

FRESHWATER COUNTRY PROFILE
UZBEKISTAN

Decision-Making

Programmes and Projects

Status

Capacity-Building, Education, Training and Awareness-Raising

Information

Research and Technologies

Financing

Cooperation

Decision-Making: National policy of water resources management is formed on the basis of the Laws: «On Water and Water Use» (1993), «On Nature Protection» (1992), «On Specially Protected Nature Territories» (1993), Code “On Administrative Responsibility”, Constitution of the Republic of Uzbekistan (1992), Resolutions of the Cabinet of Ministers: «On Endorsement of the Regulation on water protection zones of water reservoirs and other water bodies, rivers, main channels and collectors, as well as sources of drinking and household water supply, of medical and culture-and-health purpose in the Republic of Uzbekistan» (No 174, 1992); «On measures for further Increase and Regulation of the use of ground waters and their protection from pollution and depletion» (No 179, 1992); «On limited water use» (No 385, 1993); «On Endorsement of the Regulation on the procedure of maintaining of State Water Cadastre of the Republic of Uzbekistan» (No 11, 1998); «On Endorsement of the Regulation on the procedure of maintaining of the State Cadastre of specially protected nature territories of the Republic of Uzbekistan» (No 104, 1998); «On Action Program on Environment Protection in the Republic of Uzbekistan for the period of 1999-2005» (No 469, 1999); «On introduction of payment rates for emissions, discharge of polluting substances to the environment» (No 554, 1999), “On Improvement of Organization of Water Resources Management” (No 320, 2003), and other legal acts and by-laws in this area.

There are following regulating documents related to water management and utilization: «Water protected zones, water reservoirs and other economic sites, rivers, main channels and collector networks, and the sources of drinking, medical and mineral water in the Republic of Uzbekistan» (1993) and «Water Use Restriction in the Republic of Uzbekistan» (1993).

Executive bodies responsible for water resources management are Ministry of Agriculture and Water Resources Management, Ministry of Economics, State Committee for Nature Protection (policy development in the sphere of nature protection, state control and monitoring of the sources of pollution, quality of surface and ground waters), Glavgidromet Main Department for Hydrometeorology (monitoring of surface water quality) and Ministry of Health (monitoring of drinking water quality), and State Geology Committee (exploration, management, monitoring of ground waters quality).

Interstate Commission on Water Coordination (ICWC) being one of the structures of International Fund for Aral Sea Saving (IFAS) has been established and is functioning for solving issues at interstate level. Decisions are made on regional level regarding the use of river waters and release of waters to deltas of the rivers and the Aral Sea and the decisions are binding for all states of Central Asia region. Executive bodies of this Commission are Basin Water Resources Management Organizations – BWO “Amu-Darya” and BWO “Syr-Darya”. In addition to this, issues of development of regional water policy are considered by the Interstate Commission on Sustainable Development of the countries of Central Asia region.

Programmes and Projects: Protection of quality and reserves of fresh water sources, management and use of water resources are priority issues in the process of development of local, nation-wide and regional programs. At present national strategies and programs on combating desertification, conservation of biodiversity, on protection of the environment have been developed. The works on formation of regional water strategy in the Aral Sea basin, development of general principles and criteria of water sharing, rational water use and protection of water resources are being carried out; on the basis of which the drafts of the interstate legal, regulating and juridical acts regulating the issues of joint use and protection of waters are to be prepared. In 2003 GEF Project «Water Resources and Environmental Management in Aral Sea Basin» was finalized, and it is also envisaged to implement a pilot project on monitoring of transboundary waters. The purpose of the project is development of long-term program of strategic actions aimed at protection of quality and rational use of water resources in the Aral Sea Basin and improvement of the ecological situation in the region.

The first phase of work on establishment of local water bodies along the coastal line of the Aral Sea in Amu Darya river has been completed, work has been commenced for sand stabilization on the exposed Aral Sea bottom, in the scope of the full-scale project «Aral Sea Basin Program» (ASBP), aimed at efficient utilization of water resources, including development and application of national and regional strategies on rational use of water resources, combating salinization of lands and creation of national reserves of water resources, monitoring of waters in the basin of Amu-Darya and Syr-Darya rivers. Main objective of the project is development and application of comprehensive approaches in water resources management and utilization, conservation of quality and reserves of fresh water sources.

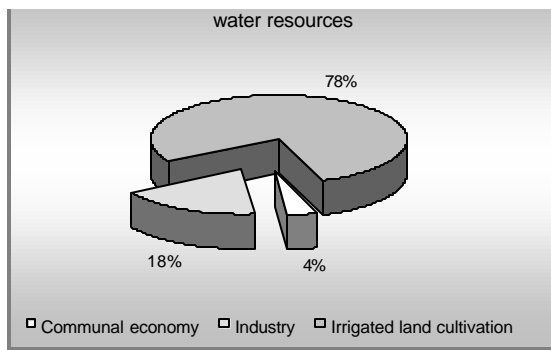
Development of national policy of water resources management and development of relationships in the area of water resources within the country is being undertaken on the basis of the Constitution of the Republic of Uzbekistan (1992), and laws: «On Water and Water Use» (1993), «On Nature Protection» (1992), «On Specially Protected Nature Territories» (1993), Code “On Administrative Responsibility”, as well as considerable package of Resolutions of the Cabinet of Ministers, regulation acts and by-laws, adopted in this area.

With the purpose of improvement of effectiveness and operative efficiency of integral water management systems and provision of equal opportunities for delivery of irrigation water for all customers of system of main canal or river catchment-basin, transition has been undertaken to basin and system principles of water resources management (Resolution of the Cabinet of Ministers dated by July 21, 2003, No 320). It stipulates exclusion of administrative interference of local authority bodies in water sharing and resources management based on parochial interests. At present staffing of these organizations has been completed, methods and styles of their work are being developed.

With the purpose of toughening the limits of water intake and improvement of the efficiency of water resources utilization, reduction of dependence on external factors, influencing changes in the rivers runoff particularly in the upper streams, the following documents have been prepared and submitted for reconciliation: 1) – Mechanism of development and implementation of water resources balance in the Republic of Uzbekistan; 2) – Regulation on the procedures of limited water use in the Republic of Uzbekistan; 3) – Regulation of the procedures for sensitization of water users for water saving and rational utilization of water resources; 4) – Program of measures on implementation of market principles in water resources utilization. Following reconciliation and introduction of the above mentioned documents, optimization of cropping patterns will be achieved, and plans will be amended without any damage for the economy, risk of losses in case of low water and drought will be reduced, efficient control of water resources utilization will be arranged. In each of the Central Asia countries conservation of water resources reserves, including reserves of high quality drinking water, is referred to priorities of both regional and national level.

To this end, areas of strategic actions on protection and rational utilization of water resources in Uzbekistan both for the near term and long-term perspective have been determined in major national program documents, National Sustainable Development Strategy and National Actions Plan On Environment Protection, and their implementation is being undertaken in the process of realization of State Programs and Projects, as well those supported by international financial institutions and donor countries.

- ♦ State Program on Provision of Rural Population With Drinking Water for the period 2000-2010 envisages construction of water-supply networks and increase of the level of drinking water supply for the population up to the level of 85%, provision of remote and hard-to-reach rural settlements with alternative water sources; in 2002-2005 it is intended to provide 1.2 thousand settlements with water of drinking quality, while in 2006-2010 it is intended provide that for 1.3 thousand settlements. More than half of these settlements are located in Bukhara, Navoiy regions and in Karakalpakstan Republic. By 2010 the level of provision of rural settlements with water will be in Bukhara region 79%, in Navoiy region 81%, and in Karakalpakstan Republic 98%.
- ♦ Measures on water saving and protection of water resources are being undertaken under the Governmental control. The scheme for water supply development for the period up to 2010 envisages reduction of estimated specific rates of water consumption in the cities (except Tashkent) from 600 to 180 l/day per capita, in rural settlements from 160 to 130 l/day per capita, growth of the length of aqueducts and water supply lines from 48 thousand km to 84.2 thousand km, increase of the coverage of urban population with water supply up to 100%.
- ♦ High significance is given to development of works on improvement of management of drinking water supply with the purpose of drinking water saving (installation of metering devices, elimination of leakages and inefficient water losses, reduction of estimated specific water consumption rates, perfection of payment system for water use, etc).
- ♦ The work is being carried out in the scope of the Program of Action on Environment Protection for 1999-2005:
 - strengthening of protection of functioning and potential sources of drinking water through assigning the protection status to the zones of formation of deposits of fresh ground waters to 11 deposits of Republican and 8 deposits of regional importance. Perfection of ground water monitoring;
 - development of the Scheme of integrated utilization and protection of fresh ground water of Sokh ground water deposit;
 - establishment of water protection zones along Amu-Darya, Kaskadarya, Surkhandarya, Syr-Darya Naryn, Karadaraya, Chrchik, Zarafshan rivers;
- ♦ Project on development of rural water supply in Western Uzbekistan (Karakalpakstan and Khorezm region) is aimed at reduction of ecological and social tension, resulted from strengthening of low water and drought processes;
- ♦ Programs on improvement of municipal water supply in Bukhara, Gulistan, Jizzak, Karshy, Nukus, Samarkand, Khiva cities, other regional centers and in locations are being implemented with participation of international financial institutions.



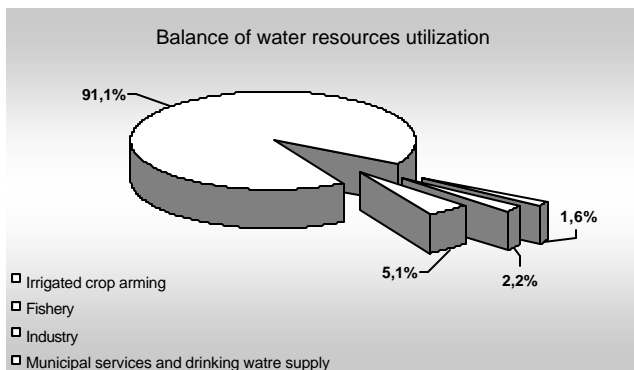
Considering the experience of inter-state cooperation and water resources management, efforts of Central Asia countries in the near term will be aimed at the following:

- development of experience of elaboration and implementation of the programs and priority projects of regional importance, including Sustainable Development Strategy and Actions Plan on Environment Protection in Central Asia;
- development of International Convention on Sustainable Development of the Aral Sea Basin and establishment of mechanisms for its implementation;
- strengthening of coordination relations and interactions of practical character between inter-state and regional institutions for achievement of common goals;
- involvement of non-governmental and public organizations in regional cooperation.

Status: Water is the most valuable natural resource in the Aral Sea basin. Major waterways of Uzbekistan and entire Central Asia region are two big water courses, Amu-Darya and Syr-Darya rivers. Therefore, the principle of obligatory consideration of regional and national interests, as well as conflict of interests of economy and ecology is to become major principle of organization of utilization of water resources of these rivers.

Pro-active measures on water resources saving and provision of guaranteed volumes of water flow to the Aral Sea have been undertaken within recent years due to agreed actions of Central Asia countries on management water resources in the Aral Sea basin. In mid-1980-s river runoff to the Aral Sea ceased completely, while since 1992 it was increased up to 21.7 km³ per year, and this allowed to maintain ecological balance in the region and in the deltas of the rivers, to cease further decline of the Aral Sea level. In 1998 water runoff to the sea and deltas of the rivers was 31.3 km³, 11.9 km³ in 1999, 5.6 km³ in 2000, 3.44 km³ in 2001, 13.1 km³ in 2002, 20.65 km³ in 2003.

Drinking water supply in the Republic of Uzbekistan is by 60% provided for the account of ground waters (GW). General forecasted assessment of the GW reserves in the Republic is about 17 km³ per year. Total average annual intake makes about 10 km³, including that for economic and household needs in the amount exceeding 3 km³ per year.



Currently territory of the Republic of Karakalpakstan, Bukhara, Navoi regions actually lacks GW suitable for drinking water supply. Shortage of fresh GW takes place even now and will grow in the nearest future on the territory of Jizzak and Kashkadarya regions. Resources of drinking water supply in these regions are formed at the expense of surface run-off and fresh GW transported to long distances. Water used for drinking purposes is often of sub-standard quality, since its mineralization level is 1.5-3 g/l and more. In the other regions of the Republic fresh GW resources are still sufficient, although their reserves are reducing.

Uzbekistan has 4,3 million ha of irrigated land, including about 2,3 million ha requiring rehabilitation. Rehabilitation of land, inter-farm and intra-farm channels, collector systems, drainage arrangements, and base land use planning are major measures for meeting the growing water demand for irrigation purposes, from the point of view of limited natural resources in the region. Additionally, utilization of ground and drainage waters is highly significant for irrigation water supply. Control of water quality and quantity is to be undertaken on all the levels of water management in the river basin.

Capacity-Building, Education, Training and Awareness-Raising: Major reason of ecological crisis in Uzbekistan and on the most territory of Central Asia was in the authoritarian principle of management in the Soviet planning system. Domination of cotton production development led to monoculture, resulted in wasteful utilization of the limited water resources and emerging of the Aral Sea crisis. Within the period between 1965 and 1990 water consumption in the Aral Sea basin increased more than twice, and irrigated territories increased almost by 35 %. This resulted not only in exhaustion, however also in pollution of water and land resources, as well as deterioration of the standards of living of a dozen million of people. With the purpose of solution of the faced problems in January 1994 heads of five Central Asia states adopted a program of concrete actions for improvement of ecological situation in the Aral Sea basin for the coming 3-5 year period, considering socio-economic development of the region. For the first time in history, this program consolidated totally the issues of

economy and ecology, this actually became the first attempt to integrate ecological priorities into political and economic decisions on inter-state level. The Program envisaged solution of the following issues:

- rational utilization of water and protection of water resources in the Aral Sea basin;
- implementation of the universal for the region system of water resources recording and utilization;
- improvement of water quality for agricultural use;
- development of measures for establishment of artificially watered ecological systems on the territories of Amu-Darya and Sir-Darya river deltas and on the area of exposed Aral Sea bottom;
- implementation of in-state program "clean water and health of the population" for provision with pure drinking water and improvement of sanitary and epidemiological situation;
- implementation of computerized system of Amu-Darya and Syr-Darya rivers management;

On the meeting in Dushanbe on the 6th of October 2002 Heads of Central Asia states made a further step for solution of ecological problem in the region: they approved "Major areas of the Program of Concrete Actions for improvement of ecological and socio-economic situation in the Aral Sea Basin for the period 2003-2010", having specified the issues of the previous Program.

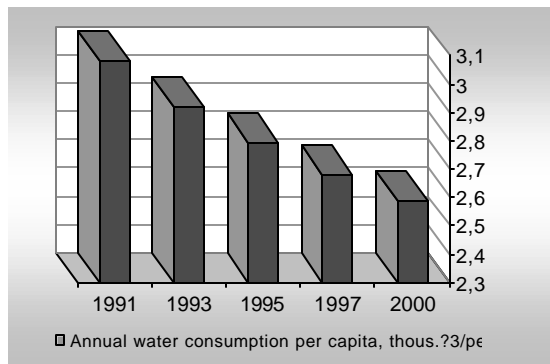
In addition to this, Presidents of Central Asia countries stated (Dushanbe Declaration) about determination of improvement of socio-ecological situation in the region for creation normal living conditions for the population living in the Aral Sea basin, as the major area in solution of the issues related with the Aral Sea crisis.

Executive Committee of the International Foundation for Aral Sea Saving is regularly preparing reports, summarizing outcomes of implementation of works on the projects and the results are reported in mass media. Concrete strategic actions on protection and rational utilization of water resources for the nearest future and long-term perspective have been determined in National Action Plan on Environment Protection (NAPEP), National Sustainable Development Strategy of the Republic of Uzbekistan. Their realization is being carried out in the process of implementation of (i) State Programs and (ii) Pilot projects.

Recognizing the fact that for Central Asia countries conservation of the reserves of water resources, including GW of high quality, is one of the priorities of both regional and national levels, GEF Project «Water Resources and Environmental Management of the Aral Sea Basin» envisaged in its structure the "Public Awareness" component. Implementation of the activities of this component is aimed at education of broad strata of public in the spirit of understanding of the need to protect water resources, involving them in decision making process on these issues, realization of concrete actions.

Information : Reports are published regularly in the newspapers «Narodnoye Slovo», «Pravda Vostoka», «Tabiyat va Insoni», and the magazine «Ecological Bulletin», republican and regional TV and radio about the course of implementation of republican ecological programs related to water resources development and utilization, and ecological issues are highlighted broadly, as well as decisions and actions undertaken for their elimination. Scientific Information Center of ICWC accomplishes information provision, international exchange, preparation and implementation of technical and scientific programs of regional importance, and controls regional database on water use and ecological sustainability.

Research and Technologies: In accordance with the Law of the Republic of Uzbekistan «On Water and Water Use» (Article 8), the following specially authorized state governing bodies regulating water use have been determined: water resources management bodies (surface waters), State Geology Committee (ground waters) and the State Supervisory Committee on Safe Accomplishing of works in Industry and Mining (thermal and mineral waters). All interrelations on water issues within the Republic of Uzbekistan are accomplished on the basis of the above-mentioned documents and through drawing up of appropriate water supply contracts. Water supply on contractual basis is provided not only to all water users, however also among water resources management organizations on the borders of regions, districts and between individual subdivisions. As a rule, volume of water run-off on the border of relevant neighboring state is indicated on the basis of the interstate agreements. Recording and reporting of water intake, water supply and utilization of water resources is carried out in accordance with the approved procedures. Daily recording of water resources discharge and consumption is carried out by 18,150 hydro-posts on inter-farm systems, including those on



17,703 water dividers through two-shot measurements. Major hydrounits are operated through tele-control systems.

All interstate water relations of the Republic of Uzbekistan are based on the Constitution of the Republic of Uzbekistan, Law «On Water and Water Use» and other legal acts on water issues and are regulated by appropriate interstate, intergovernmental contracts and agreements, protocol decisions.

In these issues Republic of Uzbekistan first of all confirms acknowledgement of all previously adopted documents, which were prepared in the view of the existing real situation in the region. There is a probability that certain documents (previously adopted) might not meet the requirements of the new legislative acts of certain states, however it should be pointed out that in the beginning 90-s (when most of the interstate documents have been passed) in the region it was stated about the fact of water resources depletion and by that time water resources were already distributed not only between the republics, however also between the branches of the national economy and all currently existing industrial and social infrastructure was built considering available water resources and their distribution. Therefore any slightest deviation from the previously reconciled decisions would result in dis-balance of the situation not only in one individual state, however in the whole region as well, and this requires the weighed and well-thought -out approach to these issues.

There are two basic documents on interstate water resources management:

- The first document: coordinated with all states (before obtaining sovereignty) Basin schemes of integrated use and protection of water resources;
- The second document: Agreement between the Republic of Kazakhstan, Republic of Kyrgyzstan, Republic of Uzbekistan, Republic of Tajikistan and Turkmenistan on cooperation in the sphere of joint management of use and protection of water resources of the interstate sources.

The first document, drawn up with participation of relevant design-and-prospecting as well as research organizations of all the five republics, determines the principles and physical volumes of water distribution in the region. Probably these principles or physical volumes of water resources distribution may not suit someone in regards of some parameters. But nevertheless all of them were duly substantiated through required estimations and passed through thorough expert examination. In the process of elaboration of the above-stated «Schemes...» all circumstances and conditions related with the use of resources thoroughly analyzed, and various options of placing and development of production forces in the region were elaborated. Additionally, demographic peculiarities both of the entire region and each republic were taken into account.

The second document adopted after formation of the sovereign states (Agreement dated 18.02.1992) confirms the need of observance by all parties of the decisions of the previously adopted documents on distribution and utilization of water resources considering the existing situation.

There is also a range of bilateral and multilateral contracts, agreements and protocol decisions: on Syr-Darya river basin, small rivers of Fergana valley, on Amu-Darya river basin, etc. All these documents have also been adopted after appropriate estimations and numerous meetings of experts.

Positive role of Framework «Agreement between the Governments of Kazakhstan, Kyrgyzstan and Uzbekistan on the use of hydro-power resources of Syr-Darya river basin, signed on March 17, 1998, with the purpose of mitigation of a rather stressed situation in the region, developed in the result of transfer of the working regime of the Toktogul water reservoir to power generation regime. Certain balance has been achieved in inter-state water relations due to the «Agreement» between the three states of Syr-Darya river basin and all the states still try to fulfill the agreement, though with difficulty, by signing annual «Working Agreements» with the indication of concrete volumes, terms of flows, releases and deliveries.

One of major initial legal documents on distribution of water resources of Amu- Darya river, following «Basin Scheme», is the Protocol of Scientific and Technical Council of the Ministry of Amelioration and Water Resources Management of the USSR No 566 dated by the 10th of September 1987, where ultimate volumes of water intake by the states were determined (protocol of the «Union Republics») with participation of the representatives of all states and this document served as the basis for development of bilateral agreements on water resources issues between Turkmenistan and Uzbekistan.

Financing: Management of water resources in Uzbekistan is envisaged through the state budget, budget of the regional khokimiyats allocated for operational activities, funds of the enterprises, foreign investments, banks loans and credits.

Cooperation : The first attempts of mitigation the consequences of the Aral Sea crisis and restoration of ecological balance in the Aral Sea basin were undertaken at the end of 80-s. The need of solution of quality aspects of water resources was taken into account as well as formulation of the principles of water resources management.

Large-scale development of new irrigated lands has been forbidden in the region, the significant capital investments were invested for introduction of capital-intensive water protection and water saving machinery and technologies. In the framework of centrally planned economy each Central Asia republic was imposed strict limits of water resources utilization targets on reduction of specific water consumption in irrigated crop farming.

Implementation of large-scale projects on development and improvement of drinking water supply for the population was launched. However, due to disintegration of the Soviet Union the undertaken measures did not give expected outcomes. In addition to this, they had palliative character and they were not aimed at elimination of root causes of the crisis, hidden in structural policy of the centralized state. This policy required running of water-intensive monoculture-based agriculture and did not envisage radical changes of regional economy structure.

One indisputable conclusion was made in the course of discussion on the Aral Sea problem – it could not be solved immediately and through isolated efforts of the countries of the region. The situation was aggravated by deep discrepancies in the assessment of the situation and interests of the countries of the region following gaining independence by them. Since establishment of five independent states in Central Asia problems emerged in coordinated management of the resources of transboundary rivers of the sea basin and regime of their utilization. It is quite clear that the interests of Kyrgyz and Tajik Republics, located in the head streams of the rivers in the zone of water resources formation, are very far from Aral Sea problems, which are faced by Uzbekistan, Kazakhstan and Turkmenistan. In addition to this, on the territory of the first two countries there are reservoirs for long-term regulation, built previously in the interests of irrigation purposes, while major irrigated areas are located on the territory of the three latter countries. This circumstance caused contradictory approaches of the countries of the region to water reservoirs regime. Kyrgyzstan and Tajikistan release water reserves in the reservoirs during peak electricity consumption in winter period, and the result is that the other countries suffer water deficiency in the period of crops irrigation. Increment of such contradictions served as complimentary stimulus for searching mutually acceptable decisions for achieving the balance of political and economic interests and requirements of environment conservation.

One can not state that development of regional cooperation on Aral Sea problems is going on smoothly, however there is a political consent, valuable experience is being developed in the area of solving the problems of multilateral and bilateral interaction, making complex decisions, mitigation of conflict situations. Capacity of the interstate organizations has been built, and cooperation mechanisms are being developed.

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