

PROSPECTS OF TIMBER INDUSTRY DEVELOPMENT IN THE FAR EAST OF RUSSIA



By Ilya Kuzminov,
Candidate of Geographic Sciences,
Research Officer,
Higher School of Economics,
Russia, Moscow

Russian Federation inherited a wide and well-developed timber harvesting infrastructure from the Soviet Union. It also inherited relatively strong timber processing industry, especially a network of giant pulp-and-paper plants with access to abundant water supply and cheap electricity. However, a number of factors deteriorate Russia's timber processing competitiveness. First, military security reasons made Soviet Union locate its processing industry, including timber processing, deep within the continent. Therefore, major Russian pulp-and-paper plants, as well as sawmills, panels and plywood plants face higher transportation costs when exporting their production than their counterparts in the United States and Finland. Second, major timber processing plants had been technologically advanced in time of deployment (1970-1980-s), but their technology and machinery has become quite backward over the decades, while investment in the production has nearly stopped altogether in 1990-s and was scarce in 2000-s.



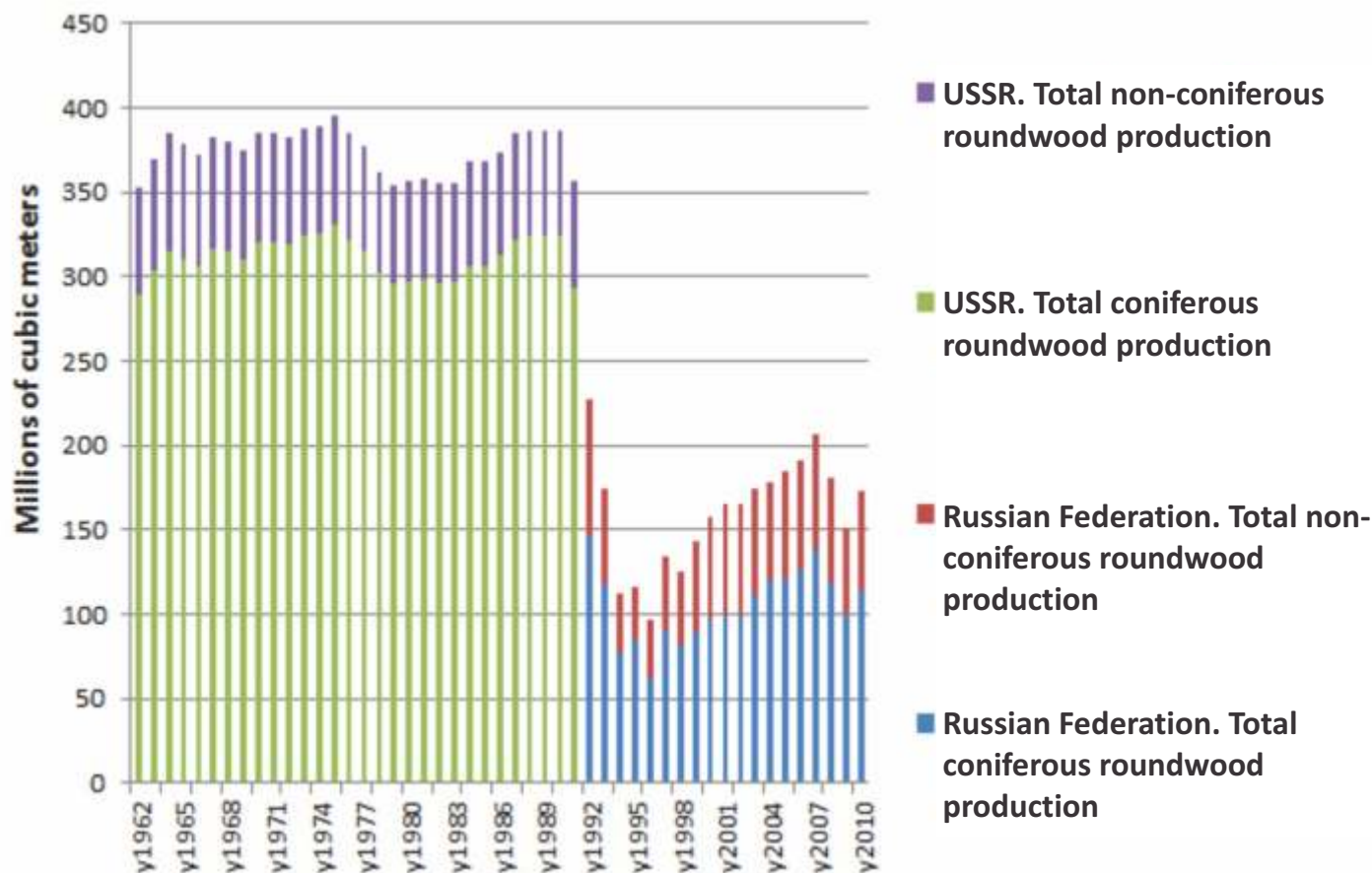
No new pulp-and-paper plants has been built over more than twenty five years despite more than a dozen investment projects preliminary developed by regional governments to offer to large investors. Those projects included industrial sites with basic infrastructure, low-cost timber harvesting concessions, and tax remissions. All of them provided 1 to 2 billion dollars investment with the resulting production capacity of about a million tons of pulp a year. Third, complex interconnections of industrial facilities, which provided raw material, by-products, energy and transportation savings, have been largely destroyed in the process of shock-therapy transition to market economy. For instance, the majority of wood chemical industry enterprises ceased to exist. Fourth, catastrophic slump in timber harvesting infrastructure investment, which has never overcome, led to exhaustion of high-quality timber supply for many processing enterprises.

Abundant mature stands of industrial significance are now physically inaccessible. The problem is severe in the North-West European part of Russia (Karelia Republic; Leningrad, Arkhangelsk, Vologda regions) characterised by higher rates of harvesting during 1990-2000-s due to proximity of European markets. Fifth, large-scale harvesting in late-soviet time were certainly accompanied by silvicultural measures of the

same scale, but the latter weren't implemented on a good level of quality due to low labour discipline. Therefore, silvicultural activities haven't become a sound counter-balance to harvesting. This led to proliferation of Birch and Aspen stands in place of Pine and spruce ones, which is manifested mostly in the European part of the country.

Taking into account the above mentioned issues, the question arises: is Russia's timber industry competitive at all nowadays? A number of macroeconomic indicators show that, as a whole, it is not. However, it will be shown later in the article that timber industry of the Far East and Baikal Region (FEBR) of Russia can become very attractive for investment and competitive in coming years.

The latest available FAO forestry statistics provides data on timber industry production indicators until 2010. The figure shows that after the Soviet Union collapse, timber harvesting in Russia experienced at least, three-fold slump. As Russia concentrates on the most part of timber resources on the territory of the former Soviet Union (the second largest timber producer being Belarus; Baltic countries playing minor role, while other countries being located outside boreal zone), the USSR indicators on the figure can by and large be considered as Soviet Russia's indicators.



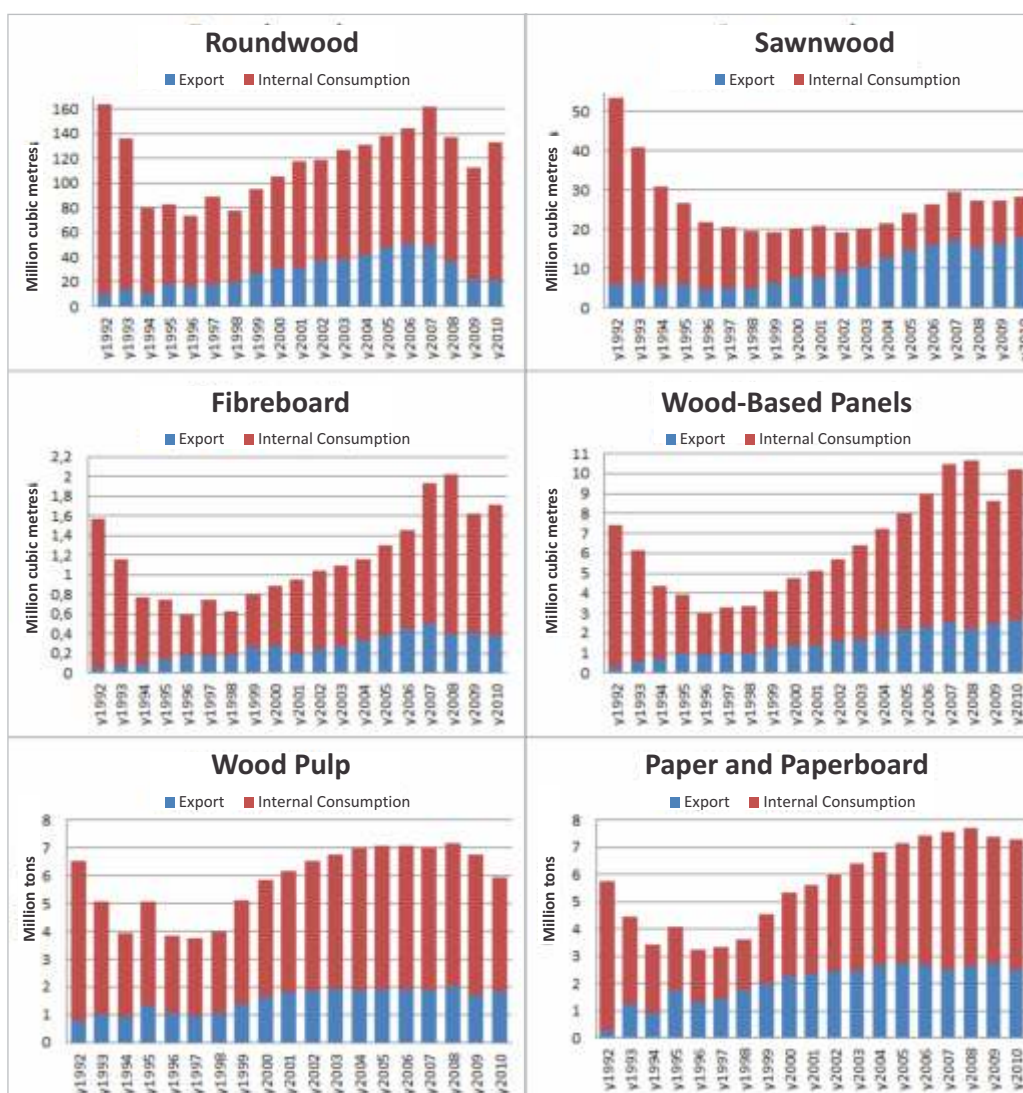
Dynamics and structure of roundwood production in the USSR and the Russian Federation in 1962-2010.

The figure shows as well that after a moderate growth in timber harvesting, it fell again well below 200 million m³ in later years. It can be seen that the decline began before the financial crisis of 2008. It is caused by policy of imposing export duties on the roundwood exports to stimulate development of processing industry within the country. Also, unlike some other industries, such as oil-and-gas and metal production, timber harvesting has been recovering relatively slow after 2009. It can be seen that non-coniferous roundwood production has larger share in Russian

harvesting that it had in Soviet. All these facts clearly show that unstable growth of timber harvesting in Russia is caused by structural deficiencies, not only global markets volatility.

Russia's timber industry is export-oriented to a degree, with share of exports in production rising slowly, with exception of unprocessed roundwood, which exports the government openly suppresses (see Figure). While exports of roundwood have been successfully lowered to about 15 of production, exports of processed goods account for one fifth to two

thirds of production. Thus, 63per cent of sawnwood, 30-35per cent of pulp, paper and paperboard, 23per cent to 26per cent of fibreboard and panels production is exported. We can see that export volume and shares of goods with higher degree of processing (such as sawnwood as opposed to roundwood, panels, and paper as opposed to pulp) have been rising more rapidly during the mid-2000-s, and have been more resilient in face of economic crisis. However, in terms of absolute values exports of unprocessed timber remain colossal (about 20 million m³), with sawnwood exports only near reaching that mark (19 million m³), while other types of products are produced in relatively small quantities (no more than 11 million m³ in case of panels, no more than 9 million tones in case of pulp and paper).



Shares of export and internal consumption of Russia's timber industry products, in physical terms.

economic crisis is on the run), it is still valuable in structural terms, because structure of production and international trade is much more inertial than overall dynamics. The 26 considered countries are Austria, Belgium, Bulgaria, Canada, China, Cyprus, Czech Republic, Denmark, Finland, France, Germany,

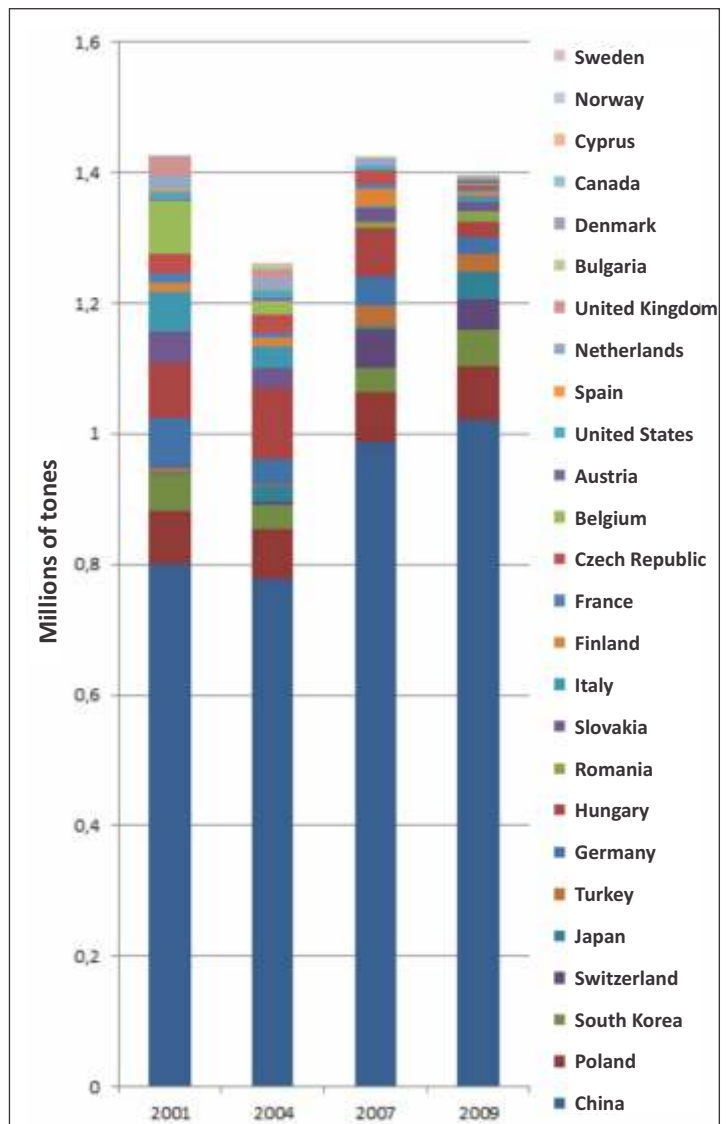
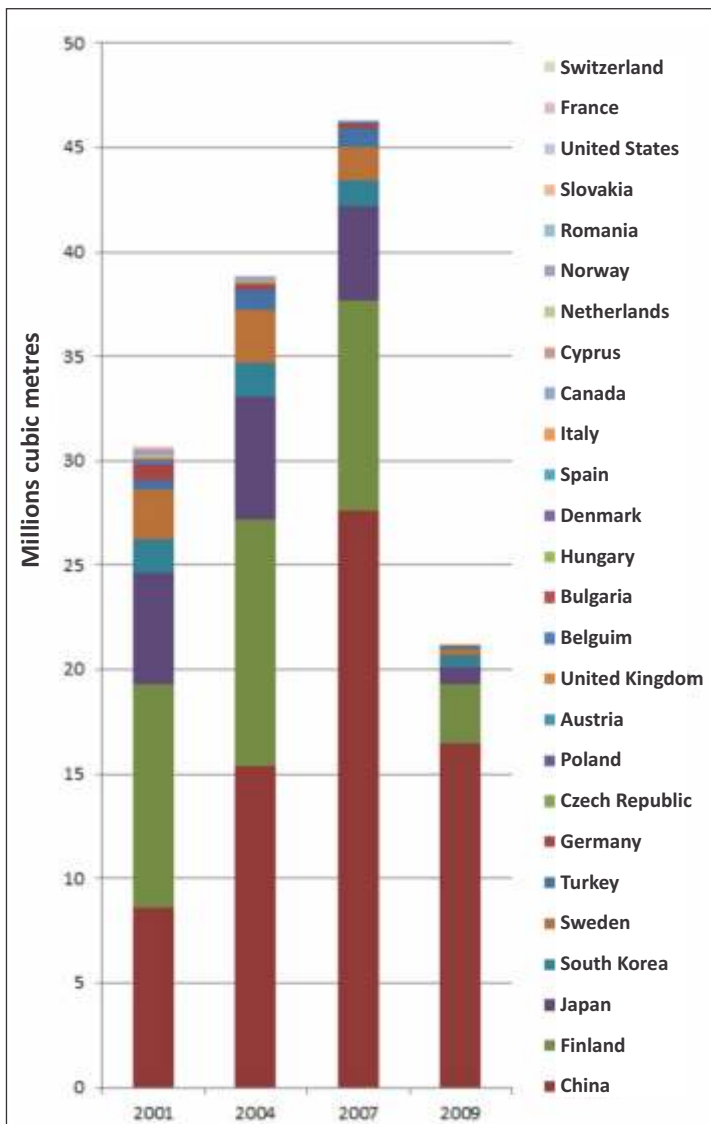
Great Britain, Hungary, Italy, Japan, Netherlands, Norway, Poland, Romania, Slovakia, South Korea, Spain, Sweden, Switzerland, Turkey, United States. The share of those countries in overall exports is given in the Table

Share of the 26 main importers of the Russian timber production in overall Russian timber export over the years, .

Product	2001	2004	2007	2009
Raw Timber	96,5	93,5	93,7	97,7
Sawn Timber	60,9	47,3	39	45,2
Panels	23	16,9	20,2	8,4
Plywood	61,6	74,6	65,1	60,6
Pulp	79,4	67,5	74,7	88,2
Paper	47,2	45,6	47,2	43,9

As we can see, the share of the 26 countries in Russian exports of the main timber products (raw timber and pulp) is quite high. Therefore, sound conclusions can be made based on the changes of roles of importers within the set of those countries. The figures next show dynamics of main importers share in buying raw timber and pulp over the years. We can see that structural changes have been dramatic with number of trade partners diminishing year after year and monopsony of China becoming more and more manifested.





Dynamics of timber exports structure (left) and dynamics of pulp exports structure (right)

The growth of China's role in Russian raw timber consumption has been damaged by increase of export duties, which coincided in time with the crisis outbreak, and exports to the country slumped from 27,6 to 16,4 m³ of raw timber within one year. Finland, once a major consumer of Russia's raw Birch for pulp and paper processing, has switched to the

Southern timber in fear of unpredictability of exports duties policies. The role of other countries, including Japan, in purchases of Russian raw timber has become minuscule. In Russia's pulp consumption, China's domination is less strong, because the growing processing industries of the country need either cheap raw materials, or high quality

semi-finished products not produced internally, while quality of Russia's pulp is not very high. Another significant article of Russia's timber exports is sawn timber. Together China and Japan buy over 2,6 million tons of Russia's sawn timber, which is about 30 per cent of total its exports. The share of China has been continually rising from less than quarter of a million tons in 2001 to more than two million tons in 2009, while the share of Japan has been gradually contracting. Such processed goods as panels, plywood and paper (predominantly, newsprint) are sold mostly to Germany, Turkey, countries of East and Central Europe and CIS. One of the largest consumers of Russian plywood is United States. However, its share has dropped from 27 per cent to 13 per cent between 2001 and 2009. It should be mentioned, also, that panels, plywood, pulp and paper production and exports are relatively insignificant compared to those of raw and sawn timber. So, China is the major market for Russia's timber industry today with prospects of further growth of its absolute and relative significance. Therefore, out of two major timber harvesting and processing regions – Arkhangelsk region in North-European part of the country and Irkutsk region in the Siberia near the Lake Baikal – the latter is to become much more attractive for investments in future. The other reason for Asian shift in timber industry investment is that European coniferous forests have been systematically overcut in late Soviet period, so

that today Birch and Aspen stands dominant there, and timber processing industry there begins to face deficits of high quality and technically reachable coniferous stands. At the same time, Pine and Larch stands in Irkutsk and other Baikal and Far East Regions are still intact on extensive territories.

Depleted timber resources of the European Russia along with growing timber trade with China lead to a conclusion that if national timber industry is to develop at all, it will develop in the Far East. To study the feasibility of accelerated timber industry development scenario in the region, not only natural indicators should be taken into account, but also tendencies in state investment and regional policy should be considered.

The following Figure shows the map of Russia with regions having significant timber resources or / and timber industries titled. The twelve highlighted regions in the East of the country have been recently grouped into the so called Far East and Baikal Region (FEBR) by the Ministry for Regional Development, and special development programs and state investment initiatives have been designed for the region. The three regions around the lake Baikal (shown in blue) – Irkutsk region, Republic of Buryatia, and Zabaikalsky kray – belong to Siberian Federal District, while other 9 regions belong to the Far Eastern Federal District.

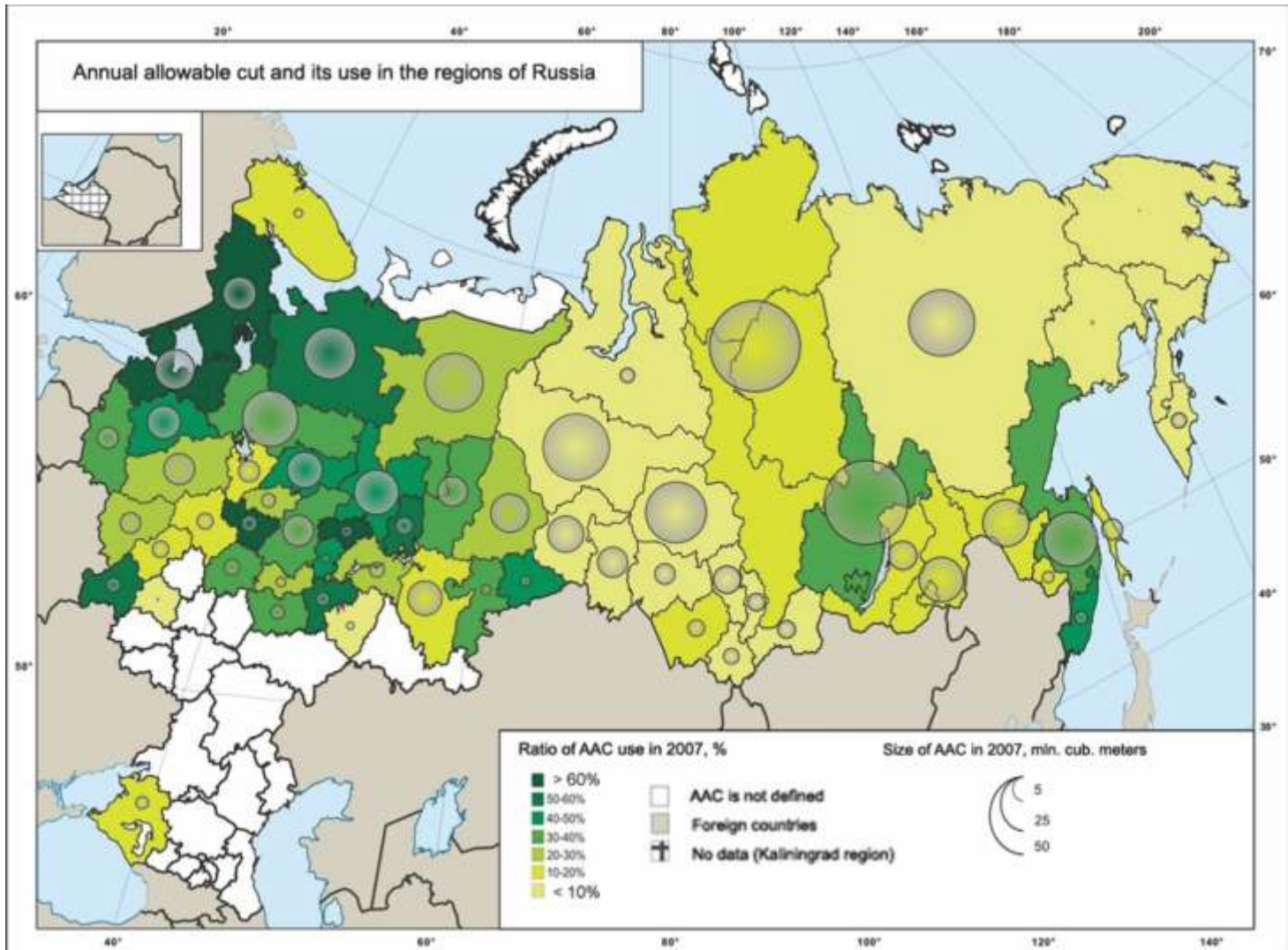


Map of Russia's regions. Regions with significant timber resources and / or timber industry are titled

FEBR accounts for 45,2per cent of the country's territory, 7,5per cent of its population, and 7,8per cent of its GDP. It provides 13,2per cent of the production of national mineral extraction industry and only 3,3per cent of its industrial processing. Investment in the region has been rising during the decade from 6,4per cent to 10,7per cent of national investment. It concentrates 169,2 m³ of annual allowable cut (AAC), which is 29,7per cent of national AAC. Of that volume, only 38,7 m³, or 22,8per cent, have been actually cut in 2007 – the peak of timber harvesting in post-Soviet Russia. At the same time, the ratio is 42,3per cent in the 18 major North-European

regions. Official data on the size and rate of use of AAC in the regions of Russia is presented in the following figure. It should be noted that the map in question is implemented in a special projection making the European part of the country seem significantly larger and the Asian part of the country seem significantly smaller than they are.

The map clearly delineates five macro-regions in terms of timber harvesting. First one is European and Urals parts of the country where amounts of resources are relatively small, while their use ratio is high. Second macro-region includes all the southern regions



Size and ratio of use of the annual allowable cut in the regions of Russia in 2007

outside the boreal zone, where timber harvesting and industry are virtually inexistent. Third macro-region is Siberia and the north of the Far East where significant resources are underexploited due to their location in mountainous terrain or on marshlands far from transportation routes. The fourth includes three Easternmost and Northernmost regions of the country where

quite small forests are not cut except when clearing sites for infrastructure. Finally, the fifth macro-region is the most perspective in terms of timber industry development. It includes five southern regions of FEBR: Irkutsk region (the main timber harvesting and processing region of the country), Buryatia, Zabaikalsky kray, Amur region, and Khabarovsk region. Also, the southern part of the Yakutia

should be included there. The territories in question feature a number of competitive advantages. They concentrate relatively large amounts of raw timber, mostly in well-developed Pine and Larch stands, as opposed to northern regions with mostly minus stands (consisting of small trees scattered around marshes and foothills). The stands there are mostly intact. The resources are accessible because of two major railroads running through the territory. The proximity of China and of the Pacific seaports make it easy to export the harvested wood; the processing facilities can be placed along Amur river and in the seaports. Such location can provide in future an opportunity to ship raw timber from the southern countries for processing, just like processing enterprises along the eastern coast of the United States do.

Current state investment drive in the region can help make timber industry of the region more attractive for investment. The state programs in the FEBR are targeted at improving its transportation infrastructure, finalising power plants, where construction was frozen in 1990-s, rebuilding the major seaports and improving transit capacity of the two major railroads: Baikal-Amur and Trans-Siberian mainlines.

All the described foci of accelerated industrial development are located in territories abundant with high quality wood stands. Complex development of mining and

processing sites will necessitate large-scale timber cuts, while general purpose roads construction in the area will make development of systematic timber harvesting feasible.

The timber industry is not characterised by very high profit margin. Therefore, it is often unprofitable to develop timber harvesting infrastructure even in timber-rich territories. The infrastructure costs are often higher than the cost of timber cut and processed. The nearly complete halt in forest roads construction after the Soviet Union collapse has shown that private business is unable to heavily invest in forest infrastructure and remain profitable. State-private partnership seems to be the only way to solve the issue. Today, the opportunity to use newly developing general-purpose infrastructure for timber harvesting emerges in the Far East and Baikal Regions. It will, seemingly, become the last component needed for the successful accelerated development of the industry in the region.

