been reducing its sawn timber imports over the last two years. The current market situation may be described as low business liquidity against decreasing prices for imported sawn timber. Still, the 2015 national budget was passed at the level of 2014, and the construction of governmental infrastructure projects was not suspended.

The complicated political situation and lack of stabilization in Libya, Yemen, and Sudan does not allow forecasting sawn timber sales scenarios for that region. The banking system of those countries may undergo changes, which may directly affect the stability of local currencies.

Sawn timber consumption in Egypt, Morocco, Algeria, and Tunisia is sufficiently stable, while prices of consumed sawn timber products are declining. In fact, sawn timber supply to the region from Scandinavian and European countries, and Russia, has increased.

By and large, in many sawn softwood markets a supply surplus from Scandinavian, European, and Russian sawn timber can be found, which reduces sawn timber prices while leaving internal demand unchanged. The second quarter of 2015 will most probably differ little as regards consumption growth in any of the regions, with prices remaining the same as those in the first quarter of 2015.

Pyotr SINITSIKH



CHERPOVETSLES



Forest leasing



Timber harvesting



Sawn timber and biofuel production



FSC certificate



The company annually harvests in the North-Western part of Russia more than 1 million m³ of round timber from which it produces 70 thousand m³ of dry sawn timber and 10 thousand ton of fuel briquettes at its own production facilities.



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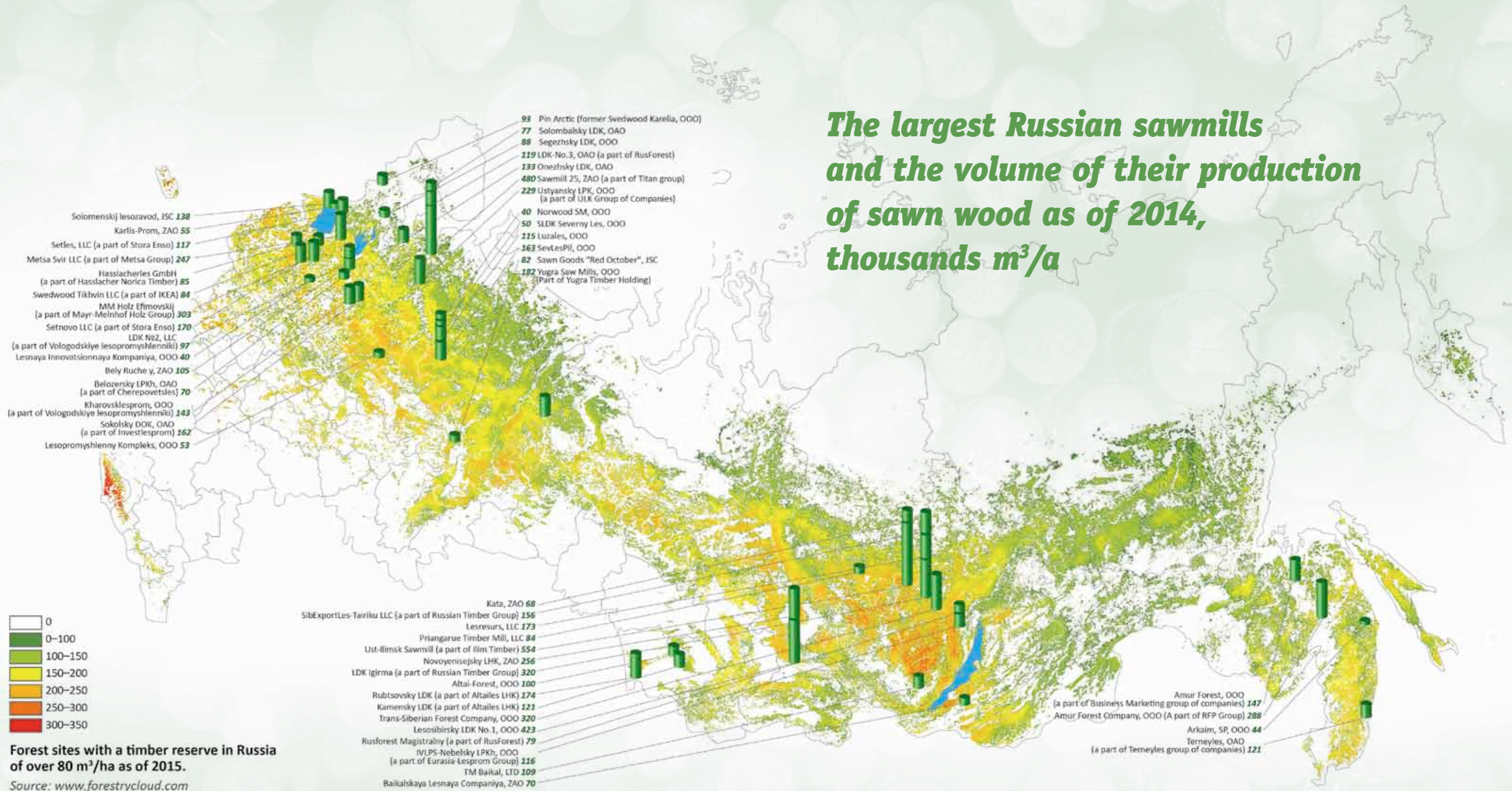
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The largest Russian sawmills and the volume of their production of sawn wood as of 2014, thousands m³/a



Source: WhatWood



The Wood Based Panel Business in Russia:

(a) Few Reasons to Invest

Is there any sense in investing in Russia in the long run? There are good reasons to say “maybe”. But it is not an easy decision, it requires some courage. Once you have it, the rest is more or less logical: choosing regions, products, technology, and markets – we will discuss those. And, finally, we are going to have a short look at the investor’s options once the mill is running. We will skip the process of actual investment, as it is a bit of a separate story. And, for illustrational purposes, we will focus on a narrow product range and geography: namely, wood based panels in Russia and comparing Russia with its BRIC counterparts, Brazil, India and China.

NO PAIN, NO GAIN...

Is there any sense in investing in Russia in the long run?

The number of unsuccessful investment projects in Russia in the recent decade is quite large. Among the top causes for failure (based on sporadic interviews) are: the difficulties of getting a loan, lengthy decision making, the difficulties of ensuring support from the local administration,

the difficulties of dragging the process through a burdensome and sometimes unpredictable permission process, the difficulties of putting infrastructure in place (especially for greenfield projects), the difficulties of finding a reliable and experienced construction management team, the difficulties of obtaining and keeping skilled managers once the mill is running and (if you are lucky or clever enough to get to this stage) difficulties with wood supply and markets, as well

as sometimes overwhelming control from all kinds of authorities (however, the last point would not come as a surprise at this stage, right?). Today, to this (already) long list, we should add great political and economic uncertainty on the macro-level which for an investor translates into the risk of losing the business (if it is running and profitable) or the risk of there being a sudden change in the rules – which almost inevitably translates into loss of profit.

Table 1: Ease of doing business rank, 2014, BRIC countries

Country	Final ranking: Ease of Doing Business Rank	Starting a Business	Dealing with Construction Permits	Getting Electricity	Registering Property	Getting Credit	Protecting Minority Investors	Paying Taxes	Trading Across Borders	Enforcing Contracts	Resolving Insolvency
Russia	62	34	156	143	12	61	100	49	155	14	65
China	90	128	179	124	37	71	132	120	98	35	53
Brazil	120	167	174	19	138	89	35	177	123	118	55
India	142	158	184	137	121	36	7	156	126	186	137

Source: World Bank

In general, is Russia a good place to invest? The obvious answer is “Hm... I am not sure,” considering the 2014 Ukrainian crisis and the rollercoaster of the national currency in 2014–2015. But let’s have a look at Russia among the BRIC countries (Brazil, Russia, India, and China). Of course, to perform a serious analysis of “where is the best place to invest” we should expand the geography far beyond the BRICs. And, of course, the BRIC countries are not even the best short list group at least due to the fact it is pretty diverse at this time. But the BRIC group is a context Russia is often put into, so it is not a bad choice for this article – and I need something to add a sense of competition and big-picture background while describing the situation in Russia. So, we will use the BRIC countries, and we will begin with the “doing business” and the “corruption perception” ratings (see tables 1-3). **It might come as a surprise, but Russia does not look particularly bad.**

For “doing business”, Russia is far from being among the global leaders but it is the leader among the BRIC countries (see Table 1). Please note that the numbers represent position of the countries from 1 (the best in the world) to 189 (the worst in the world, among 189 countries surveyed). Saying that, Russia differs substantially within its Federal Regions and further down to the sub-regions. The numbers in Table 2 represent the position of selected regions in Russia among 30 selected regions surveyed (so, the numbers vary from 1 for the best to 30 for the worst).

The corruption perception index provides a gloomier picture: Russia is far behind China, India and Brazil. Russia is quite far behind even Argentina. And it is desperately far from the world’s leading forest industry benchmark countries (see examples in Table 3: New Zealand, Canada, and Finland). On the positive side, we can note that Russia and Brazil are improving faster than other selected countries. However, Russia is improving from a tremendously low level – in 2014 Russia was ranked Number 136 among 175 countries around the world.

THE “BIG THREE” IN THE INVESTOR’S EQUATION

Let’s suppose you know it all but for some reason you believe your case will be a success. What’s next? An investment decision in the wood based panel business may boil down to just three things: the location of the mill, the location of the resources, and the location of the markets. If you have those three right, the rest is more or less technology and management. Of course, it is important to have the right team to manage the construction, loans, partners and thousands of other things. And it is important to choose the right technology, the right machinery and the right capacity for it. But the big variables in the equation are almost always outside of the “big fun boys’ toys” of construction and production machinery.

The greatest variables are, again, the locations – as the wood based panel business (being both

Table 2: Ease of doing business rank, 2014, selected sub-regions in Russia

Selected sub-regions	Federal Region	Ease of Doing Business Rank	Starting a Business	Dealing with Construction Permits	Getting Electricity	Registering Property
Kaluga	Central	6	17	9	15	1
Tver	Central	18	21	25	14	8
Moscow	Central	30	25	30	30	26
Vladivostok	Far East	15	18	22	23	3
Khabarovsk	Far East	23	24	29	8	17
Petrozavodsk	North-West	11	6	16	21	8
Kaliningrad	North-West	19	11	3	22	22
Saint-Petersburg	North-West	22	1	9	24	27
Irkutsk	Siberia	10	8	6	10	18
Omsk	Siberia	13	19	20	13	4
Tomsk	Siberia	20	15	6	10	25
Novosibirsk	Siberia	29	23	18	29	24
Ekaterinburg	Ural	24	29	13	19	20
Ulyanovsk	Volga	1	3	4	5	8
Kazan	Volga	5	4	14	17	4
Kirov	Volga	12	13	5	4	20
Samara	Volga	21	22	24	28	8
Perm	Volga	25	13	12	18	27

Source: World Bank

Table 3: Corruption perception index, 2014

Selected countries*	2008	2009	2010	2011	2012	2013	2014	Average in 2008-2014	Improvement, 2014 compared with 2008
Russia	147	146	154	143	133	127	136	141	-11
Argentina	109	106	105	100	102	106	107	105	-2
China	72	79	78	75	80	80	100	81	28
India	85	84	87	95	94	94	85	89	0
Brazil	80	75	69	73	69	72	69	72	-11
Chile	23	25	21	22	20	22	21	22	-2
Canada	9	8	6	10	9	9	10	9	1
Finland	5	6	4	2	1	3	3	3	-2
New Zealand	1	1	1	1	1	1	2	1	1

* BRIC countries and selected countries with forest industry sector as important part of the economy

Source: Transparency International

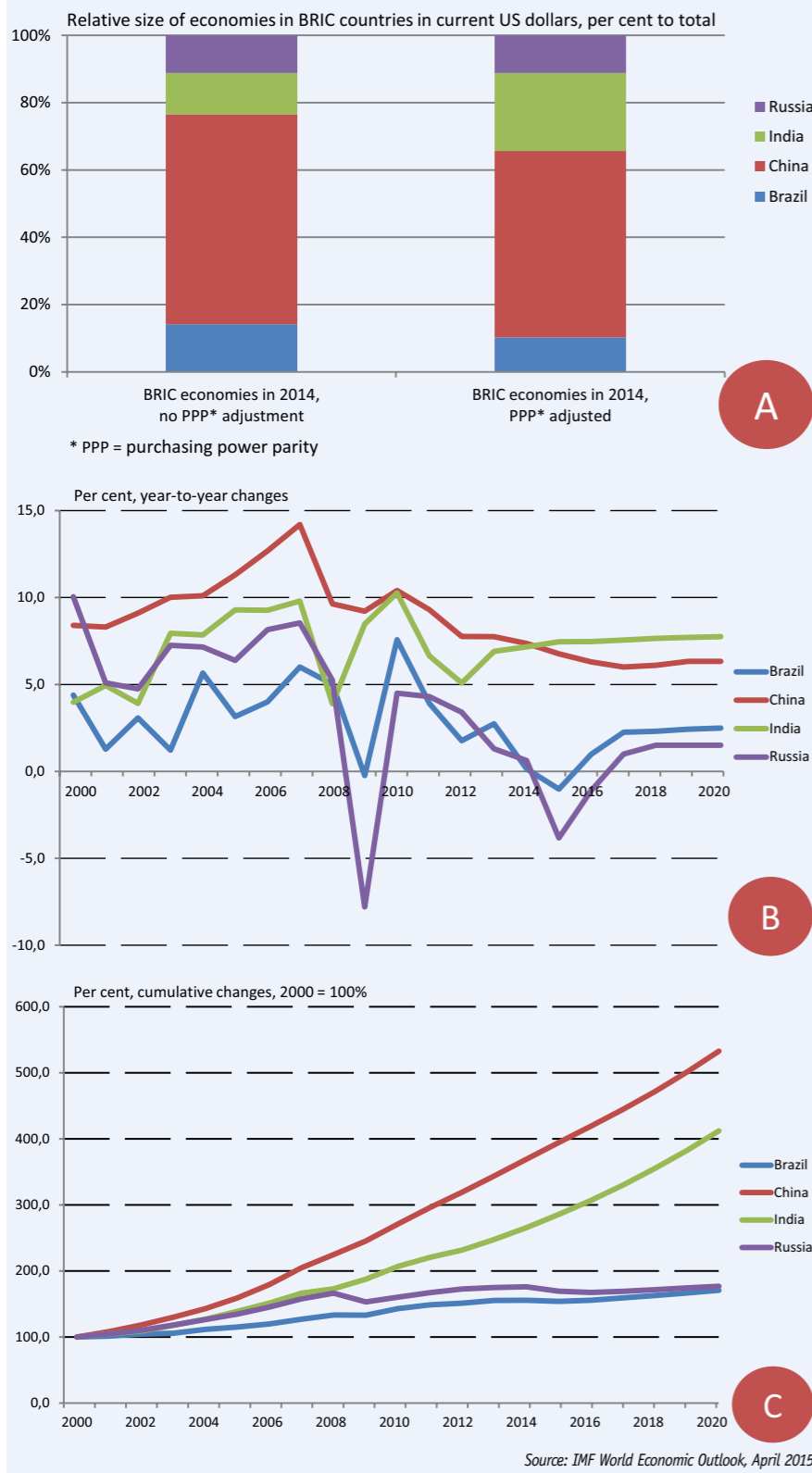
resource intensive and largely a bulk product manufacturing process) is a business where logistics, in a large sense, makes the largest difference in margin: flow of resources to the mill, fiber flow inside the mill, flow of finished products to markets. Once again, the **wood based panel business is mostly a pure logistics business**: in terms of costs, the most important are the cost of fiber, conversion cost, and the cost of delivery to the market. If you have the locations right, you have made the right strategic decision. If one of the locations is chosen poorly, you would need luck to make your enterprise profitable. And yes, the location of the mill includes right capacity and (as we are discussing Russia) it involves support of the local authorities and some luck on the macro-scale.

Globally, it is often the case that the bulk of resources is in one place (e.g. New Zealand, Brazil,

Siberia and the Russian Far East) while the largest market is in another (e.g. Europe, China, India). Not many countries/places on the planet can offer a large forest-products market together with large available forest resources. Russia and Brazil may be regarded as rare examples – with medium sized but growing markets and vast forest resources. Each of the two countries possesses some 22–25 per cent of global forest growing stock. With that in mind, Russia was the largest global exporter of round wood in 2013, the second largest global exporter of sawn timber (after Canada) and only the tenth largest exporter of wood based panels (after China, Canada, Germany, Malaysia, Thailand, Indonesia, France, Romania, and Austria).

So, is the abundance of wood resources crucially important? Yes and no. “Yes” because it is quite easy to imagine a situation when production of wood based panels in Russia would boom by

Fig. 1: Gross domestic product in BRIC countries: (A) relative size of economies in BRIC countries in current US dollars, per cent to total; (B) history and forecast in constant prices, year-to-year percent change and (C) history and forecast in constant prices, cumulative change, 2000 = 100 per cent



several times in several years – all you need for this to happen is to have all the basics in place – legislation, protection of ownership rights, trust in long term stability etc. The last point requires a stretch of the imagination, doesn't it? On the other hand, resources are not really that critical a factor – as we will see in the examples of China and India below.

WHERE ARE THE MARKETS?

China is slowing down. The “new normal” in GDP growth in China is in a range of 5–7 per cent/a as compared to 9.7 per cent average growth in 2000–2014. Is this bad news? – not necessarily.

China is no longer “growing from a low level” and even 5–7 per cent is a very (very!) remarkable volume, (see Fig. 1). While China is slowing down in percentage points, India is picking up. There is a strong possibility that India might become “a new China” in global economic growth in the next two decades. Naturally, it would require some legislative changes in favor of investors (see Table 1) while many other factors look promising.

Russia and Brazil are struggling to “double GDP in seven years” (to quote Russia’s President Vladimir Putin from 2003). It looks like Mr. Putin’s self-appointed task would require some 20 years instead of just seven – and that is true for both Russia and Brazil. **In the short run, some 3–4 per cent growth looks like extremely optimistic scenario for Brazil and Russia while the same numbers would be a very pessimistic scenario for China and India.**

How does this affect the wood based panel markets in those countries? Production and consumption of different wood based panels (particleboard, fiberboard/MDF, plywood, OSB) differ in shares from country to country while the overall volume (all panels combined) is comparable for Brazil, India and Russia both in production and in consumption.

In 2013, production was at a level of nearly 10 million m³/a in Brazil and slightly over 10 million m³/a in Russia and India. Consumption in Russia and Brazil is lower than production mainly due to plywood export in both cases. Consumption in India in recent years has developed faster than production due to positive net-import in all large-volume wood based panel types: MDF, particleboard, plywood.

The development of production and consumption of wood based panels in China looks similar to the GDP skyrocket pattern from the fig. 1C. **Wood based panel production in China is over ten times larger today than in Russia, Brazil or India** while the starting point for China – some 20 years ago on the graphs below – was slightly above Brazil, slightly below India, and about twice as low as in Russia. Production in China is larger than consumption, which is additional proof that production of wood based panels does not necessarily need abundant wood resources in the country.

It is worth noting that by 2011, the production of wood based panels in China had already

Fig. 2: Production and consumption of all wood based panels (combined) in BRIC countries and in the rest of the world, million m³/a

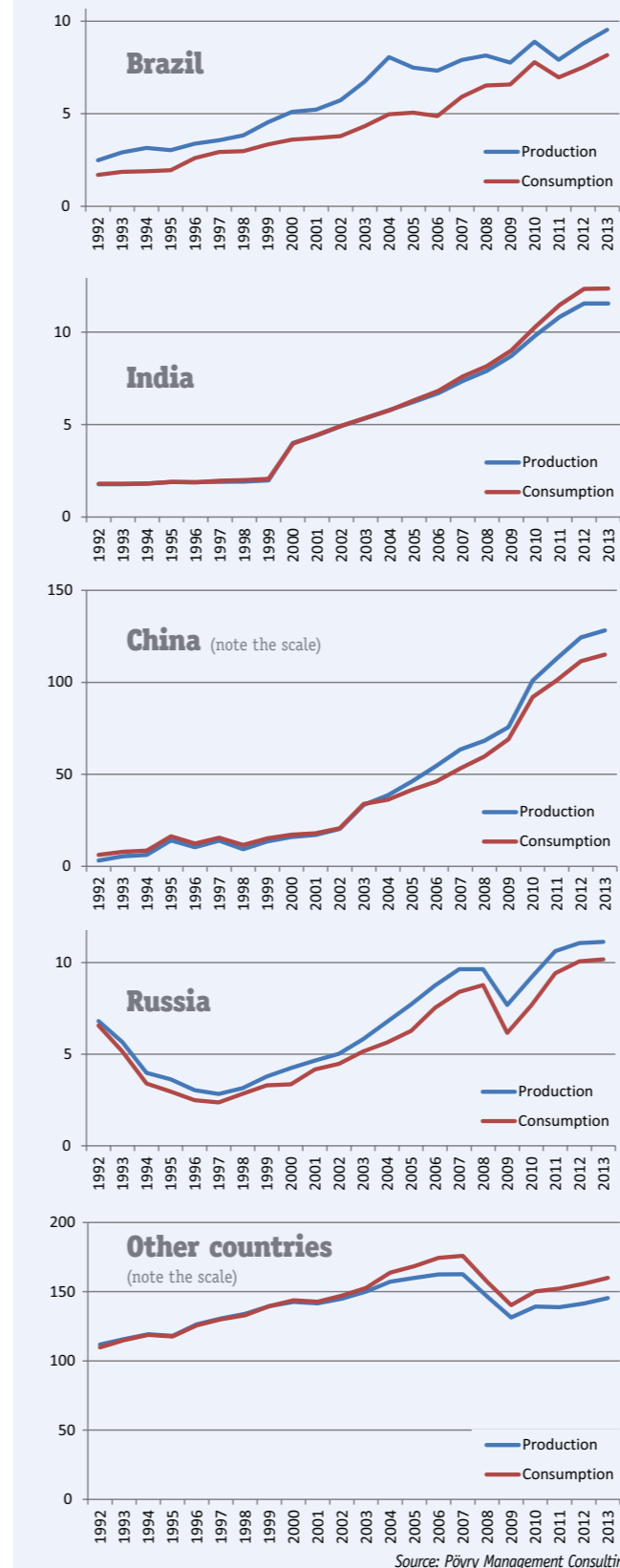


Fig. 3: Production and consumption of wood based panels in Russia, 1000 m³/a

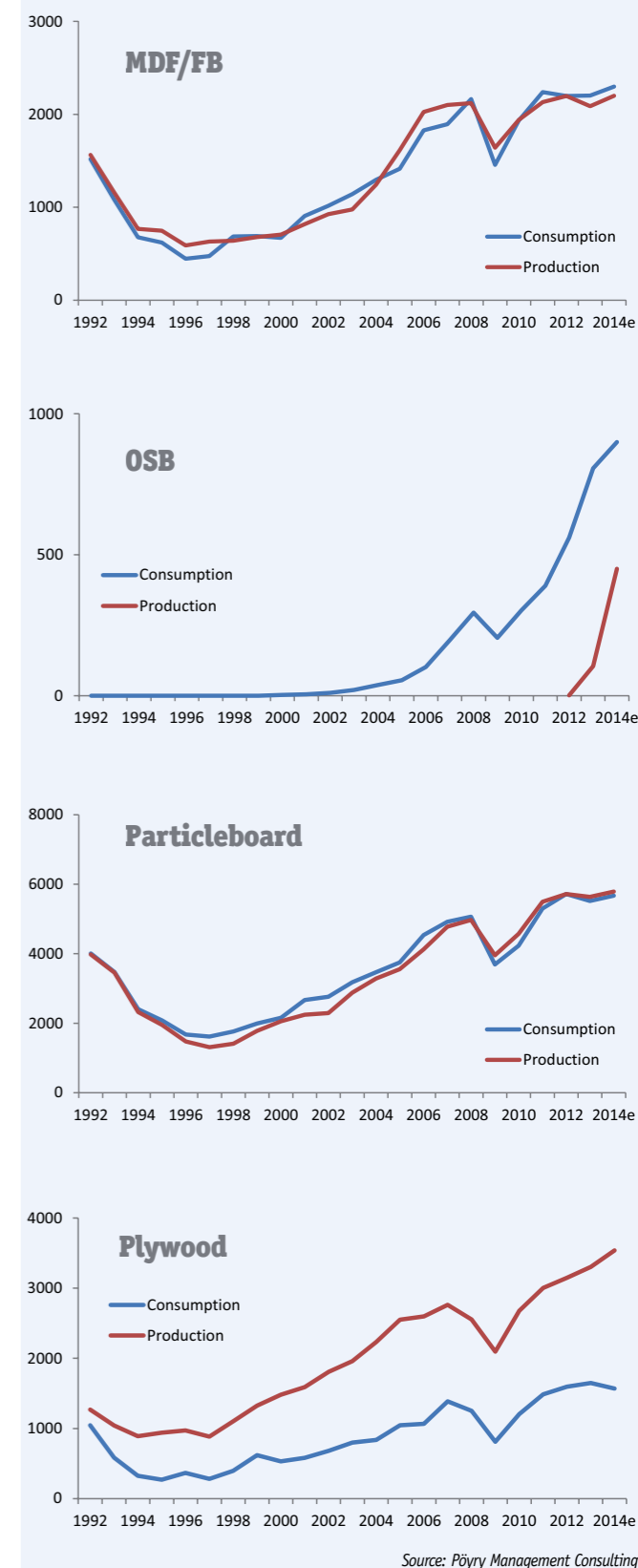
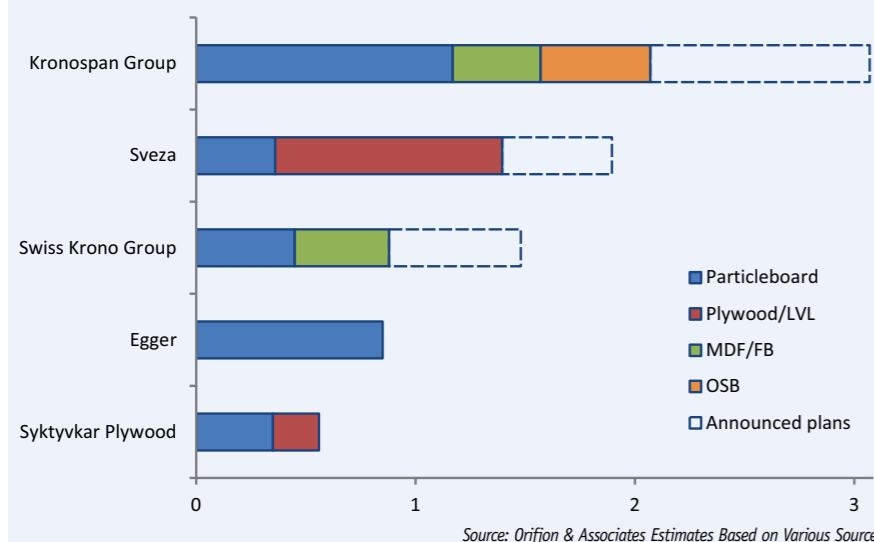


Fig. 4: Top-5 producers of wood based panels in Russia by capacity, 2015, million m³/a



grown so much that total production in BRIC countries surpassed that of non-BRIC ones. By 2013, combined production of wood based panels in BRIC countries overcame the rest of the world by some 15 million m³/a (about 5 per cent of total global production volume). Consumption in BRIC countries was by about 15 million m³/a lower in BRIC countries than in the rest of the world. In a nutshell, trends in the wood based panel business in BRIC countries might be regarded as trends in the global wood based panel business (see Fig. 2)

WHERE IN RUSSIA?

If you are willing to invest in Russia, which products and which regions look promising? In terms of products, the picture differs significantly: particleboard is moderate risk high volume product; plywood and MDF are medium volume products with low and moderate risks respectively; OSB is the fastest growing product with low starting volume and moderate risks; fiberboard (hardboard) is a small/decreasing volume product (Fig. 3).

Panel types used mostly for construction (OSB and plywood) are likely to experience growth in production in the mid-term in Russia, with quite different drivers: plywood production might grow in volumes (and in share of higher value products) to increase exports; OSB production will grow to push away imports, i.e. to decrease – and maybe – reverse the net-import flow:

OSB production began in Russia in 2012. Current installed capacity in OSB production in Russia is over 1 million m³/a (DOK Kalevala, Hillman, Novovyatsky Ski Combine, Kronospan Egor'yevsk). Hot large-capacity plans include Kastamonu in Tatarstan, Kronospan near Ufa, Swiss Krono in the Perm Krai, Ugra-plit in the Khanty-Mansiysk region and Taleon Terra in the Tver region. Even with some delays and cancellations of the planned mills, Russia is facing some 2.5–3 million m³/a

of installed capacity by 2020, which significantly exceeds projected demand. In the mid-term the capacity utilization might be damaged by ongoing projects as well as by deliveries from the new Kronospan mill in Belarus, which came on stream in 2014 with capacity of some 600,000 m³/a.

Plywood remains heavily an exported product – some 1.97 million m³ out of some 3.54 million m³ produced was exported in 2014. Exports grew by 11 per cent as compared to 2013. Consumption of plywood in Russia decreased slightly due to growing competition with domestically produced OSB as well as due to larger incentives to sell plywood on the export market when domestic prices tumbled together with the falling ruble.

Panel types used mostly for furniture and interiors (particleboard and MDF) are likely to be in more difficult position as the volume of consumption largely depends on furniture production inside the country. Here we are likely to see growing supply, stagnant demand and thus rapidly increasing competition:

Particleboard production grew in Russia by 2.7 per cent in 2014 as compared to 2013. Particleboard remains both the most produced and the most consumed type of wood based panel in the country. Nearly one-third of the total particleboard production capacity in Russia is over 30 years old, with an average age in this group of 45 years. In 2014, two high-capacity mills started particleboard production in Russia and in Belarus: Rechitsadrev (part of Bellesbumprom, capacity 215,000 m³/a, Belarus); Uvadrev (capacity 315,000 m³/a, Udmurtia, Russia). Construction is on the way at Kronospan Bashkortostan project in Ufa (Russia), capacity 500,000 m³/a. A bit earlier, particleboard production started at the Kronospan site (former Elektrogorskmebel) in Elektrogorsk, capacity 250,000 m³/a. The largest plan is for a 750,000 m³/a line for Kastamonu in Tatarstan. If installed, the line will be the second largest in Russia and one of the Top 10 in the world.

In 2014, new capacity came on stream in the production of **MDF**: Kastamonu (Tatarstan, capacity 480,000 m³/a), is currently increasing MDF capacity up to some 850,000 m³/a by installing ex-Pfleiderer line initially targeted by Pfleiderer in Novgorod, and PDK Apsheronsk (Krasnodar Krai, capacity 300,000 m³/a). One more high capacity MDF line might come on stream in 2016: the project has been developed by Russian Laminate holding in the Smolensk region with a capacity of 400,000 m³/a. In 2014, two mills started in Belarus: Gomeldrev (part of Bellesbumprom, capacity 215,000 m³/a, MDF 3–40 mm thick) and Mozyrsky DOK (capacity 350,000 m³/a, insulation fiberboards 20–240 mm thick).

While furniture production is almost an exclusive end-use segment for particleboard in Russia, MDF end-use segmentation is diverse: MDF/HDF is used in production of doors, mouldings and wall panels, in furniture production and in **laminated flooring** production. Laminated flooring production is going through a full-scale production boom now – after the devaluation of the ruble there is the need to substitute some 35 million m²/a (which means: over 300,000 m³/a of HDF) of European and Chinese laminated flooring in the Russian market. New capacity of 20 million m²/a was started in 2014 by by Kastamonu in Tatarstan. PDK Apsheronsk is planning to start laminated flooring production with capacity of some 10 million m²/a in 2015. Egger has plans to have some Russian-based production as well.

With forest resources spread widely from the North-West to the Far East of the country, the demand for wood based products in Russia is heavily concentrated in Western Russia, mostly in the Central, Volga and South regions. But even within the Western part of the country, the transportation distances are huge by European standards. On the positive side, transportation is relatively cheap – often within a range of some 1.5–2 euro per m³ per 100 km. That being said, transportation distances often exceed 500 km, a fact which in Europe would in many cases kill competitiveness. It means that competition in Russia is not regional: large players operate in all main consuming Federal Regions.

Of course, there are some exceptions for lower price products, e.g. for particleboard: producers in the North-West tend to sell to the North-West market and to Central Russia, producers in Central Russia sell in their home region and around – to the Volga and the South. Current oversupply of particleboard in the North-West (some 1 million m³/a) creates a wave from the North-West to the Center, where the wave is strengthened by further oversupply of some additional 0.5 million m³/a from the producers in Central Russia. And the wave, finally, is consumed by the Volga and the South regions. Undersupply in the Volga region is (a partial) explanation behind the location of all recent large-scale projects in particleboard production: Sveza, Uvadrev, Kastamonu, Kronospan Ufa.

But again, as a rule, competition is not regional: it is nationwide for domestically produced/consumed

products and it (naturally) transcends any borders for internationally traded goods. Who are the main game setters? (see Fig. 4)

Concentration in the industry is at a medium level – the Top-5 players control just a bit over 30 per cent and the **Top-10 players control nearly a half of total wood based panel production capacity in Russia**. Among the Top-10 producers there are large international players including Kronospan Group, Swiss Krono Group, Egger, IKEA, and Kastamonu. These producers are among the largest investors as well – with plans and projects in production of panels, furniture, and laminated flooring.

One more interesting thing to notice in Fig. 4 is that while the top leader is well defined, the position of all other players is subject to change: Kastamonu might become the second-largest player in couple of years, with an MDF capacity of some 850,000 m³/a (two lines) and a particleboard capacity of some 720,000 m³/a. The Number 5 position in the list might be taken by any one-site-one-line producer with a high capacity line of 600,000 m³/a or so. For example, the Taleon Terra 600,000 m³/a OSB line that is planned for installation in Torzhok would move the mill right into the Top-5 list, and for that we would not even need to include the 150,000 m³/a LVL capacity of the mill. Any player with over 600,000 m³/a which starts in 2015–2018 would almost certain to have a place among the Top-10 producers of wood based panels in Russia. The number of high capacity mills in Russia in any panel type is still low, and there is a place for new (cost efficient) entrants in particleboard and plywood, while

the current size of MDF and OSB market would be a limiting factor for entrants in production of these panels.

Looking at individual panels, the Top-5 producers control from 45 to 55 per cent of total capacity in the production of MDF, particleboard, and plywood separately. Foreign players dominate MDF and particleboard production: Kronospan, Kastamonu, Swiss Krono, Egger, and IKEA. In plywood production the undeniable leader is Sveza, controlling about a fifth of total plywood production capacity in the country. In OSB production, the Top-4 players are the only players so far, and the concentration here is high.

Considering possible new entrants, only the competitive situation in particleboard and plywood might be called favourable: with a long tail of old low-capacity high-cost mills which can be pushed out of the business by new high-capacity low-cost entrants. But competition and the pressure on prices even in particleboard and plywood production are likely to increase to levels not seen in the last 15 years. And here we run into one more growing difficulty for wood based panel producers in Russia: **if the market stops growing for several years in a row, cost efficiency would jump right to the top of the agenda of almost any mill manager** – not just because “we need even better profits” but because “that’s a matter of the survival of the business”.

With that said, there is a lack of specialists which are experienced in working in an extremely

low-margin environment. The last 15 years of development of the wood based panel market in Russia was always a “capture the growing market” game, with a short break in 2009. There was no time and no “good” conditions to develop the best management practices for a survival-of-the-fittest kind of environment. The current slowdown might be much longer than the “it was scary but short” slowdown of 2009. So, how to cope with potentially lowering margins?

HOW TO COPE WITH LOWERING MARGINS?

Many mills in Russia, facing lowering margins, have decided to enter value-added production. On the face of it, the strategy is appealing: “we do not make money on the base boards, let’s go further downstream, to where the money is made!”

However, this strategy has at least two significant pitfalls:

- If the strategic move is successful from a market perspective (competition in the value-added products sector, logistics, product range), than any of the existing competitors can copy the move – reducing the question of margins back to the competitiveness of the basic boards. If the strategic move is unsuccessful, already low profitability is damaged even further.
- Even when the decision of going downstream to manufacturing of value-added products looks absolutely right from the market perspective, there is a good chance that the existing “wholesale” mindset of the

Fig. 5: Pöyry Management Consulting: over 150 performance improvement projects for forest industry enterprises worldwide, typical duration of a project – 12 months, typical ROI 5:1



management at the mill will not allow the business model to fly. One example here is when a wood based panel producer is trying to enter the furniture production business: depending on the furniture type and price segment, the boards constitute about 15–25 per cent of the total cost of the furniture item, with the bulk of the value created in design and services – and the mill is almost never ready to switch its working practices from “everything for capacity utilization” to “everything for the customer”. Of course, there are products which are much safer than furniture from this perspective: laminate flooring, wall panels – but here the customers are DIY stores, wholesalers, and specialist stores, they do all converting from a product business to a product-and-service business. To complete the picture: a move in the opposite direction (e.g. when a furniture producer goes upstream to enter wood-based panel production) almost never fails. Of course, in this case the main reason for the move is not the margin but the safety of supply and control over the panel design.

If the strategy of focusing on creating value/profit in downstream operations is questionable, what

is the best alternative? How to switch the mill to the continuous improvement of the margin, how to make the best out of existing assets with no additional CAPEX – downstream, upstream or elsewhere? And how to do it with personnel accustomed to looking at CAPEX as “the ultimate pill” for any profitability issue?

The answer might lie in the introduction of the best-available management practices. The range of measures here might vary from performance improvement seminars for managers (e.g. to support ongoing internal performance improvement programs) to the full-scale 12–18 month long implementation of projects lead by an external consulting company. The latter brings faster, more certain and lasting results – providing that the consultants are dedicated and experienced (see Fig. 5 and 6).

How do those projects work? What is the difference between “how it is” and “how it should be” in everyday management practices? The simple answer on the strategic level is: the goal is to switch from the “sporadic improvements” to a continuous performance improvement at the mill. Among the tactic goals there would be:

- Shifting the management focus from emergency actions (firefighting) to the

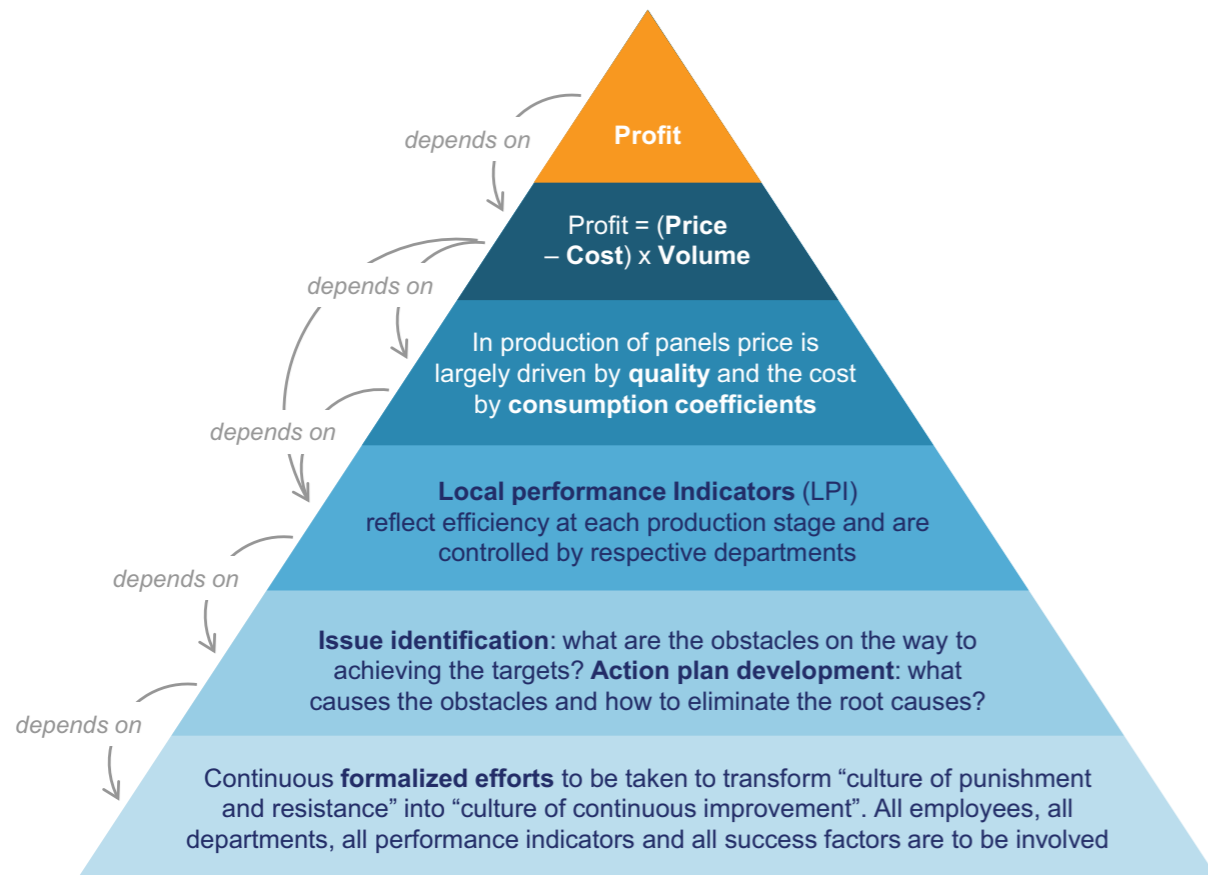
identification and removal of root causes of performance gaps;

- Narrowing focus to what is controllable and can be improved at the site – not on markets or in variability of raw materials; increasing accountability and ownership of performance at the supervisor and operator levels;
- Making the performance improvement process sustainable. This means simplifying efforts to identify and remove the root causes of performance gaps while making it more difficult to use obstacles as excuses.

In 2014, the wood based panel industry in Russia entered a period in which cost competitiveness and the best management practices are of the utmost importance to the overall survival of individual mills. The shift means that “how you operate existing assets” attains a bigger role than “how well you are able to catch market opportunities”. It is a paradigm shift for the top management of many mills in Russia, and the paradigm shift is happening now – whether we like it or not.

Alexey BESCHASTNOV,
Senior Consultant at
Pöyry Management Consulting

Fig. 6: Performance improvement projects in a nutshell: the management system should be based on performance indicators and formalized action plans



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Widely Promoted Oriented Strand Boards (OSBs)

OSBs have undoubtedly been among the most widely promoted and advertised woodworking end products on the Russian market in the last decade. From 2005 to 2015, the construction of at least 40 OSB factories, with a total production volume of 6 million m³ per year, were announced in Russia. If these projects are realised, Russia will take a third of the global market for OSBs.

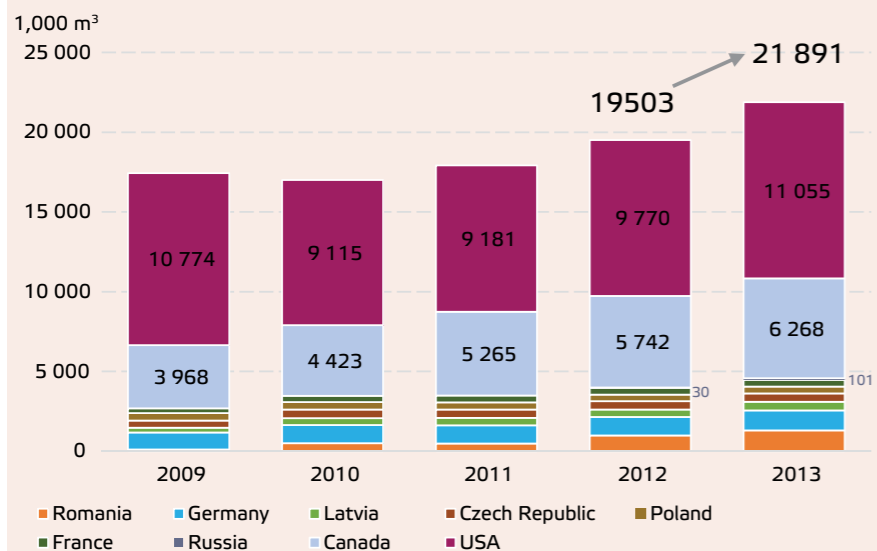
THE GLOBAL MARKET

The estimated capacity of the global OSB market is 21–22 million m³, or \$8–10 billion in monetary terms. The average annual global growth rate of OSB production in 2009–2013 was 6%.

In Europe (not counting production in Belarus, Ukraine and Russia), OSB production increased by 9.9% in 2013, reaching 4.8 million m³, while in North America it increased by 11.7% to 17.3

million m³. The United States accounted for 64% of North American volume (diagram 1).

Diagram 1. Production of OSB by countries of the world in 2009–2013



EUROPE

Construction activity in Europe continued to show unimpressive results in 2012–2014 and therefore growth in OSB consumption has been delayed until the economy in Europe recovers. Romania and Germany produced 1.3 million m³ each and became the biggest European manufacturers of OSB in 2013, while a new OSB plant was opened in Italy with a capacity of 130,000 m³.

The average annual growth of global consumption in the period from 2009 to 2013 was 5.5%, with most of the increase in 2011–2013 and amounting to 8% (diagram 2).

NORTH AMERICA

A growing demand for housing, building materials and furniture contributed to the increase in the consumption of all board and plywood products in North America by 5.4% to 49 million m³ in 2013. By the end of 2013, OSB consumption increased by 11.7% to 16.7 million m³, thus consumption continued to recover for a third year in a row (UNECE/FAO, 2014). Nevertheless, the consumption was far from the level of 2005, when the figure of 25 million m³ was reached.

The European market, including Russia, is not the main focus for sales of the North American manufacturers of OSBs and its share does not exceed 5% of the total exports. Nevertheless, Canadian OSBs, consistently hold the leading positions in Russian market, sharing the 1st and 2nd places with Latvian or Romanian manufacturers. In this regard, Canadian manufacturers are closely watching the situation on the Russian market as conditions change. For example, in the crisis year of 2009, under comparable conditions with the weakening exchange rate of the Russian currency and a general decline in the consumption of imported timber, deliveries of boards from Canada to Russia decreased by 3.5 times. At the same time, Canadians managed to redirect a part of these sales with deliveries to South Korea.

Thus, against the background of the growing sector of wooden housing construction in the United States and, accordingly, a stable demand for OSB, the local market seems to be favorable and reliable for the North American manufacturers.

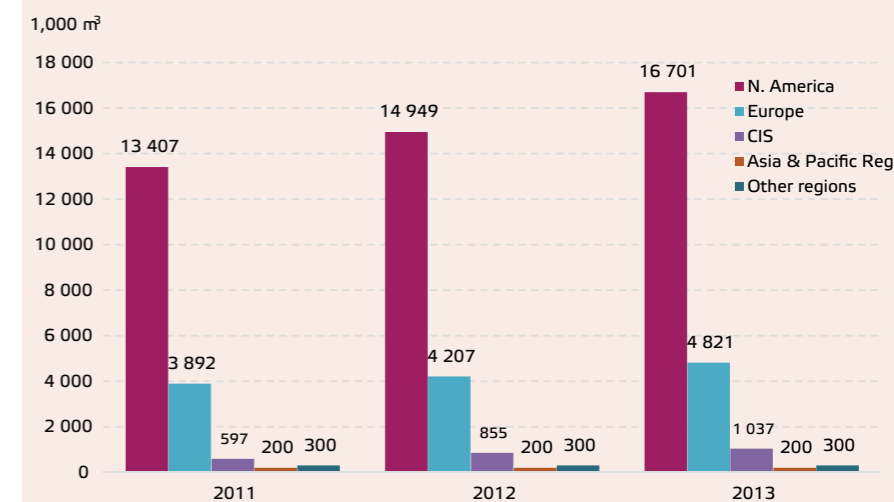
THE RUSSIAN MARKET

Production

The first big companies started to explore the Russian market for establishing

OSB production in 2005–2006. In 2006 the Investment Fund of Kazakhstan announced its intention to build a factory of the OSBI Grupp in Tomsk, and the German company Egger announced that OSB could be manufactured at its new factory in Ivanovo Oblast. The Vuokatti-Rus company planned to build a factory in the Nizhny Novgorod

Diagram 2. Consumption of OSB by regions of the world in 2011–2013



Oblast with a capacity of 300,000 m³ per year with an expected investment of 100 million euros. Similar initiatives have been put forward by Belrusneftegaz, Russian Forest Group, JSC Karelia DSP, and Safwood (diagram 3).

Perhaps the Kalevala MLC woodworking plant (Karelia) remained the most long-awaited project during these years. Investors announced the construction of the plant in 2006 and construction of the plant began in August 2007. Its commissioning was postponed several times; however, it was launched in 2013. Equipment for the plant was supplied by Siempelkamp of Germany.

Capacity of the plant's first stage is 300,000 m³ per year, and with the commissioning of the second stage the rated capacity will reach 500,000 m³. The total value of the project amounted to more than 8 billion roubles, while the originally planned value was 4.5 billion roubles in 2007.

The first production facility in Russia was Hillman OSB, a mini-factory that was launched in 2012 in the Vladimir Oblast. The factory's capacity is 30,000 m³ per year.

In the same year 2012, after a major reorganization, Novovyatsky Ski Factory started the production of

Map 1. Consumption of OSB by regions of the world in 2011–2013

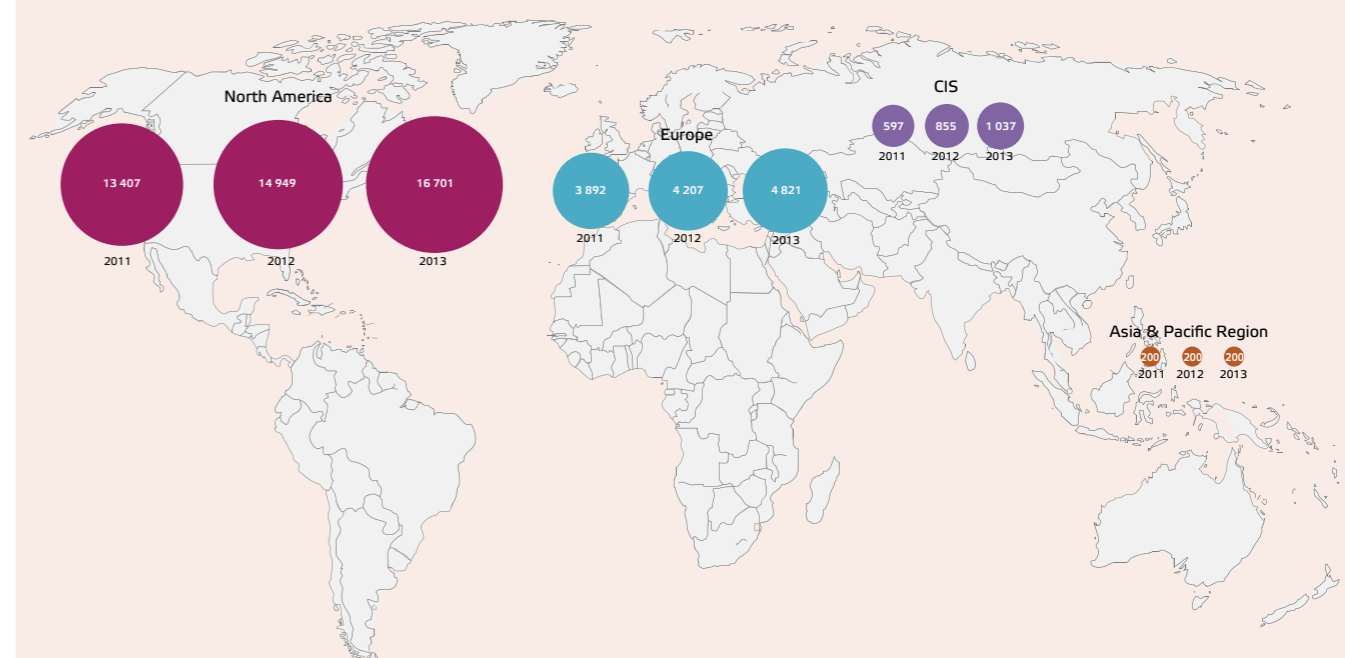
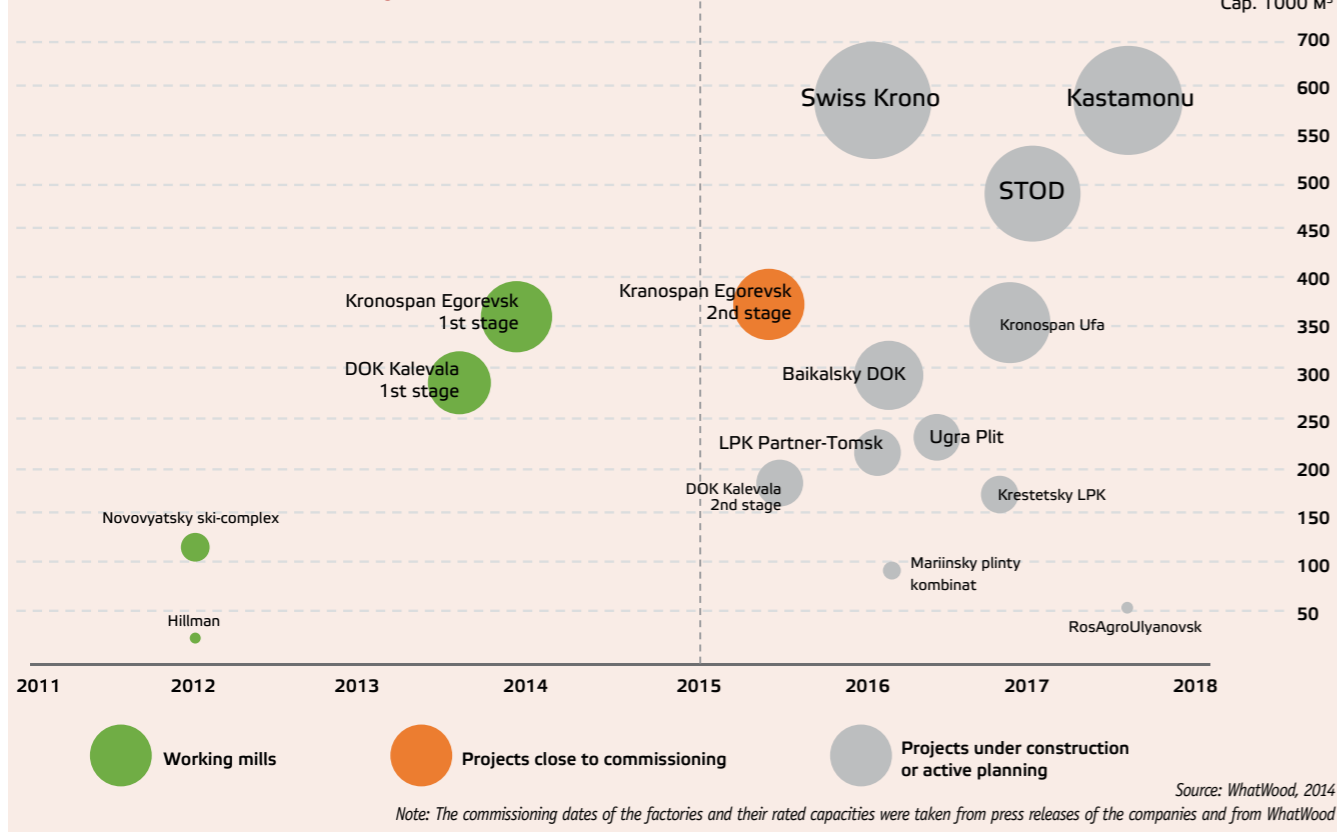


Diagram 3. OSB factory projects in Russia



OSB with a capacity of 130,000 m³. The factory is capable of manufacturing chipboards on the same line. The total value of the project amounted to 1.8 billion roubles.

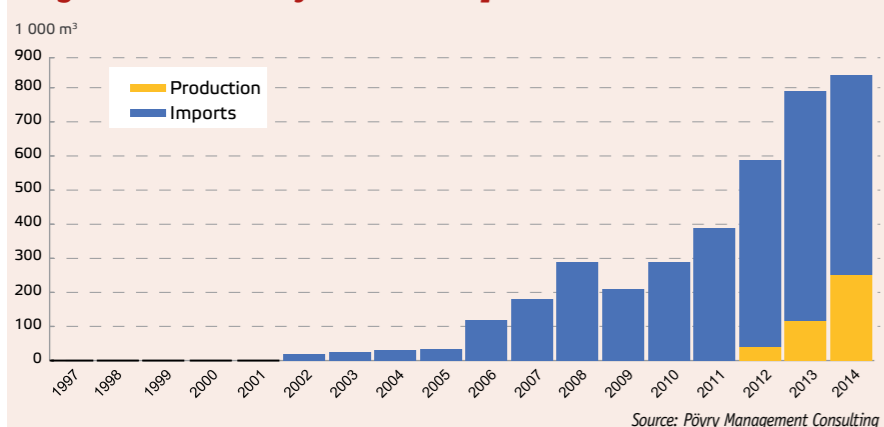
In 2014, the holding company Kronospan launched the fourth OSB factory in Russia with a capacity of 350,000 m³ in Yegoryevsk, a Moscow satellite town. The company intends to expand production at this site up to 700,000 m³ and is trying to find a solution of the problem at the site for the construction of the second line.

Consumption

According to our observations, as the position of OSB is strengthening in the Russian market of building materials and structures and as the product is better recognized by consumers, the scope of application is expanding (diagram 4).

Redecoration of rooms and premises, including blocks of flats, is becoming an important area. However, the consumption of OSB is directly dependent on the state of the construction sector which is the main driver of demand for the boards.

Diagram 4. Volume of OSB consumption in Russia in 1997–2014



Exports

In 2013, the OSB exports from Russia amounted to about 7,900 m³. The entire volume was delivered to Commonwealth of Independent States (CIS) countries by the Novovyatsky Ski Factory and by rare traders. Probably, Russian manufacturers will continue to consider the possibility of OSB exports to Central Asia – in the same way that producers of chipboards and fiberboards have proceeded.

Imports

Despite OSB production in Russia, imports continue to meet the main demand of the consumers. In 2013, deliveries from abroad increased by 23% to 695,000 m³ as compared to the level of 2012.

In the first half of 2014, the imports were 283,600 m³, which is 3.4% less than in the first half of 2013. According to preliminary estimates, volumes of imports will drop in 2014, with the main reason being the devaluation of the national currency and, as a consequence, the rising cost of importers' foreign currency contracts. An equally serious reason is the substitution of Russian factories' products for imported boards.

In imports, the Kronospan group dominates, and mainly supplies the boards from a factory in Brasov, Romania, and from the Latvian company Bolderaja. Other big suppliers are Egger

(a Romanian factory in Radauti), Glunz (Germany), Norbord and Louisiana-Pacific (both from Canada).

Diagram 5. Import of OSB to Russia in the 1st half of 2013 and in the first half of 2014 in kind

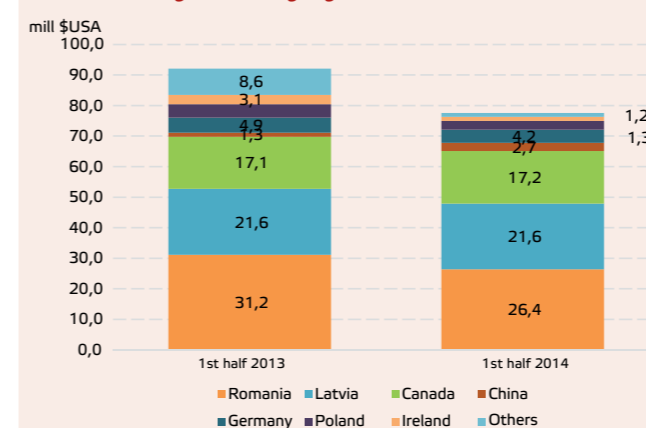
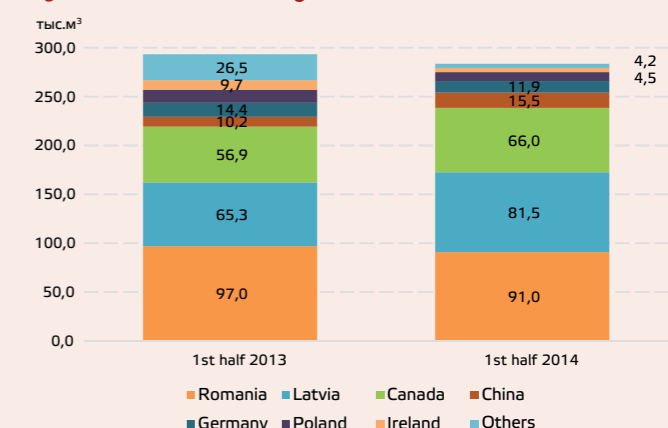


Diagram 6. OSB imports to Russia in the 1st half of 2013 and in the first half of 2014 in monetary terms



Source: Customs declarations, estimates of WhatWood

The most expensive and high-quality boards on the Russian market are imported from Germany. Canadian and especially Chinese boards are considered economy-class products. The Romanian and Latvian products are located in the middle price segment, where boards from the Russian factory Kalevala compete with them.

Imports from Romania grew last year due to an increase in the capacity of the Egger and Kronospan factories. The latter completed an investment project worth of 40 million euros at the

factory in Brasov in September 2013 and doubled OSB capacity to 600,000 m³. Because of that, Kronospan partially transferred deliveries from its Bolderaja facility in Latvia to the Romanian company, which resulted in a reduction of imports from Latvia.

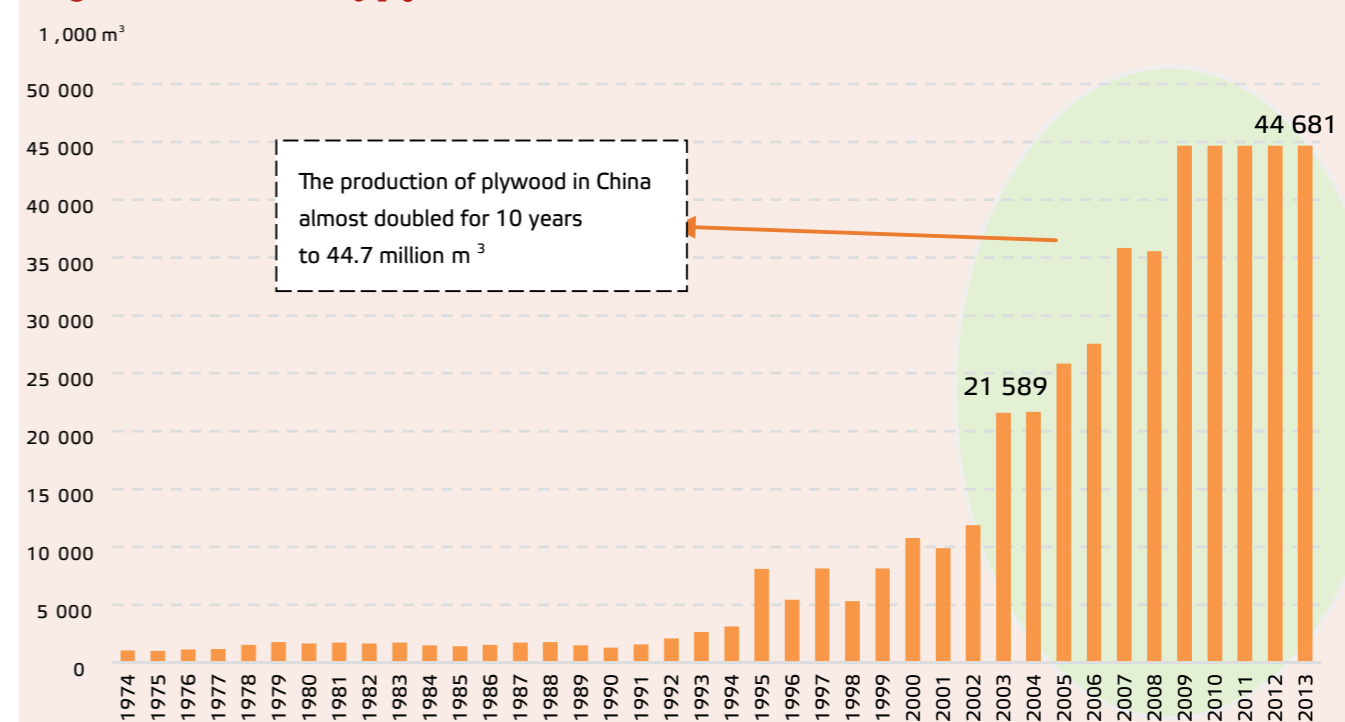
Deliveries from Belarus and Ukraine may be potentially attractive for Russian importers. In 2012, production was started at Krono-Ukraine, and in August 2014, the Kronospan OSB factory in Mogilev, Belarus, began pilot production with

an output of 300,000 m³ per year. It immediately began searching for regional exclusive distributors in Russia (diagrams 5 and 6).

Prospects for OSB development

The recovering wooden house market in the US has begun to generate high demand for OSBs on the North American continent. It is logical to assume that in order to maintain sufficient margins, the US and Canadian manufacturers of wood boards will ship the products to the local

Diagram 7. Production of plywood in China in 1974-2013



Source: UNECE/FAO TIMBER database, 2014

Diagram 8. Housing commissioning trends in Russia in 2002-2013

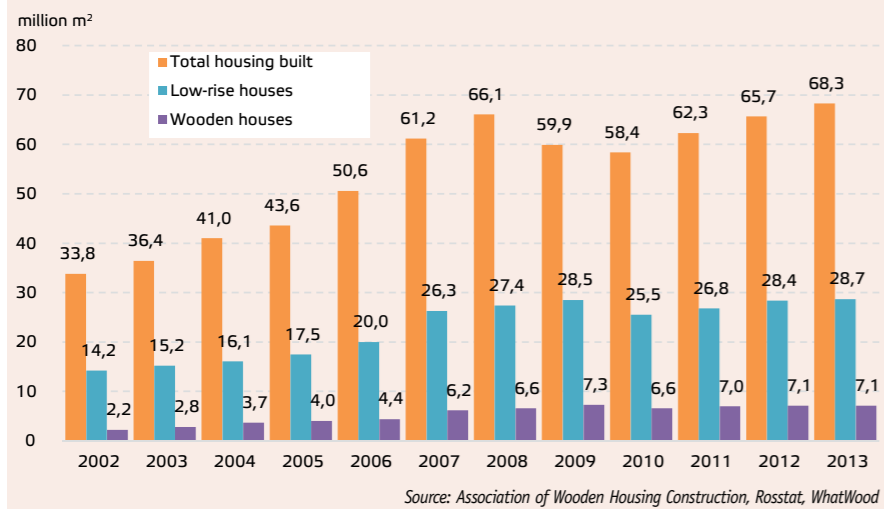


Diagram 9. Average import prices of OSB in Russia

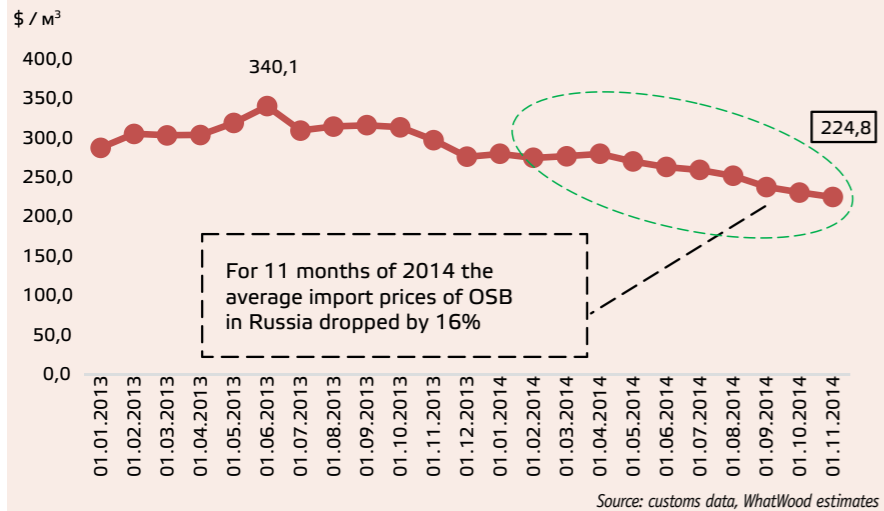
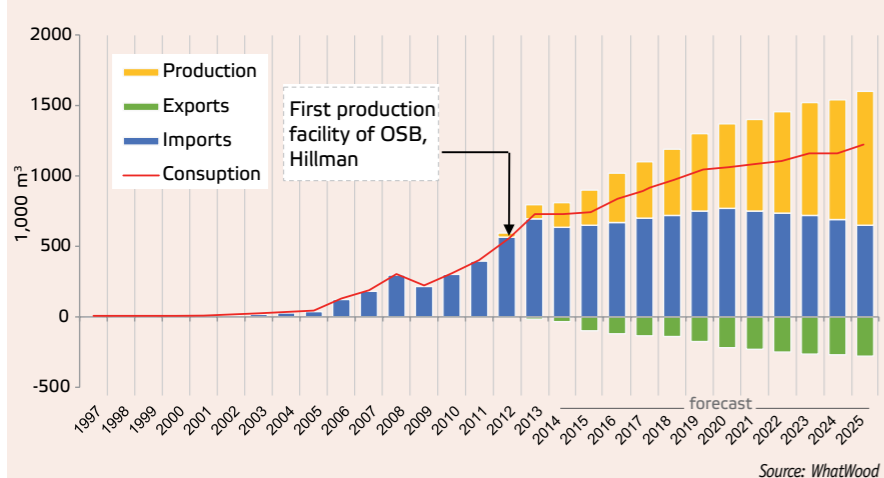


Diagram 10. Forecast of export, consumption and import of OSB in the Russian market in 1997-2025



consumer markets. On the contrary, the weak pace of recovery of the economy and construction sector in Europe do not provide an adequate demand for boards in the local market, and sales are made up for by the demand from Russia. It is quite likely that this situation will last till 2018 or 2019, when another one or two large-scale projects will be launched in Russia, with the volume of imports gradually fading at a rate of 1% to 3% per year. A probable scenario is that shipments of Russian OSB to CIS countries (especially Kazakhstan and Uzbekistan) will begin, as is already the case with chipboards and fiberboards.

This scenario does not provide for the possibility of an OSB production boom on the Asia market, for example in China. This can be compared with plywood, one of the main substitute products for OSB. In the period from 2003 to 2013 plywood production in China increased by almost 23 million m³ to 44.7 million m³ per year (diagram 7). If OSB takes root in China, the country could become one of the biggest exporters of OSB, including to Russia. A prerequisite for the development of this scenario is the emerging shortage of quality raw materials for the production of plywood. Chinese manufacturers are increasingly looking for suppliers of raw materials in foreign markets, while the volumes of planted wood so far do not allow to fully cover the demand for raw materials.

The key driver of OSB consumption is the construction and repairs industry. A positive aspect is the trend towards an increased share of wooden houses in the total volume of construction. In the period from 2002 to 2013, the total area of houses built of wood rose from 2.2 million m² to 7.1 million m² (diagram 8). However, the volumes of new housing are still significantly lower than what was the case in the Soviet Union.

If we were to assume that several factories with the total volume of 1.2-1.5 million m³ per year were launched in Russia within the next two to three years, with a steady import of 600,000-700,000 m³ per year, there would be a marked increase in competition among manufacturers for markets. In such a case, a drop in prices for OSB in the domestic market can be predicted.

As to imported boards, the average weighted prices of boards has been dropping since November 2013 after a peak in June 2013 (\$340). By November 2014, the price of 1 m³ of OSB was \$225 (diagram 9).

One possible scenario depicting export, import and consumption of OSB in the Russian market until 2025 is given below (diagram 10).

WhatWood, 2014

Note: This review was written with the aid of the "OSB Market in Russia" report that was undertaken in the first half of 2014 and does not take into account risks that have arisen since that time against a background of geopolitical tension, the strong devaluation of the national currency and a total reduction in the growth of Russia's economy.

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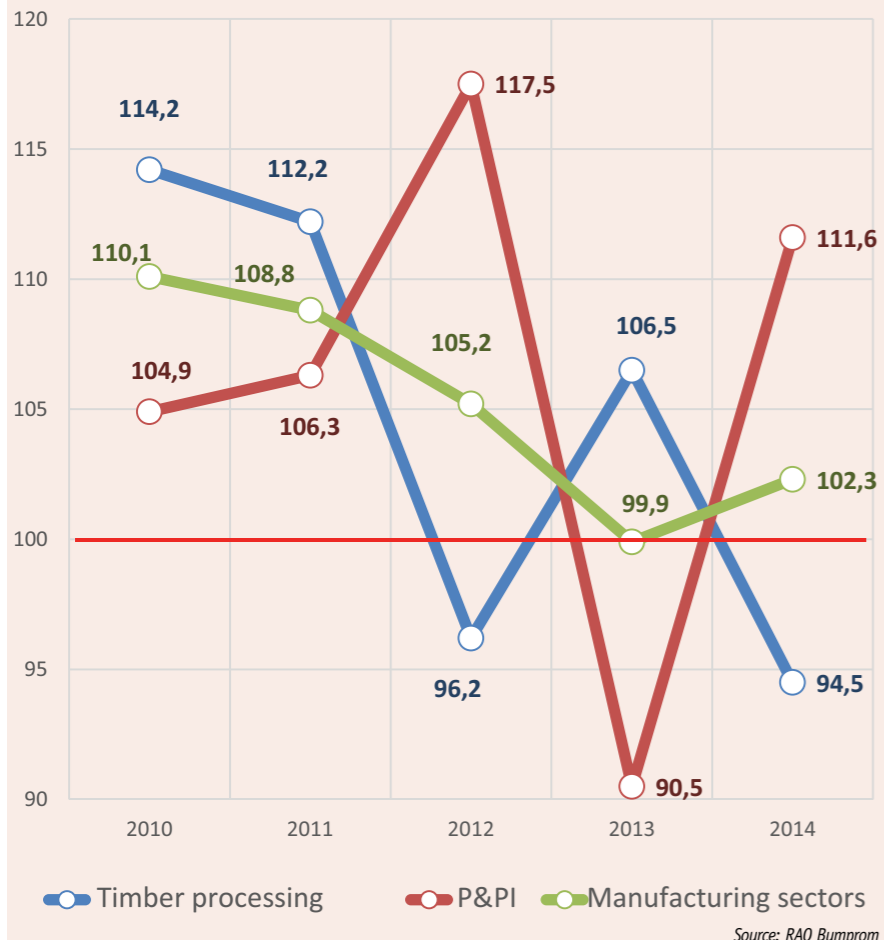
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Russian Pulp and Paper Industry: Capabilities and Challenges



Currently, Russia's economy in general and its pulp and paper industry in particular are facing pressure from many external and internal factors.

Fig.1. Industrial production indices in Quarters I-III of 2010-2014, %



According to Rosstat, the industrial production index for the first three quarters of 2014 was 102.3% for manufacturing industries, 94.1% for timber processing and 111.6% for P&PI (see Fig. 1).

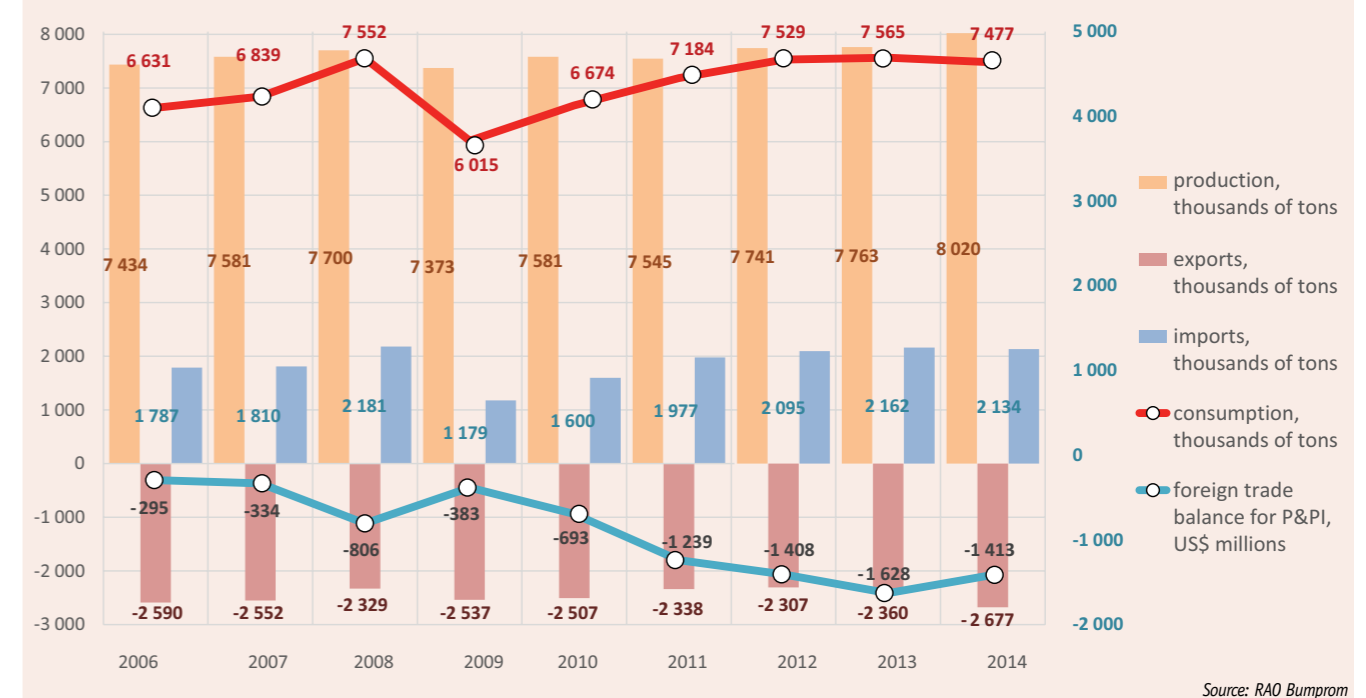
The industrial growth rates in the forestry and timber sector, as in the manufacturing sectors in general, have been decreasing over the last five years, which indicates the ongoing stagnation of the national industry.

The negative foreign trade balance related to P&PI products has been increasing over the last decade. While paper and paperboard product consumption has been growing in Russia in recent years, the positive trend in the manufacturing remains insignificant, and until recently, the growing domestic demand has been covered by imports. With the P&PI product export tonnage exceeding the imports twofold, the value of imported products exceeded the export value by \$1.4 billion in 2014. It should be noted that in 2013, the indicator was even higher at \$1.6 billion. (Fig. 2)

This has become possible due to shortcomings in the production structure in supplying the domestic market's needs for high quality consumer goods, in particular coated paper for the printing industry.

The output of marketable pulp increased to 2.2 million tons in 2014, having recovered after an output drop in 2013 due to pre-planned equipment shutdowns at the Bratsk facility of the Ilim Group and at the Arkhangelsk pulp & paper mill. In the near future, marketable pulp made by the Mondi Syktyvkar mill is expected to enter the market, as a drying machine for over 100,000 tons of bleached sulfate pulp has been started up.

Fig. 2. Consumption of OSB by regions of the world in 2011-2013



With the restart of newsprint production by Kondopoga JSC, the startup of updated capacities at the Koryazhma mill of the Ilim Group, at the Kamenka paper mill and some other facilities, the paper output in Russia grew to 4,950,000 tons in 2014, with newsprint, in particular, increasing to 1.7 million tons. Cardboard output continues to grow, although the growth rates have noticeably slowed down. In addition, losses in pulp production have been reduced, and the overall profit for P&PI enterprises increased by 3.1 billion rubles in January-June 2014.

Other important indicators are the prices and charge rates (Fig.3).

The pulp and paper price indices lag behind the indicators for other sub-sectors of the forestry and timber sector, i.e. timber harvesting and processing, and behind the price indices for manufacturing industry products in general. As compared to the P&PI, the prices for raw materials, chemicals, energy, and transport are showing priority growth rates, which results in higher prime costs and a lower overall rate of return for the sector's enterprises, despite the above-mentioned production output growth.

Reviewing the financial indicators, a highly significant issue arises – investments in the development of the sector (Fig.4).

Unlike timber processing where the companies' own funds make 43% of the total investment and the investment growth exceeded 21% in January-September 2014, in the pulp and paper industry, with the proportion of own money at over 80%, the investment rates dropped by 22.6%.

Fig. 3. Industrial product manufacturers' price indices in Quarters I-III of 2012-2014, %

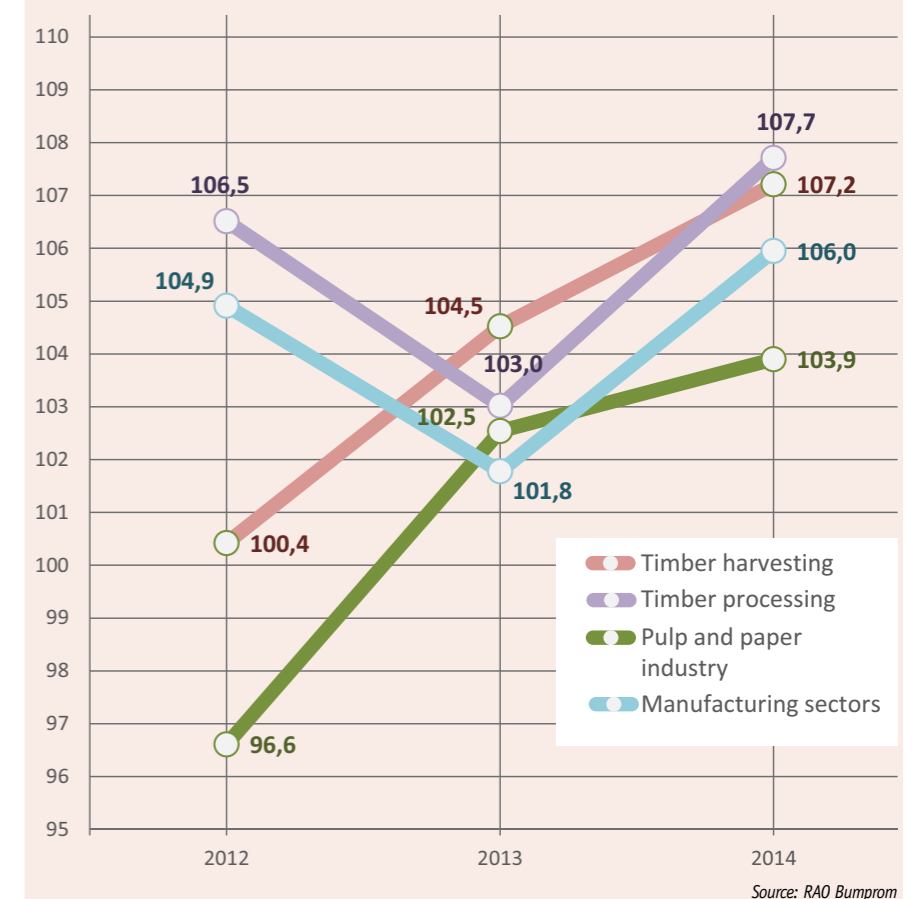
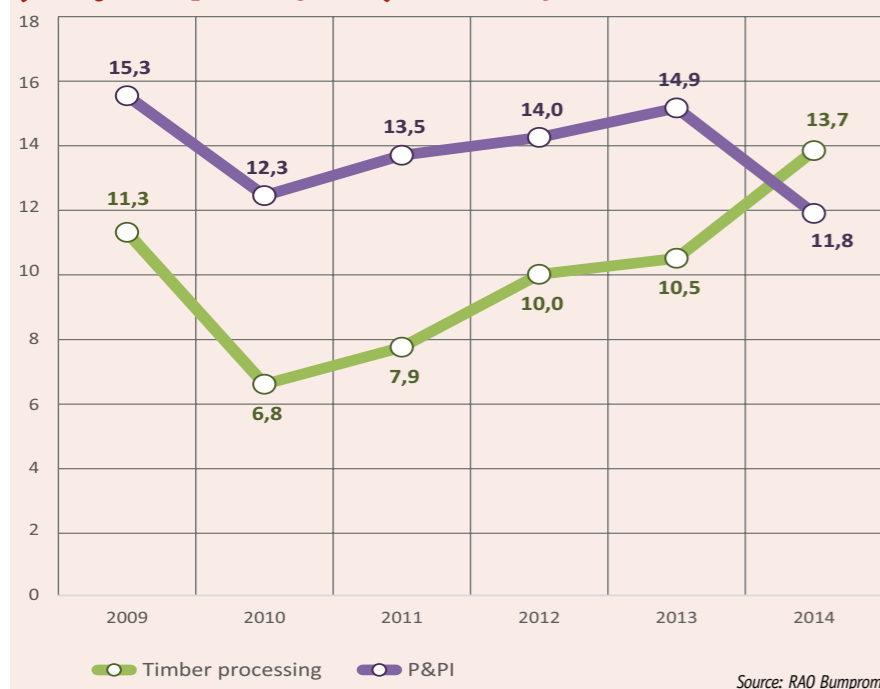


Fig. 4. Investments in fixed assets for P&PI large and medium-sized facilities in Quarters I-III, 2009–2014 (in adjusted prices of 2009), billions of rubles



There are several explanations for this:

- In the first place, the low investment attractiveness of the domestic pulp and paper industry for reasons that are well known (long project payback periods, climatic conditions, lack of infrastructure, high bank rates, tax press and the growing prime costs of products);
- Secondly, some large investment projects in the sector were completed in the preceding years, 2013-2014. These are the Greater Bratsk and Greater Koryazhma projects at the ILIM Group facilities; the STEP project at the Mondi Syktyvkar mill and the modernizing of fixed assets at the Arkhangelsk, Solikamsk, and Perm pulp and paper mills, the Kamenka paper mill and some other facilities.

The prices of industrial product manufacturers are noticeably behind the inflation rate, while the natural monopoly charge rates are noticeably ahead. The investment climate continues to deteriorate.

In recent years, the main part of the investment was allocated to the modernization of fixed production assets. The modernization was carried out by companies on the Ministry of

Industry and Trade "List of priority investment projects in forest management" (PIP), currently containing 122 facilities. The overall investment provided by PIP is 428 billion rubles, of which 13 are P&PI facilities with a funding of 241 billion rubles (Fig.5).

The increase of capacities, outputs, and consumption of paper and cardboard in the Russian Federation provided by the PIP meet the "Russian Forestry and Timber Sector Development Forecast through to 2030" prepared by the Russian specialist community to the order of the FAO. When developing the forecast the experts based their assessment on the GDP growth rates predicted by the Ministry of Economic Development (Fig. 6 and 7).

According to this forecast, the 2030 results would be:

- paper and cardboard, given the innovative scenario, 25.5 million tons (with a consumption of 20 million tons)
- given the moderate scenario, 18.8 million tons (and 16.8 million tons)
- given the inertial scenario, 14.7 million tons (and 13.9 million tons)

According to the innovative scenario, the paper consumption per capita would increase from

54 kg/person nearly threefold. In this case, the priority in achieving the targets should be setting up, mostly in forest-abundant regions of Russia, new capacities to make high-quality paper grades, up-to-date packaging materials, and hygienic products oriented primarily at the domestic market.

These matters were discussed with colleagues from the UN FAO and International Council of Forest & Paper Associations during the Annual Meeting and 55th Session of the FAO Advisory Committee on Sustainable Forest-based Industries in St. Petersburg in June 2014. RAO Bumprom was the sponsor of the site for this important international event in the forestry industry. For the first time in its national history, Russia received such high level forestry industry experts from around the world.

Unfortunately, despite the best laid plans, life often takes its own course. Facing the stunted growth of the economy, the Russian forestry/timber sector development is steadily following the inertial scenario, lagging behind not only the leading countries, but also average global indicators more and more. Today, implementation of best accessible technologies (BAT), reducing the material and energy consumption of production, and wider use of waste and other renewable energy sources are becoming the main priority.

BIOREFINING AND BAT

New trends emerging in the world economy have necessitated the development of industrial biotechnologies based on renewable resources. To achieve these goals, strategic programs have been developed in the worldwide forestry sector, starting from Agenda 2020 adopted in North America 20 years ago, and up to the Russian forest technology platform developed as part of BIOTECH 2030. The purpose of the Russian forest technology platform is to implement an innovative model of development of the national forestry/timber sector. One of its priorities is the bio-refining of timber, that is to say, making hi-tech products with a high added value based on the integrated deep processing of timber resources directly in the regions of their cultivation.

Russia has 80 million m³ of low-value timber that is not utilized. The potential of renewable energy sources (RES) is 4.6 billion tons of conventional fuel per year (which is five times more than all of the country's fuel/energy resources). There are tremendous opportunities for their use in the energy sector, in marketable fuel production (wooden fuel pellets) and in generator gas and liquid engine fuel production technologies. Diversification of production facilities should become the next step, with stage-by-stage transition to making high added value biochemical products.

Fig. 5. Largest investment projects in the Russian P&PI in 2010–2014



- Priority Investment Projects (PIP) 13 facilities
- Companies carrying out modernization but not on the PIP list: 9 facilities

P&PI product types	2014	Till 2020	P&PI product types	2014	Till 2020
Pulp (cooking)	7.2	+3.9	Investment in P&PI, billions of rubles	11.8	26.3
Paper	4.9	+1.9	Raw timber consumption, millions of m ³	115	+40
Cardboard	3.1	+3.4	New jobs, thousands	720	+4.5

Source: RAO Bumprom

Fig. 6. Production capacities, paper and cardboard outputs in the RF, and scenarios of their growth till 2030, millions of tons

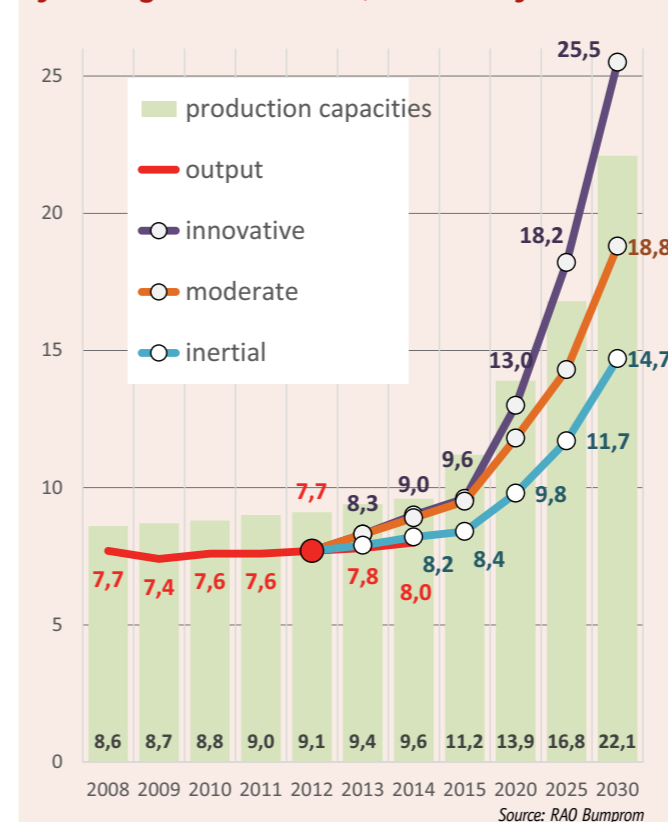


Fig. 7. Consumption of paper and cardboard in the RF, and scenarios of its growth till 2030, millions of tons

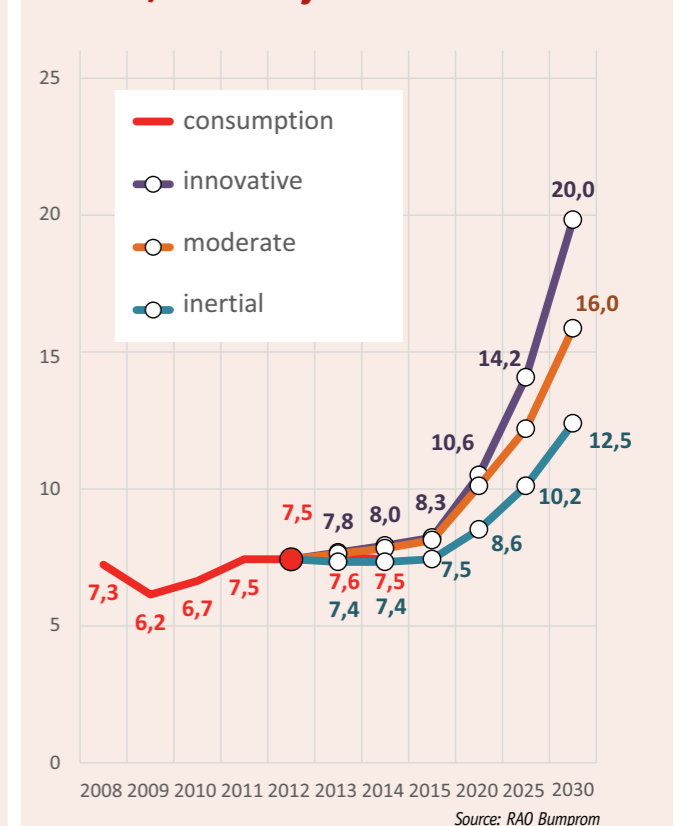


Fig. 7. Essential sections, promising technologies, and expected results of the implementation of the Development of industrial biotechnologies in the FTS segment

Production of new types of wood semi-finished products and other materials 12

- up to 100,000 tons/year of nano pulp, wood composite materials, biopolymers for biodegradable materials, xanthan, arabinogalactan, and quercetin from larch
- up to 200,000 tons/year of anti-corrosion heat insulation coatings

New "green" chemistry 10

- up to 90,000 tons/year of tall oil and pitch, turpentine, and other terpenes
- up to 9,000 tons/year of drilling muds, bitumen emulsions, and synthetic oils
- up to 1,000 tons/year of camphor and aroma compounds from terpenes and terpenoids
- up to 6,000 tons/year of medical preparations

Updating of P&PI, implementation of BAT 7

- up to 2 million tons/year of new kinds of paper and cardboard (including biodegradable ones) and products made of them
- complete changeover to bleaching without using elemental chlorine
- bringing the secondary fiber utilization rate to 55%
- reduction of specific electric power consumption per ton of product by 30%, and water consumption, by 50%

Forest bioenergy 3

- bringing the proportion of energy from P&PI waste to 70% of the total consumption
- production of liquid biofuels of wood origin, up to 200,000 cu m/year

Environmental protection; disposal of solid P&PI waste 2

- production of up to 1 million tons/year of biofertilizers for agriculture from P&PI waste
- bioremediation and bioreclamation of dumps and slurry/sludge tanks
- implementation of integrated waste water and gas emission treatment systems

✦ Number of technologies

The Russian forest technology platform, being a form of public-private enterprise, should unite and harmonize the efforts of the state, science, and business to create a bioeconomy. The goal is to provide up to 1% of Russia's GDP through the use of biotechnologies.

To implement this plan, a "Road map for the development of industrial biotechnologies in the forestry and timber sector" was developed,

and approved by the RF Government in June 2013. According to it, 36 new technologies are to be implemented. The governmental program "Industry Development and Competitiveness Enhancement" (a subprogram of "Industrial Biotechnologies") provides for the growth of biotechnological product output by 23.3 billion rubles by 2016, and by 62 billion rubles by 2020 (Fig. 7).

The development of new diversified technologies and the outfitting of laboratories and institutes with the necessary equipment for replica/pilot tests will require a lot of effort, funds and time. I believe it will be like this not only in the implementation of the Russian forest technology platform, but also with other industrial platforms.

After many years of discussion of the necessity to implement a process rationing system based on international experience of implementation of the best accessible technologies (BAT), amendments to the Environmental Protection Law and some statutory acts of the Russian Federation were adopted on 21.07.2014. The main goal of the changeover to process rationing is the stage-by-stage reduction of environment pollution by implementing BAT. The use of the process rationing system will enable the enterprises to evolve from an "end-of-pipe" strategy to the strategy of "pollution prevention" at its source, and to achieve high environmental efficiency along with economic gains.

To implement this, several legislative and regulatory initiatives have been provided. By resolution of the RF Government, a package of measures to discard inefficient technologies and to switch to BAT has been approved. A draft resolution of the Russian Federation Government has been prepared for implementation of the switchover to the BAT principles, defining the functions and relationships of governmental agencies coordinating the development of BAT information handbooks. Rosstandart is appointed as the authorized agency of the executive power for BAT implementation.

To manage the switchover to the BAT principles, the Ministry of Industry & Trade established an Interdepartmental Board for switchover to the BAT principles headed by First Deputy Minister Gleb Nikitin. The Interdepartmental Board has supported the initiative of pulp and paper makers – Ilim Group, and Arkhangelsk and Solikamsk mills to implement BAT and switchover to the weight method of water and air pollution recording. The whole sector's goal for 2015 is to develop a BAT handbook and regulatory/procedural documentation. This will enable P&PI companies to avoid non-productive environmental penalties.

On the instruction of the Interdepartmental Board, a technical task team (TTT) is being built, with representatives of federal executive authorities, research facilities, public organizations, and industrial companies on its list. The functions of the TTT are data collection and analysis to select a BAT technology, and development and updating of a BAT handbook.

Also, a BAT board is being formed, to coordinate the activity of TTT, manage the expert assessment of the BAT handbook developed by TTT, and submit the developed handbook to the authorized body, i.e. Rosstat.

With regard to the opinions of companies/enterprises, RAO Bumprom has submitted its

proposals for the namelist of TTT for the pulp and paper industry.

The implementation of BAT will require sizeable funds. Article 17 of the Federal Law "On amendments to the Federal Law "On Environmental Protection" and to some statutory acts of the Russian Federation, provides for measures of governmental support to activities aimed at the implementation of BAT and other efforts to reduce negative environmental impact. However, the regulatory documents have not been developed until now.

ADVANCED DEVELOPMENT ZONES

In the entire 25-year period of economic reform of the Russian forestry and timber sector, not a single pulp and paper mill was built on a separate site. The main reasons are the ill-considered investment policy and problems with accessibility and cost of long-term construction loans.

Finally, in 2014 the Government started setting up mechanisms to support such investment projects. For this purpose, a law on advanced development zones (ADZ) is currently being prepared, which provides for a maximum favorable mode for the regions' economic potential development. TDZ is a part of a region with special modes of legal activities. Such areas provide the best competitive conditions to their residents.

The changeover of P&PI to a process rationing system based on BAT will help to:

- achieve a high economic efficiency of production, get additional economic gains, and have the domestic P&PI products certified, which will enhance their competitiveness;
- reduce the level of gross and specific discharges and emissions of pollutants, and to reach the rated figures step by step;
- reduce the prime cost of products by using energy and material saving solutions and by cutting operating costs;
- improve the finished product quality, and thus increase the profit from their sales.

When working out the law, the best practices of countries with high paces of development (China, South Korea etc.) were studied in regard to the legislative and tax domain. The package of measures to build such TDZ includes:

- Infrastructure building using budget funds.
- Broad tax preferences granted.
- Faster VAT refunding mechanism; lower land, property etc. tax rates.
- No administrative barriers for business.

The start of activities of such a TDS in the Far East is already planned in 2015. After two or three years of operation under the new conditions, the law will be extended to Russia's northern regions.

Summing up, I would like to say the following. There is a growing understanding in Russian governmental circles that the existing situation

in the Russian economy and the forestry and timber sector in particular, has to be radically changed. Certain actions have already been taken and now a great deal depends on the business community, on their ability to consolidate their efforts and develop a common stance on several strategic issues. The time has come to take stock. Governmental support for the programs and the will of business to undertake their practical implementation must become priority issues. Only then will the forestry sector really become a sector of the economy that conforms to the concept of sustainability and adopts a form of up-to-date environmental-friendly production.

Vladimir A. CHUIKO,
Chairman of the Management Board,
RAO Bumprom



Mondi Syktyvkar completed €30 million pulp dryer project

The €30 million large-scale pulp dryer project for the production of softwood market pulp at Mondi Group's Syktyvkar mill was completed in 2014.

The official opening ceremony on November, 19th was attended by representatives of Komi Republic Government and Mondi leaders.

The estimated 100 visitors of the event included customers, partners and contractors who had been involved in the project implementation, as well as members of the project team and journalists from the Russian trade press and local media representatives.

"We are proud of Mondi Syktyvkar's 45 year heritage in the Komi Republic of Russia. Our

new pulp dryer project illustrates Mondi's continued commitment to ensuring the success of the mill for years to come," concluded Peter Orisich, CEO of Mondi Uncoated Fine Paper, at the opening ceremony.

The pulp dryer allows Mondi Syktyvkar to produce more than 100,000 tonnes of a new bleached softwood market pulp called KOMICELL, which is FSC® certified and produced without elemental chlorine (ECF). The FSC® chain of custody certified product is ideally suited to meet the needs of national and

international packaging, tissue, and newsprint industry customers. Together with the proven supply chain capabilities, Mondi Syktyvkar is looking forward to fulfilling its customer requests – on time and in full.

Softwood pulp is the most valuable fiber material in paper production.

It mainly consists of long fibers that can be used with short-fibered materials (mechanical, hardwood, straw and cane pulp) in paper production and can also be used on its own.



Technical Director of Mondi Syktyvkar Vladimir Druzhkov



New Pulp Dryer at Mondi Syktyvkar



Managing Director of Mondi Syktyvkar Klaus Peller

Mondi Syktyvkar rebuilds waste water treatment plant

Mondi Syktyvkar is implementing a large-scale project to rebuild the waste water treatment plant. The investment into the first two stages of this project amounted to approximately EUR 12 million.

"Mondi Syktyvkar invests in the development of the mill every year with a particular focus on environmental measures, including those aimed at protection of water resources of the region. The rebuild of the waste water treatment facilities will increase their efficiency, improve occupational safety and quality parameters of the waste water," said Klaus Peller, Mondi Syktyvkar Managing Director.

During the first stage the company upgraded the aeration tank № 3, the secondary clarifiers № 4 and № 7, completed the construction of the mechanical waste water treatment plant station and the mixing chamber.

Currently the modernization of the aerator is completing. The second stage encompasses upgrading the aeration tank № 4, three secondary clarifiers, and activation of buffer capacity. The third stage of the waste water treatment plant rebuild project is under development.

"The mill has taken another step forward to further improve the environmental situation in the capital of the republic and most directly in Ezhva district by starting up the mechanical waste water treatment plant," said Ivan Pozdeev, Head of Syktyvkar Administration.

"Discharge of insufficiently treated waste waters affects water ecosystems, and has an impact not only on the environment, but also on the sanitary conditions of communities. Realizing

the importance of this issue, Mondi Syktyvkar makes major efforts to improve its environmental performance. I am sure that this project, which by the way can be easily called a social one, will bring only positive results," noted Pozdeev.

The official opening of the new mechanical waste water treatment plant took place on March 3rd, 2015. Managers of Mondi Syktyvkar, managers of municipal administrations, representatives of environmental authorities and regional mass media participated in the event which is of great importance for public utilities of Syktyvkar and Ezhva.

The waste water treatment plant at Mondi Syktyvkar is a complex of production units and processes. Through the plant over 80 million cubic meters of water pass annually, whereof 30 percent is taken by municipal waters of Syktyvkar, Ezhva district and the Northern industrial hub (including effluents

of the poultry factory in Zelenets and municipal waters of the Vylgort settlement).

In addition to being mechanically treated with the sand, coarse wastes and other minerals, waste waters coming to Mondi Syktyvkar are also biologically treated with organic compounds by means of "active sludge" consisting of organic feeding microorganisms. To maintain their performance continuous oxygenation of waste waters is required. This is provided by special membrane aerators feeding air to special vessels (aerotanks) where active sludge is also supplied. At the biological waste water treatment plant 8 aerotanks are in operation. Secondary clarifiers represent the final stage of biological treatment where water is clarified (separated) from the sludge. The separated sludge is sent back to aerotanks for treatment of waste waters.



The waste water treatment plant at Mondi Syktyvkar

Mondi Syktyvkar and the Government of the Komi Republic extend cooperation on social and economic partnership for 2015

Mondi Syktyvkar and Government of the Komi Republic have renewed their social and economic partnership agreement for 2015.

Mondi invests RUR 46 million for support and development of 8 Komi districts involved in company activities, including Ezhva.

The official document was signed by Klaus Peller, Managing director of Mondi Syktyvkar, and Vladimir Tukmakov, Chairman of the Government of the Komi Republic. "Although Russia is facing a challenging economic situation, we have found a way to continue to offer financial support to the district. The agreement for voluntary support is important to us and is part of our company's approach to considering the needs of local communities around our operations.

Over 60 percent of the mentioned amount will be spent on creation of new work places in the regions of the republic. The remaining amount will be used for social infrastructure development," said Klaus Peller, Managing Director, Mondi Syktyvkar, at the signing ceremony.

According to Vladimir Tukmakov the investment distribution mechanism has been updated in the agreement. "Part of the amount will go directly to municipalities, and the other part will go to the budget of the republic.

This funding is dedicated to the development of small and medium business, and will be forwarded to regions accordingly. Such a support on the republic level will allow increasing of funding allocated for the same purposes from the federal budget. We will achieve this positive effect based on the correction of the funding allocation scheme", explained Mr. Tukmakov.

Besides the financial support, the agreement also stipulates indirect support measures, such as allocation of health facilities vouchers to municipalities targeted to improve the social wellbeing and health of local residents.



Klaus Peller and Vladimir Tukmakov

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Mondi Syktyvkar supported the Ski Masters World Cup

Mondi Syktyvkar announced continued financial support for the Masters World Cup in cross country skiing. In 2014 the funding amounted to RUR 41.5 million, which enabled the construction of a training facility to serve as a gym for athletes to train for the competitions. Later, the facility will be used as a gym for representatives of guest teams arriving for competitions.

“The Masters World Cup in cross country skiing is a large-scale event, with many athletes participating. It shows that people try to pay more attention to physical exercise and sports, and consequently to improving their overall health. We are happy to support healthy lifestyle initiatives, both in and outside the company,” said Klaus Peller, Mondy Syktyvkar Managing Director.

“The cooperation with Mondy Syktyvkar started long before the World Cup was planned.

The Komi Republic Ski Federation concluded a long-term agreement with Mondy according to which RUR 5 million are allocated annually for skiing development in the region,” said Nikolay Gordeyev, Director of the center for athletic instruction and selection teams in Komi.

These funds are dedicated to supporting the preparation of leading Komi skiers to the 2018 Olympic and Paralympic Games in Pyeongchang.

The Masters World Cup was held from 14 – 20 March 2015 near Syktyvkar in the regional ski center named after Raisa Smetanina. Almost 900 skiers aged 30 to 91 took part in the competition, with 75% coming from Russia. Komi had a strong showing, with 117 out of



Before start at the Masters World Cup in cross country

a total of 682 Russian participants coming from the region – making up roughly 17% of the Russian delegation. 212 foreign athletes representing Kazakhstan, Belorussia, Estonia, Sweden, Norway, Switzerland, Austria, Denmark, Canada, the USA, Australia, Germany, France, Spain, and Italy applied for participation. The Finnish team was the biggest among other foreign teams with 38 people.



Mondi Syktyvkar supports school forestries in Komi

Mondi Syktyvkar continues to support development of school forestries in the Komi Republic. In 2013 the company allocated 5 million rubles for their restoration. At present 43 school forestries are operating in the region and this tendency is spinning up.

At the end of January 2015 the delegation of specialists from Mondy Syktyvkar visited the school forestry in Kortkeros.

“We are glad that we can support school forestries. Children from the regions of the republic gain practical skills on environment protection and reforestation, learn more about flora and fauna of Komi. It helps to foster responsibility and care of the natural habitat – forest, as well as interest and respect to the native land”, said Axel Bender, Forestry Director Mondy Syktyvkar.

According to Elena Shavandina, Head of the school forestry in Kortkeros, their activities are quite diverse – they arrange stands, publish the school newspaper “Yunye Druzja Prirody”, hold environmental activities and contests. In summer children make and hang up birdhouses, fence ant hills, plant trees, repair fire safety tags. Foresters of Kortkerosky logging company give theoretical and practical lessons to them in the forest.

“Thanks to Mondy Syktyvkar we managed to proceed with school forestries in the republic. At the expense of the mill we bought children’s uniform – camouflage suits, T-shirts and baseball caps, purchased forest survey devices, binoculars,

cameras, printers, computers, tents and sleeping bags. We also spent a big portion of money on organization of different events – contests and excursions”, said Liubov Arkhipenko, Chairperson of the Society of Foresters.



Members of one of the school forestries supported by Mondy Syktyvkar skiing

What Does the Future Hold for Russian Paper and Board Markets?

The Russian economy, along with Russian pulp and paper industry, has undergone probably its most turbulent period since the 2009 worldwide economic crisis. This article provides an overview of the state of Russian paper and board industry in 2007, prior to the 2008/2009 crisis and subsequent years ending in 2014, discusses the drivers of two major growth areas (tissue and corrugated consumption) and attempts to provide a near-term outlook for the whole industry.

In 2009, the Russian economy contracted sharply, leading to a subsequent drop in its paper and board consumption and production. In 2014, the Russian economy's structural issues were exacerbated by economic sanctions imposed by the international community, which reduced its economic growth further from 1.3 per cent in 2013 to 0.6 per cent in 2014. Between 2007 and 2013, it appears that growth in the country's total paper and board consumption and production was highly correlated with its real GDP growth (Figure 1). However, in 2014 paper consumption contracted sharply to the tune of 6 per cent, while the country's paper production posted healthy growth of 3.2 per cent. Such divergence had not been seen since 2008, although the magnitude of divergence was higher in 2014. Indeed, the Russian pulp and paper industry has not been affected directly by the sanctions, which means that there is no restriction on exports of its products to world markets. However, Russian companies are restricted in terms of access to banking credits to support its export activities.

Below are three major factors that in our view help explain better than expected Russian higher domestic production in 2014:

- The depreciation of the Russian ruble, especially during the fourth quarter of 2014 which supported higher exports.
- Most of overseas markets for Russian paper and board continued to grow last year, a situation which is quite different from that during the previous crisis in 2009.
- Increased capacity from new paper and board machines.

Despite contracting, our preliminary estimates put Russian paper and board consumption at 6.8 million tonnes in 2014, still 3.3 per cent higher than 2007 levels. Growth in consumer spending, real GDP and industrial production – although at lower than during the pre-crisis period – helped Russian paper and board consumption to grow by 5.5 per cent annually between 2010 and 2013.

Figure 1: Growth in Russian Real GDP, Paper and Board Consumption and Production



Figure 2 provides the breakdown of Russian consumption of all paper and board into various grades such as containerboard, cartonboard, wrapping papers, printing and writing paper, newsprint and other unclassified grades in 2007 and 2014. Note that we define consumption as domestic production minus exports plus imports.

The lion's share of growth in consumption of all paper and board in Russia from 2007 to 2014 was in containerboard, the share of which increased from 30 per cent in 2007 to 39 per cent in 2014. The next largest paper market is printing and writing paper with 25 per cent of all consumption in 2014. After reaching more than 100,000 tonnes greater than 2007 levels in 2013, the consumption of printing and writing paper in Russia contracted by up to 10 per cent in 2014. The third most important paper market in Russia is cartonboard, with a share in paper and board consumption dropping by 1 per cent to 10 per cent to 700,000 tonnes. This segment is exposed to import competition of printed materials, which are exempted from import duties while imported base board is subject to import duties of 15 per cent. Market reports suggest that close to third of cartonboard needs in Russian market are imported in the form of printed folding cartons, which puts the Russian printing and converting industry at a competitive disadvantage.

Newsprint consumption, which has been affected by the rise in electronic media, represented just 7 per cent of total paper consumption in 2014. Its share in total paper consumption declined by 5 per cent from 2007 and its volume posted a drop of 41 per cent to 460,000 tonnes in 2014. Newsprint and wrapping papers have been suffering due to competitive pressure from electronic devices and plastic packaging, respectively. The country's apparent consumption of wrapping papers dropped by 17 per cent from 2007 levels of 260,000 tonnes, leading its share in overall paper and board consumption to decline to just 3 per cent by the end of 2014.

Tissue has been one of the best growing sectors in Russia through 2012, with market size reaching

Figure 2: Breakdown of Russian Paper and Board Apparent Consumption* in 2007 and 2014, thousand tonnes

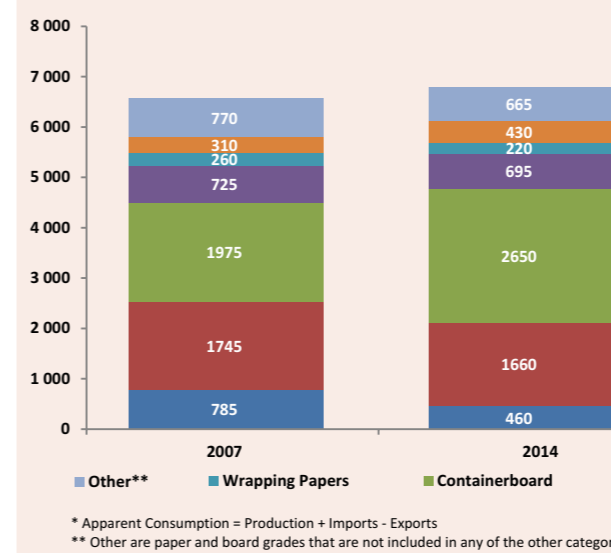
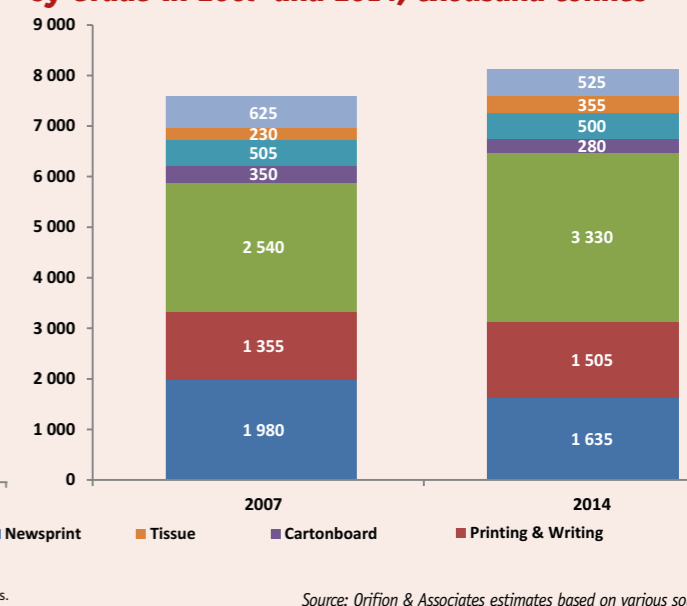


Figure 3: Russian Paper and Board Production by Grade in 2007 and 2014, thousand tonnes



Source: Orifjon & Associates estimates based on various sources

490,000 tonnes in 2012 thanks to average annual growth of 11.1 per cent between 2007 and 2012. However, tissue consumption contracted by 6 per cent in 2013 and 2014 per year due to the uncertain economic situation. Nevertheless, with 430,000 tonnes of consumption in 2014, the share of tissue in the country's total paper consumption was 6 per cent, which is still higher by 1 per cent than in 2007.

Finally, consumption of "Other Paper and Board," which consists of such grades as specialty paper and board not included in any of the packaging and graphic paper categories (e.g., roofing board, coreboard, technical papers, labels, wallpaper, gypsum liner), posted a drop of 1.8 per cent annually over the last seven years, with levels of just 665,000 tonnes in 2014, or 10 per cent of total consumption.

As for domestic paper supply in Russia, total production reached about 8.1 million tonnes in 2014, up by 545,000 tonnes from 2007, with average annual growth of 1.2 per cent. The difference between production and domestic consumption indicates that Russia remained a net exporter of paper and board and its surplus position has increased over the last seven years. Substantial capacity increase in printing and writing paper, and containerboard, contributed to most of the increase in the country's net export position during this period. A sharp increase in recycled containerboard capacity for the last two years (SFT Kamenskaya Cardboard and Paper Mill, Mayak Mill in Penza, OOO Dekart in Moscow region etc) pushed Russian domestic virgin containerboard producers to increase their exports with the aim of offsetting the share loss in their domestic markets. At the same time, in the printing and writing paper areas, Russia saw a drop in its trade deficit position thanks to new paper capacity (Kotlas Branch of Ilim Group). In the cartonboard segment, given

a relatively complicated production technology, the Russian market remained a large net importer of cartonboard. In the case of tissue, it was challenging for domestic supply to keep up with growing domestic demand and this caused a small, but sustained trade deficit in the segment.

Three segments in Russia saw increased production during the last seven years: containerboard, printing and writing paper, and tissue. Tissue production posted the largest increase of all grades (55 per cent) over its 2007 levels to reach 355,000 tonnes in 2014. Containerboard production posted the largest increase in absolute terms over the last seven years with a 31 per cent increase over 2007 levels by the end of last year. The share of containerboard production increased

by 7 per cent to 41 per cent of total paper and board production in 2014.

Although there are a lot of grades within that category, the country's domestic production of printing and writing paper increased annually by 1.1 per cent between 2007 and 2014. The trade deficit position in that segment had been increasing to reach historical highs in 2013, before new uncoated and coated domestic paper production caused it to decline sharply in 2014.

All other sectors contracted as a result of declining domestic demand during the last seven years. Newsprint's share in overall production dropped by 6 per cent to 20 per cent in 2014, while the share held by wrapping paper fell a couple of percentage points to 6 per cent relative to

Figure 4: Consumer Market for Corrugated and Tissue Consumption in Russia

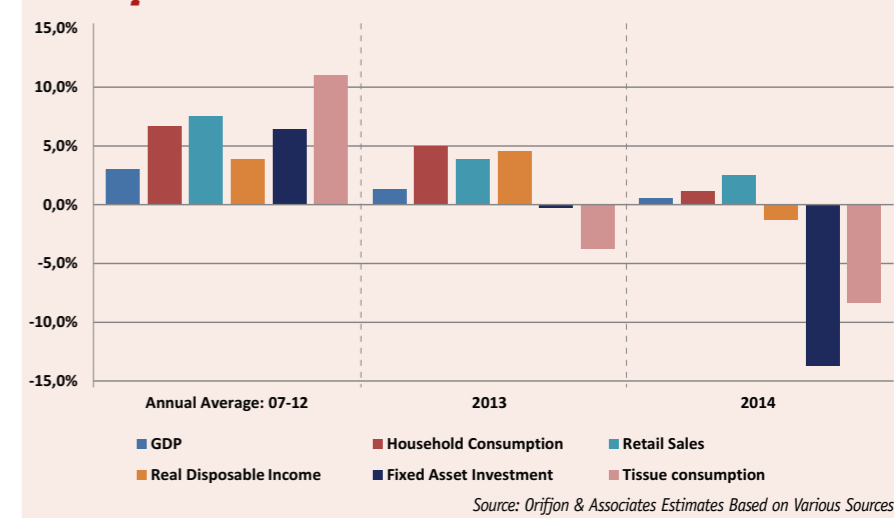
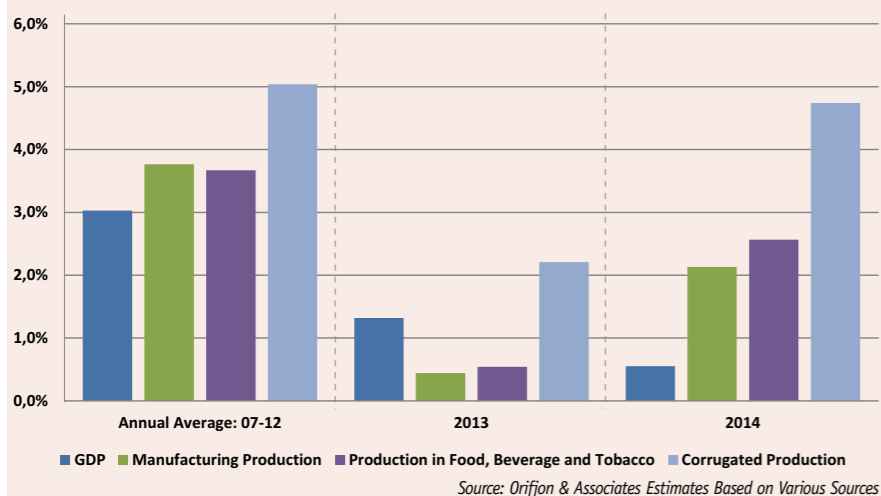


Figure 5: Industrial Sector and Corrugated Consumption in Russia



2007. As domestic consumption declined, the wrapping paper segment was able to maintain flat production only thanks to increased exports over the same period. Production of cartonboard amounted to 280,000 tonnes in 2014, a drop of 70,000 tonnes from 2007 levels.

What happened to tissue and corrugated consumption in 2014?

Tissue and corrugated consumption diverged in 2014 and in contradiction to general wisdom. Most market reports point to the fact that despite the on-going crisis, tissue and containerboard in Russia were the only segments that posted growth in 2014. As mentioned above, preliminary figures do not support this conclusion given unexpected contraction in Russian tissue consumption for the last two years. At the same time, during the last two years we saw several new tissue machines being brought in Russia (SCA Hygiene Products Russia, Pulp Invest Hayat).

As can be seen from Figure 4, growth in Russian tissue consumption was three times real GDP growth, while outperformance in corrugated production relative to GDP was just 50 basis points

per year between 2007 and 2012. Over the same period, annual growth in tissue consumption of 11 per cent also outpaced the growth in both household consumption and real disposable income. On the other hand, despite continued growth in major macroeconomic indicators in Russia, tissue consumption posted its first contraction since 2009 in 2013 driven by both "at home" and "home-away" segments. In 2014, the combination of a drop in real disposable income and a further contraction in fixed asset investments accelerated the contraction of tissue consumption from 3.8 per cent in 2013 to 8.3 per cent in 2014.

On the other hand, demand for corrugated products in Russia can be affected by the performance of both consumer and manufacturing sectors in the country. An increase in consumer spending through a growth in real disposable income can positively affect retail sales because an improved distribution of consumer products requires more packaging through the supply chain. The growth in retail sales in the country for the last seven years is probably the major factor explaining the outperformance of corrugated production relative to manufacturing production. And with the recent restrictions of imports on agricultural products from Europe and North America, Russian domestic

production in the food, beverage and tobacco sectors benefitted most from reduced competition from imports. A portion of domestic production was oriented towards import substitution and helped industrial plants to increase their utilization rates. This created additional domestic demand for corrugated packaging last year.

What does the future hold for Russian paper and board consumption and production?

In this final part, we try to forecast a possible trend for Russian paper and board markets in near-term. On the other hand, the changing macroeconomic situation means that making a forecast is a little challenging. Generally, to certain extent the history guides us in our assessment of future market developments.

Some experts predict Russian real GDP to contract by up to 5 per cent in 2015. According to our estimates, total Russian paper and board consumption contracted by 9.7 per cent in 2009, while real GDP dropped by 7.8 per cent. If we apply the same relationship between the expected changes in GDP and total paper consumption for 2015, then total paper consumption is likely to contract by just 6 per cent. On the supply side, the country's total paper and board production will likely perform much better this year compared to domestic consumption given the expected sharp drop in imports of some paper materials and sustained high exports. Indeed, the majority of Russia's trading partners (in Europe, the Middle East and Africa) are expected to see their consumption of paper and board grow (albeit at a lower rate than in the past), which will maintain Russian exports in traditional segments of paper and board in 2015. In addition, the depreciation of the Russian ruble relative to major world currencies will likely keep Russian paper and board competitive on export markets.



Orifjon ABIDOV,
Founder and Managing
Director
of Orifjon & Associates

Orifjon & Associates is a relatively new company founded by Orifjon Abidov, who worked for several years for a leading information provider for global forest products industries as head of its European paper packaging economic analysis service. His responsibilities included overseeing work at both the back and front offices, such as providing a forecast analysis for the European paper packaging markets for regular monthly and quarterly reports, conducting various multi-client and single-client studies concerning different segments of the European and Global paper packaging markets, speaking at several global industry conferences, and in various customer seminars on service. At the same time he was responsible for the content and product development, as well as supporting sales teams in expanding customer portfolios. In his role, he was a leading specialist in developing the coverage of European white top containerboard and Russian paper packaging markets. Orifjon & Associates is headquartered in Brussels, Belgium.

For more information contact at aopackaging@gmail.com or call +32(0)497050730



OUR CONFERENCES:

Timber Industry of Russia: Searching of Growth Points

September 30th, 2015

Conference: 11.00 – 18.00.
Registration starts at 10.30
Saint-Petersburg

Key topics of the conference

- **Russian sawn timber: where to find market?** *Deep processing, industrial distribution, DIY-stores. Wooden construction as a new trend in modern urban planning (city parks etc.);*
- **How to benefit from profitable ruble exchange rate for export?** *Growing markets (MENA, China and South Korea) and steady expensive markets (Japan and Europe): economic survey, consumption segments;*
- **Will it be enough space for new factories at wood-based panel market in Russia?** *How economic slow-down will influence on demand? Survey of segments of wood-based panel consumption. Export demand for birch plywood. New production capacities (planned and existing) of OSB, MDF, plywood and chipboards in Russia and the Custom Union (Belorussia, Kazakhstan);*
- **Legislation: how has the program of national priority investment projects changed with toughen up criterias;** *USAIS and its influence on wood trade;*
- **Where to find necessary capacity of raw material in Russia?** *How much of economically accessible raw material does exist in different regions?*

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WHAT
WOOD

Wood-based Panel Production: Optimization and costs management

November 25th, 2015

Russia, Moscow, Exhibition center
Crocus Expo, Hall №1,
conference room №2
Conference: 11:00-18:00

Key topics of the conference

- **Best worldwide practices in building of effective system of management at wood-based panel production**
- **Costs reduction at raw material supply of wood-base panel production**
- **Optimization of wood-base panel production**
- **Optimization of purchase costs of basic equipment for wood-based panel production**
- **Optimization of binder application as an important part of wood-base panel price component**
- **Wood-base panel sales optimization**

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Detail information about the conference on our web page www.LesPromInform.ru or by telephone:

Conference Program	Mikhail Dmitriev	+7 921 963-2907, develop@lesprominform.ru
Organization and registration	Olga Ryabinina	+7 921 300-2089, or@lesprominform.ru

The Rebirth of the Pellet Industry in Russia



According to data quoted at the WSED European Pellet Conference in WELS, Austria (February 25-26, 2015), the pellet output in Russia increases by 10-15% every year. Since 2014, the production of pellets and their export to the EU has become profitable even for facilities located in East Siberia; therefore, many companies of other profiles began to invest in pellet manufacturing. The annual Russian export is about 1,000,000 tons of pellets mainly to the European Union (97%). The South Korean market comes second, but it is not as large as the European one (2%).

At the beginning of 2014 Russia already had 12 large pellet mills exporting from 20,000 to 300,000 tons of pellets per year (Table 1).

Table 1. Russia's largest exporters of wood fuel pellets from July 2013 till June 2014, tonns

Vyborg Forest Corporation, Leningrad region	300,000
SP Arkaim, Khabarovsk region	70,000
Novoeniseisky LHK, Krasnoyarsk region	50,000
Mir Granul, Leningrad region	45,000
Lesozavod-25, Archangelsk region	45,000
DOK Enisey, Krasnoyarsk region	45,000
Severo-Zapadny Holding, Leningrad region	40,000
Svedwood Tikhvin, Leningrad region	35,000
Russian Pellet Alliance, Karelia	30,000
Setnovo, Novgorod region	20,000
STOD, Tver region	20,000
Russian Pellets, Mary El	20,000

Source: Infobio Information Agency

The exports mainly consist of industrial pellets (pellets intended primarily for burning at high-capacity co-generation plants, that meet the new ENplus-B standard, Table 2), but over the last 1.5 years, already four Russian pellet mills were successfully certified to the EN plus standard, and are exporting pellets of the ENplus-A1 class (white pellets, often called premium class pellets, for use in small-capacity pellet boilers, mainly in private residences) to the EU.

Russia's first specialized transshipment and warehouse complex at the port of Ust-Luga in Leningrad Oblast, near the Estonian border, deserves a special note. It started operating only in 2014, but has already become No. 3 among all of Russia's essential ports shipping pellets for export (fig. 1).

Four new large pellet mills were started up in 2014:

- DOTs+ LLC** (Bryansk), 80,000 tons of pellets per year.
- Arkhangelsky LDK-3 JSC** (Arkhangelsk Oblast), 100,000 tons of pellets per year.

According to the press service of the Governor

of Arkhangelsk Oblast, in accordance with the thermal energy development concept approved by the regional government in November 2014, the output of wood fuel pellets in the region must reach 500,000 tons/year by 2020.

Lesresurs LLC (Irkutsk Oblast), 30,000 tons of pellets per year.

Several mills have already been constructed in Irklutsk Oblast, for an output of 30,000 tons of pellets per year and more. In 2015, a few more mills will be commissioned, and in the next year 2016, the pellet output in the oblast will reach 500,00 tons/year. Pellets are exported from Irkutsk Oblast both to the EU and to South Korea.

Bionet JSC (Arkhangelsk Oblast), 150,000 tons of lignum pellets per year.

The reserves of hydrolyzed lignin in the Russian Federation estimated at dozens of millions of tons are comparable to other timber processing waste like bark, sawdust and so on, but most interestingly, their difference is in their more homogeneous nature, and above all in their higher concentration (in dumps near hydrolysis plants). Most hydrolysis and biochemical plants dispose of their lignin in dumps, thus polluting large areas,

which creates problems both for the environment and for the enterprise. Many European specialists visiting such plants emphasize that they have not seen such colossal concentrations of unused energy raw material anywhere in Europe.

In Nizhny Novgorod Oblast, German pellet maker German Pellets (the largest in Europe) announced its contribution to and funding of the construction of a pellet mill with a capacity of 500,000 tons/year. It may be concluded that the manufacturing of pellets in Russia and their shipping to its buyers in the EU are quite profitable for the company. One more factor to be considered is that Germany, and other European countries too, have faced big problems with quality raw materials, in terms of both available quantities and prices that are continually rising.

Taras V. Shevchenko, associate CEO of the Sayano-Shushenskaya HPP, RusHydro JSC, told us about a very interesting project of pellet making from timber already submerged or sinking at hydro powerplants in the Krasnoyarsk Territory. The purpose of the project is to completely clean the HPP reservoir of wood residues in 10 years; to gain economic advantage from processing abandoned timber left after HPP construction and during forest husbandry work; to improve the environmental situation; to reduce the indirect costs related to HPP structures' protection from free-floating logs and the manufacture of solid biofuel. Experts estimate the abandoned timber floating in the HPP basin at 1.5 to 2 million m³. This volume of wood is sufficient to make 500,000 to 700,000 tons of quality pellets or briquettes.

Most experts agree that biomass is the most promising type of renewable energy sources (RES) for Russia today. They believe this should be developed as an integrated solution for waste disposal. The highest potential for bioenergy in the RF is waste disposal in the timber processing and agro-industrial sectors, food industry, and domestic waste (the total industrial biomass potential in the RF being 15,00-20,000 MW; for comparison, the capacity of all nuclear powerplants in Russia was 23,643 MW in 2011).

It should be noted that investors have already noticed the potential of the bioenergy sector in Russia. For instance, according to the consultancy company Rosbioconsulting, the accumulated investments in bioenergy have grown 18-20 times over the last ten years. As of 2010, the investments in bioenergy amounted to about 30 billion rubles, or 88-90% of the total investment in RES in the country. According to the National Union for Bioenergy, RES and Ecology, Russia's potential volume of timber processing industry waste is about 200 million cu. m/year, and the annual industrial and domestic waste to be used for energy generation is about 165 million tons.

Among the main obstacles for bioenergy development in Russia are the lack of a governmental support system, lack of Russian RES standards, relatively low electric and thermal energy charge rates (although these have noticeably grown over the recent years), and above all, problems with investments in

Table 2. Standards adopted today in the ENplus classification of wood fuel pellets

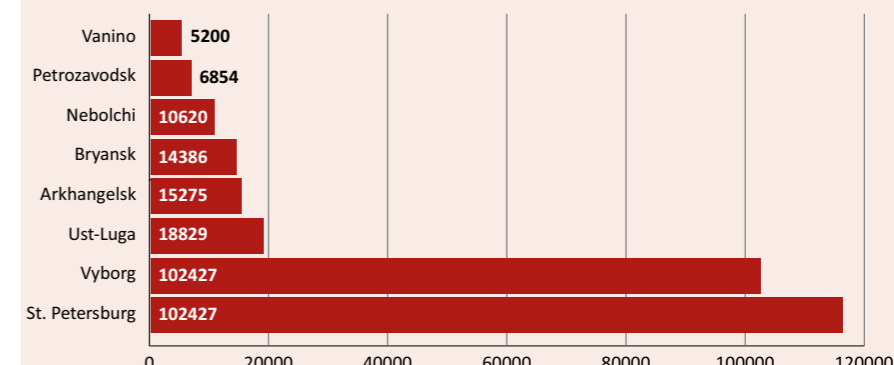
Parameter	Group	ENplus-A1	ENplus-A2	ENplus-B
Diameter	mm	6(±1) or 8(±1)	6(±1) or 8(±1)	6(±1) or 8(±1)
Length	mm	3.15 < L < 40	3.15 < L < 40	3.15 < L < 40
Bulk density	kg/m ³	> 600	> 600	> 600
Calorific value	MJ/kg	> 16.5	> 16.3	> 16.0
Humidity	%	< 10	< 10	< 10
Dust (< 3.15 mm)	%	≤ 1	≤ 1	≤ 1
Mechanical strength	%	> 97.5	> 97.5	> 96.5
Ash content (for ash temperature of 550°C)	%	< 0.7	< 1.5	< 3.0
Ash softening temperature	°C	> 1200	> 1100	> 1100
Chlorine	%	≤ 0.02	≤ 0.02	≤ 0.04
Sulfur	%	≤ 0.03	≤ 0.03	≤ 0.04
Nitrogen	%	≤ 0.3	≤ 0.5	≤ 1.0
Copper content	mg/kg	≤ 10	≤ 10	≤ 10
Chromium	mg/kg	≤ 10	≤ 10	≤ 10
Arsenic	mg/kg	≤ 1	≤ 1	≤ 1
Cadmium content	mg/kg	≤ 0.5	≤ 0.5	≤ 0.5
Mercury	mg/kg	≤ 0.1	≤ 0.1	≤ 0.1
Lead	mg/kg	≤ 10	≤ 10	≤ 10
Nickel	mg/kg	≤ 10	≤ 10	≤ 10
Zinc	mg/kg	≤ 100	≤ 100	≤ 100

projects having a payback period of 10 to 15 years, which is often too long a time given the real situation in Russia, especially today's reality of sanctions implemented against Russia by the EU and the Western world in general.

Currently, the RF Ministry of Energy is developing the draft resolution "Amendments to some acts of the Russian Federation Governments on encouraging the use of RES on the wholesale electricity and power market." The Government of the RF has adopted an integrated program of bioenergy development and in particular of the use of vegetable biomass in the RF until 2020. In all, 367 billion rubles will be allocated for its support. The document envisages setting up a technological and engineering basis for bioenergy development, support for engineering efforts and equipment manufacturing, and support to regional programs for the use of biomass in decentralized energy supply.

Just recently, Vice Premier Arkady Dvorkovich approved the "Plan of Bioenergy Development in the Russian Federation." The Ministry of Natural Resources is the main executive agency for the plan, implementing several essential activities to promote bioenergy development in Russia. Its premise is that the Russian potential for the development of this sector of the economy is tremendous. The timber reserves in the forests are 82 billion cu. m (over one quarter of the world reserves). The annual timber harvesting exceeds 500 million m³. Today, 40-60 m³ of timber sawing waste on average is left on each hectare of felling. The waste of timber harvesting and timber processing facilities may be recycled into fuel pellets, briquettes or fuel chips. According to expert data, over 80 million cu. m of wood biomass is generated in the Russian Federation in one form or another. This is logging residues on forest sites, low-value hardwood left standing, and timber production waste (chips and dust). This

Fig. 1. The main export points in Russia from January till June 2014, tonns



Source: Infobio Information Agency

Distributed and self-contained energy supply system using local fuels: A promising line of Russian energy sector development in the 21st century

enormous undemanded mass generated annually makes Russia a very interesting market in terms of bioenergy development. One of the main goals of the "Dvorkovich plan" is to build a domestic biofuel market in order to generate demand, which would push supply, helping investors to decide on pellet and briquette facilities to be set up in Russia.

Under the plan, lists of RF constituent members to implement pilot bioenergy projects are prepared. These regions will have to develop their own regional bioenergy development programs. Many regions of Russia already have their own programs aimed at promoting processor chains, starting from the production of raw timber material as such and its processing into one or another biofuel, up to biofuel burning at industrial or communal energy facilities.

Timber is one of the principal types of RES in Russia, and the waste obtained in timber harvesting and processing can be successfully used in energy generation. According to the State Research Center for the Forestry and Timber Sector of the RF Ministry of Industry and Trade, facilities produce up to 1 million tons of wood fuel annually, and up to 80 or 90 percent of these products are exported abroad.

So far, the domestic wood fuel market is poorly developed. However, several RF constituent members are already implementing regional programs for municipal boiler plant switchover from coal and black oil to local wood fuel. This should be reviewed in more detail.

ARKHANGELSK OBLAST

By 2030, in the north of Arkhangelsk Oblast it is intended to completely give up imported black oil fuel and diesel fuel in local energy generation, primarily by increased use of local fuels. It is expected that in the future, the fuel balance of Arkhangelsk Oblast will include 54% of natural gas, 44% of biofuel and 2% of coal.

Annually, up to 5 million m³ of wood waste from the activity of timber industry facilities is generated in Arkhangelsk Oblast. About 2 million m³ is used by the facilities in their own boiler plants. Harvesting waste remains without demand, as does the waste from the activity of small processing facilities in communities. Considering the available forest resources, the government of Arkhangelsk Oblast decided to switch the communal energy sector over to renewable fuels.

For instance, the target program "Energy saving and higher energy efficiency in Arkhangelsk Oblast

for 2010-2020" provides for the changeover to biofuel of 101 boiler plants, the construction of 15 new boiler plants, and the construction of grounds for temporary storage of wood waste in the region's communities. The first results of the program implementation in 2010-2013 were the construction of 8 new biofuel boiler plants, the rebuilding of 43 boiler plants for burning wood fuel and closing down 22 obsolete loss-making boiler plants. These actions enabled avoiding the purchase of 51,000 tons of coal and 21,000 tons of black oil and diesel fuel. The resulting operating cost saving was 141 million rubles.

By the end of 2013, the proportion of local raw material in the overall balance of fuel consumption by municipal energy facilities of Arkhangelsk Oblast was increased to 37% by cutting the use of expensive and environmentally unfriendly oil products and coal. For comparison: in 2007, the proportion of biofuel use did not exceed 18%.

The reconstruction of existing boiler plants, opening of new ones and construction of facilities to produce wood fuel are carried out at the expense of private investors. The regional authorities in their turn have adopted several legislative measures to promote investments in energy efficiency improvement projects based on RES and local types of fuel. For example, apart from tax benefits, companies may buy equipment for their production using funds of the oblast program of small and medium business support.

It should be noted that the operation of such enterprises contributes to the development of the entire region's economy; in the last year, the total tax deductions by Biotoplivo alone to budgets of all levels exceeded 2.5 million rubles. Besides, starting up new boiler plants enables giving up the operation of inefficient heat supply facilities. For example, the commissioning of the Shkolnaya boiler plant (Bereznik settlement) burning raw stuff by Biotoplivo enabled the closing down of three old boiler plants that burned firewood. According to Igor Orlov, Governor of Arkhangelsk Oblast, such boiler plants and biofuel making facilities closed into one process chain are an essential component of the regional energy efficiency program. "Our goal is complete abandonment of imported fuel, and Bereznik is a vivid example of the clever use of forest resources. It is a very proper and logical solution, which should be implemented in all of the districts of our Oblast", the head of the region commented.

Currently, this northern territory is working on setting up a biofuel exchange – a thoughtful and efficient system of wood waste collection and processing.

REPUBLIC OF KOMI

The Republic of Komi is a key forest region in the north-west of Russia, with a timber reserve of 2.8 billion m³. The forest utilization is about 7 to 7.5 million cu. m/year. Thus, according to experts, at least 1.5 million tons of wood waste is generated in this RF constituent member annually. Consequently bioenergy may become a very important sector of the economy in Komi. In addition, more active utilization of wood waste as fuel will improve the region's environmental situation, reduce the budget costs for public utility services, create new jobs, and improve the economic attractiveness and efficiency of timber processing facilities and timber harvesters.

According to Alexander Gibezh, First Deputy Minister of Industry and Transport Development of the Republic of Komi, the bioenergy development plan for the region may be subdivided into two phases. The targets of the first one, for the years 2014-2016, include: the complete utilization of wood waste from timber processing for bioenergy generation purposes; partial replacement of coal with fuel briquettes on communal boiler plants; the implementation of pilot projects for reconstruction of communal boiler plants and the installation of heat generation equipment using biofuel for heat supply of social objects instead of electric heating or obsolete equipment.

Under the 2nd phase of implementation of the region's bioenergy development plan for 2016–2020, the raw material for biofuel will include, apart from timber processing waste, also low-grade timber, and waste of improvement cutting. "The projects for the reconstruction of communal boiler plants providing for a switchover to biofuel must enter the systemic implementation phase," Alexander Gibezh adds. "Besides, it is planned to build a system for biofuel supply to private homes." Already today, pellets and briquettes in the Republic of Komi are subsidized fuels for benefit holders.

To support investment projects related to bioenergy, the region's authorities have developed motivation instruments. Among them are tax benefits and subsidies up to 4 million rubles to compensate part of the costs of biofuel facility building. As of today, eight facilities making fuel briquettes and pellets have been launched in Komi.

Apart from biofuel facilities, grounds for the temporary storage of wood waste are being opened in the Republic. Since 2012, the total investment of the Republic of Komi in the construction of the bioenergy sector infrastructure has increased from 3.4 million rubles to 61.8 million rubles in 2014. The grounds are links connecting sawmills as wood waste suppliers and processors making biofuel.

Currently, three boilers have been switched over to biofuel in the region, and 12 pellet boilers have been installed. Also, feasibility studies are being developed in the region for updating heat supply systems for communities located in forest areas of the Republic. In 2013, such feasibility studies were prepared for six communities, and in 2014, feasibility studies will be prepared for six more

localities. The development of feasibility studies is a basis for attracting investors for participation in the projects of boiler plant switchover to biofuel.

Apart from reconstruction of communal boiler plants, the Republic is implementing projects of co-generation (combined generation of electric and heat energy). The first mini co-generation powerplant (mini CPP) on biofuel was started by SevLesPil in May 2014. When the company reaches its design output, it will be able to completely provide itself with heat and electricity, generating 12 MW of heat and up to 2.4 MW of electric power.

Under the regional program "Energy saving and higher energy efficiency in the Republic of Komi", one more co-generation powerplant construction project is being implemented by Bioenergy Company LLC.

KHANTY-MANSI AUTONOMOUS OKRUG – YUGRA

During timber harvesting, nearly one fifth of the total timber harvested goes to waste. At the sawn timber production stage, the waste is still higher, reaching 40%. Today, low-grade timber and timber sawing and processing waste are partially used in KMAO as firewood for municipal boiler plants and in private homes, or processed into process chips by such companies as Yugra-Plit JSC and Surgutmebel LLC. The facilities consume about 600,000 cu. m of low-grade timber annually. It is intended to increase the scope of processing by launching new productions and construction of boiler plants burning biofuel and wood chips.

According to the latest data, the region's heat supply facilities include 17 boiler plants on wood fuel. Surgutmebel, whose product range also includes wood pellets, is actively implementing and installing pellet boilers at municipal facilities and in private homes. The company has already installed over 100 boilers for individual use.

In order to support companies producing wood fuel, the program "Development of the forestry and timber sector of Khanty-Mansi Autonomous Okrug – Yugra for 2014-2020" provides for subsidies for biofuel production. A subsidy will be provided at 570 rubles per ton of fuel produced. For the year 2014, the funding for this purpose was slightly over 3 million rubles.

PELLET BOILERS AND BOILER PLANTS IN RUSSIA

The first pellet boiler plants appeared in the Russian Federation in the mid-2000s, at first in the North-Western and Central Regions, near the first Russian pioneer mills producing wood fuel pellets. The boilers in such boiler plants were initially imported. Today, Russia has many domestic manufacturers of pellet boilers, some of them making foreign brand boilers under license, other using their own developments. Many boilers and boiler plants in Russia use such fuels as wood fuel briquettes and chips.

Over 70 percent of the territory of the RF belongs to the self-contained utility zone.

Today, the most common are two main structures of the uninterruptible supply system (USS), centralized and distributed (localized). A centralized system contains one uninterruptible power source (UPS), to which all loads are connected. In a distributed system, a group of local users is supplied from a separate (local) UPS.

Distributed power supply is a segment of power supply management comprising small generating units and small generating sets, in particular those not connected to centralized power mains, and using traditional fuels and renewable energy sources. The distributed or small energy sector may develop along the following lines: water energy, wind energy, biomass energy, solar energy, geothermal energy, and other self-contained energy units of low or medium capacity. Currently, over 70 countries worldwide have their national distributed energy development programs and reliable legislative support for this trend. In Russia, such a program and its legislative support still do not exist.

Distributed energy is the same as small or decentralized energy. Self-contained energy means one stand-alone source generating electricity for any one object (building or structure) and operating separately from the power grid.

It includes the regions of the Extreme North, Far East, Siberia, Buryatia, Yakutia, Kuril Islands, Kamchatka, and some parts of Central Russia. According to RosTechNadzor, this area contains over 140,000 rural inhabited localities, with about 30 million people living in it. Even in centralized energy supply areas, the natural gas use is 52.7%, with just 12% of villages having natural gas supply. While, for example, in the decentralized energy segment of Krasnoyarsk Territory, the total installed power of diesel generator powerplants in remote northern districts is about 30 MW.

Currently, the broad use of wood and other local fuels in decentralized power supply of the RF regions is restricted mainly by the lack of profitable, easy-to-make, and easy-to-use power generating sets of low or medium capacity: ORC modules (Organic Rankine Cycle), Stirling engines, and wood gas generators. The main impediment to the broad implementation of such units in Russia are the high prices for imported equipment and the absence of its manufacture in the RF. Establishing manufacture by Russian factories may be a solution – for instance by setting up joint ventures with well-known foreign manufacturers or by buying licenses with operating and design documentation for its manufacturing. Such an approach will enable the setting up of equipment production in Russia in the near future (in 1 or 1.5 years), and later improve the licensed equipment models and the possibility of making them on the basis of our own developments.

According to expert estimates, the world RES market will reach the level of 2 trillion US dollars. The traditional users of the RES market are the European Union, USA, Japan, and Canada; Russia's share is just 0.1%-0.2% of the world RES consumption. Nevertheless, Russia has set a goal of bringing RES generation and consumption to 4.5% of the Russian energy balance by 2020. This is set forth in RF Government Instruction No. 1-P

of 08.01.2009 "The main lines of governmental policy in improving the power sector's energy efficiency on the basis of renewable energy sources for the period up to 2020." On the basis of this instruction, it was defined what RES power generation and consumption indicators (except for hydro powerplants with an installed power exceeding 25 MW) are to be reached: by 2010, 1.5%; by 2015, 2.5%; and by 2020, 4.5%.

Now regarding the use of solid biofuel made from wood raw material. This writer believes that for Russia, where the population of the northern and far eastern regions is about 10 million, where the lack of energy resources is constantly felt, electricity is generated in a decentralized mode and mostly by diesel generator powerplants where diesel fuel is brought via Northern Supply Hauls from thousands of kilometers away, and the electric power prime cost is soaring, the use of small CPP burning biomass will be economically justified, both reducing the power cost and creating new jobs. The total number of diesel powerplants in Russia exceeds 5,000, and the annual fuel consumption is over 6 million tons. But regions with centralized power supply also have many facilities where the use of RES is economically efficient. In those regions, biomass (firewood, chips, wood waste, pellets, and briquettes) may be used as local fuel both for heat supply to smaller communities and minor industrial facilities, and for co-generation using gas generating stations or micro turbines.

The development of the bioenergy sector in the country will reduce CO₂ emissions, improve the environmental situation in the regions, reduce the Housing and Utilities's energy purchase costs, and generally improve the efficiency of the forestry and timber sector operation.

*Sergei PEREDERI,
EKO Holz-und Pellethandel, Director*



Implementation of Priority Investment Projects in Forest Management in Russia

Early in 2015, the Natural Resources Institute Finland analyzed the experience of implementation of priority investment projects in Russia. Currently, a public report is being prepared, to become available soon on the Internet for concerned parties.

The institution of priority investment projects in forest management was launched in 2007. In the last seven years, 148 projects were registered; of these, as of January 1, 2015, 129 projects, or 87 per cent, are being implemented according to the published data of the Ministry of Industry and Trade, with the rest deleted or being deleted from the priority list. However, only 108 projects are actually working, while the rest are not

developing for several reasons while remaining on the list of priority projects of the Ministry. The main cause of the lack of progress for several of the announced projects is suspended funding or problems with the company's timber land holding.

According to the official data on the projects registered by the Ministry, the investments shown in the projects underway amount to 580.9 billion rubles. This money mostly comes from loans from international financial institutions. The average time a wood processing facility in a priority investment project comes on stream is 3.8 years, according to design documentation. The average payback time is 6.8 years. The priority investment projects currently underway consume 89.1 million m³ of wood per year, which makes 46 per cent of the entire wood harvested in the Russian Federation in 2013. In addition, 71.7 million m³ of wood is earmarked for the implementation of priority investment projects, which is about 10 per cent of the estimated wood to be felled in the Russian Federation.

Investors are interested most of all in access to cheap wood in the form of a large timber land holding, for which just 50 per cent of the rent has to be paid. This makes leasing forests and their subsequent subleasing very profitable, and several companies do in the Republic of Karelia, the Krasnoyarsk Territory, the Republic of Bashkortostan, and the Tver Oblast do in fact do this.

Investors are mostly attracted by projects related to timber sawing (66 per cent of all projects), plywood making (12 per cent) and chipboard making (11 per cent). Ten per cent of all projects made investments in pulp and paper making. It should be said that the average size of investment in pulp and paper making is seven times higher than the investment in an average timber sawing project. Most of the priority investment projects currently underway are within the framework of already existing facilities and are aimed at updating them, e.g. building new shops for an existing specialization.

For one half of all priority investment projects, the size of the investment does not exceed 1 billion rubles. There are very few large investment projects with investments of over 10 billion rubles; just 11 projects out of 129. We have come to the conclusion that timber sawing projects supported with a good resource base are the most attractive for investors. Investment in timber sawing is relatively small because the costs of production and harvesting (provided the forest has good-quality trees and roads) are lower than in Europe and the demand for sawn timber is growing. All this makes such projects highly feasible, with record-high payback periods, and therefore attractive for investors. Besides, since most new sawmills were built by foreign corporations, export-oriented sales are generally managed via the parent company's head office outside the Russian Federation, and many investors believe that this also reduces risk.

It should also be noted that many investors implementing priority investment projects have faced several problems which made them suspend a project or re-focus it. The most frequent problems are:

- 1) no good-quality raw material in the timber land allocated for the project, which has prevented launching the project;

Geography of priority investment projects in forest management in the Russian Federation



Source: Natural Resources Institute Finland

- 2) despite resources being available, the regional authorities did not provide access to the leasing base;
- 3) investors or their partners refused to fulfill their obligations;
- 4) delayed scheduling, and as a result, local authorities applying to the Ministry of Industry and Trade to delete the project from the priority list.

Our analysis of the stoppage of priority investment projects, based on published data, shows that the main reason for investors' refusal to implement such projects was difference between the actual structure of the forest in the allotted land and the declared one. The main reason for local authorities' applications for project deletion from the priority list was disruption of project implementation deadlines.

The number of new priority investment projects is decreasing; the highest number of such projects was registered in 2009 (44 projects), and the lowest, in 2013 (6 projects). New projects are prepared very slowly, and investors face bureaucratic problems and high requirements for priority projects by the Ministry of Industry and Trade. The largest number of investments was attracted in the first two years of the priority investment project in 2008–2009. Since 2010, the investments have dropped by an order of magnitude. The lowest amount of investments was attracted in 2011.

The leading authorities in terms of the number of priority investment projects that have been initiated are the Vologda Oblast, the Perm Territory and the Krasnoyarsk Territory. Of these, the largest investment and allotted felling area is in the Krasnoyarsk Territory. Since the institution of priority investment projects was set up in order to increase timber harvesting and processing in the Russian Federation, the actual quantity of harvested and processed wood as a result of project implementation must be the basic criterion of the successful implementation of any project. From this point of view, the institution of priority investment projects has been most successfully exploited in the Republic of Komi, which leads in the quantity of wood harvested and processed under priority investment projects.

It should be noted that although the institution of priority investment projects has not yet satisfied the expectations that existed in 2007 for forest industry modernization in Russia, investments in several projects have helped to develop it positively. Of course, the scope of investments in the timber industry is not sufficient for its complete modernization; this is explained by the risk related to the investment in the industry and by the lower competitive advantages of such projects related to investment in tropical timber.

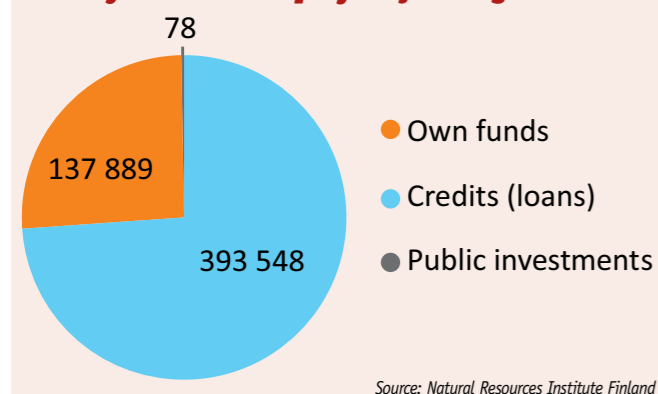
From the technical point of view, and in the context of ruble devaluation and raised refinancing rates from the Russian Central Bank, investments in priority investment projects for forest management are becoming more affordable for foreign investors. More expensive loanable funds in Russia may be replaced with cheaper credits from abroad, which makes such investment attractive. But this affordability is restricted by the existing risks and known problems (lack of quality forest in the desired region, influence of authorities on access to resources, etc.) in the implementation of priority investment projects.

The downgrading of Russia's credit rating by international agencies in February 2015 will lead to more expensive loans and capital drain – from the timber industry in particular. On February 19, 2015 a report was read in the State Duma about the legislative transition that needs to be made toward an intense model of forest industry development, in which a rise of the minimum cost of a priority investment project was mentioned (currently this figure is 300 million rubles). In our opinion, such a rise under the current conditions will not enhance the inflow of investment into the timber industry. The number of potential investors and project initiators is already quite small, and a higher threshold will reduce by even more the number of those willing to get involved and favor large companies. A reduction in the number of participants will increase the risks related to forest earmarking for a project and increase the chances that its implementation will be refused. Despite the large potential for timber harvesting in the Russian Federation, estimated felling is utilized to 27.7 per cent (for the country in general). This indirectly suggests that there are resources for implementation of priority investment projects if we neglect the differences in the transport accessibility of forests in different regions. There are already regions with a deficit of wood harvesting resources and a surplus of wood processing capacities.

Economic sanctions imposed on Russia in 2014 have caused problems for funding large investment projects in the timber industry. Meanwhile, the devaluation of the ruble has enhanced the competitiveness of timber processing in Russia – but only until inflation increases local production costs. Nevertheless, in our opinion, investments in Russia are attractive under the current conditions, especially in the production of pulp for Asian markets.

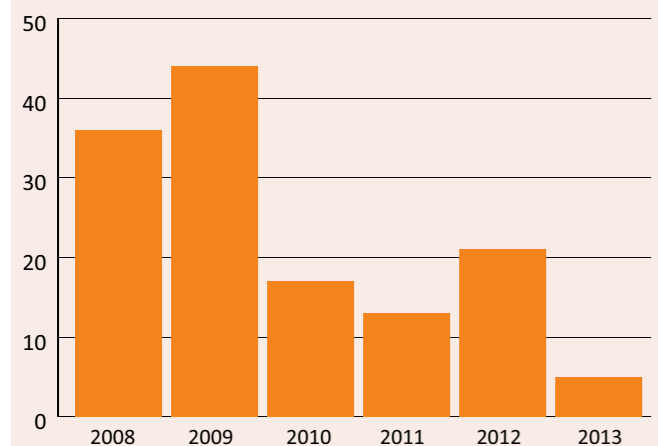
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Priority investment project funding sources



Source: Natural Resources Institute Finland

Priority investment projects in forest management registered by the Ministry of Industry and Trade in 2008–2013



Source: Natural Resources Institute Finland according to the Russian Federation Ministry of Industry and Trade

LIST OF PRIORITY INVESTMENT PROJECTS IN FORESTRY MANAGEMENT IN RUSSIA

STATUS AS OF THE BEGINNING OF 2015. AN ATTEMPT AT A SUMMARY

To begin with – a bit of background. To encourage the development of strategic sectors of the economy, a mechanism of governmental support to promising large investment projects has been developed in Russia, aimed at making high added value products within Russia. To get such support, an investment project has to be entered on to the so-called "List of priority investment projects." Each industry has its own list, to be maintained by the relevant federal ministry or department. In addition, such lists may exist at the regional and municipal level, and decisions on particular methods of governmental support will be made there.

The particular terms of granting priority investment project status, and the preferences offered are stated in the statutory documents regulating the maintenance of such lists and measures of governmental support for projects entered on them.

To encourage the development of the forestry and timber sector, a mechanism of governmental support to investment projects on the "List of Priority Investment Projects in Forest Management" has been working in Russia since 2007. Today, the Ministry of Industry and Trade of the RF is responsible for maintaining this list. The conditions of assigning priority status to a project are gradually changing (becoming

stricter as a rule), therefore there is no use describing them in detail here – firstly, this information is publicly available, and secondly, it may become obsolete by the date of issue of this collection. Adding an investment project to the priority list offers several preferences to the investor, the most important ones being the right to obtain an allowable cut area without an auction; furthermore, the investor will be entitled to a reduced rent for forest sites, with a factor of 0.5, for the payback period.

We had our reasons to title this publication an ATTEMPT at summarizing the priority project data – because, strange as it may seem, complete and exact data would not be provided by ANY of the departments that supposedly should have it by the nature of their functions (and make it available upon journalists' request according to media law). The long, and honestly very difficult work of obtaining, bringing together, and analyzing dissonant information from various sources resulted in the table that we are now offering you. Probably, in fact – definitely, it is far from perfect and needs supplements and corrections, however we daresay that the industry's specialists will not see a similar collation anywhere else. That is to say, you may find it of use.

Investor / Name of Project / City	Volume of Investment, million Rubles.		Volume of the consumed raw material, th m ³	Allowable cut size, thsd. m ³	Types of Products and Annual Production Volumes	Employment impact (number of man)	Period of Construction	Payback Period, Number of Years
	Total	Incl. Borrowed Funds						
NORTHWESTERN FEDERAL DISTRICT								
KOMI REPUBLIC								
Mondi Syktyvkar LPK • Syktyvkar Creation and modernization of timber-processing infrastructure	17,110	17,110	1,000	1,935	Pulp cooking – 189 thsd t Paper product – 145 thsd t Market pulp – 60 thsd t	No info	2008–2017 (production started in 2010)	7.8
<i>Under constant modernization</i>								
Syktyvkar Integrated Industrial Plant Production of pre-fabricated wooden houses from solid boards, and production of structures for wooden house construction	816	716	404.3	404.3	100 m ² area wood houses – 300 pices Profiled timber – 14 thsd m ³ Glued timber – 8.6 thsd m ³ Moulded strips – 6.2 thsd m ³	140	2009–2013 (production started in 2009)	5.7
<i>No information</i>								
Lesozavod #1 • Ust-Vymsky district, Kazluk village Plant of construction elements for wooden house construction	1,000	Her	179.8	179.8	Sawn timber – 19.4 thsd m ³ incl. export – 14.9 thsd m ³ Construction elements for wooden house construction – 30.7 thsd m ³ Technological wood chips – 45 thsd m ³	156	2009–2010	4.9
<i>In August 2013 technical startup. Problems with circulating assets and raw materials</i>								
PechoraEnergResurs • Troitsko-Pechorsk Timber-processing production	1,253.5	1,253.5	311.3	181.9	Glued timber – 41 thsd m ³ Furniture board – 12 thsd m ³ Moulded strips – 4.2 thsd m ³ Pellets – 74 thsd t Essential oils – 45 thsd kg	354	2009–2012	5.8
<i>2011 – start of pellet production. 2013 – start of sawn timber and essential oil production. Late 2014 – start of production of furniture board was planned</i>								
Luzales • Priluzsky district, Kydziavidz village Modernization of woodworking plant	400	No info	No info	No info	Dry sawn timber – 143 thsd m ³	No info	2010–2013	No info
<i>Put into operation</i>								

Investor / Name of Project / City	Volume of Investment, million Rubles.		Volume of the consumed raw material, th m ³	Allowable cut size, thsd. m ³	Types of Products and Annual Production Volumes	Employment impact (number of man)	Period of Construction	Payback Period, Number of Years
	Total	Incl. Borrowed Funds						
Azimut • Troitsko-Pechorsky district Timber-processing production	558	No info	No info	No info	Sawn timber – 73 thsd m ³ Glued timber – 10 thsd m ³ Furniture board – 5 thsd m ³ Moulded strips – 7 thsd m ³	300	No info	No info
<i>The first step of production was started in 2012. Now sawn timber and briquettes are being produced. Start up of power station based on bio-fuel is in planning</i>								
VOLOGDA OBLAST								
LDK #2 (Group of Companies Vologodskiy Lesopromyshlenniki) Vytegra Production of dry sawn timber	706.6	550.8	190	136.8	Sawn timber – 89.8 thsd m ³	148	2008–2009 (started in 2010)	5
<i>Put into operation in 2010 with Promsvyazbank financing. In 2011 it reached full capacity</i>								
Cherepovets Plywood and Furniture Plant • Cherepovets Modernization of chipboard plant	985.3	626.8	306	97	Increase in chipboard output – up to 208 thsd m ³ , incl. laminated chipboard	22	2008–2009 (started in 2009)	6
<i>According to plan, Dieffenbacher chipboard press was put into service in 2009, later reconstruction of plywood production was put into operation</i>								
Patriot • Velikiy Ustyug Organization of sites for logging, wood-sawing and woodworking	362.9	362.9	80	50	Glued timber – 12 thsd m ³ Furniture board – 5 thsd m ³ Parquet plank – 100 thsd m ² Moulded strips – 1.95 thsd m ³ Technological wood chips – 11.9 thsd m ³	158	2008–2015	6.9
<i>No information</i>								
Koskivilva • Sheksna Organization of logging, and woodworking	5,223.8	3,055.8	700	363.2	Sawn timber – 20 thsd m ³ Birch veneer – 65 thsd m ³ Plywood – 40 thsd m ³	633	2008–2016	8.4
<i>Owned by a Finnish company. Wood-sawing was set in operation in 2007</i>								
Nikolsk Forest • Nikolsk Organization of logging, wood-sawing, and woodworking	340	340	153.9	127.6	Softwood sawn timber – 6.5 thsd m ³ Glued timber – 8 thsd m ³ Planned timber – 6 thsd m ³ Wood briquettes – 11.8 thsd t Round logs – 8 thsd m ³ Technological wood chips – 12.5 thsd m ³	220	2009–2015	9.9
<i>Consolidation of small enterprises. It has started logging and is now building processing facilities</i>								
SAU LH VO Vologdaleskhoz Organization of logging, wood-sawing, and woodworking	821.5	821.5	824	824	Sawn timber – 70 thsd m ³ Planned timber – 30 thsd m ³ Glued timber – 20 thsd m ³ Round logs – 12 thsd m ³	984	2009–2019	9.3
<i>Three plants are to be built, and one was set in operation in 2013</i>								
Novatorsky LPK • Velikiy Ustyug Production of houses form glued profiled timber	323.5	318	220	213.6	Sawn timber – 13.4 thsd m ³ Moulded strips – 3.5 thsd m ³ Prefabricated houses – 280 pieces Technological wood chips – 20 thsd t	75	2008–2016	8.7
<i>No information</i>								
BioLesProm • Verkhovazhje settlement Wood-sawing and production of pellets	300.3	300.3	64.2	49.5	Sawn timber – 60 thsd m ³ Pellets – 29.2 thsd t	180	2009–2015	6.5
<i>No information</i>								
Kholbit • Mezhdurechensky district Organization of logging, and rearrangement of a wood-working plant	307.1	307.1	151.5	151.5	Floor plank – 10 thsd m ³ Moulded strips – 4.5 thsd m ³ Sawn timber – 29.1 thsd m ³ Technological wood chips – 20 thsd m ³	114	2010–2016	9.2
<i>No information</i>								
Sokolsky DOK (AFK Sistema) • Sokol Development of production	725.3	725.3	405	364.8	Timber houses – 85 thsd m ² Frame-houses – 75 thsd m ² Window unit – 73 thsd m ² Cement-shaving boards – 19.2 thsd m ³ Sawn timber export – 30.1 thsd m ³ Sawn timber – 15.4 thsd m ³	263	2008–2012	3.9
<i>Used to be a part of Investlesprom Holding. Modernization of glued timber production, and pre-fabricated houses production ended in 2014. There are plans to increase production. Production of cement-shaving boards has not been realized</i>								
Babushkinsky Business Alliance Babushkinsky district Timber-processing production	363.1	363.1	175.4	175.4	Furniture board – 8.8 thsd m ³ Moulded strips – 11.1 thsd m ³ Sawn timber – 18.8 thsd m ³ Wood pellets – 10 thsd t Technological wood chips – 14.5 thsd t	184	2010–2015 (started in 2013)	7.2
<i>No information</i>								
Kharovsk Forest • Kharovsk Processing of thin timber and optimization of production of planed profiles	316.79	No info	No info	107	Round log – 2 thsd m ³ Sawn timber – 24.7 thsd m ³ Moulded strips – 6 thsd m ³ Wood brquettes – 10 thsd t Wood charcoal – 3 thsd t	76	2011–2015	No info
<i>RUF briquettes are being produced. There is no information about the startup of other lines</i>								

Investor / Name of Project / City	Volume of Investment, million Rubles.		Volume of the consumed raw material, th m ³	Allowable cut size, thsd. m ³	Types of Products and Annual Production Volumes	Employment impact (number of man)	Period of Construction	Payback Period, Number of Years
	Total	Incl. Borrowed Funds						
Kharovsklesprom (Group of Companies Vologodskiy Lesopromyshlenniki) • Kharovsk Reconstruction of production	1,060	1,000	450	No info	Sawn timber – 225 thsd m ³ Technological wood chips – 110 thsd m ³	No info	2012–2014	No info
<i>In 2013 the first step of modernized wood-sawing production and a boiler were set into operation. In December 2014 a new log sorting line was put into operation</i>								
Severodvinsk-Les • Velikoustyugsky district, Krasnoye Pole Timber-processing production	319	No info	No info	188	Planed sawn timber - 8 thsd m ³ Moulded strips – 12 thsd m ³	No info	2012–2015	No info
<i>The project is underway, though behind schedule</i>								
Kichgorodetskaya Forestry Company • Kichgorodetsky district Timber-processing production	491	No info	No info	No info	Dry softwood sawn timber – 12 thsd m ³ Dry hardwood sawn timber – 6.8 thsd m ³ Furniture board – 8 thsd m ³ Moulded strips – 11.1 thsd m ³ Wood briquettes – 10 thsd t	184	Since 2012	No info
<i>In October 2014 the company received a construction permit and started the plan of the plant</i>								
Vologda Wasteless Technologies • Babaevoye Organization of pellet production and woodworking	421.3	No info	No info	No info	Dry softwood sawn timber – 7.4 thsd m ³ Dry hardwood sawn timber – 2.6 thsd m ³ Glued timber – 8 thsd m ³ Moulded strips – 6 thsd m ³ Pellets – 30 thsd t	145	Since 2013	No info
<i>No information</i>								
Ustjeles • Sokol Plywood Mill	335.2	No info	No info	No info	Birch plywood – 36 thsd m ³ Technological wood chips – 43 thsd m ³	150	Until 2018	No info
<i>Construction work started in spring 2014, it is estimated that the first plywood plant will start in spring 2015, the second line – in 2018</i>								
Sivezh • Babushkinsky district Organization of logging sites and plant rearrangement	360	No info	No info	186.6	No info	No info	Since 2014	No info
<i>No information</i>								
ARKHANGELSK OBLAST								
Arkhangelsk Paper Mill • Novodvinsk Reconstruction of cardboard production	5,451.9	1,135	665	550	Cardboard – 35.1 thsd t Fluting paper – 98.2 thsd t	No info	2008–2014	12
<i>Continuous modernization of production</i>								
Ustyansky LPK (Group of Companies ULK) • Ustyansky district Timber-processing complex	1,500	No info	200	58.8	Sawn timber – 500 thsd m ³ Pellets	350	2009–2010	7.6
<i>Production was started in 2011. Considerable increase in facilities in comparison with planned expansion. Construction of a seed-growing center for 9 million young plants was started in 2011</i>								
Ilim Group • Koryazhma Modernization of cardboard-and-paper production and white paper production	14,900	–	770.8	728.8	Market cellulose – 159 thsd t Cardboard – 585 thsd t Paper – 372 thsd t	350	2008–2014	7.9
UK Solombalales • Arkhangelsk Modernization of processing plants and organization of the forestry infrastructure objects	2,718.9	2,032	1,000	714.5	Pulp cooking – 280 thsd t	648	2008–2018	6.5
<i>Solombala Paper Mill. The woodyard was modernized, but in 2013 production was halted, and oversight procedure was introduced. A fire occurred in July 2014</i>								
Ustyanskaya Timber-Processing Company (Group of Companies ULK) • Bereznik Low-grade timber processing, and pellet production	~5000	No info	1,300	No info	Sawn timber, pellets,	459	2015–2017	No info
<i>In May 2015 the building of a new plant for hardwood timber processing on the basis of the existing house-building factory, which has been recently purchased by GK ULK was announced. The inefficient factory will be fully reconstructed for a different function: during the first step temporal equipment for birch plank production will be bought, and in the next, a birch plank and furniture board plant, capable of producing 300,000 m³, will be built on the site of the house-building factory. It is estimated that a boiler will be set in operation in 2015; the building of a pellet workshop has already started</i>								
Onejsky LDK (AFK Sistema) • Onega Modernization of wood-sawing production and organization of logging sites	311	No info	335.8	335.8	Sawn timber – 270 thsd m ³ Technological wood chips – 229 thsd m ³	350	2012–2013	No info
<i>Used to be a part of Investsprom Holding. The factory is working at short capacity; in 2013 the project was on the verge of exclusion from the list of priority projects. After being bought by AFK Sistema, financing should be renewed</i>								
Lesozavod 25 • Arkhangelsk Modernization of production on Tsiglomen' site	1,700	No info	No info	No info	Sawn timber – 470 thsd m ³ Pellets – 60 thsd t	No info	2013–2015	No info
<i>Wood-sawing line started working in 2013. In October 2014 the assembly of pellet equipment was finished</i>								
Pomorsky Forestry Technopark Organization of timber processing, production of biofuel, and building of boilers, based on wood raw materials	30,000	29,696	No info	270	No info	No info	Since 2014	No info
<i>The project unites 18 small and medium-sized business projects in Kargopolsky, Konoshsky, Krasnoborsky, Plesetsky and Shenkursky districts of the Arkhangelsk region</i>								

Investor / Name of Project / City	Volume of Investment, million Rubles.		Volume of the consumed raw material, th m ³	Allowable cut size, thsd. m ³	Types of Products and Annual Production Volumes	Employment impact (number of man)	Period of Construction	Payback Period, Number of Years
	Total	Incl. Borrowed Funds						
LENINGRAD OBLAST								
MM-Efimovsky • Boksitogorsky district, Chudtso Organization of wood-sawing plant	2,584.3	1304	650	570.3	Sawn timber – 338 thsd m ³	287	2008–2012 (started in 2009)	7.3
<i>Pellet production started in 2012</i>								
International Paper • Svetogorsk Production of fully bleached Chemi-Thermomechanical Pulp (BCTMP)	4,206	4206	520	158.3	BCTMP – 200 thsd t	60	2005–2012 (started in 2013)	9
REPUBLIC OF KARELIA								
Kostomuksha Building Company Kostomuksha Logging and timber-processing	362.9	290.3	170	51.4	Glued timber, house units and planed timber – 16.8 thsd m ³ Pellets – 12.8 thsd t Technological wood chips – 42.3 thsd m ³	102	2009–2011	6.1
<i>The company was a candidate for exclusion from the list of priority projects. It had problems with its raw material base</i>								
Segezhsky Paper Mill (AFK Sistema) • Segezha Program of development, rearrangement and modernization (Project White Bear)	25,782	25,782	3,229	80	Pulp cooking – 796 thsd t Bleached pulp – 450 thsd t Bag paper – 295 thsd t Product of dendrochemistry – 31.4 thsd t	No info	2008–2012	12.5
<i>Used to be part of Investsprom Holding. The project was not set into operation. After being bought by AFK Sistema, the necessity "of reconsidering" the project was announced</i>								
DOK Kalevala • Petrozavodsk OSB plant	9,000	No info	No info	92.4	OSB boards – 300 thsd m ³	300	2010–2024 (the first step – 2012)	No info
<i>Second stage of the project is planned for implementation</i>								
NPO FinTek • Kostamuksha Factory of timber-processing and prefabricated houses	1200	No info	No info	No info	Softwood sawn timber - 175 thsd m ³ Glued timber- 40 thsd m ³ Planed profiles – 11.3 thsd m ³	250	2010–2020	No info
<i>The first step was finished in late 2012 based on the furniture plant in Kostamuksha. Construction of the second step, factory of pre-fabricated houses, has been started</i>								
NOVGOROD OBLAST								
Hasstaheer Norica Timber • Malaya Vishera Creation of planed sawn timber production at ZAO MADOK, and development of the forestry infrastructure	535	No info	250	No info	Technological wood chips – 15 thsd m ³ Glued timber Pellets – 20 thsd t	No info	2011–2017	No info
<i>Owned by the Austrian Concern, Holz Industries Leitinger, as well as MADOK ZAO. 2012 – start of planed sawn timber production and glued wood constructions.. October 2014 – start of pellet production.</i>								
Krestetsky LPK • Krestetsky district Creation of timber processing complex	3,800	No info	1,280	1,280	Строганные пиломатериалы OSB	No info	2012–2015	No info
<i>No information</i>								
CENTRAL FEDERAL DISTRICT								
SMOLENSK OBLAST								
Gagarin Plywood Plant • Gagarin Production of laminated chipboard	3,900	2,145	952	1,000	Laminated chipboard – 350 thsd m ³	350	2007–2009 (started in 2009)	5.3
<i>Has been in the possession of Egger (Austria) since 2011</i>								
Igorevsky Woodworking Plant (Russky Laminat) Kholm-Zhirkovsky district, Igorevskaya Construction of MDF plant	7,103	3,741.36	No info	No info	Chipboard, MDF – 400 thsd m ³	No info	2009–2013	No info
<i>Realization of the project was affected by a fire which occurred in September 2011, after which chipboard production was stopped (the fire destroyed the Siempelkamp press, installed in 2005). However, chipboard laminating continued: boards were purchased from third-party manufacturers. In March 2013 a new Siempelkamp press was set into operation. The building of an MDF plant is underway. In 2014 a tax relief agreement was reached with the region's government, and credit of 3.3 billion rubles was agreed with Sberbank. It is supposed to attract funds of the Investment Fund of the Russian Federation for infrastructure development in the district. The estimated production volume is 396,000 m³ MDF boards per annum.</i>								
BRYANSK OBLAST								
DOTS Plus • Bryansk Production of sawn timber and pellets	417.6	280.3	246	246	Pellets – 9 thsd t Sawn timber – 15 thsd m ³ Wood windows – 12 thsd m ³	418	2008–2014 (started in 2009)	6.9
Trubchevsky DOZ • Trubchevsk Organization of logging sites and timber processing	471.5	462.5	133.6	103.2	Glued timber – 12 thsd m ³ Parquet board – 100 thsd m ³ Granular activated charcoal – 1.1 thsd t Moulded strips – 15.9 thsd m ³ Pellets – 143 thsd pieces Technological raw materials and firewood – 25.9 thsd m ³	250	2009–2013	6.3
<i>In 2013 it was named as an incorrigible defaulter as regards forest payments. There is no information about the project realization</i>								
Dyatkov-D0Z • Dyatkovo New chipboard and laminated chipboard plant	1,900	No info	252.9	No info	Chipboard and laminated chipboard – 250 thsd m ³	235	2012–2020	No info
<i>Katyusha furniture plant, equipped with Italian equipment, was opened in 2012 on the base of the plant</i>								

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	Total	Incl. Borrowed Funds						
Avand Capital • Brasovsky district, Pogrebi Timber-processing plant	350.5	No info	No info	24.3	Round logs, thermo wood, pellets, briquette and wood charcoal, moulded strips	No info	2009–2018	6
<i>2010 – a pellet workshop, and site for the deep autoclave impregnation of wood were built. 2012 – a wood-sawing workshop was built, the first phase of a boiler based on wood waste was finished. 2012 – the second phase of the boiler based on wood waste and mechanized fuel store was finished. 2014 – a drying complex, canter line, and moulded line 160 m/min speed were put into operation</i>								
RYAZAN OBLAST								
Oka Holz • Ryazan Modernization of rotary-cut veneer and plywood production	505.4	485.4	257.3	257.3	Rotary-cut veneer – 47 thsd m ³ Woodworks for building – 12.2 thsd m ³	300	2008–2014 (started in 2015)	4.3
<i>A wood-sawing workshop was opened in 2013</i>								
IVANOVO OBLAST								
Ivanovskaya Timber-Processing Company • Ivanovo Timber-processing plant	347	347	179.2	179.2	Sawn timber – 34.4 thsd m ³ Glued timber – 13 thsd m ³ Euro-pallets – 99.2 thsd urt. Parquette board Moulded strips – 109 thsd m ³ Pellets – 20 thsd t	293	2009–2014	6.5
<i>Production was started in September 2014. It is planned to reach estimated capacity in 2015</i>								
Reshma-Les • Kineshemy district Development of the woodworking production on the basis of Kineshemy forestry	305.9	305.9	173.5	173.3	Round logs – 9.5 thsd m ³ Sawn timber – 14 thsd m ³ Rotary-cut veneer – 8 thsd m ³ Moulded strips – 4.5 thsd m ³ Technological wood chips – 38.5 thsd m ³ Wood briquettes – 10 thsd t	210	2009–2016	8
<i>Startup is estimated in 2015</i>								
VLADIMIR OBLAST								
Vladimirsky LPK • Kal'chugino Woodworking production with the its own logging	348	348	240	235.3	Sawn timber – 47 thsd m ³ Planed profiles – 20 thsd m ³ Glued timber – 13 thsd m ³ Units for wooden house construction – 8 thsd m ³	325	2009–2014 (started in 2011)	5
Kovrovlesprom • Sudogorsky district, Andreevo settlement Development of logging and timber-processing	405	No info	No info	237.7	Softwood sawn timber - 35 thsd m ³ Hardwood sawn timber - 10 thsd m ³ Moulded strips (softwood and hardwood) – 7.5 thsd m ³ Glued units - 10 thsd m ³ Fuel briquettes - 8 thsd t Wood charcoal - 800 t	300	2012–2016	4
<i>Heavy equipment for logging and log trucks have been purchased. It is planned to put a new wood-sawing line SAB in operation in June 2015</i>								
TVER OBLAST								
STOD • Torzhok Production of LVL and pellets	6,952.1	6,952.1	400	300	LVL – 200 thsd m ³ Pellets – 60 thsd t	660	2009–2014 (started in 2009)	10.4
<i>The building of an OSB plant is underway. The equipment supplier is Dieffenbacher. The plant capacity will be 600,000 m² of OSB per annum. It is planned to start the plant up late 2015. The next step is organization of a prefabricated houses plant with the implement of LVL</i>								
Vyshnevolotsky Forestry • Vishny Volochek Up-to-date glued wood structures	345.5	255	291	141.5	Laminated profied timber – 7.5 thsd m ³ Glued construction beam – 17.5 thsd m ³	25	2008–2014 (started in 2010)	5
LPH Siyani • Zapadnodvinsky district Production of logging and timber-processing	360	255	256	No info	Dry sawn timber – 48 thsd m ³ Increase in volumes of logging, and market timber sales	From 64 to 196	2010–2018	No info
<i>The plant continues to sell round timber. There is no information on whether the plant has enlarged production</i>								
SOUTHERN FEDERAL DISTRICT								
KRASNODAR KRAI								
PK Apsheronk • Apsheronk Development of logging and timber processing, production of MDF, woodworks and furniture goods	9,440	7,080	600	597.8	Laminated MDF boards – 223.3 thsd m ³ Laminated floor surfaces – 70.1 thsd m ³ Sawn timber – 75 thsd m ³	436	2008–2015	8.1
<i>MDF production started in January 2015, startup of a laminated MDF line – in February, startup of a parquette line – in April</i>								
NORTH-CAUCASIAN FEDERAL DISTRICT								
REPUBLIC OF NORTH OSSETIA - ALANIA								
Rokos • Vladikavkaz Growth and modernization of production up to 360 thsd chairs and 120 thsd tables per annum	1,091	645	No info	26.5	1.2 million furniture units (dinner tables and desks, chairs, chairs-transformers, stools, banquettes, library sections, doors, staircases, and windows)	324	2010–2013	7.4
<i>More than 230 Italian and German benches, CNC centers and production lines were bought and set into operation</i>								



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VOLGA FEDERAL DISTRICT								
KIROV OBLAST								
Stroyles • Kirov Organization of logging and timber-processing: production of wood houses from laminated timber	368,6	193	63	100	Logging – 100 thsd m ³ Houses from laminated timber – 19.6 thsd m ³ Woodworks – 4.5 thsd m ³ Fuel granules – 4.4 thsd t	190	2009–2011	5.7
<i>The project is being realized, but behind schedule</i>								
North West Forest Company Podosinovskiy district, Demjanovo Plywood plant	1.331	868	293	200	Plywood – 110 thsd m ³	678	2008–2010	4
<i>Veneer production started in 2010, but plywood production has not started yet. The company initiated insolvency proceedings and then came out of them</i>								
Krasny Yakor • Slobodskoy Modernization of plywood production	1,037.5	695.2	371,3	451,6	Plywood – 120 thsd m ³	No info	2008–2014 (started in 2012–13)	7
<i>including government support – 53.9</i>								
Vyatsky Plywood Plant • Kirov Production of oversize plywood	3,000	3,000	800	527.3	Oversize plywood – 90 thsd m ³	542	2008–2009 (started in 2009)	9.5
Novovyatsky Lzhny Kombinat • Kirov Модернизация действующего производства	1,087.8	696.8	773.4	684.4	Chipboard and OSB – 130 thsd m ³ Furniture board – 3.6 thsd m ³ Skis – 340 thsd rap Bent-and-glued details – 6.6 thsd m ³ Parquette board – 340.6 thsd m ²	No info	2009–2014	8.3
<i>OSB production started in 2012. That year wood-sawing plant and furniture board production was stopped, and modernization of ski production was implemented. In 2013 the German company Sudheimer Car Technik-Vertriebs GmbH purchased the plant. In October 2013 the plant's management announced that ski and parquette production was to be halted, and since then only OSB would be produced. 300 people were hired, almost half of the workforce. In 2014 the modernization term was prolonged until 2020. The planned investment capital is 5.8 billion rubles</i>								
Lestekhsnab Plus • Kirov Timber-processing production	509.3	No info	No info	592.5	Pellets – 15,6 thsd t Sawn timber – 71 thsd m ³ Planned timber – 11.8 thsd m ³ Construction beam – 10 thsd m ³ Fuel briquettes – 989.5 t	No info	No info	6.5
<i>In January 2015 it was announced that the project was behind schedule. Funds to the amount of 200.3 million rubles had been invested to midyear 2014, and a pellet line was bought and assembled</i>								
PKP Almis • Omutninsk Modernization of timber-processing plant	1 billion and more	No info	No info	512.82	Pellets – 25 thsd t Planned profiles – 43.25 thsd m ³ Sawn timber – 28.74 thsd m ³	No info	2015–2023	No info
<i>No information</i>								
REPUBLIC OF UDMURTIA								
MD NP Krasnaya Zvezda • Mzhga Modernization of timber-processing infrastructure	305.8	229.35	80	60.2	Furniture – 400.5 million rubles	123	2008–2015	7.8
<i>No information</i>								
REPUBLIC OF BASHKORTOSTAN								
Timber-Processing Company Selena Beloretsky district Timber-processing production	2,100	–	403.8	403.8	Glued timber constructions – 40 thsd m ³ Round logs – 20 thsd m ³ Moulded strips – 20 thsd m ³ Other products – 30 thsd m ³	300	2009–2011	7
<i>The company has already started sawn timber production, but in 2014 stopped its activity in the course of a dispute with the regional authorities. According to the company's management the company got only 300,000 m³ of allowable cut instead of 400,000 m³, and in fact there was only 200,000 m³ on the forestry areas. In turn, the authorities accused Selena of selling round log and breaking the terms of the realization of the investment project. The Selena management announced the halting of all their projects held in Bashkortostan (it had planned to invest more than 3 billion rubles.) Information from public sources detailed the suppliers' claims against Selena and demands for it to be declared bankrupt. There is no information about its removal from the list of priority investment projects</i>								
Ufa Plywood Factory (Bashlesexport holding) Zheleznodorozhny Timber-processing complex	310	No info	No info	361.6	Oversize plywood Moulded strips – 6,100 m ³ Furniture boards and semi-finished products – 3,300 m ³ Glued timber – 9,400 m ³ Wood charcoal – 5,600 m ³	172	2012–2013 (started in 2014)	No info
<i>No information</i>								
Ufa Plywood Mill (Bashlesexport holding) • Ufa Mill of the oversize plywood (reconstruction of board productions)	1,250	No info	No info	602.4	Moulded strips – 6.8 thsd m ³ Oversize plywood – increase of production for 51 thsd m ³ Fuel briquettes – 3.8 thsd t Wood charcoal – 3.3 thsd t	156	2012–2013	No info
<i>It was planned to start a workshop of oversize plywood at the end of 2014</i>								
PERM KRAI								
Capital-3 • Gremiachinsk Production of bent-and-glued units from plywood	964	681.4	500	499.5	Oversize plywood – 60 thsd m ³ Bent-and-glued details – 18 thsd m ³ Sawn timber – 24 thsd m ³	840	2008–2012 (started in 2009)	3.8
GornozavodskLesProm • Gornozavodsk Organization of logging sites and timber-processing plant	366.2	314.5	338.3	338.3	Sawn timber – 34,6 thsd m ³ Glued timber – 6 thsd m ³ Technological wood chips – 26.1 thsd m ³	110	2009–2014	6
<i>The project is being realized, though behind schedule, oversight procedures have been initiated</i>								



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Permsky DSK • Perm Modernization of house-building production	300.2	262.6	104.8	101.8	Wood panel houses – 10 thsd m ³ Joisted floors – 4.8 thsd m ³	176	2008–2011 (started in 2010)	6.7
<i>No information</i>								
Perm Plywood Mill (renamed to <i>SVEZA-Uralskiy</i> in the beginning 2015) Uralskiy Reconstruction of plywood production	1,016.2	–	173.3	173.3	Laminated plywood – 30 thsd m ³ Chipboard – 24.2 thsd m ³ Laminated chipboard – 24.2 thsd m ³ Sawn timber – 26.2 thsd m ³	144	2007–2015	8.1
<i>Owned by SVEZA Group. It is planned to continue modernization with a 5-7 billion rubles cost, in order to increase volume of plywood production up to 250,000 m³ per annum</i>								
Solikamskbumprom • Solikamsk Modernization of the line for fiber and paper production Building of a new technological line	12,658.4	8,501.5	1,300	682.4	Newsprint – increase of production on 410 thsd t – up to 950 thsd t	539	2008–2018	10
<i>No information</i>								
Uralbumaga • Perm Modernization of paper machine B-21, modernization of cardboard machine KP-06 and organization of logging sites	3,348	2,551	1,500	1,336.2	Fluting paper – 1,020 thsd t	214	2009–2020	3.2
<i>No information</i>								
Sawn Goods "Red October" • Perm Development of logging infrastructure and wood-sawing production	800	<i>No info</i>	240	500	Sawn timber – 240 thsd m ³	<i>No info</i>	2012–2013	7
<i>Is owned by Linwood Trading Limited, Cyprus. A new wood-sawing complex was set into operation in September 2013</i>								
Osentsovsky DOK • Perm Modernization of production and development of forests "Novaya Glubina"	331.9	<i>No info</i>	92.3	<i>No info</i>	Glued constructions from wood – 18 thsd m ³ Moulded strips – 10 thsd m ³ Workpieces for pallets Pellets – 9.5 thsd t Technological wood chips	40	Since 2012	<i>No info</i>
<i>The project is underway</i>								
Swiss Krono Rus • Krasnokamsky district OSB plant	10,440	<i>No info</i>	<i>No info</i>	<i>No info</i>	OSB – 600 thsd m ³ and more	<i>No info</i>	2015–2018	<i>No info</i>
<i>A plot of land was bought, and the land area was prepared. The project received a positive State expert review. It is planned to start the first phase at the close of 2015. However, at the beginning of 2015 information about the closure of the project appeared</i>								
URAL FEDERAL DISTRICT								
SVERDLOVSK OBLAST								
Viyskiy DOK • Nizhniy Tagil Woodworking plant with the own logging	789.7	709.3	250	391	Furniture boards and other untis – 27.4 thsd m ³	600	2006–2008 (started in 2009)	6.5
<i>In 2011 the closure of the project was announced</i>								
ArgusSFK • Serovskiy district Woodworking plant with the own logging	310	310	600	600	Sawn timber – 154 thsd m ³ Plywood – 30 thsd m ³	800	2008–2010 (started in 2011)	2.8
<i>Creditor – Sberbank</i>								
Ural-Siberian Investments • Nizhniy Tagil Organization and modernization of logging and wood-working objects	1,127	1,127	800	800	Logging – 800 thsd m ³ Sawn timber – 246,13 thsd m ³ Chipboards – 150 thsd m ³ Pellets – 26.8 thsd t	699	2009–2013	7
<i>The plant is being built. The Federal Forestry Agency accused regional authorities of halting the project – they left the plant without a raw material base</i>								
Lesnikov • Serovskiy district, Krasnoglenniy settlement Timber-processing production with the own logging	525	<i>No info</i>	<i>No info</i>	<i>No info</i>	Timber products - 200 thsd m ³	<i>No info</i>	До 2018	<i>No info</i>
<i>The project is underway</i>								
KURGAN OBLAST								
PKF Les • Kurgan Woodworking plant with the own logging	458.2	371.4	100	100	Sawn timber – 24,6 thsd m ³ Furniture boards – 6 thsd m ³ Glued timber – 12 thsd m ³ Sets of houses – 150 pieces	247	2008–2011	7
<i>315 million rubles were invested in timber-processing facilities. There is no information about the processing plant startup. The plant is the main supplier of the wood-working plant Dasko (Kurgan)</i>								
TYUMEN OBLAST								
Tyumen Plywood Plant • Tyumen Oversize plywood plant	1,218	738.7	664.2	664.2	Oversize plywood – 120 thsd m ³	576	2009–2015	6.9
<i>The second plywood line was set in operation in 2013. The third step is planned for 2015</i>								
Zagros • Zavodoukovskiy district Zavodoukovskiy forestry complex	350	<i>No info</i>	<i>No info</i>	178	Softwood and hardwood sawn timber. Profiled timber. Round logs. Pallets. Seeds, and planting stock. Firewood. Fuel wood chips	<i>No info</i>	2012–2016	<i>No info</i>
<i>Increase of production facilities. In 2013 a blank workshop of 30,000 m² capacity for pallet production was opened</i>								

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SIBERIAN FEDERAL DISTRICT								
REPUBLIC OF BURYATIA								
Baikal Forestry Company • Eravninsky district Organization of objects for forestry and timber-processing infrastructure	1,520.1	1,520.1	272.2	426	Sawn timber – 150 thsd m ³ Technological wood chips – 83.2 thsd m ³ Pellets	431	2008–2013	5.2
<i>Creditor – Sberbank. In 2013 Mitsui & Co., Ltd. (Japan) invested 1 billion rubles in the project</i>								
Lesnaya Birzha • Zaigraevskiy district OSB plant construction (Baikal DOK)	4,600	<i>No info</i>	<i>No info</i>	276.7	OSB – 236 thsd m ³ Profiles	257	2011–2019	–
<i>The foundation stone on the construction site was laid in 2013, although the building has not been started. The shareholders changed, and now 57% of the company is owned by a Swiss company. It was announced about the authority's intention to terminate a land lease agreement</i>								
Forestinvest • Severo-Baikalsk Organization of forestry and timber-processing infrastructure	404	376.8	200	203	Sawn timber – 120 thsd m ³ Wood-plastic composite boards – 2-3 thsd m ³ Pellets – 100 thsd m ³	269	2011–2017	7
<i>Wood-sawing was started in 2013, although the project was behind schedule. In summer 2014 a timber-processing complex and multiple sawing equipment were set into operation, a housing settlement for forestry shift workers was organized. About 35 million rubles were invested in the project in 2013</i>								
Selenginsky CKK • Kabansky district Modernization of cardboard production	330	<i>No info</i>	<i>No info</i>	215	Tare cardboard Fluting cardboard Paper bags and packs	2000	<i>No info</i>	<i>No info</i>
<i>In winter 2013-2014 the mill was stopped. On the brink of bankruptcy, it was purchased by OOO Bail. A new owner is going to invest 5.2 billion rubles in plant modernization and increase cardboard production twofold</i>								
TRANS-BAIKAL KRAI								
TsPK Polyarnaya • Mogochinsky district, Amazar Creation of timber processing complex	22,000	<i>No info</i>	<i>No info</i>	<i>No info</i>	Unbleached pulp – 400 thsd t	3249	2005–2016	<i>No info</i>
<i>A wood-sawing plant, capable of producing 100,000 m³ of raw materials, was set in operation in 2012. The project was stopped because of protests by local residents, but recently building works have been continued. Round timber is exported to China. In January 2014 the previously closed border crossing point nearby was opened again. The simplest wood-sawing workshop is in operation</i>								
IRKUTSK OBLAST								
LDK Igirma • Nizhneilimsky district, Novaya Igirma Wood-sawing and timber-processing complex	3,000	2,100	1,000	413	Sawn timber – 434 thsd m ³	1000	2008–2009 (started in 2011)	5
<i>Is part of the "Russian Forestry Group". In 2013 the production of briquettes started. The start of pellet production is planned of 95,000 per year</i>								
Ilim Group • Ust-Ilimsk Investment project for forestry development	18,700	–	11,000	7,147.5	Market pulp – 1,270 thsd t Cardboard – 250 thsd t Paper – 120 thsd t	250	2008–2014	7.6
<i>Production of softwood pulp was started in 2013</i>								
Trans-Siberian Forestry Company • Irkutsk Wood-sawing and woodworking complex	5,887	2,943.5	1,971	1,971	Sawn timber – 500 thsd m ³ Wood constructions – 94 thsd m ³ Wood houses – 122 thsd m ² Glued beams – 100 thsd m ³ OSB – 300 thsd m ³ Fuel granules – 160 thsd t	861	2008–2012	5
<i>Sawn timber production is in process. In February 2015 the purchase of Hekotek equipment for pellet production was announced</i>								
Rusforest Magistralny • Kazachinsko-Lensky district Timber-processing plant for dry sawn timber production	<i>No info</i>	<i>No info</i>	<i>No info</i>	599.7	Dry sawn timber – 150 thsd m ³ Technological wood chips	541	Started in 2011	<i>No info</i>
Eurasia-Lesprom Group (Far Eastern Corporation of the Forestry Industry, China) • Magistralny Timber-processing complex	2,000	<i>No info</i>	1,000	609 <small>(1,130 thsd m³ according to other data)</small>	Dry sawn timber – 400 thsd m ³ Workpieces for furniture production	208	<i>No info</i>	<i>No info</i>
<i>In 2011 the end of the construction works of the wood-sawing plant, capable of producing 400,000 m³ of sawn timber per annum was announced. At the end of 2011 the project received the status of priority project. In 2014 it was announced: "it has been decided to increase production and to increase investment capital in the project. The main areas are the continued development of woodworking, woodworking output production, and disposal of wastes"</i>								
Company Gosstroy • Irkutsk district, Khomutovo Timber-processing production	1,530	<i>No info</i>	<i>No info</i>	<i>No info</i>	Glued timber – 50 thsd m ³	<i>No info</i>	2008–2010	5
<i>The plant was set in operation at the end of 2009. In 2012 the company underwent bankruptcy proceedings because of the overdue debt to Sberbank to the amount of 1.1 billion rubles. It is possible that after that the owner of the concern changed. In 2014 the project received priority status, and the company got 20,951 million rubles to cover loans</i>								
KRASNOYARSK KRAI								
Kraslesinvest • Boguchany Timber-processing complex	73,250	73,250	5,000	7,670.4	Bleached softwood kraft-pulp – 850 thsd t Kraft-liner – 500 thsd t Soft sawn timber – 700 thsd m ³ MDF – 250 thsd m ³ Glued beam, veneer	2600	2008–2014	9
<i>The project is known as Boguchansky LPK. The first line was set into operation officially in 2014. Credit funds from Vnesheconombank to the amount of 43 billion rubles were loaned. The company inaugurated the first line in autumn 2014, although in fact industrial production was not started, and the forest was subleased. Due to the wrong estimation of wood stocks on the forestry sites, it was announced in the beginning of 2013 about the termination of paper mill construction works. In February 2015 the former general contractor OOO SP Arkaim submitted to the arbitral tribunal of the Krasnoyarsk Territory a petition about the recovery of 915.4 million rubles from the project investor ZAO Kraslesinvest. The company submits that the fulfilled works still have not been paid. In its turn, Kraslesinvest has filed a claim at Arkaim for the sum of 7.3 billion rubles</i>								

Investor / Name of Project / City	Volume of Investment, million Rubles.		Volume of the consumed raw material, th m ³	Allowable cut size, thsd. m ³	Types of Products and Annual Production Volumes	Employment impact (number of man)	Period of Construction	Payback Period, Number of Years
	Total	Incl. Borrowed Funds						
Yeniseu Plywood Plant • Sosnovoborsk Business development in timber-processing	7,680	2,350	900	1,886.5	Plywood – 350 thsd m ³ Veneer – 100 thsd m ³	544	2008–2010	6
<i>Was put into operation in 2011. Production was stopped in November 2014 by Rospotrebnadzor because of the high level of maximum allowable concentration of methanol and formaldehyde in the air. Credit funds from VTB of 5,329,761,700 rubles were loaned. The plant has been declared bankrupt. The media have noted the bad loan credited by VTB to its own enterprise, which might have been used for moving funds offshore. The main problem stated was the lack of quality raw materials in the rented forestry funds</i>								
Angara Paper • Lesosibirsk Building of the wood-chemical complex Angara Paper (Yeniseysky LHK)	30,747.5	21,523.2	5,000	6,869.3	Sanitary paper - 60 thsd t Thermomechanical Pulp – 220 thsd t White line box cardboard – 320 thsd t Cardboard from unbleached kraft pulping – 320 thsd t	560	2008–2012	8.4
<i>Only pre-project works have been fulfilled. Sodra Group (Sweden) withdrew from the project in the beginning of 2013. The management of Angara Paper announced that an updated concept of the project had been prepared, and an EPC-contractor had been found – the Japanese Marubeni Corporation. According to data of Forest Forum Greepeace, the main shareholder OAO Angara Paper, is the Cypriot company Brazzako Limited (74.9% shares)</i>								
Sibles Project • Yeniseysky district, Verkhnepushino Modernization of timber-processing production	693	613	300	200.5	Sawn timber – 120 thsd m ³ Moulded strips – 18 thsd m ³ Technological wood chips – 90 thsd m ³	345	2008–2013	5.8
<i>Production was put into operation in 2014, the second phase and pellet workshop are being built now</i>								
KLM-Eco • Krasnoyarsk Development of woodworking complex	470	470	300	236.8	Moulded strips – 90 thsd m ³	167	2009–2011	5.5
<i>Production of glued beam and sets of houses started at the end of 2013</i>								
Managing Company Mekran • Krasnoyarsk Creation of full cycle woodworking production	5,636.4	4,600	118.6	1186	Furniture from solid wood – 5,660.4 million rubles	939	2009–2011	7
<i>The first Mekran furniture plant was modernized in 2010, and the new furniture production was put into operation in 2013</i>								
Novoisenysky LHK • Lesosibirsk Growth of timber-processing production and organization of the forestry infrastructure	351.1	252.2	226	226	Pellets – 80 thsd t	29	2009–2012 (started in 2013)	4.2
<i>A paper mill and new sawn timber production are in the plans of Novoisenysky LHK</i>								
Firma Master • Krasnoyarsk Solid wood processing	1,482.4	1,189.2	214.6	214.6	Dooble-edged boards – 45 thsd m ³ Floor board – 6.72 thsd m ³ Lining – 6.72 thsd m ³ Furniture board – 6.72 thsd m ³ Glued window timber – 6.72 thsd m ³	207	2010–2015	4.1
<i>The latest coverage in the media was in 2011</i>								
Priangarsky LPK (UK Lespromtekhologii) • Kodinsk Organization of timber-processing	2,200	1,500	630	1,400	Sawn timber – 300 thsd m ³ Fuel briquettes – 25.32 thsd t Wood charcoal – 2.56 thsd t	480	2011–2018	7
<i>Sawn timber production was started in spring 2014, it is planned to reach estimated capacity in 2016. A pellet production is in the plans</i>								
TOMSK OBLAST								
LPK Partner-Tomsk • Tomsk MDF production	6,308.9	5,083.1	570	575.6	MDF – 264 thsd m ³	700	2008–2010 (started in 2010)	6.5
<i>An OSB plant is planned</i>								
ALTAI KRAI								
Sodruzhestvo (LHK Altai) • Pavlovsky district Plant for production of sets of houses from glued timber	337	210	141	121	Детали домов из клееного бруса – 18 тыс. м ³	134	2006–2015 (started in 2010)	5.4
<i>No information</i>								
Kamensky LDK (LHK Altai) • Kamen'-na-Obi Wood-sawing production	1,000	542	No info	568 thsd ha	Sawn timber – 240 thsd m ³	120	2009–2011 (started in 2011)	No info
KEMEROVO OBLAST								
Anzhersky Plywood Plant • Anzhero-Sudzhensk Over-size plywood production	2,405.3	2,105.3	333.7	333.7	Over-size plywood – 60 thsd m ³ Sawn timber – 6 thsd m ³	745	2009–2018	9.6
<i>At the end 2009 building works were stopped (75% is at the stage of readiness) because of difficulties with financing and default on an obligations by subcontractor OOO Videmann Poland. In October 2010 a new subcontractor OOO PSP Redox was chosen, although in spring 2014 construction works were not resumed. In February 2015 the continuation of construction was announced</i>								
Mariinsky Plywood Plant • Mariinsk OSB, OPB and chipboard production	3,734	No info	No info	No info	OSB, OPB – 99,6 thsd m ³ Chipboard – 20,4 thsd m ³	No info	2011–2015	No info
<i>Vnesheconombank issued credit, the construction works are in process</i>								
OMSK OBLAST								
AVA Company • Omsk Timber-processing production	948.6	948.6	277.6	277.6	Sawn timber – 61.4 thsd m ³ Furniture board – 3.4 thsd m ³ Parquette – 8.7 thsd m ³ Moulded strips – 2.1 thsd m ³ Fair furniture workpieces – 1.45 thsd m ³ Wood briquettes – 20 thsd t Furniture – 192 million rubles	1760	2006–2012 (started in 2010)	8.1
<i>AVA Company is planning to build a similar plant for birch processing in the Tyumen' Oblast</i>								

Investor / Name of Project / City	Volume of Investment, million Rubles.		Volume of the consumed raw material, th m ³	Allowable cut size, thsd. m ³	Types of Products and Annual Production Volumes	Employment impact (number of man)	Period of Construction	Payback Period, Number of Years
	Total	Incl. Borrowed Funds						
FAR EASTERN FEDERAL DISTRICT								
PRIMORSKY KRAI								
Les Export • Dalnerechensk Three-ply parquette board production	2,447	1,395	91.2	128.5	Parquette – 1,757 thsd m ²	150	2008–2012	4
<i>No information</i>								
Primorsklesprom Wood-sawing plants in Terneysky and Olginsky districts, glued timber plant in Chuguevsky district	309.7	195.6	360	200	Sawn timber – 130 thsd m ³ Glued timber – 50 thsd m ³	No info	2008–2013 (started in 2014)	5.2
<i>All the three wood-sawing plants are built, although within 2013-2014 they did not operate steadily because of problems with raw materials and sales</i>								
Terneysky • Terneyskiy district Creation of timber-processing infrastructure	3,979.4	3,979.4	685	392.5	Sawn timber – 150 thsd m ³ Veneer – 267 thsd m ³	325	2008–2010 (started in 2009)	4.2
<i>No information</i>								
SAKHALIN OBLAST								
BM Sakhalin (part of the holding Business-Marketing) Aleksandrovska-Sakhalinsky district Woodworking production	7,167	6,100	465	747	Dry sawn timber – 80 thsd m ³ Planed sawn timber – 100 thsd m ³ Technological wood chips – 370 thsd m ³ Fuel pellets – 62 thsd t	686	2012–2023	9.2
<i>In the stage of organization of logging sites, exporting round log to China. It is planned to build a plant in 2015</i>								
KHABAROVSK KRAI								
Amur Forest • Solnechny district, Berezy settlement Wood-sawing plant	856.8	856.8	300	114	Sawn timber – 150 thsd m ³	120	2008–2009 (started in 2009)	5
<i>The second stage was set in operation in 2014, it was announced at the end of the year about the plant stoppage because of a claim caused by fire at a waste tip</i>								
SP Arkaim • Vanino district Woodworking complex for chipboard and sawn timber production	2,375.9	1,960.7	825	636	Chipboard – 140 thsd m ³ Sawn timber – 350 thsd m ³	560	2008–2010 (started in 2009)	7.2
<i>The second stage startup was planned for 2012. Non-payment of wages, strikes by workers, and criminal cases. \$600 million credit from China Forest Products Corporation, plans for creation of the Russian-Chinese woodworking holding with the logging volume up to 3.7 million m³ and processing facilities up to 2 million m³ of timber per annum</i>								
Rimbunan Hijau • Lazo district, Khor settlement MDF and THDF plant	2,400	2,400	300	262	MDF/THDF boards – 150 thsd m ³	360	2008–2009	8.2
<i>Was put into operation in 2011. The production was stopped in 2012, because of the high cost of raw materials and index of formaldehyde emission. In March 2015 the leadership of Rimbunan Hijau announced about plans of construction of a wood-sawing plant and production of their own glue, which would make it possible to resume MDF production</i>								
Dallesprom • Amursk Far Eastern center of deep timber-processing	12,054.9	12,008.1	2,133	2,133	Sawn timber – 230 thsd m ³ Rotary-cut veneer – 300 thsd m ³ MDF boards – 300 thsd m ³ Technological wood chips – 750 thsd m ³	1,000	2009–2019	10
<i>Part of RFP Group. Creditor – Vnesheconombank. Veneer production was set in operation in 2013</i>								
Asia Les (UK Amurles, part of the holding Business-Marketing) Solnechny district, Berezy settlement Production of profile and planed sawn timber	500	No info	500	No info	Round timber – 150 thsd m ³ Dry sawn timber – 290 thsd m ³ Planed sawn timber – 60 thsd m ³ , Pellets – 100 thsd t	No info	2012–2015	No info
<i>Wood-sawing and pellet equipment has been purchased. Production facilities are being increased</i>								
AMUR OBLAST								
Amur Forest • Zeya Building of woodworking plant	352	345.6	175	34.2	Sawn timber – 105 thsd m ³ Fuel granules – 3 thsd t Wood houses – 50 pieces	270	2007–2013	8.7
<i>It was behind schedule, and consequently was mooted to close, but in 2014 it was announced that the project was to continue</i>								
Turanles • Tyndinsky district Building of the woodworking plant Vostochny	346.8	168	116.8	116.8	Sawn timber – 8 thsd m ³ Glued timber – 1.2 thsd m ³ Square beam – 14 thsd m ³ Moulded strips – 1.6 thsd m ³ Floor board – 1.5 thsd m ³ Furniture board – 0.2 thsd m ³ Set of low-rise house construction – 20 pieces	105	2006–2015	9
<i>Construction of a pellet plant was started in 2013. There is no information about the woodworking plant</i>								
JEWISH AUTONOMOUS OBLAST								
Ecoles Company • Birobidzhan Creation and modernization of objects of forestry and timber-processing infrastructure	655.9	382.2	325	325	Sawn timber – 72 thsd m ³ Wood charcoal – 10 thsd t Activated wood charcoal – 0.9 thsd t Fuel briquettes – 3.24 thsd t Glued timber and furniture board – 20.75 thsd m ³	804	2010–2014	2.5
<i>Realization of the project was stopped in 2012, because the Chinese investors refused to finance</i>								

THE PROJECTS EXCLUDED FROM THE LIST

Investor / Name of Project / City	Volume of Investment, million Rubles.		Volume of the consumed raw material, th m ³	Allowable cut size, thsd. m ³	Types of Products and Annual Production Volumes	Employment impact (number of man)	Period of Construction	Payback Period, Number of Years
	Total	Incl. Borrowed Funds						
Ivanovo Forest • Ivanovo oblast Production of complex processing of raw materials	307.7	307.7	110	110	Sawn timber – 15.3 thsd m ³ Wood tables – 50 thsd pieces Wood chairs – 200 thsd pieces Parquette board – 100 thsd m ² Moulded strips – 1.9 thsd m ³ Pellets – 10 thsd t	529	2009–2013	6,3
<i>The project was excluded from the list of priority projects in June 2014 because of failure to reach commitments</i>								
Shabalinsky DOZ • Kirov oblast Creation of timber-processing plant based on raw materials of Svechinsky forestry	341.1	341.1	146.6	146.6	Sawn timber – 5.95 thsd m ³ Construction units – 6.5 thsd m ³ Round logs – 10 thsd m ³ Tare boards – 10.6 thsd m ³ Pallets – 172.5 thsd pieces Glued timber – 9.2 thsd m ³ Fuel briquettes – 2.4 thsd t	140	2009–2015	5,4
<i>Was excluded in the beginning of 2015</i>								
Forestry Managing Company Kirovles • Kirov Development of timber-processinf and creation of OSB production targeted for low-rise house construction	350	No info	No info	No info	Sawn timber, and OSB	No info	2012–2016	4,8
<i>Bankruptcy in 2013</i>								
SeverDomStroy • Kirov oblast Creation of deep woodworking plant	336.6	No info	156.2	No info	Square sawn plank – 5.43 thsd m ³ Planned profile units for construction – 23.4 thsd m ³ Glued construction timber – 6,000 m ³ Round timber workpieces for house construction – 11.2 thsd m ³	173	2011–2015	No info
<i>Excluded at the beginning of 2015</i>								
Baikal Nordic • Republic of Buryatia, Ulan-Ude Integrated wood-processing and building of infrastructure for the timber-processing object	1,500	No info	450	500	Sawn timber – 220 thsd m ³	285	2008–2012	5
<i>Excluded in October 2013 because of failure to reach commitments (logging was being carried out, round log was being sold, but the construction of a wood-processing plant was not fulfilled)</i>								
Timber Industrial Company • Ryazan Development of timber-processing complex	650.4	No info	424.2	424.2	Square sawn plank – 147 thsd m ³ Unedged board – 36.5 thsd m ³ Pallets – 1,200 thsd pieces Glued timber – 60.1 thsd m ³ Furniture board – 33.2 thsd m ³ Rotary-cut veneer – 30.3 thsd m ³	204	2008–2009	2,2
<i>Excluded at the end 2013. Forest lands have been withdrawn from lease</i>								
Osetrovsky LDK • Irkutsk oblast, Ust-Kut Organization of glued oversize softwood plywood	1,938	1,938	787	787	Plywood – 100 thsd m ³	125	2010–2011	5,1
<i>Excluded</i>								
StroyService (it used yo be fulfilled by 000 Lesprom) Kaluga oblast Construction of woodwoking plant	1,300	1,075	200.3	238.2	Glued timber – 12 thsd m ³ Moulded strips – 6 thsd m ³ Parquette board – 0.5 thsd m ³ Window units – 12 thsd m ³ Door units – 15 thsd m ³ Fuel granules – 33.6 thsd t Pallets – 140 thsd pieces	584	2008–2010	8
<i>It was excluded in 2013 (logging was being carried out, round log was being sold, but the construction of a wood-processing plant was not fulfilled). An entrepreneur Alexey Uzhovsky tried realizing the project 'Lesprom', but ultimately he was only processing timber, offering a favourable rate. Uzhovsky was sentenced to imprisonment for fraud.</i>								
Tajga Tranzit Vologda oblast, Velikoustyugskiy district Building of timber-processing plant	480.4	No info	No info	99.2	Sawn timber – 36.6 thsd m ³ Planned profiles – 17.5 thsd m ³ Round logs – 15.2 thsd m ³ Workpieces for pallets – 8 thsd m ³	No info	2011–2014	No info
<i>Excluded in February 2014 because of failure to reach commitments</i>								
Minusinsky Les • Krasnoyarsk territory, Minusinskiy district Organization of logging, wood-sawing, woodworking, and board production within long-term forest lease	7,452.9	No info	1,250	1,525.7	Logging – 1.25 million m ³ Planned profiles, glued timber, and untis for frame-house construction – 129 thsd m ³ OSB 3, and OSB 2 – 320 thsd m ³ Chipboard – 260 thsd m ³	1,557	2009–2015	5
<i>Excluded because of failure to reach commitments</i>								
Balezinsky DOK • Republic of Udmurtiya, Balezinskiy district Modernization of the acting plywood and wood-sawing productions, reshaping of furniture workshop, organization of logging works	951	761	323.4	323.4	Glued plywood – 100 thsd m ³ Sawn timber – 50 thsd m ³ Wood pre-fabricated houses – 300 pieces	1600	2008–2011	4
<i>The project was excluded at the request of the owner (Vnesheconombank refused to issue credit)</i>								

Investor / Name of Project / City	Volume of Investment, million Rubles.		Volume of the consumed raw material, th m ³	Allowable cut size, thsd. m ³	Types of Products and Annual Production Volumes	Employment impact (number of man)	Period of Construction	Payback Period, Number of Years
	Total	Incl. Borrowed Funds						
Gazkom Perm territory, Chusovskoy district Construction of house-building plant	406	350	80.7	80.7	Sawn timber – 7.8 thsd m ³ Glued timber – 6 thsd m ³ Moulded strips – 5 thsd m ³ Cement bonded particle board – 400 thsd m ³ Wood charcoal – 0.8 thsd t Technological wood chips – 16.8 thsd m ³	215	2009–2015	9,2
<i>Excluded in June 2012. The reason – lack of investment capital</i>								
DalEuroLes Khabarovsk territory Production of glued plywood and sawn timber	3,810	3,810	850	480	Sawn timber – 200 thsd m ³ Glued plywood – 190 thsd m ³	278	2009–2015	7,2
<i>Excluded, and declared bankrupt in March 2014</i>								
Mostootryad-T • Amur oblast, Solnechnyy district Development of timber-processing complex	1,225	1,200	286	75.7	Veneer – 85 thsd m ³	400	2008–2010	5
<i>Excluded in December 2011. The main reason was lack of investment capital</i>								
Syktvykar OSB Plant Republic of Komi, Syktvykar OSB Plant	5,500	No info	516.2	516.2	OSB – 450 thsd m ³	No info	2008–2011	10
<i>Excluded because of insolvency. The managers are being tried on charges in Italy including tax evasion</i>								
SiamzhaLesProm Vologda oblast Increase of production of sawn timber, moulded strips and glued beam	304	304	126	88.7	Glued timber – 12 thsd m ³ Moulded strips – 16.2 thsd m ³	176	2009–2014	7,5
<i>Excluded because of bankruptcy of the enterprise</i>								
CentroWoodCom Republic of Komi Center of deep (wastless) timber-processing	2,768.6	692.2	1,840	1,840	Sawn timber – 177.5 thsd m ³ Woodworks – 59.9 thsd m ³ Sets of pre-fabricated wood houses – 16.8 thsd m ³ Tare – 15.7 thsd m ³ Pellets – 257.2 thsd m ³ Wood constructions – 108 thsd m ³	1043	2008–2011	9,1
<i>Excluded in 2013. Declared bankrupt because of failure to reach commitments. They failed to restart the project</i>								
KharviSeverLes • Arkhangelsk Building of the woodworking plant	1,235.4	732.2	260	380	Glued timber – 95 thsd m ³ Technological wood chips – 86 thsd m ³	380	2007–2017	3,7
<i>The plant was opened but went out of business because of non-payment of rent, and failure to reach commitments</i>								
Mill of Wood Materials Invest Novgorod oblast, Okulovka House-building plant	8,532.7	7,785.7	634.6	653.9	Sawn timber – 97.1 thsd m ³ OSB – 179.2 thsd m ³ Sets of pre-fabricated houses and frame-houses – 224.2 thsd m ²	1393	2008–2011	10,3
<i>No information</i>								
Aspek-Lesprom Kostroma oblast, Manturovo Building of a pulp-and-paper mill	51,045	38,284	3,097	2,671.3	Bleached pulp – 517 thsd t Chemi-thermomechanical pulp – 170 thsd t Chalk-coated printing paperboard – 100 thsd t Chalk-coated box paperboard – 300 thsd t Coated label paper – 150 thsd t Coated book and magazine paper – 100 thsd t Office paper – 150 thsd t	2000	2009–2015	10
<i>In 2012 the rented forest was withdrawn</i>								
East-Siberian Plant of Bio-Technologies Irkutsk oblast, Tulun Organization of production of biofuel from sustainable non-food resources	1,048	1,048	530	530	Fuel pellets – 106 thsd t	700	2008–2013	3,5
<i>GK Rostekhnologii stopped the project in 2009</i>								
Rosbioprom (used to be a part of Euroimp Sales AB) Pskov Project Pskovsky LPK	1,000	No info	No info	700	Softwood sawn timber – 150 thsd m ³ Hardwood sawn timber – 20 thsd m ³ Technological wood chips – 124 thsd m ³ Fuel wood chips – 50 thsd m ³ Pellets – 100 thsd m ³ Planned impregnated sawn timber – 30 thsd m ³	No info	2011–2014	No info
<i>In the first part of 2013 it was announced that the project would have an investment of 500 million rubles and that the financing would be continued. In August 2013 the project was excluded from the list of priority projects. In 2014 000 Rosbioprom stopped its activity by reorganization in the form of merging with 000 Doctor Portnov's Clinic</i>								

KASTAMONU has Opened a New Plant in Alabuga

On 24 September 2014 the Turkish company KASTAMONU opened the largest woodworking plant in Europe on the territory of the special economic zone (SEZ) Alabuga (in the Yelabuzhsky district of the Republic of Tatarstan). The total capacity of the plant in SEZ Alabuga will amount to 1.8 million m³ of products per year, and will be the largest woodworking plant in Europe, placing KASTAMONU in the top four of the leaders of the world woodworking sector. The total investment of funds amounts to 600 million US Dollars. The investment project is being realized in phases, and as of today the first phase, costing \$350 million, has already been fulfilled: Fully automated MDF production (475,000 m³) and flooring (20 million m²) have been implemented. The second phase will involve the start of construction of the second MDF line (450,000 m³).



The rich source of Russian raw materials and sales opportunities make it possible for the company to hold its own on the world market. The project is being realized in close cooperation with the local energy authorities, who have fulfilled a whole range of measures to create a favorable investment climate in the Republic of Tatarstan. In the event of the successful realization of the project, KASTAMONU will enlarge its presence on the Russian market. With a view to shedding some light on the project's details in our magazine, we have interviewed the Vice President of KASTAMONU, Mr. Onur Güven.

Mr. Guven, in conditions where the international investment rating of Russia is going down, the KASTAMONU company is actively investing in the Russian economy. This, from a European investor's point of view, is not very logical. What did you take into consideration when making your decision to invest in Russia?

Our company is part of an international holding which has a large number of factories not only in Turkey but also abroad: in Bulgaria, Romania, Bosnia and Herzegovina, and Russia. The economic situation in the company's regions of operation has, of course, a certain influence on the development of our business. But we in our activities are trying to adhere to the principles of strategic planning for a period of 5 and 10 years, and not for the short term. Thus, in accordance with the 5-year plan, we intend to actively develop our business in Russia. We have carefully evaluated the market situation, possible risks and other factors, and decided to invest in Russia. It is important for us for several reasons: it is an emerging market, it is rich in natural resources which are of definite interest to us.

As you once mentioned, you have a plan to invite to "Alabuga" some Turkish partners – furniture companies. Is this still the case? What are KASTAMONU's aims in relation to this? Is it related to KASTAMONU's desire to guarantee sales by tested Turkish partners through many years of cooperation? Are these companies interested in entering the Russian market? What is their motivation? Were these plans prompted by the capacity of Tatarstan and neighboring areas, who cannot consume all the products produced by the KASTAMONU factory?

The KASTAMONU company supports the initiative of the republican authorities on the issue of forming a furniture manufacturing cluster in the region. We have come to Russia with serious intentions and for a long time, that is why we are examining the possibility of working with furniture producers on the territory of the Republic of Tatarstan. It would be a great help to their operation, because the transport costs for board delivery are significantly reduced.

On our part we are ready to continue developing production to achieve the output, needed for furniture producers. In particular in 2015 we plan to start building the second stage of the plant, which will make it possible to increase our capacities for MDF board production up to 900 thousand m³ per annum. We have started production of the glossy MDF boards EvoGloss, which are widely applied in the production of facades.

As for the sales policy, currently the handling company "Bosfor Group" is dealing with the realization of the product in the Republic of Tatarstan, that is why there should not be any problems with the product supply to the members of the furniture cluster in the region,



that is to say the furniture producers. Even in the case of a shortage of the product on the All-Russian market.

We offer not only high-quality, certified products, but also attractive prices in comparison with foreign competitors. Therefore, at present we do not have any problems with sales. We have dealers in different regions of Russia. The industry today is experiencing a need for quality and affordable products and the KASTAMONU company is ready to meet this demand. It is expected that about 75% of the plant's produce is to be sold in Russia. The remaining 25% will be exported to Asia and Europe.

A lot of experts say that the Russian labor market is short of qualified staff. What can you

say about that? How does KASTAMONU solve this issue, especially when you are looking for top-managers and mid-level managers or technical specialists?

The construction of the plant has been finished thanks to the efforts of two parties: local and Turkish specialists. In our practice, we always try to maximize the potential of local professionals in the operation of our facilities. The general scheme is as follows: within six months or a year before the launching of a plant, we select staff, hire them for jobs and conduct their training on probation at the existing facilities of the company in Turkey. Then, after completion of the equipment installation and launching of production, a group of Turkish specialists monitor production



(at various times up to 50 people) and train staff. It is personnel education and training that is our main task because skilled personnel are not available on the labor market. We also use the services of recruitment agencies with a view to selecting our operating staff.

Why Tatarstan? If we will look from the perspective of raw material supply, Tatarstan – is not a heavily forested region. Also the biggest consumers of KASTAMONU products are located in Moscow and St-Petersburg, which are quite far from Tatarstan. Which begs a further question: is Tatarstan able to consume all the volumes produced by the factory? If not, how and where do you sell? How do logistics influence sales policy?

The production site has not been chosen at random: the decision to invest in a new venture in Tatarstan was taken in view of the close cultural and historical ties of this Russian republic with Turkey, as well as due to the logistical advantages owing to the geographical location of the region.

Within a radius of 1,000 kilometers from the SEZ "Alabuga" there are leading consumers of wood products: furniture factories and manufacturers of interior doors. A well-developed transport infrastructure allows the direct export of products to near-abroad countries. As of today, we can ensure the delivery of products using

virtually all types of transport: dry cargo sea containers, rail cars and gondolas and delivery trucks.

As for the source of raw materials for our production in Tatarstan, for the first stage of our KASTAMONU plant in "Alabuga" 1 million m³ of wood per year will be needed. For the project to be competitive and the production economically sound, it is beneficial for us to get the raw materials within a radius of 200–300 km from the plant: that is from Tatarstan, Udmurtia and the Kirov Region.

Today, the planned cutting area in Tatarstan is 2.2–2.3 million m³ of wood per year. Only around 30% of it has been reclaimed. In addition, it should be understood that with the advent of large-scale KASTAMONU wood-working production in the region, reforestation will intensify. This will have a positive impact on the ecology of the Republic of Tatarstan.

Did you evaluate the capacity of your sales on the Russian market related to the decrease in imports caused by the devaluation of Russian currency in relation to the EUR or USD? What potential do you see for your company in this matter?

The situation on the market is developing in such a way that it is becoming increasingly difficult for European and Chinese producers to compete with us in terms of price and quality. We

simply have to take advantage of such favorable market conditions. In particular, having carefully studied the current wood-working products market situation, we have decided to increase the MDF production capacity of the plant in "Alabuga" by another 450 thousand m³. With a view to implementing this project we are currently negotiating with all stakeholders. The Russian MDF market is actively developing. The aggregate production capacity of the enterprises of the industry is about 2 million m³ per year. The market volume is estimated at 2.4 million m³ per year.

What is the strategy of KASTAMONU in the Russian market? What advice can you give to foreign companies who would like to operate in Russia?

To foreign companies that are going to work in Russia, I would advise preparing for its climate and the cultural specifics which are reflected, in particular, in the way business is done in Russia.

How was the decision to invest taken? Who was the initiator? What effort did the Russian government to attract you as investors? What conditions or preferences were the federal or regional government ready to give or gave you to draw your attention to investment opportunities in Russia? Or did the initiative to invest come entirely from your side?

A free economic zone, in this respect, is a great help from the federal and regional authorities

in Russia. Here, favorable infrastructural and economic conditions are created for the establishment and development of business. In particular, a flexible system of taxation for the residents of the special economic zone has been provided. Besides, the government of the Republic of Tatarstan has helped us to overcome a large number of bureaucratic barriers. With their help, we have opened a lot of doors. A major role has been also played by the government bodies in Tatarstan in the successful launching of our investment project.

Some time ago KASTAMONU announced plans for 2017–2018. According to these plans you are planning to construct an OSB factory with a capacity of 500 thousand m³. On one hand the devaluation of Russian currency makes investments in Russia much cheaper and attractive. On the other hand imported machinery for product manufacturing becomes twice as expensive. Do these macroeconomic changes cause any adjustment of your investment plans in Russia?

We have already modified our expansion policy, for example, it is planned to increase MDF production up to 925 thousand m³. in 2016, and to produce gloss MDF boards, EvoGloss. Furthermore within the period 2017–2018 we will look at starting OSB production. We would like to stress the point, that these plans for the future are still only the

plans, and they might be modified because of the situation.

Does the KASTAMONU company plan to open other factories in other regions of Russia besides Tatarstan? What regions are you considering? Why these regions? What do you plan to produce there? When do you plan to start construction of the facilities? In particular, there was information about the construction of a factory in Kaluga Oblast. In an interview Mr. Haluk Yildiz mentioned the purchase of land in Krasnodar near a metal works. What do you plan to do there? Why did he elaborate on its proximity to a metal works? Do you plan some joint operation?

I can speak only about the construction works of the plant in the Kaluga Oblast. As for the other projects in the Russian Federation, there is no official information.

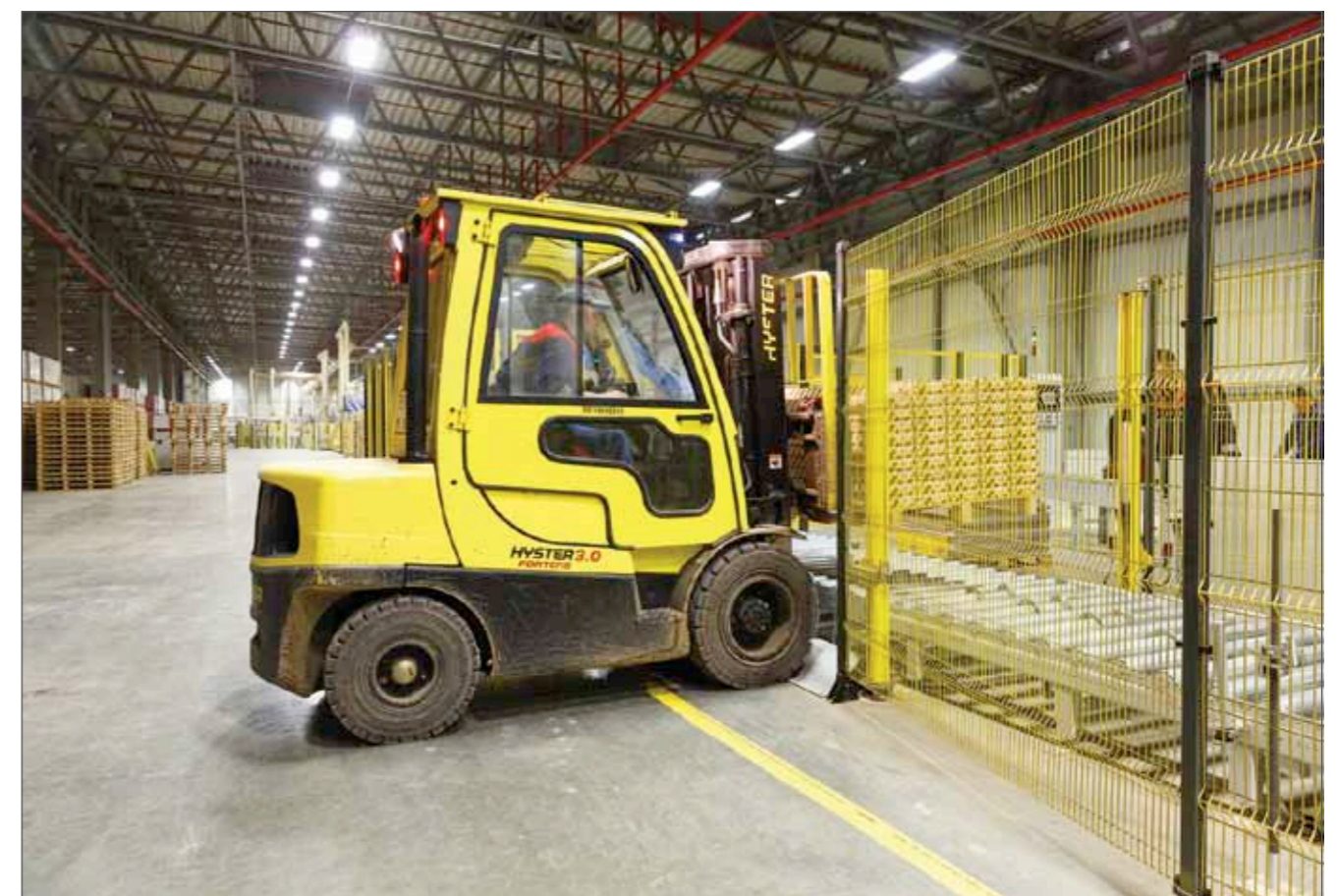
In addition to Tatarstan, we have been considering two other regions of Russia where we plan to invest. In the Kaluga Region, the project of building a wood processing plant in the SEZ "Lyudinovo" will be comparable with the company's facility at "Alabuga". The scale of new production will be similar to the one in Tatarstan. These production indicators will allow the group of KASTAMONU companies to be among the four world leaders in the industry. The project is to start in 2016.

In addition, our company has business interests in the Krasnodar Region where land for our investment projects has already been purchased.

It is also worth taking into account the fact that the KASTAMONU company is part of the international holding HAYAT. Investment projects of the holding HAYAT are not limited to the construction of Europe's largest KASTAMONU wood-working facility and an enterprise for producing HAYAT KIMYA consumer goods in the SEZ Alabuga. At present, the HAYAT holding has also been implementing an ambitious housing project. We are referring to the construction in Naberezhnye Chelny of the multifunctional residential complex, SUNRISE CITY. This project began to be implemented in parallel with the construction of the KASTAMONU plant.

The construction of the residential complex is a new project not only to Tatarstan, but also to Russia. In terms of its infrastructure and construction concept, this complex will have no analogues in the region. This complex will have everything: a shopping center, garages and parking, a medical center and a fitness club, swimming pool and cinema. We are creating a small world, a city within a city. The individual who lives here will be able to access all necessary services without leaving the complex. It is really the first project of such a type.

The interview was conducted by Mikhail DMITRIEV



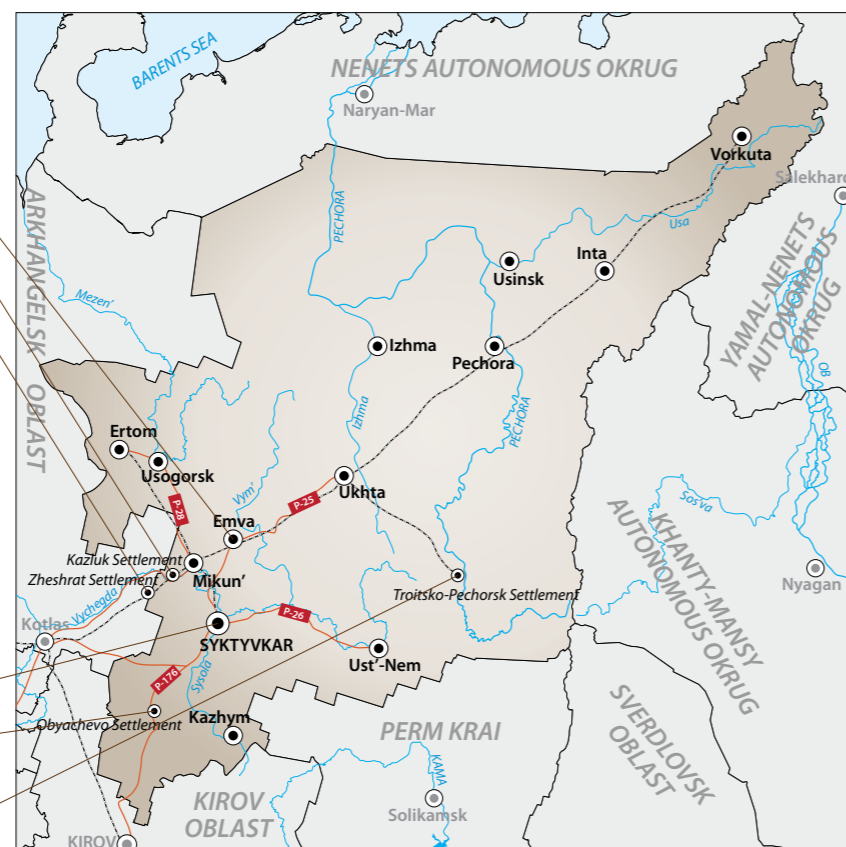


Komi Republic: The Land of Oil Derricks

Life in the Komi Republic is determined by the production and transport of energy resources

Large-scale forest enterprises of Komi Republic

- Knyazh-Pogost Fiberboard Factory
- Lesozavod No. 1, OOO
- Zheshart Plywood Plant, ZAO
- LesTrans, OOO
- Luzales, OOO
- Mondi Syktyvkar JSC
- Norwood SM, OOO
- SevLesPil, OOO
- Sewer, MF, OOO
- SLDK Severny Les, OOO
- Syktyvkar Integrated Industrial Plant, OOO
- Syktyvkar Plywood Factory, OOO
- Syktyvkar Tissue Group, OOO
- SLK, OOO
- Azimut, OOO
- PechoraEnergResurs, OOO



The Komi Republic is a part of the North-Western Federal District of the Russian Federation. About one-third of the region belongs to the Extreme North and the capital, Syktyvkar, is where executive and legislative governmental institutions, and the Supreme Court of the Komi Republic, are located.

STATISTICS

The Komi Republic totals 416,800 km² or about 2.4 per cent of Russia. At its longest extent, from the south-west to the north-east, the region extends 1,275 km.

The republic has no common borders with neighboring countries. The region's largest cities (apart from Syktyvkar) are Vorkuta, Ukhata, Inta and Usinsk.

According to the Russian state statistics agency Goskomstat, the population of the Republic in 2015 was 864,238, with a population density of slightly more than 2 persons per km²: in rural districts it is half that figure. Most of the population is concentrated in cities.

GEOGRAPHY AND CLIMATE

Geographically, the Komi Republic is in the extreme north-east of European Russia. The terrain is diverse; there are lowlands, uplands, and access to the western slopes of the Ural Mountains.

The climate is mainly temperate continental, with a long winter and short and cool summer. According to long-term data, the average temperature of January is -20 °C in the north of the republic and -17 °C in its south, although in winter, the temperature may drop to -60 °C in some parts of the region. The average temperature in July is +11 °C in the north and +17 °C in the south. A feature of the climate in the Komi Republic is frequent incursions of cold air masses from the Arctic, and of warm air from the Atlantic coast.

RESOURCES

The region produces oil, coal, natural gas, bauxite, titanium, and manganese. Fuel/energy resources are important in the Komi Republic, due to the presence of a large part of the Timan-Pechora oil and gas field, the large Pechora coal basin, and three oil shale basins. The scope of the reserves and production of minerals in the republic makes it the main fuel base for Russia's European North.

According to official data, deposits prospected in the republic contain about 50 per cent of all Russia's titanium reserves and at least 50 per cent of its bauxite reserves, as well as about 80 per cent of its reserves of quartz. Against this background, the oil and gas reserves are modest: about 3 per cent and 4.5 per cent, respectively. The Pechora coal basin is Russia's second largest in terms of coal reserves, and there is a large, long-term raw material base for the development of coal-based chemistry, energy sector, and methane production. Peat resources include 4,840 deposits, and commercial prospected reserves are estimated at 452.9 million tons.

The Komi administration has certain region development plans related to the deposits of deficit minerals; the republic has proven reserves of manganese and chromite ores. The total booked reserves of placer and primary gold are about 50 tons, and estimated gold resources, over 200 tons.

Another resource in the region is salt. There is a large basin of rock salt and potassium-magnesium salts in the south-east of the republic. In the Upper Pechora deposit the measured reserves are over 13 billion tons of common salt, over 165 million tons of magnesium salt, and over 122 million tons of potassium salt.

TRANSPORT

The transport infrastructure in the republic comprises water, air, road, railway, and pipeline transport. According to official data from the region's government, the length of railways is 2,300 km, navigable waterways total 4,100 km, and motor roads total 11,800 km.

The density of the public railway network is 4,100 km per 1,000 km². The length of the basic Kotlas-Vorkuta railway line is 1,700 km. The BelKomUr project (White Sea-Komi-Urals) will be a new sector of the regional railway, which forms the basis of the Integrated Program of Industrial and Infrastructural Development of the Komi Republic, the Perm Territory, and the Arkhangelsk Oblast. The commissioning of this trunk line will enable, in particular, communication between the seaport of Arkhangelsk and extractive regions of the Extreme North. The region's authorities expect that given sufficient funding, the line's construction will be completed by the end of 2018. The total cost of the project is about 180 billion rubles, with government funding not exceeding 50 billion rubles, the rest being borrowed funds and investment under a public-private partnership.

"The BelKomUr may give a push to the development of projects worth nearly a trillion rubles," believes the republic's head Vyacheslav Gaizer. "About 40 per cent of the industrial wood in European Russia is in the Komi Republic. Our allowable cut is 32 million m³, but we harvest several times less than this. When the BelKomUr is commissioned, we will be able to utilize up to 50 per cent of the merchantable cut, which will enable building a timber processing complex on a scale similar to Syktyvkar LPK."

Regular air traffic in the Komi Republic is supported by seven airports. As well as the region's largest cities, Pechora and Ust-Tsilma can also receive air transport. Currently, the government is taking active measures to develop internal airlines. Oil transport in the Komi Republic is represented by the Kharyaga-Usa interfield oil pipeline system and the Usa-Ukhata and Ukhata-Yaroslavl trunk oil lines. Trunk gas transport in the Komi Republic consists of four stages of trunk gas lines that are 7,300 km long. The republic's trunk gas lines ensure delivery of natural gas to Russia's Unified Gas Supply System in a volume of more than 100,000 tons/year. Since 2007, a 2500 km new generation gas transport system has been under construction, part of which will extend

across the Komi Republic to transport Yamal gas to the Unified Gas Supply System. Construction is planned to be completed by 2030.

THE ECONOMY

Impressive reserves of minerals and a ramified system of their production and transportation set the pace for the entire economy of the region. The development of oil refining in the republic is justified by the vast sales market for oil products. In addition, a sizeable part of the GRP is represented by timber processing / woodworking, and the pulp and paper industry.

The proportion of machine-building in the region's industrial output does not exceed 1 per cent, and the application of these products is again determined by the region's specializations: the oil, coal and gas industry, the timber sector, and construction.

FOREST RESOURCES

The total area of the forests controlled by the Forest Committee of the Komi Republic was 36,264,900 hectares (87.2 per cent of the republic) as of January 1, 2014. Forests not included in the forest resources occupy 2,656,700 ha. The forest coverage indicator differs in different districts of the republic, and depends on physico-geographic, climatic, and soil conditions. Average forest coverage in the republic is 79.1 per cent. Over 60 per cent of the total area of the republic's forest resources and other categories of forests are classified as commercial forests.

The majority of the forested land (53 per cent) is covered by spruce stands that are widespread in all districts and grow nearly on all soils in the republic except for peat bogs and dry sandy soils. Pine stands occupy one quarter of the forested land (25.2 per cent). Stands with cedar, larch and fir predominating cover a small area (1.1 per cent). Birch accounts for 16.6 per cent of forested lands. Clear felling and wildfires were the main factors that produced the occurrence of such birch stands on large areas. Aspen woods occur in all forest ranges and prevail in the southern part of the republic. All aspen woods are secondary forests. They appeared as a result of spruce forest felling and fire clearing of felling sites.

The total timber reserve in the republic's forests (forest resource lands) as of January 1, 2014 was 2838.47 million m³, of which softwood timber accounted for 2349.82 million m³ (82.8 per cent), and hardwood timber accounted for 428.02 million m³ (17.2 per cent). In the total reserve of stands, spruce stands account for 56.3 per cent, pine stands for 25.1 per cent, other softwood (fir, larch and cedar) for 1.4 per cent, birch for 13.7 per cent, aspen for 3.4 per cent, and other species for 0.1 per cent.

In the total reserve of mature and old growth stands, softwood species account for 85.3 per cent, of which spruce accounts for 67.2 per cent, pine for 16.5 per cent, fir for 0.7 per cent, larch for 0.8 per cent, and cedar for 0.1 per cent; hardwood species

account for 14.7 per cent, of which birch accounts for 10.9 per cent and aspen for 3.8 per cent.

The natural environment and old growth stands, which may be used for timber harvesting and become a commercial resource, are spread very unevenly over the republic's territory. Raw timber resources at traditional harvesting locations along public railways and motor roads have been depleted. The proportion of mature and old growth forests is negligible. The main reserves of mature and old growth stands are in the north-western and north-eastern forest districts of the region, where there are low levels of transport accessibility.

Experts believe that the environmental situation in the forests of the Komi Republic is satisfactory. The main difference between the forests of the Komi Republic and other regions is availability of vast tracts of virgin forests that have never been affected by human activity and man-made impacts. In 1995, according to a resolution made by UNESCO, the United Nations educational, science and cultural organization, the Pechora-Ilych preserve (together with a protective and buffer zone), and the Yugyd Va national park, were listed as a UNESCO heritage site under the common name "Virgin Komi Forests". The total area of these forests is 3.3 million ha. It is the largest of the primary forest areas of those that remain in Europe.

THE FORESTRY AND TIMBER SECTOR (FTS)

In recent years, a steady trend toward an increase in the scale of forest utilization has been observed in the Komi Republic. In particular, from 2011 to 2014, total forest utilization increased from 7.2 to 8.5 million m³, or by 18 per cent.

Harvesting, wood processing, and pulp and paper companies are represented in the republic's timber industry. The FTS in Komi is one of the leading sectors of the region's economy as measured by its share of manufacturing industry output, size of tax deduction to the budget, foreign currency revenues, size of its fixed assets, and number of jobs.

Development priorities in the regional timber sector include the gradual abandonment of exports of unprocessed timber and an increase in the social and economic efficiency of the sector through the integrated and rational use of available timber resources. Knowing the features of the existing production structure, regional forest resources, and their current use, the basic lines of development are the processing of low-grade timber, in particular by pulp and paper and fiberboard facilities; deeper mechanical processing of timber, forest chemistry, and bioenergy in terms of both biofuel production development and the larger scope of its use in the region.

The region's government gives special attention to bioenergy sector development. For this purpose, a network of grounds for temporary wood waste storage is being arranged. The availability of such grounds not only reduces the adverse impact



of waste on the environment, but also creates favorable conditions for their use in biofuel production, in particular fuel briquettes and pellets, and in thermal and electrical energy generation. By now, four such grounds are already in operation in the region: in the Adjerom settlement and the village of Mordino (in the Kortkeros District), the Zheshart settlement (in the Ust-Vym District), and the village of Ust-Kulov (in the Ust-Kulom District).

In addition the republic's budget grants subsidies for compensation of a part of costs of setting up fuel briquette and pellet productions. This approach, on the part of the region's authorities, has promoted the appearance of new facilities in the region; a new branch of the FTS is forming in the region, oriented at integrated use of raw timber and biofuel production.

Also, a strategic line of development of the FTS of the Komi Republic is the construction of a second timber industry cluster (in addition to the existing Mondi Syktyvkar LPK). The Komi Republic is one of the few regions in European Russia that has the necessary forest resources to develop pulp and paper and fiberboard production. For the construction of a pulp and paper mill, Troitsko-Pechorsk District is the most favorable. According to expert calculations, timber resource extraction within the radius of 200 km from the expected mill site is evaluated at 6 million m³ of timber per year. To enable pulp and paper production, water resources are also needed, and Troitsko-Pechorsk District has them for the future facility: river water may be used for processing needs, and flow well waters, for drinking. However, the district is only partially able to provide transport accessibility for the new facility. There are two republic-level motor roads, to Ukhta and to Syktyvkar, but the road network within the district is poorly developed, and there is no river harbor. Troitsko-Pechorsk has a railway station, and that railway joins the strategic Moscow-Vorkuta trunk railroad. In the future, access to the BelKomUr line now under construction will also be possible.

Prospective investment sites for timber processing facilities are located near the Mezhdurechensk and Verkhneizhemy settlement, and have a reserve for timber harvesting of up to 300,000 m³ per year, and access to railway infrastructure. Apart from sawn timber production, a pellet factory could be set up there, with a capacity of up to 90,000 t/year.

In addition, existing timber processing facilities have significant potential for expansion and development.

KEY ENTERPRISES IN THE FOREST AND TIMBER SECTOR OF THE KOMI REPUBLIC

Mondi Syktyvkar JSC (in Syktyvkar) is one of the leaders in the pulp and paper industry and Russia's largest paper product manufacturer. The mill specializes in office and offset paper and makes newsprint and top liner board and softwood market pulp. The company operates one cardboard machine and three papermaking machines and a pulp dryer, a wood yard and sulfate cellulose areas, a cogeneration plant, and a set of water treatment plants. Mondi's timber supply chain includes forest growing, harvesting, road construction, timber haulage, and forest management. In 2010, the company implemented a STEP project, one of the largest investment projects in Russia's pulp and paper industry in the last 30 years (545 million euros). This resulted in updated technologies, higher safety and environmental protection of the facility, higher product quality and competitiveness, and higher overall efficiency.

The mill's total output is about 1 million tons of finished products per year. In 2014, the facility made 723,200 m³ of paper (0.2 per cent more than in 2013) and 273,900 m³ of cardboard, which is 3 per cent more than in 2013. The company and subsidiaries employ about 6,000 personnel.

Syktyvkar Tissue Group LLC (in Syktyvkar) is one of Russia's leading manufacturers of tissue paper and base hygiene paper. The company's products are in high demand with many users and are well-known on Russian and Commonwealth of Independent States markets due to its high quality. Currently, the company employs about 600 people.

Syktyvkar Plywood Factory (in Syktyvkar) is one of Russia's largest manufacturers of large-size plywood and wood-based furniture boards. The factory's products are used by leading construction and furniture companies in Russia, Europe, and America. In 2014, the factory made over 200,000 m³ of plywood (of which, more than one half was laminated) and over 300,000 m³ of chipboards. The factory employs about 1,500 people.

Zheshart Plywood Plant LLC (Zheshart settlement, Ust-Vym District) is one of the three largest timber

industry companies in the Komi Republic; in terms of birch plywood output, it is a leader in the North-Western Federal District. The company makes a broad range of products, including 300 types of plywood of different size and thickness, laminated plywood, and medium density fiberboards / chipboards. In 2014, the combine manufactured over 150,000 m³ of plywood, of which nearly one-third was laminated, and about 8 million m² (conditional) of MDF boards. Currently, the company's staff exceeds 1,700 people.

Knyazh-Pogost Fiberboard Factory is one of Russia's largest companies making hard fiberboard by the wet method. Its regular customers are companies in the construction, furniture, and automobile industries. Last year, the factory made about 12.5 million m² (conditional) of fiberboards. The factory's employs more than 300 people.

SevLesPil LLC (in Syktyvkar) was established in May 2000, with commercial product output starting in 2002. Since then, the company has become the leading sawn softwood timber producer in the Komi Republic. Raw materials are supplied to the facility by its own harvesting division and by the region's largest harvesters. The main product is sawn softwood timber. Over 190,000 m³ of sawn timber was produced in 2014. The company employs more than 400 people.

SLDK Severny Les LLC (second name: Syktyvkar LDK, Syktyvkar) specializes in the production of sawn timber for the worldwide market. Nearly 180,000 m³ of sawn timber was produced in 2014. The sawmill employs more than 600 people.

Luzales LLC, Syktyvkar: This sawmill is a leading harvesting and wood processing facility in the republic. Its products are sold not only on the Russian market but also on markets in Western

Europe and the Middle East. The sawmill runs a full cycle of timber processing, and makes sawn timber and high quality planed and glued/laminated timber products.

Norwood SM, Syktyvkar, is a subsidiary of Norvik Group of Iceland. The company's main activities are timber harvesting, timber processing, trade in sawn timber, and its shipping within Russia. The sawmill is located in Syktyvkar and specializes in sawn softwood timber, both of natural humidity and shipping dry. Ninety per cent of the company's products are sold outside Russia. More than 40,000 m³ of sawn timber was produced by the company in 2014.

PechoraEnergResurs LLC (Troitsko-Pechorsk settlement), which has been operating since 2007, is one of the most rapidly developing companies in the Russian timber processing industry. The company's assets comprise a harvesting division and an added-value timber processing factory making softwood trim moldings and birch furniture boards, as well as wood fuel pellets and conifer essential oil. The company's employs slightly less than 150 people.

Azimut LLC (Troitsko-Pechorsk settlement) is a priority investment project for forest management in the Komi Republic, the goal of which is to establish a new hi-tech timber processing complex including harvesting, wood processing, and generation of electric and thermal energy from wood waste. All the components of the project suggest the use of the best available technologies. The first phase of the project was completed in August 2012, with the commissioning of the sawmill area and production of fuel briquettes from wood waste. Expected annual product output after reaching the full-scale capacity will be over

80,000 m³ of sawn timber, over 5,000 m³ of planed trim moldings, 10,000 m³ of laminated beams, and 5,000 m³ of furniture boards. Allotted to the company are forest resources with an annual harvesting volume of nearly 400,000 m³. Timber harvested in 2014 was about 70,000 m³. The company employs about 150 people.

Lesozavod No. 1 LLC (Kazluk settlement, Ust-Vym District). Having built and commissioned a new sawmill in August 2013, the company implemented the first phase of the project to construct a factory for the manufacturing of wooden house structural elements. The sawmill's design capacity is 120,000 m³ of dry sawn timber per year. A wooden-house-component production facility is planned for commissioning in 2016. Investment in the project is calculated at more than 1 billion rubles.

Syktyvkar Integrated Industrial Plant, LLC, Syktyvkar, is the leader in wooden house construction in the Komi Republic. The enterprise specializes in design and construction of up-to-date wooden structures for the construction of individual residential houses, blocks of flats, social facilities, and other industrial/business facilities. The plant has set up manufacturing of certified wooden construction elements: wooden framework panels, solid wooden panels using Massiv-Holz-Mauer (MHM) technology, laminated beams, and roof frames. In addition, the enterprise produces laminated boards and a broad range of high-quality wooden finishing materials (Euro battens, decorative battens, imitation beams, floor planks etc.). In 2014, the company made more than 150 million rubles' worth of marketable products. The company employs slightly less than 140 people.

Maria ALEKSEYEVA

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Enterprises of the forestry industry of the Komi Republic

Name	Activity	Address	Contacts
Agrolesservice, 000	Logging. Wood-sawing: sawn timber	168130, Komi Republic, Priluzsky rayon, s. Objachevo, ul. Lesnaya, 55A	Tel.: +7 (82133) 227-86, 231-45
Alfaremstroi, 000	Wooden house construction: wood frame-houses	167005, Komi Republic, Syktyvkar, Oktjabr'sky prospect, 131/4, cabinet 35	Tel./fax: +7 (8212) 25-00-41, (904) 270-52-21, alfaremstroi@mail.ru, www.alfaremstroi.ru
Antonovskaya L.H., IP	Woodworking: veneer, wood-based boards, and timber	167094, Komi Republic, Syktyvkar, pos. Krasnozatonsky, ul. Mikhailovskaya, 14	Tel. +7 (8212) 55-32-41, ivanantonovsci@rambler.ru
Arteev L.H., IP	Logging	169463, Komi Republic, Izhemsky rayon, village El', 4	Tel. +7 (82140) 962-21, ekatterenteva@yandex.ru
Asbi, 000	Furniture production: casegoods furniture	167000, Komi Republic, Syktyvkar, Dyrnos, 3/5	Tel./fax +7 (8212) 43-05-94, novolestorg06@yandex.ru
Azimut, 000	Logging. Wood-sawing: sawn timber, moulded strips. Bioenergy: wood fuel briquettes	169429, Komi Republic, Troitsko-Pechosky rayon, pgt Troitsko-Pechorsk, Ukhtinskaya motorway, 6 km, Ob.1	Tel.: +7 (82138) 910-76, 910-27, pechorsky_lph@mail.ru
Brigadir (Masapura E.A., IP)	Wooden house construction: log houses, wood frame-houses, and timber houses	167000, Komi Republic, Syktyvkar, ul. Internatsional'naya, 152	Tel.: +7 (8212) 34-62-40, 21-54-03, brigadir.si@mail.ru
Continent, 000	Wood-sawing: sawn timber	167009, Komi Republic, Syktyvkar, ul. Internatsional'naya, 157, office 85A	Tel.: +7 (922) 584-88-84, (904) 106-33-33, kontinent11@mail.ru
Dekostroi Service, 000	Woodworking: window and door units, and staircases. Wooden house construction. Wood-sawing: sawn timber	167000, Komi Republic, Syktyvkar, ul. Morozova, 113A/18	Tel./fax +7 (82142) 251-28, deko.komi@mail.ru
Diant, 000	Wood-sawing: sawn timber	167000, Komi Republic, Syktyvkar, ul. 5 Promishlennaya, 22/2	Tel.: +7 (8212) 28-63-12, 28-63-61, diant11@mail.ru
DomStroy, SK	Wooden house construction: glulam houses, houses from laminated veneer lumber and round log	167000, Komi Republic, Syktyvkar, ul. Pushkina, 30A, office 1	Tel.: +7 (8212) 29-71-84, 29-71-85, www.domstroykomi.ru
East department of OAO Mondi SLPK	Logging	168074, Komi Republic, Ust'-Kulomsky rayon, pos. Yugyd'yag, ul. Z.Kosmodemyansky, 6,	Tel.: +7 (82137) 951-91, 952-70, www.mondibp.com
Flora, 000	Wood-sawing: sawn timber	168060, Komi Republic, Ust'-Kulomsky rayon, ul. Internatsional'naya, 48A	Tel./fax +7 (82137) 942-44, belkom57@mail.ru
Format, Company (Potapova U.V., IP)	Furniture production: casegoods furniture, kitchens, and office furniture	167000, Komi Republic, Syktyvkar, Oktjabr'sky prospect, 131/6	Tel./fax: +7 (8212) 51-51-15, 33-33-61, forma-m@mail.ru
Garmonia, MP (Glukhov A.S., IP)	Furniture production: soft casegoods furniture	169300, Komi Republic, Ukhta, ul. Yubilejnaya, 12	Tel./fax +7 (8216) 74-57-49, garmoniamp@mail.ru, www.garmoniamp.ru
Glukh A.L., IP	Logging. Wood-sawing: sawn timber	168160, Komi Republic, Priluzsky rayon, s. Letka, ul. Sovkhoznaya, 17, office 8	Tel.: +7 (82133) 414-55, (922) 588-20-20, a.gluh@mail.ru
Golovkin I.I., IP	Logging. Wood-sawing: sawn timber, round log, planed timber. Wooden house construction: log cabins	167905, Komi Republic, Syktyvkar, pos. Verkhnyaya Maksakovka, ul. Bol'shaya, 30	Tel./fax +7 (8212) 23-28-02, golovkin_i_i@mail.ru
Goncharov U.P., IP	Logging. Wood-sawing: sawn timber	169523, Komi Republic, Sosnogorsky rayon, pos. Nizhny Odes, ul. Molodezhnaya, 15	Tel.: +7 (82149) 205-13, 249-54, vlaud@rambler.ru
Gorizont, 000	Logging. Wood-sawing: sawn timber	169436, Komi Republic, Troitsko-Pechorsky rayon, s. Yaksha, ul. Shkol'naya, 26	Tel. +7 (82138) 956-21, dubchak.gorizont@yandex.ru
Inteks, 000	Wooden house construction: glulam houses, and log houses	167000, Komi Republic, Syktyvkar, ul. Kolkhoznaya, 42, office 19	Tel.: +7 (8212) 56-05-66, 21-51-18, 560566@mail.ru, www.inteks11.ru
Kairos, 000	Furniture production: casegoods furniture	169710, Komi Republic, Usinsk, ul. 60 Let Oktyabrya, 7A	Tel. +7 (34384) 410-14, ooo.kairos@mail.ru, www.kairos.ucoz.ru
Knyazh-Pogost Fiberboard Factory, 000	Wood-sawing: sawn timber. Woodworking: fiberboard, decorated fiberboard	169200, Komi Republic, Emva, ul. Vymskaya, 35	Tel. +7 (82139) 212-79, 211-88
Komplekt-Resource, 000	Furniture production: casegoods furniture, and soft furniture	169710, Komi Republic, Usinsk, ul. Lenina, 9, office 74	Tel. +7 (82144) 453-50, kom-resurs@mail.ru
Korpus-Kom (Mikushev I.A., IP)	Furniture production: casegoods furniture	167000, Komi Republic, Syktyvkar, ul. Karla Marksa, 213, office 4	Tel.: +7 (8212) 21-41-58, 55-96-71, korpus_kom@mail.ru
LesExport-A, 000	Logging	167001, Komi Republic, Syktyvkar, ul. Internatsional'naya, 110	Tel. +7 (8212) 44-75-65, lesexport-a@mail.ru
Lesozavod No. 1, 000	Logging. Wood-sawing: sawn timber, moulded strips	169012, Komi Republic, Ust'-Vymsky rayon, pos. Kazluk, ul. Shkol'naya, 1A	Tel.: +7 (499) 641-05-85, 641-06-86, info@lesozavod1.ru, www.lesozavod1.ru

Name	Activity	Address	Contacts
Lespil, 000	Wood-sawing: sawn timber	167000, Komi Republic, Syktyvkar, ul. Pechorskaya, 50, kab. 4	Tel. +7 (904) 230-99-55, 2702.69@mail.ru
LesTrans, 000	Wood-sawing: moulded strips	167000, Komi Republic, Syktyvkar, ul. Kirova, 45, office 321	Tel.: +7 (821) 224-99-69, (912) 864-09-42, lestrans@lestrans.eu, valery@lestrans.eu, www.lestrans.eu
Luzales, 000	Logging. Wooden house construction: houses from round log	167981, Komi Republic, Syktyvkar, ul. 1 Promishlennaya, 8	Tel. +7 (8212) 28-73-86, fax +7 (8212) 28-73-99, luzales@mail.ru, info@luzales.ru, www.luzales.ru
Mebel + (Petrov A.N., IP)	Furniture production: casegoods furniture, kitchens, wardrobes, children furniture, and office furniture	167000, Komi Republic, Syktyvkar, Pokrovsky boulevard, 7	Tel. +7 (8212) 20-38-20, mebel70@inbox.ru, www.mebel70.ru
Mebel-Design (Fedorov K.G., IP)	Furniture production: wardrobes, casegoods furniture, and soft furniture. Woodworking: interior doors	167000, Komi Republic, Syktyvkar, ul. Chkalova, 34	Tel.: +7 (8212) 24-87-78, 24-87-76, mdtorg@mail.ru, www.md-rk.ru
Mondi Syktyvkar JSC	Logging. Pul-and-paper: office paper, offset paper, newsprint, and cardboard	167026, Komi Republic, Syktyvkar, prospect Bumazhnikov, 2	Tel. +7 (8212) 69-95-55, fax +7 (8212) 62-02-82, www.mondibp.com
Moroz, 000	Logging. Wood-sawing: sawn timber	167009, Komi Republic, Syktyvkar, ul. Permskaya, 24	Tel.: +7 (8212) 43-85-33, 56-57-14, morozles@yandex.ru
Nazaret, Mebelny Saloon (Lavrenov V.A., IP)	Furniture production: casegoods furniture	167000, Komi Republic, Syktyvkar, ul. Karla Marksa, 191	Tel.: +7 (8212) 21-60-71, 20-19-99, nazaret_08@mail.ru, www.nazaretmebel.com
New Construction Technologies, 000	Furniture production: casegoods furniture	167023, Komi Republic, Syktyvkar, ul. Tarovskogo, 32, kv. 40	Tel.: +7 (8212) 31-74-75, 57-96-60, newstroit@mail.ru
Norwood SM, 000	Logging. Wood-sawing: sawn timber	167983, Komi Republic, Syktyvkar, m. Chovju, ul. Melioratorov, 4	Tel.: +7 (8212) 28-62-05, 28-61-13, inform@norwoodsm.ru, www.norwoodsm.ru
Novy Dom, 000	Woodworking: window and door units. Wood-sawing: sawn timber	168220, Komi Republic, Syktyvkar, rayon, s. Vyl'gort, ul. Nagornaya, 28	Tel. +7 (8212) 55-81-20, novdom3@yandex.ru
Optima Les, 000	Logging. Wood-sawing: sawn timber	168090, Komi Republic, Ust'-Kulomsky rayon, s. Pomozdino, ul. Garazhnaya, 8	Tel. +7 (82137) 971-50, optimales@rambler.ru
PechoraEnergoResurs, 000	Logging. Wood-sawing: sawn timber. Bioenergy: wood pellets	169420, Komi Republic, Syktyvkar, pgt. Troitsko-Pechorsk, ul. Sovetskaya, 46, of. 8	Tel./fax +7 (82138) 91-104, info@pechora-es.ru, www.pechora-es.ru
SevLesPil, 000	Wood-sawing: sawn timber	167026, Komi Republic, Syktyvkar, Ezhvinsky rayon, ul. Lesnaya, 2/4	Tel. +7 (8212) 63-01-00, fax +7 (8212) 63-05-09, secretary@sevlespil.com, www.sevlespil.com
Sewer, MF, 000	Furniture production: casegoods furniture, children and office furniture	168220, Komi Republic, Syktyvdinsky rayon, Syssol'skoje shosse, 1	Tel.: +7 (8212) 57-75-67, (82130) 712-82, sewer@sewer.ru, www.sewer.ru
SLDK Severny Les, 000	Wood-sawing: sawn timber	167009, Komi Republic, Syktyvkar, ul. Lesozavodskaya, 15	Tel. +7 (8212) 22-74-37, fax +7 (8212) 22-69-33
SLK, 000	Logging. Wood-sawing: sawn timber	168130, Komi Republic, Priluzsky rayon, s. Objachevo, ul. Internatsional'naya, 13	Tel.: +7 (82133) 230-05, 298-05, slkk@mail.ru, www.slkk.ru
Sviana, MF (Tkachuk S.K., IP)	Furniture production: casegoods furniture	169336, Komi Republic, Ukhta, pgt. Vodny, ul. Ukhtinskaya, 2	Tel./fax: +7 (8216) 79-96-61, 79-05-83, sviana-syktyvkar@mail.ru, www.sviana.ru
Syktyvkar Integrated Industrial Plant, 000	Woodworking: glulam, solid boards, pre-fabricated panels, and moulded strips. Wooden house construction	168220, Komi Republic, Syktyvdinsky rayon, s. Vyl'gort, Permsky per., 1	Tel.: +7 (8212) 28-76-60, 28-76-61, 28-76-62, espk@espk.ru, www.espk.ru
Syktyvkar Plywood Factory, 000	Woodworking: plywood, and chipboard	167026, Komi Republic, Syktyvkar, Ukhtinskoje shosse, 66	Tel.: +7 (8212) 29-37-00, 29-38-48, info@plypan.com, www.plypan.com
Syktyvkar Tissue Group, 000	Pulp-and-paper: hygiene products	167026, Komi Republic, Syktyvkar, pr. Bumazhnikov, 4	Tel.: +7 (8212) 62-02-20, 62-02-22, mail@sgbi.ru, www.sgbi.ru
Technologii Tepla, 000	Wooden house construction: timber houses	167005, Komi Republic, Syktyvkar, ul. Tentjukovskaya, 81/34	Tel.: +7 (8212) 55-73-78, 32-22-33, 21-32-22, ttepla@ttepla.ru, www.ttepla.ru
Technopark, 000	Wooden house construction: wood frame-houses	167000, Komi Republic, Syktyvkar, ul. Starovskogo, 22/1	Tel.: +7 (8212) 55-57-48, (904) 270-57-48, interlab@mail.ru
Temnov D.S., IP	Wooden house construction: wood frame-houses. Woodworking: window and door units	168220, Komi Republic, Syktyvdinsky rayon, s. Vyl'gort, ul. Rabochaya, 13A	Tel. +7 (904) 865-84-00, www.temnov.tiu.ru
Triteks, 000	Furniture production: casegoods furniture, and soft furniture	167000, Komi Republic, Syktyvkar, ul. Svobodi, 27	Tel./fax +7 (8212) 24-43-40, tritekc@mail.ru
Vershina, 000	Wooden house construction: log houses, glulam houses, and клееного бруса, pre-fabricated houses	167000, Komi Republic, Syktyvkar, ul. Kuratova, 83, office 512	Tel. +7 (8212) 55-26-28, 55-26-28@mail.ru, www.ooo-sds.ru
Yortomsky Leskhov, 000	Logging	169250, Komi Republic, Udorsky rayon, pos. Blagoevo, ul. Oktyabr'skaya, 4	Tel. +7 (82135) 221-45, yortomsky.lesxoz@yandex.ru
Zheshart Plywood Plant, ZAO	Woodworking: plywood, chipboard, and MDF	169045, Komi Republic, Ust'-Vymsky rayon, pos. Zheshart, ul. Gagarina, 1	Tel. +7 (82134) 471-20, zfk-11@mail.ru, www.zfk11.ru

Kirov Oblast: a Land of Go-Getters

According to experts, including those with global knowledge, the economy of Kirov Oblast is well-balanced and stable, which, in spite of the poor quality of roads in the region, has considerable investment potential.

The Kirov Oblast is a part of the Volga Federal District and belongs to the Volga-Vyatka Economic Region. The region is 120,400 sq.m, and its population is 1,319,100, of whom 96% are Russians.

The capital city is Kirov, with a population of 502,600, located 896 km east of Moscow. In all, there are 39 municipal districts, six cities under oblast jurisdiction, 273 villages, and 53 urban-type settlements.

GEOGRAPHY AND CLIMATE

The region has a hilly relief. Most of the region is taken up by the Vyatka River basin, a tributary of the Kama River in Tatarstan. All in all, there are almost 20,000 rivers totalling more than 66,000 km in length in the Kirov Oblast.

The climate is continental, with a long, cold, snowy winter (lasting 4.5 months on the average) and

a mild summer. In January, the temperature varies between -12 and -15 °C. In autumn and winter the Kirov Oblast is under the influence of cyclones coming from the Atlantic Ocean and the Mediterranean Sea and causing considerable cloudiness, frequent snowfalls and windy weather. Cyclones often alternate with arctic air masses that form anticyclones with frosty, windless and clear weather.

Large-scale forest enterprises of the Kirov Oblast

Demjanovskiye Manufakturny, OOO

DOK, OOO

Severdomstroj, OOO

Krasnyi Yakor, AO

Almis, PKP, OOO

Brenburg, GK

Craft, MF

Lesnoy Profile LPK, OAO

North West Forest Company, OOO

Novovyatsky Sky Plant, OOO

PerspektivaLes, LPK

VyatkaEvroLes, OOO

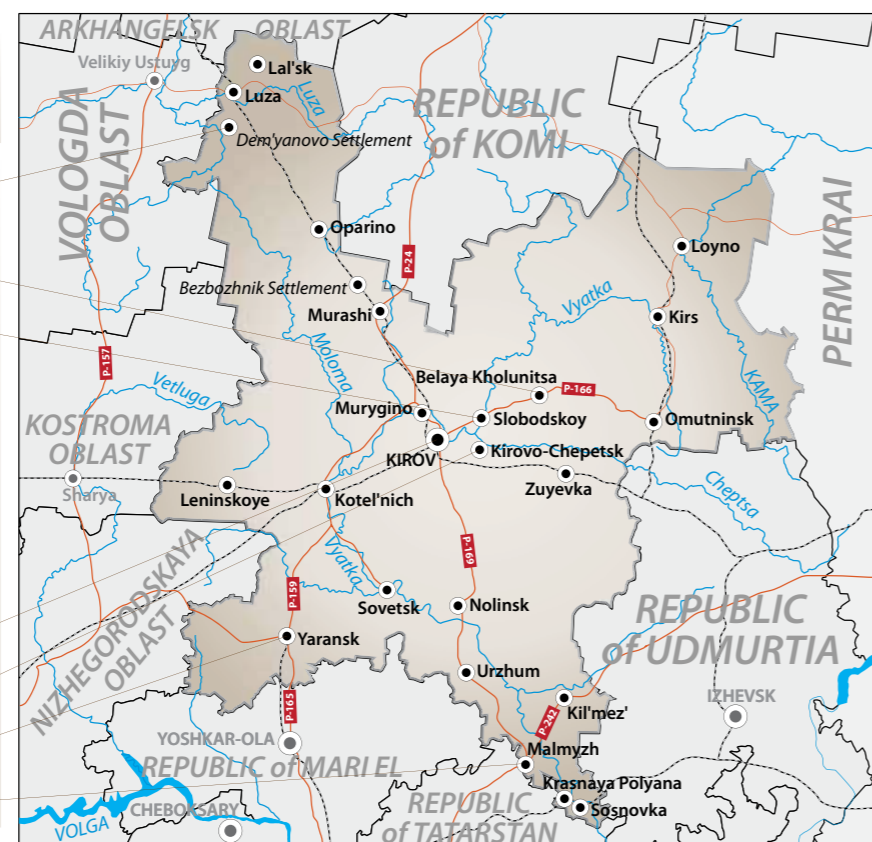
Vyatka Plywood Plant, OOO

Vyatsky Dom, OOO

Bimma-Decor, OOO

Yaransklesprom, ZAO

Domostroitel, OAO



July is the warmest month of the year, with temperatures ranging from +17 to +19 °C. The average annual precipitation in the region is 500 mm; in the north-west this figure is somewhat higher.

ECONOMY

According to experts, the Kirov Oblast has a well-balanced economy at this time. There have not been any fundamental changes in the structure of the gross regional product (GRP) for many years. Industry is the largest sector, accounting for about 30.7% of the GRP. The key industries of the Kirov Oblast are engineering and metalworking, chemicals and petrochemicals, woodworking, pulp and paper, food processing, and electric power. These account for 84% of the industrial production. Agriculture, hunting and forestry account for 9.3% of GRP, construction accounts for 4.1%; transportation and telecommunications 10.9%; wholesale and retail trade, repairs of motor vehicles, motorcycles, domestic and personal appliances 14.5%; and other activities 30.5%.

The stability of the situation of the region's economy is confirmed by international ratings such as Fitch Ratings which has assigned a long-term rating with a "stable" outlook to the Kirov Oblast.

The strategy of the social and economic development of the Kirov Oblast until 2020 names the development of the timber industry and agriculture as the main priorities. In addition, it is expected that a high emphasis will be placed on the development of building materials manufacture and of the chemical sector based on developing phosphate deposits. The authorities of the region also intend to concentrate their efforts on creating a biochemical and pharmaceutical cluster.

TRANSPORT

The length of the region's railways totals 2,200 km, and the base passenger line of the Trans-Siberian Railway passes through the territory. In addition, the development of peat extraction in the region in the late 1920s entailed the construction of narrow gauge railways, many of which are still used.

The total length of motor roads is 24,100 km, however, no more than 10,000 km of them are hard-surfaced roads. Therefore, during the autumn and spring many roads even between big regional cities become impassable. New paved roads are being built in the region, and the problem of road quality is being gradually addressed.

The total length of waterways is 1,800 km, with the Vyatka River being the main route. There are also air links.

RESOURCES

In Soviet times, the Kirov Oblast was one of the biggest fur processing centers in the USSR. These days almost all species of commercial fur-bearing

animals in Russia are hunted and bred in the Kirov Oblast.

The Kirov Oblast is also considered to be the peat capital of Russia. The estimated commercial reserves of peat are 378.3 million tons with 484 commercially significant deposits over 10 ha in area accounting for more than 50% of all peat extracted in the Russian Federation. The region can also be considered the phosphate capital of the country. According to the administration of the Kirov Oblast, Europe's largest Vyatka-Kama phosphate rock deposit lies within the boundaries of the region. In-place reserves of phosphate rock amount to 2 billion tons, or 45% of all reserves in Russia.

In addition, the Oblast has reserves of glassmaking sands, sand and gravel mixes, clay, building stone, and cement raw materials.

FORESTRY

By volumes of logging and woodworking, the region is among the major forest-industrial complexes in the European part of Russia and is the leader in the Volga Federal District. The region is the 19th largest in the country in terms of timber resources, and eighth largest in timber hauling.

According to the Forestry Department of the Kirov Oblast, 63.2% of its area is covered with forest, or slightly over 8 million ha, with 5.4 million ha of woods fit for use. Total timber resources amount to over 1.2 billion cu.m.

Commercial forests account for 6,498,900 ha (80%) of the resource, while shelter forests account for 1,624,000 ha (20%). According to the Kirov Oblast Forestry Development Concept for 2010–2015, the average age of forests in the region is 58 years. The average merchantability class of mature stands and overmature woods in the commercial reserves by wood species is 1–2 for pine, 2–3 for fir, 2–3 for birch, and 3–4 for aspen. The largest area in coniferous forests is occupied by stands with a predominance of fir (56% of the total area), while pine forest stands account for 44%.

The share of softwood in the total timber reserves in the forest stands is about 56%.

Investment Projects Planned for Implementation in the Kirov Oblast

– "Efficient Use of Forests in the Luza District of the Kirov Oblast." The investor is LLC Luza-Viled; the total volume of forest use is 129,500 cu. m. The application has been approved by the Government of the Kirov Oblast and by the Federal Forestry Agency.

– "Founding an Enterprise for the Production of Wood-Polymer Composites on the Basis of the Raw Materials Base of the Omutninsk Forestry." The investor is Lesnaya Kompaniya LLC; the total volume of forest use is 75,000 cu. m. The application has been approved by the Government of the Kirov Oblast and by the Federal Forestry Agency.

– "Retrofitting of the Lumber Factory of PKP Almis LLC." The investor is PKP Almis LLC; the total volume of forest use is 512,820 cu. m. The application has been approved by the Government of the Kirov Oblast and by the Federal Forestry Agency.

– "Setting Up an Added-Value Wood Processing Facility by Partner LLC." The investor is Partner LLC; the total volume of forest use is 169,400 cu. m. The application is under review by the Government of the Kirov Oblast.

The annual allowable volume of timber harvesting (rated wood cutting) is estimated in the Kirov Oblast at 17,046,300 cu. m, almost 8 million cu. m of this in the softwood reserves.

The main use of forests in the region is logging for industrial production and for the needs of the population. Eight-hundred and fifty-six contracts lease 5,723,100 ha (71.2% of the total area of the forest resources lands) with the annual possible logging volume of 13 million m³ (78.6% of the total rated wood cutting).

As in most Russian regions, forest management data in the Kirov Oblast are very outdated. The last time data collection was carried out in the region on a wide scale was in 1997–2003. Even five years ago, while preparing the Kirov Oblast Forestry Development Concept for the years 2010–2015, experts noted that on 66% of total forestry lands, the last forest management work was carried out more than ten years ago. The situation with lands transferred to forestry from agricultural use is even sadder: the last survey on 85% of the lands was carried out 25 or more years ago, and the legal term of validity is ten years. As yet this cannot be addressed because funds from the federal budget allocated to the region for forest surveying are clearly not enough. At the same time, the region cannot afford to spend its own funds to survey federally owned forests. The lack of accurate forest survey data influences forest-resource planning in implementing priority investment projects and when forest lots are put up for auction.

However, reforestation targets have been outstripped in the Kirov Oblast. Thus, in 2013 forest regeneration work was undertaken on an area of 27,271 ha with the year's target of 26,699 ha, i.e. the target was exceeded by 102%. Forest crops were planted on an area of 6,500 ha. Forest lot lessees procure seeds of forest plants and softwood seedlings are supplied to adjacent regions, i.e. the Perm Krai, the Vologda Oblast, the Kostroma Oblast, and the Republic of Komi.

The Kirov Oblast may also become one of the pilot regions in Russia where forest regeneration will use cloned planting stock.

The underdeveloped network of forest roads and hauling tracks hinders full-fledged forest

restoration and forest management. In addition, according to experts, young plants are not cared for, which minimizes the efficiency of such work.

The distribution of roads is extremely non-uniform in the region, and therefore the share of unused rated wood cutting is high in its north-west and north-east. The timber cut in harvesting areas is transported to lower landings situated in places convenient for accumulating it and to neighboring regions for processing. The hauling distance varies from 20 to 250 km. Haulage of large volumes of timber from harvesting areas to distances exceeding 30 km considerably reduces the economic efficiency of forestry in many districts of the region.

According to the regional Forest Plan, there are 5.1 km of haulage roads per 1,000 ha of wooded lands, whereas the standard is 10 km for 1,000 ha. Therefore, the Forest Plan of Kirov Oblast until 2018 provides for the construction of 669.3 km of forest roads in the region for timber haulage. The development of a network of public forest roads

will be funded from regional and local budgets, while non-public forest roads are to be built on the basis of private-public partnerships involving businesses.

FOREST-INDUSTRIAL COMPLEX

More than ten investment projects in the field of the forest-industrial complex are currently being implemented and planned. However, the regional authorities are not satisfied with the amount of income the industry brings to the budget.

According to information provided by the Industrial Development Department of the Kirov Oblast, more than 1,100 organizations with about 25,000 employees currently operate in the forest-industrial complex of the region. By percentage of volume of shipped products (14.1%), the forest-industrial complex is the third largest among processing industries in the region.

In 2013, output of the region's wood enterprises was worth 19.9 billion rubles, or 9.5% more than in the previous year.

Currently, nine priority investment projects in forest management have been approved by the Russian Federation's Ministry of Industry and Trade and are being implemented in the Kirov Oblast. These projects include the manufacture of residential houses with glued laminated lumber, large-size plywood, chipboard and wood pellets. The bulk of investment is in woodworking, especially in the construction of veneer/plywood production facilities such as Vyatka Plywood Works LLC, North-Western Forest Company LLC, and CJSC Krasny Yakor.

To address the problem of processing low-grade wood and edgings, priority is given to the manufacture of wood pellets, bricks, wood powder, and wood-plastic composites. The Russian government supports projects by providing wood lots to investors without holding auctions and by applying a reduction factor of 0.5 to the rent rate during the payback period of an investment project.

Maria ALEKSEYEVA

Kirov Oblast government authorities responsible for forest industry regulation

Governor of the Kirov Oblast

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Forestry Department of the Kirov Oblast

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Enterprises of the forestry industry of the Kirov Oblast

Name	Activity	Address	Contacts
Afanasjevsky Les, SPPSK	Logging	613060, Afanas'yev, ul. Energetikov, 2A	Tel. +7 (83331) 21-434 af-les2010@yandex.ru
Alexandrov S.L., IP	Logging. Wood-sawing: sawn timber	612450, Sunskij rayon pos. Suna, ul. Truda, 33	Tel. +7 (912) 826-98-04 elena_alex75@mail.ru
Almis, PKP, 000	Wood-sawing: sawn timber, moulded strips. Bioenergy: wood pellets	610000, Kirov, ul. Gertsena, 21	Tel.: +7 (8332) 70-82-51, 70-82-52, 64-98-99 almis@wd.kirov.ru, www.almiswood.com
Altai-Service, 000	Woodworking: plywood, and lining boards. Wood-sawing: sawn timber	610035, Kirov, ul. Proizvodstvennaja, 23	Tel.: +7 (8332) 34-01-10, 34-11-21, 51-55-90 as@as.kirov.ru, www.alservice.ru
Astron, 000	Pulp-and-Paper: corrugated board	613040, Kirovo-Chepetsk, GP, PO Box 9	Tel.: +7 (83361) 344-35, 344-36, 344-37, 344-38 sinitsyna@astron.su, www.astron.su
Bakhta-Dom, 000	Wooden house construction: houses from round log and squared timber	610914, Oktyabrskij rayon, s. Bakhta, ul. Yubilejnaya, 1	Tel. +7 (912) 704-31-51 baxta-dom@mail.ru
	Furniture production: casegoods furniture	625001, Tyumen, ul. Yamskaya, 29	Tel.: +7 (3452) 42-05-15, 23-80-49, 23-80-50 mebel_buro@mail.ru, www.buroplus.ru

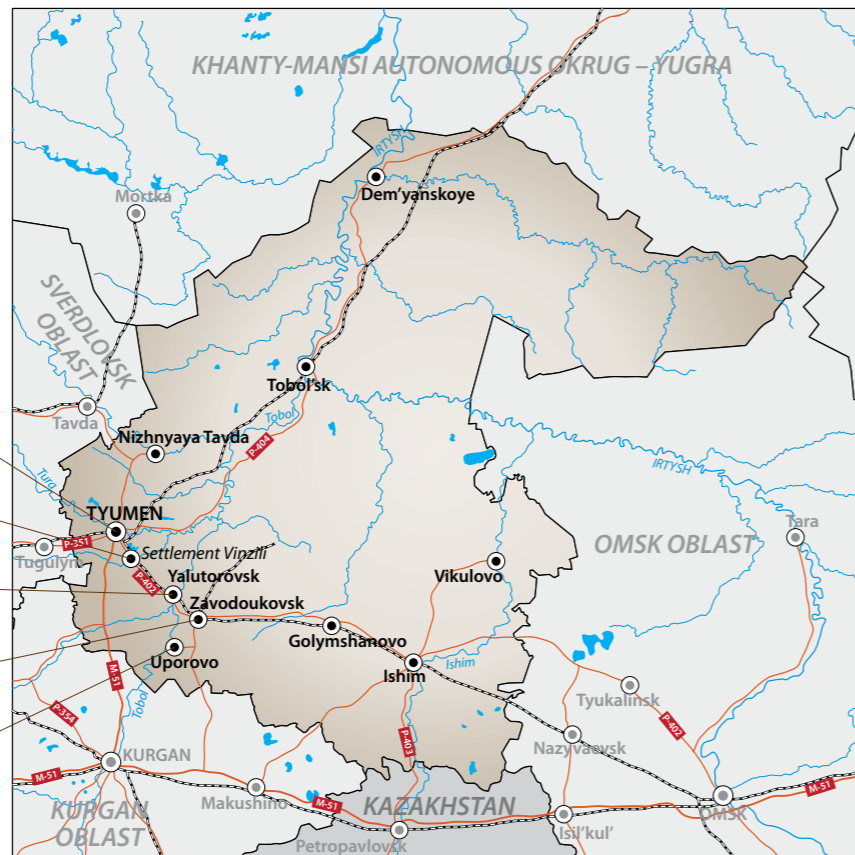
Name	Activity	Address	Contacts
Bakhtin O.N., IP	Woodworking: planed timber. Wood-sawing: sawn timber	613340, Sovetsk, ul. Stroitelej, 28A	Tel. +7 (922) 920-36-77 bon8706@yandex.ru
Belka-Favorit, ZAO	Woodworking: matches	613153, Slobodskoj, ul. Slobodskaja, 53	Tel.: +7 (83362) 4-92-60, 4-92-13 spichki@belkafavorit.kirov.ru, www.belkafavorit.com
Bers-Les, 000	Wooden house construction: houses from round log, and squared timber. Wood-sawing: sawn timber	613108, Slobodskoj rayon, der. Ponizov'ye	Tel. +7 (912) 829-34-98 bars.les@mail.ru
Bimma-Decor, 000	Woodworking: MDF, fiberboard, folding	613042, Kirovo-Chepetsk, PO Box 1759	Tel.: +7 (83361) 3-56-44, 3-44-55, 3-44-66 bimma@bimma.ru, www.bimma.ru
Brevenburg, GK (Moyasarova N.V., IP)	Wood-sawing: round log. Wooden house construction: houses from round log	610007, Kirov, ul. Rejdovaya, 38	Tel.: +7 (8332) 46-37-99, (912) 826-37-99 fax +7 (8332) 22-62-45 info@brevenburg.ru, www.brevenburg.ru
Brothers Bazhenovs' Furniture, 000	Furniture production: soft furniture	610913, Kirov, der. Maraki, 7	Tel.: (8332) 52-63-67, 25-52-48, 29-02-03 roman.v.i@yandex.ru, www.kirovmebel.ru
	Furniture production: casegoods furniture	625000, Tyumen, ul. Timiriyaeva, 6	Tel. +7 (3452) 31-81-51 office@frontal.ru, www.frontal.ru
Captain, 000	Wood-sawing: sawn timber	610002, Kirov, ul. Lenina, 95A	Tel. +7 (8332) 64-52-25 captain@vib.kirov.ru, www.captain-wood.ru
Craft, MF (Craft, 000)	Furniture production: casegoods and soft furniture	610000, Kirov, ul. Bazovaja, 8/1	Tel.: +7 (8332) 77-71-12, 42-49-95 490995@mail.ru, www.43mebel.ru
Dariy, MF, 000	Furniture production: casegoods furniture	610006, Kirov, Oktyabrskij pr., 79	Tel.: +7 (8332) 71-55-99, 71-17-47 dariy_mebel@mail.ru, www.dariy43.ru
Demjanovskiye Manufakturny, 000	Woodworking: fiberboard	613911, Podosinovsky rayon, pos. Dem'yanovo, ul. Stroitel'naya, 30	Tel. +7 (833-51) 2-13-90 info@dmanufactories.ru
Diwell, MF	Furniture production: soft furniture	613040, Kirovo-Chepetsk, ul. 30 Let Oktyabrja, str. 9	Tel. +7 (83361) 9-34-96 mail@diwell-mebel.ru, www.diwell-mebel.ru
Dobrotny Dom, 000	Wooden house construction: houses from round log	610017, Kirov, ul. Gorkogo, 5, office 409	Tel. +7 (912) 827-88-10 dobrus-dom@rambler.ru, www.dobrus.ru
DOK, 000	Wood-sawing: sawn timber. Wooden house construction: glulam houses, and houses from round log	613200, Belaya Kholunitsa, ul. Naberezhnaya, 44	Tel.: +7 (83364) 416-35, 410-40, 418-16 bh@dsk.kirov.ru
Doma Veka, 000	Wooden house construction: houses from round log	610014, Kirov, ul. Komsomol'skaya, 89, offices 104, 105	Tel. +7 (8332) 56-01-98 proekt012@yandex.ru, www.domvek.ru
Domostroitel, OAO	Furniture production: furniture from solid wood. Bioenergy: fuel briquettes	612950, Vyatsko-Poljanskij rayon, pos. Krasnaya polyana, ul. Druzhby, 1	Tel.: +7 (83334) 530-01, 531-01 office@domo.kirov.ru, www.domo.kirov.ru
Donaurovo Les, 000	Logging	613546, Urzhumskij rayon, pos. Donaurovo, ul. Lesnaya, 25	Tel. +7 (83363) 371-30 donaurovoles@yandex.ru
Drevkar, 000	Wooden house construction: frame houses	610912, Kirov, pos. Doronichi, ul. Oktyabrskaya, 4	Tel.: +7 (8332) 55-40-71, (922) 666-77-75 karkas@drevkar.ru, www.drevkar.ru
Edem, 000	Wood-sawing: sawn timber, moulded strips. Bioenergy: pellets	612412, Zujevskaya, ul. Lesnaya, 1, lit. A	Tel. +7 (83337) 256-19 edem.135@mail.ru
El-Les, 000	Wooden house construction: houses from round log	612602, Kotel'nich, ul. Shevchenko, 2	Tel. +7 (83342) 460-61 el-les@yandex.ru
Etalon, 000	Logging. Woodworking: window and door units. Wood-sawing: sawn timber	249400, Kirov, ul. Nekrasova, 48A	Tel. +7 (48456) 558-83 etalon-lesa@rambler.ru
Feniks, 000	Woodworking: matches	610004, Kirov, ul. Krasnoj Zvesdy, 17	Tel.: +7 (8332) 35-01-39, 35-78-32, 65-14-38 f-match@rambler.ru, www.feniksmatch.com
Green Wood Houses, AO	Wooden house construction: glulam houses	610001, Kirov, Oktyabrskij rayon, 116 A, office 206	Tel. +7 (922) 903-39-99 greenwoodhouse@yandex.ru
Invest Dom Stroj, 000	Wooden house construction: houses from round log	613150, Slobodskoj, ul. Gogolya, 66	Tel. +7 (919) 512-47-84 bakos@prostorles.com
Jivoje Derevo, 000	Woodworking: doors	610046, Kirov, ul. Moskovskaya, 102-B, TK Planeta, office 1C	Tel. +7 (8332) 26-50-64 jivoje-derevo@mail.ru, www.jivoje-derevo.ru
Jugrand (judintsev S.U., IP)	Wood-sawing: sawn timber	612600, Kotel'nich, ul. Rechnaya, 22B	Tel.: +7 (912) 823-54-09, (909) 140-10-43 Fax +7 (83342) 46-385, mirdosok@mail.ru
KaizerDom, 000	Wood-sawing: round log. Wooden house construction: houses from round log, glulam houses, and log cabins	610046, Kirov, ul. Moskovskaya, 109/5	Tel.: +7 (8332) 51-73-14, 51-72-17 severles43@mail.ru www.severles43.ru
Kirov Forestry Company, 000	Wood-sawing: moulded strips	610021, Kirov, ul. Proizvodstvennaya, 18, kv. 17	Tel. +7 (8332) 75-62-36 ooo.kirovles@yandex.ru
	Wood-sawing: moulded strips. Woodworking: glulam, cement-shaving boards. Wooden house construction: houses from glulam, and frame-board wooden houses	625530, Tyumen Oblast, Tyumen rayon, p. Vinzili, ul. Zavodskaya, 15	Tel. +7 (3452) 72-86-46, 72-81-00 sibzhilstroi@mail.ru www.sibzhilstroi.com



Tyumen Oblast: Spanning the Breadth of the Land

Large-scale forest enterprises of the Tyumen Oblast (without KhMAO-Yugra)

- Adonis-Interior, ZAO
- Karsikko Dom, OOO
- Krasny Oktyabr', DOK, OAO
- Siblesprom, PKF, OOO
- Tyumen Plywood Plant, OOO
- Tyumen Pyrolysis Works, OOO
- Zarechje, OAO
- Sibzhilstroi, OOO
- Intedi, OOO
- Zagros, ZAO
- Uporovo Furniture Plant, OAO



Tyumen Oblast is the only Russian region that extends from the Arctic Ocean to the state border with Kazakhstan in the south. The Oblast belongs to the Ural Federal District.

Tyumen Oblast occupies 1,435,200 km² and is Russia's third largest region (after Yakutia and Krasnoyarsk Territory). It comprises Khanty-Mansi Autonomous Okrug and Yamal-Nenets Autonomous Okrug. It should be noted that the autonomous okrugs, formally parts of Tyumen Oblast, are however independent and equal-right constituents of the Russian Federation with their own governors and governments.

The region extends 2100 km from north to south and 1400 km from west to east. It has a population of 3.5 million. Its capital is Tyumen, with a population of 609,000. The distance from Tyumen to Moscow is 2144 km.

GEOGRAPHY AND CLIMATE

The Oblast along with the autonomous okrugs occupies the largest part of the West Siberian Plain. The northernmost point of the region is Cape Skuratov in the Yamal Peninsula, and the southernmost one is the Sladkovo District on the border with Kazakhstan. The Oblast is located on several natural zones: mixed forest and wooded steppe, taiga, tundra, wooded tundra and arctic wilderness.

The region's largest rivers are the Ob and the Irtysh; it has about 70,000 lakes.

The climate is temperate in the center and south, and arctic and subarctic in the north. The frozen season varies from 130 days a year in Tyumen to 210 days in the north.

RESOURCES

The main part of Russia's oil and gas reserves is concentrated in Tyumen Oblast. The most important oil fields are Samotlor, Kholmogorskoye, Krasnoleninskoye, and Fedorovskoye; the main gas fields are Urengoi, Medvezhye, and Yamburg. According to expert estimates, rich hydrocarbon zones are located in the Gydan Peninsula and the Kara Shelf of the Yamal zone; The development of the Uvat group of oil fields in the south of the Oblast is deemed to have great potential.

In addition, the region produces peat, sapropel, quartz sand, brick and keramzite clays, limestone, and building stone. About 400 deposits of raw materials for construction have been discovered and are in various degrees of exploration.

TRANSPORT

The Trans-Siberian Railway extends across the region, with the Oblast's largest cities along it, such as Tyumen, Yalutorovsk, Zavodoukovsk, and Ishim. The density of hard surface public roadways is 44.3 km per 1000 m² (the average Russian indicator is 3.1).

Roschino, Tyumen's main airport, has international status. In all, 20 air companies offering flights

on local, Russian and international air lines are registered in Tyumen Oblast.

River traffic is well-developed in the region. For several communities, rivers offer the only means of transport, especially where cargo traffic is concerned. The main ports are in Tyumen and Tobolsk.

ECONOMY

Tyumen Oblast is Russia's greatest oil and gas producing region; 63% of Russian oil and 91% of gas is produced there.

In terms of industrial production output, the Oblast is No. 1 in Russia. The fuel industry accounts for 86.4% of industrial output; Russia's largest facility in this sector, Tobolsk Petrochemical Plant, is located in the region.

Oil and gas reserves also determine the development of other sectors. For instance, the main segments of machine building (which accounts for 3.6% of industrial output) are oil production, exploration, and oil refining equipment.

For the same reason, the energy sector is well developed in the region. Regional powerplants located in Tyumen Oblast work on associated gas and provide the oil and gas sector of Khanty-Mansi Autonomous Okrug with electric power.

FOREST RESOURCES

The total area of forest resources in Tyumen Oblast (minus the Autonomous Okrugs) is 11,389,200 hectares, i.e. 71% of the region's area.

The forests are in the taiga and wooded steppe zone, and may be subdivided into two parts, the West Siberian southern taiga plainland with a total area of 7,862,297 ha and the West Siberian subtaiga wooded steppe with a total area of 3,526,903 ha.

In terms of usage, the forests of Tyumen Oblast may be subdivided into protected (1,164,900 ha) and commercial (10,224,300 ha). The region has no allocated reserve forests.

The age and species composition of the Tyumen Oblast woods is not particularly diverse, this is related to the climatic and soil conditions. Hardwood species predominate in the forests in the south of the Oblast, with birch dominating. To the north, the proportion of softwood increases. Pine is the dominant species there.

Mature and old growth stand is the dominant age group (43% for softwood and 45.2% for hardwood), next in descending order are medium-age stands (27.2% for softwood and for hardwood 29.5%), ripening (16.9% for softwood and 15.8% for hardwood), and young stand (12.8% for softwood and 10.7% for hardwood). Such distribution of forests by

age group is a result of the poor development of the allowable cut.

The total forest stand reserve is estimated at 943,950,000 m³. The reserves of hardwood and brushwood predominate, making 63% of the total stand; the proportion of softwood stand is 37%.

The commercial reserve of the mature and old growth stand of commercial forests in Tyumen Oblast is 487,580,000 m³. Of these, softwood species, having the highest commercial value, account for 34.6% of the commercial stand, and hardwood, for 65.4%. The largest commercial reserve of softwood is in those forestries of Tyumen Oblast where there are no logging roads.

The main problem of forest management in Tyumen Oblast (minus the autonomous okrugs) is obsolete forest engineering materials. In 77% of the region's forestries, no forest maintenance has been carried out over the last 10 years.

Tyumen Oblast has quite a dense network of roads, of both federal and regional level. However, the situation is not so good in terms of forestry accessibility: the actual availability of logging roads is a mere 2.7 km per 1000 ha. About 70% of the forest land area is accessible only to aviation and firefighting facilities. The construction of year-round logging roads is not planned for this hard-to-access, marshy terrain. Timber harvesting and cargo delivery in such areas is done in winter, and the roads built for this (winter trails) are temporary.

The greatest commercial reserve of softwood, with pine predominating, is in the Uvat (5,348,000 m³) and Tobolsk (1,513,100 m³) forest districts. However, they are very poorly supported with transport infrastructure, and they have no road network for timber haulage. Therefore, the largest reserves of Tyumen timber are hard to access today.

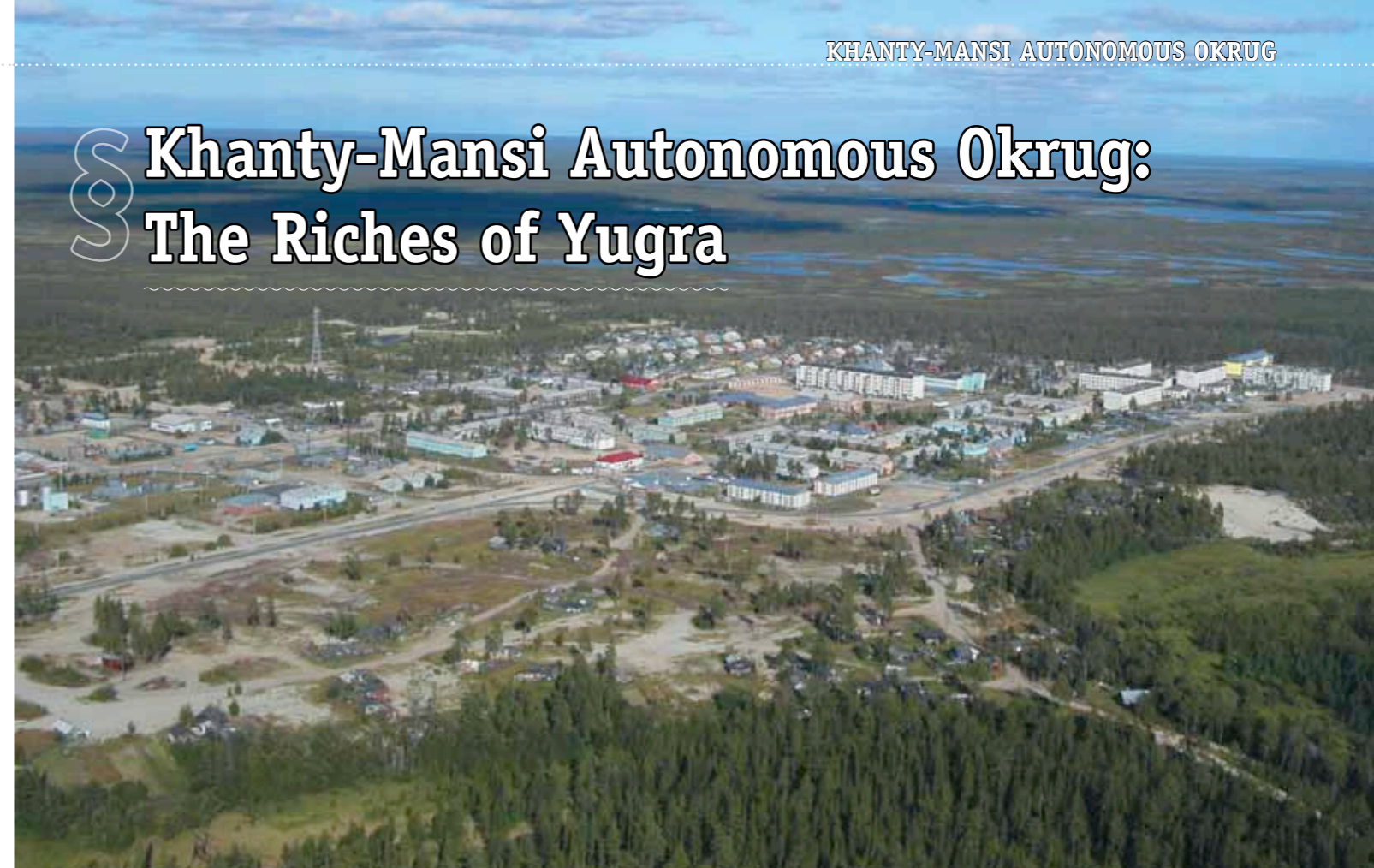
FORESTRY AND TIMBER SECTOR

The share of the forestry and timber sector in the industrial production structure of Tyumen Oblast is a mere 2%. This is, however, quite understandable for Russia's largest oil and gas producing region.

The facilities of the Sector do not cover the region's needs in full. Statistics show that up to 70% of hi-tech timber processing products is imported to Tyumen Oblast from other regions of the Russian Federation or from abroad. The products of just few large and medium facilities of the region's timber sector are widely represented on the Russian market, and very few of these export their products abroad.

According to the Forestry Plan of Tyumen Oblast, the allowable cut for the region in general is 14,182,400 m³, but currently only 6.5% percent is exploited, of which 3.7% by forestry lot

Name	Activity	Address	Contacts
Kosachev K.G., IP	Furniture production: caseloads furniture, and soft furniture	625037, Tyumen, ul. Klari Tsetkin, 4	Tel.: +7 (3452) 43-28-14, 79-24-76 fax +7 (3452) 79-25-23, kosachovkg@mail.ru
Krasny Oktyabr', DOK, OAO	Furniture production: caseloads furniture. Woodworking: chipboard, laminated chipboard. Export	625001, Tyumen, ul. Kombinatskaya, 60	Tel.: +7 (3452) 23-88-66, 23-88-54, 23-88-49 info@dokko.ru, www.dokko.ru
Lescom, OOO	Wooden house construction: houses from round log	625026, Tyumen, ul. Dzerzhinskogo, 15, office 309	Tel. +7 (3452) 55-00-20 info@lescom.su, www.lescom.su
Liga-Mebel, OOO	Furniture production: caseloads furniture	625000, Tyumen, ul. Prokop'ya Artamonova, 5	Tel.: +7 (3452) 51-44-66, 94-71-47 liga-mebel2010@mail.ru, www.liga-mebel72.ru
Mebel Grafika, OOO	Furniture production: caseloads furniture	640022, Tyumen, ul. Dambovskaya, 53B, stroeniye 6	Tel. +7 (9829) 38-74-64 mebelgrafika@mail.ru, www.mebelgrafika.ru
Mebel Group, FK. OOO	Furniture production: caseloads furniture	625000, Tyumen, ul. Kamchatskaya, 183	Tel. +7 (3452) 63-88-80 admin@fkmg.ru, www.fkmg.ru
Mebel-HIT, OOO	Furniture production: caseloads furniture	625000, Tyumen, ul. Klari Tsetkin, 17A	Tel.: +7 (3452) 67-92-53, (963) 060-41-19 mebelhit@inbox.ru, www.mebel-hit72.pul.ru
Mebeline, OOO	Furniture production: caseloads furniture	625000, Tyumen, ul. L'va Tolstogo, 64	Tel.: +7 (3452) 69-19-69, 25-20-38, 43-05-80 mebel72@bk.ru, www.pplus72.ru
MebelRos, OOO	Furniture production: caseloads furniture	625031, Tyumen, ul. Scherbakova, 158, stroeniye 17	Tel. +7 (3452) 23-81-73 m.p.s.72@mail.ru, www.mebelros72.ru
Mebikom Tyumen (RossBusinessKom, OOO)	Furniture production: caseloads furniture	625031, Tyumen, ul. Veteranov Truda, 50	Tel. +7 (3452) 90-55-52 sks72@bk.ru, www.mebikom72.ru
New Style, OOO	Furniture production: caseloads furniture	625000, Tyumen, ul. Tyumenskaya, 61B	Tel.: +7 (3452) 62-68-80, (9044) 93-70-59 626880@mail.ru, www.новыйстиль72.pf
Pallada, OOO	Furniture production: caseloads furniture. Woodworking: facades MDF	625031, Tyumen, ul. Druzhbi, 128, korpus 6	Tel.: +7 (3452) 47-14-47, 47-37-74 palladatm72@mail.ru, www.pallada72.ru
RashFor, OOO	Logging. Wood-sawing: sawn timber	627302, Tyumen Oblast, Golyshmanovsky rayon, r.p. Golyshmanovo, ul. Sadovaya, 185A	Tel.: +7 (34546) 2-85-97, 2-85-75, (3452) 69-46-01 sibwoods@mail.ru
Siberian Timber-Processing Company, OOO	Wooden house construction: houses from timber and round log	625000, Tyumen, ul. Proizvodstvennaya, 10A	Tel.: +7 (3452) 53-08-50, 53-12-41 info@sibles72.ru, www.sibles72.ru
Sibinkor-Les, OOO	Wood-sawing: sawn timber, and moulded strips	625014, Tyumen, ul. 3 km Starogo Tobol'skogo Trakta, 10	Tel. +7 (3452) 68-19-25 sibwoods@mail.ru
Sibles, TPK, OOO	Furniture production: furniture from solid wood. Woodworking: window and door units	625006, Tyumen, ul. Veteranov Truda, 58, stroeniye 1	Tel. +7 (3452) 47-28-19, fax +7 (3452) 48-34-1 sibles1974@rambler.ru, www.тпксіблес.pf
Siblesprom, PKF, OOO	Woodworking: window and door units	625037, Tyumen, ul. Yamskaya, 91, lit. A	Tel.: +7 (3452) 43-06-28, 42-09-14 pkfsiblesprom@mail.ru, www.pkfsiblesprom.ru
Sibzhilstroj, OOO	Wood-sawing: moulded strips. Woodworking: glulam, cement-shaving boards. Wooden house construction: houses from glulam, and frame-board wooden houses	625530, Tyumen Oblast, Tyumen rayon, p. Vinzili, ul. Zavodskaya, 15	Tel. +7 (3452) 72-86-46, 72-81-00 sibzhilstroj@mail.ru www.sibzhilstroj.com
Standart, TSK, OOO	Wooden house construction: frame-houses, and log cabins	625000, Tyumen, ul. Yamskaya, 87A, office 108	Tel.: +7 (3452) 61-35-65, 68-90-10 standart72@bk.ru, www.стандарт72.pf
Tyumen Plywood Plant, OOO	Woodworking: plywood, and veneer	625034, Tyumen, ul. Kamchatskaya, 196	Tel.: +7 (3452) 63-77-65, 63-77-78 office@tumfk.ru, www.tumfk.ru
Tyumen Pyrolysis Works, OOO	Bioenergy: charcoal	625517, Tyumen Oblast, Tyumen rayon, d. Parenkina, industrial base ZAO TPZ, lit. A	Tel.: +7 (3452) 69-64-41, 97-44-49, 74-02-26 zaotpz2010@mail.ru www.piroliz72.ru
TyumentAgroLes, OOO	Logging. Wood-sawing: sawn timber, and moulded strips	625049, Tyumen, ul. Moskovsky Trakt, 134	Tel.: +7 (3452) 70-10-83, 30-39-74 a.svetlov72@mail.ru
Uporovo Furniture Plant, OAO	Furniture production: furniture from solid wood	627180, Tyumen Oblast, Uporovsky rayon, s. Uporovo, ul. Krupskoy, 11	Tel.: +7 (34541) 3-10-62, 3-10-40 uporovo-mebel@mail.ru, www.upmebel.narod.ru
UralStrojLes, OOO	Wooden house construction: houses from round log	625027, Tyumen, ul. 50 Let Oktyabrya, 35	Tel. +7 (3452) 61-13-90 les_45@mail.ru, www.les-72.ru
Uyut, OOO	Furniture production: soft furniture	625014, Tyumen, ul. Novatorov, 3, korpus 2	Tel. +7 (3452) 22-53-02, 22-54-89 uut72@yandex.ru, www.uut72.su
Verona, OOO	Furniture production: caseloads furniture	625037, Tyumen, ul. Klari Tsetkin, 4	Tel. +7 (3452) 79-25-23, verona@t5.ru
Voyage, OOO	Furniture production: caseloads furniture	625056, Tyumen, pr. Voroniskie Gorki, 184	Tel. +7 (3452) 90-28-92 voyazh.fasad@mail.ru, www.voyage72.ru
Zagros, ZAO	Logging. Wood-sawing: sawn timber, and moulded strips	627140, Tyumen Oblast, Zavodoukovsky rayon, pos. Komsomol'sky, ul. Trudovaya, 2	Tel./fax: +7 (34542) 3-15-63, 7-14-14, 3-15-02 zagros@mail.ru www.zagros.ru
Zagros-Stroj, OOO	Wooden house construction: houses from shaped timber, and round log	625043, Tyumen Oblast, pos. V.Bor, ul. Dorozhnaya, 2	Tel. +7 (922) 000-19-79 zagros-stroj@mail.ru
Zarechje, OAO	Furniture production: caseloads furniture	625005, Tyumen, ul. B. Zarechnaya, 41	Tel./fax: +7 (3452) 46-01-21, 46-14-12, 46-88-14 priemnaya@zarechje.ru, www.zarechje.ru



§ Khanty-Mansi Autonomous Okrug: The Riches of Yugra

Large-scale forest enterprises of Khanty-Mansi Autonomous Okrug – Yugra

- Surgutmebel, OOO
- LVL-Yugra, OAO
- Samzassky Saw Mill
- LVL-Stroyproekt, OOO
- Yugra Timber Holding
- Torsky Saw Mill
- Zelenoborsky Saw Mill
- Malinovsky Saw Mill
- Karsikko Les, OOO
- Yugra Saw Mills, OOO
- Yugra-Plit, OAO
- MDF Plant, OOO

Khanty-Mansi Autonomous Okrug, also known as Yugra, cannot boast a mild climate or a convenient geographical position. Instead, its enormous oil reserves make it a highly self-sustaining region of Russia.

Khanty-Mansi Autonomous Okrug -- Yugra belongs to the Ural Federal District. Formally it is a part of Tyumen Oblast, but is still an equal-right constituent of the Russian Federation. The area of Yugra is 531,800 km², and it is the ninth largest region of the RF. It extends 1400 km from west to east, and 900 km from north to south. It has a population of 1,536,900.

Its capital is Khanty-Mansiysk, with a population of 85,000. The region's largest cities are: Surgut (324,000), Nizhnevartovsk (263,800) and Nefteyugansk (138,000).

GEOGRAPHY AND CLIMATE

Khanty-Mansi Autonomous Okrug -- Yugra is located in the middle of the West Siberian Plain. The terrain is predominantly flat, with many bodies of water. The main part of the area is heavily marsh-ridden taiga. The main rivers are the Ob and its tributary, the Irtysh.

The climate is temperately continental, characterized by rapidly changing weather conditions, especially inbetween seasons. The region's territory is open to the north, which lets in cold Arctic air masses.

KhMAO is a region equal in type to the Extreme North regions.

RESOURCES

Yugra is the country's main oil and gas region, providing 7.3% of worldwide and 50% of Russian oil production. Since the start of the exploitation of Yugra reserves (in the 1960s), over 10 billion tons of crude has been produced there.

Nearly one half of the oil production is accounted for by 11 large oil fields, with over 5 million tons produced in each. In all, 461 oil fields have been discovered in Khanty-Mansi Autonomous Okrug, of which 355 are in the distributed reserves.

TRANSPORT

There are over 18,000 km of roads, of which 13,000 km are hard surfaced. The main highway connecting the Okrug with Russia's other regions extends via Nefteyugansk, Tobolsk and Tyumen.

There is a total of 1106 km of railway track. In the west of the Okrug, the railway serves the forestry enterprises, and in the north-west, the oil and gas industry facilities.

Civil aviation assets comprise ten airports, of which Surgut, Nizhnevartovsk, Khanty-Mansiysk and Kogalym have international status.

In the summertime, there is active cargo and passenger traffic on the Ob and Irtysh rivers.

ECONOMY

Khanty-Mansi Autonomous Okrug -- Yugra is an economically self-sufficient donor region of the RF, leading in several essential economic indicators. It is number one in Russia in terms of electric power generation and oil production; second place in Russia's industrial output, natural gas production, and budget tax revenues; and third in Russia's investments in fixed capital.

Over 90% of industrial output is accounted for by the fuel and energy sector, therefore the economy of KhMAO-Yugra directly depends on international oil prices.

FORESTRY: In the shade of the oil and gas sector

The status of Yugra's forestry is greatly determined by the region's specific feature, as it hosts a powerful, national level oil and gas complex. Over 70 oil and gas companies, whose facilities are located on forestry land, operate in the Okrug. Therefore, the main uses of the Yugra forests are: geological research of mineral resources, development of mineral deposits,

construction, reconstruction, and the operation of infrastructure facilities. Timber harvesting is of secondary importance. Annually, crude and oil product spills are recorded on forestry land, attributable to pipeline utilization.

As is noted in the Department, currently, several statutory documents of various levels set forth obligations of forestry land leaseholders (who are responsible for the forests being polluted with oil products) in relation to land reclamation. But the mechanism has not been determined yet. There is no uniform approach to reclamation, its quality assessment, the procedure for the allocation and leasing of forestry land plots, and the issue of permits and licenses for the reclamation of oil-polluted land.

Yugra is one of few regions where the problem of "illegal loggers" does not exist. The region is too far from any sales markets, and its transport infrastructure is too poor for timber theft to be profitable. Where any cases of illegal cutting are still recorded, it turns out that the trespassers are fuel / energy sector companies and their contractors, who clear forested sites without waiting for appropriate permits.

The authorities believe that the key problems in the development of lease relations in KhMAO are the almost total unavailability of vacant forestry plots for timber harvesting that would be economically attractive to big business, and lack of a clear mechanism and efficient practice of allocating forestry plots to small business for timber harvesting. The existing system of forest resource distribution substantially limits the simultaneous use of a forestry plot for different purposes. The practice is such that two different users in one plot face problems when using forest land jointly.

THE FORESTRY AND TIMBER SECTOR

The share of the forestry and timber sector in the industrial output structure of Khanty-Mansi Autonomous Okrug -- Yugra is small, a mere 0.2 percent. The strategy of the region's socio-economic development provides for its increase to 0.7% by 2020. There is a potential for this, because Yugra is a leader among constituent members of the RF most provided with timber resources.

The timber harvesting by companies of the forestry and timber sector of KhMAO--Yugra was 2.3 million m³ in 2014 (in 2013, 2.8 million m³; in 2012, 2.4 million m³; in 2011, 2.3 million m³; in 2010, 1.8 million m³). According to estimates by experts of the Department of Natural Resources and the Non-Energy Sector of KhMAO-Yugra, the region can harvest about 5 million m³ of timber annually; these forest reserves are deemed to be economically accessible.

Over 130 organisations and individual enterprises are involved in the forestry and timber business in the Autonomous Okrug. The sector's structural base is large timber harvesting and processing companies. The largest one is Yugra Timber Holding JSC, with a full industrial cycle from forest exploitation and reclamation to the manufacture of hi-tech products such as sawn timber, LVL, and wooden houses constructed by frame-panel technologies.

Three board-making facilities have been set up: a chipboard factory with a production capacity of 265,000 m³/year (Ugra-Plit JSC in Sovetsky); an MDF fiberboard factory with a production capacity of 50,000 m³ of boards per year (Zavod MDF JSC in Mortka) and an LVL timber factory with a production capacity of 39,000 m³/year (LVL Ugra JSC in Nyagan).

The products of Yugra's timber sector is exported to Germany, the UK, Italy, Greece, Turkey, Egypt, Denmark, Latvia, Finland, Sweden, and other countries. The main exported products are sawn timber, LVL and fuel pellets.

Wooden house construction in the Autonomous Okrug has a vast margin of unrealized potential for large-scale development. The overall capacity of the facilities enables production of 120,000 m³ of factory-made homes.

The total volume of low-grade timber and sawing waste processed by all the facilities exceeds 500,000 m³/year. As a method of increasing the utilization of low-grade timber boiler plants have been converted and new ones constructed to use wood biofuel and wood chips in several of the region's municipal entities.

Among the problems typical for the region's forestry and timber sector, the Department of Natural Resources and the Non-Energy Sector of KhMAO-Yugra lists the following:

- a lack of financial stability due to the debt burden on enterprises, and a lower demand for the products due to the crisis situation in the economy;
- the seasonal nature of timber harvesting (five months a year);
- growing energy charge rates;
- poorly developed transport infrastructure: insufficient quantity of logging roads, and low availability of rail transport;
- a high proportion of low-grade timber and production waste (50% of the raw material harvested);
- the inefficient allocation of production forces and the depletion of accessible reserves.

Furthermore, the key enterprises in the sector are local major employers, which rules out cutting production costs by wages and payroll optimization.

Evgenia Chabak, Oleg Prudnikov

Source: Natural Resources and Non-Energy Sector Department of Khanty-Mansi Autonomous Okrug – Yugra



Description of the forestry land of Khanty-Mansi Autonomous Okrug – Yugra as of January 1, 2014

50,406,600 ha – the total area of lands occupied by forest

- **49,355,726 ha** – state forestry land
- **199,407 ha** – land of populated areas which are forested
- **851,506 ha** – land of specially protected natural areas

53.9% – the forest coverage

3,180,930 th m³ – the total yield

39.6 mln m³ – the allowable cut

- **80.03%** – softwood
- **19.94%** – hardwood
- **0.03%** – other wood species and brushwood

The species composition of the yield (by volume)

Common pine	45.8%
Spruce	9.4%
Fir	0.5%
Larch	2.8%
Siberian stone pine (cedar)	21.4%
Birch	14.6%
Aspen	4.8%
Other wood species and brushwood	0.6%

Forested area distribution by age group

Young growth	10.3%
Middle-aged stand	18.5%
Ripening stand	13.2%
Mature and old growth	79.2%
of which old growth	21.2%

Production indicators of forest and timber facilities in KhMAO-Yugra in 2014

	Production output, 1000 m ³	Dynamic against 2013, %
Sawn timber	279.42	93.5
Chipboard	156.75	190.6
Fiberboard (including MDF)	50.8	127.3
LVL	2.03	49.6
Plywood	17.3	107.5
Wood pellets	23.1	156.6
Pulp chips	154.5	104.2



Krasnoyarsk Krai: Along the Great Siberian Road

The Krasnoyarsk Krai is Russia's second largest region. It occupies an area of 2,339,700 km², or 13.8 per cent of the whole of Russia, second only to Yakutia.

In the north, the Krai is washed by the Kara Sea and the Laptev Sea. The Krai's extent from the north to South Siberia's mountain areas is nearly 3,000 km. According to the latest statistical data, its population is 2.85 million.

The administrative and political center of the Krasnoyarsk Krai is the city of Krasnoyarsk, founded in 1628. The distance from Moscow to Krasnoyarsk is 3,955 km. Other large cities are Norilsk, Nerchinsk, Yeniseisk, Kansk, Lesosibirsk, Minusinsk, and Dudinka.

GEOGRAPHY AND CLIMATE

The Krasnoyarsk Krai is located mostly within East Siberia, in the basin of the Yenisei River. The river's left bank is a lowland valley, while along its right bank extends the Central Siberian Plateau with heights above sea level reaching 500–700 m. Russia's geographical center is in the Krai, near Lake Vivi in Evenkiya.

Three climatic zones are to be found in the Krasnoyarsk Krai: arctic, subarctic, and temperate. Within each of them, changes of climatic features are seen not only in a north-south trajectory but also from west to east. Therefore, western and eastern climatic areas can be distinguished, with their border marked by the Yenisei River valley.

The average January temperature is -36 °C in the north and -18 °C in the south; the respective July temperatures are 10 and 20 °C. Snow cover sets in generally in early November and disappears by late March.

RESOURCES

The Krasnoyarsk Krai is one of the most resource-rich regions in Russia. The Krai's reserves of natural resources form the basis of its investment attractiveness and of its future development. More than 6,000 deposits of various mineral resources have been discovered in the area. Seventy per cent of Russia's coal reserves are concentrated here, as well as the main Russian reserves of platinum, copper-nickel ores, and Iceland spar. In addition, large deposits of lead, apatites and nepheline, molybdenum, copper, titanium-magnesium ores, magnetites, antimony, talc and graphite have been prospected in the Krai. Its gold production is one of the highest in Russia, with Russia's second-largest gold field (Olimpiadnoye).

Twenty-five oil and gas deposits have been explored in the Krasnoyarsk Krai; moreover, these resources are as a rule located close to each other and could be developed simultaneously.

TRANSPORT

The public transport system of the Krasnoyarsk Krai was initiated in the mid-18th century, when the Moscow (Siberian) Highway constructed for trade with China opened a new stage of the region's settlement and development. Today, the Krasnoyarsk Krai is a major transport distribution and transit hub of the Siberian Federal District. The region has all kinds of transport, including pipelines.

There are 26 airports in the Krai, including the international Yemelianovo airport in Krasnoyarsk.

The main ground transport corridor is the Trans-Siberian Railway. Branching off this trunk railway are the Achinsk-Abakan and Achinsk-Abalakovo lines (the latter providing access to the forests of the Angara River area). For nepheline ore export, the Kiya-Shaltyr (Belogorsk)-Krasnaya Sopka railway was constructed. Russia's northernmost Dudinka-Norilsk railway is located in the Krasnoyarsk Krai.

The M53 (Novosibirsk-Krasnoyarsk-Irkutsk) "Baikal" federal highway, traverses the Krasnoyarsk Krai. In the city itself, the following routes originate: the M54 (Krasnoyarsk-Abakan-Kyzyl-State Border) "Yenisei" highway leading to Mongolia (Tsagan-Tolgoi) and R409 (Krasnoyarsk-Lesosibirsk-Yeniseisk) "Yeniseisky Trakt" road.

The Krasnoyarsk river harbor, the port of Lesosibirsk, the port of Yeniseisk, and the sea port of Igarka facilitate Northern Sea Route traffic and shipping on the Yenisei. The total length of operated ground roads and waterways, including earth roads and smaller rivers with local small boats, is nearly 50,000 km.

ECONOMIC SITUATION

The Krasnoyarsk Krai is in the top ten Russian Federation constituent entities in terms of gross domestic product. Industry accounts for about 53 per cent of the Krai's GDP, while agriculture accounts for about 7 per cent. The Krai accounts for 4 per cent of Russian industry, and 40 per cent of industry in the East Siberian Economic Region. The main sectors are: non-ferrous metallurgy, mining and chemicals, timber harvesting and processing, and electric power. The Krasnoyarsk Krai generates about 6 per cent of total electric power in Russia. Large power facilities are located there, such as: the Krasnoyarsk Hydro Power Plant, the Krasnoyarsk Regional Power Plant 2, the Nazarovo Regional Power Plant, the Boguchansk Hydro Power Plant (currently under construction), and the Beryozovskaya District Power Plant 1. The two largest hydro power plants in Eurasia are on the Yenisei: the Krasnoyarsk HPP and at the Sayano-Shushenskaya Dam.

The industrial sector of the Krasnoyarsk Krai has a marked orientation toward raw-materials. This is not surprising for a region containing reserves of almost all known minerals, but significantly reduces the region's investment abilities. The short-term goal set by the Krai's government is changing the existing economic model. Among the priorities of the region's industrial development are metallurgy, the fuel and energy complex, and the oil and gas sector, still new for the Krasnoyarsk region, but it is rapidly developing. It is in these sectors that essential large investment projects are to be implemented.

FOREST RESOURCES

The Krasnoyarsk Krai has raw wood resources that are the largest in Russia, and their reserves have only been increasing in recent years. For instance, according to the Timber Industry Agency, the region had about 7.8 billion m³ of raw wood resources in the early 2000s, which amounted to 10 per cent of all Russia's timber resources. Today, according to the regional Ministry of Natural Resources and the Environment, the total timber reserve in the region is estimated at 11.5 billion m³.

The forested areas of the Krasnoyarsk Krai as of 1 January 2013 is 164.0 million hectares, of which the forested land area is 158.7 million ha and the area covered with woods is 105.1 million ha.

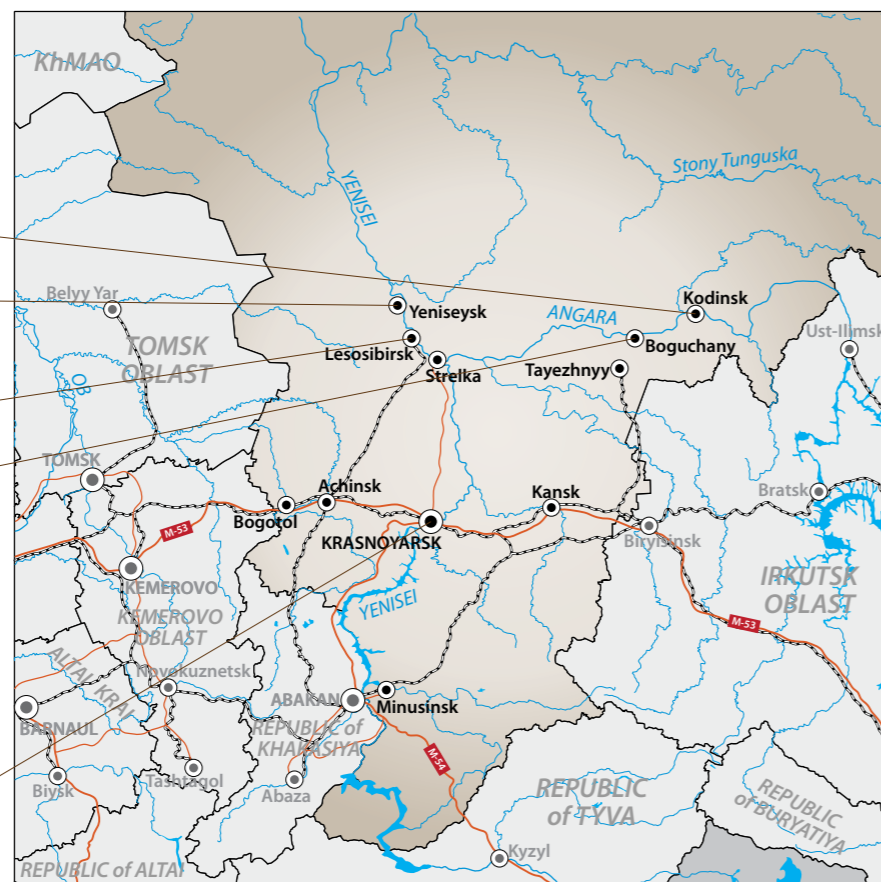
Forest resources are classified by their intended use into shelter, commercial, and reserve forests, and occupy approximately equal areas. For instance, the total shelter forest area as of 1 January 2013 was 32.7 per cent of the total forest resource area (51,825,100 ha), commercial forest area was 39 per cent (61,980,900 ha), and reserve forest area was 28.3 per cent (44,922,000 ha). In 2012, the shelter forest area increased by 85,600 ha, the commercial forest area decreased by 83,200 ha, and the reserve forest area remained the same. The total forest area increased by 2,400 ha compared with 2011.

Fine softwood species are the dominant species in the Krasnoyarsk Krai, covering over 76 per cent of the forested areas. They are larch (43.7 million ha), pine (13.5 million ha), and Siberian stone pine (9.7 million ha), although birch remains second in terms of occurrence. A feature of the age structure of the timber stands is the predominance of mature and old growth, amounting to 59 per cent of the forested lands. For softwood, their proportion exceeds 65.5 per cent of the recorded forest area.

Softwood species timber volume is 9.7 billion m³, of which 6.8 billion m³ is mature or old growth. The overall hardwood reserve does not exceed 1.9 billion m³, of which 1.2 billion m³ in mature and old growth forests. Commercial forests contain over 5.1 billion m³ of mature and old timber.

Large-scale forest enterprises of Krasnoyarsk Krai

- Priangarsky LPK, OOO
- Angara Paper, OOO
- Lesosibirsky LDK No.1, OAO
- Novoyenisejsky LHK, ZAO
- Boguchanskyy LPK (Kraslesinvest, ZAO)
- Yenisei DOK, OOO
- KLM Co, ZAO
- Krasnoyarsky DOK, ZAO
- Krasnoyarskles, GPKK
- Mekran, UK, OOO
- SibWod, PKF, OOO
- Sibles, OOO
- Kraslesinvest, ZAO (head office)



Sanitary felling is the basic forest management activity in the Krai.

In accordance with silvicultural requirements, 225,700 ha of forest resources in the Krasnoyarsk Krai a year need tending. In fact, not more than 10 per cent of the required scope is completed. Moreover, experts comment that the forest tending area decreases every year. This is related to the increasing costs of the work; the Krai's budget provides a fixed amount for forest management costs, while growing energy prices, transport fares, and inflation annually reduce the scope of services that can be provided for that amount.

Wildfires occur in the Krasnoyarsk Krai throughout the fire-hazardous season. This is due both to the diversity of forest growth conditions and to the great south-to-north extent of the region, i.e. to the diversity of climatic and temperature factors. As positive air temperature grows, wildfires start in the Krai's southern districts in April, and gradually move northward. Sometimes, if the early summer is hot, wildfires start simultaneously in the most of the Krai. Usually, wildfires originate in natural factors, such as thunderstorms, but quite often ignitions are attributable to local residents.

To fight wildfires, a unified entity specializing in preventing and suppressing wildfires was established, called the State-Owned Wildfire Center Enterprise of the Krasnoyarsk Krai, which combines the functions of ground and aviation forest protection.

FORESTRY AND TIMBER SECTOR

The authorities do not include the forestry and timber sector on the list of primary areas for the region's economic development, although they recognize the "special role" of the forestry and timber sector and agro-industrial sector in the Krai's economy.

As in most Russian regions, actual harvested timber is several times less than the allowable cut. The lack of infrastructure in, and information about, the forest resource, and poor accessibility to the forests are the main reasons for the low development of the allowable cut in the Krasnoyarsk Krai at just 18 per cent (about 77 million m³), of which 22 per cent is softwood and 9 per cent is hardwood.

The region has adopted a departmental target program titled "Development of the Forestry and Timber Sector in the Krasnoyarsk Krai for 2013–2015". The program requires the increase, by the end of 2015, of the development of the allowable cut from 18.1 per cent to 28.8 per cent compared with the year 2012; the increase of the finished product yield per 1 m³ of harvested

timber from 1722.2 to 2073.6 rubles; the increase of human resources engaged in the timber industry from 92.0 to 97.0 per cent; and the increase of the fire detection in smaller areas to 80.0%. The program is funded primarily from the federal budget to 2.73 billion rubles, with slightly more than 600 million rubles to be allocated from the Krai's budget.

Judging by public information, the interim targets of these programs has not been achieved thus far. For instance, the allowable cut development remains at the previous level, and the events in national economic and political life of Russia in the last two years will hardly help attracting new investment into the Krai's forest industry.

Currently, almost all kinds of wood processing products are made in the Krasnoyarsk Krai, in particular sawn timber, fiberboards and chipboards, plywood, veneer, pellets, fuel briquettes, charcoal, and MHM panels (Massiv-Holz-Mauer technology), furniture, glued wooden products, building structures, pulp, paper and so on. The main bulk of these products have low added value.

Among the factors restricting the development of the Krasnoyarsk Krai's forest and timber industry, in addition to problems faced by any other sector (low levels of engineering production and high wear of fixed assets; low levels of labor efficiency), are:

- the great remoteness of the region's timber industry facilities from basic Russian and international markets;
- the poor development of added-value raw timber processing facilities for low-quality wood;
- low-levels of timber harvesting and processing waste management;
- seasonal fluctuations and low concentration of timber harvesting; insufficient year-round logging roads;
- unsatisfactory commodity composition of timber exports, with its raw-material orientation remaining in place;
- poorly structured timber businesses.

The authorities emphasize that among the positive factors determining the prospects for the Krai's forest and timber industry development are the following. The Krai has:

- Russia's largest raw timber resource potential, with fine softwood predominating;
- power facilities and rich water resources;
- the possibility of large increases of product output by operating facilities of various profiles through their updating, re-equipment, and reconstruction, and setting up new enterprises.

The government of the Krasnoyarsk Krai realizes that the region's investment attractiveness cannot be improved without developing infrastructure, and transport infrastructure in particular. Therefore, satisfying the industry's needs for railroad rolling stock is planned under the target program.

In the opinion of the regional authorities, not all of the Krai needs active development of logging roads. At least 40 million of 158 million hectares of taiga are in fact unpopulated, without inhabited localities, enterprises, or infrastructure.

However, this does not mean that the regional government totally refuses to expand the logging road network. For instance, about 100 million rubles is earmarked for the construction of roads off the Yartsevo-Maisky route towards Novy Gorodok in the Lower Yenisei Forest District for the period up to 2015.

Special attention is given in the Krai's forest sector development target program to priority investment projects for forest management. As of the end of 2013, nine investment projects of the Krai were on the Ministry of Industry and Trade's priority list, but as of this day, some of them have been deleted from the list or have entirely ceased to exist. The priority investment projects in the Krasnoyarsk Krai that remained in effect as of the beginning of 2015 were:

1. Development of the wood processing factory in Krasnoyarsk (KLM Co. JSC).

Cost: \$45 million. Content: updating of the existing woodsawing and timber processing facility of KLM Co. in Krasnoyarsk, with the production capacity increased to 114,000 m³ of glued wooden structures per year. Expected results: updating the region's largest woodsawing and timber processing facility to make glued laminated beams, an added-value timber processing product.

2. Setting up a full-cycle timber processing factory in Krasnoyarsk (Mekran Management Company LLC).

Cost: 5.6 billion rubles. Content: updating of an operating factory in Krasnoyarsk manufacturing premium class furniture (DOZ-1), with a capital investment of 166.8 million rubles; construction of a new factory in Krasnoyarsk to make business class blockboard furniture (DOZ-2) (5 billion rubles); development of a business network and opening 51 showrooms in various Russian cities (33.37 million rubles).

3. Setting up and updating of added-value timber processing facilities in Sosnovoborsk and Verkhnepashino, Krasnoyarsk Territory (Sibles Project LLC).

Cost: 3.3 billion rubles. Content: the manufacture of 157,000 m³ of sawn timber of various lengths and sections in Verkhnepashino, Krasnoyarsk Krai. 13,800 m³ of low quality sawn timber (GOST 8486-86) will be delivered to Sosnovoborsk to produce 43,600 m² of MHM panels per year. Sosnovoborsk will also host a facility to manufacture plywood (30,000 m³/a) and veneer (9,600 m³/a).

4. Setting up an added-value solid wood processing facility (Firma Master LLC).

Content: the set-up of a high-tech, highly profitable solid wood processing factory by providing a raw timber harvesting and transportation infrastructure, the design, purchase and launch of an advanced sawing and drying facility, and the initiation of a facility to produce semi-finished products such as planed stock, glued furniture boards, glued beams, and euro siding.

5. Expanding the timber processing facility at Novoyeniseisk Timber Chemical Plant JSC by making new kinds of products, and setting up a forest infrastructure to develop new forest tracts (Novoyeniseisk Timber Chemical Plant JSC).

Cost: 351 million rubles. Content: the expansion of raw timber processing by making a new product (pellets). Integrated utilization of raw material, setting up a forest infrastructure, and development of virgin forest tracts. Using pellets to produce thermal energy as substitute for non-renewable natural resources.

6. Construction of the Angara Paper timber chemical complex in Yeniseisk District, Krasnoyarsk Territory (Angara Paper JSC).

Cost: \$3.2 billion. Content: the construction of a timber chemical complex producing annually 900,000 t of softwood bleached pulp, 300,000 t of dissolving pulp, 380,000 m³ of sawn timber and 100,000 t of wooden fuel granules (pellets).

7. Setting up a timber processing complex in Boguchansk District, Krasnoyarsk Krai, to produce softwood bleached kraft pulp, kraft liner, timber sawing/processing products, and MDF (Krasinvest JSC).

Cost: 73.3 billion rubles. Content: the construction and launch of a wood processing complex to make the following advanced hi-tech added-value products that meet international standards:

- softwood and hardwood kraft pulp: 850,000 t/a;
- MDF boards: 250,000 m³/a;
- kraft liner: 500,000 t/a;
- sawn timber (including added-value sawn timber): 700,000 m³/a.

It is expected that the mill will annually process up to 7.7 million m³ of softwood and hardwood. The enterprise will be oriented at integrated waste-free utilization of timber.

According to public sources, the investor updated its plans under the investment project, giving up (at least temporarily) the intention to build a new pulp and paper mill. Among the main reasons for this decision was the lack of the required resources which would ensure full utilization of the facility for a few decades to come.

8. Setting up wood processing in Kezhma District, Krasnoyarsk Krai, with a designed capacity of 300,000 m³ of finished products per year (Priangarsky Wood Processing Mill LLC).

Cost: 1.569 billion rubles. Content: the launch of the Priangarsky Wood Processing Mill as an advanced multi-purpose facility producing sawn timber (210,000 m³/a), wood trim (48,000 m³/a), fuel briquettes (25,320 t/a), and charcoal (2,560 t/a).

To implement these investment projects, wood land holdings totaling 9.1 million hectares (6 per cent of the Krai's total timber resources) with an overall annual allowable cut of 18.1 million m³ (23 per cent of the Krai's total estimated allowable cut) were rented out in the long term and without a tender.

Mariya ALEKSEYEVA, Oleg PRUDNIKOV



Krasnoyarsk Krai government authorities responsible for timber industry regulation

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Enterprises of the forestry industry of the Krasnoyarsk Krai

Name	Activity	Address	Contacts
AbsolyutLesStroj, 000	Logging. Wood-sawing: sawn timber, moulded strips	660050, Krasnoyarsk, ul. Sportivnaya, 60A/5	Tel. +7 (391) 286-30-90 kras-kedr@mail.ru, www.kedr.dsk24.ru
Alliance, 000	Logging. Wood-sawing: sawn timber	660020, Krasnoyarsk, ul. Shakhtiorov, 16A-223	Tel.: +7 (923) 279-20-62, (391) 286-69-39 siblesnet@bk.ru, www.sibpilomat.ru
Allion, 000	Furniture production: casegoods furniture. Woodworking: MDF	660031, Krasnoyarsk, ul. Ajvazovskogo, 16	Tel.: +7 (391) 272-65-30, 254-35-66 dm543566@yandex.ru, www.allion24.ru
Angara Paper, 000	Investment project in realization. Logging. Wood-sawing: sawn timber. Bioenergy: wooden fuel granules. Pulp-and-paper: cellulose	660062, Krasnoyarsk Krai, ul. Vysotnaya, 4, office 417	Tel.: +7 (391) 218-03-72, (902) 940-11-89 www.angarapaper.ru
AngaraSrubComplekt, 000	Logging. Wood-sawing: sawn timber	663430, Krasnoyarsk Krai, Boguchansky district, Urochishche Shamanki, 3 km westwards from Chunoyar station (former dead-end ORSa)	Tel. +7 (920) 404-40-37 angara-sk@mail.ru www.angara-sk.ru
Arkada Trade, 000	Woodworking: window and door units	640049, Krasnoyarsk, ul. Surikova, 12, office 302	Tel. +7 (391) 252-33-83 zal@arcada.pro, www.arcada24.ru
AtlantStroj, 000	Wooden house construction: timber houses, frame-houses	660118, Krasnoyarsk, Severnoje Shosse, 35	Tel. +7 (391) 296-16-86 atlant-st@mail.ru, www.atlant-st.ru
BerjuzovoFurniturePlant, 000	Furniture production: casegoods furniture	662520, Krasnoyarsk Krai, Berzovsky district, pgtBeriozovka, ul. Parkhomenko, 2	Tel.: +7 (391) 752-13-32, 752-14-43 fabric-bmf@yandex.ru www.фабрика-бмф.рф
BiG Company, 000	Furniture production: soft furniture	660006, Krasnoyarsk, ul. Bazajskaya, 140, stroenie 6	Tel.: +7 (391) 297-22-25, 269-87-69 kras@big-company.ru, www.мебельбиг.рф
BusinessStar, 000	Logging	660021, Krasnoyarsk, ul. Profsoyuzov, 3, stroenie 7, office 301	Tel.: +7 (3912) 21-04-59, 52-22-59
Center of Technology Solutions, 000	Wood-sawing: sawn timber	660017, Krasnoyarsk, ul. Krasnoy Armii, 1	Tel. +7 (913) 041-79-17 grozan11@gmail.com
Daursklesprom, 000	Logging. Wood-sawing: sawn timber	660115, Krasnoyarsk, ul. Dudinskaya, 12A	Tel. +7 (902) 940-03-41 2018590@mail.ru
Delo, 000	Wood-sawing: sawn timber	663605, Krasnoyarsk Krai, Kansk, ul. Lineinaya, 9, stroenie 6	Tel.: +7 (902) 992-75-02, (913) 176-64-21 kansk-delo@mail.ru, www.kansk-delo.ru
Diva Mebel, 000	Furniture production: casegoods furniture and soft furniture	660013, Krasnoyarsk, ul. Tambovskaya, 25, stroenie 5	Tel. +7 (391) 241-26-83 pavel@diva-mebel.ru, www.diva24.ru
DOK Minusinsky, 000	Furniture production: theater chairs, furniture from solid wood. Wood-sawing: sawn timber	662602, Krasnoyarsk Krai, Minusinsk, ul. Gerasimenko, 62	Tel.: +7 (391) 322-04-23, 322-03-26 mindok@mail.ru www.mindok.ru
EcoDSP, 000	Technology for chipboard production. Mechanical engineering: equipment for chipboard production	660049, Krasnoyarsk, ul. Markovskogo, 57, office B318	Tel. +7 (391) 214-88-80 shastovskiy@mail.ru

Name	Activity	Address	Contacts
Interra, 000	Furniture production: furniture from solid wood. Woodworking: doors	660078, Krasnoyarsk, ul. 60 Let Oktyabria, 42	Tel.: +7 (391) 261-22-32, 261-41-49 interra@mail.ru, www.interra-kr.com
ItisPlus, 000	Wooden house construction: houses from round log	660032, Krasnoyarsk, ul. Dubenskogo, 4, office 314	Tel.: +7 (391) 240-80-81, 202-01-78, (908) 213-30-00 itis05@mail.ru, 2133000@mail.ru www.itis.lesprom.com
K&K Taseevo, 000	Wood-sawing: sawtimber	660112, Krasnoyarsk, ul. Voronovo, 29/71	Tel. +7 (391) 240-71-68 bpm2008@mail.ru
Karabulales, OAO	Logging. Wood-sawing: sawn timber	663467, Krasnoyarsk Krai, Boguchansky district, p. Taiozhny, ul. Novaya, 6A	Tel.: (39162) 2-65-49, 2-65-76 karabulales@mail.ru, www.karabulales.ru
KLMArt, 000	Woodworking: glued beam production. Wooden house construction: glulam houses	660022, Krasnoyarsk, ul. Partizana Zhelezniaka, 23	Tel.: +7 (902) 927-65-69, (391) 285-87-80 sales@klm-art.ru, klmart-stroy@mail.ru www.klm-art.ru
KLM Co, ZAO	Logging. Wood-sawing: sawn timber, moulded strips. Woodworking: glued beam. Wooden house construction: glulam houses	660049, Krasnoyarsk, ul. Parizhskoy Kommuni, 25A	Tel.: +7 (391) 227-69-00, 288-97-97 klm@klm-co.ru www.klm-co.ru
KMK, 000	Furniture production: casegoods furniture and soft furniture	660054, Krasnoyarsk, PO Box 13774	Tel.: +7 (391) 217-88-18, 255-30-75, 206-16-60, 206-16-61 kkm-mebel@mail.ru, www.kkm-mebel.ru
Komandor Furniture Company	Furniture production: casegoods furniture	660077, Krasnoyarsk, 78 Dobrovol'cheskoy Brigadi, 12, PO Box 9909	Tel. +7 (391) 231-30-08 kuhni@komandor-mebel.com www.mk-komandor.ru
KraslesCo, 000	Wood-sawing: sawn timber	660028, Krasnoyarsk, ul. Televizornaya, 1, stroenie 9, office 608	Tel. +7 (391) 290-00-31 spt6677@mail.ru
Kraslesinvest, ZAO	Logging. Wood-sawing: sawn timber	660022, Krasnoyarsk, ul. Partizana Zheleznyaka, 35 A	Tel. +7 (391) 263-16-16, fax +7 (391) 263-14-09 mail@kraslesinvest.ru, www.kraslesinvest.ru
KrasLesKom, PSK, 000	Wood-sawing: sawn timber	660118, Krasnoyarsk, ul. Poligonnyaya, 7	Tel.: +7 (391) 232-87-21, 226-67-14 olleg75@bk.ru, www.krasleskom.ru
Krasnoyarskles, GPKK	Logging. Wood-sawing: sawn timber	660055, Krasnoyarsk, ul. Dzhambul'skaya, 125	Tel. +7 (391) 224-77-73 Priem@krles.ru, www.krles.ru
Krasnoyarsky DOK, ZAO	Wood-sawing: sawn timber. Woodworking: chipboard. Export	660006, Krasnoyarsk, ul. Sverdlovskaya, 101A	Tel.: +7 (391) 261-10-58, 261-52-17 info@krasdok.ru, www.krasdok.ru
Krona, 000	Logging. Wood-sawing: sawn timber	660054, Krasnoyarsk, ul. Splavuchastok, 3	Tel. +7 (391) 261-09-71 krona_04@mail.ru
Lesosibirsky LDK No.1, OAO	Wood-sawing: sawn timber, planed profiles. Woodworking: fiberboard. Furniture production: furniture from wood. Export	662543, Krasnoyarsk Krai, Lesosibirsk, ul. Belinskogo, 16E	Tel.: +7 (391) 456-13-02, 459-24-50, 456-16-97 ldkinfo@mail.ru, www.ldk1.ru
LesProm (Shikin V.V., IP)	Wood-sawing: sawn timber	662200, Krasnoyarsk Krai, Nazarovo, mkrn. Beriozovaya Roscha, stroenie 2	Tel.: +7 (391) 555-83-35, (962) 067-11-11 lesorub24@mail.ru, www.lesprom.pro
Marafon-2, PK, 000	Furniture production: furniture from solid wood. Woodworking: doors, windows and staircases	660004, Krasnoyarsk, ul. 26 Bakinsky Komissarov, 17B	Tel.: +7 (391) 216-40-44, 264-88-81 marafon-kr@rambler.ru, www.marafon2.ru
Master Firma, 000	Investment project in realization. Wood-sawing: sawn timber, moulded strips. Woodworking	660006, Krasnoyarsk, ul. Sverdlovskaya, 6A	Tel. +7 (391) 226-42-06 fabiry@rambler.ru
Mekran, UK, 000	Woodworking: window and door units. Furniture production: casegoods furniture	660111, Krasnoyarsk, ul. Pogranichnikov, 46	Tel. +7 (391) 226-64-29 info@mekran.com, www.mekran.com
NKM, MF (Ladja-M, 000)	Furniture production: casegoods furniture	660071, Krasnoyarsk, ul. Kutuzova, 1, stroenie 13	Tel. +7 (391) 295-52-89 NKMmebel2011@yandex.ru, www.nkmmebel.ru
Novoyenisejsky LHK, ZAO	Wood-sawing: sawn timber, moulded strips. Woodworking: fiberboard. Bioenergy: wood-based boards	662546, Krasnoyarsk Krai, Lesosibirsk, ul. 40 Let Oktyabria, 1	Tel.: +7 (39145) 3-91-93, 3-40-01, fax +7 (39145) 3-31-65 referent@novo-lhk.ru
Petrograd, 000	Furniture production: casegoods furniture and soft furniture	662520, Krasnoyarsk Krai, pgt. Beriozovka, ul. Kirova, 125	Tel. +7 (391) 273-71-60 info@fabrika-nils.ru, www.fabrika-nils.ru
PiK-99, 000	Furniture production: casegoods furniture	660000, Krasnoyarsk, pr.Svobodny, 68, office 305	Tel. +7 (391) 244-48-37 milana20053@yandex.ru, www.pik-99.ru
PNKSibir, 000	Wooden house construction: houses from glued timber	660059, Krasnoyarsk, ul. Vavilova, 49B, office 2-17	Tel. +7 (391) 288-45-46 pnk@pnksibir.ru

Name	Activity	Address	Contacts
Priangarsky LPK, 000	Wood-sawing: sawn timber, moulded strips. Bioenergy: charcoal, fuel briquettes	663491, Krasnoyarsk Krai, Kezhemsky district, Kodinsk, PO Box 57	Tel.: +7 (39143) 7-58-55, 7-13-12 kodinsk-lpz@mail.ru, plpkles@mail.ru www.plpk.info
Sibagropromstroy, AO	Woodworking: windows, doors, and staircases. Furniture production: furniture from solid wood. Wood-sawing: mouldedstrips	660077, Krasnoyarsk, ul. Aviatorov, 19	Tel.: +7 (391) 298-88-01, 298-88-02 info@saps.ru, www.saps.ru
SiberianUsad'da, 000	Wooden house construction: timber houses, round log, and frame-houses	660028, Krasnoyarsk, ul. Krasnomoskovskaya, 76	Tel.: +7 (391) 282-55-55, 293-78-93 sib-usadba@yandex.ru, www.sib-usadba.ru
SibirExportLes, 000	Trade by timber product. Wood-sawing: sawn timber	660000, Krasnoyarsk, Severnoie shosse, 10	Tel.: +7 (391) 240-83-13, 241-75-46 sibexles@yandex.ru
Sibles, 000	Logging. Wood-sawing: sawn timber, moulded strips	660075, Krasnoyarsk, ul. Maerchaka, 31A, office 2-02	Tel. +7 (391) 274-85-51, fax +7 (391) 274-86-22 reception@maltrat.ru, www.maltratwood.ru
SiblesProject, 000	Wood-sawing: sawn timber	660075, Krasnoyarsk, ul. Maerchaka, 31A	Tel. +7 (391) 274-85-51, fax +7 (391) 274-86-22 reception@maltrat.ru, www.maltratwood.ru
SibLesProm, 000	Wood-sawing: sawn timber	660118, Krasnoyarsk, ul. Yeniseisky Trakt, 5/3	Tel. +7 (391) 286-66-16 doskitut@gmail.com, www.doskitut.ru
SibWod, PKF, 000	Wood-sawing: sawn timber, moulded strips. Woodworking: furniture board. Wooden house construction: houses from round log and profiled timber	663035, Krasnoyarsk Krai, Yemelianovsky district, p. Shuvaevo, ul. Solnechnaya, 2A	Tel. +7 (391) 292-07-33 sibwod@mail.ru, www.sibwod.ru
SmalP.V., IP	Logging. Wood-sawing: sawn timber	660052, Krasnoyarsk, ul. 2-ya Gipsovaya, 2A	Tel. +7 (902) 942-74-55 smallpavel@mail.ru
Solo, 000	Furniture production: casegoods furniture and soft furniture	660000, Krasnoyarsk, ul. Timoshenkovo, 74ж	Tel.: +7 (391) 218-20-40, 218-21-21 solo_50k@mail.ru, www.solo24.net
SSSR, 000	Wood-sawing: sawn timber	660061, Krasnoyarsk, ul. Kalinina, 88/4	Tel.: +7 (901) 646-03-02, (913) 539-92-13 lesopilka_souz@mail.ru
Tat'kovMebel (Tat'kova G.V., IP)	Furniture production: soft wood	660013, Krasnoyarsk, ul. Bogdana-Khmel'nitskogo, 10, stroenie 3	Tel.: +7 (391) 295-33-31, 295-81-25, fax +7 (391) 237-71-35 rla.79@mail.ru, www.tatkov-mebel.ru
TranssLes, 000	Wood-sawing: moulded strips. Woodworking: furniture board	662520, Krasnoyarsk Krai, Berezovsky district, pgt Beriozovka, ul. Kirova, 109A	Tel.: +7 (391) 204-00-30, (923) 371-31-37 www.transsles.ru
ValmonPK, 000	Furniture production: casegoods furniture.	660000, Krasnoyarsk, pr. Krasnoyarsky Rabochiy, 160, stroenie 4	Tel. +7 (391) 282-20-60 vm08@mail.ru, www.valmon.ru
VashaMebel, MF, 000	Furniture production: casegoods furniture.	660061, Krasnoyarsk, ul. Kalinina, 91A	Tel.: +7 (391) 268-23-24, 268-23-25 vmebel@mail.ru, www.vmebel.ru
Vector, 000	Logging	663060, Krasnoyarsk Krai, Bol'shemurtinsky district, pgt B. Murta, ul. Poliarnaya, 13	Tel.: +7 (908) 212-55-84, (391) 983-16-81 kozulinms@rambler.ru
VinokurovA.I., IP	Logging	655600, Krasnoyarsk Krai, Sayanogorsk, mkrn 10, 18, kv. 128	Tel. +7 (902) 468-63-07 s655600@yandex.ru
Wooden Houses, TD, 000	Wood-sawing: sawn timber, round log. Wooden house construction	660135, Krasnoyarsk, ul. Vzliotnaya, 5, stroenie 1, office 401	Tel. +7 (391) 293-56-56, fax +7 (391) 255-99-70 td-dd@bk.ru, www.td-dd.ru
Wooden Terema, 000	Wooden house construction: houses from round log	660049, Krasnoyarsk, ul. Dubrovinskogo, 110, office 1-21	Tel. +7 (391) 294-59-35, fax +7 (391) 229-58-08 dterem@yandex.ru, www.dterema.ru
WoodenHousesReblov, 000	Wooden house construction: houses from round log, blockhouses	660017, Krasnoyarsk, ul. Kirova, 19, office 57	Tel. +7 (391) 290-23-23, fax +7 (391) 249-96-62 rublev24@mail.ru, www.rublev24.ru
Yenisei, DSK, 000	Wooden house construction: frame-houses	662500, Krasnoyarsk Krai, Sosnovoborsk, ul. Zavodskaya, 1	Tel.: +7 (391) 272-69-93, 271-64-94 info@dskenisey.com, www.dskenisey.ru
Yenisei DOK, 000	Wood-sawing: sawn timber. Bioenergy: fuel briquettes. Export	662520, Krasnoyarsk Krai, Berezovsky district, pgt. Beriozovka, ul. Traktornaya, 87, PO Box 7	Tel. +7 (391) 204-03-33 site@dok-enisey.ru www.dok-enisey.ru
YugSayanStroj, 000	Wood-sawing: sawn timber, moulded strips	660032, Krasnoyarsk, ul. Dubenskogo, 8, office 63	Tel. +7 (391) 295-67-64 poc4tar@yandex.ru, www.cub24.com



§ Tomsk Oblast: On Two Pillars

Tomsk Oblast is a part of the Siberian Region, and with an area of 314,400 km², is the fifth largest oblast in the country. The region's development is focused on the production and processing of minerals, which it possesses in abundance. In spite of the fact that the largest part of Tomsk Oblast is forested, industrial timber processing is not a priority area of the development of its economy, by a long way.

According to the last census in the RF, the population of Tomsk Oblast is slightly over one million, of which 70% live in cities and 30%, in rural areas. Tomsk Oblast is one of Russia's 24 regions where a natural increase in population has been recorded. Its capital is Tomsk, which is 3,500 km away from Moscow and was founded in 1604.

GEOGRAPHY AND CLIMATE

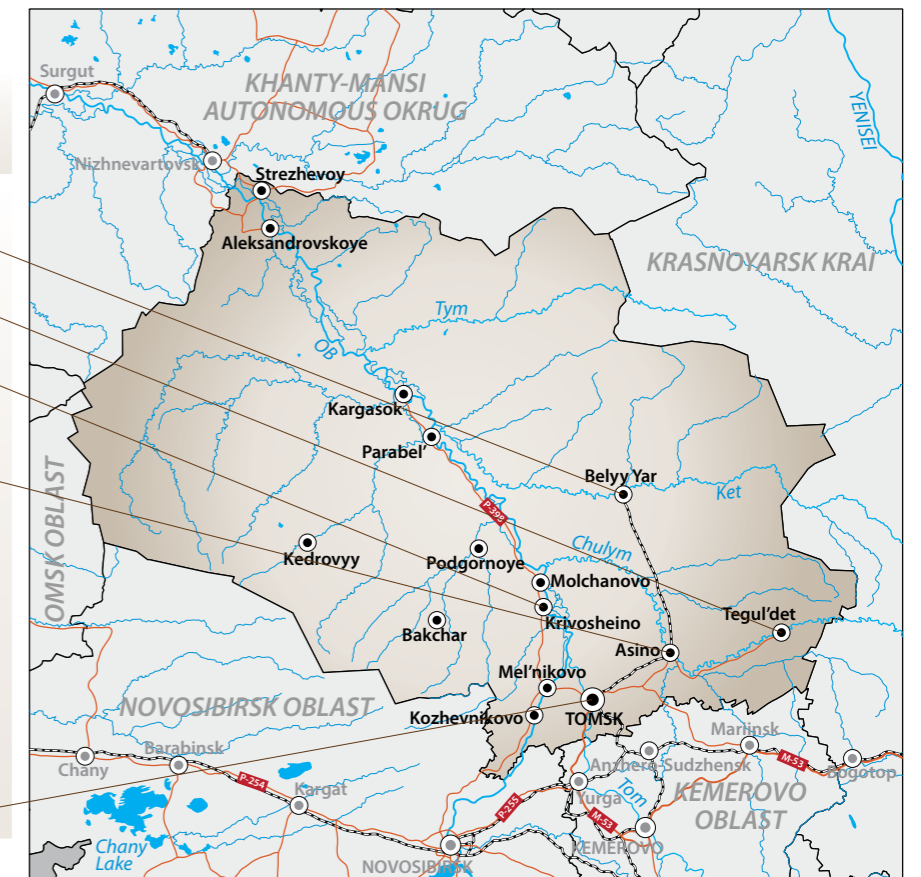
Most of the area of Tomsk Oblast is hard to access, because it is almost entirely covered with taiga and marshes. For instance, the Vasyugan Swamp, one of the world's largest, is located there. It occupies over 10 percent of

the whole area of Tomsk Oblast, or 53,000 km². The oblast has 573 rivers all of which are over 20 km long, and 35 lakes each with an area of over 5 km². The whole river system belongs to the basin of the Ob river, which crosses the oblast from south-east to north-west, dividing it into two almost equal parts.

Forests occupy about 60% of the area; the difference between the main zones, mid-taiga, southern taiga, and forest-steppe can be clearly seen. The taiga consists mainly of softwood species: pine, Siberian pine, spruce, and fir; the predominant hardwood species are birch and aspen.

Large-scale forest enterprises of the Tomsk Oblast

- Verkhneketsky LPK, 000
- Henda-Sibir, 000
- SibLesTrade ZPK, 000
- Asinovsky MDF Plant, 000
- Sibirskaya Fanera, 000
- Apio Tom, ZAO
- Avtor, 000
- First Russian Chair Plant
- Grol, MF, 000
- Partner-Tomsk, LPK, ZAO
- Siberian Pencil Factory, 000
- Tomsk Production Company, 000
- Tomlesdrev, 000
- Vitra, 000



It has a moderate continental climate, which is cyclic. It is further characterized by considerable daily and annual temperature amplitudes and a long winter period. The average annual temperature is -0.6 °C, the average temperature in July is 18.1 °C, and in January, -19.2 °C.

RESOURCES

The natural resources are quite diversified: timber, peat, China clay, high-melting clays, glass sands, ilmenite-zircon sands, iron ores, bauxites, brown coal, and zinc. Occurrences of gold, platinum, titanium, and zirconium have been found. The oblast is among the ten Russian regions intensely producing oil and gas.

TRANSPORT

Road, railway, waterway, and air transport are the means of communication used in Tomsk Oblast. The total length of hard surface roads in the region is 7,156 km. The length of waterways is 5,195 km. The Ob, Vasyugan, Ket, Tom, Parabel, Chulym, and Chaya are all navigable.

The length of operational railway is 346 km, the main line being Bely Yar-Tomsk-Taiga.

Interregional communication is provided by the Tomsk-Yurga (a branch of the M³ Baikal federal highway), Tomsk-Kozhevnikovo-Novosibirsk, and Tomsk-Mariinsk highways. The North Latitude Highway, now under construction, extends across the region. By 2015, it will connect Perm, Chusovoy, Kachkanar, Ivdel, Khanty-Mansiysk, Nefteyugansk, Surgut, Langepas, Megion, Nizhnevartovsk, Strezhevoy, Kargasok and Tomsk.

Two airports, at Tomsk and Strezhevoy, and 15 airstrips operate in the oblast. The Bogashevo airport at Tomsk was given international status in 2010.

ECONOMY

According to local experts, the economy of Tomsk Oblast is based on two strategically important factors, "Two Pillars" -- the considerable raw material and intellectual resources available in the region. There are six universities in Tomsk, two of which have "National Research" status.

According to the Tomsk Oblast Government, "the highest proportion in the gross regional product is that of the (hydrocarbon) mineral production sector. Manufacturing, transport and communications, trade, agriculture, and construction come next."

In terms of per capita GRP, the region is one of the three leaders in the Siberian Federal District; by per capita investment in fixed capital, it is a leader in the SFD and amongst the ten top regions in Russia.

FOREST RESOURCES

Two forest areas are identified in Tomsk Oblast: West Siberian plain taiga and West Siberian sub-taiga/forest-steppe. These forest areas differ in their area and species composition, and also in the productivity of forests, the intensity of their development, and forest protection and reproduction.

Softwood and small-leaved stands occupy almost equal shares of the forested area: 53.7 and 46.3%, respectively.

Softwood species dominate in the north of the oblast; to the south, they are replaced with birch and aspen. According to the Forest Plan of Tomsk Oblast for 2009–2018 and the long-term target program "Forest management development in Tomsk Oblast for 2013–2016," pine forest occupies an area of 5,610,100 ha (29.1% of the forested area); mature and old growth stands occupy 56.6% of the forested area. The total reserve of pine forest is estimated at 661,230,000 m³. The total productivity is 118 m³/ha, which is lower than the productivity of other softwood. The explanation is that 13.5% of pine forest is made up of young stock of age class I and II, and 24.4% is made up of low-quality stands of class V and Va quality, situated on marshy lands.

Every tenth Siberian cedar in the country is in the Tomsk Oblast; this particularly valuable species occupies an area of 3.6 million ha. The Siberian

cedar stands occupy nearly 20% of the forested area of the region (3,645,800 ha). They contain 46.5% of the softwood reserve and 26.5% of the total timber reserve. The mature stand reserve is estimated at 291 m³/ha, and the average productivity of Siberian cedar stands is 209 m³/ha.

Fir woods grow on 588,000 ha (2.6% of the forested area, about 4% of the timber reserve). Spruce woods occur as small sites in the valleys and on the banks of taiga rivers and springs all across the region. Siberian larch stands are represented by small sites in the northern districts of the oblast, over a total area of 7,700 ha.

Predominant among the hardwood forests are birch woods, which constitute the largest forest formation. Their proportion is 36% of the forested area. Birch timber reserves are about 880 million m³, and if there is a reserve of seeds, nearly all of the secondary birch woods not affected by wild fires for more than 10 years are successfully reproduced with dark coniferous species. Their potential is considered in felling management and general birch forest management. Aspen stands occupy 9.7% of the forested area (11.3% of the total reserve). The average productivity of aspen woods is higher than that of birch groves (179 ha and 126 m³, respectively).

Commercial forests grow on 26,900 ha (94% of the forest lands in Tomsk Oblast). The total timber reserve in the region is estimated at 2,820,880,000 m³, of which 1616 million m³ is softwood. The total commercial timber reserve in mature and old growth forests is 1594.2 million m³, of which 648.8 million m³ is softwood and 945.4 million m³ is hardwood. The area of protective forests is 1,712,000 ha. By overall timber reserves, the oblast is third among the Siberian Federal District regions, and eighth in the Russian Federation.

The annual allowable cut in Tomsk Oblast exceeds 41 million cubic meters, of which 14.9 million m³ is for softwood. Currently, the timber industry facilities use about 11% of this volume. Over 60 percent of timber harvesting and haulage is concentrated in three districts, Pervoimaisky, Verkhneketsky and Asinovsky.

The high average age of the basic forest-forming species shows the availability of forest stands suitable for harvesting by clear fellings. All told, obsolete forest survey remains the key problem for forest management in Tomsk Oblast. Less than one quarter of the region's forests has been surveyed within the last ten years.

Currently, the main bulk of forest resources of Tomsk Oblast is concentrated in hard-to-access areas with undeveloped road infrastructure and waterlogged soils. Therefore, most of the harvesting is done in winter using winter trails.

By 2018, according to the Oblast Government, as a result of forest surveys it is intended to increase the permitted annual timber harvesting (allowable cut) by 9.5 million m³, and the actual timber harvesting, by 2.3 million m³ per year.

FORESTRY AND TIMBER SECTOR

So far, the contribution of the forestry and timber sector to the gross regional product has been rather modest. It accounts for 2.5% in the industrial output of Tomsk Oblast, and for about 1% in the overall economy of the oblast (making up 10 percent of Tomsk exports).

About 500 companies are engaged in timber harvesting and processing in Tomsk Oblast. The main products are sawn timber, millwork, chipboards, MDF, laminated beams, window and door units, furniture, overlaid plywood and so on. According to the oblast authorities, primary and secondary timber processing is actively developing in the region; in the last decade, the proportion of roundwood shipped without processing was reduced from 50 to 3 percent of the total harvested volume.

Today, the products of the region's FTS are exported to 20 countries of the former Soviet Union and beyond. The key importers are China and Uzbekistan. In Russia, the key buyers of the region's timber products are in the Central and Siberian Federal Districts and in the Far East. The exports exceed \$100 million/year.

According to experts, the timber processing potential of Tomsk Oblast is far from being realised, which is indicated by the extremely low percentage of the allowable cut utilization, a mere 11%. The economically accessible forest

resource, according to Oblast authorities' estimates, is currently assessed at more than 10 million m³/year, while the actual harvesting figures are slightly over 3 million m³/year.

An increase in timber harvesting is hindered by the deficit of added-value timber processing capacities, which would enable using wood waste and hardwood in the industrial process. But this is far from the only reason – experts believe that extremely negative impacts on timber harvesting development in Tomsk Oblast come from the low transport accessibility of sites with quality forest resources; the seasonal nature of harvesting; the gradual degradation of the road network; unreliable forest survey documentation; low scopes of forest survey and reclamation activities; illegal felling and wildfires, which are almost impossible to prevent and suppress under the conditions of the Siberian taiga.

A "Forest Sector Development Strategy" has been developed in Tomsk Oblast, under which a large timber industry cluster is to be built in the region for integrated timber processing on the basis of advanced technologies and using the region's research and industrial potential. The main focus is on the production of wood boards and plywood for various purposes. The investments in the timber industry, according to the strategy developers, will amount to 40 billion rubles by 2020. By 2020, the timber harvesting and processing output will increase threefold, to reach 9 million m³. The timber processing outputs by product type will increase in this period as follows: for sawn timber, to 1,400,000 m³, and for wood boards (plywood, chipboards, OSB, MDF), to 2,000,000 m³. It is intended to completely phase out the export of unprocessed timber out of the oblast.

The region's department for business and economic development maintains that unlike other sectors of the regional economy where the investment amounts correspond to the amortization level, FTS demonstrates sustainability and real investment activity.

Key FTS companies of Tomsk Oblast that have real financial and operational potential for development

Tomlesdrev LLC: Integrated timber processing company; one of the largest makers of laminated chipboards in Siberia. Its harvest is 500,000 m³/year. The annual output is about 300,000 m³ of laminated chipboard which meet all essential world standards. The company also makes sawn timber and other timber products. The company's products hold 20 percent of the market in the regions of Siberia and Far East. The number of personnel is over 2,000.

LPK Partner-Tomsk LLC is a timber processing mill aimed at added-value processing of raw material. The first stage of the MDF factory was started up in December 2010, and in 2012, the factory reached its design output of 264,000 m³ of fiberboard. The company has its own timber harvesting unit. The number of personnel is about 500.

Current status of the forest fund of the Tomsk Oblast and its changing within the last five years

Indicators	As of 01.01.2010	As of 01.01.2014	Difference over the five-year period of forest resource record
			+
Total area of the forest resources, ha	28,604	28,820.1	216.1
Forested	19,242.2	19,392.3	150.1
of which, is predominantly:			
softwood species	10,311.8	10,334.1	22.3
hardwood	8,862.2	8,987.6	125.4
Total timber reserve, millions of m ³	2,852.31	2,861.37	9.06
of the total reserve, stands with a predominance of:			
softwood species	1,606.73	1,604.53	-2.2
hardwood	1,244.66	1,255.54	10.88

Source: Forestry department of the Tomsk Oblast

AVIC International Holding Corporation (China) The subsidiaries of this company operating in Tomsk Oblast (Roskitinvest JSC and Henda-Sibir LLC), under a Russo-Chinese intergovernmental agreement, are implementing the investment project "Setting up a timber industrial park in Asino." The industrial park under construction is Russia's largest joint intergovernmental project. The number of personnel is 1200. The main bulk of the personnel (about 1000) are residents of Asinovsky District and neighboring districts of the oblast.

The Chinese investor is setting up 10 timber processing mills in Asinovsky District. The opening of the first stage of veneer production with a 100,000 m³ output is scheduled for February. The construction and assembly are nearing completion at the sawmill for an annual output of 220,000 m³. The construction of other sites is ongoing, as well as of a 48 MW thermal energy center, which will use wood waste and natural gas as fuel. The construction of an employee dormitory for 400 beds and a workers' settlement for 3,000 families has been started.

Over 13 billion rubles was invested in the construction of the industrial complex, and the total investment will amount to 30 billion rubles up to 2022. 1,800 project staff employees (of which 200 are foreign citizens) and 500 employees of construction contractors are engaged in the construction of the timber complex.

Mariya ALEKSEYEVA, Oleg PRUDNIKOV

Tomsk Oblast government authorities responsible for timber industry regulation

Governor of the Tomsk Oblast

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Enterprises of the forestry industry of the Tomsk Oblast

Name	Activity	Address	Contacts
Ametist-M, OOO	Furniture production: soft furniture	634000, Tomsk, ul. Visotskogo, 28, stroenie 4	Tel.: +7 (3822) 64-74-04, (923) 418-51-01, ametist_m@sibmail.com, www.ametist.tomsk.ru
Apio Tom, ZAO	Logging. Wood-sawing: sawn timber	634029, Tomsk, pr. Frunze, 16	Tel. +7 (3822) 53-13-13, fax +7 (3822) 52-88-05, tom@mail.tomsknet.ru,
Art-Mebel, OOO	Furniture production: casegoods furniture	634000, Tomsk, ul. Kotovskogo, 19/2,	Tel. +7 (3822) 22-65-69, info@art-meb.com, www.art-meb.com
Asinovsky MDF Plant, OOO	Wood-sawing: sawn timber, wood chips. Woodworking: millwork, veneer, and plywood	636842, Tomsk Oblast, Asino, ul. Im. Kuibisheva, 1, stroenie 1	Tel.: +7 (38241) 272-28, 271-63, (923) 448-01-72, (923) 448-19-60, azmdf@mail.ru
Atam, OOO	Wooden house construction: houses from round log. Wood-sawing: sawn timber	634009, Tomsk, ul. Voikogo, 75	Tel.: +7 (3822) 57-85-75, (913) 827-85-75, (909) 540-20-33, atam.tomsk@mail.ru
Avtor, OOO	Furniture production: furniture from solid wood. Woodworking: staircases, and doors	634009, Tomsk, ul. Vodianaya, 84, stroenie 1	Tel. +7 (3822) 40-56-99, avtor.tomsk@mail.ru, www.avtor.tomsk.ru
Berezka, OOO	Wood-sawing: sawn timber. Wooden house construction: blockhouses	634537, Tomsk Oblast, pos. Kopilovo, ul. Stroitelei, 2/1	Tel. +7 (3822) 50-92-47, www.berezkatomsk.ru
Chulymls, OOO	Wood-sawing: sawn timber. Woodworking: wood fuel granules	636955, Tomsk Oblast, Pervomaisky rayon, pos. Novy, ul. Shkol'naya, 4	Tel.: +7 (38245) 391-12, 391-16, mikhalyovg@tomlesdrev.ru, www.tomlesdrev.ru
Dom, SK, OOO	Wooden house construction: houses from round log and profiled timber. Wood-sawing: sawn timber	634050, Tomsk, prospect Komsomol'sky, 42, stroenie 1, office 309	Tel. +7 (3822) 57-33-06, manager@house.tomsk.ru, www.house.tomsk.ru
DSK Doma and Bani, OOO	Wooden house construction: houses from solid timber. Wood-sawing: moulded strips	634024, Tomsk, 2-j Posiolok LPK, 111, stroenie 5	Tel.: +7 (3822) 34-34-66, 57-03-80, info@doma-n-bani.ru, www.doma-n-bani.ru
Dveri iz Dereva, OOO	Woodworking: doors from solid wood	634000, Tomsk, Moskovsky Trakt, 19/1	Tel.: +7 (3822) 21-20-71, 21-25-75, (901) 611-20-71, dveriizdereva@sibmail.com, www.dveriizdereva.ru
Eco Les (Syrkin I.V., IP)	Wood-sawing: sawn timber, and moulded strips	634000, Tomsk, ul. Dobrolyubova, 10	Tel.: +7 (3822) 22-52-74, 93-39-90, ecoles225274@mail.ru, www.ecoles-tomsk.ru
Essi, MF, OOO	Furniture production: casegoods furniture, and soft furniture	634029, Tomsk, pr. Frunze, 40	Tel.: +7 (3822) 53-25-07, 53-32-16, essi2000@mail.ru, www.essi.tomsk.ru
First Russian Chair Plant (SP Technoles, OOO)	Furniture production: tables, and chairs	634027, Tomsk, ul. Smirnogo, 9/2	Tel.: +7 (3822) 47-06-89, 76-13-00, rfstomsk@mail.ru, rfstomsk@yandex.ru, www.1rfs.ru
FMF Irbis, OOO	Woodworking: furniture facades	634028, Tomsk, ul. Timakova, 21, stroenie 9, office 4	Tel.: +7 (3822) 21-36-86, 42-03-39, irbis-tomsk@yandex.ru, www.fmf-irbis.ru
Fortress, OOO	Furniture production: casegoods furniture (based on metal frame)	634000, Tomsk, ul. Pushkina, 63, stroenie 7	Tel./fax: +7 (3822) 65-11-25, 65-22-48, 65-22-49, info@ooofortress.ru, www.ooofortress.ru
Grol, MF, OOO	Furniture production: casegoods furniture	634024, Tomsk, ul. Profsoyuznaya, 2/4	Tel.: +7 (3822) 46-36-10, 46-36-20, 46-36-30, maier@grol.tomsknet.ru, www.grol.ru
Henda-Sibir, OOO	Logging. Wood-sawing: sawn timber	636900, Tomsk Oblast, Teguldetsky rayon, selo Teguldet, ul. Mayakovskogo, 23	Tel.: +7 (3822) 910-678, 910-677, henda@mail.ru
Kedr-Tomsk, OOO	Wood-sawing: sawn timber. Wooden house construction: houses from profiled cedar timber	634059, Tomsk, ul. Tsiolkovskogo, 24, kv. 83	Tel.: +7 (952) 880-09-73, (913) 853-44-39, mail@kedr-tomsk.ru, www.kedr-tomsk.ru
Lesnaya Company (Bedareva T.N., IP)	Wood-sawing: moulded strips	634000, Tomsk, Moskovsky Trakt, 109 B	Tel.: +7 (3822) 30-58-00, 33-12-65, 25-42-05, bedarevat@mail.ru,
LK Inguzet, OOO	Logging	636511, Tomsk Oblast, Verkhneketsky rayon, pos. Klyukvinka, ul. Krasnoarmeiskaya, 1,	Tel.: +7 (38258) 244-21, 511-248, les_torg@bk.ru,
Mebel City (Kharitonkina S.A., IP)	Furniture production: casegoods furniture	634000, Tomsk, ul. Mostovaya, 32	Tel./fax +7 (3822) 25-01-05, mebelcity-tomsk@yandex.ru, www.mebelcity-tomsk.ru
Mebeler, OOO	Furniture production: casegoods furniture, and soft furniture	634040, Tomsk, ul. Ivanovskogo, 4, stroenie 1	Tel.: +7 (3822) 90-38-55, 63-38-55, (923) 401-96-63, mebeler@sibmail.com, www.mebeler-interyer.ru

Name	Activity	Address	Contacts
Partner-Tomsk, LPK, ZAO	Woodworking: particleboard, MDF	634062, Tomsk, ul. Kuzovlevsky Trakt, 4, stroenie 2	Tel.: +7 (3822) 61-03-54, 70-45-10, fax +7 (3822) 70-21-84, partner_tomsk@inbox.ru, www.partner-tomsk.ru
Premier, OOO	Wooden house construction: wood frame-houses, and houses from timber. Woodworking: millwork. Wood-sawing: sawn timber	634015, Tomsk, ul. Michurina, 114	Tel.: +7 (3822) 51-21-99, 51-26-99, fax +7 (3822) 73-64-05, t70t@bk.ru, www.tomles.ru
Prima SV, OOO	Wooden house construction: houses from profiled timber. Woodworking: staircases	634000, Tomsk, ul. Feodora Lytkina, 3/1, office 447	Tel.: +7 (3822) 42-58-01, 44-39-77, primasv@inbox.ru, www.primasv.tomsk.ru
Project-Lesstroy, OOO	Wooden house construction: houses from round log and profiled timber. Wood-sawing: sawn timber, and moulded strips	634000, Tomsk, pr. Kirova, 58	Tel./fax +7 (3822) 91-58-80, p-lesstroy1@rambler.ru, www.p-lesstroy.ru
Rona-Mebel, OOO	Furniture production: soft furniture	634000, Tomsk, 2-j Posiolok LPK, 111, stroenie 6	Tel. +7 (3822) 70-11-21, rona-m2004@mail.ru, www.rona-mebel.ru
Russky Shick (Kome-S, OOO)	Furniture production: casegoods furniture	634026, Tomsk, per. Dobrolyubova, 10	Tel.: +7 (3822) 40-35-04, 40-31-00, 25-23-23, rshik@tomsk.ru, www.rshik.tomsk.ru
Sagos, PO, OOO	Wooden house construction: houses from round log. Wood-sawing: sawn timber, and moulded strips	634045, Tomsk, ul. Nakhimova, 15, office 120	Tel. +7 (3822) 59-99-66, lpk@sagos.ru, www.sagos.ru
Siberian Athens, GK	Wooden house construction: houses from round log and wood frame-houses	634000, Tomsk, pr. Frunze, 152	Tel.: +7 (3822) 33-15-62, 44-46-06, 21-05-36, sibirskie-afini@mail.ru, www.sibafini.ru
Siberian Pencil Factory, OOO	Woodworking: pencils, and pencil slats	634009, Tomsk, ul. Voikova, 75	Tel.: +7 (3822) 40-22-93, fax +7 (3822) 40-40-79, info2@skf.tom.ru, www.pencilfactory.ru
Sibirskaya Fanera, OOO	Woodworking: plywood	636840, Tomsk Oblast, Asino, ul. Lenina, 7A	Tel./fax: +7 (38241) 2-13-45, 2-27-86, fanerasibir@mail.ru
SibLesTrade ZPK, OOO	Logging. Wood-sawing: sawn timber, and moulded strips	634057, Tomsk, per. Sovpartshkol'ny, 13, office 403	Tel.: +7 (3822) 20-91-78, 20-91-79, siblest@mail.ru, www.siblestrade-ltd.ru
Sibregion, TD, OOO	Woodworking: wood sleepers. Wood-sawing: sawn timber	634000, Tomsk, pr. Frunze, 25	Tel./fax: +7 (3822) 53-08-08, 53-09-09, 52-89-90, 23-09-89, 23-19-89, 23-79-89, sibregion70@mail.ru, www.sibregion.biz
Stefurak, V.M., IP,	Logging. Wood-sawing: sawn timber	636451, Tomsk Oblast, Kolpashevsky rayon, pos. Togur, ul. Koroleva, 23	Tel.: +7 (38254) 5-55-03, 5-53-16, fax +7 (38254) 5-47-76
Stolyar-Master (TriA, OOO)	Furniture production: casegoods furniture. Woodworking: doors, and staircases	634000, Tomsk, ul. Hertsen, 78, office 431	Tel. +7 (3822) 22-43-65, stolyar-master@mail.ru, www.столяр-мастер.рф
StrojDom, OOO	Wooden house construction: houses from glulam, and wood frame-houses	634000, Tomsk, pr. Frunze, 20, office 415	Tel./fax: +7 (3822) 53-13-20, 30-40-29, usolcevergej@gmail.com, strojdom@sibmail.com, www.strojdom.su
Studia-F, OOO	Furniture production: soft furniture	634015, Tomsk, ul. Tsentral'naya, 3A	Tel.: +7 (913) 801-84-13, (913) 814-86-64, studia-f@mail.ru, www.s-f.tomsk.ru
Tomlesdrev, OOO	Logging. Wood-sawing: sawn timber. Woodworking: chipboard, and laminated chipboard	634024, Tomsk, 2-j Posiolok LPK, 111, korpus 16, office 6	Tel. +7 (3822) 70-67-34, lyusv@tomlesdrev.ru, tomld@mail.tomsknet.ru, www.tomlesdrev.ru
Tom-Service, OOO	Woodworking: wood toys	634050, Tomsk, ul. Belentsa, 17, office 57	Tel./fax: +7 (3822) 42-75-02, 42-75-91, toys@mail.tomsknet.ru, www.tomik.ru
Tomsk Doors, OOO	Woodworking: furniture facades	634021, Tomsk, pr. Frunze, 119E	Tel. +7 (3822) 54-51-50, fasad@tomfasad.ru, www.tmf.tomsk.ru
Tomsk Production Company, OOO	Wood-sawing: sawn timber. Woodworking: sleepers, and transmission tours	634050, Tomsk, ul. Shevchenko, 53	Tel.: +7 (3822) 55-75-45, 48-05-70, fax +7 (3822) 55-54-76, tpktomsk@mail.ru, www.tpktomsk.ru
Tomskiye Dveri, OOO	Woodworking: door units. Furniture production: casegoods furniture	634000, Tomsk, ul. Shishkova, 20	Tel.: +7 (3822) 53-51-18, 22-55-68, mail@dveri.tom.ru, www.dveri.tom.ru
Tomskleskom, OOO	Wood-sawing: sawn timber, and moulded strips	634026, Tomsk, ul. Geroev Chubarovtsev, 6, stroenie 20	Tel. +7 (3822) 47-28-55, fax +7 (3822) 76-52-15, 472855@mail.ru, www.томсклес.рф
Uyutny Dom, OOO	Wood-sawing: sawn timber, and moulded strips. Woodworking: windows, doors, and staircases. Furniture production: furniture from solid wood	634027, Tomsk, per. Mostovoy, 2, Lit.A	Tel.: +7 (3822) 22-28-29, 22-01-86, uyutdom@sibmail.com
Verkhneketsky LPK, OOO	Logging. Wood-sawing: sawn timber	636500, Tomsk Oblast, Verkhneketsky rayon, pos. Bely Yar, ul. Tayozhnaya, 1, lit. D	Tel.: +7 (38258) 2-15-47, +7 (3822) 51-39-54, fax +7 (3822) 51-39-54, belyi@vlpk.tomsk.ru, lena@vlpk.tomsk.ru, www.vlpk.tomsk.ru
Vitra, OOO	Furniture production: casegoods furniture	634040, Tomsk, ul. Visotskogo, 28, stroenie 7	Tel.: +7 (3822) 70-58-10, 70-58-20, inkin@vitra-mebel.ru, www.vitra-mebel.ru



Novosibirsk Oblast: In the Heart of Siberia

According to various rating agencies, Novosibirsk Oblast is among the top thirty constituent members of the Russian Federation in terms of investment potential. In 2013, investments in fixed assets totaled 174 billion rubles; thus, the region occupies the relatively high 23rd place in Russia and 3rd place in the Siberian Federal District, after Krasnoyarsk Territory and Kemerovo Oblast.

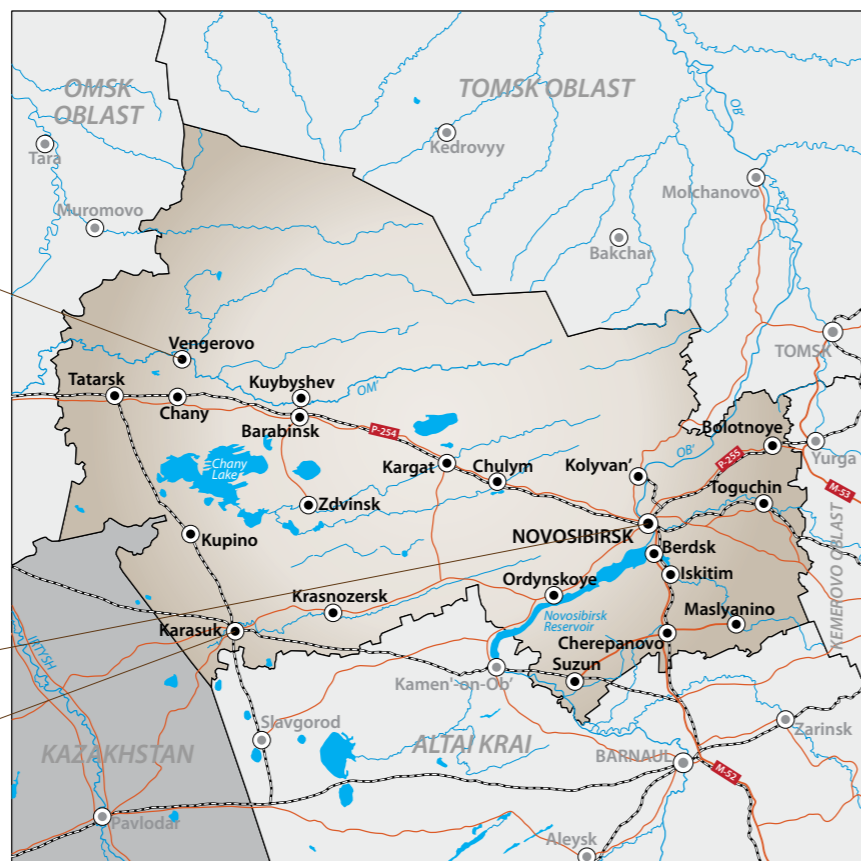
Novosibirsk Oblast was established in 1937 when the Altai Territory was split from the West Siberian Territory. Later, Kemerovo Oblast and Tomsk Oblast, previously parts of Novosibirsk Oblast, also became separate oblasts. This splitting of regions resulted in the quite moderate linear dimensions of Novosibirsk Oblast. The region extends 642 km from west-to-east, and 444 km from north-to-south. The area of Novosibirsk Oblast is 177,800 km².

Its capital, Novosibirsk is also the capital of the Siberian Federal District.

The region comprises five urban districts, 30 municipal districts, and 455 settlements (26 of which are urban and 429 rural). According to Novosibirskstat, 2,709,836 people were resident in Novosibirsk Oblast as of January 1, 2013, of which 2,110,240 were city dwellers.

Large-scale forest enterprises of the Novosibirsk Oblast

- Vengerovo Leskhoz, OAO
- Dauria, GK
- Ecodom, OOO
- Kamea, TD, OOO
- Megano, MK, OOO
- Raumbel, OOO
- Siberian Forest, PG, OOO
- Sibirmebel, GK
- Siblesprom NSK, OOO
- SKMD, ZAO
- Strojbit-M, ZAO
- Karasukskaya PMK, OOO



GEOGRAPHY AND CLIMATE

Novosibirsk Oblast is located in the south-eastern part of the West Siberian Plain, mainly in the Ob-Irtysh interfluvium. There are approximately 350 rivers in the oblast, the main one being the Ob. Close to the region's capital is the Novosibirsk Reservoir, the ("Sea of Ob"); the oblast has over 3,000 lakes.

The climate is continental. The temperature in January varies from -16 in the south to -20 °C in the northern districts. The temperature in July ranges between 18-20 °C.

RESOURCES

Over 500 deposits of various minerals have been identified in Novosibirsk Oblast, of which not more than 100 are currently being developed. Apart from coal, high-melting clay, and peat deposits, the oblast has minor reserves of gold and four types of marble, including high-class marble, which is in great demand. There are considerable reserves of ground water, thermal and mineral waters. Oil fields and natural gas fields have been discovered in the north-west of the oblast.

Nearly 6.5 million hectares of forest cover the region.

TRANSPORT

The transport routes across Novosibirsk Oblast connect Siberia, the Far East, and Central Asia to Russia's European regions. Several federal highways and a portion of the Trans-Siberian Railway extend across the oblast.

Novosibirsk is a river port; navigation on the Ob serves long distance cargo transit, local passenger traffic and sand production.

There are 12 airports in the oblast, of which two are of the federal level: Tolmachevo and Novosibirsk. Novosibirsk is the first Siberian city to construct a subway.

ECONOMY

The gross domestic product of the Novosibirsk Oblast grew by 1.3% against 2013 in 2014, to reach 776 billion rubles. The industrial production growth rate was 100.2 in 2014. The trends are positive in agriculture, wholesale and retail, in the service domain and in cargo turnover for all kinds of transport.

The military industrial complex has a special role in the region's economy. 39 companies and institutes of the oblast work to defense orders. A growth of 14% was recorded in this sector in 2014, with a product output worth 57 billion rubles. Currently, the defense order size for the region's enterprises remains at last year's level, with an overall decrease of federal allocations for other federal target programs.

The pride of Novosibirsk Oblast is science and the agro-industrial complex. The region grows grain, potatoes and vegetables; meat and dairy farming, poultry farming and beekeeping are well-developed; flax production is of great importance. The oblast is among the top ten largest agricultural producers in Russia.

Novosibirsk Oblast has been taking the lead in science and technology for more than 50 years. The Siberian Branch of the Russian Academy of Sciences, the Siberian Branch of the Russian Academy of Medical Sciences, the Vektor State Virology and Biotechnology Research Center, 55 academic institutes and over 60 industrial research, engineering and design institutes, and 100 large and 1700 smaller companies related to technological innovation activity are located there. The educational complex of Novosibirsk Oblast is the largest in Russia's Asian territory.

The level of business activity in the region is relatively high. The proportion of turnover of small and medium companies in 2014 was 40% of the overall turnover of the region's business.

FOREST RESOURCES

Forest coverage in Novosibirsk Oblast is a mere 26.7%, that is to say the oblast is sparsely forested. Furthermore, the oblast belongs to Siberia's forest-deficient regions in terms of softwood, and to forest-abundant regions, in terms of hardwood. Typical for most forest lands is the predominance of

hardwood stand – nearly 80 percent of forested land; in particular, 66.3% of which is birch wood, just one-fifth being occupied by softwood stand, with pine predominant.

For this reason, the governmental policy on forest management and reclamation is primarily aimed at changing the existing situation and curbing the softwood timber resource deficit. According to the state forest register, a positive trend may be seen in the quality and quantity indicators of forest lands in recent years. The forested areas have increased by 3,500 hectares, the overall reserve of basic dominant species has grown by 3.8 million m³, the area of homogeneous stands brought to forested lands has increased by 100 hectares, and the total average increment has increased by 40,000 m³.

According to the Forest Plan of Novosibirsk Oblast, the total forest land area is about 6.4 million ha of which the area covered with forest vegetation is 4.6 million ha. The total timber reserve is estimated at 517 million m³, of which 124 million m³ (24%) for softwood and 393 million m³ (76%) for hardwood.

As reported by the forest management department of Novosibirsk Oblast, the allowable cut in the region is 4,810,800 m³, 25-30% of which is currently exploited. The main cause of such a low indicator of development, as in most Russian regions, is the lack of transport infrastructure in the northern regions where the main forests of the oblast are located, and the quality structure of the stand.

THE FORESTRY AND TIMBER SECTOR

The forestry and timber industry is a mere 2.2% of the output of all the industries of Novosibirsk Oblast.

The annual timber harvest in Novosibirsk Oblast has remained at about the same level since 2010, varying within 1.2-1.7 million m³, with nearly 600,000 m³ harvested for the needs of the region's population. However, according to the Forest Plan of Novosibirsk Oblast, it is planned to increase the proportion of the forestry/timber sector in the industrial production of Novosibirsk Oblast to 2.7 million m³ by 2020.

There are no large timber processing facilities in Novosibirsk Oblast. According to experts, the region's FTS is mainly an array of small and scattered harvesting facilities, nearly all of which operate absolutely obsolete equipment. This determines the high costs of such facilities, and thus a low, and even, due to the crisis, negative rate of return of such production. These timber companies are not rich, and therefore cannot afford to modernize their production, due to deficient current assets.

The region's FTS is aimed at satisfying the needs of local residents for firewood, and of the megalopolis for construction materials. Most of the timber products are imported to Novosibirsk Oblast from neighbouring regions (Altai Territory, Tomsk Oblast and so on). In the future, a large hardwood processing facility could be set up, but as of this day, there are no such FTS-related investment projects in Novosibirsk Oblast.

Attracting new investors to build their mills there from scratch might turn the tide. Today, the authorities see low-rise house building and biofuel production as the most promising lines of development for the region's FTS. As for added-value timber processing, a whole number of problems are faced here. The main problems still are the species composition of the region's forest resources and economic accessibility of attractive forest lots; infrastructural support to FTS; skilled personnel for FTS enterprises, and the need to modernize most of the processing facilities.

Experts see the development of the bioenergy segment as a considerable prospect for the development of the regional FTS. A program to improve the energy efficiency and energy saving in the oblast using renewable energy sources, primarily timber has been developed with contributions from regional authorities. There is news already about several successfully implemented projects for the construction of new boiler plants burning biofuel, or of the switchover of existing municipal boiler plants from burning coal or black oil to the use of wood fuel. One of the first such projects was the launch of an experimental boiler plant for 6 MW of thermal energy in Vengerovo village in Novosibirsk Oblast. About 5,500 cubic meters of wood chips are needed for the proper operation of the boiler plant for the whole heating season.

Mariya ALEKSEYEVA, Oleg PRUDNIKOV

Novosibirsk Oblast government authorities responsible for timber industry regulation

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Enterprises of the forestry industry of the Novosibirsk Oblast

Name	Activity	Address	Contacts
ABC, 000	Furniture production: furniture from solid wood	632644, Novosibirsk, ul. Sibiryakov-Gvardejtsev, 51/1	Tel. +7 (383) 299-85-47 e.fehu@yandex.ru, www.abcfehu.ru
Agrostroyinvest, 000	Wooden house construction: frame-houses, and log houses	630058, Novosibirsk, ul. Russkaya, 50/2	Tel.: +7 (383) 214-36-45, 286-54-63 mail@agro-si.ru, www.agro-si.ru
Albero, 000	Woodworking: doors, staircases, and arches. Furniture production: casegoods furniture, and furniture from solid	630024, Novosibirsk, ul. Mira, 63A, korpus 12	Tel. +7 (383) 363-44-53 info@rwood.su, www.rwood.su
AlexMarMebel, 000	Furniture production: casegoods furniture	630102, Novosibirsk, ul. Voskhod, 1A, office 110	Tel.: +7 (383) 310-48-62, (953) 888-26-83 alexmar2011@mail.ru, www.alexmarmebel.ru
Alfasib, 000	Furniture production: casegoods furniture	630027, Novosibirsk, ul. Dunaevskogo, 29	Tel.: +7 (383) 291-38-01, 274-14-15 alfasib@gmail.com, www.alfasibnsk.ru
Anvik, 000	Wood-sawing: sawn timber	630099, Novosibirsk, ul. Chaplygina, 2/1, office 206	Tel. +7 (913) 737-71-46 lukyanov.anvik@gmail.com
Ar-Deko, 000	Furniture production: casegoods furniture	633000, Novosibirsk, ul. Svyazistov, 12A, korpus 35	Tel. +7 (383) 380-79-45 ar-deko.mebel@ya.ru, www.ar-deko.su
Argo Plus, 000	Furniture production: casegoods furniture	630024, Novosibirsk, ul. Vatutina, 40, office 5	Tel.: +7 (383) 352-87-39, 361-18-72 argosk@yandex.ru, www.apro-ck.pdf
Boff, 000	Furniture production: casegoods furniture	630132, Novosibirsk, r.p. Kol'tsovo, ul. Voznesenskaya, 2, office 1	Tel. +7 (383) 306-38-60 mebelboff@mail.ru, www.mebelboff.ru
Coupe, 000	Furniture production: casegoods furniture	630049, Novosibirsk, ul. Galuschaka, 2A, office 316/1	Tel.: +7 (383) 210-54-65, 292-60-42 Fax +7 (383) 210-54-65, mail@coupe.com.ru www.coupe.com.ru
Cutting Wood, 000	Furniture production: casegoods furniture	630000, Novosibirsk, ul. Zaleskogo, 7/2	Tel. +7 (913) 725-22-99 dvprovotorov@ngs.ru
Dauria, GK (Industrial Engineering Systems, ZAO)	Woodworking: summerhouses, fences, arches, and foot-paths. Wooden house construction: wooden frame-houses	630025, Novosibirsk, ul. Tvardovskogo, 3, korpus 1	Tel.: +7 (383) 213-13-16, 286-90-32 timber@dauriawood.ru www.dauriawood.ru
Dolina Mebeli, MK (Garni, 000)	Furniture production: casegoods furniture	630000, Novosibirsk, ul. B. Khmel'nitskogo, 90/3	Tel.: +7 (383) 367-01-26, 271-43-45 garni96@inbox.ru, www.dolina-mebel.ru
Ecodom, 000	Woodworking: glulam	630534, Novosibirsk Oblast, pos. Mochische, ul. Shossejnaya, 21	Tel. +7 (383) 294-58-55, fax +7 (383) 294-53-73 info.ecodom@mail.ru, www.ecodom-nsk.ru
Elan, 000	Woodworking: furniture workpieces	630077, Novosibirsk, ul. Vertkovskaya, 38, office 4	Tel.: +7 (383) 355-58-55, 263-17-10 elan-ds@online.nsk.su
Elema-N, 000	Furniture production: medical furniture, and casegoods furniture	630015, Novosibirsk, ul. Gogolya, 219	Tel.: +7 (383) 279-21-62, 279-98-08 info@elema-n.ru, www.elema-n.ru
Elit-Mebel, 000	Furniture production: casegoods furniture, and furniture from solid wood	630041, Novosibirsk, ul. 2ya Stantsionnaya, 30, korpus 5	Tel.: +7 (383) 230-04-92, 230-04-93, 350-01-91, info@elitmebell.ru, www.elitmebell.ru
Formula-7, 000	Wood-sawing; moulded strips	633000, Novosibirsk Oblast, Berdsk, ul. Promishlennaya, 14	Tel.+7 (383) 291-05-98 mail@formula-7.com, www.formula-7.com
Inprokom, 000	Furniture production: casegoods furniture	630091, Novosibirsk, ul. Dostoevskogo, 22	Tel.: +7 (383) 217-36-19, 291-96-63 mail@sibprocom.ru, sibprocom@mail.ru www.sibprocom.ru
Interproekt-C	Furniture production: casegoods furniture	630049, Novosibirsk, Krasny pr., 85	Tel. +7 (383) 225-50-35, www.interproekt-c.ru

Name	Activity	Address	Contacts
Kabinet, 000	Furniture production: casegoods furniture, and soft furniture	630015, Novosibirsk, ul. Gogolya, 204B	Tel.: +7 (383) 278-00-28, 288-22-26, 288-22-27 Bvk-kabinet@yandex.ru, support@bvk.ru www.bvk.ru
Kalina-Mebel, MF (Standart, 000)	Furniture production: casegoods furniture, and soft furniture	630052, Novosibirsk, ul. Tolmachevskaya, 43/2	Tel.: +7(383) 303-14-84, 303-14-49 art@mebelnsk.com, www.mebelnsk.com
Kamea, TD, 000	Furniture production: furniture from solid wood	630132, Novosibirsk, ul. Narimskaya, 17/2	Tel.: +7 (383) 214-30-03, 217-13-91, 220-45-20, (913) 767-59-74 kamea@kamea.ru, www.kamea.ru
Karasukskaya PMK, 000	Wood-sawing: sawn timber. Woodworking: millwork	632862, Novosibirsk, Karasuk, ul. Sovetskaya, 1E	Tel. +7 (383) 553-36-97, fax +7 (383) 553-17-44 trk@bk.ru, www.pmk.su
Kerulen, 000	Furniture production: casegoods furniture	630000, Novosibirsk, ul. Petukhova, 67, korpus 4	Tel.: +7 (383) 298-92-92, 362-11-83 kerulen-mebel@mail.ru, www.kerulen-mebel.com
Kratos, 000	Furniture production: casegoods furniture	630108, Novosibirsk, ul. Stacionnaya, 30A, office 409	Tel. +7 (383) 381-62-25 kratosmebel@yandex.ru, www.kratosmebel.ru
Vengerovo Leskhov, OAO	Logging. Wood-sawing: wood chips	632241, Novosibirsk Oblast, Vengerovskiy rajon, s. Vengerovo, ul. Chapaeva, 87	Tel. +7 (38369) 211-32 oaovenles@mail.ru leshov.vengerovo.ru
Lyizamebel, 000	Furniture production: casegoods furniture	630099, Novosibirsk, ul. Romanova, 27, office 304	Tel. +7 (383) 255-30-52 lyizamebel@mail.ru, www.lyizamebel.com
Master & Co, 000	Woodworking: doors. Furniture production: casegoods furniture	633010, Novosibirsk Oblast, Berdsk, ul. Lenina, 89/6	Tel.: +7 (38341) 2-76-30, 238-09-46, 212-55-47, 212-55-62 office@masterk.ru, www.masterk.ru
Mebel'naya Manufactura, 000	Furniture production: soft furniture	630000, Novosibirsk, ul. Dobrolyubova, 162/1	Tel.: +7 (383) 212-49-10, 310-67-56 mebel_divan@mail.ru, www.mebel54-online.ru
Mefa, 000	Furniture production: casegoods furniture	630088, Novosibirsk, ul. Sibiryakov-Gvardejtsev 49A, office 301	Tel.: +7 (383) 342-75-41, 344-76-49 mefa@bk.ru, www.mefa.ru
Megano, MK, 000	Furniture production: casegoods furniture	630000, Novosibirsk, Krasny prospect, 220/1	Tel. +7 (383) 210-66-22, fax +7 (383) 227-70-69 info@megano.ru, www.megano.ru
MK-Novo, 000	Furniture production; casegoods furniture. Woodworking: furniture facades	630082, Novosibirsk, ul. Zhukovskogo, 111	Tel.: +7 (383) 227-32-55, 225-49-09 mk_novo@mail.ru
Mushta-Furniture, 000 (33 sofas)	Furniture production: casegoods furniture	630015, Novosibirsk, ul. Promkirpichnaya, 22	Tel.: +7 (383) 279-36-16, 279-87-17, 279-19-05 i33divana@yandex.ru, www.i33divana.com
NovoKom, 000	Furniture production: casegoods furniture	630110, Novosibirsk, ul. Bogdana Khmel'nitskogo, 72	Tel.: +7 (383) 214-32-33, 380-78-14 novokomnsk@mail.ru, www.novokom-mebel.ru
Novokor, 000	Furniture production: casegoods furniture	630000, Novosibirsk, ul. Bogdana Khmel'nitskogo, 90, office 318	Tel./fax +7 (383) 363-55-45 novokor07@mail.ru, www.novocorsib.ru
Optim, MF	Furniture production: casegoods furniture	630120, Novosibirsk, ul. Svyazistov, 12A	Tel.: +7 (383) 287-82-50; (913) 01-88-777 optimum014@bk.ru, www.opt-meb.com
Raumebel, 000	Furniture production: casegoods furniture	630091, Novosibirsk, ul. Sovetskaya, 46/2	Tel. +7 (383) 209-16-70 raumebel@raumebel.ru, www.raumebel.com
Siberian Forest, PG, 000	Logging. Wood-sawing: sawn timber, moulded strips	630102, Novosibirsk, ul. Voskhod, 20, office 804	Tel./fax: +7(383) 254-03-40, 254-04-40 pgsibles@yandex.ru, www.woodsib.ru
Siberian Furniture, 000	Furniture production: casegoods furniture	630009, Novosibirsk, ul. Nikitina, 20, office 554	Tel. +7 (383) 230-17-51 sibmebel-2014@yandex.ru
Siberian Modeling Factory, 000	Furniture production: casegoods furniture	630024, Novosibirsk, ul. Betonnaya, 2	Tel.: +7 (383) 211-93-70, 210-59-63 info@mzs-slm.ru, www.mzs-slm.ru
Sibirmebel, GK	Furniture production: casegoods furniture	630083, Novosibirsk, ul. Bol'shevitskaya, 131, office503	Tel.: +7 (383) 357-10-92, 212-53-62, 292-24-49 air-way@yandex.ru, www.sibirmebel.ru
Sibir-Profil, 000	Woodworking: interior doors	630088, Novosibirsk, ul. Sibiryakov-Gvardejtsev, 56	Tel.: +7 (383) 335-87-87, 335-89-89 info@sibprofil.ru, www.sibprofil.ru
Siblesprom NSK, 000	Wood-sawing: sawn timber. Woodworking: glulam	630110, Novosibirsk, ul. Pisemskogo, 24/2	Tel.: +7 (383) 271-87-37, 204-28-82 sibles2@yandex.ru, www.siblesprom.ru
SKMD, ZAO	Woodworking: glulam	630052, Novosibirsk, ul. Tolmachevskaya, 43/3	Tel. +7 (383) 363-15-01 info@skmd.ru, www.skmd.ru
Strojbit-M, ZAO	Woodworking: door units. Furniture production: casegoods furniture, furniture from solid wood	630001, Novosibirsk, ul. Gipsovaya, 3	Tel.: +7 (383) 292-82-63, 292-82-64 fax +7 (383) 226-65-32 nskmebel@mail.ru, www.sb-mebel.ru
Topaz-Mebel, 000	Furniture production: casegoods furniture	630039, Novosibirsk, Gusinobordskojeshosse, 60	Tel. +7(383) 375-46-00 3754600@mail.ru, www.topaz-mebel.ru
Triana, MF (MFT, 000)	Furniture production: casegoods furniture	630082, Novosibirsk, ul. Dachnaya, 23/5	Tel. +7 (383) 373-08-57 mail@trianamebel.ru, www.trianamebel.ru
Venge-Mebel, 000	Furniture production: office furniture	630075, Novosibirsk, ul. Dusi Koval'chuk, 378A, korpus 4, office 1	Tel.: +7 (383) 236-16-20, 203-34-81 masterdoka@mail.ru, www.venge-nsk.ru
Xilema, 000	Furniture production: office furniture	633009, Novosibirsk Oblast, Berdsk, ost. Zelenaya Roscha, 2-yapl. BEMZa	Tel.: +7 (38341) 4-26-26, 3-44-33 xilema-berdsk@yandex.ru

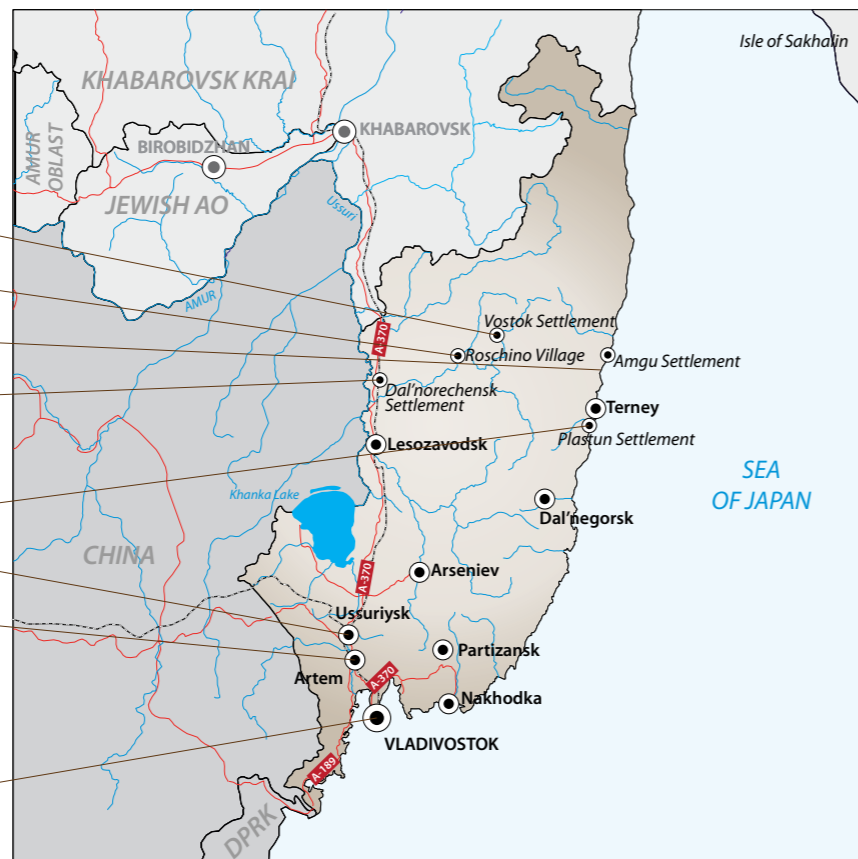
Primorsky Krai: Outpost on the Pacific Coast

The features of the economic development of Primorsky Krai are dictated by its geography

Primorsky Krai is a part of the Far East Federal District of the Russian Federation. Before Russian pioneering explorers appeared there, the lands were uninhabited, however in the mid-19th century Russia started actively strengthening its positions on the north-western Pacific coast.

Large-scale forestry enterprises of the Primorsky Krai

- Primorsky GOK, OAO
- Roschinsky KLPH, OAO
- Amgu, OAO
- Les Export, ZAO
- Hardwood, PTS, ZAO
- Teknowood, STS, ZAO
- Terneyles, OAO
- Primsnabcontract, OAO
- Ecopan-DV, OOO
- DomoCenter, ZAO
- Domokomplekt, OOO
- Forester-DV, OOO
- Golden Empire, GK
- Primorsklesprom, OAO



The territory's capital is Vladivostok. The city was founded in 1860; today, it is the main base of the Russian Navy's Pacific Fleet, and the largest scientific and educational center of the Far East Region, with the Far East Federal University and Far East Branch of the Russian Academy of Sciences. The distance to Moscow is 9141 km via land routes, and 6417 km as the crow flies.

STATISTICS

The area of Primorsky Krai is 165,900 km², which is slightly less than 1% of the whole area of Russia (25th on the list of constituent members of the RF), but much larger than Belgium, Holland, Denmark, and Switzerland put together.

The north-to-south extent of the region is about 900 km, and the distance between the westernmost and easternmost points of Primorsky Krai is 430 km. The total length of the Territory's borders is about 3000 km, and precisely one half of them are coastal.

Primorsky Krai comprises 25 districts, 12 cities, 46 townships, and 617 rural communities. Apart from Vladivostok, the largest cities are Ussuriysk, Nakhodka, Artyom, Arseniev, Spassk-Dalny, Bolshoi Kamen and Partizansk.

According to Primorskstat, 1,938,500 people inhabited Primorsky Krai as of the end of 2014, of which 1,059,600 were economically active population aged from 15 to 72. Most of the population (77 percent) live in cities.

Primorsky Krai is inhabited by more than thirty ethnic groups; according to the latest census, 86% of the population identify themselves as Russians.

It should be noted that there is a steady trend towards a reduction in the population in all of the Far East District regions. For instance, the maximum number of residents was recorded in Primorsky Krai in 1989, but since the dissolution of the USSR and to the present day the statistics give a negative forecast for this indicator. According to estimates, Primorsky Krai will have 1.8 million residents at the most by 2031.

GEOGRAPHY AND CLIMATE

The terrain of Primorsky Krai is determined by two mountain areas, Sikhote-Alin and East Manchurian, separated by the Razdolnoye-Khanka Plain. The highest point is Anik Mountain (1933 m above sea level). Primorsky Krai also has several islands, such as Russky, Popov, Reineke, Ricord, Askold, Rimsky-Korsakov Islands, Putyatn Islands, and Petrov Islands. The territory's longest river is the Ussuri; the Russian-Chinese border extends along this river and along the Lake Khanka basin.

The climate of the region is temperate, prone to heavy rainfall and humid. It is strongly affected by the hilly terrain. Due to the considerable extent of the region north to south, the temperature in its different parts may differ noticeably. In the northern part, winter frosts may be up to -50 C or lower, while on the eastern coast of the Sea of Japan, the thermometer never drops below -14 C in winter. July is the warmest month in the territory's continental districts, and August, on the coast.

Among the inclement climatic properties are rain showers, when up to one third of the annual precipitation rate may fall, and dry hot winds on the Khanka Plain.

RESOURCES

Scientists and economists note that Primorsky Krai has significant land, water and hydropower, forestry and recreational resources; reserves of valuable minerals are also explored.

The total coal reserves in Primorsky Krai are estimated at 2.4 billion tons, with 70% of the deposits fit for development. Non-ferrous and precious metals are represented by tin; 15 deposits of multi-metal ores are known containing lead and zinc, and small quantities of copper, silver, bismuth and rare earth metals.

Over 50 gold deposits have been identified in the territory, located mainly in the north and south. About 60% of all gold reserves are in placers in the valleys of the Pogranichnaya, Fadeevka, Malaya Nesterovka, Sobolinaya Pad', and Izubrinaya rivers.

Russia's largest boron deposit is near Dalnegorsk (over 92% of all of its production in Russia). It is expected that its reserves will last for at least the next 50 years. Also, fluor spar is produced in Khorol District of the territory; the deposits' ores also contain rare metals: lithium, beryllium, tantalum, and niobium. In the future the development of rock phosphates may start in the territory, but this valuable fertilizer material is in the mainland slope of the Sea of Japan, which requires the application of special technologies.

Almost all districts of the region have construction material reserves, but their extraction is generally open-quarry, which causes great damage to the environment.

Six conservation areas are arranged in Primorsky Krai, in particular the Sikhote-Alin state biosphere reserve and the Far East state maritime reserve, as well as nearly twenty national parks and wildlife sanctuaries.

TRANSPORT

Railway, road, waterway, and air traffic is provided in the region. The southern part is the most developed in terms of transport; the northern districts are poorly provided with all forms of communication.

By the beginning of the 20th century, the nation's longest Trans-Siberian Railway was laid there, connecting the Far East to the capital and European part of the Russian Empire. According to official sources, the length of railways in Primorsky Krai is currently 1625 km, of which 970 km are electrified.

Primorsky Krai has an important role in the federal concept of transport development in the Russian Federation, as forming six international transport corridors (ITC). Apart from the Trans-Siberian, which provides railway communication from Berlin to Vladivostok and further international transit to Japan, North Korea, China (Shanghai), Taiwan, Western Europe and Middle East, it is also the Northern Sea Route connecting Vladivostok to European ports via the Arctic. The ITC Primorye-1 and Primorye-2 serve the growing needs of trade with Chinese provinces Jilin and Heilongjiang, sea ports of southern China, and countries of the Asia-Pacific Region. The development of the East-West ITC is planned for interaction with ports of the US Pacific Coast; and the name "TransSib Trans-Korean Line" is self-explanatory. 17 border entry points operate in Primorsky Krai: eight maritime, five road, three railway, and one air point.

The length of roads in Primorsky Krai is over 11,000 km, of which 9454 km are hard-surfaced. The proximity of Japan and North Korea dictates modest prices of used foreign cars, therefore Primorsky Krai has become the RF leader in car ownership by residents.

The transport complex of Primorsky Krai comprises four maritime transport hubs: Vladivostok, East Nakhodka, Khasan (Southern), and Northern. Currently, most of the ports in Primorsky Krai have in fact reached their capacity limit and need updating.

The airport at Vladivostok is of international importance. In 2012, when preparing for the APEC summit, it was totally reconstructed; an agreement for its development was signed in 2013 as part of the Petersburg international economic forum.

At the end of 2014, the authorities started implementing the regional air traffic development framework. For this purpose, two DHC-6 TwinOtter 400 airplanes were purchased. As the first phase, it is planned to provide flights to Kavalerovo, Plastun, Ternei, Amga, Maksimovka, Ust-Sobolevka, Samarga and other localities; in the second phase of implementation, it is planned to double the number of airplanes. The officials believe that the affordability of the service to residents must promote the development of local airlines. In the next year, by the region governor's decision, the subsidies for this line will be increased 4.5 times, from 80 to 345 million rubles.

ECONOMY

The features of the region's economy are primarily determined by its geography. The Trans-Siberian Railway ends in the port of Vladivostok; together with the port of Nakhodka it is also the end point of the Northern Sea Route. Primorsky accounts for one third of the entire Russian catch of

fish, and one third of canned fish production. The food industry's share in the region's economy is about 40%.

Machine-building and metalworking together amount to about 10% in the territory's industrial production. The facilities of this sector specialize in shipbuilding and ship repair, instrument making, and aircraft engineering. The largest machine-building factories in the territory are the Vladivostok Ship Repair Yard, Dalzavod, Dalpribor, Radiopribor, and the Metallist factory in Vladivostok.

Forestry and timber processing is one of the oldest sectors of the region's economy, providing about 7.1% of the gross regional product. Over 75% of the harvested timber is exported abroad as raw material.

FOREST RESOURCES

According to the State Forest Register, the total area of forests in Primorsky Krai is 13,380,600 ha, with protective forests occupying 4,596,900 ha and commercial forests, 8,783,600 ha. The forest coverage rate of the region is 79.3%, varying from 92% in the northern districts to 6% in the south-west. The highest proportions of commercial forest are in Chuguevo (88.8%), Arseniev (87.7%), Dalnerechenskoye (82.6%) and Roschino (81.9%) forestry sections.

The age structure of forests in Primorsky Krai is conditional to a great extent, because forests growing there are mostly of mixed age. The basis for forest estimation is the age of predominant stand ages. Taking this into account, experts believe that mature and old growth stands make 42%; ripening -- 18%; middle-age -- 34%; and young stand -- 5%. The total timber reserve is 1,753.7 million m³, of which mature and old growth, 865.01 million m³. The overall average increment is 17.5 million m³.

Predominating are softwood forests at over 55%; broadleaved hard-wooded species account for 28% and broadleaved soft-wooded, for 16%. The wood species occurrence is as follows: spruce, 22.5%, cedar, 18.9%, fir, 3.7%, larch, 10.7%, oak, 17.5%, stone birch, 6.2%, white birch, 9.8%, ash, 2.7%, lime, 3.5%, elm, 1%, aspen, 1.8%, and other species, less than 1.7%.

The region's protected forests are made up of spawning-protection and prohibited belts along water bodies (47.0%). Material parts of the protective forests are nut-picking zones (21.1%), forests for environmental protection (16.9%) and green belts around communities (13.8%).

According to the governmental program "The development of forest management in Primorsky Krai for 2013–2017," about 70% of the region's forests have a survey age of over 10 years, and on a forest area of over 200,000 ha previously owned by agricultural entities, there have never been any surveys. The program originators indicate that currently, in 40% of the forested land (5,352,240 ha) the survey age is over 15 years, and in 35% of the land (4,683,210 ha) it is 11 to 15 years. Given such outdated surveys and the insufficient accuracy of current field work, an additional check of record data is required for their use in the analysis of forest management status and appraisal of its development prospects.

The insufficient accuracy of forest potential estimation, and a rather low level of use of advanced information technologies in forestry cause problems which hinder efficient forest management. With the adoption of the program "Development of forest management in Primorsky Krai for 2013–2017," the forest survey work in Primorsky Krai has become more active.

The wildfire problem is extremely acute for Primorsky Krai. On January 4 last year, the first wildfire in Russia of that year was recorded there; next, along with the Republic of Sakha (Yakutia), Transbaikal Territory, Amur Oblast, and Irkutsk Oblast, the region occupies a place at the forefront of those that face large fire risks. According to official RosLesKhoz data, these regions accounted for about 30% of all wildfires and over 80% of the area affected by fire.

According to the Primorsky Krai administration, the region annually sees an average of 345 fires, 20-30% of these develop to the "major" category, and their area is up to 87% of the total fire-affected area in the region. In Primorsky Krai, the disagreement between the available firefighting capacities and firefighting activity and the required scope of fire protection of the forests is clearly seen. Funds are allocated from the federal and regional budget to prevent and control fires, but so far, the situation cannot be overcome quickly.

Today, volunteers are actively invited for wildfire control in Primorsky. 275 associations of voluntary fire guard troops have already been established, with over 23,000 firefighters in all. In 2015, it is intended to engage them primarily in control of communities potentially subjected to wildfire threat, and communities outside the zones of rated arrival time of the primary firefighting units.

THE FORESTRY AND TIMBER SECTOR

The Primorsky Krai FTS still cannot move beyond its export/raw-material orientation. The causes are both the general recent situation making timber exports many times more profitable than working on the domestic market, and the features of economic development of Primorsky Krai.

As early as in the late 2000s, the region's authorities declared their commitment to the reduction of raw timber exports and an increase in the share of domestic added-value product output. However, the proximity of the rapidly developing China and successful South Korea willing to buy timber at favorable prices does not at all motivate the Primorsky business to develop their own timber processing.

Among the investment projects being currently implemented in the territory, not a single large one is related to added-value timber processing. For faster development of the region, the authorities focused primarily on building transport and utility infrastructure, expecting this would push the development of manufacturing sectors amongst others. However, the construction of the last two large timber-related factories was completed at the end of the last decade. First, a three-ply parquet factory was commissioned in Dalnerechensky urban district. The facility's design output is 1,757,000 m³ of parquet a year, of which 1,600,000 m³ is three-ply parquet and 157,000 m³ is solid parquet; for this purpose, 120,000 m³ of timber per year will be processed. The official project cost was 2.4 billion rubles.

Two years earlier, in the port of Plastun in Ternei District, Terneiles JSC along with the Sumitomo Corporation of Japan updated an operating timber processing complex including veneer and chips production and recycling softwood and hardwood waste. The design capacity of the facility occupying over 25,000 m² was 267,000 m³ of veneer and 150,000 m³ of sawn timber per year as of the commissioning date, after processing 685,000 m³ of roundwood. The project cost was 4 billion rubles, of which \$150 million of loans was guaranteed by the Japanese partner.

Incidentally, the Japanese show great interest in buying business in Russia today, when the Russian economy is stagnating – just as in 2008, during the economic crisis. This February, it became known that the holding Iida Group Holdings, as part of business development in Primorsky Krai, expressed its wish to buy Primorsklesprom JSC and Olgales JSC. However, the settlement of the transaction required the permit by the Federal Anti-Monopoly Service, which had previously denied similar applications by the said Terneiles, indicating that "the transaction might result in limited competition on the timber market in Primorsky Krai and the dominance of Terneiles, which is against the anti-monopoly law." At the first glance, the desire of Iida Group Holdings to buy Russian companies does not imply such a danger, but experts suspect that the Japanese are in a hurry to secure the Russian assets primarily to use them as a raw material source. That is, the sale of Primorsklesprom JSC and Olgales

JSC will mean just what the Russian authorities are trying to avoid: an increase in timber exports.

"The past and present activity of the harvesting segment in the structure of Primorsky Krai's forest industry is typical for a raw supplier region," note the developers of the Primorsky Krai Forest Plan. "The economic and geographic position of the region, and its proximity to the timber markets of the Asia-Pacific orient the timber companies towards exporting unprocessed timber, which works against the integrated use of forest/timber resources. In recent decades, the structure of the forestry and timber sector has noticeably degraded, and the proportion of harvested timber against the timber processing scope has greatly increased, making about 80% of the total timber product output today.

The raw export profile of the Primorsky Krai FTS is also explained by the low solvency and low demand for timber products on the internal regional timber market. In today's construction, wooden door and window units are more and more often replaced with plastic steel ones. Sawn timber by Primorsky manufacturers are not in demand abroad, and shipping them to the west of Russia is unprofitable.

On a related issue, this situation heavily affects small and medium business. Many companies previously specialized in harvesting and primary processing have expanded the scope of their business from simple sawn timber production to the manufacturing of window and door units, however the sales market for such products, mostly manufactured in fact by semi-artisan techniques, is continuously shrinking.

Incidentally, despite the interest of neighboring Japan in the resources of the Russian Far East, the investment climate of that region, and Primorsky Krai in particular, is evaluated as rather negative. On the rating of regions' investment attractiveness published by the Expert RA agency annually, Primorsky Krai holds the 21st position; as in Yakutia and Khabarovsk Territory, the risks there are estimated as moderate, and the investment potential as reduced. At the same time, experts note the high corruption level, and problems in overcoming administrative barriers.

According to an opinion poll of Primorsky and Khabarovsk businessmen by the World Bank, the excessive level of bureaucracy provides officials with great opportunities for delays in performing their function, thus squeezing bribes from the business. Bribes are squeezed on administrative procedures, without which it is hard or impossible to conduct business. These procedures are: tax administering, connection to utility lines and licensing. The respondents note a higher "time tax" – time lost in overcoming administrative barriers. The justice system, as was the case earlier, is not trusted by the region's business. Active efforts have been started in the region to decriminalize the forestry and timber sector, supported by the territory prosecutor's office. It is too early to make conclusions as to how successful they are.

Maria ALEKSEYEVA



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Enterprises of the forestry industry of the Primorsky Krai

Name	Activity	Address	Contacts
Altair, OOO	Furniture production: casegoods furniture	690000, Vladivostok, prospect 100-Letia Vladivostoka, 159, stroenie 3	Tel. +7 (423) 237-46-63 altairvl@mail.ru, www.altair-dv.com
Amgu, OAO (part of Terneyles, OAO)	Logging. Wood-sawing: sawn timber	692162, Terneysky rayon, pos. Amgu, ul. Primorskaya, 1	Tel.: +7 (42374) 381-43, 381-68 company_amgu@mail.ru, www.oao-amgu.ru
Anuta, OOO	Furniture production: soft furniture	690014, Vladivostok, ul. Nesterova, 4	Tel. +7 (423) 263-18-68 fax +7 (423) 229-11-63 anuta@anutamebel.ru, www.anuta.dvru.ru
Armstroi-S, OOO	Furniture production: casegoods furniture	692500, Ussuriysk, ul. Krasnoznamennaya, 6A	Tel.: +7 (4234) 32-90-33, 30-47-34 imaga55@mail.ru, www.armstroi-s.ru
Art Mebel, MK (Petrokin A.U., IP)	Furniture production: casegoods furniture	692900, Nahodka, ul. Ugol'naya, 61, sklad 46 (baza TMT)	Tel. +7 (4236) 77-24-28 tmt46@mail.ru, www.artmebel25.ru
A-Style, GK	Furniture production: casegoods furniture, and commercial furniture	690000, Vladivostok, ul. Tatarskaya, 11	Tel.: +7 (423) 291-05-98, 269-73-88 fax +7 (423) 253-77-23 info@a-style.ru, astyle8@mail.ru www.a-style.ru
Classic Hall, PK	Furniture production: casegoods furniture	690000, Vladivostok, ul. Lugovaya, 22, korpus 26	Tel.: +7 (423) 291-22-88, 293-07-73 ch912288@mail.ru, www.classic-hall.ru
Deco-Les, PSK	Wooden house construction: houses from profile timber, and round log. Woodworking: staircases, and doors. Furniture production: furniture from solid wood	690074, Vladivostok, ul. Kariernaya, 20A, lit. 5	Tel.: +7 (423) 254-83-67, 292-39-83 deco-les@mail.ru, www.decolesdv.ru
Derevyanny Mir (Safronov V.V., IP)	Wood-sawing: sawn timber	692900, Nahodka, ul. Ugol'naya 59	Tel. +7 (4236) 63-17-10
DomoCenter, ZAO	Wooden house construction: houses from glued timber	690105, Vladivostok, ul. Russkaya, 55, lit.A	Tel.: +7 (423) 230-11-01, 221-86-27 dom@domocenter.ru, www.domocenter.ru
Domokomplekt, OOO	Logging. Wood-sawing: sawn timber, moulded strips. Wooden house construction: houses from round log, and glued timber. Woodworking: sleepers	690041, Vladivostok, ul. Makovskogo, 56A	Tel. +7 (423) 201-44-44 dkdv@dkdv.ru www.dkdv.ru
Domostroi, OOO	Wooden house construction: frame-board houses, and timber houses	690048, Vladivostok, ul. Kolesnika, 5	Tel.: +7 (423) 233-25-61, 269-73-69 domvl@list.ru, www.domostroi.vl.ru
Ecopan-DV, OOO	Wooden house construction: SIP houses, and houses from glued timber	692760, Artem, ul. Kirova, 185	Tel.: +7 (423) 292-62-22, 250-53-56, (902) 556-85-22 ekopandalniiwostok@yandex.ru www.ecopan-dv.ru
Evrostandart, OOO	Logging. Wood-sawing: moulded strips	692178, Krasnoarmeysky rayon, s. Glubinnoye, ul. Shkol'naya, 1	Tel.: +7 (42359) 261-87, 214-04 ipsulla_a@mail.ru
Expoles, OOO	Wood-sawing: sawn timber, moulded strips	690033, Vladivostok, prospect 100 Let Vladivostoka, 57	Tel.: +7 (4232) 33-28-18, 36-12-29 fax +7 (4232) 40-82-93 expolesdv@expolesdv.ru, www.expolesdv.ru
Finnish House, OOO	Wooden house construction: houses from glued timber. Wood-sawing: moulded strips	690002, Vladivostok, ul. Pervaya Krugovaya, 25A	Tel.: +7 (423) 292-03-33, 254-87-09 info@findom-dv.ru www.findomdv.ru, www.findom-dv.ru
Forester-DV, OOO	Wood-sawing: moulded strips. Wooden house construction: houses from profile timber, and houses from round log	690025, Vladivostok, ul. Fanzavod, 1	Tel.: +7 (423) 257-75-33, 271-70-90 forester_dv@mail.ru, www.foresterdv.ru
Forest-Star, OOO	Wood-sawing: sawn timber	690021, Vladivostok, ul. Kalinina, 269, Lit.A	Tel. +7 (4232) 28-66-22 forest-star@mail.ru
Golden Empire, GK	Wooden house construction: houses from glued timber, and log houses	690049, Vladivostok, ul. Borodinskaya, 20A, office 1	Tel.: +7 (423) 266-80-12, 266-80-09 fax +7 (423) 232-83-22 mail@golden-e.ru, www.golden-e.ru
Hardwood, PTS, ZAO (part of Terneyles, OAO)	Wood-sawing: sawn timber. Woodworking: glued timber	692152, Terneysky rayon, PO Box 41	Tel.: +7 (42374) 344-72, 346-97, 341-84 kovalchuk@pts-hardwood.ru www.terneyles.ru
Inkom, OOO	Wooden house construction: houses from glued profiled timber	690003, Vladivostok, ul. Verkhneportovaya, 38, office 303A	Tel. +7 (4232) 51-79-41, fax +7 (4232) 51-78-27 info@inkom.info, www.inkom.info
KMV, OOO	Wooden house construction: houses from profiled glued timber, and log houses	692500, Ussuriysk, ul. Plantatsionnaya, 53A	Tel.: +7 (4234) 23-16-57, 23-16-56 kmiz@yandex.ru, www.kvm-uss.ru
Kovcheg, OOO	Wooden house construction: houses from profiled timber	692446, Dal'negorsk, prospect 50 Let Oktyabrya, 92, office 42	Tel.: +7 (423) 272-92-97, 272-37-78 d4747@mail.ru, 2729297@mail.ru www.zms-vl.ru

Name	Activity	Address	Contacts
Les Export, ZAO	Logging. Wood-sawing: sawn timber, moulded strips. Woodworking: parquet, and glued timber	692136, Dal'nerechensk, ul. 45 Let Oktyabrya, 1	Tel./fax: +7 (42356) 295-94, 230-22-33 info@lesexport.com, www.lesexport.com
Lesozavodsky LPK, OOO	Logging. Wood-sawing: sawn timber, wood chips.	692036, Lesozavodsk, ul. Sverdlova, 24	Tel. +7 (42355) 290-35 Lpk-market@mail.ru
Lestekh, OOO	Furniture production: furniture from solid wood	690039, Vladivostok, ul. Tatarskaya, 1	Tel.: +7 (423) 249-98-50, 296-09-09 lestekh-vl@yandex.ru, www.ltlv.ru
Lotos-DV, OOO	Furniture production: casegoods furniture	690000, Vladivostok, ul. Fadeeva, 37	Tel. +7 (423) 263-34-22 lotosdv@yandex.ru, www.fortros.ru
Lusamb, MF (Biskaev E.A., IP)	Furniture production: casegoods furniture	690000, Vladivostok, ul. Irtyshskaya, 23	Tel.: +7 (423) 236-83-45, 260-57-32 lusamb@rambler.ru, www.lusamb.ru
Mebelim, OOO	Furniture production: casegoods furniture	690014, Vladivostok, Partizansky prospect, 44	Tel. +7 (423) 208-55-00 info@mebelim.me, www.mebelim.me
Primf, OOO	Furniture production: casegoods furniture, and bentwood furniture	692751, Artem, ul. Kirova, 189	Tel.: +7 (42337) 984-84, 480-99 info@primf.com, primf@mail.ru www.primf.com
Primorskaya Mebel, MF (Stroipark, OOO)	Furniture production: casegoods furniture	692500, Ussuriysk, ul. Oktyabr'skaya, 65A	Tel. +7 (4234) 32-96-67 prim.mebel@mail.ru, www.mebel-prim.ru
Primorsklesprom, OAO	Logging. Wood-sawing: sawn timber	690091, Vladivostok, ul. Sukhanova, 3	Tel.: +7 (423) 243-35-72, 243-24-22 fax +7 (423) 243-31-28 primorsklesprom@mail.primorye.ru www.primorsklesprom.ru
Primorsklesprom, OAO, filial Svetlaya	Logging. Wood-sawing: sawn timber	692166, Terneysky rayon, pos. Svetlaya	Tel.: +7 (42374) 354-63, 355-01 oao.plp.svt@list.ru, www.primorsklesprom.ru
Primorsky GOK, OAO	Logging. Wood-sawing: sawn timber, moulded strips	692183, Krasnoarmeysky rayon, pos. Vostok, ul. Naberezhnaya, 3	Tel.: +7 (42359) 271-45, 274-38, 274-55, 274-51 jscair@mail.primorye.ru, www.air-gok.ru
Primorsky Shpon 2, OOO	Wood-sawing: moulded strips. Woodworking: veneer, glued timber, and glulam	692751, Artem, ul. Kirova, 185	Tel.: +7 (42337) 481-00, 437-74 shpon1@yandex.ru www.primshpon.ru
Primsnabcontract, OAO	Pulp and paper: cardboard	692527, Ussuriysk, shosse Rakovskoye, 1	Tel./fax: +7 (4234) 23-15-61, 23-15-63 ukk@prmsk.ru, primsnabkontrakt@mail.ru www.primsk.ru
Radion-Prim, OOO	Furniture production: casegoods furniture	690034, Vladivostok, ul. Karbysheva, 4	Tel./fax +7 (423) 234-28-31 info@radion-prim.ru, www.radion-prim.ru
Roschinsky KLPH, OAO (part of Terneyles, OAO)	Logging. Wood-sawing: sawn timber	692180, Krasnoarmeysky rayon, s. Roschino, ul. Shkol'naya, 15	Tel./fax: +7 (42359) 231-90, 237-14 klpx07@mail.ru, www.terneyles.ru
Rus Dom, OOO	Wooden house construction: houses from profiled timber, and log houses	690033, Vladivostok, prospect 100 Let Vladivostoka, 74	Tel.: +7 (423) 261-62-02, 256-56-66 office@rus-loghome.ru, direct@rus-loghome.ru www.rus-loghome.ru
Russky Dom, PSK	Wooden house construction: houses from glued timber	690000, Vladivostok, ul. Pervaya Rabochaya, 1, office 301	Tel.: +7 (423) 294-77-55, 20-88-55 market@rusdom5.ru, www.rusdom5.ru
Severstroy, OOO	Wooden house construction: SIP houses, and houses from glued timber	690950, Dal'negorsk, Okeansky prospect, 69, office 409	Tel.: +7 (423) 244-80-42, 294-11-99 promo@severstroy.ru, www.severstroy.ru
Sfera Mebeli, OOO	Furniture production: casegoods furniture	690000, Vladivostok, ul. Tolstogo, 41B	Tel. +7 (423) 201-61-06 info@sfera.me, www.sfera.me
Story-Sistema DV, OOO	Wooden house construction: houses from glued timber, and log houses	690068, Vladivostok, ul. Magnitogorskaya, 4, office 609	Tel. +7 (423) 290-18-44 s-s-dv@mail.ru, www.stroy-sdv.ru
Sunray, OOO	Logging. Wood-sawing: sawn timber	692952, Nahodka, ul. Naberezhnaya, 1	Tel.: +7 (4236) 63-39-24, 63-37-93, 63-37-92 s.lukinova@sunray.nakhodka.ru
Teknowood, STS, ZAO (part of Terneyles, OAO)	Wood-sawing: sawn timber. Woodworking: glued timber	692152, Terneysky rayon, pos. Plastun	Tel. +7 (42374) 347-26 fax: +7 (42374) 349-19, 340-33 zaoststeknowood@mail.ru, www.terneyles.ru
Terneyles, OAO	Logging. Wood-sawing: sawn timber, wood chips. Woodworking: veneer	692152, Terneysky rayon, pos. Plastun	Tel.: +7 (42374) 349-08, 331-28, 346-10 company@terneyles.ru, www.terneyles.ru
Thermo Plus, OOO	Woodworking: thermowood	692900, Nahodka, ul. Ugol'naya, 61	Tel.: +7 (4236) 77-79-27, (423) 200-16-28 mail@thermoplus.ru, www.thermoplus.ru
Vostok-Mebel, MF (Milana, OOO)	Furniture production: casegoods furniture, and soft furniture	690012, Vladivostok, ul. Kalinina, 204	Tel. +7 (423) 228-33-55, fax +7 (423) 227-58-03 info@vostok-mebel.ru, www.vostok-mebel.ru
Werena Mebel, OOO	Furniture production: soft furniture	690016, Vladivostok, ul. Borisenko, 48	Tel.: +7 (423) 249-94-46, 263-08-21, 263-86-27 inmoda@mail.ru, www.werena-mebel.ru
Yappi, OOO	Logging. Wood-sawing: sawn timber	692180, Krasnoarmeysky rayon, s. Roschino, ul. Zavitaya, 24	Tel. +7 (42359) 233-61 yappi.06@mail.ru

§ Khabarovsk Krai: a Velvet Territory



The Khabarovsk Krai is one of the largest administrative entities in the Russian Federation, comprising almost 5% of the country's territory. With a total area of 788,600 sq. km, the region stretches along the Sea of Okhotsk and the Sea of Japan, measuring 1800 km from north to south. In addition to its continental part, the Krai includes several islands, the largest of which are the Shantar Islands.

Since May 2000, the region's administrative center, the city of Khabarovsk, has also been the center of the Far Eastern Federal District. The region includes six cities under regional administration, one city under district administration, 17 municipal districts and 223 municipal entities. The distance by rail from the region's center to Moscow is 8533 km, while the distance by air is 6075 km.

According to the latest data by Rosstat, the Khabarovsk Krai is home to 1.34 million people, with 80% of the population living in urban areas.

GEOGRAPHY AND CLIMATE

The climate of the region is variable, influenced both by its geographic location (the northernmost point is just 430 km below the Arctic Circle) and its proximity of the sea.

The winters are long and severe, with little snow. The average January temperature ranges from -22 °C in the south to -40 °C in the north; the range narrows to -18 °C to -24 °C in coastal areas. The summers are hot and humid: the average temperature in July is +20 °C in the south and +15 °C in the north.

The annual rainfall is 400–600 mm in the north and 600–800 mm in the plains and on the eastern slopes of mountain ridges. In the south, up to 90% of precipitation occurs from April to October, concentrated mostly in July and August.

TRANSPORT

Khabarovsk is the largest transport hub in the Russian Far East and as such plays a significant role in the recently intensified economic ties with Asia-Pacific countries.

Two mainline railways, the Trans-Siberian and the Baikal-Amur, run across the region, forming the foundation of the transcontinental land bridge between Europe and Asia. Railway transport in the Khabarovsk Krai accounts for around 40% of all rail freight in the Far Eastern Federal District.

Water transport is an important factor in sustaining the region. The largest international sea ports are Vanino, Sovetskaya Gavan and De-Kastri.

The public road network is underdeveloped. While the average density of hard surface roads in Russia averages 39 km per 1000 sq. km, in Khabarovsk Krai the figure drops to 7.4 km per 1000 sq. km. Some of the roads are not available for year-round use; some districts have no permanent motor transport connections with the center of the Krai, while certain key motor roads are only available in winter.

Currently, three major highways are being built to improve the situation. The Khabarovsk–Lidoga–Vanino highway, with access to Komsomolsk-on-Amur, will connect Khabarovsk with the Vanino and Sovetskaya Gavan sea ports. The 329-km highway is expected to be completed in 2016. The road from Selikhino will connect the Krai's capital and Komsomolsk-on-Amur with cities and towns in the lower course of the Amur River, and the De-Kastri and Nikolayevsk-on-Amur sea ports. Another highway currently under construction will connect Komsomolsk-on-Amur, Berezovyy, Amgun, Mogdy and Chegdomyn.

Sixteen airfields operate throughout the region; twelve are public-use airports and four host corporate flights. Khabarovsk Airport is now being developed into a Far East air transport hub interconnecting all modes of transport.

ECONOMY

The leading industries of the Khabarovsk Krai are: mining; heavy engineering (including shipbuilding, aircraft engineering, machine tool and casting machine manufacturing); electric and electronic equipment manufacturing; chemical and metals industries; forest, pulp and paper industries; and food and consumer goods industries.

To a large extent, the variety of industries in the region's economy is explained by its remoteness from the country's center, resulting in the need to be self-sufficient.

RESOURCES

In the Khabarovsk Krai, precious metals such as gold and platinum are mined. The Krai's mining industry accounts for 13.8% of gold production in the Far Eastern region and for 7.1% of Russia's total production. In terms of gold production, the Krai ranks seventh in the Russian Federation; in platinum production, it ranks second.

An important part of the Krai's economy structure relies on renewable resources such as forests and fish. According to the region's government, over 70% of the fish catch is represented by deep sea fishing, conducted mainly in the exclusive economic zone of the Russian Federation.

FOREST RESOURCES

The nature of forest vegetation in the Khabarovsk Krai is greatly influenced by the terrain, and forests vary in composition. In the north, dwarf woodland prevails, while the southern part of the region features a complex composition of tree and shrub species.

The Khabarovsk Krai accounts for 18% of wooded areas and 25% of the timber resources in the Far Eastern Federal District. The area of the state forest fund is 73.7 million ha (93.5% of the Krai's territory), in which 57.9 million ha are forest land (78.6% of forest fund area), and of these, 51.2 million ha are productive forest land (69.5%). The forest coverage rate in the Krai's territory is 66.5%, which is almost 1.5 times more than the average across Russia. The total timber resources are over 5.1 billion m³; of these, mature and overmature stands account for more than 3.1 billion m³, including 2.8 billion m³ of conifers.

More than 300 species of trees and shrubs are found in the Khabarovsk Krai, however the principal species are Dahurian larch and Ajan spruce. More than half of all Far Eastern spruce forests are concentrated in the Krai.

Overall, mature and overmature forests account for 42.6%. Their share is the largest in spruce, oak and stone birch forests (70.9%, 62.3% and 57.6%, respectively). These figures are close to the standard allowable level in larch forests and is under the standard allowable level in common birch and fir forests.



Large-scale forest enterprises of the Khabarovsk Krai

- Shelekhovskiy KLPKH, ZAO
- Arkaim, SP, OOO
- Suluk, OOO
- Business-Marketing, GK
- Dal'lesstroj, OAO
- Rimbunan Hijau MDF, OOO
- Ros-DV, OOO
- RFP Group, UK, OOO (incl. Dal'lesprom, OAO and Flora, GK)
- Khabarovsk Veneer, OOO



By intended purpose, all known groups of forests are represented in the Khabarovsk Krai: commercial forests (34.5 million ha), reserved forests (2.98 million ha), protective forests (9.3 million ha), high-value forests (8.9 million ha) as well as green belts, nut harvesting areas, forest areas sheltering fish spawning grounds, and restricted forest belts along water bodies. In coniferous forests, timber resources are estimated approximately at 2.3 million m³; in soft-wooded broadleaved forests, this figure is estimated at 276.6 thousand m³, and in hard-wooded broadleaved forests, at 148.2 million m³.

Each year, reforestation works cover an area of 67 000 hectares. Around 14 million coniferous seedlings are grown, of which more than 4 million are containerized. Over the last three years, planned targets were exceeded. Seed breeding is conducted to meet the region's demand. Another upcoming reforestation trend is plantation planting, which is still in the early stage of its development and requires significant research and investment.

In the last decade, almost no significant efforts were made in forest management. The supervision of forestry law compliance remains inefficient. This is mainly due to the fact that the forest service was downsized threefold as a result of Russian forestry reform, as well as to systematic underfunding of forestry activities reassigned to the Krai.

FORESTRY AND TIMBER SECTOR

The main type of forest use is timber harvesting. By harvesting volumes, the Krai ranks first in the Far Eastern region.

More than 130 businesses are engaged in timber harvesting. By their combined output, the Khabarovsk Krai ranks third in Russia and first in the Far Eastern region. However, the forestry share of tax proceeds to the Krai's budget only amounts to 1.5% and, at existing forest usage level, the Krai's government considers overall forestry returns to be extremely low.

Currently, 4610 km of main logging roads are used to haul timber. The region has a severe shortage of logging roads; at the same time, 85% of all spur and branch roads constructed in recent years were built with major violations, and many of them became unusable after as little as a year of operation. Also, the practice of priority harvesting of high quality sites located close to logging roads near landings caused many sections to be broken and often join different roads and landings.

Currently, the Khabarovsk Krai is receiving significant government support. In the Far Eastern Federal District, the region is leading by the number

of investment projects included in the forest exploitation priority list. According to the Krai administration, three major investment projects currently operate in the Krai: a sawmill in the Berezovy settlement, in the Solnechny municipal district, with an annual capacity of 150,000 m³ of sawn timber (000 Amur Forest); a woodworking mill in the Oktyabrsky settlement, in the Vanino municipal district, with an annual capacity of 140,000 m³ of wood particle board and 350,000 m³ of sawn timber (000 SP Arkaim); and an MDF/HDF plant in the Khor settlement, in the Imeni Lazo municipal district, with an annual capacity of 150,000 m³ (000 Rimbunan Hijau MDF). In reality, however, all these businesses are now experiencing financial hardship, though there are no quality complaints for their products. In the experts' opinion, the low competitive capacity of these businesses is due to high transportation and utility connection costs, and possibly to internal factors such as inefficient management etc., along with the effects caused by the global financial crisis of 2008–2009, when the universal fall in purchasing power was such that even price reductions could not help sales.

At the same time, the forestry and timber sector of the region has certain distinct prospects, related mainly to the ramp-up of exports. The interest shown by neighboring countries, first of all by China, proves that foreign investors are willing to invest in production capacities in the Khabarovsk Krai. For example, in late 2013, the Russia-China Investment Fund (RCIF) completed acquisition of 42% shares in Russian Forest Products Group (RFP Group), the biggest Russian forestry sector holding in the Russian Far East. According to the Fund's data, RFP Group ranks second in Russia both by the area of forests managed (5.1 million ha) and by harvesting volumes (2.3 million m³ in 2012). The holding includes OAO Dallesprom and ZAO Flora (the biggest forestry and timber companies in the Khabarovsk Krai), OOO Torgoviy Dom RFP (the biggest exporter of timber to Asia-Pacific) and OAO Amurskoye Parokhodstvo (the biggest river transportation company in the region) and thus accounts for about 10% of total Russian timber exports to China and 15% of exports to Japan. In total, the companies comprising the holding employ more than 6,000 people. RCIF's investment will be used to construct the Added-Value Wood Conversion Center. Based in the Vanino settlement, the project is being implemented by OAO Dallesprom and will produce 300,000 m³ of rotary-cut veneer, 230,000 m³ of sawn timber and 50,000 m³ of wood particle board. Investments into a waste-free chain of wood processing facilities with a total throughput of 6 million m³ of raw materials per year amount to approximately \$400 million.



Planned Projects

By OAO Dallesprom: Construction of a pulp mill in Amursk, with an annual capacity of 700,000 tons of bleached softwood sulfate pulp. Upon reaching design capacity, the mill's annual tax payments to the Krai's consolidated budget will amount to 370 million rubles. The target market is the countries of North Eastern Asia. Estimated payback period is 11 years. The number of new jobs to be created is 2,000.

By 000 Ros-DV: Construction of a facility to produce sawn timber and components for timber housing construction in the Sukpay settlement, Imeni Lazo district. The company leases forest areas with an estimated annual cut of 306,000 m³. The objective is to process the timber into 125,000 m³ of high quality sawn goods. The target markets are the countries of North Eastern Asia and Russia's domestic market. As part of the project, facilities have been built to produce 75,000 m³ of dried sawn timber and 30,000 m³ of shaped sawn products. Estimated payback period is three years. The number of new jobs to be created is 100.

Investment proposal: An OSB (oriented strand board) mill with an annual capacity of 150,000 m³.

The project has been initiated by the Ministry of Natural Resources in the Khabarovsk Krai. The facility's location will be determined by the investor during preliminary design. The target markets are the countries of North Eastern Asia (90%) and the domestic market (10%).

In 2010–2013, according to the Khabarovsk Krai administration, more than 22 billion rubles was invested in the industry, resulting in 1,500 new jobs. At the same time, the problem of timber processing waste and low-grade wood utilization remains. Starting as far back as in the middle of the century's first decade, the Krai's administration was planning to address this by building a pulp production facility. According to the Krai's Forestry Plan for 2009–2018, pulp production was expected to be restored by 2012, and in 2014 the mill was to reach its design capacity of 500,000 tons of pulp per year. However, the project has not been implemented because no investors were found.

In order to alter the situation, the region works to build and enhance its regulatory framework. As approved by decree of the Krai's government, the main strategic objectives for the forest industry are improving the efficiency of forest resource usage, and creating capacities to manufacture more forest products with high added value. These challenges will primarily be addressed in the advanced economic growth zones currently being established in the Far East. The region's authorities expect that investor incentives offered in such zones, including tax holidays, simplified building and utility connection permit

procedures, and streamlined customs clearance etc., will be able to turn the tide.

According to Vyacheslav Shport, the Krai's governor, despite the overall positive trend, the forestry and timber sector's contribution to the gross regional product (GRP) has recently been decreasing. For example, the sector accounted for 4.1% of the GRP in 2010; this figure went down to 2.9% in 2012 i.e. 23% lower than in 2010. The reduction is caused mainly by falling prices and demand on the international market. In forestry products, rough timber prevails (70%). For this reason, to stimulate forestry and timber sector growth, it is essential to increase the share of added-value wood processing and to strengthen domestic demand for timber. An example of such an effort to influence demand is promoting timber housing construction, assisted by a number of state-run programs such as the special-purpose program "The Development of Housing Construction in the Khabarovsk Krai" and the Krai's targeted program that aims to relocate citizens from unfit housing facilities while also supporting low-rise construction. In addition, there is work going on to rehabilitate and build new housing in flood-impacted areas.

Maria ALEKSEYEVA

Khabarovsk Krai government authorities responsible for timber industry regulation

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 Tel. +7 (4212)32-40-85
 kanc@adm.khv.ru, www.khabkrai.ru

Enterprises of the forestry industry of the Khabarovsk Krai

Name	Activity	Address	Contacts
101 Dom, 000	Wooden house construction: frame-board houses	680000, Khabarovsk, ul. Karla Marksa, 144Г, корпус 2, office 225	Tel.: +7 (4212) 78-41-24, 24-15-99 101_dom@mail.ru, ww.101domdv.ru
Al'ternoStroj, 000	Wooden house construction: frame-board houses, houses from round log and timber	680042, Khabarovsk, ul. P. Morozova, 84, office 28	Tel.: +7 (4212) 63-00-44, 63-85-16 smistrel@mail.ru, www.dv-karkas.ru
Amur-Trans-Les, 000	Wood-sawing: sawn timber	680000, Khabarovsk, ul. Lenina, 18A, office 6	Tel.: +7 (4212) 42-09-16, 31-62-48, fax +7 (4212) 42-10-59 amurtransles@yandex.ru
AntrelDV, 000	Furniture production: casegoods furniture	680007, Khabarovsk, Sportivniy per., 4, office 204	Tel.: +7 (4212) 41-58-00, 48-66-74 mail@antrelDV.ru, www.antrelDV.ru
Arkaim, SP, 000	Logging. Wood-sawing: sawn timber, surfaced units. Bioenergy: wood pellets. Woodworking: laminated board and chipboard	682860, Khabarovsk Krai, Vaninsky rayon, pos. Vanino, ul. Molodiozhnaya,14	Tel.: +7 (42137) 6-01-01, 6-01-03, fax +7 (42137) 6-00-66 sales@arkaim.ru
Artstroj, 000	Wooden house construction: frame-board houses. Woodworking: doors	680007, Khabarovsk, ul. Shevchuka, 18	Tel./fax +7 (4212) 41-77-11 artstroj-877@mail.ru
Asia Export, 000	Wood-sawing: sawn timber	680030, Khabarovsk, Oblachny per., 78A	Tel.: +7 (4212) 23-33-24, 23-28-66 bm@groupbm.ru

List of trade fairs in 2015

Date	Exhibition	City	Organizer/ Event Place	Contacts
9–11 May	Wood Guangzhou 2015	Guangzhou, China	China Import & Export Fair Pazhou Complex	+86 13416279371, fax +86 2082579220, grandeurhk@yeah.net, www.muyezhan.com
11–15 May	LIGNA 2015	Hannover, Germany	Deutsche Messe AG/ Hannover Messe	Tel. + 49 0511 89-0, fax +49 0511 89-32626, www.ligna.de
14–16 May	DEREVO+. House. Cottage. Dacha	Yekaterinburg, Russia	International Fair Company Ural/ KOSK Russia	+7 (343)253-77-44 (-41), info@mvkural.ru, www.expoural.com
19–20 May	Lesprom	Syktvykar, Russia	Komi Expo 000, Chamber of Industries and Commerce of Komi, International Trade Center on Stefanovo Square	+7 (8212) 206-147, 206-100, komiexpo@tppkomi.ru, www.tppkomi.ru
19–23 May	Moscow International Furniture Salon/ MIFS/ Rooms Moscow	Moscow, Russia	IEC Crocus Expo, Media Globe/ IEC Crocus Expo	+7 (495) 961-22-62, mmms@mediaglobe.ru, www.mmms-expo.ru
20–22 May	Lesdrevtekh 2015	Minsk, Republic of Belarus	NVC BelEXPO	+375 17-334-01-31, +375 17-334-03-42, forest@belexpo.by, www.belexpo.by
20–23 May	Lesdrevprom	Kemerovo, Russia	KVK Expo-Siberia/ SRK Baikonur	+7 (3842) 36-68-83, 58-11-66, info@exposib.ru, www.exposib.ru
2–5 June	Interfurniture	Kazan, Russia	OAO Kazan Trade Fair	+7 (843) 570-51-06, expokazan@mail.ru, 5705106@expokazan.ru, www.intermebelexpo.ru
2–6 June	STT/ Construction Engineering and Technologies	Moscow, Russia	Media Globe/ IEC Crocus Expo	+7 (495) 961-22-62, 961-22-67, info@mediaglobe.ru, ctt@mediaglobe.ru, www.ctt-expo.ru
4–6 June	SkogsElmia	Jonkoping, Sweden	Elmia AB	Tel. +46 36 15 21 08, fax +46 36 16 46 96, www.elmia.se
10–12 June	Paper Vietnam 2015	Ho Chi Minh City, Vietnam	China National Chemical Information Center / Saigon Exhibition and Convention Center	+86-10-64443283, yinli3243@gmail.com, www.pct-vn.com
10–13 June	Wood and Woodworking 2015	Almaty, Kazakhstan	MVK Atakent-Expo / KCDC Atakent	+7 (727) 275-09-11, 275-13-57, atakent-expo@mail.ru, manager1@atakentexpo.kz, www.atakentexpo.kz
8–11 September	Expodrev	Krasnoyarsk, Russia	VK Krasnoyarsk Fair/ Siberia Expocentre Krasnoyarsk	+7 (391) 22-88-616, ralyuk@krasfair.ru, expodrev@krasfair.ru, www.krasfair.ru
15–18 September	Forest management. Woodworking. Wooden house construction	Irkutsk, Russia	OAO Sibexpocenter/ VK Sibexpocenter	+7 (3952) 35-30-33, 35-43-47, sibexpo@mail.ru, www.sibexpo.ru
17–19 September	Woodworking	Kazan, Russia	OAO Kazan Trade Fair	+7 (843) 570-51-16, expokazan7@mail.ru, www.woodexpokazan.ru
22–25 September	Lisderevmash 2015	Kiev, Ukraine	ACCO International/ MVC	+38 063 233 2560, olga@acco.kiev.ua, www.acco.ua
22–25 September	LESPROM-Ural Professional	Yekaterinburg, Russia	Interregional Exhibition Company-Ural, 000 Deutsche Messe Rus (part of Deutsche Messe AG)/ MVC Yekaterinburg-expo	+7 (343) 253-77-44 (-41), info@mvkural.ru, www.expoural.com
22–25 September	ExpoFurniture – Ural	Yekaterinburg, Russia	Interregional Exhibition Company-Ural / MVC Yekaterinburg-expo	+7 (343) 253-77-44 (-41), info@mvkural.ru, www.expoural.com
23–25 September	Yugexpofurniture. Woodworking. Interior. Comfort	Rostov-on-Don, Russia	KVC VertolExpo	+7 (863) 280-08-07, dudka@vertolexpo.ru www.vertolexpo.ru
29 September – 2 October	Woodworking 2015	Minsk, Belarus	ZAO Minskexpo/ Football Manezh	+375-17 226-91-93, 226-91-92, derevo@minskexpo.com, derevo@telecom.by, www.minsexpo.com
30 September – 1 October	XVII Petersburg International Forestry Forum TEKHNODREV MIFIC EXPO	St. Petersburg, Russia	VO RESTEC®/ Expocenter Garden City	+7 (812) 320-80-93, techles@restec.ru, www.spiff.ru +7 (812) 320-80-93, techles@restec.ru, www.tdrev.ru +7 (812) 320 80 96, +7 (812) 635 95 04, focus@restec.ru, www.mificexpo.ru
6–9 October	Drema 2015	Poznan, Poland	International Poznan Fairs	+48 (61) 869-20-00, info@mtp.pl, www.drema.pl
6–9 October	SibFurniture 2015	Novosibirsk, Russia	ITE Siberia/ VC Novosibirsk Expocenter	+7 (383) 363-00-63, 363-00-36, abuhovich@sibfair.ru, www.sibfurniture.ru
6–9 October	WOODDEX Siberia 2015	Novosibirsk, Russia	ITE Siberia/ VC Novosibirsk Expocenter	+7 (383) 363-00-63, 363-00-36, abuhovich@sibfair.ru, www.wooddex-siberia.ru
11–14 October	Wood Processing Machinery	Istanbul, Turkey	TUYAP Fair and Exhibitions Organization Inc.	+7 (495) 775-31-45, 775-31-47, tuyapmoscow@tuyap.com.tr, www.tuyap.com.tr
13–16 October	SICAM 2015	Pordenone, Italy	Pordenone Exhibition Center	+39 02 86995712, info@exposicam.it, www.exposicam.it
20–23 October	WOOD-TEC 2015	Brno, Czech Republic	Brno Exhibition Center	+420 541 151 111, www.wood-tec.cz

Date	Exhibition	City	Organizer/ Event Place	Contacts
22–25 October	Fine Wooden Houses	Moscow, Russia	World Expo Group/ IEC Crocus Expo	+7 (495) 730-55-91, bns@weg.ru, ivr@weg.ru, www.houses-expo.ru/2015/
19–22 November	Wooden house construction/ Holzhaus	Moscow, Russia	MVK, part of the ITE Group/ All-Russian Exhibition Center	+7 (495) 935-81-00, holzhaus@mvk.ru, www.holzhaus.ru
23–27 November	Furniture-2015	Moscow, Russia	ZAO Expocenter/ CVK Expocenter	+7 (499) 795-37-36, 259-28-18, ts@expocentr.ru, www.meb-expo.ru
24–27 November	Woodex Moscow	Moscow, Russia	MVK, part of the ITE Group/ IEC Crocus Expo	+7 (495) 935-81-00, Dorofeeva@mvk.ru, www.woodexpo.ru
1–3 December	XX Conference Pulp-and-Paper in Russia and CIS	Prague, Czech Republic	Adam Smith Conferences/ InterContinental Prague Hotel	+44 (20) 7017 7339/7444, Lilia@adamsmithconferences.com, www.adamsmithconferences.com
2–4 December	Russian Forest 2015	Vologda, Russia	Forestry Department of the Vologda Region, VK Russky Dom/ Russky Dom Exhibition Center	+7 (8172) 72-92-97, 75-77-09, 21-01-65, rusdom@vologda.ru, www.vkrusdom.ru/russian-forest

List of trade fairs in 2016

Date	Exhibition	City	Organizer/ Event Place	Contacts
26–29 January	National construction materials. Section "Wood, Used in Building"	Moscow, Russia	VK Europexpo/ CVK Expocenter	+7 (495) 925-65-61, 925-65-62, osm@osmexpo.ru, www.osmexpo.ru/wood/
Spring	VII International Conference Forestry of Russia	Moscow, Russia	Adam Smith Conferences/ Marriott Grand Hotel	+44 20 7017 7442, silvia@adamsmithconferences.com, www.adamsmithconferences.com/AS2236LP1a
30 March – 2 April	UMIDS	Krasnodar, Russia	VC KrasnodarEXPO, part of ITE Group/ VKK Expograd Yug	+7 (861) 210-98-93, 279-34-19, mebel@krasnodarexpo.ru, www.umids.ru
21–24 April	TEKHNODREV Far East 2016	Khabarovsk, Russia	VO RESTEC®, OAO Khabarovsk International Fair/ Indoor Track of the Stadium by V.I. Lenin	+7 (812) 320-80-93, techles@restec.ru, www.tdrev.ru, +7 (4212) 56-61-29, 56-47-36, forest@khabexpo.ru, www.KhabExpo.ru
24–26 May	International Pulp&Paper Week, Bioeconomy Innovation Forum	Stockholm, Sweden	Adforum AB, Mentor Communications Ab/ Stockholm International Fairs	www.pulppaperweek.com, www.bioinnoforum.com
11–14 May	Zow	Moscow, Russia	VO RESTEC®/ CVK Expocenter	+7 (812) 320-80-96, 303-88-65, zow@restec.ru, focus@restec.ru, www.zowmoscow.ru
11–14 May	FIDexpo	Moscow, Russia	VO RESTEC®/ CVK Expocenter	+7 812 320-80-96, +7 812 635-95-04, fidexpo@restec.ru, www.fidexpo.ru
12–14 May	DEREVO+. House. Cottage. Dacha	Yekaterinburg, Russia	Interregional Fair Company Ural/ KOSK Russia	+7 (343) 253-77-44 (-41), info@mvkural.ru, www.expoural.com
17–20 May	Moscow International Furniture Show/ MIFS/ Rooms Moscow	Moscow, Russia	IEC Crocus Expo, Media Globe/ IEC Crocus Expo	+7 (495) 961-22-62, mmms@mediaglobe.ru, www.mmms-expo.ru
24–28 May	Xylexpo 2016	Milan, Italy	Cepra Spa/ Fiera Milano Rho	www.xylexpo.com
1–3 September	Finnmetko 2016	Jämsä, Finland	Finnmetko Oy/ Metsäoppilaitoksentie 14, Jämsä	+358 40 9009 410, fax. +358 9 563 0329, finnmetko@koneyrittajat.fi, www.finnmetko.fi
1–4 September	Holzmesse	Klagenfurt, Austria	Kaertner Messen Klagenfurt	+43 463 56800-0, fax +43 463 56800-28, office@kaerntnermesse.at, www.kaerntnermessen.at
20–23 September	ExpoFurniture-Ural	Yekaterinburg, Russia	000 Interregional Fair Company - Ural/ Yekaterinburg Expo	+7 (343) 253-77-44 (-41), info@mvkural.ru, www.expoural.com
20–23 September	LESPROM-Ural Professional	Yekaterinburg, Russia	000 Interregional Fair Company - Ural, 000 Deutsche Messe Rus (part of Deutsche Messe AG)/ Yekaterinburg Expo	+7 (343) 253-77-44 (-41), info@mvkural.ru, www.expoural.com
September	Expodrev	Krasnoyarsk, Russia	VK Krasnoyarsk Fairs, and Deutsche Messe AG/ Siberia Expocentre Krasnoyarsk	+7 (391) 22-88-616, ralyuk@krasfair.ru, expodrev@krasfair.ru, www.krasfair.ru
24–27 October	Lesdrevmash	Moscow, Russia	ZAO Expocenter/ CVK Expocenter	+7 (499) 795-27-24, +7 (495) 609-41-68, koroleva@expocentr.ru, www.lesdrevmash-expo.ru
November	Furniture–2016	Moscow, Russia	ZAO Expocenter/ CVK Expocenter	+7 (499) 795-37-36, 259-28-18, ts@expocentr.ru, www.meb-expo.ru
December	Russian Forest 2016	Vologda, Russia	Forestry Department of the Vologda Oblast, VK Russky Dom, VK Russky Dom	+7 (8172) 72-92-97, 75-77-09, 21-01-65, rusdom@vologda.ru, www.vkrusdom.ru/russian-forest

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		KRASNOYARSK 8–11 September, 2015	MOSCOW, 24–27 November 2015	VOLOGDA, 2–4 December 2015	KRASNODAR, 30 March – 2 April 2016
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Back cover – A4	215x285	3.000	4.000	3.000	3.000
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	1/2 horizontal	1,000	1.540	1,000	1,000
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	1/4 horizontal				
	1/4 vertical				
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