## ECONOMIES OF RUSSIA AND JAPAN: COURSE OF STRATEGIC PARTNERSHIP

Specially for Russian-Japanese Investment Forum





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## Introduction

Dynamically developing Asian-Pacific Region can become the world center of economic activity and compels to look at the position of the Russian Far East in a new light. If earlier regions of the European part of the country were the main center of growth and high-quality development of various branches of economy then nowadays the priority shifts in favor of remote territories in the east. Russia reckons to become a coupling agent between Europe and Asia due to its geographical position and wide involvement into trade and economic relations with different countries.

Strategic plans of Russia involve large-scale projects on modernization and development of infrastructure, stimulation of processing productions focused on foreign markets, implementation of which assumes attraction of high technology from Asian-Oceania countries. The leading Russian companies are interested in experience exchange, development of applied science.

Conditions of cross-border space make the Far Eastern federal district a perspective region for business communities cooperation of Russia and Asian-Oceania countries.

A number of decisions, urged to improve investment climate in the east of the country, including preferential taxation for new investment projects has already been accepted. Besides, in the Far East and in Eastern Siberia it is assumed to create territories of advancing economic development with special conditions for non-oil productions.

Measures to attract and retain in the district the qualified experts are specified.

Issues of customs procedures modernization and removal of excessive administrative barriers will be worked out.

## GDP

Gross Domestic Product of Japan in current prices in 2012 almost three times exceeded parameters of Russia. A similar gap was observed in per capita parameters. We should mark that the gap between two countries during the period from 2005 was considerably reduced: if in 2005 Gross Domestic Product of Russia was equal to only 17% of Gross Domestic Product of Japan, then by 2012 it reached 34%.

During the surveyed period Russia showed high rate of growth of Gross Domestic Product: from 2005 value of the parameter increased 2,6 times, thus before crisis the growth was based on the increase of investment and consumer demand, increase of construction and output volumes of processing industries. In 2009 GDP of Russia in current prices decreased by a quarter, at the same time the dollar rate increased rapidly, the average parameter of which in 2009 was 28% more than in 2008. However, losses of Russian economy as a result of crisis turned out to be less, than it was expected due to the taken crisis-response measures.

In 2013 growth of GDP was lower than analysts expected (according to preliminary estimates -1,3%), in 2014, according to experts the economy will grow more than in 2013.



#### Figure 1

Dynamics of GDP in current prices by countries in 2005–2012, billion dollars

Source: The World Bank

The difference between GNP by purchasing power parity of Russia and Japan was less: in 2005 GNP of Russia was equal to 42% from the similar parameter of Japan, and by 2012 increased to 70%. Besides, GNP of Russia by purchasing power parity exceeded the parameter of GDP in current prices. In contrast, in Japan GNP lagged behind.



In Russia during the surveyed period the share of industry was great in the amount of GDP, however dynamics of parameters of both Russia and Japan was similar: in 2005-2009 the decrease was marked and in the following two years the growth was marked.



#### Figure 3

*Dynamics of the industry share in GDP by countries in* 2005–2012, %

Source: The World Bank

Economy of Russia is much more power-intensive — almost three times less fuel in oil equivalent is spent for 1 dollar of GDP In Russia since 2009 the program of energy efficiency development as a result of realization of which by 2020 GDP energy intensity will decrease by 40% compared to 2008.



#### Figure 4

Dynamics of GDP energy intensity by countries in 2005-2012, kg of oil equivalent per 1 \$ of GDP by purchasing power parity in prices of 2005

Source: The World Bank

In the Russian economy fuel and energy complex is the most competitive and modern compared to other branches, providing great demand for innovations, high technology and development. Investment potential of energy industry branches up to 2020 is estimated at 1 trillion dollars.

## Investments

During the surveyed period Russia attracted more foreign investments, than Japan, however it was explained by closed nature of Japanese economy which is characterized by increase of investment volume into foreign economy under the inflow of direct foreign investments to the country.

Inflow of direct foreign investments to Russia was maximal in 2008, when it got closer to the point of 75 billion dollars. Further investments into economy of Russia decreased two times in 2009 but following two years they increased and a slight decrease was marked in 2012.



#### Figure 5

Dynamics of net inflow of direct foreign investments by countries in 2005-2012, billion dollars

Source: The World Bank

Notification: net inflow of investments is a flow of new investments during the period, net disinvestment

The share of Japan in foreign investments coming to Russia, was the minimal in 2004-2008 and didn't exceed 0,7%. In 2009 it increased to 1,7%, and next year increased by 0,4%. However it was followed by the decrease to 1,1% in 2011 and an increase to 1,3% in 2012. As a result of the first three quarters of 2013 the share of Japan was equal to 0,4%, and ranked eighteenth among all countries which sent direct investments to Russia during this period. Thus, Japanese investments didn't play a noticeable role in economy of Russia.



#### Figure 6

Dynamics of direct foreign investments from Japan to the Russian economy in 2004-October 2013, mln dollars

Source: The World Bank

Besides direct investments sent to the economy of Russia, Japan carries out coherent trade crediting of Russian companies – Japanese goods are bought for this money.

Production of rubber tires, tire casings and inner tubes (29%), consultation on questions of financial mediation (19%), wood cutting (16%) and trade in motor vehicles (15%) were the main directions where in the first three quarters 2013 Japan made direct investments).

Figure 7

Structure of direct foreign investments from Japan to Russia by types of activity in January-September 2013, % Source: Federal State Statistics Service



Recipients of direct investments from Japan in 2013 were first of all Central federal district (35% of total volume for during the first three quarters) and Volga federal district (32%). Japanese investors are interested in assets of the central part and in southern Russia: in particular Penza region, Voronezh, in southern regions where lands are fertile and climate is optimum for agriculture development. Far East federal district ranked third having received one fifth of total volume.



#### Figure 8

Structure of direct foreign investments from Japan to Russia by federal districts in January-September 2013, %

Source: Federal State Statistics Service

Russian investments to Japan arrived in 2004, 2005, 2011, thus volumes of investment were insignificant with the maximum of 735 thousand dollars. In 2011 the type of activity "Market researches" became the investment direction.

## Mutual trade

Volumes of goods import from Russia to Japan and from Japan to Russia in 2012 were almost equal though in 2009 differed twice in favor of Russia. In structure of the Russian export Japan in 2009-2012 had 3-3,4%, the share of Russia in Japanese export during this period increased considerably and reached 1,6%. In 2013 export from Russia to Japan continued to grow as well as the share of Japan in the Russian export (from 3,4 to 4,2%).



## Export from Russia to Japan and role of Russia on the market of Japan

Nature of the Russian export to Japan during the last years remains constant: Russia delivers mineral fuel, non-ferrous metals, wood, fish on the Japanese market and the share of fuel increased gradually.

Prevailing part of the Russian export in 2009-2013 belonged to mineral fuel, wax, bituminous substances. The share of this commodity category in 2010 increased by 12% due to prompt cost growth and increase of deliveries volumes in physical terms by 53%. In 2013, according to preliminary estimates, the share of this category increased by 4%.

Aluminum and products made of it, which in 2009 made 14% of total amount of Japanese export, in 2010 lost its positions. Export in physical terms decreased by one third, at the same time its cost also decreased. Export of wood and charcoal decreased gradually that led to reduction of its share from 5 to 3%. At quite small volumes in physical terms a significant contribution to export cost was made by pearls, precious and semiprecious stones, metals, jewelry, coins. The share of vessels and other self-floating structures increased steadily.

#### Figure 10

Change of structure of Russian export to Japan in cost terms by commodity categories in 2009-2013\*, % Source: Customs Service of RF



If we speak in more detail about goods supplied to Japan, they are crude oil, liquefied natural gas, light distillates, coal, raw aluminum, coniferous timber thicker than 6 mm, raw palladium or in the form of powder, frozen fish (besides fillet), frozen crabs and shrimps



The share of Russia in Japanese import in 2009-2013 increased by 1,2% from 1,6% to 2,8%, first of all due to increase of fuel supply.

Russia played the greatest role in import of such goods as aluminum and aluminum products (up to 20% during the surveyed period), fish, crustaceans and mollusks (up to 10% during the surveyed period), fuel (3-7%), pearls and jewelry and metals (2-5%). In other commodity categories the share of Russia didn't exceed 5%, and in the majority made less than 1%.

The Russian Federation in 2013 ranked fifth among suppliers of mineral fuel which provides to Russia the maximum income from export to Japan, conceding to the countries of the Middle East and Australia, however in 2009 it ranked ninth only, and in 2011 and 2012 – seventh.

During 2009-2013 Russia steadily ranked third among importers of aluminum on the Japanese market following China and Australia. During the surveyed period Russia ranked eighth or ninth by supply of wood and products made of it.

In the list of pearls suppliers, jewels and metals to Japan, Russia in 2010 ranked fourth compared to 2009, when it ranked ninth.

And finally, in 2013 Russia was the leader by import of fish and seafood, and earlier it was included into the number of three largest suppliers which in different years included also China, USA and Chile.



## Export from Japan to Russia and role of Japan on the Russian market

Japan supplies the Russian market, first of all, with land transport means (three quarters of which belong to cars), the share of which in export in cost terms in 2011-2013 was equal to 52-57%.

Goods of the category "Boilers, Mechanic Equipment" rank second with the share of 17-20% during the surveyed period (30% from them are bulldozers, graders, excavators; another 14% - Engines of internal combustion with spark ignition, and 12% - printing machines, printers, photocopiers).

#### Figure 13

Change of the share of Russia in Japanese import by separate commodity categories in 2013\*, % of total cost of each category Source: Customs Service of RF



Another 6-9% belonged to the share of electric cars and equipment (TV cameras; spark plugs; electric lighting or signaling equipment; telephones; remote controls, panels and switchboards).

Four-five percent belonged to rubber and products made of it (first of all, new pneumatic rubber tires). Thus, over the years the share of categories "Boilers, Mechanical Equipment", rubber and products made of it, the share of different finished products increased gradually (from 0,2% in 2010 to 1,2% in 2013). The share of land transport means decreased in 2013 after a two-year growth.

Thus, generalized data on Japanese export to Russia looks as follows - first of all cars, spare parts, accessories and components, and also special equipment.

The maximum share of supplies to Russia in the general commodity category in 2013 belonged to different finished products – 7,5%. In 2013 the share of Russia in the category of "Live Animals" increased sharply, in 2011-2012 export of this category was insignificant, and in 2013 the share of Russia was equal to 6%. The share of Russia in the category of "Furniture, Lighting, Signs, Prefabricated Structures" in 2013 was equal to 5%. In general, the share of Russia exceeded 1% on twenty two categories out of ninety seven.

During three years the share of Russia increased in the categories of "Caoutchouc, Rubber, Products made of them", "Coppers, Mechanical Equipment", "Products made of Ferrous Metals", "Different Finished Products", "Furniture, Lighting, Show-windows, Prefabricated structures", "Other Products made of Base Metals".

The share of Japan in the Russian import in cost terms was much higher, than in physical. Thus cost (and along with it the share in general import) of imported goods increased every year, and volume, after the growth in 2009-2011, decreased in 2012. In 2013 import decreased both in physical and in cost terms.



#### Figure 14

Dynamics of the share of Japan in Russian import in 2009–2013\*, % Source: Customs Service of RF The share of Japan was the largest in the Russian import of land transport means – 19% in 2012, caoutchouc and rubber import – 12%, import of different industrial goods – 11%. The last category, besides, showed the maximum growth compared to the previous year: in 2012 the share of Japan in this category increased almost nine times from 1,3% to 10,9%. The category «Boilers, Mechanical Equipment» which in 2013 had the maximum cost of imported products, the share of Japan was equal to 2,9% - 0,5% less, than in 2011.

#### Figure 15

Change of the Japanese share in Russian import by separate categories in 2011-2013\*, % of total cost of each category Source: Customs Service of RF



Despite the neighboring position, mutual trade of Russia and Japan has a small share in foreign trade of both countries. Russia, first of all, delivers raw materials to Japan, and Japan exports different equipment to Russia. Taking into account the prospects of the Russian market caused by growing solvent demand, interaction of two countries can be expanded.

## Far Eastern Federal District

Far Eastern federal district borders directly on Japan. It is the largest macro-region of Russia, occupying the territory of more than 6 million square kilometers. And together with Siberian federal district they make more than 56% of the territory of the country.

The district is rich in minerals, this is confirmed by the leadership of mining industry in formation of gross regional product. Far Eastern federal district plays the leading role in the Russian production of tin, gold, production of boric raw materials, diamonds. Far Eastern stocks of antimony, borium, tin, fluor calcareous and mercury exceed a half of the general stocks of Russia. The district is also rich in forest and water bio-resources. However, despite such size, about 6 million people live on the territory of the district that makes slightly more than 4% of the population of the country. In eastern part of Russia (Far East and Eastern Siberia) about 9% of the population of the country live.



Today Russia and Japan depend on each other insignificantly in the sphere of economy. Although Japan is one of leading suppliers of products to Russia, but thus considerably concedes in volumes to undisputed leaders to China and Germany. At the same time, the Russian market is rather capacious and attractive to investors. Japanese companies repeatedly confirmed their readiness of large-scale cooperation in Siberia and in the Far East. The most part of the current and investment projects in the Far East is focused on markets of Asian Pacific Region. It is explained by the fact that local market is too small, and delivery of production to central regions of the country in most cases is not justified logistically.

Investment activity on the territory of Far Eastern federal district is traced in large projects, either declared or already started to be implemented. For historical reasons mining was the largest branch of economy of Far Eastern federal district (27,1% of GRP in 2012), the share of processing production didn't exceed 5,2%. It is necessary to recognize that in these sectors many large projects implemented in the Far East are associated with cooperation with Japan. They include development of oil-gas condensate fields in Sakhalin region (Sakhalin-I, Sakhalin-II, gas liquefaction plant on Sakhalin), processing of diamond raw materials and geological exploration in Republic of Sakha (Yakutia). It is also necessary to mark automotive industry in Primorsky Krai, wood processing in Khabarovsk and Primorsky territories, construction of agricultural and logistic terminal in Amur region.

#### Figure 17

Directions of some regions of Far East development

Shipbuilding cluster     Carbuilding cluster			Development of fish processing on the base of existing enterprises of the region
<ul> <li>Agricultural and industrial projects: deep soy processing plant, innovational agroindustrial complex «Zelenye listya» on production of fodders, production and processing of milk, soy and other grain and oil crops.</li> </ul>	Primorsky Krai	Sakhalin Region	<ul> <li>Mineral and raw material complex (hydrocarbon raw materials, coal)</li> <li>Wood processing and wood and paper production</li> <li>Development of energy infrastructure</li> </ul>
<ul> <li>Construction materials indistry (glass container plant, foundation of Far Eastern center of wood processing)</li> <li>Development of fish-breeding industry and aquaculture</li> <li>Medical and recreational tourist centers</li> </ul>	Khabarovsk Krai	Amur Region	<ul> <li>Development of rocket and space industry (spaceport "Vostok")</li> <li>Tourism development (including cruise tourism on Amur)</li> <li>Wood processing complex</li> <li>Agroindustrial complex development</li> <li>Formation of biopharmaceutical cluster</li> </ul>

## **Production in FEFD**

Food Products								
Milk and dairy products	Fish and seafoo	d	Meat and by-products, meat			Oil		
<ul> <li>Whole-milk products in milk equivalent – 328,6 ths tons (over 52 kg a year per person)</li> <li>Liquid milk – 139 ths tons</li> <li>Fermented of acidified milk products (kefir, ryazhenka, acidophilin, sour milk, yoghur etc.) – 78,6 ths tons</li> </ul>	<ul> <li>Flesh, liver, fish milt – over 90 ths tons (the largest part – frozen products)</li> <li>Crustaceous, mollusks, invertebrates frozen, salted or dried – about 55 ths tons</li> <li>Crustaceous, mollusks, invertebrates – fresh or cooled about 48 ths tons</li> <li>Caviar – 11 ths tons</li> <li>Culinary products made of fish –</li> </ul>		products • Meat and by-products – 63 ths tons (89% - poultry) • Sausage products – 78,7 ths tons Bread and bakery products • Bread and bakery products –		vver 90     • Meat and by-products – 63 tons (89% - poultry)       ited or     • Sausage products – 78,7 ths tons       Bread and bakery product     • Bread and bakery products 270,7 ths tons       cooled –     • Bread and bakery products 270,7 ths tons       • Flour made of grain and oth vegetable crops – 24,8 ths top		u <mark>cts</mark> :ts — other	<ul> <li>Vegetable oil, not refined (soy) – 29,8 ths tons</li> <li>Refined vegetable oil – 25,8 ths tons</li> <li>Cake and hard residues -130, 6 ths tons</li> <li>Vegetables</li> <li>Canned fruit and vegetables – about 153 mln cond cans (or about 61 ths tons)</li> </ul>
Extraction of ore,	production and p	rocessing of n	netals			Fuel		
Metal ore extraction	Semi-finished prod	ucts		Fuel mir	neral reso	ources		
<ul> <li>Iron ore concentrate with mass iron content less 63% - 1,03 mln ton</li> <li>Products</li> <li>Replaceable working tools for machines or hand-guided tools (power actuated or not) – 90 ths units</li> </ul>	tons (64,5% of whic and 35,2 - of other a Rolled iron – 516,61 Semi-finished produ of plain steel – 337, Blanks for re-rolling Semi-finished produ of other alloy steel – Rolled steel and sha extrudable and forg	h are castings mad alloy steel ths tons tcts of square cross 9 ths tons for export – 292,7 tcts of square cross - 184,7 ths tons ped hot-rolled and e- 220,8 ths tons d special profiles m	<ul> <li>Natural gas – 19 bln. cub. m.</li> <li>Associated petroleum gas – 11,6 bln. tor</li> <li>Unstable gas condensate – 2,5 mln tons</li> <li>Liquefied natural gas – 10,8 mln tons</li> <li>Coal – 32,8 mln tons</li> <li>Peat – 36 ths tons</li> <li>Oil products</li> <li>Burner fuel – 4,6 mln tons</li> <li>Diesel fuel – 2,2 mln tons;</li> <li>Diesel fuel – 2,2 mln tons;</li> <li>Diesel fuel – 2,2 mln tons</li> </ul>			eum gas – 11,6 bln. tons densate – 2,5 mln tons gas – 10,8 mln tons ons s mln tons; including motor fuel for mln tons; including motor fuel for mln tons mi-processed used as raw material plants – 1,2 mln tons el – 996 ths tons e – 536 ths tons		
Consumer G					es, equipment			
Furniture and bedclothes Furniture – 150 ths units (41% wardrobes and 20% - tables) Mattresses and their bases – 4 Blankets – 15,5 ths Household appliances Household refrigerators and fr	15 ths	<ul> <li>Electric current conductors other with voltage less 1 kW – 3,8 ths km (40% of them – voltage from 80 W to 1kW)</li> <li>Cables, rods and other conductors for transmission of data, management, control, alarm – 1,92 ths km;</li> <li>Welding rods with coating, used for arc welding 50 top:</li> </ul>		<ul> <li>Cent liqui pum</li> <li>Harv</li> <li>Cran</li> <li>Ligh units</li> </ul>	,			
<ul> <li>Washing machines – 16,1 ths</li> <li>Color television – 6,5 ths</li> </ul>	Washing machines – 16,1 ths		tons; her lightning appl	liances —	<ul> <li>Recruinits</li> </ul>	eational crafts and sport crafts – 172 s		

6,8 ths items;

lamps – 64,5 the items

• Filament lamps, gas discharge lamps, arc

Electronics

• Network servers, computers of server

• Personal computers - 95,8 ths units

purpose – 6,5 ths units

#### Clothes and footwear

- Footwear 1,43 mln pairs
- Knitted gloves, mitts and other similar products over 2,2 mln pairs (1,77 mln pair – impregnated or with rubber or polymer lining)
- Special clothes about 450 ths items
- Underwear over 1 mln items



#### Wall, roof and other materials

- Wall blocks 105 mln cons. bricks;
- Construction bricks 72,3 mln cond. bricks, 67% - sand-lime brick;
- Roof materials and hydro-insulation rolled asphalt and similar materials (oil bitumen, colar-tar asphalt etc.) 451 ths sq m;
- Tile, slabs, boards and similar products made of cement, concrete or artificial stone – 386,7 ths sq m;
- Paving slabs made of cement, concrete of artificial stone 332 ths sq m.

#### Insulation materials, fillers

- Mixes and products of heat and sound insulation materials, not included into other groups – 845 ths cub m;
- Slag wool, rock wool and similar products 109 ths cub m.

Cans up to 50 litres – 234.4 mln items

#### **Construction materials**

Concrete, cement, construction mixes, fillers for concrete

- Portland-cement, aluminous cement, slag cement and similar hydraulic cements – 2,2 mln tons;
- Asphalt-bitumen mixes for road building 1,75 mln tons (almost all the volume consists of hot and warm mixes);
- Granite, sandstone and other stones for monuments and construction – 241 ths tons;
- Commercial concrete 1,26 mln cub m;
- Pebble, gravel, crushed stone 14,7 mln cub m;
- Crushed stone used as filling for concrete 2,5 mln cub m;
- Natural sand 1,85 mln cub m;
- Stone granules, crumble, powder 0 1,09 mln cub m;
- Lime, dolomite crushed and other concrete fillers for road building and other construction purposes – 908 ths cub m.

#### Prefabricated constructions

- Aluminum construction structures prefabricated – 1,7 mln tons;
- Sandwich-panels made of insulation steel 958 ths tons;
- Prefabricated steel construction components – 57 ths tons;
- Precast reinforced constructions and elements – 673 ths cub m

#### Doors, windows, glass units

- Windows and window-frames, polymer window sills 871,8 ths sq m;
- Door blocks (in sets) 87 ths sq m;
- Shutters, blinds and similar products and their parts – 56,6 ths sq m;
- Doors and their frames made of polymer 25,9 ths sq m

#### **Decorating materials**

- Inlaid plated parquet 283 ths sq m;
- Paint materials and similar 3,9 mln tons, 3,3 mln tons of which – on polymer basis (two thirds –water and one third – not water)

#### Other

Wood processing	Production of polymer products, rubber products
<ul> <li>Timber (besides wooden unimpregnated tram and railway sleepers) – 1,68 mln cub m, (85% of which are ordinary timber);</li> <li>Flitches – 9,6 mln dense cub m;</li> <li>Chippings – 300 ths dense cub m</li> </ul>	<ul> <li>Slabs, sheets, film and stripes made of polymer, unreinforced or not combined with other materials – 533,4 ths tons;</li> <li>Tubes, pipes, hose tubes, sleeves and fittings - 3,7 ths tons;</li> <li>Plastic materials in initial forms – 1,9 ths tons;</li> </ul>
Production of containers and packing	<ul> <li>Slabs, sheets, film and stripes made of polymer other (porous and not porous) – 1,85 ths tons (77% of which porous);</li> </ul>
<ul> <li>Boxes made of corrugated fiberboard (transport containers) – 13,7 ths tons</li> <li>Boxes and other skeleton crate made of polymer materials – 147,5 ths items;</li> <li>Plastic sacks – 509,8 mln items;</li> <li>Polymer packing of the category "other" (spools, reel, net, corks, barrel, containers, transport containers) – 34,87 mln items;</li> <li>Metal reservoirs – over 400 items, primarily with capacity from 50 to 300 litres;</li> </ul>	<ul> <li>Hard soap on the basis of fat – 634 tons;</li> <li>Slabs, sheets, film and stripes made of polymer, unreinforced or not combined with other materials – 533 tons;</li> <li>Monofibre thread with the size of cross-section over 1 mm; rods, cores and profiled outlines made of polymer – 498 tons;</li> <li>Rubber granules – 261 tons;</li> <li>PVC film unplasticized – 234 tons; tires new and refurbished – 7,8 ths items</li> </ul>

In 2013 volume of shipped products of FEFD processing production exceeded 411 billion rubles, that was equal to 1,6% of all-Russian parameter. We should mark that since 2009 volume of shipped products in FEFD increased by 98%, while in Russia in general – by 91%.

### Export from FEFD (all countries of the world)<sup>1</sup>

The main exporters in Far Eastern federal district are Sakhalin region, Yakutia, Primorsk and Khabarovsk Territories. During the surveyed period they provided 93-96% of total cost of goods shipped from the macroregion. Shares of Jewish autonomous territory, Chukotka Autonomous Territory, Magadan and Amur Regions made less than 1,5% each, and in total made not more than 3%.

#### Figure 18

Change of export structure by regions of FEFD in 2009-2013\*, % Source: Customs Service of RF



#### Figure 19

Change of export from FEFD structure by commodity categories in 2009-2013\*, % Source: Customs Service of RF



<sup>1</sup> Analysis includes commodity categories imported to Japan, where Russia plays an important role, in these commodity categories key subcategories were defined The main part of Far Eastern federal district export consists of crude oil and liquefied natural gas — in 2009-2013 about 60% of total export amount, and the share of LNG increased, and the share of oil decreased. Besides, the macro-region exports frozen fish, coal, wood products. Export of these commodity categories to Japan in 2013 according to preliminary estimates exceeded 8,5 billion dollars, having increased 2,7 times compared to 2009.

## Import from Japan to FEFD

Fiaure 20

During five years import from Japan to Far Eastern federal district in cost terms increased 3,6 times, in 2012 its volume exceeded 970 million dollars, and in 2013 during January-October only products for the amount, exceeding 1,15 billion dollars were imported. The main share in 2013 – 86% according to preliminary estimates - was provided by Primorsk territory, another 6-8% belonged to the share of Sakhalin region and 3-4% - to Khabarovsk territory.

Let's analyze in more detail import to Primorsky Krai and Sakhalin Region, as main recipients of Japanese products.



In all-Russian volume of import from Japan 4-5% belonged to Primorsky Krai in 2009-2012, in 2013 according to preliminary estimates the share increased to 11%.

The following commodity categories are imported to Primorsky Krai from Japan (in decreasing order of import in cost terms in 2012):

- · Land transport means, besides railway or tram rolling stock
- · Boilers, equipment and mechanical devices; spare parts
- · Caoutchouc, rubber and products made of them
- Electric cars and equipment, their parts; TV and audio equipment
- · Mineral fuel, products of their distillation; bituminous substances; wax
- Vessels, boats and floating structures
- Optical, photographic, cinema, measuring, medical tools and devices; their parts and accessories
- Soap, surface-active organic substances, lubricants, artificial and ready-made wax, pastes for molding, plasticine, "dental surgery wax"
- · Products from ferrous metals
- Different finished products
- · Other chemical products

In total in 2012 they made 95% of total cost. Further the main subcategories of three commodity categories with maximum import volumes in 2012 were considered.

The main part of import in 2009 - 2012 was made by cars, cargo vehicles -24-32% in total cost, in 2013 their share decreased to 11% because of sharply grown import of cars bodies.

A great share of parts and accessories for cars is connected with operating co-productions: Sollers started joint venture with MazdaMotorCorporation on September 6, 2012, in 2013 according to results of the first three quarters production volumes increased twice compared to the similar period of 2012. In 2013 Toyota LandCruiser Prado assembly was initiated by joint venture of the Sollers company and Japanese trading house Mitsui&Co.

#### Figure 21



Change of import from Japan to Primorsky Krai structure in cost terms in 2009-2012, % Source: Customs Service of RF

In majority of main imported commodity groups the share of Japan in total import cost decreased. For example, Japanese cars which in 2009 made more than 90% of cumulative cost, in 2012 supplied only 62% though in 2013 its share increased.

In 2009-2012 the share of Japan in import of parts and accessories for motor vehicles decreased from 75 to 27%, bodies – from 93 to 16%, ICE with spark ignition – from 90 to 29%, rubber tires - from 39 to 15%, but in 2013 the share of Japan in these commodity categories increased again.

#### Table 1

Share of Japanese import in total import to Primorsky Krai by separate commodity categories in 2009-2013\*, % Source: Customs Service of RF

	2009	2010	2011	2012	2013 E
Light motor vehicles	92%	94%	83%	61%	73%
Motor transport for freights transportation	54%	46%	38%	45%	62%
Parts for motor transport	75%	39%	30%	27%	45%
Car bodies (including cabs) for motor transport	93%	3%	1%	16%	73%
Derrick-cranes, cranes and lifting truss	40%	73%	33%	37%	42%
Bulldozers, graders, diggers and compressing machines	54%	57%	52%	49%	46%
ICE with spark ignition	90%	31%	29%	29%	46%
Pneumatic rubber tires other	39%	42%	25%	15%	20%
Motorcycles and bicycles with an additional engine	47%	39%	39%	32%	23%
Products made of vulcanized rubber	31%	27%	22%	18%	20%

In all-Russian import the share of Primorsky Krai was the largest in such commodity categories as motor vehicles for freights transportation, bodies for motor vehicles, marine derrick-cranes, lifting cranes and trusses, etc.

#### Table 2

Share of import to Primorsky Krai in total volume of import from Japan to Russia by separate Source: Customs Service of RF

	2009	2010	2011	2012	2013 E
Light motor vehicles	2,5%	2,2%	1,6%	1,8%	1,6%
Motor transport for freights transportation	32%	34%	50%	61%	66%
Parts for motor transport	14%	9%	6%	6%	13%
Car bodies (including cabs) for motor transport	37%	5%	1%	13%	86%
Derrick-cranes, cranes and lifting truss	8%	49%	14%	48%	44%
Bulldozers, graders, diggers and compressing machines	8%	7%	4%	4%	5%
ICE with spark ignition	6%	5%	3%	7%	28%
Pneumatic rubber tires other	4%	7%	5%	3%	6%
Motorcycles and bicycles with an additional engine	18%	38%	36%	28%	28%
Products made of vulcanized rubber	7%	8%	7%	8%	8%

The share of Sakhalin region in general import from Japan to Russia during the surveyed period made less than one percent (1,1% in 2009-2010, then decreased to 0,7-0,8%).

Japan imports the following commodity categories to Sakhalin region (in decreasing order of import in cost terms in 2012):

- · Vessels, boats and self-floating structures
- Boilers, equipment and mechanical units; their parts
- · Products made of ferrous metals
- Land transport means, besides railway or tram rolling stock
- Optical, photographic, cinema, measuring, medical tools and devices; their parts and accessory
- Products made of stone, plaster, cement, asbestos, mica or similar materials
- Electric cars and equipment, their parts; TV and audio equipment.

As a whole in 2012 they made 96% in total cost. Further the main subcategories from three commodity categories with maximum import volumes in 2012 were considered.

An essential part of import from Japan to Sakhalin region during the surveyed period was made by hollow seamless pipes, tubes and profiles of ferrous metals, however it should be marked that their share growing in 2009-2011, in 2012 decreased by 20%. In 2013, according to preliminary estimates, it increased to 38%.

#### Figure 22



Change of structure of import from Japan to Sakhalin Region in cost terms to in 2009-2013\*, % Source: Customs Service of RF

Every year the share of graders, bulldozers, excavators and other similar equipment (from 9 to 16%) increased. In general, import became more concentrated.

During the surveyed period Japan was the main supplier of bodies for motor vehicles to the region. Gradually, the share of Japan in import of cars increased. In 2013 according to preliminary estimates the share of Japan in parts and accessories of vehicles supplies decreased considerably.

#### Table 3

Share of import from Japan in total import volume to Sakhalin Region by separate commodity categories ion 2009-2013\*, % Source: Customs Service of RF

	2009	2010	2011	2012	2013 E
Tows and pushers			0,2%	62%	72%
Tubes, pipes and hallow solid profiles made of ferrous metals	40%	44%	56%	43%	41%
Bulldozers, graders, diggers and compressing machines	69%	59%	46%	61%	52%
Light motor vehicles	77%	78%	85%	90%	90%
Parts for motor transport	89%	87%	87%	88%	46%
Equipment for food products and beverages production	25%	54%	83%	56%	59%
Other vessels besides pulling boats	0,0%	0,1%	54%	1%	0,01%
Other products made of ferrous metals	5%	2%	4%	5%	2%
Equipment for sorting, bolting, ablution etc. and processing of hard mineral resources	2%	29%	12%	30%	49%
Car bodies (including cabs) for motor vehicles	99%	100%	97%	99%	95%

The share of Sakhalin region in total import volume from Japan to Russia was highest in such commodity categories as tows and pusher vessels, other vessels, besides rowboats, equipment for production of foodstuff and drinks.

#### Table 4

Share of import to Sakhalin Region in total volume of import from Japan to Russia by separate commodity categories in 2009-2013\*, %

Source: Customs Service of RF

	2009	2010	2011	2012	2013 E
Tows and pushers			11,4%	100,0%	100,0%
Tubes, pipes and hallow solid profiles made of ferrous metals	70,7%	46,2%	52,7%	29,7%	40,9%
Bulldozers, graders, diggers and compressing machines	5,1%	2,4%	2,1%	2,2%	2,3%
Light motor vehicles	0,2%	0,1%	0,1%	0,1%	0,0%
Parts for motor transport	1,3%	0,6%	0,3%	0,2%	0,1%
Equipment for food products and beverages production	8,6%	24,6%	36,9%	55,9%	43,8%
Other vessels besides pulling boats	43,5%	91,9%	100,0%	100,0%	23,3%
Other products made of ferrous metals	12,4%	2,4%	3,6%	5,0%	1,8%
Equipment for sorting, bolting, ablution, etc. and processing of hard mineral resources	2,8%	12,8%	17,1%	18,3%	25,0%
Car bodies (including cabs) for motor vehicles	8,4%	1,1%	0,4%	0,3%	0,02%

Summing up the result, it is possible to tell that mutual trade between Japan and Far Eastern federal district is conducted within a limited circle of commodity categories. The Far East delivers crude oil, LNG and frozen seafood to Japan, and the import structure includes location of economic activity on territories of the district on production of cars and their accessories. Besides, Japan is the supplier of vessels, equipment for them and for ports.

# SECTORAL STRUCTURE OF COOPERATION

The most perspective spheres of interaction with Japanese enterprises for Russia, and in particular for Far Eastern federal district, are the following:



## **Energy cooperation**

Russian economy is characterized by high energy intensity, according to the experts, it is about 3 times higher, than energy intensity of gross domestic product of Japan. One of the main reasons of low energy efficiency is high level of wear of fixed assets (up to 65,1% – in fishery and fish breeding, up to 56,2% – in transport infrastructure).

The main measures of state policy applied to increase energy efficiency are acceleration of modernization and energy industries funds updating, stimulation of technological energy saving and energy efficiency, increase of coefficient of oil extraction and depth of oil and gas raw materials processing, development of exchange trade of oil and gas. In addition, complex tax reform and liberalization of the natural gas export, significantly improving investment climate, is provided. As for fuel and energy complex of the Far East, provision with fuel resources is leveled by low efficiency of power plants and wear of infrastructure. «RAO Energeticheskie sistemy Vostoka» JSC is responsible for all power industry of the Far East of Russia. About 500 diesel power plants (with total power of 670 MW) work in remote areas of the district. These stations are characterized by low efficiency and high cost of fuel because instead of coal or gas they use imported diesel fuel. Expenses for fuels increase annually (for the beginning of 2014 they were estimated at 254.3 million dollars/year at fuel consumption of 254 thousand tons) that makes thinking seriously over development of renewable sources. Specifics of environment of Far East allows to develop actively wind and solar power, capacity of small hydroelectric power stations and bio-fuel.

South of Far East possesses high potential of solar energy, in some regions wind power can be actively developed. So, the average annual speed of wind on Kamchatka exceeds 7–8 m/s, on the Commander Islands (Aleutian Region) this parameter exceeds 10 m/s that is twice more, than on continental platforms of Germany and Denmark, which are among leaders by wind power.

In the district there are already several pilot projects which proved its efficiency. Subsidiaries of RAO ES of the East holding operate four solar power stations in Yakutia and three wind turbines in Kamchatskiy Krai. Even these small capacities (totaling to 90 kW cum sole and 825 kW downwind) give more than 485,7 thousand dollars of annual economy on diesel fuel.

In the Far East, in Eastern Siberia and on Far North the "Eastern Gas Program" was accepted for implementation, with purpose to establish new gas production centers. The program provides development of large-scale gas-condensate deposits in Yakutia, Irkutsk region and on Sakhalin, and also construction of «Power of Siberia» pipeline of ESPO uniform corridor with operating capacity of 60 billion cubic meters a year.

The Russian coal companies study coal mining projects in Yakutia, Transbaikalia, Tyva. Growth of production will be promoted by planned changes in the tax legislation.

## **Engineering industry**

Specifics of Far Eastern district allow to develop such branches of mechanical engineering as aircraft industry and shipbuilding on its territory. It is connected with requirements of allied industries, perspective for the macro-region, and also priority development of innovative hi-tech sectors. In particular, development of shipbuilding is necessary for ensuring needs of fish branch and extracting branches, aircraft industry – for satisfaction of aviation equipment needs of military and civil aviation, for increase of transport availability of the Far East territory.



Development of mechanical engineering can become the driver for allied industries and stimulate production of innovative products. For example, production of specialized glass (automobile, tempered, for medical use, for solar batteries covering, for greenhouses).

## Shipbuilding

Priority segments of the Russian shipbuilding are shelf development, development of fishery fleet, updating and expansion of river fleet. Russian market of water transport services following the world tendencies shows growth, however the Russian transport fleet, as of 2013 was completed with 25% of vessels aged over 30 years, demands updating. According to the experts the cumulative need of the country for ship-building products till 2020 will be equal to 1,4 thousand units.



#### Figure 23

Age structure of transport marine fleet controlled by Russia in 2013, %

Source: Single national information system on the situation in the World Ocean

The national chamber of navigation of the Russian Federation developed a 10–15 years program for updating of river fleet. The cost of the program implementation will be equal to 1,2–1,4 billion rubles a year. Ship-owners, selling for scrap metal vessels older than 30 years, will get a utilization grant on acquisition of a new vessel of not less than 10% of the cost of a new vessel that will allow to acquire a vessel on lease. Construction of a new vessel on the Russian shipyards becomes a condition for receiving a grant.

Efficiency of the branch, taking into account high capital- and knowledge intensity of projects, is assumed to be raising due to formation of ship-building clusters (in St. Petersburg, the Arkhangelsk region, the Astrakhan region).

Branch specialization of the Far East defines a great potential demand for modern fishery vessels, and also gas carriers. Plans of the leading Russian companies of gas branch for expansion of export assume purchase about 28-30 gas carriers for all the companies.

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Resource provision of Far East and new strategy of export-focusing make perspective woodworking, agriculture and processing of fish and sea products. To involve small and medium-sized enterprises to the Far East, construction of a network of industrial parks and special economic zones was initiated.

### Wood and paper industry

Far Eastern federal district has a considerable stock of wood, including coniferous – 20,6 billion cubic meters, 57% of which are concentrated in maturity and overaged forests that is equal to 25% of Russian stocks. However processing level makes about 35% that is much lower than the average Russian parameter of 65%. To change the situation the Strategy of forestry complex development of the Russian Federation for the period up to 2020 assumes an advancing development of deep wood processing production in the Siberian and Far Eastern regions, rich in forests, which will allow to raise the level of deep wood processing up to 70%.

Production capacity of wood processing industry of Far East is very perspective to develop in Khabarovsk, Primosky Territories and Amur region.

On the territory of the district, the organization or expansion of production of the following commodity groups is possible:

- · Wood in the form of chips or shaving from deciduous breeds;
- Plywood, veneered panels and similar materials made of laminated wood;
- · Layered and glued wood product;
- Raw wood products made of coniferous breeds.

## Low-height construction, urban construction

Housing commissioning in Far Eastern federal district is characterized by high rates. In 2013, 2150,4 thousand sq.m were commissioned that was 12% more, than in previous year.

#### Figure 24

Dynamics of residential space commissioning in Far Eastern Federal District in 2012-2013, ths sq m and commissioning structure in 2013, % Source: Federal State Statistics Service of RF



The share of low housing as of 2012 was the lowest in Kamchatskiy Krai (35%), Amur Region (37,3%), Primorsky Krai (38,2%) and Khabarovsk Krai (39,3%).

According to Strategy of construction materials industry development for the period up to 2020 the output of inhabited factory-built wooden houses in Russia is planned to be brought to level of 2,9 mln sq.m. Thus, if in 2010 the share of individual inhabited housing construction of wood in low-level construction made 31,1%, in 2015 it has to grow to 40,4%, in 2025 to 70,4%, by 2030 to 84,1%.



Figure 25

Share of low-level residential space commissioning in total volume of buildings commissioning in regions of FEFD in 2012, %

Source: Federal State Statistics Service

Increase of construction volumes determines growth of demand for construction materials and technologies, including energy saving in the macro-region. Besides low-level construction, the question of complex building of residential quarters in the cities, residential districts with simultaneous building of objects of social, engineering and transport infrastructure became actual.

### Agriculture

Agriculture has to become one of drivers of economy growth for Far Eastern regions. The district provides itself with less than half of the main food products (grain – 14%, meat and milk – 24%, vegetables – 45%). In this regard, one of the largest players of meat and combined feed market of Russia, «Cherkizovo» group initiated the cattle-breeding project in Khabarovsk Krai.

Far East possesses high potential for agriculture and animal husbandry development. In bulk there are about 2,5 million hectares of arable land where it is possible to receive more than 8 million tons of soy, corn that will provide fodders for animal husbandry. Taking into account serious competition in the European part of the country, other large players can come to the east after «Cherkizovo».
Amur Region	
	1,5 mln ha of cropland
Primorsk Territory	
	0,7 mln ha of cropland
Jewish Autonomous Territory	
Jewish Autonomous Territory	0,3 mln ha of cropland

In Far Eastern federal district poultry prevails in of agricultural animal livestock, its share decreases slightly (by several tenths of a percentage point). Cattle ranked second, and pigs - third, the share of the last increases gradually. Shares of other animal species make less than 2%. The main cattle-breeding regions of the district are Amur region, Primorsky and Khabarovsk Territories, Republic of Sakha (Yakutia).

Agricultural resources of Far East allow to organize a full cycle of agricultural production (from food supply to processing), with production focused not only on domestic market, but also on ensuring needs of neighboring countries. Construction of modern fruit and vegetable storages, and also power effective greenhouses, could solve a problem of deficiency and high cost of fruit and vegetable production. Creation of the agro-industrial special economic zone (SEZ) with participation of Japanese investors is planned at the territory of the district.

The macro-region has great yields of potato. The main part (about a quarter) is reaped in Primorsky Krai, 21-22% of total volume is reaped in Amur Region and Khabarovsk Krai. In 2011 soy yield increased by one third. Soy is primarily grown in Amur region, due to this region, where the most part of earth is used for bean growing, there was a sharp increase in2011, about 10% in 2012 was provided by Primorsky Krai, which ranked second. Application of hybrids in 2012 allowed Primorsky Krai to receive twice more corn, than in 2011. In the best farms the yield reached ten tons from one hectare. The corn is demanded not only on the domestic market – a part was exported to South Korea.

In Altai Territory especially valuable hard wheat is grown, which could be exported to Japan. Prospects of this direction are noticeable on existing dynamics of cereals import to Japan.

So, in 2013 about 45% of Japanese grain import was provided by landowners of USA , 16% - Brazil, and 3% of deliveries belonged to Ukrainian suppliers. Now demand for grain crops increased on the world market that is directly connected both with increase in consumption of bakery products, and with grain use in production of forages. In recent years USA weakened its positions on the grain market, increasing internal consumption of grain for production of bio-fuel. Russia and Brazil, according to experts, can make a great contribution to supply of grain to the world market.



Deep soy processing became an allied supplying industry for agroindustrial complex, food industry, and aquaculture (concentrates, isolates, soy flour). Such a project was initiated in Jewish autonomous territory, and in Primorsky Krai of Far Eastern federal district. Waste of soy production can also be used in pharmaceutics and as forage.

## Deep fish processing

Far East concentrates more than 50% of all coastal fish-processing capacities of the country, however the share of fish products with high extent of processing production is insignificant. No more than 10% of organizations are engaged in deep processing. In 2013, according to operational data of the Center of monitoring system of fishery and communication, the catch of fish and seafood in the Far East made about 2,8 million tons, 1,3 million tons of them were intended for export. About 42% of export products belonged to Primorsk Territory.



Taking into account high potential of natural resources, fish breeding industry is planned to be actively developed in the Far East. Construction of fish breeding plants is supposed in Khabarovsk, Primorsky, Kamchatskiy Territories, in Amur, Magadan, Sakhalin Regions and Jewish autonomous Territory.

The future of the branch is also connected with aquaculture development. This branch is planned to be developed in Magadan, Sakhalin Regions, Kamchatka and Khabarovsk Territories.

### Medicine, pharmaceutics

Creation of the Center of nuclear medicine (the pilot project of the state program of government of the Russian Federation on creation of a network of carbon and proton therapy centers for treatment of patients with oncological diseases) at Far Eastern federal university (FEFU) there are provisions for cooperation with companies of Japanese medical industry. The emphasis is on joint introduction of the new medical equipment and technologies, and also joint development of new equipment components for hadron therapy of cancer.

An important factor of this cooperation is that Russia possesses unique technologies which are not available to many countries of the world today: these are superconducting magnets and system of beam cooling by electrons. Russian physicists are capable to reduce the cross section of beam bunch - from 5 centimeters (it is the norm which is used now including in Japan), to 0,5 millimeters.

## Transport and infrastructure

On the territory of Far Eastern federal district 22 of 63 Russian seaports are located (the largest are Vostochniy, Nakhodka, Vladivostok, Vanino). Railway lines of the Trans-Siberian Railway and BAM pass through the macroregion. New opportunities for development of the Russian logistic market appear due to arrangement and organization of transport vessels movement by the Northern Sea Route (NSR).

Positive dynamics of goods turnover in Far Eastern federal district testifies to positive tendencies in the sphere of transport services. The volume of freights transfer in seaports of the Far East in 2011 increased by 6,8%, in 2012 - by 7,1%, in 2013 - by 7,8%.

However a limiting factor of the Russian transport services export development is limitation of railway lines capacity in Siberia and in the Far

#### Figure 28

Dynamics of transshipment in ports of the Far East in 2007-2013, ths tons Source: Single national information system on the situation in the World Ocean



East. Capacity of the Baikal-Amur Mainline is equal to 12,5 million tons a year.

The Russian cargo air base can be used in multimodal transportations. Articles of daily necessity are transported to regions of the Far East by air, but owing to a unilateral orientation of freight traffic there is no solvent demand for the return loading while there is a considerable transit potential in the direction from Asia to Europe (transportation of electronics, seasonal and urgent goods).

One of prospects of the Far East development is transit increase. According to experts , high growth of freights flow transported by motor transport is observed on its territory. It is expected that soon traffic will grow from 150-200 big cargo motor vehicles a day to 1,5-2 thousand cars a day. In the center of Russia traffic makes more than 6 thousand heavy transporters a day on the main federal highways. This tendency causes construction of transport and logistic terminals: the so-called classical logistic centers (4PL-providers), and also new port and dock-side multipurpose terminals of various profiles (3PL-providers) are most demanded.

#### RUSSIAN-JAPANESE INVESTMENT FORUM

In the light of multimodal transportations activization as one more perspective direction for the macro-region it is possible to define transport and consumer packaging. In Russia special containers, boxes, boxes for transportation of cooled products are almost not produced, demand for special containers will inevitably grow with a growth of transit transportations.

# CONCLUSION

The Russian Federation earlier focused on interaction with the countries of Europe now starts being closely interested in Asian-Pacific Region.

In the light of new strategic interests of Russia in the Asian-Pacific Region, the vector of Far Eastern federal district and Eastern Siberia development changed. The key area of operation in the Far East is creation of competitive conditions for investors from the Asian-Pacific Region. Practical work on creation of advancing development territories and providing of preferential terms for investors in them is conducted. The priority is given to productions with high efficiency of work, focused on the APR market. Among the most perspective directions are: automotive industry, production of autocomponents, oil and gas chemistry, production of aircraft equipment, vehicles and mountain equipment, construction materials, seafood processing, metallurgical minerals, shipbuilding, implementation of heat power projects, woodworking and production of cellulose.

We should mark that in recent years positive changes in the field of conditions for business activity are observed in Russia – increase of country rating in "DoingBusiness" can be confirmation to it, which reflects conditions of administrative environment for business.

Interaction between Russia and Japan has to be based today not only on development of industrial sector, but also on a mutual exchange of technologies, development of science and education potential of Japan and Russia. Cooperation in the field of hi-tech, such as medicine, alternative power engineering seems to be priority. Creation of coproduction of hi-tech glass on the territory of the Far East would allow to develop allied industries more actively: solar power (glass for solar batteries covering), medicine, vegetable growing (films and glasses for greenhouses), mechanical engineering (automobile, aviation glass), industrial construction (architectural glass). A great importance in bilateral relations of business communities is gained also by rendering business services connected with service of production: consulting, engineering, marketing.

In connection with the plans of advancing economic development zones creation on the territory of FEFD experience of Japan in the field of clusters creation can be used (as experience of the first state program of innovative clusters development, accepted in 2001, and a new program of 2014 which will be renewed taking into account errors of the first stage).

Russia, located between Europe and APR, possesses essential transit potential. So, development of transport and logistic infrastructure on the territory of Far Eastern federal district will allow to use exits to maritime routes, to large rivers and tracks, to the Northern Sea Route and the Trans-Siberian Mainline more effectively, will increase transit opportunities for Japan on the territory of Russia.

The Northern Sea Route mentioned above is a strategically important route, introduction to regular operation of which would reduce the way from Europe to the Pacific region three times compared to a route through the Suez Canal and Indian Ocean. It is especially actual in the light of growing fuel prices which considerably reduce profitability of shipping and compel ship-owners to increase flight duration for reduction of fuel consumption due to decrease of speed.

In general, taking into account introduction of the Far East and Eastern Siberia into a number of national priorities on long-term prospect, these macro-regions become new centers of growth for the country, in a counterbalance to highly competitive regions of the European part of Russia. Emphasis is supposed to be put on high value added products and focus on foreign sale markets.

## List of abbreviations and acronyms

APR – Asian Pacific Region	aut autonomous
BAM – Baikal-Amur Mainline	bln – billions
CFD – Central Federal District	cond conditional
DFI – Direct Foreign Investments	cub.m. – cubic meters
FEC – Fuel and Energy Complex	doll. – dollars
FEFD – Far Eastern Federal District	etc. – et cetera
GDP – Gross Domestic Product	fin. – financial
GNP – Gross National Product	ha - hectar
GRP – Gross Regional Product	jan. — January
HES – Hydroelectric Station	kg — kilogram
ICE – Internal Combustion Engine	kW – kilowatt
LNG — Liquefied Natural Gas	mln - millions
NWFD – North Western Federal District	mm – milimeters
RF – Russian Federation	m/s – meters a second
SFD — Siberian Federal District	p.p. – percent point
UFD – Ural Federal District	ppl. – people
VFD – Volga Federal District	prec. – precious
	semiprec semiprecious
	sep. – September
	sq. m – square meter
	t – tons
	ths. – thousand
	unit - unit



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