

## COUNTRY PROFILE



# RUSSIA



### Geography

The Soviet Union came to an end in late 1991 and the Russian Federation emerged as one of the 15 newly independent former Soviet republics. The Russian Federation is a large country in area, population, and economic potential. It is located in the eastern part of Europe and in the northern part of Asia. Its area totals 17.07 MSq.Km. Russia is surrounded by the seas, the Arctic Ocean, the Pacific Ocean, the Atlantic Ocean (the Baltic Sea, the Black Sea, and the Sea of Azov) as well as by the Caspian Sea. In the south, Russia borders with China, Mongolia, Kazakhstan, Azerbaijan, and Georgia; in the west, it borders with Belarus, the Ukraine and Baltic states.

### Population and land use

By the mid-2019, as per Population reference Bureau, the country's population numbered 146.7 Millions, including 107.1 millions of urban population and 39.6 millions of rural population. The largest city is Moscow with 12 million inhabitants, followed by Saint Petersburg with 5 million inhabitants and 13 cities of 12 million inhabitants. Average population density in the country is 8 inhabitants/Km<sup>2</sup>. Of the total area of the county, 45% is covered by forests, 4% by water, 13% by agricultural lands, 19% by deer pastures and 19% by other lands.

### Climate and rainfall

A large part of the territory of Russia is within the limits of the temperate climatic belt. The far north and northeast of Russia are located in the area of sub-arctic and arctic zones. The monsoon climate is observed in the southern part of the Far East (the Primorski Krai). The mean temperature of January in the country varies from -10 to -50°C and that of July +10 to 25°C. The yearly

Geo. Area (MKm<sup>2</sup>)  
17.07



Population (M)  
146.7

Average rainfall (mm)  
550



Arable Area (Mha)  
124.7 (2012)

Irrigated Area (Mha)  
4.5 (2012)



Drained Area (Mha)  
4.8 (2007)

Micro Irrigation (Mha)  
0.05 (2012)



Sprinkler Irrigation (Mha)  
2.5 (2012)

precipitation varies from 100 to 1000 mm. Many areas of Siberia and the Far East feature permafrost, which covers 11 MSq.Km. or 60% of the total area of Russia.

### Food and agriculture

Actual conditions of agricultural lands and the vast territory of Russia are responsible for the erroneous opinion of unlimited and inexhaustible land resources of the country. The agricultural area, which is the sum of arable land, permanent crops and permanent meadows and pasture, is estimated at 217 Mha (2013), which is 13% of the total area of the country. The agricultural land area of Russia involves: 124.5 Mha of arable lands, 18 Mha of hay lands, and 55 Mha of lands under pastures. The major crops grown are: Grain crops and legumes, Potatoes and Vegetables, Sugar beet, Sunflower (seeds), Soybeans, Fruits and berries. In 1997, there were also 274 thousand percent (individual) farms having 5.7% of sown area producing 7.5%



of cereals, 1.2% of potatoes, 2.8% of vegetables, 2.9% of sugar beet, 14.2% of sunflower seeds and 2% of fodder crops. Their share in the total crop output was 2%.

## Water resources management

Water resource complex is based on the river runoff that in normal years makes up 4262 Km<sup>3</sup>, 90% of this amount is accounted for by the basins of the Arctic and Pacific Oceans. However, over 80% of the population of Russia and its main industrial and agricultural potential mostly lie in the basins of the Caspian and the Sea of Azov, accounting for less than 8% of the total annual volume of river runoff. Most of the land under irrigation is commanded by reservoirs, and open canals convey the water to the irrigation schemes. The largest canals are: Saratovski, Donski, Magistral, Great Stavropolski, TerskoKumski and Kumo-Manycki. Within the schemes, underground pipes convey the water to the emitters (rain guns). The sprinkler irrigation was the most widely used technique (96% of the area), surface irrigation being used on the remainder. The present operational groundwater resources in proved deposits is equal to 28 Km<sup>3</sup>. The predicted potential groundwater resources of Russia exceed 300 Km<sup>3</sup> a year.

Operational management of the Russian Federation water resources is carried out under the leadership and with the participation of the Federal Agency for Water Resources, which is part of the Ministry of Natural Resources and Environment of the Russian Federation as a structural unit.

## Irrigation and drainage

Based on climate and soil conditions, it is estimated that 15-20% of the cultivable area needs irrigation in the moderately warm

dry semi-desert zone, 5-8% in the moderately warm semi-dry steppe zone, 2-5% in the moderately warm semi-dry forested steppe zone, and 1-2% in the moderately warm forest zone. Figures for irrigation potential are estimated at almost 29 Mha under permanent irrigation. However, water resources used for irrigation will make it possible to irrigate a total area of 20 Mha, including 5 Mha of existing irrigated lands. Out of 15 Mha of lands, which was being irrigated in 2010, 4.3 Mha are located in the European part of Russia. The area of new drained lands in over wetted zone of Russia is likely to increase by 7-8 Mha, later in the decade. In 2012, total area equipped for irrigation was estimated at 4.5 Mha, of which 80% were irrigated by surface water and 20% by groundwater. In the over moistened zone of Russia the most intensive agricultural drainage construction was carried out in 1970s - 1980s. The area of drained lands increased from 3.1 Mha in 1970 to 5.1 Mha in 1990, and was 4.8 Mha in 2007 including 3.2 Mha with subsurface drainage.

## Water policies

Social and economic transformations are taking place in Russia, like change in the organizational and legal forms of the water users, introduction of the WATER CODE requiring conceptions of the State Policy on the Use, Rehabilitation and Protection of Water Bodies. Before the USSR disintegration, the period of the most intense land reclamation development from 1965 to 1991, the former Ministry of Land Reclamation and Water

Management of the USSR was responsible for administration of irrigation and drainage schemes and water resources of the country. The Ministry of Natural Resources of Russia is responsible for management of a water resources complex; 12 inter-regional large river basin boards and 84 territorial natural resources committees in the republics; territories and regions are subordinated to the Ministry. The said committees are responsible for water resources as well. In 1998, the Federal Law on Payment for Use of Water Sources elaborated by the Ministry of Natural Resources was passed. Nowadays there are federal programs for the effective involvement of agricultural lands and the development of the reclamation complex of the Russian Federation for the next 10 years. They include the development of scientific and methodological justifications and the determination of prospects for the water resources use for various large agricultural and reclamation facilities. One of the promising directions of the state program for 2022-2031 is to increase the efficiency of the water resources use of the Kuban River basin, the North Caucasus Federal District and the Volga region with reclamation of agricultural lands based on the territory water balance.

## ICID and National Committee

Russia joined ICID in the year 1955 and established the National Committee of the Russian Federation on Irrigation and Drainage (RUCID). The past Vice Presidents of ICID from Russia were: Mr. E.E. Alekseevsky (1972-1975); Mr. A.N. Askochensky (1960-63); Mr. K.K. Shublazde (1966-69); Mr. B.G. Shtepa (1977-80); Dr. Georgi Georgievich Guluyk (2004-2007); and Dr. (Mrs.) Irena G. Bondarik (2106-19). The RUCID hosted the following events in Russia: the 9th International Congress on Irrigation and Drainage at Moscow during 28 July - 02 August 1975; Socio-economic aspects of irrigation, drainage and flood control in the Afro-Asian countries during 07-16 September 1976 at Tashkent (USSR); 12th International Drainage Workshop from 23-26 June 2014 in Pushkin near St Ptersburg. Mr. Daniil P. Putyatn is currently the Chairman and Dr. (Mrs.) Irena G. Bondarik is Secretary General of RUCID. The RUCID can be contacted at <ruscid@mail.ru>

