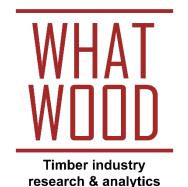
Methodology and specification guide



Forest products price monitoring in Russia

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Russian Wood Resources Report

The Russian Wood Resources Report is based on monitoring prices for timber on several bases:

1) Purchase prices of enterprises on condition of free-wagon station of departure. Purchase prices of enterprises were obtained by polling market participants: traders, suppliers and buyers. Prices for sawlogs are largely formed at the expense of prices provided by independent suppliers (traders) who do not have a leased forest fund or sawmill. Pulp and paper mills have a slight influence on the prices of sawlogs, which, depending on the seasonality, purchase sawlogs of 1-3 grades and thereby affect the price index. Pulp prices are equally represented by both traders and buyers (mainly pulp and paper mills and wood-based panel producers). Prices do not take into account individual contractual features that may be spelled out in the contract between the buyer and the supplier, such as: interest on grades, diameters or breeds, volume, availability of a certificate or other essential conditions.

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Logs	Specification	Conditions of delivery
Saw logs (spruce)	GOST 9463-88, 1-2 grade, Ø> 16 cm, 3-6 m	Arkhangelsk region FCA Konosha
Saw logs (spruce)	GOST 9463-88, 1-2 grade, Ø> 16 cm, 3-6 m	Vologda region, FCA Babaevo
Saw logs (spruce)	GOST 9463-88, 1-2 grade, Ø> 16 cm, 3-6 m	Novgorod region, FCA Coniferous
Saw logs (pine)	GOST 9463-88, 1-2 grade, Ø> 16 cm, 3-6 m	Novgorod region, FCA Coniferous
Saw logs (pine)	GOST 9463-88, 1-2 grade, Ø> 16 cm, 3-6 m	Arkhangelsk region, FCA Konosha
Saw logs (pine)	GOST 9463-88, 1-2 grade, Ø> 16 cm, 3-6 m	Vologda region, FCA Babaevo
Saw logs (pine)	GOST 9463-88, 1-2 grade, Ø> 16 cm, 3-6 m	Leningrad region, destination station
Veneer logs (birch)	GOST 9462-88, 1-2 grade, Ø> 20 cm, 3-6 m	Vologda region, departure station
Veneer logs (birch)	GOST 9462-88, 1-2 grade, Ø> 20 cm, 3-6 m	Tver region, departure station
Veneer logs (birch)	GOST 9462-88, 1-2 grade, Ø> 20 cm, 3-6 m	Kirov region, departure station
Veneer logs (birch)	GOST 9462-88, 1-2 grade, Ø> 20 cm, 3-6 m	Kostroma region, departure station
Veneer logs (birch)	GOST 9462-88, 1-2 grade, Ø> 20 cm, 3-6 m	Novgorod. region when delivered from Leningrad. region *
Pulp logs (spruce)	GOST 9463-88, 1-3 grade, Ø = 6-24 cm, 3-6 m	Vologda region FCA Babaevo
Pulp logs (spruce)	GOST 9463-88, 1-3 grade, Ø = 6-24 cm, 3-6 m	Karelia, FCA Pyaozero
Pulp logs (spruce)	GOST 9463-88, 1-3 grade, Ø = 6-24 cm, 3-6 m	Arkhangelsk region, FCA Konosha
Pulp logs (spruce)	GOST 9463-88, 1-3 grade, Ø = 6-24 cm, 3-6 m	Leningrad region, destination station *
Pulp logs (spruce)	GOST 9463-88, 1-3 grade, Ø = 6-24 cm, 3-6 m	Leningrad region, destination station
Pulp logs (pine)	GOST 9463-88, 1-3 grade, Ø = 6-24 cm, 3-6 m	Vologda region, FCA Babaevo
Pulp logs (birch)	GOST 9462-88, 1-3 grade, Ø = 6-24 cm, 3-6 m	Vologod., Novgorod, Kirov. region, station of departure
Pulp logs (mixed softwood)	GOST 9463-88, 1-3 grade, Ø = 6-24 cm, 3-6 m	Arkhangelsk, Kirov region departure station

Note: the price index is based on the FCA basis for the station of departure by rail, including loading into a wagon (rubles per m3, excluding VAT). The price index for FSC certified timber is 100 rubles higher per m³. Most of the roundwood processors purchase raw materials on the basis of the FCA departure station, using their own or leased rolling stock for transportation. * Vehicles.

2) Logging prices ("on the roadside", in the upper warehouse, excluding hauling costs). Logging prices are based on Rosstat data (excluding VAT).

Logs	Specification	Conditions of delivery
Saw logs (spruce)	GOST 9463-88, 1-2 grade, 3-6 m, Ø = 16-40 cm	Vologda, Arkhangelsk., Leningrad regions
Saw logs (pine)	GOST 9463-88, 1-2 grade, 3-6 m, Ø = 16-40 cm	Vologda, Arkhangelsk., Leningrad regions

Note: Logging prices based on the roadside basis, excluding removal costs (Russian rubles for m3, excluding VAT).

3) Export log prices. Prices are taken from the statistical databases of customs declarations.

Export price index	Specification	Conditions of delivery
Sawlog (spruce)	GOST 9463-88, 1-2 grade, 3-6 m, Ø> 15 cm	FCA Russia-Finland border
Sawlog (pine)	GOST 9463-88, 1-2 grade, 3-6 m, Ø> 15 cm	FCA Russia-Finland border
Sawlog (larch)	GOST 22298-76, 1-2 grade, 3-6 m, Ø> 15 cm	FCA Irkutsk Region
Sawlog (spruce)	1-2 grade, 4-6 m, Ø> 14-20 cm	DAP Manzhouli
Sawlog (pine)	1-2 grade, 4-6 m, Ø> 14-20 cm	DAP Manzhouli
Sawlog (larch)	1-2 grade, 4-6 m, Ø> 14-20 cm	DAP Manzhouli
Sawlog (spruce)	1-2 grade, 4-6 m, Ø> from 16-20 cm	CFR Taitsang
Sawlog (larch)	1-2 grade, 4-6 m, Ø> from 16-20 cm	CFR Taitsang
Sawlog (oak)	GOST 9462-88, 1-2 grade, 4 m, Ø> 32 cm	DAF Grodekovo
Veneering wood (birch)	GOST 9462-88, 1-2 grade, 4 m, Ø> from 32 cm	DAF Grodekovo
Veneering wood (birch)	GOST 9462-88, grade A, 4 m, Ø> from 26 cm	CFR Taitsang
Veneering wood (birch)	GOST 9462-88, 1-2 grade, 4 m, Ø> 32 cm	FCA Russia-Finland border
Fuel chips (spruce)	GOST 15815-83 (solid m3)	FCA Russia-Finland border
Fuel chips (Birch)	GOST 15815-83 (solid m3)	FCA Russia-Finland border
Chips tech. (Birch)	GOST 15815-83, (bulk m3, Ts-3)	FCA Russia-Finland border

Note: the export price index is formed on the basis of FCA Departure station, as well as taking into account delivery to the Russian border or destination point.

Wood-based panels report

Wood-based panels watch - monthly review of market prices for Russian plywood sold in the domestic market and abroad. Wood-based panels watch aims to monitor the current level of plywood market prices, explain the reasons for their changes and provide a short-term forecast. Wood-based panels watch lists market prices on four main bases:

1) DIY Retail Index (Moscow)

the index reflects market prices of plywood sales in the largest construction hypermarkets in Moscow and the Moscow region: LeroyMerlin (18 stores in Moscow), Obi (9 stores in Moscow and the Moscow region), Castorama (6 stores), STD Petrovich (4 stores). Moscow region was chosen as the most capacious in terms of consumption volumes. This index helps to determine the change in prices for plywood sold to the consumers (small retail private buyers). The price is not a weighted average by volume, but reflects the average price to date for all DIY stores. Prices are based on a DIY hypermarket warehouse. Prices are indicated with VAT.

2) Trader Index (Moscow)

reflects the prices of the plants' first line official dealers. This is the most capacious in terms of product range and a representative index, since the most plywood sales are realized through plants' dealers, who determine the final selling product price. The price lists of the first line official dealers most fully reflect the plants' product ranges. Prices are formed on the basis of a dealer's warehouse located in Moscow or the nearest Moscow region. Prices are indicated with VAT.

3) Producer Index

reflects the selling prices of first line plants' dealers and allows to understand the plants' sales prices. Prices are based on EXW plant basis. Prices are indicated with VAT.

4) Export Index

reflects plywood export prices and allows to determine the plants' sales prices. Prices are based on EXW plant basis. Prices are indicated in the currency of the contract. Without VAT.

5) The difference between the indices makes it possible to understand the reasons for price fluctuations on different bases, to predict prices for the short term.

Product	Specification	Sales Conditions
Plywood	Birch, 5x5, 4/4, interior, unsanded, 6, 12, 21 mm	DAP Moscow, DIY, from 1 sheet
Plywood	Birch, 4x8, 2/4, exterior, sanded, 6, 15 mm	DAP Moscow, DIY, from 1 sheet
Plywood	Birch, 5x10, 1/1, exterior, laminated, 6, 12, 21 mm	DAP Moscow, DIY, from 1 sheet
Plywood	Birch, 4x8, 1/1, exterior, laminated, 6.12, 21 mm	DAP Moscow, DIY, from 1 sheet
Plywood	Birch, 5x10, 4/4, exterior, unsanded, 6, 12, 21, 24, 30, 40mm	DAP Moscow, DIY, from 1 sheet
Plywood	Needles, 4x8, 3/3, exterior, unsanded, 12, 21 mm	DAP Moscow, DIY, from 1 sheet
Plywood	Birch, 4x8, 4/4, exterior, unsanded, 6, 12, 21 mm	DAP Moscow, DIY, from 1 sheet
Plywood	Birch, 5x5, 4/4, interior, unsanded, 6, 12, 21 mm	DAP Volga region, Retail
OSB-3	4x8, 8, 9, 11, 12, 15 mm	DAP Moscow, DIY, from 1 sheet
OSB-3	4x8.9 mm	DAP Volga region
Fiberboard	4x8, 3.2mm	DAP Volga region
Fiberboard	4x8, 3.2mm	DAP Moscow, DIY, from 1 sheet
MDF	2800x2070, sanded, 8, 16, 25 mm	DAP Moscow, DIY, from 1 sheet
MDF	2800x2070, laminated, 22 mm	DAP Moscow, DIY, from 1 sheet
MDF	2620x1220, 5.5mm	DAP Volga region
HDF	2800x2070, sanded, 3 mm	DAP Moscow, DIY, from 1 sheet
HDF	2800x2070, laminated, 3 mm	DAP Moscow, DIY, from 1 sheet
Laminated PB	2750x1830, laminated, 16 mm	DAP Moscow, DIY, from 1 sheet
Laminated PB	2750x1830, laminated, 16 mm	DAP Volga region
PB	2750x1830, sanded, 16 mm	DAP Moscow, DIY, from 1 sheet

Pellet market in Russia

The basis of the review "Pellet market in Russia" is the monthly fuel wood pellets (pellets) prices monitoring on the basis of FCA St. Petersburg:

1) Weighted average spot, mid-term and long-term export contracts, (€ / t).

- prices reflect the market, actual prevailing contract price of the main suppliers of "premium quality" wood pellets (6 and 8 mm, with EN Plus A1, FSC or PEFC certificates FM / CoC, SBP, NCV> 17 GJ / t ., ash content <0.7%, packed in 1-ton big bags) in the specified delivery period, further sold, as a rule, in the segment of industrial consumption.
- Spot, mid-term and long-term export prices include all types of contracts: from one-time test (pilot deliveries) to long-term periods of up to a year or more without setting volume limits.
- Actual prices and forecast are formed on the basis of traders, buyers, suppliers of pellets consensus survey.
- The price includes delivery to the port station of St. Petersburg, port / terminal / warehouse in the railroad cars of the pellets supplier, ready for unloading. Unloading, storage, transshipment are not included in the price.

2) Weighted average spot export contracts (€ / t).

- prices reflect the market, actual prevailing contract price of "premium quality" wood pellets of the main suppliers (6 and 8 mm, with EN Plus A1, FSC or PEFC certificates FM / CoC, SBP, NCV> 17 GJ / t ., ash content <0.7%, packed in 1-ton big bags) in the specified delivery period, further sold, as a rule, in the segment of industrial consumption.
- Spot export prices include only one-time test (pilot) contracts with a short-term delivery up to 90 days without setting volume limits.
- Prices are formed on the basis of traders, buyers, suppliers of pellets consensus survey.
- The price includes delivery to the port station of St. Petersburg, port / terminal / warehouse in the railroad cars of the pellets supplier, ready for unloading. Unloading, storage, transshipment are not included in the price.

3) Weighted average prices of pellet producers (Federal State Statistics Service)

- Prices are formed on the basis of statistics provided by pellet producers to regional state statistics bodies.
- The basis of pricing depends on the specific terms of the producer's contracts with a division into export and domestic markets.
- · Prices are indicated without VAT.

Domestic Prices

Destination	Producers' location
Domestic market	Russia (in average)
Domestic market	North-West
Domestic market	Siberia
Export	Russia (in average)
Export	North-West
Export	Siberia

Source: Federal State Statistics Service. Prices are indicated without VAT and are based on specific terms and conditions of the producers' contracts

Note: the average price in the North-West was formed on the following companies: GC ULK, Sawmill 25, Russian Forest Alliance, Sevlespil, Grantop-Export, Granule World, Energoresurs, Setnovo, Derussa Factory, STOD; in Siberia: Omphal, Ind Timber, Lesresurs, Rusforest Magistralny, DOK Yenisei, Lesosibirskiy LDK No. 1.

Export Prices

Destination	Conditions
Export to the North of Europe	Average weighted spot, mid- term and long-term contracts, €/t.

Source: WhatWood

Note: prices reflect the market, actual prevailing contract price of the main suppliers of premium quality wood pellets (6 and 8 mm, with EN Plus A1, FSC or PEFC FM / CoC, SBN, NCV certificates> 17 GJ / t., ash content <0.7%, packed in 1-ton big bags) during the specified delivery period, which are subsequently sold, as a rule, in the segment of industrial consumption. Prices are formed on the basis of traders, buyers, suppliers of pellets consensus survey. The price includes delivery to the port station of St. Petersburg, port / terminal / warehouse in railroad cars of the pellets supplier, ready for unloading). Unloading, storage, transshipment are not included in the price

Destination	Conditions
	Average weighted spot, mid-
Export to Italy	term and long-term
	contracts, €/t.
Source: WhatWood	

Note: prices reflect the market, the actual prevailing contract price of delivery to the ports of Italy of the main Russian exporters of wood pellets "premium quality" (6 and 8 mm, with the presence of certificates EN Plus A1, FSC or PEFC FM / CoC, SBP, NCV> 17 GJ / t, ash content <0.7%, packed in 15 kg bags) during the specified period, which are subsequently sold, as a rule, in the segment of private consumption. Prices are based on export deliveries to Italian ports. The price includes delivery to the Italian ports by sea and land.