



Ministry of Water Resources
of the Republic of Uzbekistan

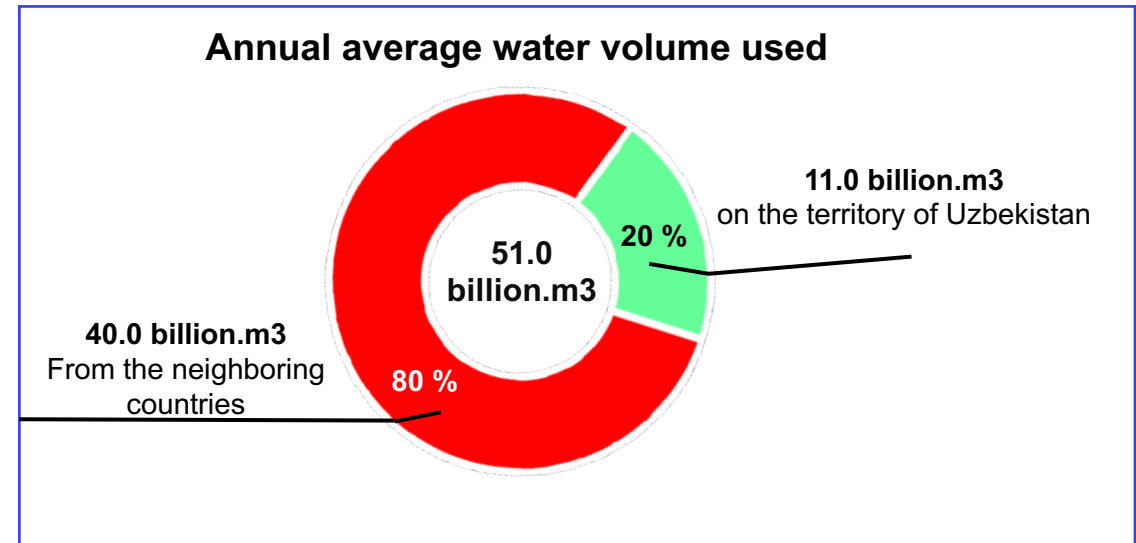
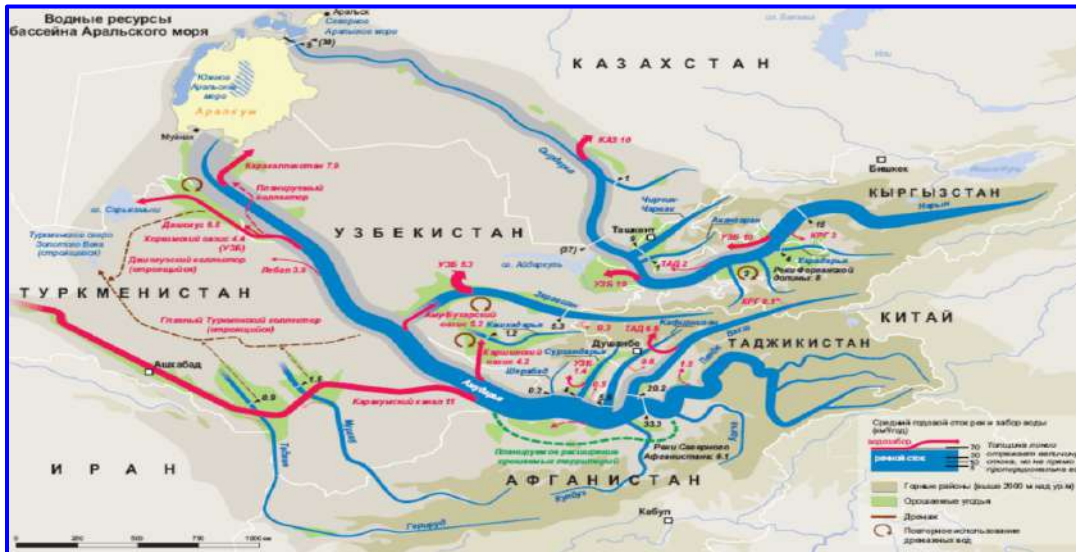
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Water resources of the Republic of Uzbekistan: current status and future plans



Water resources of Uzbekistan



Water use in economic sectors

Agriculture



90 %

Public utilities



4.5 %

Industry and energy

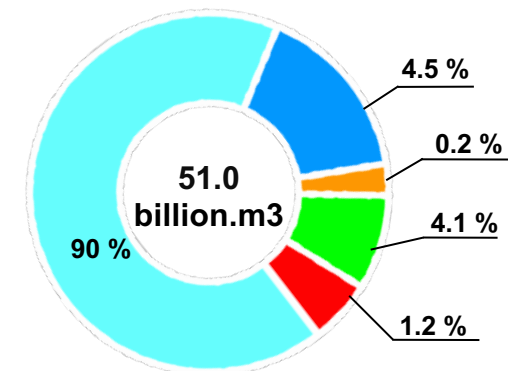


4.3 %

Fishery



1.2 %





CHALLENGES

Climate change



Over the past **50 years**, the volume of glaciers has decreased by an average of **30%** and this trend continues.



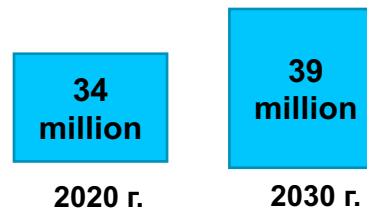
The melting of glaciers has a negative impact on the formation of water resources. An increase in air temperature will lead to an increase in irrigation norms, an increase in low-water year, and aridization of the region.

Population growth



According to forecasts, the population of Uzbekistan will increase by another 5 million by 2030.

Population forecast



Urbanization



In the message of the Oliy Majlis on December 28, 2018, the President of the Republic of Uzbekistan Sh. Mirziyoyev announced the task: to bring the level of urbanization to **60% by 2030**.

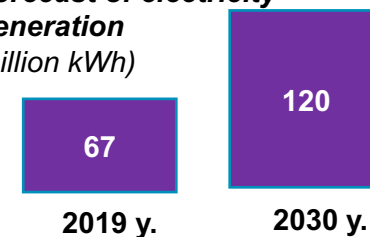
The growing demand for water for municipal needs, services and urban improvement.

Economic development



According to the draft Concept of socio-economic development of Uzbekistan until 2030, it is planned to achieve **2.1 times** GDP growth by 2030, and 3 times GDP per capita.

Forecast of electricity generation (billion kWh)

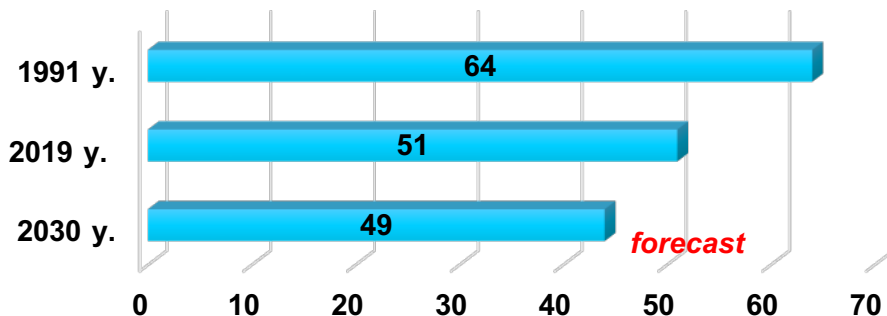




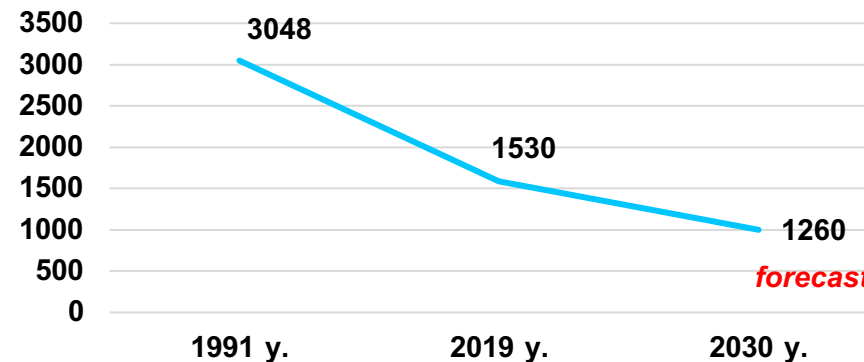
• Forecasts and possible consequences



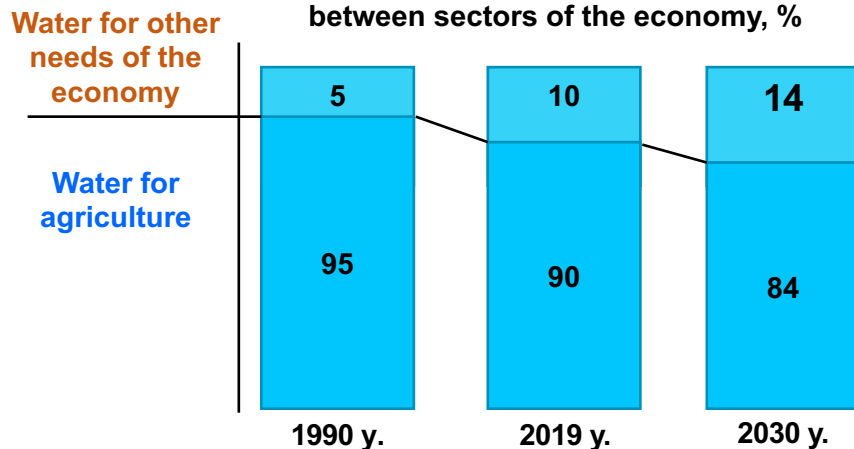
Reduction of water resources (billion m3)



Annual water intake per capita (m3/person)



Changing the structure of water use
between sectors of the economy, %



The shortage of water in the future is aggravated by the projected decrease in water resources, increased demand for water resources due to population growth, the development of industry and other sectors of the economy.

Water scarcity and the presence of competition between economic sectors will increase the burden on groundwater and negatively affect water quality.



• Modern problems of irrigation and water management

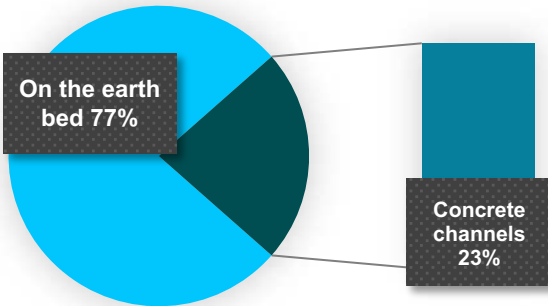


The technical condition of the **irrigation network** does not meet modern requirements, the efficiency is **0.63** or **37% of water is lost in channels.**



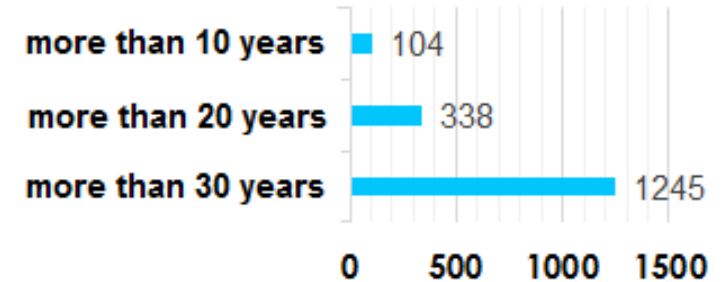
Pumping stations are morally and physically worn out. The service life of **more than 60%** of pumping equipment has long expired.

The length of the irrigation network
(183.5 thousand km)



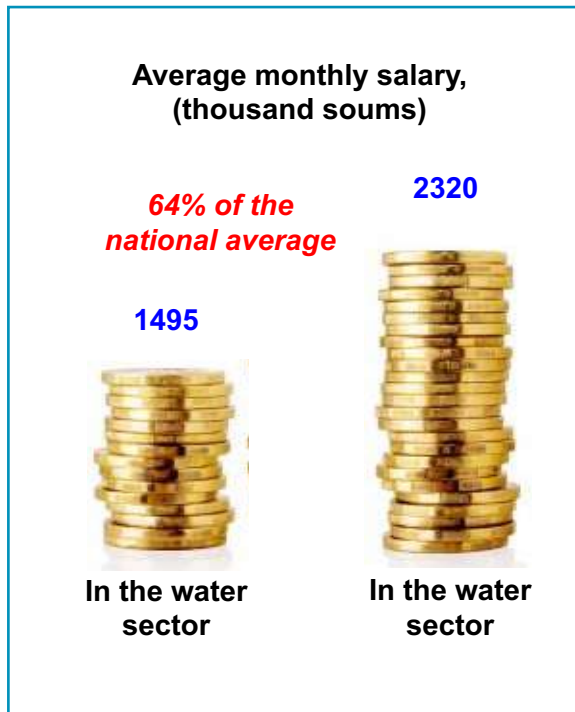
12.0 thousand km or **44%** of trunk and inter-farm channels require repair and restoration, **4.5 thousand km** or **16%** - reconstruction.
80% of large pumping stations require reconstruction or major repairs.

Number of pumping stations by
service life (total 1687 units)





• Modern problems of irrigation and water management





Ministry of Water Resources
of the Republic of Uzbekistan



The concept of water management development of the Republic of Uzbekistan for 2020-2030

Key reforms and indicators



ADB
Asian Development Bank

 Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC

AITHER



• The purpose of the water management development concept for 2020-2030



creating **conditions** to meet the ever-growing needs of the population, economic sectors and the environment for water;



ensuring **effective management** and use of water resources, improvement of the reclamation condition of irrigated lands;



achieving **water and food security** in conditions of increasing water scarcity, as well as global climate change.



The concept defines the **goals, objectives and priority directions** of the development of the water sector of the Republic of Uzbekistan for **medium and long-term** prospects.

The concept is the **basis** for the development of a "Strategy for water resources management and irrigation sector development" and programs for the further development of the water sector.

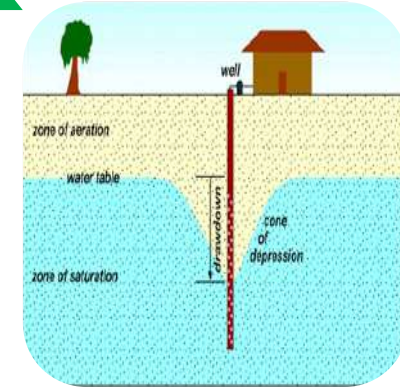


• Priority direction

Development and implementation of the principles of integrated water resources management (IWRM)

The following activities are planned for the wide implementation of IWRM principles:

- Guaranteed provision of water to economic sectors on the basis of interconnected management of all water resources (surface, underground and return waters);
- Improvement of the water resources planning and management system;
- Development of the Water Code;
- Creation of flexible mechanisms for water distribution between sectors of the economy;
- Rational use of return waters;
- Preservation of strategic reserves of underground fresh water.





• Priority direction



Scaling up the use of water-saving technologies

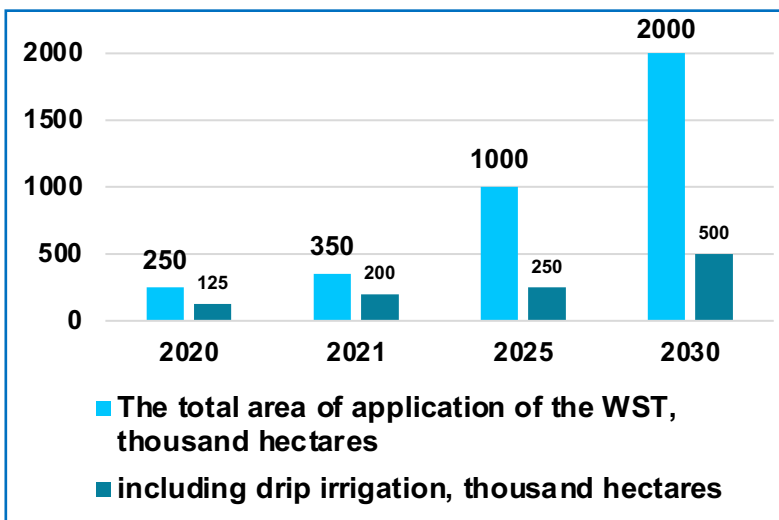
Further expansion of the scale of introduction of water-saving irrigation technologies (drip, sprinkler, irrigation with portable flexible hoses, etc.)

Widespread use of the circulating water supply system in industry

Further improvement of incentive mechanisms for the introduction of water-saving technologies

Raising awareness of existing ways to save water, including highly efficient methods of surface irrigation;

Formation of a feeling among the population and water consumers for the careful use and protection of water resources



Wide implementation in WST will give the opportunity :



Annual water savings of 3 billion. m3 of water



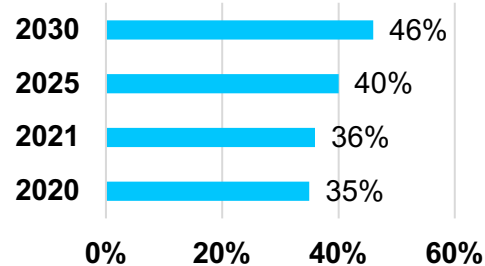


• Priority direction

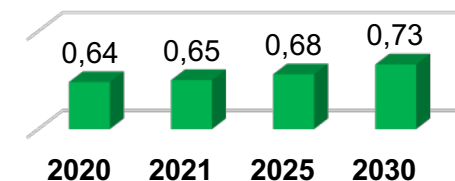
Modernization of water infrastructure

- Modernization and improvement of the technical condition of the water infrastructure
- Implementation of reconstruction, repair and modernization of trunk, inter-regional, inter-farm, intra-farm channels
- Reconstruction and repair of hydraulic units and structures, replacement and restoration of the hydro-mechanical and electrical parts
- Replacement and restoration of the hydro-mechanical and electrical parts, as well as control and measuring equipment of reservoirs
- Attracting investments in the modernization of the HPS

Increasing the proportion of
concreted channels



Improving the efficiency of
the irrigation network



As a result of modernization of
water infrastructure:



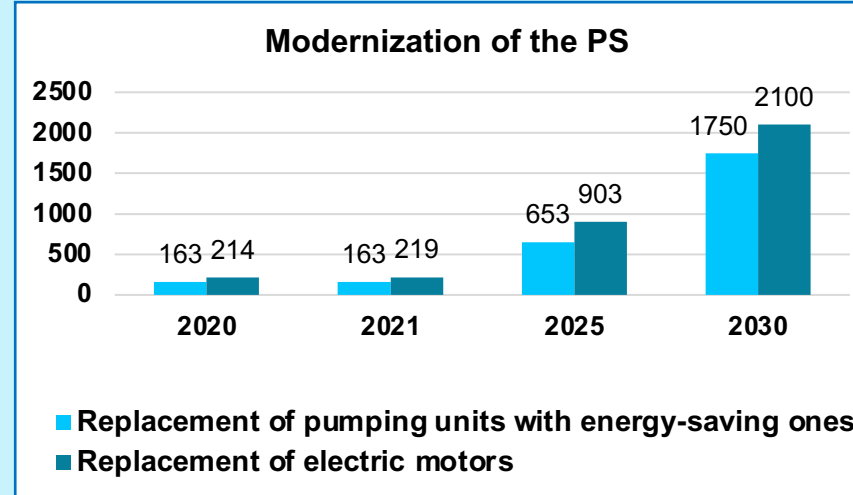
Savings of 4
billion m3 of
water



• Priority direction

Modernization of pumping stations

- Phased replacement of obsolete pumps and electric motors with modern energy-saving pumps and electric motors with high energy efficiency;
- restoration, overhaul and renovation of pressure pipelines of pumping stations;
- step-by-step replacement and renewal of the electrical part with modern energy-saving equipment;
- step-by-step equipping of pumping stations with capacitors compensating reactive power and modern frequency converters;
- creation of an automated system for monitoring management and control of electricity consumption at pumping stations in real time;
- establishing the use of alternative energy sources at pumping stations.



Reduction of energy consumption in pumping stations
from
8.0 million kW per hour
to
6 million kW per hour
in 2030



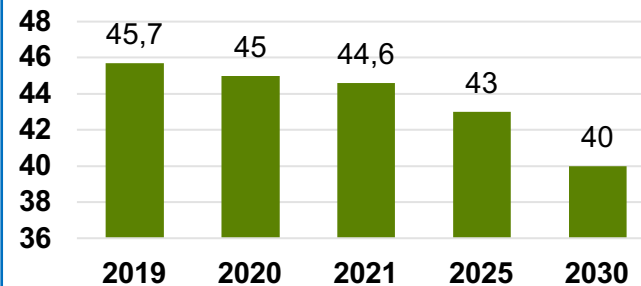
• Priority direction

Improvement of the reclamation condition of irrigated lands

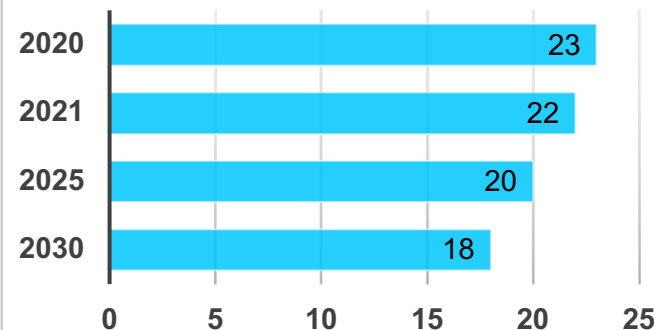
Planned activities:

- improvement of the technical condition of the CDN and other reclamation facilities, their modernization;
- strengthening the material and technical base of reclamation expeditions, providing them with modern medical equipment and mobile operational laboratories;
- strengthening the material and technical base of reclamation expeditions, providing them with modern medical equipment and mobile operational laboratories;
- Attracting investments in the implementation of land reclamation measures;

Reduction of the share of saline irrigated lands, %



Reduction of the share of areas with critical GWL (0-2m), %



Introduction to agricultural turnover of irrigated lands that have left the turnover of about 300 thousand hectares



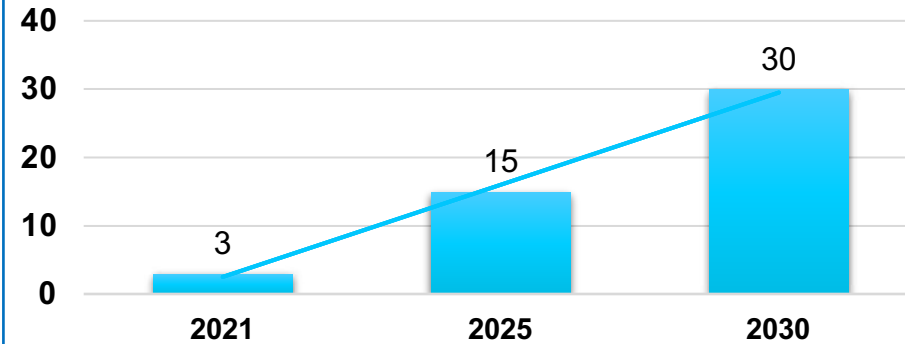
• Priority direction

Introduction of market principles and mechanisms of public-private partnership

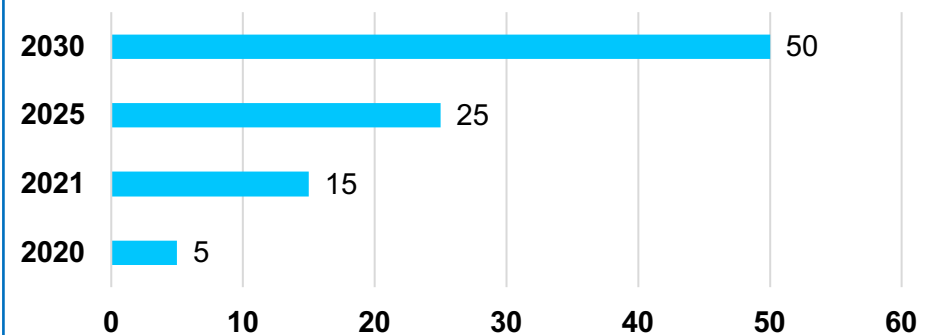
The main instruments of state regulation in the distribution and management of water resources are:

- taxation system and imposition of fines when using water;
- state subsidies and tax benefits in the water sector;
- transfer of economic functions in the field of management and maintenance of water infrastructure, provision of services to third-party organizations within the framework of public-private partnership (PPP) and other forms of outsourcing;
- Covering part of the state costs of water delivery by water users;
- Transfer of part of the water management functions to water consumers (associations of farmers, clusters, etc.) ;
- Development of the implementation of public-private partnership (PPP) and other outsourcing principles in the water management system.

Reduction of the share of budget funds due to the introduction of market principles, %



Implementation of projects based on the principles of PPP, the project





• Priority direction



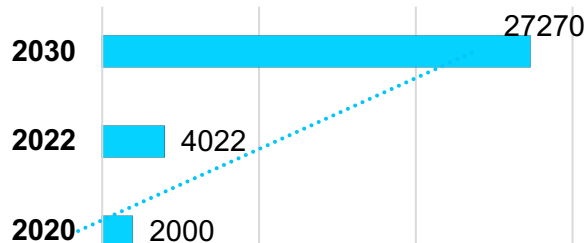
Widespread introduction of information and communication technologies (ICT) in the water sector

- Automation of water monitoring and metering;
- Automation of management of hydraulic structures;
- Creation of a unified water resources information system;
- Automation of the monitoring system of reclamation observation wells;
- Ensuring the availability of information on water resources.

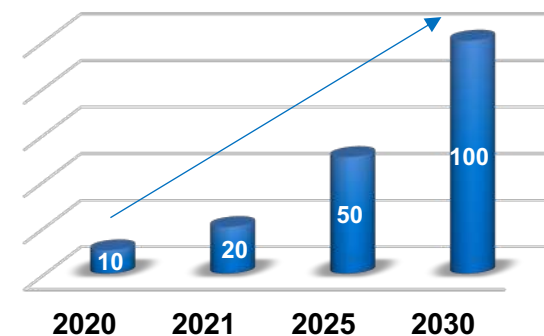
Equipping large water facilities
with the “Smart Water” system 18,576 points



Equipment with an automated
monitoring system for reclamation
wells, units.



Automation of the control process
of hydraulic structures, units.





• Priority direction



Development of human, scientific and innovative potential of water management



Improving the level of staffing of water management organizations



Improvement of the system of advanced training of leading specialists and managers of water management



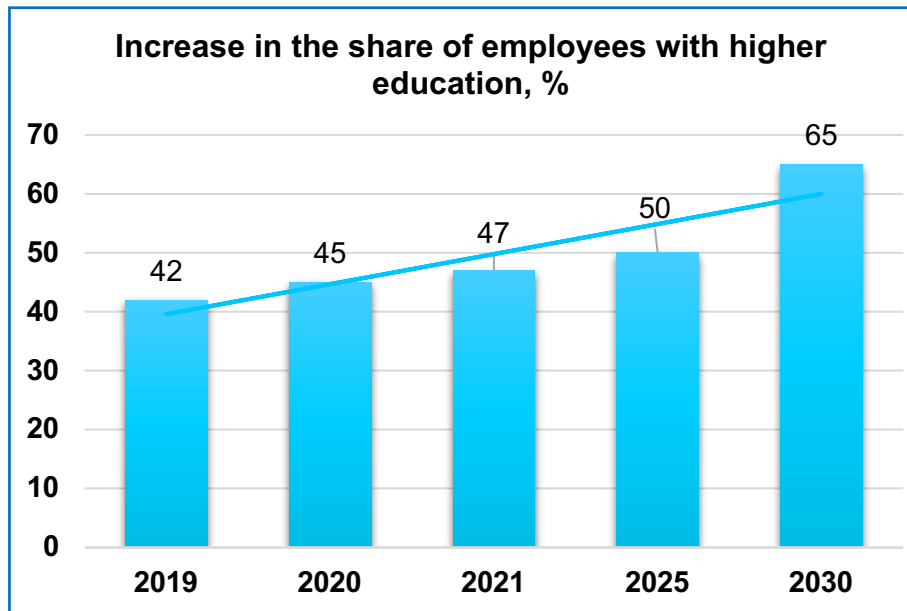
Introduction of modern educational technologies and distance learning methods into the educational process



Consistent organization of regional specialized higher educational institutions in the form of TIAME branches in the Fergana Valley and in the Khorezm-Karakalpakstan region



Bringing the wages of employees of organizations of the water management system to the level of the average monthly salary in the country.





• Priority direction



Strengthening of scientific research in the water sector and widespread introduction of scientific achievements



strengthening the material and technical base and increasing the potential of research, development and educational institutions of the water management system



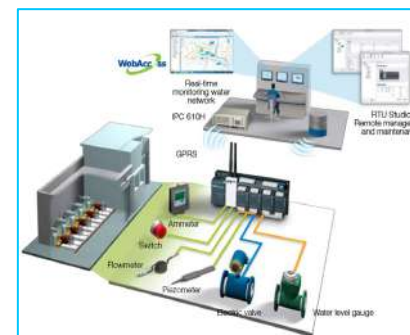
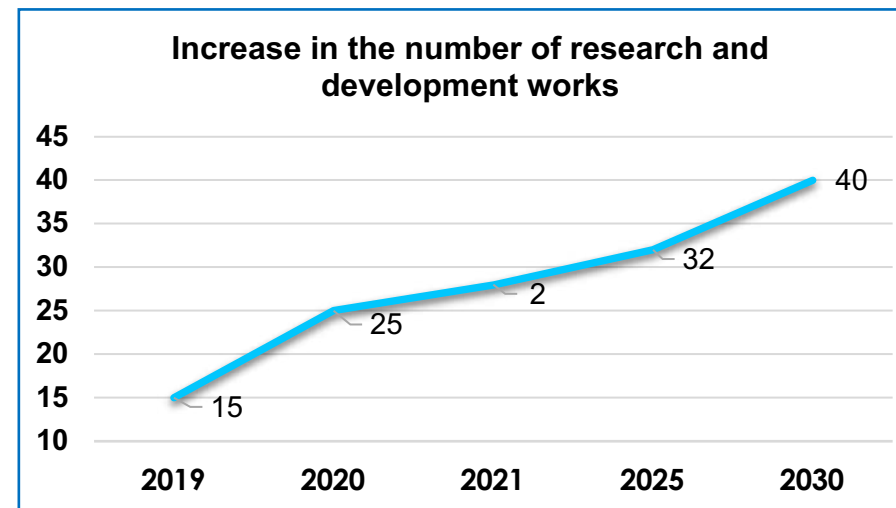
creation of favorable conditions for conducting applied research at scientific demonstration sites of water-saving technologies



establishing closer cooperation between foreign and international research institutes and national research institutes



creation of research and demonstration sites on water and energy-saving technologies, the use of alternative energy sources





• Priority direction



Development of interstate relations on the use of transboundary water resources

- ✓ Promotion of constructive dialogue and development of cooperation with neighboring countries on joint management of transboundary water resources in the region
- ✓ Development and promotion of mutually acceptable mechanisms for the joint use of transboundary water resources in the region
- ✓ Study of international experience, as well as the involvement of international experts in the region
- ✓ Development of joint plans for regional water resources management and identification of joint tasks for the future



Thank you for your attention

