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KRASNODAR KRAI – AGRO-INDUSTRIAL GIANT AND TOURIST JEWEL OF THE RUSSIAN FEDERATION

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Abstract: This article provides a geographic and socio-economic description of Krasnodar Krai, one of the federal subjects of the complexly organized Russian Federation. Its size and population are comparable to the ones of smaller European countries, such as Austria, Czech Republic, Republic of Ireland or Denmark, Finland and Slovakia. In comparison to Serbia, this region is somewhat smaller and less densely populated. Its landscape and climate diversity, as well as an abundance of natural resources make a good starting point for a further economic and social development of the region. The agro-industrial complex and tourism are especially developed in this region and are considered its strong points both within Russia and outside its borders. The level of industrial cooperation between Serbia and Russia is considerably lower than in the times of SFRY and USSR. However, it will certainly increase in the future, leading to an intensification of cooperation with Krasnodar region which will not only be based on trade relations.

Key words: Krasnodar, agro-industry, tourism, development, cooperation

Introduction

The modern-day Russian Federation is the legal heir of the Soviet Union. As Russian Soviet Federative Socialist Republic (RSFSR), it was part of the USSR from December 30th, 1922, when the Soviet Russia, Ukraine, Belorussia and the Transcaucasian Federation unified into the Soviet Union, until the end of 1991. On December 8th, 1991, the Belavezha Accords signed by Russia, Ukraine and Belorussia declared the USSR dissolved and on December 12th, the agreement was ratified by the Supreme Soviet of the RSFSR. On December 25th, the Supreme Soviet adopted a law to rename the RSFSR to Russian Federation. Two years after, on December 25th, 1993 a new constitution came into force and it is current to the present day.

Russia is the world's largest country, spreading over two continents and covering more than 17 million km² (Figure 1). Today's Russia is a successor to

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several states. According to the “call for the Varangians” theory (Norman theory), all of those states originated in the ancient Russian state, founded in 862 and governed by the Rurik dynasty.

Russia is a complex entity, composed of not only republics but also other types of federal units, which all have a common denomination: federal subjects. The subjects of the contemporary Russian Federation were formed in the times of RSFSR. When the current Constitution was adopted in 1993, it defined 89 subjects. Subsequently, a series of transformations and name changes occurred, so after some regions unified on March 1st, 2008, there was left a total of 83 subjects. Following the incorporation of Crimea referendum held on March 18th 2014, the number of federal subjects increased to 85 (Figure 2).



Figure 1. Russian Federation, orthographic projection
Source: <https://ru.wikipedia.org/wiki>

According to the Russian Federation Constitution, the status of a federal subject, being the territorial unit of the highest level, belongs to the cities of federal importance (Moscow, Sankt Petersburg and, after the incorporation of Crimea on the March 16th, 2014 referendum, also Sevastopol), also to the republics (Adygea, Altai, Bashkortostan, Burvatia, Dagestan, Ingushetia, Kabardino-Balkaria, Kalmykia, Karachav-Cherkessia, Karelia, Komi, Mari El, Mordovia, Sakha (Yakutia), North Ossetia-Alania, Tatarstan, Tuva, Udmurtia, Khakassia, Chechnya and Chuvashia), krais (Altai, Zabalkaysky, Kamchatka, Krasnodar, Krasnoyarsk, Perm, Primorsky, Stavropol and Khabarovsk Krai), autonomous oblasts (Jewish Autonomous Oblast), oblasts (Amur, Arkhangelsk, Astrakhan, Belgorod, Bryansk, Vladimir, Volgograd, Vologda, Voronezh, Ivanovo, Irkutsk, Kaliningrad, Kaluga, Kemerovo, Kirov, Kostroma, Kurgan, Kursk, Leningrad, Lipetsk, Magadan, Moscow, Murmansk, Nizhny Novgorod, Novgorod, Novosibirsk, Omsk, Orenburg, Oryol, Penza, Pskov, Rostov, Ryazan, Samara, Saratov, Sakhalin, Sverdlovsk, Smolensk, Tambov, Tver, Tomsk, Tula, Tyumen, Ulyanovsk, Chelyabinsk and Yaroslavl Oblast) and autonomous okrugs (Nenets, Khanty-Mansi, Chukotka and Yamalo-Nenets Okrug).

In addition to the federal organs, each federal subject has its executive (governor), legislature (regional parliaments) and judicial branch (Constitutional or Statutory court). Each subject has its own Constitution or Statute, as well as its own legislature, adopted by the respective regional parliament. The federal subjects each have two representatives in the Federation Council, which is the upper house of the Federal Assembly. All the subjects are equal in terms of their relationship with the federal government. They are empowered to solve issues delegated by the Constitution. The federal subjects are given no right to separate from the Russian Federation.

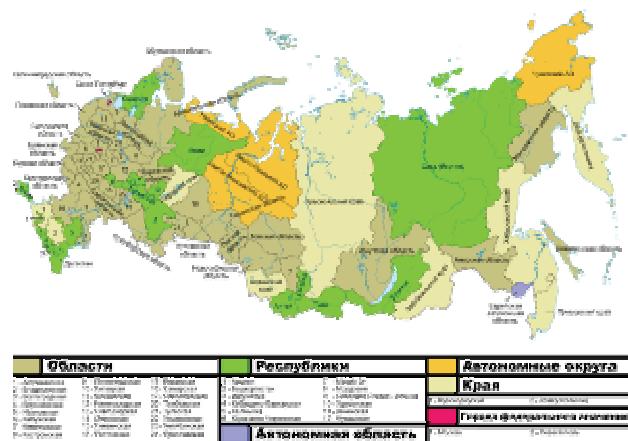


Figure 2. Russian federal subjects
Source: <https://ru.wikipedia.org/wiki>

According to the fundaments of political and social organization of the Russian Federation, the federal subjects are grouped in federal okrugs since 2000. Okrugs are not subjects or any other kind of constituents of the Federations and they were formed after the example of the military okrugs. A federal okrug is an area in which the President of Russia is represented by a polpred representative, one of the leading members of the Administration of the President of Russian Federation, who substitutes the President in a number of occasions. At first, seven okrugs were formed, while in 2010 the North-Caucasian separated from the South Federal Okrug, and after the incorporation of Crimea the Crimean Federal Okrug was established. Therefore, 9 federal okrugs exist in today's Russian Federation.

Besides okrugs, the federal subjects are grouped into:

- 11 economic regions
 - 14 geographic regions

- 4 military districts (6 as of 2010)
- 11 time zones.

Krasnodar Krai was founded on September 13th, 1937, when the then Azov-Chernomor Krai was divided into Krasnodar and Rostov oblast (its capital being Rostov on Don), and today it belongs to the South Federal Okrug and to North-Caucasian Economic Region. It belongs to the Moscow time zone.



Figure 3. Flag and coat of arms of Krasnodar Krai
Source: https://ru.wikipedia.org/wiki/Краснодарский_край

In terms of administrative divisions, Krasnodar Krai consists of seven city municipalities (Krasnodar, Novorossiysk, Gelendzhik, Goryachy Klyuch, Sochi, Armavir, Anapa) and 37 districts-raions (Abinsky, Apsheronsky, Beloglinsky, Belorechensky, Bryukhovetsky, Viselkovsky, Gulkevichsky, Dinskoy, Yeysky, Kavkazsky, Kalininsky, Kanevskoy, Korenovsky, Krasnoarmeysky, Krylovsky, Krymsky, Kurganinsky, Kushchyovsky, Labinsky, Leningradsky, Mostovsky, Novokubansky, Novopokrovsky, Otradnensky, Pavlovsky, Primorsko-Akhtarsky, Seversky, Slavyansky, Starominsky, Tbilissky, Temryuksky, Timashyovsky, Tikhoretsky, Tuapsinsky, Uspensky, Ust-Labinsky, Shcherbinovsky).

Geographic position, area size and population

Krasnodar Krai (Figure 4) is one of the 9 federal subjects of the Russian Federation with a krai status. It is situated in the south of the European part of Russia, within the borders of Northwest Caucasus, whose north and central parts belong to the Kuban Plains while its south is part of the Great Caucasus range.² The territory of this region covers the area between 43° 30' N and 46° 50' N and it is roughly divided into two parts by the 45th parallel. Compared to Serbia's

² The elementary information about the physical-geographic characteristics of Krasnodar Krai have been taken from: Geography encyclopedic dictionary (geography terms), 2003 (*Географический энциклопедический словарь (географические названия)*), 2003), a entries: Krasnodar Krai, Kuban, Sochi, Taman Peninsula; as well as from a textbook (Lotyshev, 2001).

geographic latitude ($46^{\circ} 11'$ N to $41^{\circ} 51'$ N), this area is a bit north, spreading from the geographic latitude of the Serbian city Nis ($43^{\circ} 19'$ N) to the north borders of Serbia. The Krai borders the Rostov Oblast to the north and northeast, Stavropol to the east, the Karachay-Cherkess Republic to the southeast and Abkhazia and Georgia to the south. The Republic of Adygea is situated within the territory of the Krasnodar Krai. Kerchensky Strait separates the Krai from the Crimean Peninsula and the Republic of Crimea. To the northwest the Krai is bordered by the Sea of Azov and to the southwest by the Black Sea. The territorial integrity of the Krasnodar Krai was violated in 1991, when the Republic of Adygea, until then an autonomous oblast within the Krai with the total area of $7,792 \text{ km}^2$, separated and declared independence from the Krasnodar Krai. Krasnodar Krai covers a total of $75,485 \text{ km}^2$, spanning at the longest point 370 km in direction north-south and 375 km west-east. The size of its territory is comparable to that of European countries such as Czech Republic ($78,866 \text{ km}^2$), Austria ($83,871 \text{ km}^2$), Republic of Ireland ($70,273 \text{ km}^2$), and somewhat smaller than Serbia ($88,502 \text{ km}^2$)³. Out of the Krai's total border length (1,540 km), 740 km are maritime boundaries.

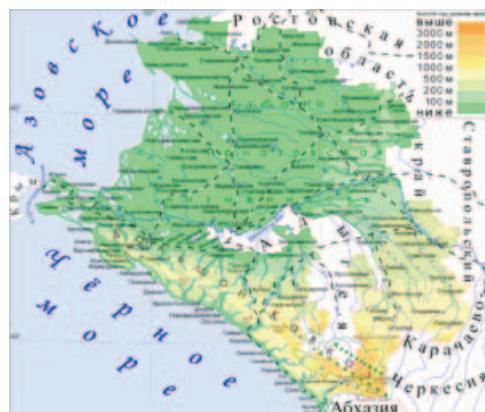


Figure 4. Krasnodar Krai
Source: https://ru.wikipedia.org/wiki/Краснодарский_край

The total population of the Krasnodar Krai is 5.4 million (3.2% of Russia's total population). The population density ($71.59 \text{ people per km}^2$) is relatively high for Russia, although lower by one quarter than the one of Serbia (according to the 2011 census⁴, 7,186,862, or $92.6 \text{ people per km}^2$). The share of urban population is 54%, considerably lower than the average of the whole Russian Federation,

³ Statistical Calendar of the Republic of Serbia 2014, p. 111.

⁴ Data excluding Kosovo and Metohija.

where this percentage exceeds three quarters of the total population. This means that the population is not mainly agriculture-oriented. The largest cities are Krasnodar (with the population of more than 800,000 people) and Sochi (about 400,000). Cities with the population above 100,000 are Novorossiysk (about 260,000) and Armavir (almost 200,000 people). The share of urban population in Serbia is somewhat higher, making up 56% of the total population. However, its structure is different, since its one big city (Belgrade) is two times more populated than Krasnodar.

The Krai is multi-ethnic, being home for more than 100 different ethnicities. The dominant one is the Russian, making up 86% of the total population, while the rest are Ukrainians (4%), Armenians (3%), Adygeans (2%), Belorussians (0.8%), Germans (0.6%), Greeks (0.6%), Jews, Moldovans, Crimean Tatars, Tatars, Georgians etc. This Krai is one of the few Russian regions whose population has experienced growth in the post-Soviet period. The population has increased by 0.7 million people, which is mainly a consequence of immigration, mostly from the Caucasian countries (Vidyapin, 2012: 381). It is comparable to the population of the following European countries: Denmark (5.4 million), Finland (5.2) and Slovakia (5.4).

Climate, relief and water

Krasnodar Krai is located at the same geographic latitude as the Northern Italy and Southern France, between the continental and subtropical latitudes as and on the borderline of plains and mountain ranges. The altitude diversity of the land, ranging from the plains, which occupy about two thirds of the total land, to mountains, making up one third of the land, is one of the factors that influence the climate, making it diverse and changeable. The geographic latitude and the proximity of two seas also affect the climate conditions. The complex physical geographic conditions, the diversity of landscapes and the closeness of the seas have an impact on the movement of air masses and determine the diverse climate types.

The bigger, flat part of Krasnodar Krai has humid continental and semi-arid climate. On the other hand, alongside the Black Sea North coast between Anapa and Tuapse, the climate is Mediterranean, while the mountains have a more humid and cool climate. The area to the south of Tuapse enjoys a humid subtropical climate. In the flat and coastal areas, the average temperatures range from -4° to 5° C in January and from 22° to 24° in July. In the mountains, the temperature varies from 8° in January to 13° in July. The annual precipitation is different across the region: the Sochi area gets from 400 mm to 1,000 mm, while

Krasnaya Polyana gets up to 3,200 mm per year. These are favorable climate conditions for agriculture, since the flat part of the land has a vegetation period lasting between 220 and 240 days. That is a significantly longer period than in other parts of Russia. It is well known that Russian natural conditions are generally not adequate for agriculture development. The sowing and harvest period is only 100 to 140 days long in the northern taiga and tundra areas, depending on the humidity, 150 to 170 days long in Saint Petersburg region, while in the central part surrounding Moscow it is five and a half months long (from mid-April to the end of September) and in the steppe areas this period lasts for about half a year.

The most important river is the Kuban river (Figure 5), which gives an alternative name to the region, since Krasnodar Krai is also known as Kuban. The river flow is relatively short (870 km and together with its tributary Ullukam 906 km) but rich in water volume. Interestingly, the river's name has changed about 300 times. It originates on the slopes of Mount Elbrus in Karachay-Cherkessia at the merge of its two tributaries, Ullukam and Uchkulam. South of the city of Nevinnomyssk, it reaches the Kuban-Azov plain, flows across Stavropol Krai, Krasnodar Krai (662 km of the total flow) and the Republic of Adygea. It eventually discharges into the Sea of Azov, forming a large marshy delta. Its tributaries are Mali Zelenchuk, Bolshoy Zelenchuk, Urup, Laba, Belaya and Pshish. Due to its high fluctuation, the Kuban used to flood, causing significant damages in spring and summer time, so dams and channels were constructed to regulate the water flow. In 1949 the Nevinnomyssk channel was constructed, which was a basis for creating a new 450 km-long water basin, thus providing water for agriculture and opening up possibilities for construction of new hydropower plants. A large number of cities are located along the Kuban, such as Karachayevsk, Cherkessk, Armavir, Novokubansk, Kropotkin, Ust-Labinsk, Krasnodar, as well as the harbour-city Temryuk, situated on the coast of the Sea of Azov.

Krasnodar Krai area is split into two parts by the Kuban river: the plain, covering about two thirds, and the south, hilly and mountainous part, which stretches over one third of the total territory. The highest peak (3,345 m) is at the Mount Tsakhvoa Hertsen ridge, between the rivers Bezymyanka and Tsakhvoa and southeast from Sochi. The mountainous area of the Krai is part of the Greater Caucasus range, which stretches for almost 1,500 km (340 km within the borders of Krasnodar) from the Anapa city to the Absheron peninsula. The width of the Caucasus ridge goes up to 30 km in the northwest and 130 km in the southeast.

More than a half of the total area is mainly flat, dominated by Kuban-Azov Plain, Prikuban Plain and the Kuban river delta. Kuban-Azov Plain is a low alluvial plain with extensive occasionally flooded valleys lying in between the Kuban, the Sea of Azov and the northern borders of the Krai. It descends towards the northwest, with its altitude gradually lowering from 156 m in the Kropotkin region to 0 m on the coast of the Sea of Azov. The Prikuban Plain is terraced and split by deep valleys of the Kuban left tributaries and includes some very pronounced terraces as high as 200 m and also deep uvalas. The Kuban river delta has numerous branches, with low ridges, dune slacks, river confluences and plavni dominating its relief.



Figure 5: Krasnodar Krai and the Kuban river
Source: http://trasa.ru/region/krasnodarskiy_clim.html.

The relief of the Taman Peninsula is quite complex, stretching towards Crimea surrounded by the Sea of Azov in the north, by Kerchensky Strait in the west and by the Black sea in the south. The size of Taman is approximately 2,000 km². It was formed in 5th century by the merge of what once were islands. Seaside planes in Taman alternate with the westernmost parts of the Greater Caucasus and various landscapes formed by the Kuban delta. The hills are not very high and they do not exceed 164 m of altitude. The Peninsula has more than 30 dormant and active mud volcanoes.

Natural resources

Besides enjoying favorable climate conditions and orohydrographic system, Krasnodar Krai is rich in many natural resources, especially minerals, such as oil, salt, gas, coal, manganese, copper, nickel, tin and limestone. There are 60 types of ore, 69 oil reservoirs and 42 sources of mineral water. The oil reserves are estimated at between 1.7 and 1.9 million tons and the natural gas reserves at

3 billion m³. This became the oldest oil exploitation region in Russia, after drills first started in 1864, in Krasnodar, Armavir and Novorossiysk. Accumulations of construction and building materials, such as limestone, granite, marble and gravel, are enormous. Silver, lead, zinc, graphite and iron can also be found and the reserves of iodine-bromine water are significant. The plains of the western part of North Caucasus are rich in chernozem, which favors the agriculture development.

In regards to the soil types, the carbonate chernozem is the prevailing one. A large part of the Kuban-Azov Plain and the Taman peninsula steppes are covered in chernozem. This soil type supports fruit, grape vine, corn, sunflower, sugarcane and winter wheat growth. The soil in the flat and mildly hilly part, stretching north of the line Primorsko-Akhtarsk-Starovelichkovska-Timashevsk-Kropotkin-Armavir, is predominantly carbonate chernozem low in humus (about 5% humus) and with heavy soil texture. Similar chernozem types with a somewhat higher percentage of humus can be found on the left bank of the Kuban, between the Urup and the Bolshaya Laba confluences. The higher-elevation areas mostly have mountain forest soil. The total arable land amounts to 3.9 million hectares. Different kinds of forests, both deciduous and coniferous cover 1.9 million hectares, while there are also many meadows.

The flora and fauna are very abundant and diverse. There are 86 species of mammals, 20 species of reptiles, more than 300 species of birds and 11 species of amphibians inhabiting Krasnodar Krai. Many of the animal species are included in the “Red book of Russia”⁵ (11 species of mammals, 24 species of birds, 2 species of reptiles and 3 species of amphibians). There are two protected natural areas – the Caucasian Natural Reserve and the Sochi National Park. The flora⁶ is represented by 30,000 species, half of which are vascular plants. In regards to the dendroflora, there are 165 species in total, 142 of which are deciduous, 16 are deciduous conifers and 7 are coniferous. Out of the total number, 22% are relict forests, while 24% are endemic. The high-altitude flora consists of 819 species of grasses, 287 of which are endemic. Medicinal herbs are plentiful and about 200 have practical medicinal application. Almost one fourth of the Krai area (1.7 million hectares) is covered by forests. Oak forests

⁵ “Red book of Russia” contains a list of rare and endangered species of animals, plants and fungi. It resembles the “Red book of RSFSR”. The first book, which deals with animal species, was published in 2001 (Pintaly, 2001). The second book, dealing with plants and fungi was only published in 2008 (Kamelin, 2008). From the 1990s to the beginning of the 21st century, a series of corresponding regional red books were published. In Krasnodar Krai, these books were published in 1994 and 2007.

⁶According to: <http://www.agrien.ru/reg/краснодарский.html>

are the dominant ones, with 53,5%, while the common beech and the coniferous species occupy 20% and 6,5% of the forest area respectively. A comparison with Serbia (Ranković, 2008:48) shows certain differences but also some similarities: the total forest area in Serbia amounts to 2.4 million hectares, which is 27% of the total area, it is dominated by the beech and the oak in its deciduous part and by the pine in what it refers to coniferous trees. The above data is not to be taken for granted, having in mind the unplanned deforestation as well as the always-ongoing changes. According to the National Forest Inventory of the Republic of Serbia (Banković et al. 2009:43), 29.1% of Serbia is forested.

A particular sort of natural resources is water. Europe's biggest fresh water basin, the Azov-Kuban basin is situated in Krasnodar Krai. It holds enormous reserves of thermal and mineral waters, with more than 500 rivers of total length 14,000 km. There are also six artificial water accumulations spreading over 59.1 thousand hectares. In the Black Sea and the Sea of Azov coastal areas, the Kuban river forms an enormous 10 to 30 km wide delta, with numerous limans, situated between the cities of Anapa and Yeysk. Almost 13,000 hectares of artificial lakes have been designated for fish farming. However, the fish population is endangered in case of most of the species used in fish farming – sturgeon, zander and the subspecies of rudd found in the Black Sea and the Sea of Azov named taran, as well as bream. Since the population of belugas is constantly declining, its conservation status is currently characterized as critical.

Furthermore, natural gas and oil reserves have been found in the Taman Peninsula, as well as some iron ore. A harbor in Taman is currently under construction and is to become one of the biggest ports in the South of Russia. The most important mineral mined in this area is tamanite, named after the peninsula.

Economy

The above mentioned natural conditions and diverse resources have made the Krasnodar Krai one of the regions with the highest economic growth and the most developed infrastructure network in Russia⁷. It belongs to the North Caucasus economic region, which comprises ten federal subjects: Rostov Oblast, Krasnodar Krai, Stavropol Krai, Republic of Adygea, North Ossetia-Alania, Dagestan, Karachay-Cherkessia, Kabardino-Balkaria, Ingushetia, Chechnia

⁷ Serbian scientific literature rarely considers Russian regional economies and economic geography. One of the exceptions is textbook (Sekulović, 2006), but its features and volume allowed the exposure of mostly general conclusions in terms of Russian economic regions.

(Ichkeria). This region makes up 2% of the total area of Russia (335.1 thousand km²), but has 19,445,604 inhabitants (13.6%). The region is mainly agro-industrial and other important industries are machine construction and chemical industry.

The administrative capital is the Krasnodar city, situated in the Prikuban plain, on the right bank of the Kuban river. Krasnodar is 1,539 km away from Moscow. Its population exceeds 800,000 inhabitants (beginning of 2014); it is an important railway and road knot, as well as a major industrial, transportation and culture center. The heavy industry, mostly machine construction, accounts for about one third of industrial production. Furthermore, oil refining, chemical industry and construction materials production are also developed. In terms of light industry, the most important are the industries of textile, leather, food, tobacco and furniture. Krasnodar is also a significant science and investigation hub, being home to the Kuban State University, Kuban Agrarian University, Kuban State Technological University, Medicine Academy, Kuban Medicine Institute etc.). Until 1920, the city kept its former name, Yekaterinodar, given to it in honor of the Empress Yekaterina Velikaya who had rewarded the Black Sea Cossack Host with this portion of land in 1792. The city was founded on this land in 1793.

Krasnodar has numerous important buildings. One of the best-known ones is the famous Shukovskaya Tower, a water tower designed by Vladimir Grigoryevich Shukhov (1853–1939), which is an architectural monument of federal significance (Figure 6). Other monuments of federal significance are the Krasnodar Philharmonic building and the “Winter Theater”, work of the architects A. A. Kozlov and F. O. Schechtel dating back to 1908 (reconstruction in 1954 lead by the architect A. V. Titov) and home to M. S. Kuznetsov from 1888 to 1990. Today it serves as a conservatory.

The basis of the Krai’s economic potential is the agro-industrial complex, one of the biggest in Russia. The fuel and energy complex, including the oil and gas refining and electric energy industries, are also developed. Besides that, the region has significant chemical, light industry, machine, agricultural and furniture production, as well as forestry and wood manufacturing. The most important industrial centers are Armavir, Yeysk, Krasnodar, Kropotkin, Novorossiysk, Tikhoretsk.

Within the Krai Gross Domestic Product structure, the emphasis is on the transport (16.2% of the total in comparison with 8.2% in Russia as a whole), and agriculture (16.0% compared to 7.8%). The share of industry value in total GDP

is two times lower than the average and amounts to 16% (in comparison to 33% in Russian Federation and 23% in the South Federal Okrug). The structure of Serbian GDP⁸ is significantly different: the process industry accounts for 18.1%, agriculture, forestry and fishery for 9% each, while transportation and storage only account for 4.6% of the total each.



Figure 6: Shukovskaya Tower in Krasnodar
Source: <https://ru.wikipedia.org/wiki>.

The Krai's main industry is the food industry, which provides for 42.8% of the total industrial production. In regards to the light industries, textile industry is also present (kamgar-wool corporation and carpet manufacturing in Krasnodar). The Krai is also one of the leading regions in market agriculture production. The agriculture participates in the total GDP with 16% (7.8% in Russia), and it is the most important agricultural region in the country, raking 1st in Russia and accounting for 7% of its total gross agriculture production. The most important crops are winter wheat, rice, maize, sunflower, sugarcane and castor oil plant. The annual crop yield is about 3.5 million tons of wheat and 715,000 tons of corn. The total wheat yield (10% of the Russian gross yield) and sugarcane yield (17.3%) is the most copious in Russia. The Krai also maintains one of the leading positions in sunflower and wine production (15% and 37% respectively). The North-Caucasus region is the biggest rice producer in Russia, and one of its main production centers is Kuban. Besides the tea, which is grown in the south, the plant oil production is also significant, accounting for one third of Russia's total production, as well as sugar (one third of total production) and meat production. Fishery is especially developed in the Kuban delta.

⁸ Share in Gross Value Added in 2012 according to the Statistical Yearbook of the Republic of Serbia, 2014, Belgrade, 2014, pp. 140-141

Table 1. The major crops yield, quintal per hectare

Culture	2007.	2008.	2009.	2010.	2012.
Crop		56	47.1		40.3
Wheat	47.2		48		
Winter Wheat					
Winter Hordeum		52.3	49.3	52.4	
Rice	50			66.2	65
Maize (grain)				33.2	41.5
Sugarcane	265.7	437		348.4	
Sunflower					22.8
Soy					18.1

Source: Сельское хозяйство Краснодарского края,

<http://www.agrien.ru/reg/краснодарский.html>.

The average crop yield is shown in Table 1 above. Although the data are not complete, they provide some information necessary for comparisons with Serbia. According to the Statistical Yearbook of the Republic of Serbia in 2014 (p. 230), in the past three years, the average annual crop yield, measured in tones per hectare, has been: wheat – 4.2; 4.0; 4.8, maize – 5.1; 2.8; 4.9, sugarcane – 50.7; 35.9; 47.8, sunflower – 2.5; 2.2; 2.7, soy – 2.7; 1.7; 2.4. As it can be observed, there are minor differences, but they are not pronounced.

The fact that Krasnodar Krai borders two seas, the Black Sea and the Sea of Azov, determines its position in terms of its transportation significance. The main seaports are Novorossiysk and Tuapse, both located on the coast of the Black Sea (Figure 5), while the Kuban is important in terms of river transportation. It is navigable from the confluence of the Laba river, near the city of Ust-Labinsk, 62 km east of Krasnodar. Road, air and rail transportation modes are developed (North-Caucasian railway). There are five airports (Krasnodar, Sochi and Anape are international, while Gelendzhik and Yeysk are domestic airports), which together form the Basel Aero group. The air gate of the Krai is Pashkovski airport in Krasnodar, one of the biggest airports in Russia, which was ranked the seventh busiest airport in 2010. Pipeline transport is supported by the international oil pipeline “Tengiz-Novorossiysk” and the gas pipeline “Russia-Turkey” (“Blue Stream”). This oil pipeline (Figure 7) connects the West-Kazakhstan city of Tengiz with Novorossiysk; it is 1,410 km long and its volume is 28.2 million tons of oil per year. Originally, the project was modified in order for its capacity to increase up to 67 million tons of oil per year.

The “Blue Stream” gas pipeline (Figure 8) connects Russia and Turkey with pipes lying on the bottom of the Black Sea. Its total length is 1,213 km, 396 km of which are under the sea. This construction project was a part of the Russian-

Turkish 1997 agreement and its commercial exploitation started in 2003. The initial volume of the gas pipeline was 16 billion m³, and it is planned to increase up to 32 billion m³. The “Blue Stream” is a project that has beaten many records while having a strong impact on the gas industry development. In 2013, it transported 13.7 billion m³ of gas to Turkey. Russia and Turkey have reached an agreement in principle to increase its capacity up to 19 billion. The Turkish authorities have expressed readiness to consider the possibility of the “South Stream” passing through Turkey, which would change radically the position of some countries, especially Bulgaria, in regards to the growing problem related to the construction of this gas pipeline. These facts are certainly of great interest and importance for Serbia, whose participation in this project is rather uncertain.



Figure 7. Oil pipeline “Tengiz-Novorossiysk”

Source: <https://ru.wikipedia.org/wiki>

Krasnodar Krai is one of the principal tourist destinations of Russia, famous for internationally renowned resorts. Sochi, which lies 1,700 km from Moscow and 270 km southeast of Krasnodar, is the most important resort destination in Russia. Besides that, it is an important transportation knot, since the rail connecting North Caucasus with South Caucasus passes through the city. Furthermore, Sochi is an important economical and culture center in the Black Sea coast area and host of the 2014 Winter Olympic Games. The Sochi area is surrounded in the northeast, east and southeast by the ridges of the Greater Caucasus. Thanks to their height, which ranges from 300 to 1,100 m, these ridges protect the coastal area from the cold north and east winds, thus creating unique climate conditions, which are to thank for the fact that a summer resort destination was able to organize winter Olympics. Other popular tourist destinations are Anapa, Gelendzhik, Yeysk, Goryachiy Klyuch and the Tuapsin tourism zone. The Taman Peninsula is also promoting tourism, which is developing thanks to the mild and warm climate, kilometers of golden sandy beaches, a high number of sunny days throughout the year, rich history, a large

number of architectural monuments, hectares of vineyards, among other factors. The Taman Peninsula resorts, such as Veselovka, Taman, Kuchuguri, Golubitskaya and Temryuk are uniquely situated between two seas, the Black Sea and the Sea of Azov. Serbia does not have comparable potential for tourism development, but it does have other attractive features, such as historical monuments. Therefore, the current position of tourism within its economy (only 1.4% of its Gross Value Added) is quite poor. Considering the cultural proximity of the two peoples, these destinations should be present in the Serbian tourist offer in Russian and specifically Krasnodar market.



Figure 8: "Blue Stream" gas pipeline
Source: <http://www.kommersant.ru/factbook/50802>

In terms of natural wealth, well-known are the Caucasian State Nature Biosphere Reserve named after H. G. Shaposhnikov and the Sochi National Park, one of the first national parks of Russia, which was founded in 1983 as the Sochi State Nature National Park, receiving its current name in 1995. The Caucasus Reserve was given the biosphere reserve status by UNESCO in 1979. In 1999, its area was included in the World Heritage Site list. A little bit above 63% of its total area, which amounts to more than 280,000 hectares, belongs to Krasnodar Krai, while the rest is in the Republic of Adygea and in Karachayev-Cherkessia Republic. The total Sochi National Park surface (190,000 hectares) is somewhat smaller than the total area of all the 5 national parks in Serbia (Đerdap, Kopaonik, Tara, Šar Mountains and Fruška gora), which amounts to 192,171 hectares. There are also numerous historic-cultural monuments, with temples standing out among them (Pokrov Church in Taman, Church of the Holy Prophet Iliy, Grigoriy the Victorious Church, Yekaterin Cathedral Council), as well as monasteries (female monasteries of Assumption of the Holy Virgin, Marfo-Mariyin, Mary Magdalene and the male Monastery of the Holy Spirits). In this area, there are also many village and fortification remains from different periods, such as the Phanagoria fortification in Taman, which dates back to 1794; as well

as archeological sites (dolmens, giant stone graves in the North Caucasus estimated to date back 5,000 years ago, which were discovered by the Russian academician P. S. Palas in 1793). Some contemporary buildings are also worth mentioning, such as the Malaya Zemlya Memorial Complex in Novorossiysk. Tourists should not miss seeing some natural tourist attractions: Agur Waterfalls, Vorontsovskaya Cave, Prometheus statue in Orlinye Rocks, place where Prometheus was chained according to the legend, and the Museum of Caucasian Flora and Fauna. The Prometheus statue (Figure 9) was erected in 1998 by the Omsk sculptor Kapralov. It is located in the Orlinye Rocks (White Rocks) Reserve, close to the Agur Waterfalls in the Khostinsky region.



Figure 9. Prometheus statue in the Orlinye Rocks Reserve
Source: http://sochi.tour52.ru/online/dost/pamyatnik_prometeyu.html

In 2013, the Krasnodar Krai ranked first in the Ministry of Regional Development of Russian Federation evaluation of the investment attractiveness of Russian regions. Thanks to the Olympics mega-project in the first place, the region saw an investment rate of 57.4% with a total investment volume reaching 798 billion ruble and GDP worth 1,399 million ruble. In 2013, the fixed capital investment made up 61.2% of the region's GDP, the investment volume exceeded 907 billion ruble, and the gross regional product was 1.5 trillion ruble. At the beginning of 2014, 225 major investment projects were realized in Kuban, worth 900 billion ruble in total (Investment records, 2014).

What are the possibilities of economic and not only economic cooperation between Serbia and Krasnodar Krai? It should be made clear that the common conceptions of Serbian exportation potential based on agriculture and food production, as accurate as they may be when it comes to Russia as a whole, are not and cannot be primordial in this case. Having in mind the economic structure of Serbia and Kuban, cooperation could be established in the areas of high technology, science and investigation, especially in the agro-complex and in tourism branch. The light industry decline that Serbia has been experiencing in

the transition process has limited significantly its exportation possibilities, which is for now an uncompensable loss in its economic exchange with Russia as a whole as well as with its regions, specifically Krasnodar Krai. It is not easy to assess the possibilities of revitalization of the Serbian light industries capacity, but it is certainly one of the possibilities for mutual cooperation.

Lastly, Serbian construction operation companies deserve to be mentioned, since they already built their reputation on the Russian market during the preparations for the Sochi Winter Olympics. Their potential in Russian Federation should not be underestimated, nor should their another decline be allowed, as it was the case in the 1990s.

Conclusion

Krasnodar Krai is one of the smaller Russian federal subjects by both size and population, comparable to smaller European countries. However, it is characterized by great natural, cultural and economic diversity. It is one of the economically most developed regions of Russia, with a relatively comprehensive economic structure. The thriving agro-industrial complex, machine construction, oil and gas industry make perfect conditions for further economic advancement. Additionally, there are favorable conditions for development of different forms of tourism, while the coastal proximity is convenient for transportation, one of the most developed branches in Krasnodar economic system.

Considering the characteristics of the economies of Serbia and Krasnodar Krai, the possibilities of their cooperation lie in the areas of high technologies, science and investigations and above all in the agro-complex, as well as tourism. As accurate as it may be when it comes to Russia as a whole, the stereotyped vision of Serbian agricultural and food production as our biggest exportation potential is in this case not and cannot be fundamental.

In regards to the cooperation with this region as well with the whole of Russia, Serbian construction operation companies should not be underrated, since despite all the difficulties this branch has gone through in the transition process, it succeeded in establishing good reputation during the Sochi Olympics infrastructure development, thus occupying solid positions within Russia.

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