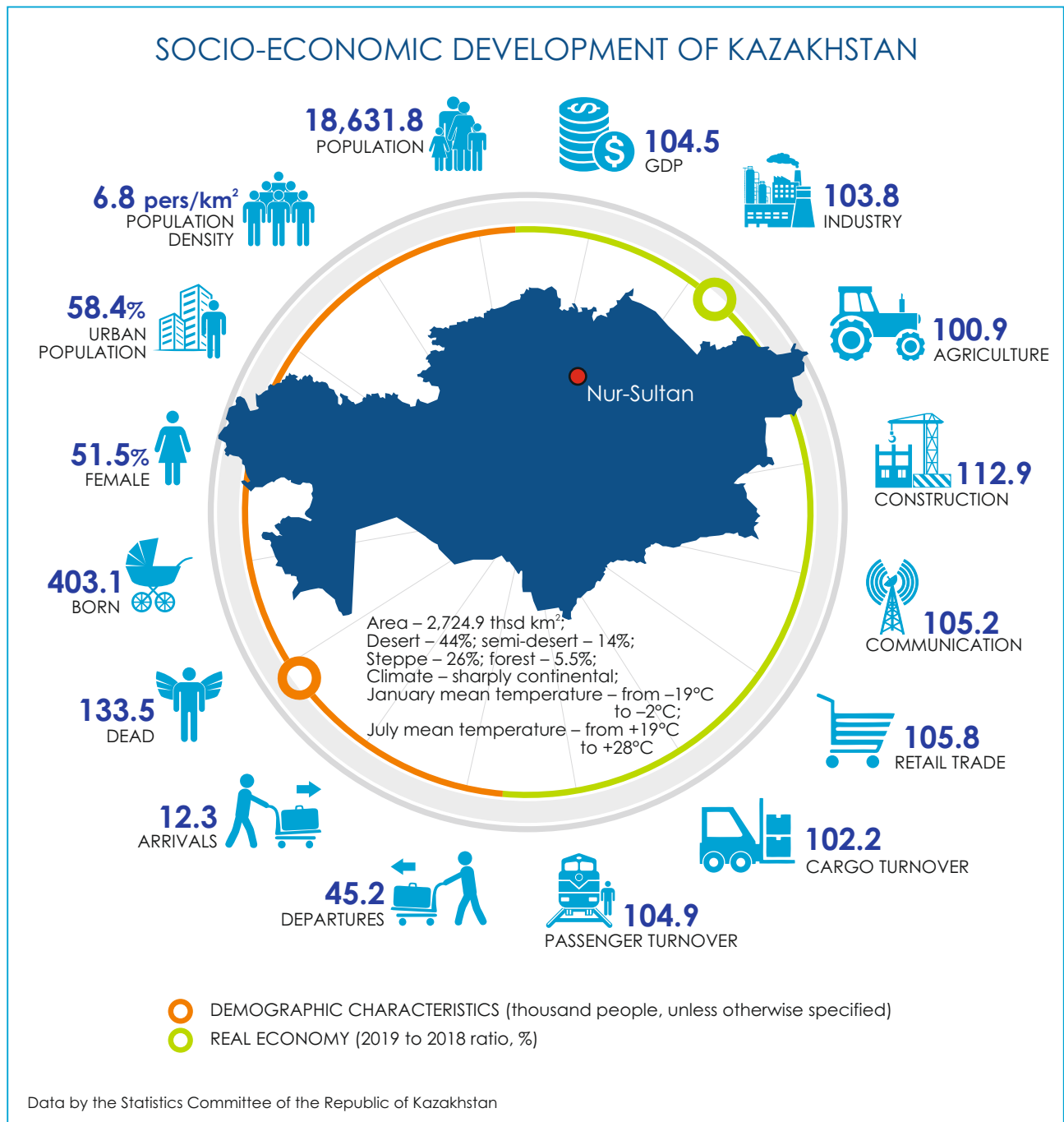




Section 5

Key Water Developments in the Countries of Central Asia

5.1. Kazakhstan



Water Sector

Water resources. The country's annual surface runoff is a little over 100 km³, of which more than 46 km³ are formed outside the national boundaries. The explored groundwater stock is 15 km³/year. The country has 8,500 rivers, 48,000 large and small lakes, with the largest ones of Balkhash, Zaisan and Alakol. The north-eastern area of the Caspian Sea is within the boundaries of Kazakhstan. The Aral Sea is shared by Kazakhstan and Uzbekistan.

Public administration reforms. The [Ministry of Ecology, Geology and Natural Resources \(MEGNR\)](#) was formed and took functions and mandate for: development and implementation of the public environmental policy, waste management, and protection, monitoring and control of natural resource use from the **Ministry of Energy**; use and protection of the water fund, water supply and diversion, and forestry from the **Ministry of Agriculture**; and, geological studies and re-production of the mineral resources base from the **Ministry of Industry and Infrastructural Development** (Decree No. 17 of the President of Kazakhstan,

17.06.2019). MEGNR contains in its structure among others the Department of Transboundary Rivers and the Committee for Water Resources.

Development and implementation of State programs. In the course of 2019, the **Concept of the Kazakhstan's State water management program for 2020-2030**¹³ was developed. The aim is to ensure water supply, preserve and restore water bodies to achieve their good status. The Program will include 10 main directions: international cooperation; improvement of legal framework; institutional reforms; modernization and reconstruction of water infrastructure; learning international best practices on water market; digitization of the water sector; Smart Water project; environmentally optimal water use; training of water professionals; and, national water projects. The Program provides for maintenance of the water balance at the level of 100 km³ by 2030 by increasing surface water by 5-7 km³ through the construction of new reservoirs, saving up to 5 km³ of water, and using up to 15 km³ of groundwater. It is planned to reduce water consumption per unit GDP from 91.2 to 73 m³ per \$1,000; build 26 new hydraulic structures and reconstruct 182 republican structures and 300 public utilities, construct new irrigation systems for irrigation expansion from 1.7 to 3 Mha; increase the length of coated main and distributing canals from 3,400 to 19,000 km. Basin inspections are to be 100% equipped. Additionally, catchment areas will be afforested on 200,000 ha.

Rehabilitation of irrigated land infrastructure was continued as part of the State Program for Agriculture Development for 2017-2021 and the Irrigation Development Plan until 2028. In particular, measures are to be taken in the Zhambyl province to achieve the following 3 targets: (1) rehabilitate irrigation on non-used but needed land area of 86,200 ha through reconstruction of 436 water-management facilities. 31 projects were developed under the EBRD loan and 24 projects among them have got positive governmental expert review. Modernization of three canals covering 1,400 ha in Zhambyl district was started; (2) by the end of 2020, construct three new reservoirs to improve available water supply of land; (3) rehabilitate deteriorated reservoirs Karakonyz, Tasotkel and Yntaly to increase their accumulation capacity 2-3 times.

Under the Irrigation and Drainage Modernization Project¹⁴, Phase 2, 223 canals, 208 wasteways and 149 vertical drainage wells will be re-

habilitated in Almaty, Zhambyl, Turkestan (former South Kazakhstan) and Kyzylorda provinces on an area of more than 39,000 ha. In the first turn, 147 km of canals, more than 191 km of wasteways and 49 vertical drainage wells are to be repaired in rural settlements of Maktaaral district, Turkestan province.

[ADB](#) has approved a \$249.8 million equivalent loan in local currency (tenge) to the Republican State Enterprise Kazvodkhoz (KVK) for the [Irrigation Rehabilitation Project](#) to help in the rehabilitation and improvement of irrigation networks serving 171,000 ha of land in East Kazakhstan, Karaganda, Kyzylorda and Zhambyl provinces. The project will rehabilitate about 245 irrigation schemes. The total length of new concrete-lined canals will be about 1,064 km, while 1,976 km of earth canals will be improved. Other infrastructure works include the construction and rehabilitation of about 4,185 hydraulic structures, including water measuring devices; improvement of 358 km of drainage collectors; establishment of a drip irrigation system covering 9,300 ha in Zhambyl; and the installation of 24 supervisory control and data acquisition systems.

Modernization of hydraulic structures. In 2019, modernization of a waterworks facility on the Bol'shaya Bulon River together with the Aktogan main canal in Koktepa district and Uydenin head intake structure in East Kazakhstan province was completed. The Aitek waterworks facility in Kyzylorda province and the Aspara waterworks facility with feeding channel in Zhambyl province were reconstructed. Operations at Taushaga reservoir in Turkestan province were completed. Reconstruction of Samarkand reservoir in Karaganda province is underway.

International cooperation. Kazakhstan and China have finished the reconstruction of joint intake structure along the Sumbe River in Almaty province. The Chinese water intake sill and spillway threshold were raised by 30 cm, water divider was rehabilitated, and the Kazakh intake was extended to the size of Chinese one. The structure will be operated jointly to share water of the Sumbe River equally 50/50.

A Memorandum of Cooperation was signed between the Kazakh Ministry of Agriculture and the Hungarian Ministry of Interior. The Memorandum provides for quantitative and qualitative monitoring of water, development of basin ma-

¹³ The Program concept was approved by the Government on 28.01.2020

¹⁴ 70% is financed from the Republican budget, while the rest is provided by WB

management plans, legal and economic regulation and incentives. Particular attention is paid to water research (April 29).

An agreement was reached on the development and adoption of the Program for Environmental Improvement of the Zhaiyk (Ural) River Basin during the XVI Forum of the Kazakh-Russian Inter-regional Cooperation (November 6-7, Omsk). An OSCE-supported [technical meeting on rational use and protection of water resources of the Zhaiyk River](#) took place (November 7, Uralsk, Western Kazakhstan) to discuss, among other issues, the national action plans and joint activities on the rational use of river water.

Events. (1) The Second Central Asian Expert Forum “Dialogue on Water Issues in Central Asia: From the National to the Regional Levels” (September 5-6, Nur-Sultan). The Forum was co-organized by the Kazakh Institute for Strategic Studies under the President of the Republic of Kazakhstan, UNRCCA, and the Friedrich-Ebert-Stiftung in Central Asia; (2) the Workshop “Towards Regional Irrigation Modernization Initiatives in XXI”, which brought together more than 80 experts from the five CA countries (November 19-20, Almaty). The Workshop was co-organized by the [CAWEP Program](#) and the Global Water Security & Sanitation Partnership.

Drinking Water Supply

In 2019, as part of the 2020 State Program for development of Kazakh regions, 205.4 km of networks were constructed and 21 rural settlements were provided with drinking water, while 18 rural settlements got improved water supply.

Group water supply systems were constructed in Almaty, Kyzylorda, and Zhambyl provinces. The projects included reconstruction of wells and construction of water mains to connect villages to water supply.

Agriculture

In 2019, the gross agricultural output amounted to 5,216,454.5 million tenge, including crop production – 2,896,965 million tenge, and livestock production – 2,306,414.9 million tenge. The agricultural export amounted to 12.41 million tones for \$3.29 billion, that is \$198 million or 6.4% more than in 2018.

Latest developments in legislation. The Law on amending and adding some legislative acts of the Republic of Kazakhstan on agro-industry

regulation (Law of RK No.268-VI of 28.10.2019) was adopted. The law simplified withdrawal from credit societies, introduced voluntary insurance of agroindustry entities with a package of support measures, and made a provision for the usage of the certificate of insurance as an additional guarantee for loans.

The Order of the Minister of Agriculture of Kazakhstan (No.252 of 03.07.2019) on the approval of the Rules for organization of monitoring over the use of agricultural land allocated for peasants or farmers was put in action. The Rules describe obligations of land users regarding the use of land and measures to be taken by relevant agencies for agricultural land monitoring.

State Programs. As part of the State Program for Agriculture Development in the Republic of Kazakhstan for 2017-2021, the 2018-2027 National Program for beef farming is implemented. The National program is focused on the establishment of relevant farms. In 2019, the program financed purchasing of 82,100 heads of cattle mother-stock and 374,400 of ewes. As a result, 840 new cattle farms and 1,057 new sheep farms were formed. This is by 38% and 2.2 times more, respectively, than in 2018.

The Ministry of Agriculture developed the sectoral program “E-APK”. The aim of the program is to increase labor efficiency and export of processed agricultural products 2.5 times by 2022. The program tasks include the automation of public services, implementation of digital agriculture projects, and development of cooperation between IT-business and agroindustry entities. The program encompasses 224 investment sub-programs for agricultural development.

The State Program “Digital Kazakhstan” is ongoing. At the year-end, 16 additional digital farms and 6 smart-farms were formed in the republic. The agrometeo-service was developed for 5 country’s regions to provide the forecast on more than 10 meteorological parameters 3 days in advance. In the course of field e-mapping, 26 Mha of cropland (100% of the area) and 56.5 Mha of pastures (78.5% of the area) were digitized. The Egistic online service was put into operation. By connecting the online platform, farmers get access to the maps of soil moisture, nitrogen content, snow cover and other parameters of their fields. The [digital platform QOLDAU](#) is also operational. The platform with over 180 users offers the following services: livestock tracking; online loaning; transport logistics; NB-IoT data transmission; weather service; farmer’s accounting and tax service, etc.

Agricultural machinery. In 2019, the average rate of agricultural machinery renewal reached 4% (3.5 % in 2018) in the Republic. Good rates of machinery renewal were shown in Karaganda (4.6%), Akmola (4.5%), Zhambyl (4.4%), Eastern Kazakhstan and Aktyubinsk (4.3%) provinces.

AO "KazAgroFinans" leased 5,893 machines. This is by 72% more than in 2018. The number of high-productive sowing units that perform several operations (cultivation, sowing, fertilization, harrowing, smoothing and packing) also increased – 143 units against 72 ones in 2018.

The first plant for production of 'energy-saturated' tractors "Kirovets" was opened in Kostanay province. It is planned to manufacture up to 700 tractors a year (October).

Projects. As part of ToR signed by ADB and the Ministry of Agriculture (January) on the assessment of resource base for meat production, the monitoring of natural resources in Akmola province (as a pilot region) was undertaken¹⁵. The Memorandum of Cooperation was also signed between KazNAU and the Scientific-Production Center of grain farming named after A. Baraev.

First fully automated soil and agrochemical laboratory was launched with the support of the Ministry of Agriculture in Petropavlovsk. The project totaling 600 million tenge was implemented by the Kazakh company TOO "Agro Lab".

Events. The following international fairs were held: agricultural and food industry fair – Kaz-Agro-2019; livestock production and meat and dairy industry fair – KazFarm-2019 (October, Nur-Sultan).

Capacity building. The Kazakh Ministry of Education and Science has passed to the Ministry of Agriculture the authority to form the order for training in the sphere of agriculture.

The training "Water quality management: EU experience"¹⁶ was held in Nur-Sultan (June 10-12). The International scientific-practical workshop "My first pivot: introduction to mechanized irrigated agriculture"¹⁷ brought together representatives of farm business from Kazakhstan, US, Russia and Uzbekistan (October 15-16).

Regional and international cooperation. The Ministry of Agriculture signed (1) a Roadmap with

the Ministry of Agriculture of Uzbekistan on cooperation in the area of agricultural sciences, production, certification, trade, digitization, veterinary and livestock breeding, and plant quarantine for 2019-2024 (November 17); (2) a Memorandum of Cooperation with the Argentine's National Institute of Agricultural Technology; (3) agreements with "Tyson Foods" on implementation of agro-multiprotein industry development program in Kazakhstan and construction of an up-to-date meat processing factory in Kazakhstan, as well as with "Kusto Group" and Valmont Industries on promotion of efficient irrigation and productive agriculture principles in Kazakhstan. A plant will be constructed in 2022 to manufacture 1,000 broadside and center pivot irrigation units a year; (4) an Agricultural cooperation agreement with Estonia; (5) the joint declaration of intent with the German Ministry of food and agriculture and the joint statement for taking the German Agrarian Center under patronage of the Association for the Sustainable Development of Modern Agricultural Methods and Technologies in Kazakhstan (December 5-6, Germany).

Energy

Latest developments in legislation. A draft law was adopted for ratification of the Agreement between the Government of Kazakhstan and the European Organization for Nuclear Research (CERN) on international cooperation¹⁸ (September 26). A roadmap was developed and approved by the joint order of the Ministry of Economy and the Ministry of Education and Science of Kazakhstan. The roadmap provides for cooperation of institutes and research organizations with CERN laboratories in the area of fundamental and applied research, nuclear medicine, nuclear physics, etc.

Hydropower. The Shardara HPP commissioned in 1967 is reconstructed and modernized by the Austrian-German company Andritz Hydro GmbH at the total cost of 38 billion tenge. First, second, and third aggregates were put into operation in February, April, and December, respectively. The fourth aggregate is planned to be launched in February 2020. The plant's capacity is to increase from 100 to 126 MW/year after replacement of all hydroaggregates. HPP covers 9% of the total energy demand of Turkestan province. It is envisaged that this indicator will increase to 15% after modernization.

¹⁵ Joint mission of ADB, U.S. Department of Agriculture and the Michigan State University

¹⁶ As part of the project "European Union – Central Asia Water and Environment Cooperation" (WECOOP2)

¹⁷ Organized by SPCGF and Valmont Industries (USA)

¹⁸ The Agreement was signed in Geneva on June 29, 2018

Verkhne-Baskan HPP-2 (capacity – 8.8 MW, cost – 4 billion tenge) and Verkhne-Baskan HPP-3 (capacity – 4.2 MW, cost – 3.4 billion tenge), plus a hydropower plant along the Kora River (capacity – 29 MW) are constructed in Almaty province. The cascade of seven HPPs is also constructed at the total capacity of 24.8 MW along the Tekes River in the same province. The 18 MW HPP consisting of 5 small plants is constructed in Zhambyl province.

TOO Standard Hydro Power is to construct two cascades of HPPs (total capacity – 18.2 MW, cost – 6.01 billion tenge) in Aksu district, Almaty province and put them into operation in 2021. The project includes the construction of four small HPPs of 14 MW in total along the Buyen River and small HPPs of 4.2 MW along its tributaries (Koksai and Burkettybien). The average annual generation is planned at a level of 89.9 GWh.

Alternative energy. Kazakhstan has made large scale efforts to increase the share of renewables in the total energy generation: 90 RES facilities with the installed capacity of 1050.1 MW are operational. In 2019, 21 RES facilities, 504.55 MW, were put into operation. At the end of the year, 19 wind stations of 283.8 MW, 31 solar stations of 541.7 MW, 37 HPPs of 222.2 MW, and 3 biofuel power plants of 2.42 MW were operational.

In 2019, solar power stations were commissioned in: (1) Karaganda province – the largest solar station in CA with 307,000 solar panels and the capacity of 100 MW and the Gulshat station, 40 MW, with the planned annual generation of 58.6 million kWh; (2) Almaty province – the 100 MW station located 13 km northward from Kapshagai town.

Investments in wind power stations (WPS). The 50 MW WPS was put into operation near the Kostomar village in Akmola province by TOO CATEC Green Energy with the financial support of the Kazakhstan Development Bank (August). The 48 MW WPS was commissioned in Aktyubinsk province. The project was implemented by the Italian investor “Eni” jointly with “General Electric” under support of “Kazakh Invest”.

Construction of the first in CA station, which is over 100 MW, is started in Zhambyl province (July). The project is invested (\$160 million) and constructed by China Power International Holding Limited. 40 wind turbines of 2.5 MW are to be built. It is expected that the station will generate up to 350 million kWh.

Events. (1) [I International business festival – Solar Fest Qazaqstan](#) dedicated to RES development in Kazakhstan (July 4-5); (2) [II International energy supply forum](#) (November 29, Nur-Sultan); (3) XII Eurasian Forum KAZAKHSTAN ENERGY WEEK-2019, during which [III renewables summit](#), panel sessions and roundtables were held. A number of agreements were concluded on construction of solar stations and joint activities and a Memorandum of mutual understanding and cooperation was signed between the Kazakh Ministry of Energy and ADB (September 23-29, Nur-Sultan); (4) The Kazakh delegation took part in the CAREC Energy investment forum and the 1st dialogue of energy ministers, where they discussed the issues of sustainable energy development with the ultimate aim of creating an interlinked and reliable regional energy system. The draft 2030 CAREC Energy Strategy was considered as well (September 20-21, Tashkent).

International cooperation. The following documents were signed: (1) Memorandum of mutual understanding in RES between EDB and the Association of Renewable Energy of Kazakhstan (AREK) (May 16); (2) Memorandum of cooperation between AREK and the Solar Power Europe, as part of which the parties agreed on joint activities for mobilization of investments in green energy projects in Kazakhstan and EU (May 22); (3) Memorandum of mutual understanding on cooperation and support of RES development in Kazakhstan between the Ministry of Energy and AIB (November 28).

Capacity building. Kazakh experts took part¹⁹ in study tours and visited RES entities, including a solid waste utilization unit and a biogas station (April 24-28, Finland); studied experience and RES technology (November 18-22, Denmark).

Environment and Climate Change

Latest developments in legislation. The Law on ratification of the Protocol on pollutant release and transfer registers to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters was adopted (Law No. 279-VI ZPK of 12.12.2019). The access to information will be extended by creating the nation-wide pollutant release and transfer registers.

The public hearing of the draft new Environmental Code was held. The core principles of the Code are as follows: (1) polluter pays and re-

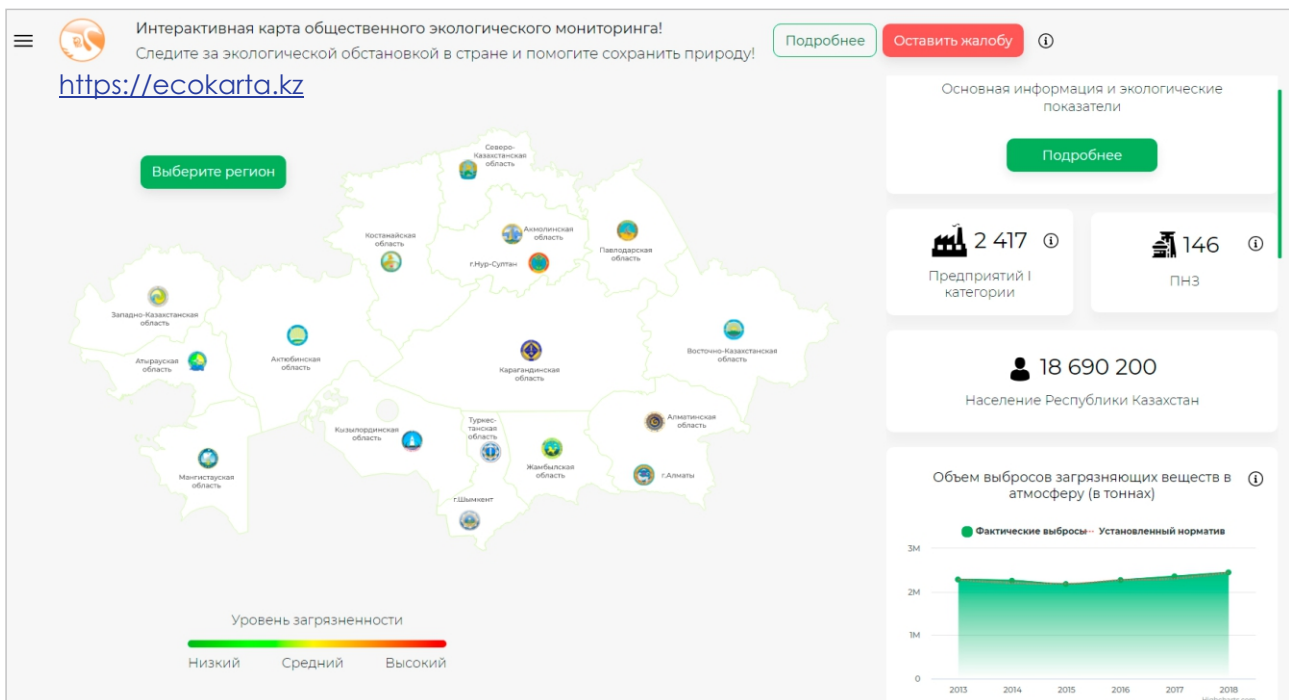
¹⁹ UNDP/GEF Project “[Derisking Renewable Energy Investment](#)”

medies; (2) new approaches to environmental impact assessment; (3) best available technology and economic incentives; (4) emission charges directed to environmental measures; (5) automated monitoring of emissions; (6) stronger environmental control; and, (7) improved waste management. The draft Code was adopted by the Cabinet of Ministers on the 24th of December.

Environmental monitoring. To ensure free access to information on environmental conditions of Kazakhstan, the KazHydromet has developed interactive maps on air and surface water quality.

The maps are available on <https://maps.hydro.kz/> and on the MEGNR's web-site. The information on atmospheric air quality is available in mobile application "AirKZ", which shows the actual data on concentrations of key pollutants in the air of 45 settlements.

An interactive map of the Association of Ecological Organizations of Kazakhstan (<https://ecokarta.kz/>) is designed for the general public. The map contains the information on businesses (emissions), environmental problems in country's regions, and measures taken by central and local authorities.



The development of the **Unified State System of environmental monitoring** is underway as part of the Digital Kazakhstan Program. The system will monitor the status of environment and natural resources and will include specific types of monitoring.

MEGNR and AO "ArselorMittal Temirtau" signed the Memorandum of cooperation on 30% reduction of emissions in 2019-2024 (October).

The rare animal and plant protection program was presented in Almaty. The program financed (\$8 million) by the Key Biodiversity Area Partnership will last for five years and will cover the CA countries and Afghanistan.

Events. The capital of Kazakhstan took part in the Earth's Hour on the 30th of March from 20:30 to 21:30.

The 3rd environmental performance review of Kazakhstan²⁰ was presented in Nur-Sultan (June 5). The report shows progress made by the country in greening the economy, including energy, industry, agriculture and health care; takes stock of Government's efforts in air pollution reduction, water quality improvement, waste reduction and specially protected natural area management; and, gives recommendations for the future.

Capacity building events included among others: training on "Water quality management: EU experience" (April 11-12, Nur-Sultan); an international roundtable dedicated to determination of the key needs and improvement of hydrometeorological services in the region (May 28, Almaty); a [seminar](#) on climate change mitigation and adaptation in CA (September 26-28, Almaty).

²⁰ www.unece.org/fileadmin/DAM/env/epr/epr_studies/ECE_CEP_185_Rus.pdf

Regional and international cooperation. During the 7th meeting of the Kazakh-Chinese Commission on environmental cooperation²¹ the parties discussed the results of quarterly comparative analyses of hydrochemical data on monitoring of water quality in transboundary rivers Kara, Yertis, Ile, Tekes, Horgos, and Yemel'; the work on prevention of river pollution, etc. The parties also signed the resulting Protocol and approved the Commission's work plan for 2019-2020 (May 14-15, Beijing). The next meeting is to be held in Kazakhstan in 2020.

As part of the Second meeting of the Kazakh-Uzbek joint working group on environmental protection and water quality in the Syr Darya River Basin, the participants summarized the results of water monitoring and exchanged information on identified pollution sources. The participants also agreed to conduct joint monitoring of 28 pollutants; additionally study pollution sources and initiate projects with the involvement of international organizations (CAREC, OECD, UNDP, etc.). It is planned to invite Tajikistan and Kyrgyzstan to activities on preservation of the Syr Darya River (November 7-8, Nur-Sultan).

Emergencies

Natural disasters. The dam of Kenesara reservoir broke in Burabai district, Akmola province (at 04:25 on March 31). The situation in the province was tense but stable. In Petropavlovsk, due to overflow along the Ishim River, minor flooding of summer cottages occurred in the floodplain and the international Chelyabinsk-Novosibirsk road was closed (April 19). Because of temperature rise and abundant rainfall, slope runoff of rainwater inundated 270 houses of Pidjim village in the mountains.

Preventive measures. Construction of a joint Kazakh-Chinese mudflow check dam was started on the Horgos River under the Inter-governmental agreement of June 8, 2017. The dam is constructed 5 km upstream of the joint waterworks facility "Dostyk" and will be equally shared by Kazakhstan and China. It is planned to build central concrete and earthen parts of the dam, the control and measurement system, the bag check and drainage canal to pass water during construction, and the bank-protective structures downstream the dam.

As part of preparation to the flood period 2020, the country's regions took the following measures: construction and repair of 163 km of protection dams; bank protection, dredging and training of 330 km of flood-prone rivers; installation of draining ditches along 116 km; cleaning of 2006 km of canals and ditches and 10314 water by-passes under motor and railroad bridges.

SDG in Kazakhstan

Kazakhstan presented its first [Voluntary national review](#) on SDGs during the High-Level Political Forum on Sustainable Development (July 9-18, New York).

Several seminars were dedicated to SDGs in Kazakhstan: on the implementation of SDGs in Kazakhstan for mass media (August 1, Nur-Sultan); "Sustainable development goals and localization approaches at the local level"²² (October 1, Petropavlovsk; November 4, Kokshetau); on SDG 6.4.1 "Change in water use efficiency over time" and SDG 6.4.2 "Level of water stress: freshwater withdrawal as a proportion of available freshwater resources" to build capacities of the participants in developing the indicators and reporting at the national and international levels, organized by UNESCAP, FAO and the Federal State Statistical Service of Kazakhstan (October 8-10, Almaty).

The **First regional SDG summit** "Mobilizing finance for Sustainable Development Goals" was organized by the Kazakh Ministry of National Economy with the support of ADB and UNDP Kazakhstan (November 15-16, Almaty).

Foreign Policy and International Cooperation

In 2019, the President of Kazakhstan paid formal and working visits to the Russian Federation (April, October, November), Uzbekistan (April), Kyrgyzstan (June, November), Tajikistan (June), China (September), USA (September), Armenia (October), Turkmenistan (October), and Germany (December).

Key developments in the foreign policy of Kazakhstan in 2019. A Decree on the concept of foreign policy of the Republic of Kazakhstan²³ was drafted and submitted to the President for

²¹ The meeting was held within the framework of Agreements between the Governments of Kazakhstan and China on protection of water quality in transboundary rivers (February 22, 2011) and on environmental cooperation (June 13, 2011)

²² The seminar was organized by the Institute of Economic Research JSC of the Ministry of National Economy of Kazakhstan with the support of UNDP, ADB

²³ Approved by the Decree of the President No.280 of 06.03.20

consideration. The document outlines country and regional priorities for Kazakhstan.

Development of alliances and strategic partnerships: with RF – in the area of energy, agroindustry and other sectors. The Program of joint actions in the field of Russian-Kazakh production cooperation was signed; with **Kyrgyzstan, Tajikistan, Turkmenistan** and **Uzbekistan** – bi- and multilateral partnerships for interregional and cross-border cooperation, joint solution of environmental problems and efficient use of transboundary water, and in energy, agroindustry and other spheres; with **China** – cooperation in the area of transboundary water sharing, ecology, energy, technological investments, etc.

Promotion of the national interests and reinforcement of the country's image

At the 74th UN GA the President of Kazakhstan K.J. Tokayev presented the country's position on topical issues (September 24, New York). Concerning SDGs, he proposed establishing in Kazakhstan a UN Center for SDG with the mandate to assist the CA countries and Afghanistan (see "[General Assembly](#)"). During the General Assembly, the President of Kazakhstan had a meeting with the UN Secretary General and took the floor at the SDG Summit, where he focused on the importance of modernization of education system, development of green and digital economies and infrastructure. He underlined that 80% of SDGs are integrated into Kazakhstan's strategic programs. The Kazakh delegation also took part in the UN Climate Action Summit 2019 initiated by the UN Secretary General Antonio Guterres (September 23, New York).

The following events were held:

- The **II Kazakhstan-China Interregional Cooperation Forum**, in the course of which a panel session on cooperation in agroindustry and more active trade and investment communications between regions of Kazakhstan and China took place (May 15, Almaty).

- A high-level panel session "[Water as a factor of economic growth and security in Central Asia](#)" was organized at the XII Astana Economic Forum (May 16-17) and focused on the national needs and visions towards sustainable water management through regional collaboration (May 17). The event was organized by the Ministry of Agriculture of the Republic of Kazakhstan and Switzerland's Blue Peace Central Asia initiative, in partnership with the European Union, the World Bank, and the International Water

Assessment Centre. The First Kazakhstan SDG Forum was also organized within the Astana Economic Forum by the Ministry of National Economy of Kazakhstan, Institute of Economic Research, UN agencies, with the support of UNDP in Kazakhstan and the Asian Development Bank.

- A meeting of the working group on National water policy dialogue under the project "European Union – Central Asia Water, Environment and Climate Change Cooperation" (WECOOP) organized with the support of EU and the non-governmental foundation "Water Initiative Center" (June 14, Nur-Sultan). The participants discussed the matters of cooperation on transboundary groundwater, safety of hydraulic structures, prevention of accidental pollution, etc. The key focus was on the reduction of loads on water and energy.

- The conference "Enhancing integration in Central Asia for regional prosperity" coincided with the launching of three new EU regional programs on trade, rule of law and business attractiveness in CA (November 28-29, Nur-Sultan).

Sources:

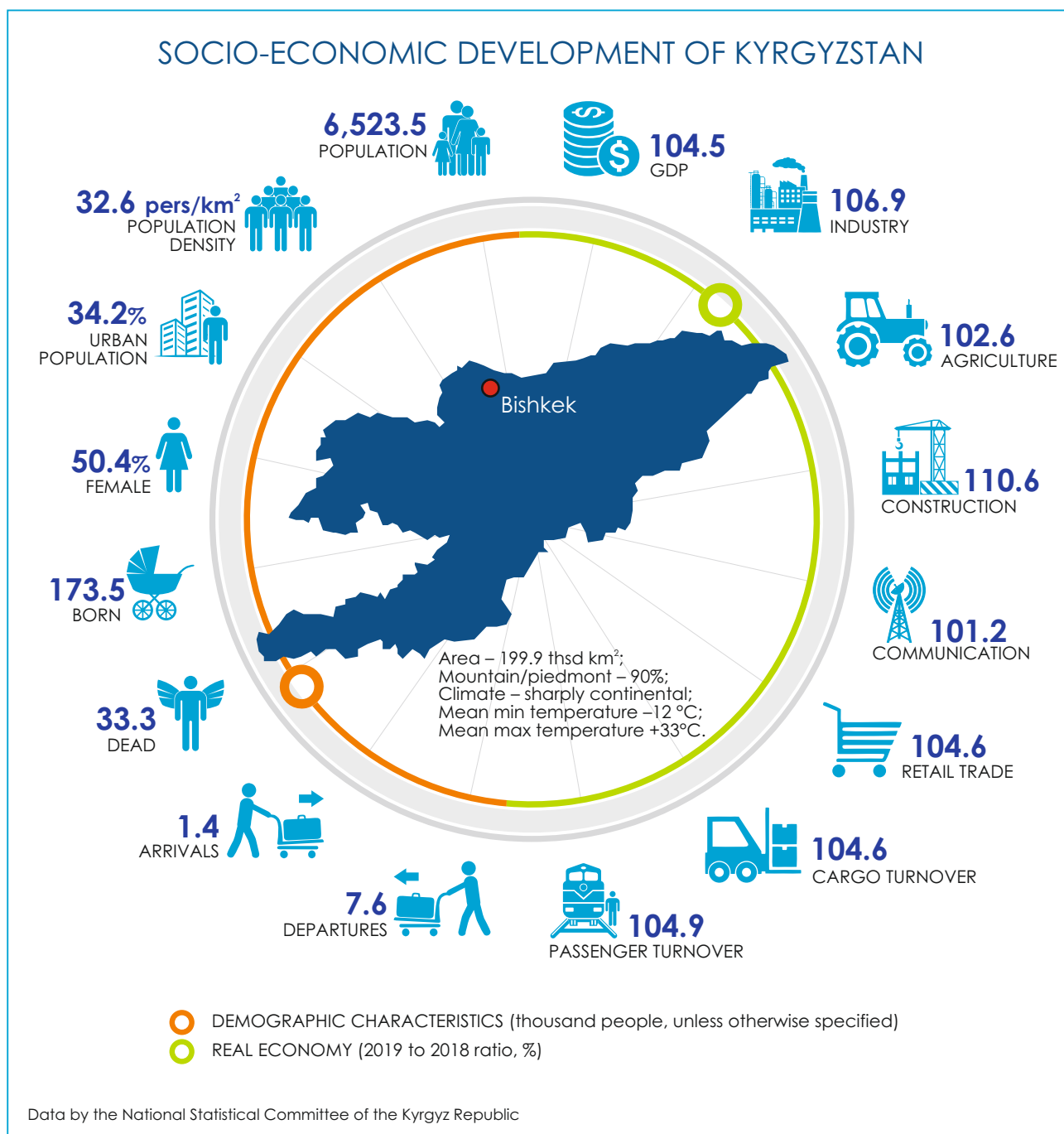
Official sites of:

the President of Kazakhstan (www.akorda.kz/ru);
 Ministry of Ecology, Geology and Natural Resources (www.gov.kz/memleket/entities/ecogeo/about?lang=ru);
 Ministry of Agriculture (www.gov.kz/memleket/entities/moa?lang=ru);
 Ministry of Energy (www.gov.kz/memleket/entities/energo?lang=ru)

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<http://adilet.zan.kz/rus>;
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<https://ainews.kz/>;
www.kazenergy.com/ru/;
<https://forbes.kz/>;
<https://kursiv.kz/>;
<https://informburo.kz/>;
<https://litter.kz/>

5.2. Kyrgyz Republic



Water Sector

Water resources. The total available water resources in KR are 2,458 km³, including 650 km³ (26.4%) in glaciers, 1,745 km³ (71%) in lakes, 13 km³ (0.5%) as potentially usable groundwater resources, and 44.5 to 51.9 km³ (2%) as average annual river runoff. The flow formation area occupies 7% of the territory. There are about 3,000 rivers and streams with the total annual runoff of approximately 47 km³. The amount of annually renewable groundwater in major artesian basins is within 7.7 km³.

The area of current glaciation is 4% of the country's territory.

The total water consumption in the republic is estimated at 10-12 km³ a year. The water transportation losses in river channels, canals and irrigation structures amount to 1.7-2.3 km³. Owing to natural (mainly relief) conditions, irrigation water is provided mainly by small rivers serving about 800,000 ha or 76% of the total irrigated area. There is minor regulation of mountain runoff: 80,000 ha (11%) are irrigated from regulated sources, while the rest of 720,000 ha, by natural flow.

Public administration reforms. The [State Water Resources Agency under the Government of KR](#)²⁴ was established on the base of the Department for Water Resources and Land Reclamation. The Agency is to regulate relations in the area of water management and use. The **Department for Drinking Water Supply and Sanitation** was transferred to the Agency (PPKR No. 383 of 30.07.2019). Yssyk-Kul Basin Water Authority and Nookan and Alamedin Region Water Authorities have got the status of 'government institutions' in place of 'government-owned corporations' (PPKR No. 42 of 05.02.2019).

Latest developments in legislation. The **Law "On amending some legislative acts of the Kyrgyz Republic (the Water Code and the Law on Water)"** (ZKR No. 44 of 05.04.2019) was adopted to settle the issue of water charges. The Law sets the procedure and terms of charging for usage of water sites and water resources and the procedure of preferences.

Amendments were made in the **Tax Code of KR** that provide tax exemptions for the territories of natural reserves, natural and national parks, water and forest funds, as well as for the land under reservoirs and the areas prone to flooding, except for those allocated for agricultural use (ZKR No. 9 of 23.01.2019); VAT exemptions for tax payers, who supply fodder for poultry and fish for agricultural producers, and for those, who produce poultry and fish (ZKR No. 79 of 08.07.2019); and, profits tax exemptions if renewable sources are used (ZKR No. 99 of 24.07.2019).

An **Agreement** was ratified between the Government of KR and the International Development Association on financing the project "Modernization of Hydrometeorological Services in Central Asia" (ZKR No. 57 of 06.05.2019). The main project goal is building capacities of KyrgyzHydromet to establish the sustainable monitoring infrastructure, improve forecasts and service efficiency in line with the national economic and social needs. The Agreement provides for allocation of \$5 million, including \$2.5 million through grant and \$2.5 million as a loan.

A working group was formed for amending and supplementing legislative acts for the improvement of WUA activities at the Agrarian committee of the Kyrgyz Parliament.

Development of the water management system. The total length of irrigation canals is 29,000 km, of which 5,800 km are the inter-farm canals on the balance sheet of the DWRLR, and 23,200 km are the on-farm canals on the balance sheet of local administration (Aiyl Okmotu), water-users associations (WUA) and other acting legal entities. Kyrgyzstan has 274 irrigation systems and 93 accumulating irrigation structures (reservoirs, basins for decade and daily regulation) on balance sheet of DWRLR. 240,000 ha of land are equipped with the collector-drainage network.

In 2019, construction of basins for daily regulation was completed in Dzhumgal district, Naryn province. As a result, 239 ha of new irrigation land were put in production and water supply of 1,041 ha was improved. In 2020, it is planned to provide with irrigation water additional 4,000 ha in Ak-Tala district and reclaim land through construction of new basins for daily regulation and reconstruction of irrigation canals.

In 2019, the following operations on irrigation infrastructure were completed: repair and rehabilitation of irrigation canals (385.7 km); cleaning of river channels (529.9 km); reconstruction and rehabilitation of 1,131 hydraulic structures and 1,117 gauging stations; repair of 100 pumping stations; and drilling of 15 irrigation wells. It is planned to put into operation 31 irrigation objects for the total amount of \$259.1 million and 27,000 ha of new irrigated land, as well as improve water supply for 40,000 ha until 2023.

In the context of the State Program of Irrigation Development for 2017-2026 aimed at the improvement of irrigation water availability and the expansion of irrigation land, the irrigated area was extended by 1,100 ha in Naryn province, by 1,000 ha in Batkent province, and by 2,000 ha in Talass province.

Water-saving technology. Over 1,100 economic entities on an area of more than 2,400 ha, including 91 economic entities on 76.88 ha in 2019, were equipped with drip irrigation. A draft Decree of the Government of KR "On the approval of the Concept of drip irrigation system development and the Plan of relevant actions for 2019-2025" was developed.

Capacity building. Training courses in updating costs and financial planning in WUAs; operation and maintenance of on-farm irrigation systems;

²⁴ By-laws of the State Water Resources Agency under the Government of the Kyrgyz Republic (in Russian) https://www.water.gov.kg/index.php?option=com_content&view=article&id=227&Itemid=1264&lang=ru

and, assessment of performance and preparation of irrigation infrastructure management plans for WUAs were conducted for the staff of regional WUA support divisions in the southern and northern republican regions as part of the project “National water resources management” (March 6, Osh; March 12, Bishkek).

Drinking Water Supply

Renewal of the Water Supply and Sanitation Strategy of the Kyrgyz Republic until 2026 (PPKR No. 155 of 28.03.2016). The developed draft Strategy was put to a general vote. The draft Strategy includes new sections on the tariff policy, institutional development, sectoral regulation and provides updated statistics. Also, new construction standards providing on average for 80 l/person/day of drinking water were included.

International cooperation and projects. With the support of EBRD, EU and the Swiss Confederation and as part of the national Clean Water Project, large projects are implemented in 20 cities for a total amount of \$160 million, of which more than 65% is allocated in form of grants, while the rest as low-interest credits. Out of 653 villages that need access to clean drinking water 25 villages were provided with clean water through republican budget, while 17 villages has got water supply at the expense of IFIs. It is planned to rehabilitate water supply systems in 24 cities and 248 villages in the next 5 years.

The Project “Improving stability and better natural resources management in Kyrgyzstan and Tajikistan” is implemented with the support of the British Government (UK Aid) and the Aga Khan Foundation in Nookat and Kara-Su districts of Osh province. As a result of construction of water conduits in two villages, 700 households and social structures has got access to clean drinking water in each of the village.

At the Forum “Clean Water for Regions” (May 23, Bishkek), agreements were signed between KR and EBRD on the following projects: “Rehabilitation of water supply in Myrza-Ake, Den-Bulak and Kurshab communities” for an amount of €6 million, including €3 million – EU grant, €2 million – EBRD credit, and €1 million – EBRD grant (ZKR No. 85 of 16.07.2019); “Rehabilitation of water supply and sanitation system in the Jalal-Abad city”, Phase 2, for an amount of €9.275 million, including €4.125 million – EBRD Special stockholder fund, €4 million – EBRD credit, €1.15 million – EBRD grant through technical cooperation funds (ZKR No. 128 of 14.11.2019).

Also, credit and grant agreements were ratified between the Kyrgyz Republic and EBRD

on a number of projects for rehabilitation of water supply and sanitation systems in the cities of Karakol, Kerben and Isfana. The duration of projects is 3 years. As a result, more than 62,000 people will get access to safe drinking water.

Relevant credit and grant agreements were ratified with: ADB for wastewater management in Issyk-Kul' (Balykchi and Karmedju cities) for a total amount of \$41.82 million; and, IBD for the improvement of rural water supply and sanitation in Batken and Talas provinces for a total amount of \$20 million.

Additionally, a credit agreement was ratified between KR and the Saudi Development Fund for an amount of \$30 million for 25 years on the project “Development of rural water supply and sanitation”. The project will cover 70 villages in Batken and Talas provinces to serve about 146,000 people and will be implemented during 4.5 years. Co-financing of \$10 million by the Government of KR is also included.

Agriculture

Irrigated agriculture. According to the Ministry of Economy, the total cropped area was 1,216,700 ha in 2019 or by 1,800 ha more than in 2018. About 87,000 ha of irrigated land are in poor condition. 730 ha of new irrigation land were put in production and 1,395 ha of land were equipped with improved irrigation system in the course of the year.

Latest developments in legislation. The Law on Agriculture Development in KR (ZKR No. 7 of 16.01.2019) was amended. The amendments make provision for annual preferential loans to be provided for agricultural producers (crop production, livestock breeding, poultry farming, beekeeping) and fish farmers.

The Law “On state dotation of seed farming” (ZKR No. 22 of 02.02.2019) was adopted to support and introduce the mechanism of state dotation of agricultural goods producers with the aim of provision of certified seeds and creation of favorable conditions for Kyrgyz seed farms for the production and sale of certified seeds of priority crops.

A number of programs were approved: the **“Program for the establishment and development of agricultural trade logistics centers in KR for 2019-2023”** to create favorable conditions for agricultural producers by increasing their competitiveness and improving export capacity of the Republic (PPKR No. 321 of 27.06.2019); the **“Program of food security and nutrition in KR**

for 2019-2023”, which sets requirements and restrictions to be integrated into health, education, economic and social sector development programs (PPKR No. 320 of 27.06.2019); the “**Framework program for phytosanitary security in KR for 2019-2023**” (PPKR No. 354 of 18.07.2019) and “**Rules of phytosanitary zoning in KR based on harmful quarantine organisms**” (PPKR No. 432 of 27.08.2019).

Projects. For further development of livestock farming, crop production and agricultural product processing through the provision of available resources and preferential loans, the “Financing agriculture-7” project was approved (PPKR No.28 of 28.01.2019). In 2019, more than 9,900 preferential loans were given for over 5.1 billion som of the Republican budget, funds of commercial banks and credit organizations.

The five-year [USAID Agro Horizon Project](#), \$22 million, designed to boost the agricultural sector was completed. The project assisted in creating more than 65,000 tons of additional annual processing capacity of agricultural products in Osh, Jalal-Abad, Batken and Naryn provinces and helped to generate 1,400 full-time jobs.

The Kyrgyz Government and the International Fund for Agricultural Development started designing the project “Sustainability of livestock farming” for an amount of \$60 million for five years. The project has three components aimed to improve pasture and forest management, achieve safe agricultural production, and involve youth and women in economic activity.

Regional and international cooperation. 12 agreements for \$349.7 million and 9 export contracts for \$67.5 million were signed between the Kyrgyz Ministry of Agriculture, Food Industry and Land Reclamation (MAFILR) and Russian entrepreneurs at the 8th Russia-Kyrgyzstan **Interregional Conference “Towards New Horizons of Strategic Partnership and Integration”** (March 27-28, Bishkek).

The **Forum “Agricultural Export and Food Security in the Kyrgyz Republic”** organized with the technical and financial support of the WB Project “Agricultural productivity and nutrition improvement” focused on the matters of improving export capacities of agricultural products, food security and improving food quality, including the development of export chain: farmer-production-sale-... (October 4, Bishkek).

Fishery development. In 2019, over 8.7 billions of valuable fish species were released into fishery water bodies, and 1,700 tons of commercial fish were produced in the republic.

The Program and Plan of actions for fishery and aquaculture development in the Kyrgyz Republic were approved for 2019-2023 (PPKR No. 546 of 15.10.2019) and the Decree of the Government of KR “On the development of fishery and usage of natural and manmade water bodies and reservoirs in the Kyrgyz Republic” was amended to change the list of natural water bodies and reservoirs allocated for fish farming (PPKR No. 67 of 19.02.2019). A Memorandum was signed between the MAFILR and the Korea Maritime Institute on cooperation in the fishery sector.

Environmentally friendly agricultural production. For further development of organic farming and application of advanced technology in this area, the “Kyrgyzagrobiocenter” was reorganized into the Organic Agriculture Department at MAFILR.

Memorandums of cooperation were signed with OOO “ECOROST” and OOO “INTER-TRANS” for production of organic fertilizers and feed additives and for production of bio-organic preparations “Moljer-Kg”, respectively.

The area of 617,200 ha was surveyed to **identify pests, diseases and weeds** and, consequently, chemical treatment of 204,000 ha was performed. Over 156,000 ha were surveyed to identify the larvae of locusts and more than 114,000 ha were treated.

Energy

Latest developments in legislation. The draft Law “On ratification of credit and grant agreements between the Kyrgyz Republic and ADB on the Uchkurgan HPP Modernization Project” was considered and adopted in the first reading (PJK No. 3475-VI of 26.12.2019). The project totaling \$100 million (\$60 million – credit, \$40 million – grant) will modernize the outdated equipment and increase generating capacities of the plant from 180 to 216 MW.

Amendments were made to the **Law “On renewable energy sources”** that provide tariff preferences only to new RES-using objects. Also the mandate of an authorized body for RES development and promotion and the economic and institutional-legal mechanisms of incentives for RES were determined (ZKR No. 99 of 24.07.2019, Article 2)

Additional agreement was ratified to the Agreement on the provision of an investment loan of \$100 million by the Eurasian Fund for Stabilization and Development for the Toktogul HPP Rehabilitation Project, Phase 2. According to the Agreement, the funds allocated for the

replacement of two hydroaggregates will be also used for the replacement of other two remaining hydroaggregates, while the total project sum and financial conditions will be kept the same.

Regional and international cooperation. The following documents were signed: (1) the Charter of the permanent commission for the interstate use of the Orto-Tokoy (Kasansay) reservoir in Ala-Buka district, Jalal-Abad province under the Agreement between the Governments of the Kyrgyz Republic and the Republic of Uzbekistan of 06.10.2017; (2) the Memorandum of Cooperation between the Kyrgyz Agency for investment protection and promotion and the Russian electric group "Ruselprom" for an amount of \$1.5 billion. It is planned to mobilize investments for a package of hydropower projects, including the construction of small and large HPPs.

Investment projects and programs. The energy sector will have about 30% of the total state investments in 2020. This will account for 113.9 billion som for the following projects: "Reconstruction of Atbasha HPP" (Switzerland – 376.3 million som); "**CASA-1000**" (WB EIB, IDB - 6,679.9 million som); "Improvement of energy supply to Arka scheme in Leilek district, Batken province" (IDB – 126.9 million som); "Commissioning of the second aggregate of Kambarata HPP-2" (EDB – 239.5 million som); "Second and third rehabilitation phases of Toktogul HPP" (ADB, EDB – 2862 million som); "Reconstruction and construction of pumping stations" (EBRD – 321.4 million som), etc.

Small HPP. By expert estimations, the country has capacities for construction of 63 small HPPs at 180 MW for generation of up to 1.1 billion kWh.

Only 1.27% of the **hydro-resources** of small rivers are **developed** in the Republic. 17 small HPPs are operational. Two small HPPs were built but not put into operation on the coast of Issyk-Kul Lake. Resources of irrigation reservoirs, canals and rivers are not used for electricity production.

In this context, **the Strategy of Sustainable Industrial Development in the Kyrgyz Republic for 2019-2023** (PPKR No. 502 of 27.09.2019) envisages measures for the development of small hydropower. It is planned to resume work on two HPPs in Ton district, Issyk-Kul province (June 2020); construct small HPP "Karakul", 18 MW, in Jalal-Abad province (until 2022); construct and put into operation small HPP "Chon-Aksuu" in

Issyk-Kul province and "Chon-Kemin-1" in Choo province at the capacities of 18 and 8 MW, respectively (until 2023); etc.

Environmental Protection and Climate Change

Latest developments in legislation. The Law "On prohibition of activities related to geological surveying of subsoil resources with the aim of finding, exploring and developing uranium and thorium deposits in the Kyrgyz Republic" was adopted (No. 139 of 14.12.2019) to protect population health and environment and ensure radiological and environmental safety.

The Concept of forestry development until 2040 was approved (PPKR No. 231 of 27.05.2019). The Concept is based on SDG 15 on the protection of terrestrial ecosystems.

The Kyrgyz Parliament adopted a draft Law "On amending certain legislative acts on biosphere protection in the area of Lake Issyk-Kul" that will impose a ban on activities of recreation and industrial sites that are not equipped with sewerage and treatment facilities.

Also, the following laws were adopted: (1) "On joining the Agreement on the establishment of the Global Green Growth Institute signed on 20 June 2012" (09.12.2019); (2) "On ratification of the Protocol on joining to the Agreement on Movement of Ozone-Depleting Substances and their Products and Recording Ozone-Depleting Substances in Mutual Trade between the Member States of the Eurasian Economic Union dated 29 May 2015" (09.12.2019).

Nature conservation measures. A draft of Governmental Decree "On the freeze in production and sale of commodities (bags, pockets, packs) made of polymer film less than 20 µm for population (end consumer)" was designed to prevent environmental pollution and reduce polymeric packaging wastes.

SAEPF²⁵ held with the support of UNDP/GEF the annual international ecological event "March movement for parks 2019" under the slogan "Let's preserve flora and fauna area!".

Regional and international cooperation. A treaty was signed with the German Union for Conservation of Nature (NABU) on environmental cooperation for a period until 2029.

²⁵ The State Agency of Environmental Protection and Forestry

During the 2nd meeting of the Russia-Kyrgyz working group for implementation of the Memorandum of Environmental Cooperation signed between the Ministry of Natural Resources and Ecology of RF and the SAEPP, the parties have approved the Plan of actions for 2019-2020, agreed on organization of a seminar for exchange of information and experience in the environmental impact assessment, state environmental expertise and best available technologies (February 27-28, Bishkek).

An agreement was reached with EBRD for allocation of the grant of €5.7 million for re-cultivation of the former uranium production sites and a Memorandum on implementation of Green Cities Program was signed by the Bishkek city administration for cooperation in the development of an Action Plan in response to identified environmental problems through strategic measures and investments in sustainable infrastructure (May 24, Bishkek).

Climate change. The Republic supports initiatives contributing to the development of a national adaptation plan, particularly, collection and generalization of information on effects of climate change in the country and identification of adaptation capacities at the sectoral level. Law “On Ratification of the Paris Agreement within the United Nations Framework Convention on Climate Change signed on 12 December 2015” was adopted.

Loan and grant agreements with ADB on the Climate Change and Disaster-Resilient Water Resources Sector Project were ratified (ZKR No. 88 of 18.07.2019). The Project totaling \$43.6 million will strengthen the climate change and disaster resilience.

As part of the National Climate Forum titled “Issues of Climate Change in Kyrgyzstan: post-Paris Actions and the Role of Civil Society”, leading experts drafted a list of recommendations to the Government for the development of concrete measures and determination of appropriate institutional structure to promote climate solutions in line with the Paris Agreement (December 17, Bishkek).

The [Climate Finance Center](#) was launched (May 23). The main goals of the Center are: assistance in developing a national strategy on climate change; coordination and attraction of climate finances; development of projects; capacity building, training and awareness raising in the area of climate change and financing.

The following events were held: (1) the first Youth climate forum of Kyrgyzstan, which brought together more than 350 university students, senior pupils, young professionals and eco-activists from different regions of the country (December 6, Bishkek); (2) an International seminar “Modeling climate change in Central Asia” organized by the EU Central Asian Research and Education Network (CAREN) Project jointly with the Institute of Water Problems and Hydropower of Kyrgyzstan and the Central Asian Institute for Applied Geosciences (May 16-17, Bishkek).

Green economy. The Program of Green Economy for 2019-2023 was adopted and set priorities of sustainable development and concrete objectives, including adaptation to climate change. The jubilee Forum “Green economy – strong regions – sustainable development of the country” was held as part of the [Green Economy Week 2019](#) (November 11-17, Bishkek).

Emergencies

Natural disasters. Over the half of the Republic territory is prone to avalanches. The area of 3,200 km² is subjected to flooding.

In 2019, as a result of flooding, more than 20 households, as well as on-farm roads and bridges in villages of Naryn province were damaged (January, February) and dwellings, social sites and agricultural land in Yntimak village of Suzak district were at risk of submerging.

The mud and stone slide in April damaged 3 km of an on-farm road and flooded 2.6 km of an on-farm ditch. Mudflows also damaged villages in Osh province (May, June) and in Issyk-Kul province (August).

Preventive measures. In 2019, the Ministry of Emergencies undertook bank-protection, preventive and damage control measures in 430 sites; protected more than 22,500 dwellings and households, over 13,900 ha of agricultural land, 63 km of on-farm roads, 7 bridges, etc.

International cooperation on the risks of transboundary disasters. The **first joint meeting of emergency ministries of Kyrgyzstan, Tajikistan and Uzbekistan** addressed a wide range of issues, presented recent progress, identified shortcomings and proposed improvements in joint coordination (April 5, Bishkek). Following the Protocol signed at the meeting, joint international training drills in transboundary emergency response took place (September 24-25, Tuura-Tash, Batken province).



A month of disaster risk reduction was organized all over the Republic (September-October). Additionally, awareness raising campaigns dedicated to emergency threats and self-protection methods, as well as scientific conferences, roundtables, and exercises took place at the republican level.

Foreign Policy and International Cooperation

In 2019, the President of the Kyrgyz Republic paid formal visits to Germany (April), Switzerland (July), UAE (December), Saudi Arabia (December) and working visits to China (April), Kazakhstan (May), Saudi Arabia (May), Japan (October), the Russian Federation (July), Tajikistan (July, September, December), Azerbaijan (October), and Uzbekistan (November).

The country was visited by the President of RF (March), Chairman of PRC (June), President of Kazakhstan (November), Foreign Minister of RF (February), Special EU Envoy on CA (April), President of Mongolia and Prime-Minister of India (June), President of Tajikistan, Prime-Ministers of South Korea and Kazakhstan (July), Prime Minister of Uzbekistan (August), President of Belarus and Prime Minister of Armenia (November).

Key developments in the foreign policy of Kyrgyzstan in 2019. The Concept of foreign policy of Kyrgyzstan approved by the President's Decree of March 11, 2019 sets priorities of foreign policy and national interests of the Kyrgyz Republic.

The key priorities of the foreign policy included: strengthening of relationships with neighboring countries, allies and strategic partners and development of cooperation with EEU

member states; enhancement of trade and economic links, particularly for attraction of investment in SME. Priorities of economic diplomacy included: enhancement of export capacities; attraction of investments; and, protection of country's economic interests.

Development of alliances and strategic partnerships: with **Kazakhstan** – settled border and trade issues and discussed matters related to water, veterinary, and phytosanitary; with **Tajikistan** and **Uzbekistan** – delimitation of state border; with **Turkmenistan** – the work on fuel-energy and investment spheres.

Chairmanship in SCO, CSTO and CCTSS²⁶. More than 60 events were organized during the SCO Summit in Bishkek (June). The most important meetings included those of the Council of the Heads of SCO Member-States, the Council of foreign ministers, and the Contact group "SCO-Afghanistan".

The chairmanship of Kyrgyzstan in CCTSS was marked by the launching of the Council's European office in Budapest (September 19) and joining of Uzbekistan to the Council's membership during the 7th CCTSS Summit (October 15, Baku).

Promotion of the national interests and reinforcement of the country's image. For the first time, Kyrgyzstan was elected to the UNESCO Executive Board for 2019-2023 at the 40th session of its General Conference (November 20, Paris). During the 208 session of the Executive Board, the Kyrgyz delegation voiced the focus areas as a member of the Board, such as climate change, glacier melting, mountain ecosystem preservation, etc. (November 29, Paris).

In connection with the launch of the new EU Strategy on Central Asia, the [EU-Central Asia Forum](#) took place on July 5-6 in Bishkek. The aim of the event was building on the positive experience from the inclusive consultation processes and creating a new forum for dialogue. Another important objective of the event was to increase the understanding of EU objectives and values in the region.

As part of the official visit of the High Representative of the Union for Foreign Affairs and Security Policy Federica Mogherini to Kyrgyzstan, a draft Agreement on the extended partnership and cooperation between the Kyrgyz Republic and the European Union was initialled

²⁶ Cooperation Council of Turkic Speaking States

and a Financial agreement on education was signed for an amount of €35.76 million for 2019-2021 (July 6-7).

The [15th EU-Central Asia Ministerial Meeting](#) took place on July 7 in Bishkek. The new EU Strategy on Central Asia adopted by the EU Member States on June 17, 2019 was presented and the participants discussed its implementation through concrete programs and initiatives. The Kyrgyz Republic put forward a proposal to host the first EU-Central Asia Economic Forum that should become an effective mechanism of trade, economic and investment cooperation between EU and CA.

At the High-Level Forum “Accelerating Reforms for Sustainable Development” the participants addressed topical issues of development in Kyrgyzstan (November 19, Bishkek).

Sources:

Official sites of the:

President (www.prezident.kg);
Parliament (www.kenesh.kg);
Ministry of Justice (<http://cbd.minjust.gov.kg>);
Ministry of Energy and Industry (<http://energo.gov.kg>);
State Agency of Water Resources (<https://www.water.gov.kg>)

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5.3. Tajikistan



Water Sector

Water resources. Tajikistan's water resources are comprised of glaciers, rivers, lakes, reservoirs and groundwater. There are 14,509 glaciers with the total area of glaciation of 11,146 km² (approx. 8% of the country's area) and the total glacial volume of about 845 km³. 947 rivers stretching to more than 28,500 km flow across the country. The main watercourses are the Amu Darya and the Syr Darya and their tributaries. The average annual runoff generated in Tajikistan is 64 km³/year

(62.9 km³/year in the Amu Darya basin and 1.1 km³/year in the Syr Darya basin) or 55.4% of the average annual surface runoff in the Aral Sea Basin. Tajikistan possesses about 1,300 lakes covering 705 km². The lakes contain over 46.3 km³ of water, including 20 km³ of freshwater. The potential groundwater stock is 18.7 m³/year, while usable groundwater resources are estimated at 2.8 km³/year.

Latest developments in legislation. The Law "On the Water Users Association" was adopted (ZRT

No. 1668 of 02.01.2020)²⁷. The Law determines economic, institutional and legal frameworks of WUA and aims to ensure water conservation and efficient operation of hydraulic structures in the WUA's service area.

Implementation of national programs. Development of the water-management system. The work was continued on the draft **National water strategy of the Republic of Tajikistan for a period up to 2030**. The Strategy is to guide implementation of IWRM in the Republic and assist in the achievement of water-related SDGs and the implementation of the National Development Strategy 2030.

Implementation of the National water sector reformation program for 2016-2025 was continued. River basin organizations (RBO) and River basin councils were established. Basin water management plans have been drafted for the Syr Darya, Zarafshan, Panj, and Kafirnigan basins. The second meeting of the Kafirnigan River Basin dialogue on IWRM was held to discuss progress and status of RBO, development of the basin plan for the Kafirnigan River, data requirements and collection, and other matters. (March 28).

In line with the Decree "On measures for reclamation of irrigated agricultural land in the Republic of Tajikistan for 2019-2023" (PPRT No. 374 of 01.08.2018), the efforts have been made to clean channels and offtakes, repair irrigation canals, and equip the water supply network.

The irrigated area of 761,500 ha is served by 29,800 km of irrigation canals, 13,100 km of wells and collecting drains, 7427 hydraulic structures and 505 deep wells. The organizations of the Agency for Land Reclamation and Irrigation provided services equivalent to 3660.6 Mm³ by farmers' requests over 8 months in 2019.

391 operational WUAs serve 395,100 ha or 51.3% of agricultural land in Tajikistan. The total fees collected from water users amounted to 36.7 million somoni or 51% of the provided services. This is by 2.7 million somoni less than in 2018. The debt of farms before irrigation organizations was 21.9 million somoni by September. If one accounts the debts for previous years, the total debt would be 143.7 million somoni.

Projects. In 2019, six investment projects on land reclamation and irrigation were implemented for a total amount of \$165.4 million in Tajikistan:

- "Irrigation of Dangara scheme", Phase 3. The Project will help to create 8,000 new jobs. The irrigated area will be used for cotton (900 ha), forage crops (100 ha), cereals (350 ha), horticulture (300 ha), and vegetables (100 ha).

- "[Tajikistan second public employment for sustainable agriculture and water resources management project](#)", which includes the rehabilitation of irrigation and drainage infrastructure and the technical assistance for legislative and institutional reforms of the sector. The Project is implemented in 14 districts of Khatlon province.

- The Project "Increasing resilience of the Panj River Basin to climate change" aims to rehabilitate the infrastructure of irrigation system and water supply networks, ensure protection from floods and adaptation to climate change. The Project covers 18 jamoats (local communities).

- "[Water resources management in the Panj River Basin Project](#)", which will help to transform the Agency for Hydrometeorology into sustainable and well-resourced agency, with the purpose of improving the forecasting of extreme weather events (floods) in the River Basin.

- "Zarafshon irrigation rehabilitation and river basin management" Project and "Strengthening Critical Infrastructure against Natural Hazards".

- A financial agreement signed with the OPEC Fund for an amount of \$10 million for implementation of the Khatlon Province Water Management Improvement Project, which is to improve water management in the context of climate change and assist to boost agricultural production, increase farmer's incomes and access to water. The Project will be implemented till 2025.

Capacity building. In the course of the year, several training events were held: training on "Water quality management: EU experience"²⁸ (June 5-7); training "IWRM: theory, practice and prospects in river basins of Tajikistan" in each catchment of Aksu-Isfana-Tomchasai-Khojabakirgan-Arkasai sub-basins (June 10-13); roundtable "Raising awareness of decision makers about IWRM mechanisms in the Tajik area of the Syr Darya basin" (September 24); training "IWRM: theory, practice and prospects in river basins of Tajikistan" at local administrations of Matcha and B. Gafurov districts and Kanibadam and Istaravshan cities of Sogd province (November 4-8).

²⁷ ZRT No. 213 of 21.11.2006 "On the Water Users Association" has become invalid

²⁸ As part of the Project "EU-Central Asia enhanced regional cooperation on environment, climate change and water" (WECOOP2)

In order to strengthen the institutional and technical capacity, the Ministry of Energy and Water Resources of Tajikistan, the Tajik Agrarian University named after Shirinsho Shohtemur and CAREC signed a [memorandum](#). One of the main areas of work will be the creation of the Innovations and Scientific Research Cluster on IWRM to strengthen water professionals' capacity, promote research and assist in application of research results (March 5).

Regional and international cooperation. The first joint Tajikistan-Kyrgyzstan meeting of Small Basin Councils was held on the small transboundary rivers of Isfana and Aksu with the aim to enhance transboundary cooperation and exchange information and experiences (September 12, Gulistan).

The Tajikistan National Commission on Irrigation and Drainage held the 7th meeting on the "Scientific development in the area of land reclamation and irrigation" on the occasion of the 3rd World Irrigation Forum (September 27).

The second Women's Water Forum was held within the framework of the 11th Syr Darya Basin Dialogue (December 28, Gulistan). The Forum was dedicated to the "Role and prospects of women's participation in integrated water resources management in the Tajik part of the Syr Darya River Basin".

Drinking Water Supply

Latest developments in legislation. The newly adopted **Law "On drinking water supply and sanitation"** (ZRT No. 1633 of 19.07.2019) sets the legal, institutional, economic and social framework of drinking water supply and sanitation, as well as the state guarantees to meet the demand for drinking water and sanitation and ensure quality and safety.

Projects and programs. Activities under the Clean Drinking Water Program for 2008-2020 were continued. In particular, new water supply lines were put into operation in Kaltachanor village in Khatlon province to cover 4,000 people and in Varsik village in Sogd province to provide access for 3,570 people. Also, the 7.2 km long drinking water conduit "Khazorchashma-Gonchi", including two reservoirs capable to store 700 and 150 m³, was commissioned in Sogd

province and provided access to clean water for more than 26,000 people. A pumping station was launched in Oftobroi village as well.

The wastewater treatment station was rehabilitated in the Khujand city. This helps the Khujand public utility to improve the quality of water discharged into the Syr Darya River. Additionally, 180,000 dwellers of Sogd province has got access to clean drinking water and better water services. The joint investments of EBRD and SECO²⁹ in this project amounted to \$8.85 million.

In 2019, the World Bank allocated grants in the amount of \$30 million for the rehabilitation of water supply and sewage infrastructure in Dushanbe and \$58 million for the improvement of water supply and sanitation in 7 districts of Khatlon province. Over 400,000 people will get access to clean drinking water and 100,000 people will be provided with improved sanitation facilities.

New projects for a total amount of \$558,000 were approved as part of the Japanese Government aid package (February). The projects provide for a water supply system in Abdulvosiev community of Rushan district, construction of an irrigation canal in Khudfigi Soya village of Gorno-Matchinskiy district and other assistance.

Agriculture

In 2019, the **agricultural production** reached 26.6 billion somoni or over \$2.6 billion. This is by 7.4% more than in 2018. Crop production grew 3.6% (\$261 million), while the growth in the livestock breeding sector was 5.4% (\$96.3 million). The rates of crop and livestock production growth amounted to 7.8 and 6.4%, respectively. The country's agriculture produced more than 1.3 million tons of grain, 993,000 tons of potato, 398,700 tons of raw cotton, etc. The total export of agricultural products was over \$18 million or by \$1.7 million more than in 2018.

Latest developments in legislation. Among the laws adopted in 2019 are: (1) the **Law "On pastures"**, which regulates public relations in pasture management, use and protection (ZRT No. 1618 of 20.06.2019)³⁰; and, (2) the Law "On the provision of population with nutritional food and drink" (ZRT No. 1635 of 19.07.2019), which regulates public relations in the area of nutritional food provision and sets the institutional and legal

²⁹ [The State Secretariat for Economic Affairs](#)

³⁰ The previous Law on Pastures No. 951 of 2013 has become invalid

framework for prevention of micronutrient deficiency and related diseases.

The **National food safety strategy** is being developed. The draft Strategy was discussed at the 2nd meeting of the Intergovernmental technical working group and the meeting of the Co-ordination development council (May 8). The Strategy summarizes the country vision and long-term goals for the provision of safe and good-quality food and protection of consumers from food related risks at both domestic and export markets.

Implementation of programs and decrees. As a result of implementation of the Presidential Decree “On the additional measures for re-organization and reformation of agricultural entities” and the Law “On dekhkan entities (farms)”, the number of dekhkan entities reached 185,616 by the end of 2019. In the first half of the year, the farms got 390 units of new agricultural equipment. In total, 27 639 units of agricultural equipment were recorded in farms by July 1. Also, 85 equipment service centers were established.

New orchards and vineyards were established on an area of over 3,000 ha within the framework of the **Horticulture and Viticulture Development Program 2016-2020**. This accounts for 97% of the plan.

As a result of implementation of the **Fishery Development Program 2009-2022**, the area of fish-breeding basins has extended to 3,013.99 ha, and the production capacity has increased from 214 to 273 tons of fish a year.

International cooperation and projects. The **Financial Agreement** was signed with the German Development Bank for an amount of €9.6 million on the development of the agricultural sector.

FAO with the EU's support and in close collaboration with the Agency for Hydrometeorology of Tajikistan's Committee for Environmental Protection established a pilot agrometeorological network of 3 automatic [agrometeorology stations](#). The weather stations have been installed in regions with specific crop patterns – vineyards in Tursunzoda district, apricots in Konibodom district, and cotton in Jaloliddin Balkhi district. Each station has different characteristics and transmits the data every 10 minutes via mobile communication to the Agency for Hydro-meteorology.

As part of the [“Enhanced Competitiveness of Tajik Agribusiness Project”](#) (EU/EBRD), semi-

nars and training in modern farming technology (drip irrigation, plant protection, etc.) were organized. To test high-yielding forage crops, special demonstration plots were arranged and field days were organized for exchange in farming methods.

The [Agriculture Commercialization Project for Tajikistan](#) (WB) organized training workshops, offered consulting services and built capacities of institutions. As a result, the Project supported more than 1000 farmers and SMEs in the rural area.

Energy

Electricity production and export. Tajikistan possesses an inexhaustible reserve of hydropower. About 95% of electricity is generated by hydropower plants. In 2019, Tajikistan generated more than 18.7 billion kWh of electrical power (17.4 at HPP and over 1.2 at TPP), which is 5.2% more than in 2018. Out of daily generation of 53-55 million kWh, the country exports over 11 million kWh, including 6.2 million kWh to Uzbekistan, 4.5 million kWh to Afghanistan, and 0.4 million kWh to Kyrgyzstan. The total electricity export increased by 23% as compared to 2018. By the end of 11 months of the year 2019, the revenue amounted to more than \$91.3 million.

Latest developments in legislation. The Governmental Decree “On electrical and thermal energy tariffs” (No. 329 of 22.06.2019) approved the tariffs of OJSC “Barqi Tojik” for consumers. According to the Decree, the cost of electricity for population has increased almost by 17% to 22.66 diram or 2.1 cent per kW against the past year.

The debt of OJSC “Barqi Tojik”, the largest unprofitable state enterprise in the Republic, amounted to 23 billion somoni or \$2.4 billion by the beginning of 2019. The Government of Tajikistan has applied to the World Bank and other partners for the financial support of the financial recovery plan of OJSC “Barqi Tojik”. This would require about \$1.2 billion. The restructuring process of the company has also started. It is to split the company into three separate companies for generation, transmission and distribution.

HPP construction and modernization

Rogun HPP. The first aggregate underwent routine inspection and preventive maintenance from February to May. As of July, the aggregate generated daily up to 3.9 million kWh. In 2019, according to the Ministry of Finance, 2.1 billion somoni or \$222.6 million were allocated from the

state budget for the construction of Rogun HPP. Since the beginning of the construction, the state budget allocated 24 billion somoni for the plant. The second aggregate was commissioned in September.

Sarband HPP. The second aggregate of HPP was commissioned in September. The modernized hydroaggregate produces 50 MW instead of previous 45 MW. The assembling of the third hydroaggregate of 49 MW will be completed by the end of 2020. After reconstruction, by 2022, the capacity of five out of six aggregates of HPP will reach 270 MW, against the current capacity of 240 MW.

Nurek HPP. The “Nurek HPP Rehabilitation Project” was started on March 20 and is to be completed in 2023. The first stage includes the replacement of 3 aggregates and their ancillary equipment plus auto-transformers and the operations on dam safety. The project's total cost is \$326.9 million. As a result of implementation, the design capacity of the plant will be increased from 3000 to 3300 MW, and, generally, the generation will increase by 700 MW.

Kairakkum HPP. A project on modernization of Kairakkum HPP was launched at the expense of EBRD by the consortium comprised of General Electric Hydro (France), General Electric Renewable (Switzerland) and Cobra Instalaciones Servision SA (Spain) (August 23). The total cost of the project, which is to be completed by the end of 2023, is \$196 million. As a result of modernization, the current installed capacity of the plant will be increased from 126 to 174 MW.

Small HPPs. EU allocated €20 million for the construction of Sebzor HPP, capacity 10 MW, along the Shokhdara River in Roshtkalinskiy district of GBAO. The plant is to generate up to 60 million kWh annually.

CASA-1000. The construction of structures of the regional high-voltage transmission line was started. The Swedish company ABB will build a converter substation in Sangtuda. The Indian company Kalpataru Power Transmission Ltd started constructing the transmission line in the north of Tajikistan, the line from the Regar substation to the converter substation and further to the border with Afghanistan. The construction of the infrastructure is estimated at \$351 million. The Tajik part of the project will be implemented at the expense of WB, EBRD, IDB, and the Government of Great Britain. The World Bank has allocated grant financing of \$24 million for the improvement of energy infrastructure in 60 villages of Sogd and Khatlon provinces

and the Districts of Republican Subordination located along the CASA-1000 project (March). It is also planned to build an electricity substation and distribution network in the Isfara city.

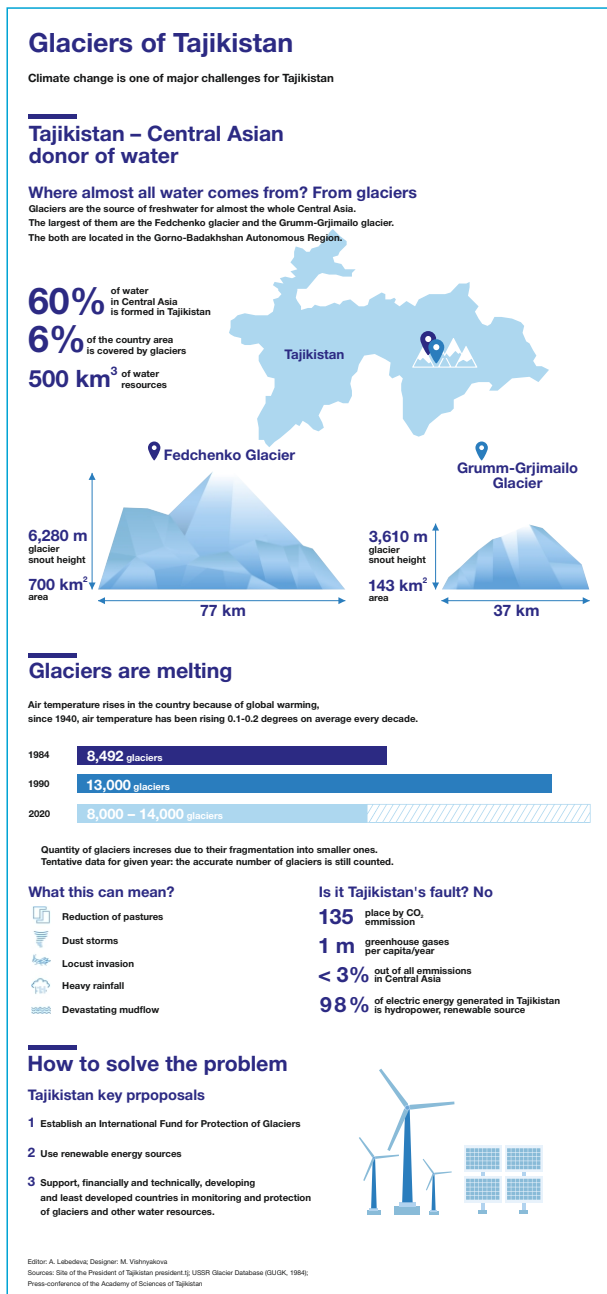
Climate Change, Glaciers and the Environmental Protection

Latest developments in legislation. (1) The Governmental Decree “On the National Adaptation Strategy until 2030” was adopted in October. The Strategy aims to support the economic growth and boost modernization of all economic sectors, ensure diversification and strengthening of global market, and enhance economic competitiveness of Tajikistan by increasing adaptation capacity and energy efficiency in the Republic; (2) The Governmental Decree “On the establishment of the Coordination Council at the Government of Tajikistan to deal with the matters related to the Green Climate Fund” was adopted in August. The Council is to regulate and coordinate activities between the public agencies and organizations and the Green Climate Fund (GCF) and to harmonize the environmental interests of the state and organizations.

International cooperation and projects. An Agreement was signed between GCF and ADB in support of the development of practical hydrological and meteorological data and information in Tajikistan to overcome institutional deficiencies of the Agency for Hydrometeorology.

EBRD launched a new financing mechanism of \$25 million to increase resilience and mitigate climate change (November 21) in the form of loans for investing in highly effective technologies contributing to better water, energy and land use in the Republic.

Glaciers. In 2019, as part of implementation of the “State Glacier Study and Preservation Program 2010-2030”, the Agency for Hydrometeorology and the Center of Glacier Studies at the Academy of Sciences of Tajikistan undertook research expeditions to Rama glacier (October 15-26) and Zeravshan glacier (October 15-26) in the Zeravshan River basin; Zulmart glacier in the Karakul lake basin; and, Didal glacier in the Surkhov River basin and others to monitor the status of glaciers. An automatic weather station equipped with data recording and storage sensors on annual basis was installed at the elevation of 4,500 m at Zulmart glacier. The Didal glacier was investigated with the use of drones and GPS. Now, the Center is drafting the Glacier Atlas of Tajikistan.



Source:
<https://tj.sputniknews.ru/infographics/20200211/1030696645/ledniki-tajikistan-istochniki-voda-centralnaya-asia.html>

Tajikistan was included in the World Glacier Monitoring Service (WGMS) in 2019.

Capacity building. The following training events were held: training course on the improvement and application of MODSNOW-Tool for the staff of the Agency for Hydrometeorology as part of the WB CAMP4ASB Project (December 28, 2018-January 31); workshop “Capacity building and

resource management of the Agency for Hydrometeorology” under the Panj River Basin Management Project (ADB, GCF) (August 21); workshop on the “Assessment of readiness of Tajikistan to the adoption of the emission monitoring, reporting and control system” (August 26).

Events. (1) A campaign on environment and glacier protection in the context of climate change, organized with the support of the Embassy of Germany for the students of secondary and general education institutions of Kazakhstan, Kyrgyzstan and Tajikistan (October 5-12); (2) campaign “Let’s protect our glaciers”, where representatives of ministries and departments, research institutes and students participated (October 25-26); (3) International scientific conference “The dust and the haze in Central Asia” that brought together climate experts from 18 countries (April 8-12, Dushanbe).

Emergencies and Disasters

Emergencies. In 2019, the Tajik Committee for Emergency Situations and Civil Defense recorded 680 emergencies (167 ones in 2018) of natural origin, of which 46 ones caused damage to population and national economy: 24 cases (51.2%) of mudflow; 8 cases (17.4%) of avalanches; 5 cases (10.9%) of rock fall; 2 cases (4.3%) of strong wind; 2 cases (4.3%) of landslide; 1 case (2.2%) of lightning; 1 case (2.2%) of water level rise in rivers. As a result, 22 people died and 136 dwellings were damaged.

Preventive measures. The **State bank protection program 2018-2020** is implemented in the Republic. In 2019, the bank protection efforts were completed along 28.771 km for an amount of 86,634,700 somoni.

As part of implementation of the **National Disaster Risk Reduction Strategy 2019-2030**, two meetings of the National Platform for disaster risk reduction³¹ (April 30, December 6) were held. In the course of the meetings, the reports on measures for prevention of natural disasters and for bank protection, aero-surveys of snow cover in mountains, results of geological surveys of hazardous sites, epidemiological situation, joint coordination in disaster prevention within the framework of the REACT, the Rapid Emergency Assessment and Coordination Team, as well as implementation of disaster risk reduction programs and projects in Tajikistan were presented.

³¹ Established for implementation of recommendations of the Hyogo Framework for Actions

Projects. Within the WB's Strengthening Critical Infrastructure against Natural Hazards Project, river embankments were built and bank protection and rehabilitation efforts were made along an irrigation canal. The Project also includes the modernization of crisis management centers and the improvement of the seismic hazard assessment capacity of the Institute of Seismology and Earthquake Engineering for more accurate disaster risk identification. The \$50 million project implementation period is 2018-2023.

The ADB [National Disaster Risk Management Project](#) will conduct dam-break analysis and flood modeling of Sarez Lake, upgrade the monitoring and early warning system, and make an inventory of glaciers. The project will also help to develop a 9-year investment plan (2022-2030), along with recommendations for a viable financing mechanism for disaster management to ensure sustainable financing and long-term engagement of the government and development partners in addressing disaster challenges in the country. In 2019, a roundtable on project progress and further steps was held and a training course was conducted in building the resilience to natural disasters, new methods of disaster reduction and development of a gender-sensitive Roadmap. The total cost of the project is \$11 million, with the Government of Tajikistan providing \$1 million. The project is to be completed in 2024.

International cooperation on transboundary disaster risks. The Tajik delegation took part in the **First joint meeting of emergency ministries of Kyrgyzstan, Tajikistan and Uzbekistan** (April 5, Bishkek), the regional meeting of the heads of emergency agencies of CA states (July, Bishkek), and the joint international training drills in transboundary emergency response (September 24-25, Batken province, Kyrgyzstan).

Foreign Policy and International Cooperation

In 2019, **the President of Tajikistan paid official visits** to the Russian Federation (April), Belarus (June), Switzerland (November), France (November) and working visits to PRC (May), Kazakhstan (May), Kyrgyzstan (July), Turkmenistan (October), Uzbekistan (November), and the Russian Federation (December).

Development of alliances and strategic partnerships. Cooperation is expanding with **Afghanistan** in the area of standardization, energy, water, oil and gas, emergency prevention,

and environmental protection; **Kazakhstan, Kyrgyzstan, Turkmenistan and Uzbekistan** in the area of energy, water use efficiency, agriculture, transportation, etc.; **Belarus** in agriculture and machine building.

During the visit of the President of Tajikistan to the Russian Federation, the 7th Tajikistan-Russia interregional cooperation conference took place and addressed the issues of agriculture, trade and investment, industry and infrastructure, and humanitarian cooperation.

Chairmanship in international organizations. Tajikistan assumed the responsibility of chairmanship in the Conference on Interaction & Confidence Building Measures in Asia (CICA) for the period 2018-2020. It hosted the [Fifth Summit of CICA](#), which adopted a [declaration](#) (June 15, Dushanbe), and a meeting of the Senior Officials Committee (December 18-19, Chongqing, China).

At the Central Asia – Japan Dialogue, the 7th meeting of foreign ministers took place (May 18, Dushanbe). The participants discussed the matters of cooperation in the field of investments, trade, tourism, development and regional security and, finally, adopted a Joint statement.

Tajikistan also assumed the responsibility of chairmanship in the **Interstate Council on Geodesy, Cartography, Cadastre and Remote Sensing** and hosted the XLI session of the Interstate Council (September 17-19, Dushanbe). The results of the intersessional period of working groups on spatial data infrastructure, coordinates and elevation reference systems; the results of the development of the “Dictionary of modern terms used in the field of geodesy, cartography, geographic information systems, cadastre and remote sensing of the Earth” and other matters were summed up at the session.

Tajikistan took over the **IFAS chairmanship** for the period of 2019-2022 according to the decision of the Second Consultative Meeting of the Heads of CA State (November 29, Tashkent). The President Emomali Rahmon will be chairing IFAS over that time.

Implementation of the International Decade for Action “Water for Sustainable Development” 2018-2028. In 2019, the International Conference “Water unites” was organized by the Ministry of Energy and Water Resources of Tajikistan in collaboration with the International Institute for Cultural Diplomacy and the OSCE Office in Tajikistan (March 18). The following scientific-practical conferences were held as part of the

initiative: “Water as a source of life” (March, Khojent); “Tajikistan – a source of clean water” (March, Dushanbe); “Land reclamation and irrigation development” (September, Dushanbe); “Water diplomacy and its inclusive factors in media relations in Central Asia” (December, Dushanbe), and others. Finally, there is ongoing preparation to the second International High-level conference on the implementation of the International Decade of Action to be held in Dushanbe in 2020 (meeting of the Organizing Committee held on November 25).

Promotion of the national interests and reinforcement of the country's image

Upon Tajikistan's initiative, the side-event “Transformative water actions to accelerate global achievement of climate change related goals” (September 25) and a high-level event on interlinkages between water and climate action (March 27) were held on the margins of the 74th session of UN GA in New York.

The President of Tajikistan spoke at the 40th session of UNESCO General Conference on the issues related to climate change (November 12, Paris) and took part in the Paris Peace Forum.

The First Deputy Minister of economic development and trade of Tajikistan moderated the 13th meeting of the SPECA Working group on trade (July 4, Geneva). In particular, the SPECA Regional Trade Facilitation Strategy was discussed at the meeting.

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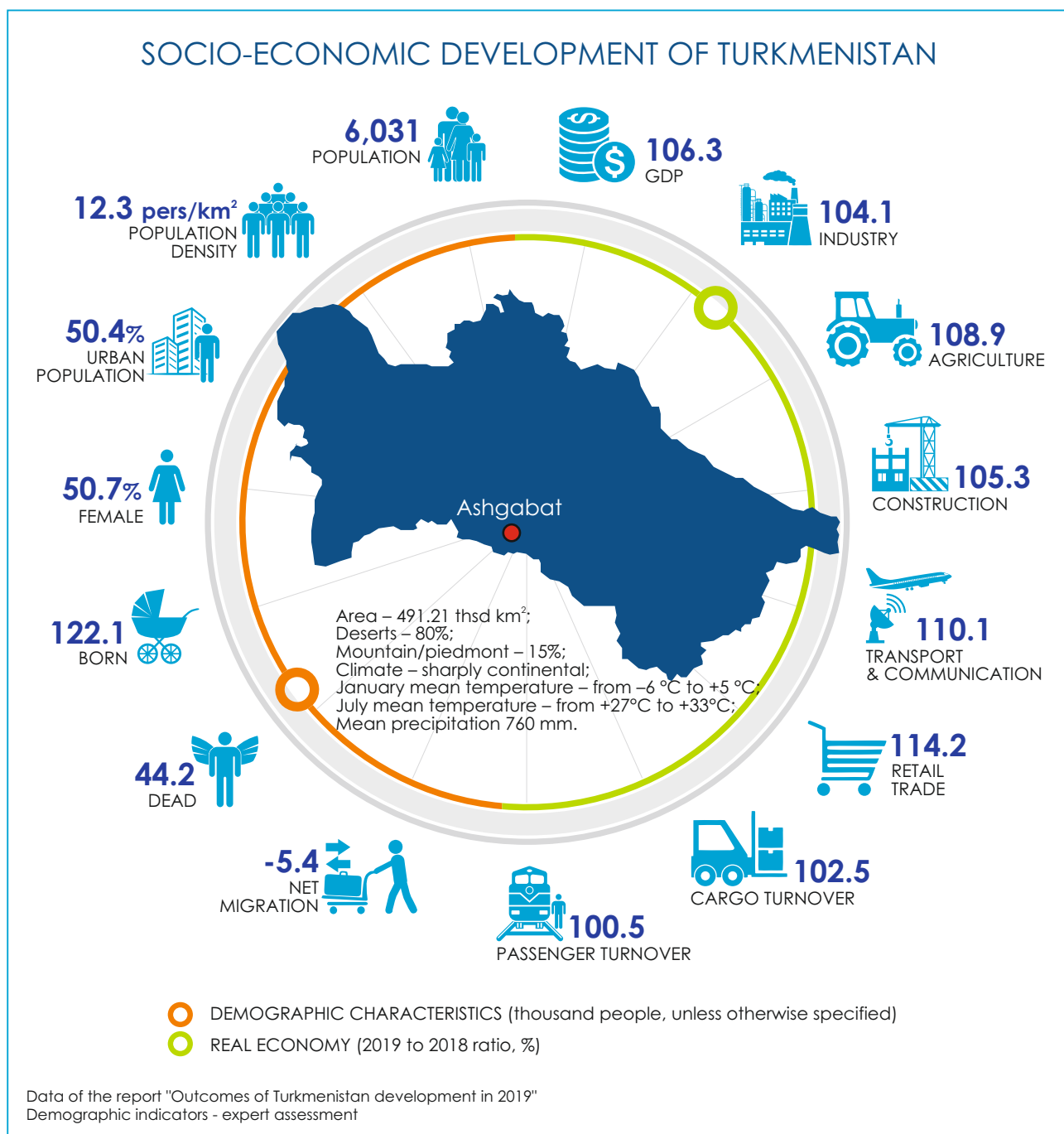
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5.4. Turkmenistan



Water Sector

Water resources. The total volume of water resources of Turkmenistan is comprised of the surface runoff of the Amu Darya (88%), Murgab (6.5%), Tedjen (3.5%), and Atrek Sumbar and Chandyr (1.4%) rivers, as well as the small water-courses of the northeast slopes of Copetdag (0.6%), and the insignificant groundwater resources and collector-drainage waters. All large rivers of Turkmenistan are transboundary, i.e. 95% of surface water in the water balance of Turkmenistan are formed outside the country.

Public administration reforms. The **Ministry of Agriculture and Environment Protection (MAEP)** and the **State Committee of Water Management** were established by the Decree of the President of Turkmenistan of 29.01.2019 on the base of the Ministry of Agriculture and Water Resources of Turkmenistan and the State Committee for Environment Protection and Land Resources. The National Committee for Hydrometeorology at the Cabinet of Ministers was transferred to the jurisdiction of MAEP and renamed as the **Service for Hydrometeorology**; the Agricultural Research Institute of MAEP was

placed under the authority of the Turkmen Agricultural Institute and renamed as the **Agricultural Scientific-Production Center**. All entities of the newly established MAEP are transformed into joint stock companies.

The **Law “On land reclamation”** was amended and supplemented (08.06.2019) in part of authorities of the newly established bodies for agriculture and environmental protection and for water management.

Improvement of available water supply. The work on **construction of new and modernization of existing reservoirs** was continued. Two reservoirs with the total capacity of about 0.063 km³ for drinking, industrial and agricultural purposes are under construction on the Karakum River. It is also planned to extend the Karakum River channel to 200 km and deliver water to the desert land of Balkan velayat (province).

The second stage of construction of Turkmen Lake “Altyň Asyr” is underway and includes activities on the increase of flow capacities of the Head collecting drain and the Dashoguz branch, the construction of hydraulic structures and bridges, and the fixation of movable sand along waterways. The experts of the Institute of Chemistry at the Academy of Sciences of Turkmenistan have carried out hydrochemical research of the collector-drainage water on the system of Lake “Altyň Asyr”. Based on the research results, the ecological maps were generated to guide the development of crop farming, livestock production and fishery in the arid area.

The **Concept of Development of the Turkmen Lake “Altyň Asyr”** region for 2019-2025 and the relevant Plan of Actions were approved. The Concept includes measures for the rational use of water resources and the development of Karakum desert, afforestation of the latter, the development of livestock farming and fisheries, and the expansion of pastures. This activity will be based on scientific research aimed to increase biodiversity, improve environmental conditions in the region, treat and use efficiently the lake’s water.

The **official stone-laying ceremony for a new village near Lake “Altyň Asyr”** was held with invitation of representatives of diplomatic corps accredited in Turkmenistan, international organizations and experts, national and foreign media on May 8. The ceremony was followed by a scientific-practical conference, which addressed the role of the Turkmen lake in environmental and socio-ecological development of the country.

The Danish company “Grundfos” audited more than 120 pumps, with the resulting recommendations on the optimal placement of suction and pressure lines of pumping stations and the efficient usage of power equipment. Related seminars were organized on optimization of pumping station operation and the improvement of water use monitoring ([July](#), [December](#)) as part of the project **“Energy Efficiency and Renewable Energy for Sustainable Water Management in Turkmenistan”**.

To **build capacities** of water-management organizations, provincial and district authorities, daikhan (farm) associations and to exchange experience in efficient water management and introduction of advanced developments, the following events were organized: a roundtable (March 19); international conference “The role of water diplomacy in achieving sustainable development in Central Asia” (June 5); a seminar “Climate change and water resources management: international practices and Turkmenistan’s capabilities” (July 18-19); a [seminar](#) “Use of innovative technologies for sustainable water management in Central Asia” (November 14-15); a [workshop](#) on mutually beneficial cooperation through innovative technologies in rational use of water and energy resources (December 17).

By the decision of the Board of Governors of the World Water Council, the **Turkmenistan State Committee for Water Management entered the membership of the Council** (October 22, Cairo).

Drinking Water Supply

“The General Clean Water Program” is ongoing in Turkmenistan. The **Law “On drinking water”** was amended and supplemented. Particularly, an article that determines the duties of water supply organizations was added. In line with the amendments made in the Law, the Cabinet of Ministers sets the drinking water and sewage collection service tariffs for population and approves quantities of drinking water provided for population.

The hydrogeological field office at the State Corporation “Turkmengeologiya” explores new sources of freshwater and updates freshwater reserves. Water-treatment facilities capable of processing 30,000 m³/day were put into operation in Akhal velayat and will help to fully meet the demands of local settlements.

A new water-distribution station, capacity 30,000 m³/day, was commissioned in Geoktepa

etrap (district). The station is fully automatic and its equipment and units can be controlled remotely.

A new water-treatment network, design capacity 30,000 m³, is close to completion in Khalach etrap, Lebap velayat. The first section of the main water conduit, 12.5 km long was constructed in Kunyaurgench etrap of Dashoguz velayat.

For trouble-free supply of Ashgabat's population with clean water, it is planned to construct two water-treatment plants, the design capacity of which is 150,000 m³ and 250,000 m³, respectively.

Agriculture

Agroindustry reformation and modernization. The **Country Socio-Economic Development Program 2019-2025** was adopted (01.02.2019). The Program includes a number of strategic areas: (1) structural transformation of industrial sectors and services through accelerated adoption of new technologies; (2) reduction of state-ownership entities through privatization and their transformation into joint stock companies; (3) structural transformations of enterprises (also through digitization); (4) improvement of the marketing strategy. The document provides for country's GDP growth by 6.3% in 2019 and 8.2 % in 2025. By that time, the industry should account for 33.8%; agriculture, 8.9%; construction, 11.5%; and, services, 45.8% in the GDP structure. Over 2019-2025, the total investments in capital assets will be 229.3 billion manats (about \$65.6 billion), of which 91.3% will be invested in the production sphere. By 2025, the foreign trade volume is to reach \$135.2 billion, including export of \$84.1 billion and import of \$51.1 billion. The ministry and sectoral agencies have undergone re-organization after adoption of the Program. To expand the private sector in agroindustry, a **Procedure** for state registration of physical entities doing business without formation of a legal entity was adopted (December 18).

Amendments were made to the **Law "On pastures"** (08.06.2019) concerning powers and functions of MAEP on pasture use and protection.

The chemical industry, which provides the crop production sector with mineral fertilizers, is developed intensively: an agreement was signed with the consortium of Japanese and Turkish companies "On design and construction of a unit for production of concentrated phosphorus fertilizer at the Turkmenabat chemical plant" (October).

Rational methods of irrigation and crop growing are also actively introduced. Particular attention is paid to the development of agrobiotechnology, selection and seed breeding.

Within the framework of the **Decree "On further agricultural reforms"** (26.09.2018), the public purchasing price of wheat increased twofold. The cotton prices were set depending on quality characteristics of raw cotton. Farmers were provided with the following opportunities: minimal land fee; preferential conditions for getting agricultural inputs; allocation of land plots for usage for 99 years; soft credits for the period of up to 10 years.

The John Deere International GmbH company and AO Uzsanoateksport deliver **agricultural machines and equipment**. MAEP has bought spare parts for agricultural machines «CASE» and «Synder» and laser levelers «LGI Omega».

As part of implementation of the **Concept of digital economy development for 2019-2025**: a concept was approved for the transfer of agricultural machines to telematic digital system in three stages over 2019-2022. A Memorandum was signed with the John Deere company for equipping of agricultural machines and facilities with the digital electronic control system over 2020-2030. It is planned to establish a Control center with provincial and district local observation points for data collection, storage, analysis and processing. The testing of «John Deere 6,195M» tractors equipped with digital telemetric systems was completed in some districts of Akhal velayat.

The privatization process of livestock farms is underway. Particularly, in 2019, four livestock production enterprises in Akhal, Lebap and Mary velayats were privatized by the members of the Union of industrialists and entrepreneurs of Turkmenistan.

The following events were organized in the course of the year: the Turkmenistan's agriculture achievements exhibition and the International scientific conference "Achievements and critical tasks to be solved next in seed production of Turkmenistan" (May 16); a seminar on innovative horticulture (July 24); practical training for agronomists and horticulturalists (November 26-28).

Within the framework of the EU project "Promoting further sustainable development of agriculture and rural area in Turkmenistan – SARD III", the workshops were conducted on the improve-

ment of performance of small livestock producers (April) and efficient irrigation water distribution and use (August) and a study tour was organized to the Cordova University (July, Spain).

Energy

The Turkmenenergo State Corporation at the Ministry of Energy has in its structure 12 power plants of the total established capacity of 5,178.4 MW: Abadan, Ashkhabad, Akhal, Avaz, Balkanabad, Gindukush, Dashoguz, Dervez, Lebap, Mary, Seid, and Turkmenbashi. The country is entirely self-sufficient in electricity and even exports it to Iran and Afghanistan.

In line with the **Concept of energy sector development in Turkmenistan for 2013-2020**, new power facilities are constructed and outdated facilities undergo reconstruction and modernization. Gas turbine power plants have been included into the sectoral infrastructure.

The Turkish company «Çalık Enerji Sanayi ve Ticaret A.Ş.» repairs steam turbines to increase capacity of the Mary power plant from 650 to 1000-1200 MW.

The consortium of «Çalık Enerji Sanayi ve Ticaret A.Ş.» and «Çalık Enerji Swiss AG» (Switzerland) is to put into operation the **Energy Equipment Repair and Maintenance Center** in the area of the Byuzmein state power plant in 2022.

Gindukush HPP on the Murgab river marked 110 years. This still operating plant, with the capacity of 1.2 MW, is also a historical site.

Alternative energy³². Turkmenistan shifts to green economy and environmentally safe and resource saving technologies in industry and social sectors as part of the **National energy saving program 2018-2024**. The Law "On renewable energy" is being developed.

Solar units, with the total capacity of 10 kW, were installed³³ in three outer settlements in the central part of Karakum desert. Solar panels of 5kW were installed in Dashohuz velayat by «Täze energiýa» company jointly with UNDP. The company has mastered the technology of glass solar panel production and intends to launch this production.

Education in the field of RES is provided at the State Energy Institute of Turkmenistan (SEIT). The Institute includes the Scientific-Production Center "Renewable energy", which carries out research and has a plan of actions on the use of solar and wind energy in the area of Lake "Altyn Asyr". A Memorandum of cooperation was signed with the Seoul National Science and Technology University (April). The Institute of Solar Energy at the Academy of Sciences of Turkmenistan was transferred to SEIT (January 29).

Energy cooperation development. The following related meetings and events took place: meeting with the [delegation](#) headed by the Secretary General of the Energy Charter (January 22); the [15th meeting of the Task Force](#) on RECA (March 27-28); a [trilateral meeting](#) on energy cooperation between Turkmenistan, Azerbaijan and Turkey. The Joint Declaration was signed upon completion of the meeting (April 19, Istanbul); a roundtable on RES development organized by the OSCE Center and USAID (April 25-26); a roundtable "The role of international cooperation in RES development" (August 1). The International energy exhibition and the scientific conference "Primary areas of energy sector development in Turkmenistan" were held (September 12-14). A meeting was held with the delegation headed by Mr. Bruno Balvanera, EBRD Managing Director for Central Asia ([January 30](#), Ashgabat) and addressed the EBRD strategy for Turkmenistan for 2019-2024, progress and further steps of implementation of the TAPI project and Trans-Caspian gas pipeline.

Environment and Climate Change

Implementation of national strategies and programs. A new version of the National Strategy of Turkmenistan on Climate Change (NSTCC)³⁴ was adopted on September 23. NSTCC is aimed at the development of effective measures contributing to low carbon country development, adaptation of priority sectors and ensuring of economy resilience, including food, water and environmental security. The new Strategy revises and supplements the sections concerning actions, financing and monitoring and evaluation mechanism. Particular attention is paid to education, training, as well as to climate change awareness raising and mobilization of private sector and civil society. A conference was

³² In October 2018, Turkmenistan became a full member of the International Renewable Energy Agency (IRENA, <https://www.irena.org/aboutirena>)

³³ As part of the UNDP/GEF project "Energy Efficiency and Renewable Energy for Sustainable Water Management in Turkmenistan"

³⁴ Developed with the technical assistance of UNDP. The previous version was adopted in June 2012

held to discuss the tasks of sectoral agencies in the context of the newly updated Strategy (September 26).

The adopted **Law “On environmental auditing”** (02.03.2019) contributes to greening and eco-efficiency of economic entities. The state regulation in the area of environmental auditing is under responsibility of the Cabinet of Ministers and MAEP. The environmental auditing is performed, obligatorily or voluntarily, by environmental auditors or resident auditing organizations on contract basis.

The **Law “On wastes”** was supplemented and amended (08.06.2019). In particular, a concept of “waste danger passport” was introduced, clarifications were made regarding agencies that develop and approve tariffs of the services related to waste collection and transportation, and provisions on passportization of wastes were added.

As part of the **National Forest Program** (2013-2020) aimed at creating green belts, the afforestation campaigns took place in spring and autumn.

The Regional program “Ecosystem-based approach to land use and biodiversity conservation in the Amu Darya lower reaches” started to be implemented in Turkmenistan³⁵ (Lebap velayat). Attention will be paid to tugai pastures. Bio-geographical mapping and training for the staff of the nature reserve on the impact of climate change on agriculture and ecosystems are also planned. Relevant seminars were organized within the framework of the Program ([June 7](#); October 1-3).

The **National Strategy for Biodiversity Conservation** (2018-2023) is implemented in Turkmenistan. A Cooperation Agreement was signed between the Government of Turkmenistan and the World Wildlife Fund. MAEP is planning to involve all concerned parties in the solution of environmental issues in the country; efforts are to be made for ecosystem restoration and the development of a network of specially protected nature areas will be supported.

EBRD approved the [Biodiversity Management Capacity Building Program](#), which is to raise the capacity of the Natural Reserves and Protected Areas for the protection of flora and fauna diversity in Turkmenistan.

The following events were held in the course of the year: a seminar for journalists “Climate change and pastures in Turkmenistan”³⁶ (February); a seminar of the UNDP Project “Climate Change Education and Awareness – Climate Box” (April); the Interdepartmental meeting dedicated to the V Kigali Amendment to the Montreal Protocol on substances that deplete the ozone layer (October); the International conference on the “Role of water diplomacy in achieving the sustainable development in Central Asia” (June 5); discussions on international and national environmental laws organized by “Yashyl Shokhle” and “Ynanch-Vepa” (December); a seminar on climate financing (December).

Turkmenistan entered to the Guinness World Records in 2019 for the Largest Ecological Lesson initiated by the Government of Turkmenistan in the Turkmenbashi city.

Emergencies

Floods. The year 2019 broke a record in terms of rainfall quantity in several areas of Turkmenistan that caused **strong flooding along the Atrek and the Murgab rivers** and their tributaries, mudflows in Kopetdag and floods along temporal water drains with accompanied damage.

In March, heavy rainfall fell in Etrek, Makh-tumkuli and Serdar districts. The Atrek River overflowing its banks flooded a vast area. The governments of Turkmenistan and Iran have agreed to protect banks and dredge the channel of the Atrek River. Shower rains in March-April in Mary province led to critical water rise in the Murgab River. Bank protection and embankment operations continued day and night at Middle Gindukush and Lower Gindukush reservoirs located 1.5 m higher of the Mary city. Sariyaz reservoir, with the design volume of 0.26 km³, was almost full. The shower rains have finally damaged grain and cotton fields.

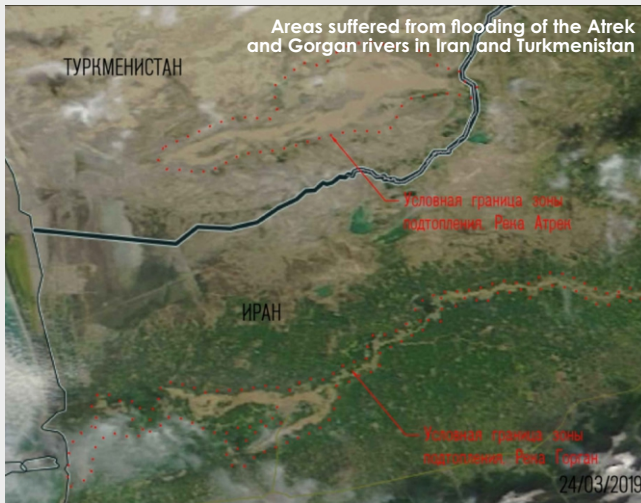
Strong wind. Strong winds accompanied with dust storms are recorded annually in Turkmenistan. In March 2019, a sand storm caused heavy damage to hundreds of houses and buildings in Serakhs. Strong winds were recorded in the west of Turkmenistan, the Karakum Desert, and in the southeast of the country in the course of the year.

³⁵ With the support of MAEP and GIZ

³⁶ Organized by MAEP and GIZ

FLOOD ALONG THE ATREK RIVER

In March 2019, the unusually heavy rains were observed in the southwest and the west of Turkmenistan and in adjacent provinces (Golestan and Mazendaran) in Iran: more than annual rainfall flooded the area in two days.

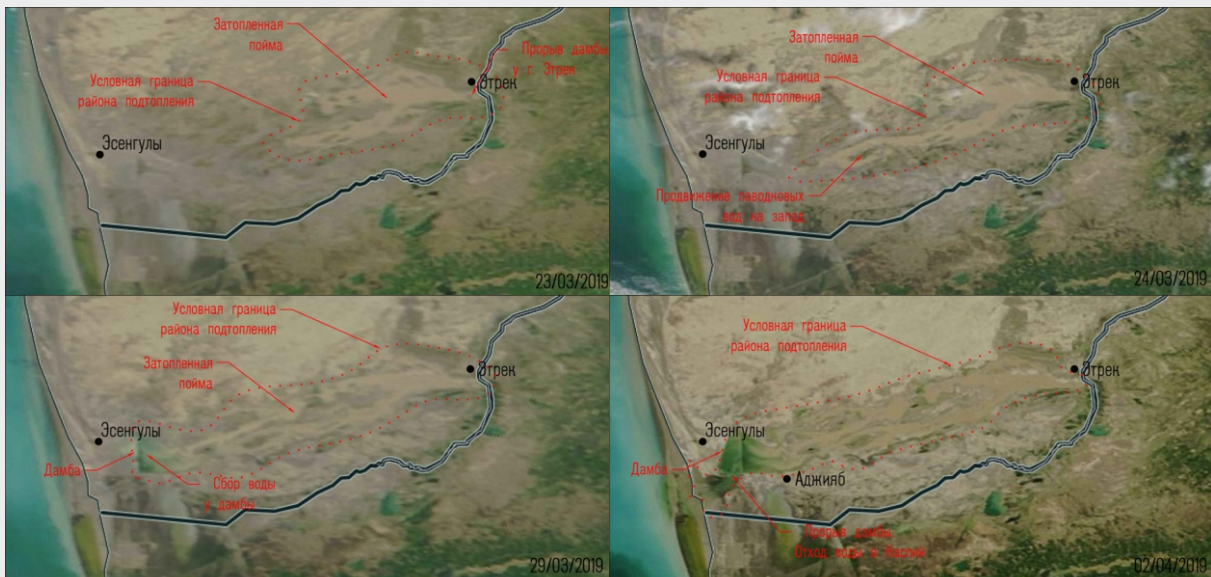


In Turkmenistan, the heaviest rain was recorded in Kyurendag foothills, where the Bereket city is located, and there were heavy rains in Serdar, Makhtumkuli and Etrek districts.

| No. | Station | Rainfall |
|-----|----------------------|----------|
| 1 | Bereket | 175.9 |
| 2 | Serdar | 104.0 |
| 3 | Makhtumkuli | 85.0 |
| 4 | Etrek | 59.0 |
| 5 | Balkanabad | 31.0 |
| 6 | Esenguly | 21.0 |
| 7 | Bal'boser (Iran) | 37.1 |
| 8 | Bodjnurd (Iran) | 26.0 |
| 9 | Gorgan (Iran) | 72.2 |
| 10 | Maraveh-Tappe (Iran) | 41.7 |

The vast area was flooded by overflow water and mudflow. The flood abated quite quickly in the mountain and piedmont regions. Whereas in lowland, the consequences of flooding have been felt for 2-3 weeks. Esenguly and Etrek districts suffered most of all. The overflowing Atrek River flooded large area³⁷. The maximum rainfall quantity that led to flooding of the Atrek River was recorded in Sumbar and Chandyr basins in Turkmenistan and Iran, as well as in the middle basin of the Atrek (Gechedag, Karabaidag ridges, etc.).

The satellite images below show flood water, which broke the dam near the Etrek city (the image of March 23) and started inundating the lowland.



Later (on March 29), the floodwater pooled in a lake at the dam, which protects the Esenguly city. Local emergency services have tried to minimize damage from early. By using pumps and digging channels, they diverted water towards the Caspian Sea.

As a result of flooding, a lot of livestock died, the district was cut of gas and electricity, dwelling and ancillary buildings were damaged.

Source: Internet Journal "Meteojurnal", <http://meteojournal.ru/stihiya/pavodok-na-reke-atrek-v-marte-2019-goda/>

³⁷ The river's length is 670 km. Most of the year the water content in the river is very low, and the lower reaches become dry. Water reaches Esenguly district in winter and spring only

SDGs in Turkmenistan

Turkmenistan is actively pursuing a SDG-related policy in economic, social and environmental areas.

The work on preparation of the Voluntary National Review (VNR) of the implementation of SDGs in Turkmenistan was underway in 2019. As part of this preparation, relevant events were held, including: meetings of the Interdepartmental Commission for preparation of the VNR ([February](#), [April](#), [June](#), MFA of Turkmenistan); the training workshop of UNESCAP and UNDP on "Systems thinking and integration of the Sustainable Development Goals into national planning" ([February](#)); a meeting with winners of the "Young SDG ambassadors" contest ([March 11](#)). [17 young people](#) were selected from all the regions of Turkmenistan to serve as Ambassadors for the Sustainable Development Goals.

The VNR of Turkmenistan outlined the progress on: Goal 3 – good health and well-being; Goal 4 – quality education; Goal 8 – decent work and economic growth; Goal 10 – reduced inequalities; Goal 13 – climate action; Goal 16 – peace, justice and strong institutions; Goal 17 – partnerships for the goals. The first VNR on the implementation of SDGs was launched at the High-Level Political Level on sustainable development held under the auspices of ECOSOC (July 9-18, New York).

As part of SDG actions in the country, a seminar on SDG monitoring and reporting (January 18), a meeting of the National working group for the SDGs (August 28, [December 20](#)), and student debates (October 21) were held.

The Turkmenistan delegation also took part in the [Regional Forum](#) on sustainable development (March 21-22, Geneva); the work of the [6th Asia-Pacific Forum](#) on sustainable development (March 27-29, Bangkok); and the 5th Forum of CIS Country Youth Organizations (December 12-15, Moscow).



Cooperation on the Caspian Sea

The Communiqué adopted at the Fifth Caspian Summit (August 12, 2018, Aktau, Kazakhstan) states the initiative of the President of Turkmenistan to host the First Caspian Economic Forum (CEF) in 2019. In the course of preparation to the Forum, the following events were organized: (1) an International media-forum (February 5, [June 29](#), Ashgabat); (2) briefings and roundtables in a number of countries; (3) an International scientific-practical conference "The Caspian Sea – a sea of opportunities" ([April 11](#), Moscow).

The First Caspian Economic Forum³⁸ was held in the city of Turkmenbashi on August 11-12. The first day of the Forum was marked by the opening of the International Caspian Exhibition of Innovation Technologies and the Exhibition "Turkmen Sahara 2019", the ministerial meeting of authorities responsible for implementation of agreements signed between the littoral Caspian nations; the first meeting of the Turkmen-Astrakhan business council; and, a business forum with business representatives from the Caspian states. An International conference "The Caspian Sea: towards the development of international economic cooperation" was held on August 12. The CEF was completed with the adoption of the Forum's Statement. The next CEF is to be held in Astrakhan, Russian Federation in 2020.



The authorized representatives of the Caspian states met in the course of the year to discuss and agree upon the following draft documents: the [Protocol on cooperation in the area of combatting illegal extraction of biological resources \(poaching\) in the Caspian Sea](#), which is developed in line with the Convention on the legal status of the Caspian Sea (February 25-26); the [Protocol on Cooperation in the Field of Securing Maritime Safety in the Caspian Sea](#) (February 28-March 1); the [Agreement](#) between the governments of the Caspian states on cooperation in conducting search and rescue operations on the Caspian Sea (March 11-13); and the [Agreement](#) between the governments of the Caspian states on cooperation in the field of scientific research on the Caspian Sea (March 14-15).

The **Institute of the Caspian Sea** was established in Turkmenistan for the development of cooperation in the Caspian Sea region, marine research, preparation of international legal and national documents and the review of the im-

³⁸ First CEF website <https://cefavaza2019.gov.tm/>

plementation by Turkmenistan of international treaties on the Caspian Sea, etc. (August 9). The 7th training course “The Caspian Sea – sustainable development and management” was held on March 4-15 in Avaza. The Institute of Chemistry at the Academy of Sciences of Turkmenistan has generated an environmental map of the littoral zone of the Caspian Sea.

Foreign Policy and International Cooperation

In 2019, the country was visited by the President of Afghanistan (February), Minister for Foreign Affairs of the Russian Federation (February), the King of Bahrain (March), the President of Korea (April), the Prime-Minister of the Russian Federation (May, August), and the Prime-Minister of Malaysia (October).

The President of Turkmenistan paid state and working visits to Tatarstan (June), Singapore (August), Japan (October), Azerbaijan (October), Italy (November), and Uzbekistan (November).

Key developments in the foreign policy of Turkmenistan in 2019

Development of alliances and strategic partnerships. Turkmenistan builds relationships with neighboring countries based on the good-neighborliness and equality principles, both in a bi- and multilateral format. Cooperation with Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan is developed in the fuel and energy, water, agricultural, transport and investment spheres.

The **Turkmen-Afghan relations** are developing in the spheres of water use, fuel and energy, transport and communications, etc. The third [meeting of Coordinative Commission on water resources](#) between Turkmenistan and the Islamic Republic of Afghanistan³⁹ was held and considered the issues related to the development and strengthening of transboundary water cooperation (April 11-12, Ashgabat). The event was attended by representatives of the State Committee for Water Resources, the State Border Service, the Garagumderiyasuvkhodjalyk Association, as well as water management associations of the Akhal, Lebap and Mary provinces. The Afghan delegation included the heads and leading experts of the Foreign Ministry, the Ministry of Energy and Water Resources, the Department of Geodesy and Cartography of the Ministry of Urban Development and Land Resources, etc.

Chairmanship in international organizations. Turkmenistan chaired the CIS in 2019. As part of

the chairmanship, Ashgabat hosted the meeting of the Council of CIS State Leaders (May 31); the 83rd meeting of the CIS Economic Council (September 13); meetings of the Council of Foreign Ministers (October 10) and the Council of CIS State Leaders (October 11). Regular consultations were held between the MFA of Turkmenistan and the foreign agencies of other countries. Also, Ashgabat hosted the XIV Forum of Creative and Scientific Intelligentsia of the CIS Member States (May 15-16) and a regular meeting of the CIS Intergovernmental Coordination Council on Seed Production (May 15).



As part of Turkmenistan's chairmanship in SPECA, the country hosted high-level international events “The SPECA Days” (November 18-21). Among them were the forum on trade policy of the SPECA countries, meetings of the working groups of the SPECA on sustainable transport and trade, and the SPECA-2019 Economic Forum (following the forum, the «Ashgabat Initiative» was adopted).

Chairmanship of Turkmenistan in IFAS. The 85th plenary meeting of the 73rd UNGA session has adopted unanimously the Resolution on “Cooperation between the United Nations and the International Fund for Saving the Aral Sea”⁴⁰, which was initiated by Turkmenistan ([May 28](#), New York) (see “[General Assembly](#)”). Twenty one countries co-authored this document. In the period of Turkmenistan's chairmanship in IFAS, the country held: meetings of the RWG on the development of ASBP-4 and the institutional and legal improvement of IFAS; multilateral consultations on the development of the UN Special Program for the Aral Sea (UN SPAS) ([December 18](#)); briefing dedicated to the outcomes of the country's chairmanship (December 28). The meeting of ICSD IFAS in Nukus (October 24) reviewed the progress report of ICSD over the pe-

³⁹ The meeting was held within the framework of the regional GIZ program TWRM

⁴⁰ Full text of the Resolution is available on <https://undocs.org/en/A/RES/72/273>

riod of Turkmenistan's chairmanship in ICSD (2015-2019). Finally, the chairmanship of ICSD was passed from Turkmenistan to the Republic of Uzbekistan (see "[ICSD of Central Asia](#)").

Promotion of the national interests and reinforcement of the country's image

Involvement in UN Activity. Speaking at the 74 UNGA (September 28, New York), the Vice-Minister and Minister of Foreign Affairs of Turkmenistan Rashid Meredov voiced the Turkmenistan's approach to the topical issues in Central Asia (see "[General Assembly](#)").

At the 12th and 13th plenary meetings of the ECOSOC Organizational session⁴¹, Turkmenistan was elected to three bodies: Executive Board of the World Food Programme for 2020-2022; Commission on Population and Development for 2020-2024; and, Commission on Narcotic Drugs for 2020-2023 ([May 7](#), New York).

As part of the High-Level Political Forum on sustainable development under the auspices of ECOSOC (July 9-18, New York), Turkmenistan organized a [thematic event "Cooperation of international institutions in providing sustainable development in Central Asia: the UN-IFAS model"](#) (July 17). The participants paid particular attention to the essentiality of strengthening collaboration in resolving the problem of the Aral Sea. In this context, the significance of the upcoming multilateral consultations on determining the future format of the Special UN Programme for the Aral Sea basin (UN SPAS) was underlined. The first VNR of Turkmenistan was launched also at the Forum (July 18).

The [Special UN Programme for the Aral Sea basin \(UN SPAS\) was presented](#) at the side event "Environment and Disasters: Closing the gap in the Asia and the Pacific region" of the 6th session of the ESCAP Committee on Disaster Risk Reduction (August 28-30, Bangkok). The participants acquainted with the main steps planned by Turkmenistan for the preparation of multilateral consultations in the UN – IFAS format and launching the pilot project of the UN SPAS.

Turkmenistan was unanimously elected as a permanent member of the Council of the United Nations Conference on Trade and Development (UNCTAD) during its 66th session ([June 27](#), Geneva).

Turkmenistan also held: a [meeting](#) of the National Leading and Coordinating Committee of the Partnership Framework Development (PFD) Program (February 15); a [meeting](#) with the Sub-

regional Coordinator of FAO (May 9); a [meeting with heads and representatives of the United Nations agencies and specialized institutions](#) accredited in Turkmenistan (July 1); a meeting with the UN Resident Coordinator in Turkmenistan (September 9); and, the [signing ceremony](#) of the joint program with the UN under the title: "Improving the social protection system by introducing inclusive quality social services at the local level" (December 16).

Cooperation with the EU. Cooperation between Turkmenistan and the EU is maintained in such spheres as public governance, private sector development, agriculture, and energy. A meeting took place with the High Representative of the Union for Foreign Affairs and Security Policy Federica Mogherini. Activization of multilateral cooperation between the EU and Turkmenistan, success of the bilateral policy dialogue and the economic and regional integration, and the focus areas of the new EU Strategy for Central Asia were among the issues addressed during the meeting at the MFA. Following the talks, the parties signed the Agreement between the Government of Turkmenistan and the European Union, the European Atomic Energy Community (Euratom) on the establishment, privileges and immunities of the European Union Delegation to Turkmenistan that created a legal base for opening of the EU representative office in the country (July 6). The development of cooperation between the EU and Turkmenistan was also discussed at the meeting with the delegation headed by the European Union Special Representative for Central Asia Peter Burian ([January 31](#), Ashgabat); the 18th meeting of the Joint Committee "Turkmenistan-European Union" ([February 26](#), Brussels); meetings with the EU delegation headed by Christian Berger ([March 4, December 13](#), Ashgabat); in the course of the working visit of the Turkmen delegation to Brussels to continue the dialogue on energy cooperation with the EU ([May 28-30](#), Brussels); and, at the 5th Inter-Parliamentary Meeting of Turkmenistan-EU ([December 2](#), Brussels).

Sources:

The official web-sites of:

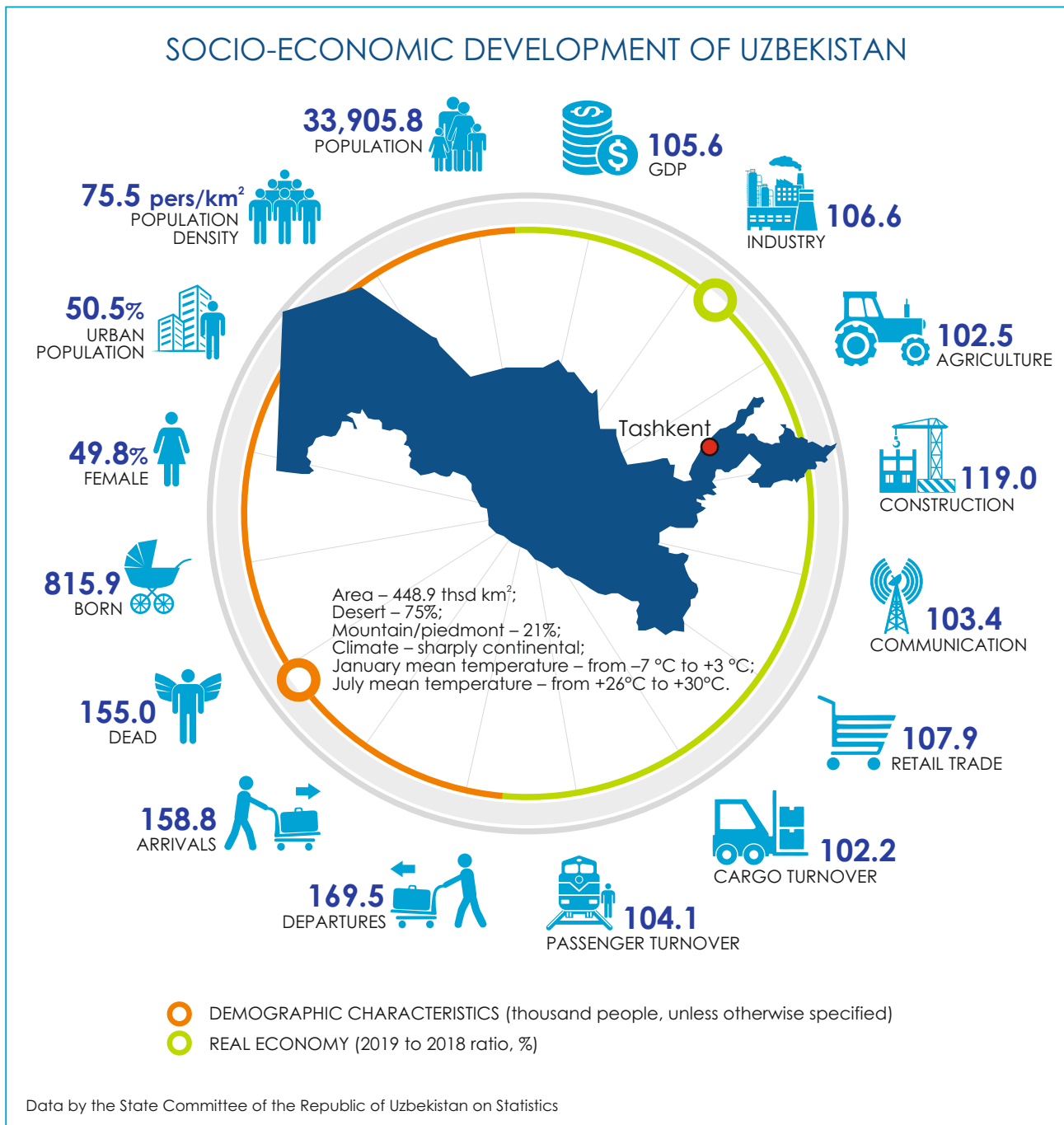
MFA (www.mfa.gov.tm/ru);
Ministry of Justice (<http://minjust.gov.tm/ru>);
Central Bank (<http://www.cbt.tm/ru/index.html>);
EC IFAS (<http://ecifas.gov.tm>)

Information agencies and sites:

<http://tdh.gov.tm/ru/>;
www.turkmenistan.gov.tm/;
<https://turkmenportal.com/>;
<http://orient.tm/ru/>;
www.turkmeninform.com/ru/

⁴¹ Turkmenistan was elected a member of ECOSOC for 2019–2021 at 96th meeting of 72 UNGA (June 13, 2018, New York)

5.5. Uzbekistan



The Economist magazine declared Uzbekistan its 'country of the year' for significant improvements made in the course of 2019.

Water sector

Water resources. The estimated natural fresh and brackish groundwater deposits⁴² potentially yield 27.6 km³/year (75.6 Mm³/day); however, they are unevenly distributed in the country. The demand

of water users is met through a combination of surface water (50.9 km³/year), groundwater (0.5 km³/year), and the reused collector and drainage water (1.6 km³/year).

Over the last years, Uzbekistan's average use of water resources was 51–53 km³/year, of which about 41 km³ (80%) were from transboundary rivers originating in neighboring countries. The water use by sector is as follows: 90% – agriculture;

⁴² Source: Draft Water Sector Development Concept of Uzbekistan for 2020-2030 (www.water.gov.uz/en/posts/1545735855/396)

4.5% – municipal sector; 1.4% – industry; 1.2% – fisheries; 0.5% – thermal power; 1% – other sectors.

The authorized government bodies that deal with

- **water use regulation** are the Ministry of Water Management (MWM) (for surface water) and the State Committee of Geology and Mineral resources (for groundwater); the State Inspectorate for Supervision over Geological Exploration of Subsoil and Safe Operations in Industry, Mining and Public Utilities Sector at the Cabinet of Ministers (for thermal and mineral water);
- **coordination of water accounting, monitoring, ensuring of water quality and safety, and consolidation of the national water balance** is the Ministry of Housing and Communal Services (MHCS) (according to President's decrees issued in 2019).

Latest developments in legislation. The Presidential resolution “On measures for further improvements in the water resources management system” (PP-4486 of 09.10.2019): sets **priorities and key performance indicators of MWM until the end of 2022** and makes amendments in and additions to the Resolution “On measures to Organize Operations of the Ministry of Water Management of the Republic of Uzbekistan” (PP-3672 of 17.04.2018); establishes the Agency for implementation of projects in the field of water resources that will be responsible for development and implementation of projects for the improvement of the national water management system; approves the institutional structure of the Agency and the Roadmap for improvement of water management system efficiency. Among the priorities are the drafting of the Water Sector Development Concept for 2020-2030; the staged adoption of the mechanisms for compensation by water consumers of a share of costs for water services; gradual reduction of the state's share in the total costs of construction, reconstruction and modernization of water infrastructure; expansion of water saving technology to more than 10% of the total irrigated land area, etc.

The Cabinet of Ministers adopted the Resolution “On measures for more effective performance of water consumer associations” that sets priority areas for new WCAs established in districts (one per district) and Kuwasai on the base of existing WUAs. Since January 2020, out of the total amount of loans provided for farm enterprises for growing grain, not less than 1% must be paid for water services delivered by the

associations. In case of cotton-growing farms, this percentage is not less than 2%. The payment of associations' debts for electricity, taxes and other obligatory fees arisen before April 2019, has been postponed to 2022, with the full payment due before 31 December 2024.

Implementation of national strategies and programs in 2019

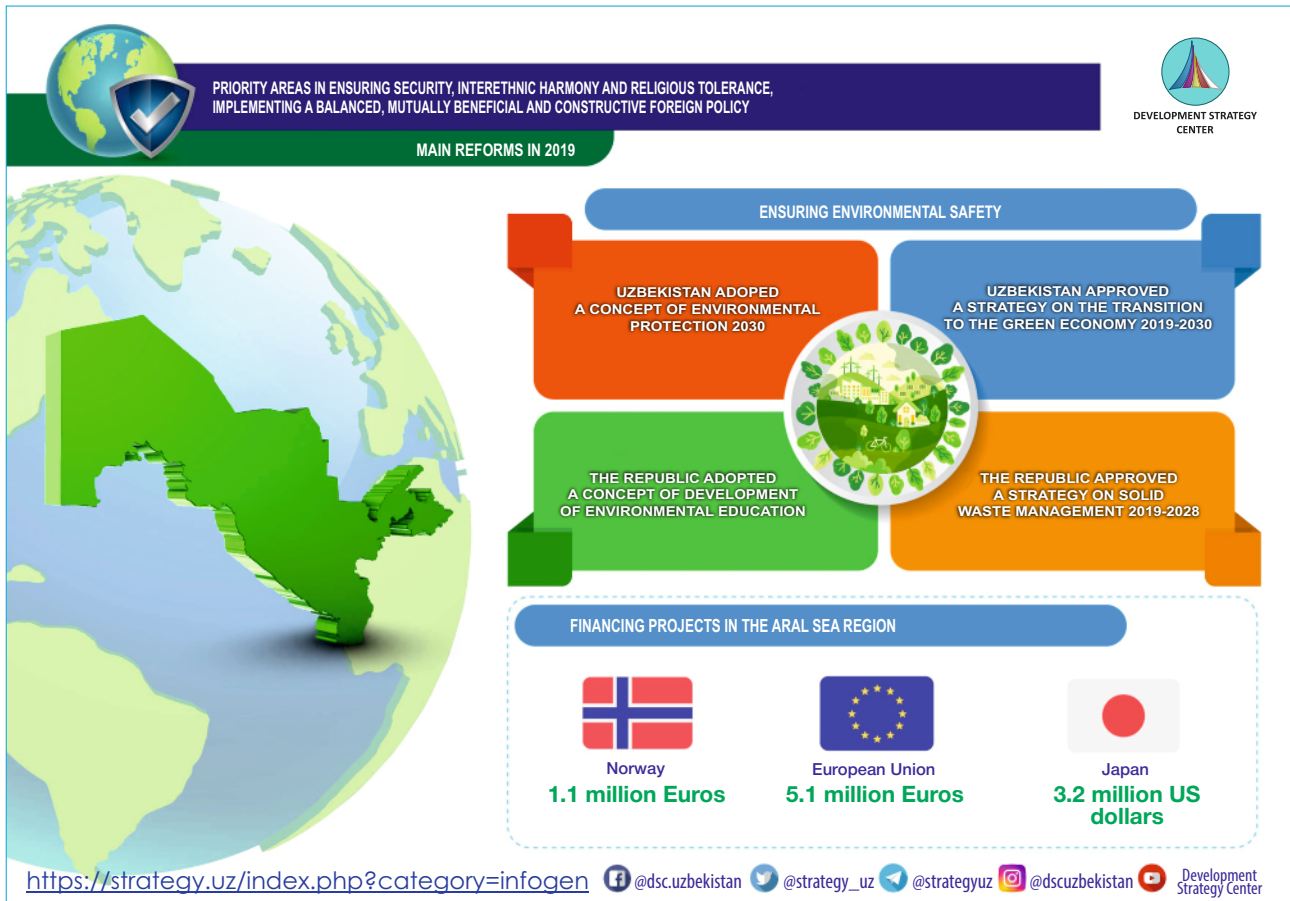
A **State Program was approved** for the implementation of the Action Strategy on Five Development Priorities of the Republic of Uzbekistan for 2017-2021 in the “Year of intensive investments and social development”. The Program provides for implementation of projects, for a total amount of 16.9 trillion soum and \$8.1 billion, aimed at achieving environmental safety and rational use of water and other natural resources. Those include, among others: (1) integral development of cotton, grain and horticulture clusters; (2) setting benchmarks for agricultural land productivity, based on soil fertility, water availability and other factors; (3) improvement of water consumer associations performance through the optimization of WCA quantity, establishment of a united association in the republic, each province and district/city or their re-organization; (4) achievement of rational water use and reclamation of irrigated land through construction and reconstruction of main, inter-district and interfarm collector systems on 821.8 km, subsurface drainage on 341.6 km, canals on 428.8 km, flumes on 127.2 km, and 213 hydrotechnical constructions; (5) development of a national food security program for 2019-2024.

Implementation of the Uzbek President's initiatives and proposals voiced at the XII Summit of the Heads of IFAS Founder-States. As part of the Roadmap adopted in 2018 for implementation of the President's initiatives and proposals, the following work was done in 2019:

- **Developed draft Concept “The Aral Sea Region – a Zone of Environmental Innovations and Technologies”** that was considered at the International High-Level Conference held under the auspices of the UN in Nukus. The work was started for the approval of the Concept by the CA countries and the IFAS Board;

- Organized and held the **International High-Level Conference “Aral Sea Region – a Zone of Environmental Innovations and Technologies”**, which adopted a Roadmap (October 24-25, Nukus). See “[2019 Calendar of Events](#)”;

- **Discussed the draft Regional program of rational water use in CA** during the International Conference in Nukus;



- **Drafted proposals on implementation of measures aimed at institutional and legal improvement of IFAS** and, jointly with CA countries, developed a **package of 34 regional priority projects for inclusion into ASBP-4**;

- Developed a concept of formation and development of the **Central Asian expert platform on water security, sustainable development and future studies** proposed as part organization of cross-disciplinary research, also on the base of scientific and information centers of ICWC and ICSD (See [“Central Asian expert platform on water security, sustainable development and future studies”](#));

- **On the improvement of the Aral Sea and the Aral Sea region**

(1) Facilitated the activities of the UN Multi-Partner Human Security Trust Fund for the Aral Sea region (MPHSTF) (PP-4099 of 08.01.2019 and UP-5848 of 10.10.2019). See [“UN Multi-Partner Human Security Trust Fund for the Aral Sea Region in Uzbekistan”](#))

(2) Launched a [new Joint Program](#) “Building the Resilience of Local Communities Against Health, Environmental and Economic Insecurities in the Aral Sea Region” by UNDP, in cooperation

with the United Nations Population Fund and the Government of Uzbekistan and with the support of the Government of Japan (December 2).

(3) Approved measures for comprehensive socio-economic development in Muynak district, Republic of Karakalpakstan for 2019-2021. 75 projects totaling 26.974 trillion soum are to be implemented under this package. The determined five priority areas for furthering the development of Karakalpakstan include: (1) establishment of large and small enterprises in all industries; (2) creation of conditions favorable for the rapid enlargement of entrepreneurship and support for business; (3) extensive introduction of state-of-the-art technologies in agriculture, augmentation of production volumes, elevation of yields and extension of the range of products; (4) development of a modern infrastructure convenient for the manufacturing industry as much as the wider public; (5) adoption of all-embracing measures to boost living standards ([August 20-21](#), Nukus).

(4) Allocated 100 billion soum for afforestation of the exposed Aral Sea bed. 500,000 ha have been planted. Small water bodies are under construction in the Amu Darya delta. See [“IFAS Agency for Implementation of the Aral Sea Basin and GEF Projects”](#).

(5) Scaled up the activity of the [International Innovation Center for the Aral Sea Basin](#) at the President of the Republic of Uzbekistan. The Center signed 24 Memorandums of Understanding with local and international organizations for joint research efforts. Experimental testing of [synthesized hydrogels](#) for sowing seeds of tomatoes, Bulgarian peppers, pumpkin and other crops was carried out (May); different [varieties of melon](#) from the collection of the Research Institute of Plant Industry were planted in pilot plots adapted to the soil and climatic conditions of the Aral Sea region; an innovative method of [drip irrigation](#) with the use of cotton non-woven sheet to remove accumulating salts was tested; [nursery-blocks with desert plants](#) were formed in the research-production plot “Muy-nak” for their further transportation and planting in the selected areas of the exposed Aral Sea bed (together with representatives of the Japanese OYO Corporation). The Center’s experts took part⁴³ in the [monitoring expedition](#) of the exposed Aral Sea bed (October 20-November 20). The Center also participated in the [“One Million Trees”](#) Campaign by planting 100 junipers in its own territory and assisting in providing seedlings (October 24).

Water management system. A complex water management system has been built in the country to provide water for agriculture and other sectors of the economy.⁴⁴ The total length of the main and inter-farm irrigation network is 28,940 km, the farm and on-farm networks comprise 155,000 km. More than 54,000 hydraulic structures are operated along the main and inter-farm canals; and 114,000 structures are operated in the on-farm network. More than 12,400 wells are used for abstraction of groundwater, including 4,069 wells being operated by the MWM, the other are operated by individual economic entities and population. Also, 56 water reservoirs and 13 mudflow reservoirs (debris basins) are operated in the country to increase water availability, and their total storage capacity is more than 20 billion m³. The total length of drainage network is 142,800 km, of which 106,100 km are open collectors (collecting drains) and 36,700 km are subsurface horizontal drains. For land reclamation purposes, the MWM also operates 172 pumping stations, 3,788 vertical drainage wells and 27,648 observation wells. For irrigation purposes, 1,687 pumping stations are operated in the country and are under responsibility of the Ministry. More than 5,285 pump units consume 8.0 billion kWh annually. Also, more than 10,280

pumping units are operated on the on-farm irrigation networks.

Construction of reservoirs. There are about 60 reservoirs in Uzbekistan. Additionally, new reservoirs with the total capacity of 45 Mm³ at the cost of \$290 million are under construction, particularly in Tashkent (Kyzylsai, about 15 Mm³, area – 1.84 ha, to be completed in 2022), Dzhizak, Kashkadarya, and Samarkand (Bulungur, 100 Mm³, cost – \$19.3 million, to be put into operation in 2021 for irrigation of about 36,000 ha) provinces.

Water saving technologies. Incentives mechanisms are expanded for wider introduction of water saving technologies and **support of those who adopt resource-saving**, particularly, in growing cotton, establishing new vineyards, developing horticulture and building greenhouses. The procedure of subsidizing and the amount of subsidies for compensation of a portion of costs related to introduction of those technologies and a portion of interests of bank loans given for buying and installation of the technologies were determined (PP-4499 of 25.10.2019). Since 2020, state subsidies will be provided in the amount of 8 million soum per hectare for introduction of drip irrigation systems, 4 million soum/ha for sprinkling systems, and 1 million soum/ha for discrete irrigation. Moreover, the legal persons that apply drip irrigation on their land plots will be exempted from the single land tax for a period of 5 years. The targets for **introduction of water saving technologies on 253,381 ha of cropland over 2019-2022** were approved (UP-5742 of 17.06.2019).

Summarizing the year 2019, water saving technologies were introduced on 33,800 ha (drip irrigation), 1,100 ha (sprinkling), and 2,200 ha (discrete irrigation). Agriclusters and farms were subsidized in 2019 in the amount of 84.6 billion soum for introduction of drip irrigation, including 3.6 billion soum for the payment of 10% interest of the loans totaling 88.3 billion soum. As estimated, the application of drip irrigation in cotton growing allowed reducing water inputs by 40-50% on average per hectare, saving fuel by 60%, increasing fertilizer efficiency by 30%, and getting 12-15 days earlier ripening of cotton. Moreover, cotton yield was increased by 20-30 centners.

Projects and programs. The Project “Sustainable Management of Water Resources in Rural Areas in Uzbekistan”⁴⁵ (GIZ/UNDP), Component 1 “National policy framework for water governance

⁴³ Under the Joint Project of the Government of Uzbekistan, UNDP and UNESCO “[Addressing the urgent human insecurities in the Aral Sea region through promoting sustainable rural development](#)”

⁴⁴ Source: Draft Water Sector Development Concept of Uzbekistan for 2020-2030 (<http://www.water.gov.uz/en/posts/1545735855/396>)

⁴⁵ EU Program “Sustainable Management of Water Resources in Rural Areas in Uzbekistan”

and integrated water resources management (IWRM)" helped to (1) install up-to-date water-saving technologies of drip irrigation and sprinkling and weather mini-stations in the pilot plots in six provinces; (2) supply six BISAs with specialized equipment, GUP "Botiometric Markaz" at MWM with measuring equipment for pumping stations and transformers, State Inspectorate "Gosvodkhoz nadzor" with equipment and geo-radar for the geological surveys of dams. The Project Component 2 "Technical capacity building" (1) provided six BISAs with mobile SonTek S5 doppler-proflographs to measure channel profiles, flow velocity and rates in rivers and canals; (2) helped to put into operation a pumping station in Kashkadarya province.

Activities were continued under the National Water Resources Management Project in Uzbekistan (SDC). In particular, training courses were held for the heads of ISAs and main canals from Karakalpakstan and Bukhara, Kashkadarya, Navoyi, Syrdarya and Khorezm provinces (September 23-28).

The Package "[Rehabilitation of Padshaota irrigation infrastructure system](#)" is implemented as part of the [Fergana Valley Water Resources Management Project](#) (WB) in the Namangan province. The Sinohydro Corporation Limited has got contracts for the rehabilitation of the main and inter-farm irrigation canals and their structures (\$7.272 million) and for the construction of new irrigation wells (\$8.367 million).

The Project "[Reconstruction of Main Irrigation Canals of Tashsaka Irrigation System in Khorezm region](#)" was extended until June 1, 2021. The project is implemented through the following ongoing packages: 1-Reconstruction of Tashsaka canal with structures; 2-Construction of cross regulators and outlet structures on main canals; 3-Reconstruction of Shavat and Gazavat canals including structures; 4-Construction of inter-farm canals with structures; 6-Repair and renewal works of structures at main canals of Tashsaka system.

As part of the [South Karakalpakstan Water Resources Management Improvement Project](#) (WB), four packages are implemented: reconstruction of Right Bank canal; reconstruction of Bustan canal (east part); construction of Bustan canal (west part); and, laser leveling and deep loosening of irrigated land.

Assessment of the tender proposal for a contract for construction of a new pump station "Amu Bukhara 1" was completed and the contract was signed with CNTIC (PRC) under the [Amu Bukhara Irrigation System Rehabilitation](#)

[Project](#). The Hebei Construction Group Co.Ltd (PRC) performs activities on the modernization of Kuyu-Mazar and Kizil Tapa pump stations.

Capacity building: open lesson "Issues related to wider application of drip irrigation technology and related solutions" (September 27); master-class on hydrogel technology application for planting trees (November 4-5, Gulistan; November 13-14, Karshi; November 19-20, Termez).

Drinking Water Supply

Latest developments in legislation. Following the Presidential Resolution on the additional measures for the development of drinking water supply and sewage systems in Uzbekistan: (1) the Smart-City Technology Development Concept and related Action Plan for 2019-2021 were approved (PKM 48 of 18.01.2019). One of the focus areas – Smart water supply and sewage disposal – implies the operation of water supply system on the base of online hydraulic models, automated water intakes and water disposal and automatic leakage detection by integrating the systems of distribution, safety and control, the management of storm water and the flood warning system; (2) debates on a resolution on measures for the development and introduction of a single national geoinformation system for water supply and sewage objects and a resolution on the approval of the Concept of Water Supply and Sewage Sector Development in Uzbekistan until 2030.

Following a Presidential decree on the measures for water management improvement in Uzbekistan, the Ministry of Housing and Communal Services (MHCS) prepares a Concept of the water supply and sanitation strategy of Uzbekistan, which includes the establishment of a centralized accounting and monitoring system, the ensuring of safety and quality of waters under the State water fund and the adoption of the "Digital water and sanitation" system.

Problems of drinking water supply. The centralized provision with clean drinking water reaches 68% in the country as a whole, including 52% in Karakalpakstan, 53% in Bukhara province, 54% in Kashkadarya and Surkhandarya provinces, and 56% in Khorezm province. 85% of structures served for drinking water generation and delivery lack measurement systems. Only 44% of water consumers are equipped with water meters. 38% of water mains are in a critical condition, and 20% of pumps are out of service. To reach 98% coverage with water supply in urban area and 85% coverage in rural area and

ensure 31% provision with sanitation by 2030, \$4.5 billion will be needed. In this context, a **set of measures was set**: establish tariffs based on free market demands to attract private investments, adopt a procedure for rate-setting proceeding from full coverage of the service cost and modernization costs, apply public compensation for a portion of drinking water costs borne by population in remote and mountain areas, etc.

Groundwater. Debates on the Cabinet of Ministers resolution "On the approval of the Procedure of state accounting of groundwater and its use" were finished. According to this resolution, since 01.01.2021 it is prohibited to divert groundwater at intake structures that are not equipped with meters.

GP Uzbekgidrogeologiya finishes generation of an interactive hydrogeological map, which includes the following layers: aquifers; stock; resources; current abstraction, and the information on public groundwater monitoring network. Groundwater exploration work is under way. The water sources were approved for supplying with drinking water of about 165,000 people in the settlements in Fergana and Surkhandarya provinces.

Projects and programs. The public-private partnership project "Transfer of water supply and sanitation systems management" is implemented. MHCS, ADB and the Agency for public-private partnership development signed a Memorandum-agreement on the provision of consulting services on contracts for urban water utilities in Uzbekistan to rehabilitate, operate and maintain water supply infrastructure in Samarkand, Bukhara, Namangan and Karshi cities. ADB contributes \$2.6 million.

The Project "Improvement of drinking water supply in Dzhizak province through water resources of the Zarafghan River" is continued. As part of the project, 183 km of water mains and a reservoir with the capacity of 100,000 m³ are constructed, 13 water distribution structures were reconstructed. 52 km of water mains will be rehabilitated in 65 villages.

ADB has approved a loan of \$105.3 million for rehabilitation and expansion of the regional water supply system in Yangiyul and Chinaz districts of Tashkent province as part of the [Second Tashkent Province Water Supply Development Project](#) that will help to provide more than 220,000 people with safe drinking water.

International cooperation. The **OPEC Fund** has approved a loan of \$54 million for a drinking

water supply project for 2020-2025 that is to provide about 200,000 people in 22 settlements in Yangikurgan district and a part of Namangan with drinking water.

EBRD will invest more than \$300 million in modernization of water supply systems in Uzbekistan: (1) project "Modernization of water supply and sanitation system in Namangan province", for reconstruction of 55 km of water mains, modernization of 3 intakes and 10 distribution structures supplying drinking water to the Namangan city and of wastewater treatment structure in Pap district; (2) project "Modernization of water supply and sanitation system in Khorezm province", for construction of new intake structures, modernization of pump stations and treatment structures, and installation of water meters that would help to cover up to 200,000 people with water supply and sanitation services; (3) project "Reconstruction and construction of a sewer system in the Karshi city of Kashkadarya province"; (4) project "Reconstruction and construction of a sewer system in Khorezm province".

Agriculture

The total agricultural land area is 20,236,300 ha, of which: cropland – 3,988,500 ha; perennial plantation area – 383,100 ha; fallow land – 76,000 ha; hayfields and pastures – 11,028,300 ha; and other land area – 4,760,400 ha.

Public administration reforms. The Presidential decree "On measures for the improvement of agricultural sector governance system" (UP-5708 of 17.04.2019) sets the main tasks of the Ministry of Agriculture. A number of organizations, including the Scientific-Production Center for Agriculture and Food and its research units, the Tashkent State Agrarian University and its branches were placed under the authority of the Ministry. In line with the Presidential resolution "On the improvement of the Ministry of Agriculture of the Republic of Uzbekistan" (PP-4292 of 17.04.2019), new divisions were formed at the Ministry for the development of agricultural entrepreneurship, agri-clusters, economic associations and public-private partnerships, for financial relations and services in the agricultural sector, efficient land use, etc. Additionally, agricultural extension centers will be established at the Tashkent State Agrarian University and its branches for training, including training of trainers.

Latest developments in legislation. Gradual measures are taken for reformation of the agricultural sector and introduction of market mechanisms. In particular, the following documents were appro-

ved: (1) **National agricultural development strategy for 2020-2030** and its Roadmap; (2) **Concept for efficient water and land use in agriculture**, its Roadmap and targets on agricultural land use efficiency over 2020-2030. Within the framework of the Concept, non-used irrigated land, rainfed land and forest fund land, pastures, fallow land, perennial plantation land and other kinds of land are allocated to agricultural enterprises and citizens of Uzbekistan for up to 50 years.

New mechanisms started to be introduced for the development of clusters and cooperation system in horticultural and viticultural production, processing and export. Measures are set for the development of agricultural cooperation forms in horticulture (PP-4239 of 14.03.2019). As an experiment, in 2019-2020 it is planned to organize agricultural associations for joint production, storage and sale of fruit and vegetable products in 8 districts in Dzhizak, Samarkand, Fergana and Tashkent provinces. Based on the experiment's results and international best practices, a draft law on agricultural cooperation is to be prepared by December 1, 2020.

A resolution "On additional measures for furthering of horticulture and viticulture and creating value added" (PP-4549 of 11.12.2019) sets the procedure for establishment of horticultural clusters and plans full-scale inventory of orchards and vineyards in 55 districts to identify ineffective orchards and vineyards for improvement.

Additional measures were determined for **ultra-processing and furthering of food industry** (PP-4406 of 29.07.2019). In particular, in 2019-2020 it is envisaged to establish 8 large agri-logistical centers, with planned output of 3 million tons, in several provinces of Uzbekistan through foreign credits in the amount of \$367 million and establish 37 centers (output – 360,000 tons) in Karakalpakstan and provinces through national investments. This will help to form an up-to-date infrastructure ensuring stable seasonal prices at the local market, food security and high-quality products.

For the **development of the livestock-breeding sector**, the resolution "On measures for further development and support of the livestock-breeding sector" provides for the allocation of reserve rainfed land and pastures to livestock farms and fodder producers, with the obligation to grow fodder and apply drip and sprinkling irrigation there.

The adopted **Law on Pastures** (ZRU-538 of 20.05.2019) regulates relations in pasture use and protection.

Farm development. By January 2020, the number of individual farms reached 92,600 in the Republic. Large-scale work was done to establish farms of multisectoral specialization. As a result, 11,939 multisectoral farms were supported in organization of intensive orchards, vine plantations, greenhouse construction, processing, and services.

Agricultural equipment. By the beginning of 2019, only 74% of equipment needs have been met in the agricultural sector through locally manufactured and imported equipment. More than 85% of agricultural equipment is deteriorated or outdated. The average level of agricultural mechanization is 88% in cotton and grain growing, 48% in livestock breeding, 42% in vegetable production and 26% in horticulture. The sector highly depends on import. In this context, for further development of the agricultural machinery branch and local manufacturing, a number of documents were prepared: (1) a resolution "On additional measures for timely equipping of the agricultural sector" that envisages state financial support for the provision of farmers with quality agricultural equipment; (2) the "Concept for further development of agricultural equipment branch of the Republic of Uzbekistan for the period until 2025"; (3) a resolution "On state support measures for agricultural mechanization", which sets the procedure of subsidizing procurements of agricultural equipment manufactured locally; and (4) a resolution that approves the Action plan for implementation of investment projects to extend local production of agricultural equipment by 2021 and the Program of measures for the development of agricultural equipment production over 2019-2020.

Projects and programs. ADB provided loans in the amount of (1) \$150 million for livestock breeding development as part of the Livestock Value Chain Development Project (2020-2024, \$237.45 million); (2) \$197 million for the establishment of agri-industrial centers for processing, sorting, packaging, storage and delivery of fresh and processed fruits and vegetables in Andizhan, Samarkand and Tashkent provinces as part of the Horticulture Value Chain Development Project (2019-2023, \$244.75 million). WB provided as credits (1) \$100 million for infrastructural improvement of 300 villages under the "Prosperous village" project; (2) \$200 million for the expansion of micro-, small and medium enterprises under the Fergana Valley Rural Enterprise Development Project.

The **International Islamic Trade Finance Corporation** allocates \$50 million for cotton produc-

tion and processing through the project “Covering the costs of growing cotton and financing the final reports”.

UNDP is implementing together with (1) **GEF** the project “[Reducing pressures on natural resources from competing land use in non-irrigated arid mountain, semi-desert and desert landscapes of Uzbekistan](#)” in three pilot plots – two plots in Zaamin district of Dzhizak province and one plot in Karakul district of Bukhara province. As part of the project, rotation-based cattle grazing plans were drafted to account for yield, capacity and types of flora on pastures. Two water pipes were provided for the Zaamin forestland for drip irrigation of rosehip plantations. Walnut and Turkish “Izmit” poplar plantations were organized in foothills and mountain areas of Zaamin district. Black saxaul was planted in spring 2019 in the Karakul forestland. And with (2) the **Adaptation Fund** the project “[Developing climate resilience of farming communities in the drought prone parts of Uzbekistan](#)” in a number of districts of Karakalpakstan to establish climate-resilient agricultural and pastoral production systems.

EU and **GIZ** implement the project “Sustainable development in rural areas of Uzbekistan”, which aims to further develop social and economic potential of rural areas in Uzbekistan by transferring European Union best practices (know-how) and technologies on agro-food value chains in partnership with local authorities and economic actors (project site: <http://uzru.raldev.eu/ru>).

International cooperation. Russia and Uzbekistan approved a Roadmap for broadening of agricultural cooperation in the mid-term (May 30, Urgench). In particular, the Russian group “PhosAgro” and the Government of Uzbekistan discussed the prospective cooperation for meeting the demands of Uzbek agriculture for high-quality and environmentally friendly phosphorous fertilizers and their effective application.

An agreement was reached with **Japan** on exporting 28 types of agricultural products (June), a number of documents was signed with **PRC** on cooperation in the agrarian field (July), and the aspects of deepening the trade-economic cooperation between the **EU** and Uzbekistan, including in the agricultural sector, were discussed (November).

Agreements were signed with (1) the OneSoil company (Republic of Belarus) and Boston Consulting Group⁴⁶ on the use of satellite data in Uzbekistan’s agriculture. This includes the work on intensive digitization of agriculture as part of the Smart Agriculture Concept and unbiased land and crop mapping in Uzbekistan by using modern technologies; (2) the “Belsemena” of the Republic of Belarus on the development of public-private partnerships for seed production; (3) the Ministry of Agriculture of the Republic of Kazakhstan (the Roadmap) for more intensive cooperation between the two countries in agricultural science, production, certification, digitization, trade, veterinary and livestock breeding, and plant quarantine for a period of 2019-2024.

Capacity building. In line with a Cabinet of Ministers’ resolution, the Khorezm branch of rice research institute will be established on the base of the Khorezm research-experimental station for deepening of research on new high-yielding and disease-resistant rice varieties and hybrids that fit for soil and climatic conditions in the region.

The following trainings were held: training workshop “Developing cooperation in agriculture” aimed to raise awareness of local administrations and farmers about the advantages of joint management (March 18-20); [regional training](#) of trainers organized by FAO to strengthen agricultural extension and advisory services (April); a workshop “Agrochemical studies of soil and agrochemical mapping of irrigated land” (September 26).

Events: (1) the International conference “Agricultural transformations, food security and nutrition in Central Asia”, which launched the IFPRI Global Food Policy Report 2019⁴⁷ (May 31, Tashkent); (2) a [multilateral forum](#) on “Transition from agricultural and environmental problems to opportunities to attract investment and innovation in the Aral Sea Basin”, during which a Memorandum was signed between the Uzbekistan Ministry of Agriculture and the International Center for Biosaline Agriculture (ICBA) (August 8-9, Tashkent); (3) the Conference “Analyzing cooperation and prospects of agricultural production and processing and developing a legal framework for regulation of related relations in Uzbekistan” (August 15, Tashkent); (4) International scientific-practical conference “Innovative approaches to the use of agrobiodiversity for sustainable agriculture” (September 25).

⁴⁶ International company specialized in management consulting and a leading consultant on business strategies (<https://www.bcg.com/>)

⁴⁷ IFPRI Global Food Policy Report 2019 (<http://gfpri.ifpri.info/>)

Energy

The available generating capacities in Uzbekistan amount to 12,900 MW, of which 11,000 MW (84.7%) – TPP; 1,850 MW – HPP (14.3%); and, more than 133 MW (1%) – isolated stations. The main source of energy generation is 11 thermal plants, including 3 cogeneration plants. The capacity of modern energy-efficient blocks is 2,825 MW (25.6% of the total capacity of TPP). In 2019, TPP generated 89.6% of local energy in the republic.

The hydropower sector includes 42 HPPs, including 12 large ones, with the total capacity of 1,680 MW (90.8% of the overall HPP capacity), 28 small HPPs of 250 MW in total (13.5%) and 2 micro plants of 0.5 MW. 30 HPPs with the total capacity of 532 MW (4 large plants – 317 MW and 26 small plants – 215 MW) are located along watercourses. 10 HPPs are a part of reservoir systems and have the total generating capacity of 1,400 MW. The hydropower use coefficient is 27% in Uzbekistan.

Public administration reforms. In line with the Presidential decree “On measures for radical improvement of the national fuel-energy management system”, the [Ministry of Energy](#) was established (UP-5646 of 01.02.2019). The Ministry included in its structure also the Agency for Atomic Energy Development, the Inspectorate for Oil and Gas Use and the Electric Energy Inspectorate.

Measures were taken to improve the governance system of the JSC “UzbekHydroenergo” through the adoption of modern methods of corporate management and meeting of sectors and population demand for electricity by attracting foreign investments. Debates on the National Hydropower Development Concept for 2020-2024 were completed. According to the Concept, it is planned to build 4 HPPs of more than 30 MW and 16 new smaller ones and modernize 21 existing plants. As a result of the implementation of the Concept, it is expected to increase the annual energy generation by 2.826 billion kWh, with the total generation of 9.343 billion kWh at 57 HPPs.

Hydropower. Following the resolutions “On the program of measures for further development of hydropower over 2017-2021” and “On measures for implementation of the national investment program in 2019”, the following activities were undertaken in 2019:

New hydropower construction projects. New HPPs were put into operation, including Tuy-

buguz small HPP (Tashkent province) at the capacity of 12 MW and the average annual generation of 41.8 million kWh; the cascade of two small hydropower plants (in the territory of Big Fergana Canal, Namangan province) at the capacity of 12 MW and the average annual generation of 72.89 million kWh. Several HPPs are under construction, including Pskem HPP (design capacity – 400 MW; average annual generation – 958.5 million kWh) on the Pskem River and Nizhnechatkal HPP (4 hydroaggregates of 19 MW each) on the Chatkal River in Bostanlyk district.

Small HPP is under construction at the Sardoba reservoir in Syrdarya province. It is planned to install two hydroaggregates of 5.35 MW each and the annual production capacity is expected to be 41.1 million kWh. The project contractor is the “Siloviye mashiny” company (Russian Federation).

Hydropower modernization projects. The modernization of HPP “SFC-1” (\$5.81 million, of which \$4.37 million – contribution from the WB and \$1.09 million – funds of AKB “Uzsanoatkurilish”) at the Shakhrikhan hydropower cascade was completed. The capacity of HPP reaches 2.2 MW, while the annual average production capacity is 17.1 million kWh.

As a result of modernization of Farkhad HPP, the installed capacity will increase from 126 to 127 MW and the deteriorated and outdated equipment will be replaced.

The resolution “On measures for implementation of an investment project on “Improving safety of Charvak HPP” approved the project’s feasibility study (PKM-706 of 22.08.2019). The project was included into the Program of cooperation between Uzbekistan and the French Development Agency for financing of a €13 million loan from the Agency over 2018-2021.

A list of natural and artificial watercourses was determined for the construction of 19 generating plants at the design capacity of 10,050 kW for a total amount of \$12 million. One of projects at \$322,000 has been implemented: micro-HPP (capacity – 200 kW; annual generation – 1.5 million kWh) on a diverting canal of Zaamin reservoir in Dzhizak province.

Thermal power. Based on the Program of Large Investment Projects in the Energy Sector for 2019-2030, 15,600 MW of new and modernized generating capacities are to be added by 2030 in thermal power only. At the same time, it is planned to withdraw 6,400 MW of outdated generating capacities of TPP.

Atomic energy. The following documents were approved in this sphere in 2019: the Concept of atomic energy development in the Republic for 2019-2029 and the related Roadmap; the Capacity building strategy for the national nuclear energy program; and, the law "On peaceful uses of atomic energy". The International Atomic Energy Agency has approved four projects for over €1 million to be implemented in 2020-2021. The Russian Atomic Agency (Rosatom) has registered its country office in Uzbekistan.

Alternative energy sources. The law "On the use of renewable energy sources" determines the focus areas of the RES policy, state support and incentives. In particular, RES-based producers, including in the private sector, are exempted from property (RES installations) and land (occupied by the installations) taxes for 10 years. Incentives are also to be given to those who use RES in dwellings.

A presidential decree sets the target to increase the share of RES to 25% by 2030 (PP-4422 of 22.08.2019). Currently, the share of RES, mainly in the form of hydropower, has accounted for 10% only in the total national energy generation.

For diversification of generation structure, measures are taken to implement investment projects in RES on the basis of public-private partnerships. Uzbekistan has joined the WB [Scaling Solar](#)⁴⁸ program. As part of the program, the Masdar company (UAE) was selected for implementation of an investment project of the photoelectric station of 100 MW in Navoiy province at a rate of \$0.02679 per kilowatt-hour and the construction period of 12 months. The station is to be commenced in Quarter 1 2021. Another photoelectric station of 100 MW is to be constructed in Samarkand province by French company «TOTAL Eren».

Construction of a small pilot solar station was started by German company "Graess Energy" in Muynak.

Wind power is also developed in the Republic: an Agreement was signed with the Masdar company (UAE) for the construction of a wind power plant of 400 MW in Navoiy province (January 18) at the total investment cost of \$600 million; another plant of 1,500 MW is under construction in Bukhara province by the Liaoning Lide corporation (PRC).

International cooperation. The Ministry of Energy (1) signed with USAID a Memorandum of Understanding as part of projects on the improvement of energy efficiency and the use of renewables; (2) started cooperating with the Finnish company "KaukoInternational" to promote investments and adopt sustainable, reliable and affordable technologies of geothermal energy production and operation; (3) agreed with the "Assystem Engineering and Operation Services S.A.S." (France) to establish a joint venture for designing all types of grids and energy structures by using innovation technologies (September 24); (4) signed a "take-or-pay" contract for energy supply from Uzbekistan to Afghanistan for 10 years (20-21 September).

JSC "UzbekHydroenergo" signed (1) a Memorandum of Cooperation with General Electric (USA) and Grupo Cobra (Spain) for the adoption of modern technologies in hydropower construction and modernization; (2) a Cooperation agreement with PAO "Siloviye mashiny".

During the 5th meeting of the Sub-committee on energy cooperation of the Uzbek-Chinese Intergovernmental Cooperation Committee, the parties agreed to study feasibility of an environmentally-friendly project on energy generation through household waste combustion in Namangan province (August 26).

Capacity building. Among others, the following training workshops were held in: introducing the international ISO 50001 standard (September 21); increasing reliability of hydrotechnical constructions for maximum use of hydropower capacities (September 25). A branch subdepartment of the TIAME on the Use of Water Energy and Pump Stations was opened in the office of the cascade of Chirchik HPPs.

Events: 1) International exhibition and conference "Power Uzbekistan 2019", where memorandums of understanding were signed with the World Nuclear University of the World Nuclear Association and the Atomic Energy Association of Japan (May 15-17); (2) International Forum of Energy Reforms (July 18); (3) Energy Week of Uzbekistan (September 25-27); (4) Conference of investors in renewables and energy infrastructure – [RENPOWER Uzbekistan 2019](#) (December 4).

⁴⁸ Scaling Solar brings together a suite of World Bank Group services under a single engagement aimed at creating viable markets for solar power in each client country (www.scalingsolar.org/)

Environment and Climate Change

Latest developments in legislation

The following documents were approved in 2019:

- a Roadmap for establishing the system of national nature protected areas over 2019-2022. It provides for the establishment of the state nature reserve "South Ustyurt" and a number of state reservations, including the Sudoche lake system, in Karakalpakstan. The Central Authority for Biodiversity and Nature Protected Areas is to be formed at Goskomecologiya;

- Regulations on establishing the water body buffer zones and sanitary protection zones in Uzbekistan that set the procedure and the regime of economic activities in these zones;

- Environmental Education Concept, which is aimed at building environmental knowledge, awareness and culture among young generation and improving the ecological science by mobilizing innovative technologies;

- Regulation on voluntary eco-labeling in Uzbekistan. An eco-label identifies products, production, use, transportation, storage and utilization of which proves to have a minimal negative impact on natural environment, health and bio-resources. Producers may label their products as environmentally safe on voluntary basis after getting the respective certificate;

- (1) "Strategy of biodiversity conservation in Uzbekistan over 2019-2028" and related Action Plan. Particularly, it is envisaged to extend the nature protected areas to 12% of the country area, expand afforested areas on the exposed Aral Sea bed to 1.2 Mha, establish a single information database of state biodiversity monitoring and inventory, etc.;

- "Strategy of transition to green economy in Uzbekistan for 2019-2030", which is aimed at integration of climate change into the sustainable national economy development. The Strategy priority areas include, among others: (1) increase of energy efficiency in main economic sectors; (2) energy diversification and RES development; (3) climate change adaptation and mitigation, improvement of resource use efficiency and conservation of ecosystems; (4) development of financial and non-financial support mechanisms for green economy;

- Environmental Concept of Uzbekistan until 2030, which sets priority areas of public environmental policy, and related Roadmap. In par-

ticular, it envisages measures for (1) mitigation of the Aral catastrophe consequences; (2) protection of land, water and biological resources; (4) improvement of waste management; (5) greening of economy, etc.;

- Strategy of solid waste management for 2019-2028, which provides for the development of legal and economic framework for compensation of waste management costs by producers themselves;

- Regulations on environmental monitoring in Uzbekistan to improve the monitoring system in the republic, ensure regular observations over natural resource use, and improve information support of public environmental control.

The decree "On measures for more efficient combatting desertification and drought in Uzbekistan" assigns to the State Forestry Committee additional functions related to prevention of desertification, afforestation, implementation of republic's international commitments to combat desertification and drought.

International cooperation. The Goskomecologiya signed: (1) a Memorandum with the Italian Ministry of Environment, Land and Sea Resources; (2) an environmental cooperation agreement with the Belarusian Ministry of Natural Resources and Environment; (3) a Memorandum of cooperation with "Alpha Global Capital (S) Pte. Ltd." (Singapore) on implementation of plasma technology for waste utilization (August 27).

Capacity building. The following capacity building events were held: a seminar on innovation development and promotion in the area of air safety (January 31); a roundtable on the adoption of world waste management practices in the Republic of Uzbekistan (July 11); a seminar "Globalization of environmental problems" (July 22); a seminar "National environmental impact assessment systems and the requirements of the Espoo Convention and the Protocol on strategic environmental assessment" (August 19-20).

Events: (1) [Hashar Week](#) to attract the general public to the issues of pollution, ecology and waste sorting. During the week, different events took place in four areas: Action, Education, Arts, and Business (March 11-17); (2) Scientific-Practical Conference "Importance of biodiversity conservation in Uzbekistan" (May 21); (3) a Conference dedicated to the World Environment Day (June 4); (4) 2nd Central Asian International Exhibition and Business-Forum "Green technologies, environmental protection and recycling –

GET Central Asia 2019" (October 9-10); (5) an International Press-club meeting, where the national Environmental Concept 2030 was discussed (November 20); (6) first International ecological marathon "ARAL MARATHON" under the slogan – We are responsible for the future! (October 17-22, Tashkent – Samarkand – Bukhara – Urgench – Nukus – Muynak); and, presentation of the fifth edition of the Red Book of Uzbekistan.

In October 2019, a five-year campaign "Plant million trees" was started in Nukus.

Ongoing projects. As part of the project "[Sustainable natural resource and forest management in key mountainous areas important for globally](#)

[significant biodiversity](#)" (UNDP, GEF), an innovative biodiversity conservation information management system and a publicly accessible Internet portal – Information Center on Biodiversity of Uzbekistan (ICBU) were developed (<http://bcims.uznature.uz/wordpress/>). A SMART⁴⁹ patrolling program was introduced. The SMART is tested in Gissar and Chatkal nature reserves. Seven tree nurseries were established in the two snow leopard landscapes – Western Tien Shan and Pamir-Alai – for forest regeneration.

A regional seminar was held within the framework of the project "[Central Asian Desert Initiative](#)" (CAD⁵⁰) aimed at preserving biological diversity and the conservation and sustain-



nable use of cold winter deserts in Central Asia. An agreement was reached to open the interim CAD⁵⁰ regional secretariat in Tashkent (October 22–23).

The UNDP-GEF Project "Complete HCFC Phase-out in Uzbekistan through promotion of zero ODS low GWP energy efficient technologies" started to be implemented in Uzbekistan in 2019.

SDG in Uzbekistan

Uzbekistan is in the list of countries that develop Voluntary National Reviews (VNR) on **SDG**. SDGs are closely related with the Action Strategy of Uz-

bekistan for 2017-2021 (totally 81 indicators harmonized with the National sustainable development goals).

The Coordination Council for National sustainable development goals and objectives approved 206 indicators for monitoring (March 20). A special national web-site was developed (nsdg.stat.uz). The VNR is to be presented in 2020 at the High-Level Political Forum on Sustainable Development.

The following events were organized on SDG: a roundtable "Urbanization concept 2030 and National sustainable development goals" (April 17); a seminar "Financing SDG" (May 14);

⁴⁹ Spatial Monitoring and Reporting Tool

⁵⁰ The project as a part of the International Climate Initiative (IKI) is implemented jointly with the University of Greifswald, Michael Succow Foundation (Germany) and the FAO Sub-regional Office for Central Asia. The main CAD⁵⁰ target countries are Kazakhstan, Turkmenistan, and Uzbekistan



the UNDP/UNECE/UNEP/UNU/FAO joint workshop on SDG indicators on environment and economic well-being (June 12-14); a seminar “Introducing the sustainable development indicators: building state capacity on human rights and implementation of the 2030 Agenda in Uzbekistan” (June 26-27); the [Regional Conference](#) “Production Potential, Commerce and Sustainable Development Goals (SDGs) in Central Asia” (November 25).

Emergencies

Reed fire in the Sudoche Lake system in Muynak district of Karakalpakstan occurred on the 4th of July. The fire was caused by lighting. The total area of fire extended to 278 ha, of which 111.2 ha belong to the Muynak aquaculture industry, and 166.8 ha, to the Sudoche ornithological nature reserve⁵¹. The fire stopped on the 6th of July. No dead animals or birds were recorded. The damage from the fire was estimated at more than 225 million soum.

Foreign Policy and International Cooperation

In 2019, the President of Uzbekistan paid formal and working visits to India (January), Germany (January), UAE (March), China (April), Turkmenistan (October), Belarus (July-August), Azerbaijan (October), Japan (December), and Russia (December).

The country was visited by the Heads of CA States, Korea, Germany, the European Union and the Heads of SCO member-countries.

Key developments in the foreign policy of Uzbekistan in 2019

The draft Concept for strengthening the positive image of Uzbekistan in the world has been developed.

Development of alliances and strategic partnerships. The country further builds relationships with Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan to strengthen regional trade and economic cooperation, develop the regional transport-transit infrastructure, ensure rational and integrated use of water and energy resources along transboundary rivers in CA and achieve environmental sustainability in the region, finish delimitation and demarcation processes, enhance friendly and good-neighborliness relations, and develop scientific-technological and cultural cooperation.

The [Second Consultative Meeting of Central Asian Leaders](#) took place in Tashkent. The meeting was attended by President Gurbanguly Berdimukhamedov of Turkmenistan, President Emomali Rahmon of Tajikistan, President Soronbay Jeenbekov of Kyrgyzstan and former President, now, Elbasy (Leader of the Nation) of

⁵¹ Sudoche is the habitat of muskrat, ducks, goose, owl, pelican, gull, flamingo, etc.

Kazakhstan, Nursultan Nazarbayev. The presidents addressed a range of matters, including the enhancement of regional security, removal of trade barriers, promotion of large-scale projects to modernize infrastructure and extend transboundary options. The leaders affirmed the common interest in achieving stability and sustainable development, good neighborly relations, security and well-being in the region. The issues of climate change, renewable energy sources were also in the focus of the discussions and the pressing need for comprehensive measures to tackle desertification and water issues was stressed (November 29).

Russia takes a leading position as a foreign trade partner of Uzbekistan. A Memorandum of Cooperation was signed between Rosstrudnichestvo and the Committee for International and Friendly Relations of Uzbekistan. The X Asian Conference of the Valdai International Discussions Club was held on “Central Asia and Eurasia: Multilateral Cooperation to Face the Challenges of Global Disorder.” A cooperation agreement was signed between the Institute of Strategic and Interregional Studies of Uzbekistan and the Valdai International Discussions Club Development and Support Fund (November 10-11).

Participation in international organizations

In 2019, Uzbekistan became (1) a member of the Global Green Growth Institute; (2) a member of the Cooperation Council of Turkic Speaking States (September 14). The President of Uzbekistan took part in the 7th Council summit (October 15, Baku). The CIS chairmanship was transferred to Uzbekistan (from January to December 31, 2020) according to the decision of the Ashkhabad Summit. At the 70th Meeting of the International Commission on Irrigation and Drainage the Minister of Water Management of Uzbekistan Sh. Khamraev was elected an ICID Vice-president for the period of 2019-2022 (September 1-7, Bali, Indonesia).

Promotion of the national interests and reinforcement of the country's image. Uzbekistan together with the UN mission in Uzbekistan hosted the International High-Level Conference “Aral Sea Region – a Zone of Environmental Innovations and Technologies” (see Section “[2019 Calendar of Events](#)”). UN GA at its plenary session adopted a special resolution “Sustainable tourism and sustainable development in CA”, which was first put forward by the President of Uzbekistan. The draft document was supported by more than 50 countries. UNESCO included Tashkent into the Global Network of Learning Cities.

The following events were also held in 2019: (1) 6th EU-CA High-Level Conference on Environmental and Water Cooperation (January 24-25); (2) International Conference “Central Asian Connectivity: Challenges and New Opportunities” (February 19-20); (3) Central Asian Economic Forum (March 15); (4) Central Asia Climate Change Conference (April 3-4) (see Section “[2019 Calendar of Events](#)”); (5) First Dialogue of Energy Ministers of CAREC member-countries (September 20); (6) Central Asian Energy Investment Forum 2019.

“...We consider it expedient to use capabilities of the International Fund for Saving Aral Sea and the resources of the Multi-Partner Human Security Trust Fund for the Aral Sea region, established under auspices of the United Nations, to tackle practical tasks in terms of drawing new knowledge and innovative technologies to the region, introducing principles of «green» economy, preventing further desertification, ecological migration and other measures...”.

The leaders adopted a joint statement and agreed to hold the next meeting in Kyrgyzstan in 2020.

A new mechanism of extended **regional cooperation between India and Central Asia** was launched. Samarkand hosted the first Dialogue “India-Central Asia”, where the foreign ministers discussed the possibilities of extending relations between India and the Central Asian countries in bi- and multilateral formats (January 12-13). The delegation from Afghanistan took part in a plenary session of the Dialogue. The next ministerial meeting is to take place in India in 2020.

Cooperation with **Afghanistan** has been enhanced. The Uzbek-Afghan business forum took place in the B2B format (July 15); a specialized Uzbek-Afghan trade exhibition was organized (July 16); a meeting of the Intergovernmental Commission on Trade and Economic Cooperation between Uzbekistan and Afghanistan was held and resulted in signature of agreements in the area of energy, processing industry, agriculture, transport and oil and gas sector (July 17).

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