

## Materials of the Working Group of the Countries in Transition

The Republic of Uzbekistan is one of the key states in the Central Asia region within the Aral Sea basin in terms of size, location, rich natural resources and historical heritage.

Uzbekistan is a country of high level of culture, which has roots in times of ancient Sogdiana. Today, it is an independent state, where more than 31 mln people live and 130 ethnic, tribal and linguistic groups. Uzbeks, indigenous population, make more than 75% of the population in the republic.

Irrigated agriculture in conditions of Uzbekistan as well as in other states of Central Asia is a main source of producing foods and gross agricultural production in general, including food which is provided by cultivation of technical crops.

Without artificial irrigation, production of food in the republic is just impossible, and therefore, it may be stated without exaggeration that irrigation, the basis of which is a water system for the agrarian sector, is the basis of life support and welfare of the republic's population.

The total area of the republic is 447 thousand km<sup>2</sup>. According to data of the soil survey by the Institute of Soil Science under the Ministry of Agriculture and Water Resources of the Republic and the State Committee on Land Resources, except for 4.3 mln ha, which are irrigated today, additional more than 7 mln ha of the land fund of the republic are potentially suitable for irrigated agriculture without particularly complicated land reclamation.

The main constraining factor for development of irrigation areas in the republic is an experiencing water resources deficit today. The main water resources in Uzbekistan are surface flows formatted by transboundary rivers – Amudarya, Syrdarya and their tributaries and of Kashkadarya, Zarafshan, Chirchik, Akhangaran, Karadarya and other rivers, which are main sources of agricultural production, food production and rural population employment who makes more than 60% of the total country population.

Large land areas, abundance of warmth and light, natural soil fertility, as well as diligence, talent and rich experience of Uzbek people ensure development of large-scale multisectoral and productive agriculture.

For irrigation of irrigated lands in the republic, a powerful branchy hydromeliorative system of a high technical level was established. The total length of the irrigation network is 196 thousand km, including 28 thousand km – they are large magistral and inter-farm canals, the length of the magistral, inter-district and inter-farm collector-drainage network is more than 30 thousand km, and of the on-farm drainage network – more than 100 thousand km.

A number of waterworks at the magistral and inter-farm networks is 25.4 thousand. For more than a half of all irrigated lands of about 2.1 mln ha, water is supplied through pumping stations, which total number is 1614.

55 reservoirs with total volume of 19.2 bln m<sup>3</sup> are exploited in the republic. 30 of them are located in the Amudarya River basin, and 25 – in the Syrdarya River basin.

Main channel reservoirs for regulation of Amudarya and Syrdarya flows are located beyond Uzbekistan. The whole reservoirs system was projected and currently operates in an irrigation-power mode.

As mentioned before, the main irrigation sources for lands in Uzbekistan are the Amudarya and Syrdarya rivers. The rivers' resources make 114 km<sup>3</sup>, and they make 90.6 km<sup>3</sup> at water availability of 90%. Approximately 5.1 km<sup>3</sup> of the Amudarya River basin flow and 6.7 km<sup>3</sup> of the Syrdarya River basin flow are generated on the territory of the republic.

After obtaining the independence of Uzbekistan, due to continuous attention from the President of the Republic of Uzbekistan Islam Karimov and the Government of the republic, drastic alterations took place in agriculture and water management. The alterations started to implement after approval of subsequent laws and making amendments and supplements to the Law "On Land" adopted in 1991-1996.

In May of 1993, the Law "On Water and Water Use" was enacted in addition to the Law "On Land" in the republic.

Till 1998, there still were a lot of issues of concern in the sphere of regulation of land and water relationships in the new economic management context. These issues of concern were eliminated after adopting a package of documents of the "Land Code of the Republic of Uzbekistan", laws of the Republic of Uzbekistan "On agricultural cooperative", "On farm", and "On dekhkan farm" by Oliy Majlis of the Republic on April 30, 1998. After adoption of those laws by the Cabinet of Ministers of the republic, a number of regulatory legal acts were adopted.

Legislative and legal bases were established in order to implement reforms in the field of restructuring agricultural enterprises in the republic in 1998.

Based on the package of documents adopted by the Cabinet of Ministers of the republic, the state provided a great assistance in implementation of those reforms, their new incentives were determined, many activities were done in order to make a dekhkan farmer feel himself/herself an owner of a land site he owes, particularly, strengthen his/her ownership, a right to dispose of his/her yields.

New incentives defining development of farms, which are the main form of farming in rural areas, were created for farmers.

In the late 1998-2000, the republic implemented the radical reform in agriculture. Farms were organized instead of unprofitable collective farms (kolkhozes) on their lands. Those farms united in Associations of Farmers, and then, on their basis, first 13 Associations of Water Users (WUAs) appeared in the republic.

The process of WUA formation subsequently developed after adoption of Enactment #8 "On measures for reorganization of agricultural enterprises into farms" by the Cabinet of Ministers of the Republic of Uzbekistan on January 5, 2002. Within the frameworks of the mentioned Enactment #8 of the Cabinet of Ministers of the Republic of Uzbekistan as of 05.01.2002, Addendum #7 titled "Procedure for regulating water interrelations on the territory of reorganized agricultural enterprises" is provided.

Based on subsequent enactments of the Cabinet of Ministers, more than 66 thousand farms and more than 1500 WUAs were organized in the republic.

Associations of Water Users build their actions only on the ground of foundation agreements on their establishment, which are approved in accordance with the established procedure of Statutes of these organizations.

WUAs have the service area of 800 to 3000 ha. The quantity of employees ranges from 6 to 15 persons. Their budgets are formed before the beginning of a year for account of WUA membership fees. A budget is approved during a general meeting of WUA members.

Shortcomings of Associations of Water Users are as follows:

1. No funds and machinery to maintain small-scale irrigation networks.
2. Due to low profitability of farmers, WUA is not able to equip physical infrastructure.
3. Low level of competence and low staff density (hydrotechnicians, accountants and others), staff turnover.
4. Insufficient number of measuring devices (leveling device, theodolites, hydrometric equipment).
5. Lack of material incentives.

The management structure for the water-management complex, which functioned during the Soviet period, existed in Uzbekistan until quite recently, up to adoption of the Enactment #290 "On improvement of activity arrangement of the Ministry of Agriculture and Water Resources" as of 28.06.2003 and Enactment #320 "On improvement of water resources management arrangements" as of 21.07.2003 by the Cabinet of Ministers of the Republic of Uzbekistan.

Based on those enactments, in 2003, transition from the administrative-territorial principle of water resources management to the basin principle was implemented, that allowed for ensuring more effective, sustainable and equal water distribution at all levels.

After obtaining its independence, the republic started a huge scope of work on diversification of agricultural production. In the beginning of the 90-s of the last century, about 50% of irrigated lands was under cotton, and the rest was used for food needs. In the current context, a share of cotton in irrigated farming makes about 30%, areas under rice drastically reduced, the rest irrigated lands are under cereals, food and fodder crops, which require less water and are vitally required for population.

As a result of the activities conducted, water diversion has reduced from 64 to 51 bln m<sup>3</sup> per year compared to the 80-s throughout the republic. At that, unit water supply per hectare of irrigated lands is 10.0 thousand m<sup>3</sup>, including 7.5 thousand m<sup>3</sup> during the growing season.

Due to understanding of social significance of irrigation and the wise state policy in the water sector, for the years of its independence, Uzbekistan coped to keep its irrigation potential – unlike many other

countries. However, there are problems as well – out of the existing 4.3 mln ha of irrigated lands in the republic, approximately 2 mln ha of lands has various levels of salinity.

To improve irrigated lands and maintain them in a good meliorative state, the Fund for Improvement of Irrigated Lands was established, and the State Program for Improvement of Irrigated Lands for 2008-2012 was adopted, as per the Decree of the President of the Republic of Uzbekistan in October 2007. For these purposes, about \$400 mln were allocated over 5 years. Meanwhile, the meliorative state of 1200 thousand ha of lands was improved. On reclaimed lands, cotton yield has increased by 2-3 centners per ha, and wheat yield – by 3-5 centners per ha.

Due to the consistent policy implemented by the Government of the Republic of Uzbekistan, physical infrastructure of operating organizations in the water sector is strengthened. During 2007-2013, high-performing excavation equipment and machineries in number of 1630 units were purchased. They include: excavators – 600 units, bulldozers – 144 units, trailers – 76 units, and other machineries and equipment – 750 units.

To further improve irrigated lands, develop a network of meliorative and irrigating objects, use water resources rationally, and thus ensure sustainable functioning of agricultural production, improve land fertility and increase in crop yields, the Decree of the President of the Republic of Uzbekistan “On Measures for Further Improvement of Irrigated Lands and Rational Use of Water Resources for 2013-2017” was adopted on April 19, 2013.

In accordance with this Decree, the State Program for Improvement of Irrigated Lands and Rational Use of Water Resources for 2013-2017 was elaborated. In 2013, 260 thousand ha of irrigated lands were improved, and reduction in water table up to an optimal level for development of agricultural lands was achieved in the republic. For these purposes, more than \$115 mln were allocated from the budget of the republic.

In 2013, reconstruction of canals with the length of 14.5 km was carried out, a flume network of 44.8 km was constructed and its major repairs were made as well, 186 hydraulic works were built, bank protection activities for 6.2 km were carried out, pipelines of 12.2 km were laid.

The total amount of the activities carried out makes \$230 mln. Moreover, in 2013, foreign credits were raised on the security of the Government of the republic, and projects for the amount of \$82 mln were implemented.

The active growth of population, intensive industrialization, globalization, a growth of demand for food stuffs, power production – all these human activities put pressure on scarce natural resources.

Water as the vital and the most important element of nature is undoubtedly the key resource to ensure sustainable development. Water is one of the most urgent concerns for the modern society.

Unfortunately, suitable and accessible storages of water resources are limited and distributed unequally in the world.

In the current context, population in many countries experience water deficit and have no access to pure water. This all commits all inhabitants of the planet to think seriously over and take urgent actions in order to ensure rational and wise use of water.

Today, the Republic of Uzbekistan encounters with sharp water deficit, and this concern, to a greater extent, has a transboundary character.

Water availability for irrigated lands in Uzbekistan still remains dependent on water policy of neighbour upstream countries, whose actions lead to change of natural flow regimes of the main Syrdarya and Amudarya Rivers.

Uzbekistan is increasingly concerned about the growing tendency of upstream catchment countries to following the diktat hydrotechnical policy of river regimes – through substituting a required irrigation-ecological regime for a power regime, which is reverse in relation to nature and human.

Unfortunately, this tendency, which leads to artificial floods in winter and increased deficit in summer, is increasingly growing.

In the current context, use of transboundary water resources, as a result of unilateral actions of upstream countries, breaks the water balance in the region, and aggravates the Aral Sea crisis as well.

Taking into account that water has the key value to achieve aims in front of the peoples in Central Asia, it is required to stress that issues regarding use of transboundary water resources should be solved consistently, taking into account interests of all basin countries, on the ground of norms and principles of the International Water Law.

As known, legal mechanisms for solving this issue are stated in many international conventions, in particular, the Declaration of Human Rights (1948), Helsinki Convention (1992), New-York Convention (1997), Espoo Convention (1999), as well as Rio de Janeiro Declaration (1992), as per which "...States bear the responsibility to ensure that activities within their jurisdiction do not cause damage to the environment of other States, and States should promote the equitable and reasonable use of transboundary waters".

Having acceded to the international water conventions, Uzbekistan proved its respect and adherence to the norms and principles of the International Water Law, since it sees them as the solution instrument for issues related to use of transboundary river resources, taking into account interests of all regional countries.

Unilateral decision making by some countries for hydropower development, to the detriment of interests of downstream countries–water users, is impermissible.

Commercial attractiveness of countries' power projects is becoming a driver of efforts aimed at implementing immense construction of hydropower objects at Transboundary Rivers.

Constructions of the Kambarata and Rogun HPPs are vivid examples of such approach.

Construction of such hydropower objects with dam heights of 275 and 335 m, respectively, which are located at the tectonic fault, within the major-seismic zone, could lead to catastrophic technogenic accidents with unpredictable colossal civilian casualties and economic losses.

A range of obvious questions occurs: What is the ground of changing the natural hydrological flows of the Transboundary Rivers? Why is water, which was used in own interests, released into the territories of other states without coordination? Who will repair the damage from artificial floods and droughts?

As known, multilateral universal regulations in the sphere of the UN International Water Law are the "Convention on the Protection and Use of Transboundary Watercourses and International Lakes" of as 17.03.1992 and the "Convention on the Non-Navigational Uses of International Watercourses" as of 21.05.1997. The Conventions take into account interests of both downstream and upstream countries, which can use water resources available within their territories, based on principles of equitable and reasonable transboundary water resources use and of "not to damage".

Uzbekistan stands for carrying out independent international examination of projected constructions of large hydropower objects at Transboundary Rivers.

Best regards,

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