

Republic of Tajikistan - Country Report

NATIONAL REPORT ON REGIONAL WATER PARTNERSHIP (REPUBLIC OF TAJIKISTAN)

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1. Quick assessment

Since 1991 Central Asian Republics - Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan - have experienced period of sovereign independent development. At once these states faced an urgent issue of water management at the regional level. Centuries-old experience, traditions of partnership in irrigated agriculture, and understanding that vacuum in water-related activities is inadmissible gave impetus to the establishment in 1992 of the Interstate Commission for Water Coordination (ICWC) and to the cooperation agreement in joint management, use, and conservation of water resources from interstate sources. Thus Central Asian states have headed for partnership, confirming their adherence to joint water management in the Aral Sea basin, and created a modern system of organizations within the International Fund for the Aral Sea Saving (IFAS).

- **Main problems and limitations in water sector at the national level**

Water is the most widespread natural resource of Tajikistan, where 55,4% of average annual flow of the Aral Sea basin is formed. At the same time there is non-uniform distribution of this flow all over the area of Tajikistan. Within-year flow distribution also greatly depends on river feeding. Above mentioned factors, as well as disjoint mountainous-valley relief, complicate and restrict water use. Lands difficult of access to gravity irrigation predetermined current water system consisting of complex and unique hydrotechnical structures. Pumping stations irrigate up to 40% of lands in Tajikistan. More than 140 thousand ha suffer from water deficit (water availability is 55-65%) due to non-regulated flow and weak sources, that requires reservoir construction and inter-basin water transfers. Lack of funds to maintain irrigation systems has led over last ten years to more than 50% wear of the capital stock of

water management system, to decreased efficiency of water supply, to considerable deterioration of lands and agricultural water supply. Pumping stations, having command area with about 2 million population, are of particular concern. It is difficult to meet competition for lift irrigation under market conditions, and proposed by several international institutes refusal from pumping stations can cause secondary desertification and migration. Solution of the latter problems is more expensive than maintenance of pumping stations.

Deterioration of the reclamation state of lands occupying more than 100 thousand ha would require additional water for leaching.

Besides, transfer of lands to farmers leaves on-farm network "without master" and financial support, therefore Tajikistan tends to creation of water users associations. The market entailed free crop choices, however irrigation systems were constructed for cotton development, and now increased rice sowing causes water deficit due to insufficient canal capacity.

Deficit of funds in farms led during recent years to breakdown in crop cultivation technology that had negative effect on water and land use efficiency.

A critical economic problem in water management system is scarce funds for its maintenance. Imposed tariffs do not cover all water supply costs, and collection of these tariffs over last 5 years does not exceed 40%. This greatly complicates economic and financial relations. In the future it is planned to introduce differentiated water tariffs depending on natural and climatic conditions, water supply category, and farm cost-effectiveness. Current government support along with water charges does not cover standard costs of water management organizations.

- **Main problems in water sector under regional and transboundary influence**

Prospects of water use in Tajikistan in the nearest 15 years will be mainly determined by an intensive population growth. Provision of population with food becomes more critical and can be solved through increased productivity of existing and development of new irrigated lands. The major issue in Central Asia is the establishment of new water allocation, while other issues, including environmental ones, are derived from the former. Another issue relates to energy independence, which requires construction of a range of reservoirs with electric power stations. Tajikistan has excellent conditions for providing itself and the whole region with fresh water and electric power. However, this needs partnership and share holding between Central Asian states.

Interstate elements of water management system's problems are as follows:

- dependence of water availability and reclamation conditions on water supply sources located in neighboring states;
- loss of profit from the operation of regional reservoirs in irrigation regime;
- problems with water allocation during dry years;
- increasing demographic pressure;
- heavy military-political conditions on boundary rivers with Afghanistan.

It is necessary to use more fully and effectively existing mechanisms of interstate relations and management on a basis of economic interest.

2. Main proprietors in water sector

According to the Constitution of Tajikistan water is an exclusive property of the Government, and the Government ensures its effective use and conservation to the public benefit.

Major proprietor in water sector is the Government, which delegates water management functions to sectoral ministries, departments and local authorities (administrations). Privatization of water sector has not been started yet. However, charges for water supply have been introduced.

Major authorities in water sector are:

- Ministry of Water Management and Land Reclamation, which deals with reclamation of lands, operation of irrigation systems, watering of pastures, and construction and operation of agricultural water supply systems.
- Central Geological Administration by the Government of Tajikistan, which deals with regulation, use, conservation, exploration, estimation, and registration of groundwater reserves.
- Ministry for Nature Conservation, which is responsible for state control in the field of nature conservation, including water resources, and for hydrometeorological matters.
- Committee for state supervision over safe industrial works and mining by the Government of Tajikistan, which deals with regulation of thermal and mineral water use and conservation.
- Ministry of Power engineering, which deals with water use for power engineering with account for the interests of irrigation and other sectors and requirements of integrated water use.
- State enterprise "Tadjikkommunservis", local authorities, and public utilities, which are responsible for water supply and sewage systems.

Collective farms, agricultural cooperatives, farmers, and various privately owned enterprises with their own irrigation structures and water supply systems still have small share in water sector.

3. Public concern and participation in water management

Public concern over water conservation and its rational use is reflected in Environmental Law and Water Code of the Republic of Uzbekistan.

Environmental Law includes paragraph XI "Public participation in nature conservation". According to this paragraph the population has the right to create social unions, funds, and organizations, to appear in print and on television, to broadcast, to undergo environmental examination, and to discuss environmental legislation.

The law ensures rights of social organizations and citizenry in the field of water conservation. Paragraph XII entails measures on environmental upbringing, education, vocational training, and popularization of environmental knowledge.

With a view to managing water resources at on-farm level the Water Code regulates establishment and functioning of Water Users Associations.

4. Current or planned institutional reforms on the adaptation of an integrated approach to water management

Interrelations between water management organizations gradually turn from command-administrative to economic basis. Markets of water and water services are being developed. This is promoted by creation of shared capital, privatization, and delegation of authority over water management structures to specialized juridical persons, including foreign ones on a contractual basis. It is necessary to elaborate new mechanisms of management and water-related activities under market conditions so that water charges and government subsidies cover maintenance of irrigation and collector-drainage systems.

In terms of organizational framework we should return to basin management principles. Current land reform should be fully connected with water resources and transformed into land and water reform.

5. Legal aspects

- Current or planned water legislation.

Water legislation of the Republic of Tajikistan is based on the Constitution and consists of Water Code, laws, standard-legal and international-legal acts adopted by the Republic of Tajikistan.

List of laws regulating different sites of water relations and water-related activity is shown below:

- Water Code
- Environmental law
- Entrails law
- Power engineering law
- Land Code
- Dehkan farm law
- State sanitation control law
- Land charges law
- Civil Code
- Criminal Code
- Annually adopted laws of state budget, which regulate government subsidies and financing of international bodies within the International Fund for the Aral Sea Saving (IFAS).

In November 2000 Republic of Tajikistan adopted new Water Code, which entails market economic tools of water use, sets regulating body for water use and conservation and procedures of establishment and formation of water users associations. Besides new code includes the following issues: technical improvement of reclamation systems; strengthening of the rights and obligations both for water users and water consumers; specification of infringements to be compensated. The code also sets principles of international cooperation in the field of water relations, and according to those principles Tajikistan ensures sustainable development of its economy and rational water use and conservation on a basis of international water law, mutually beneficial and friendly cooperation with foreign countries, and general environmental safety. International water relations with other states are regulated also by international-legal acts of Tajikistan. Economic principles of water relations with other states are based on international water law and interstate agreements.

At present time current water legislation is being brought into accord with the Water Code. This is very critical work, and its full completion needs at least 1,5-2 years. Meanwhile, we use old legislation, when it does not conflict with current Water Code.

According to the Government's decree adopted in light of resolution of the UN General Assembly to announce 2003 as a year of fresh water at the suggestion of Tajikistan, concept of rational use and conservation of Tajikistan's waters is under elaboration and to be approved in the third quarter of 2001. Undoubtedly, this will influence water and environmental legislation and water relations with Central Asian states. Apparently, negotiating about water use and conservation in the Aral Sea basin under new political and economic conditions is essential. Peculiarity of the present moment is that current use of the Amudarya and Syrdarya waters is fulfilled through post-soviet interstate agreements, however, on the base of feasibility studies of the common State system from soviet period and on the base of old compensation mechanism. Now the objective is to enable new economic mechanism. In legal terms it is necessary for Central Asia to regulate water allocation and hydropower use, to prevent pollution of transboundary water bodies, and to avert and eliminate adverse water effects.

6. Potential analysis

a. Current potential in political, legal, and economic aspects of water administration

Despite introduction of market elements, water management in general is based on command-administrative system represented by national, provincial, and regional levels. At the same time, the level of province entails hydrographic (basin) in-system units. Ministry of Water Resources manages reservoirs, while Ministry of Power Engineering manages dams. As to irrigation systems, inter-farm systems are under control of the Ministry for Water Resources, and on-farm systems belong to farms and new water users associations. Since the whole potential of water sector is a government property, it is only delegated for management or use on a legal base. In economic terms we keep independence through partial budget financing and economical activity (charges for water, services, and electric energy). Due to hard financial condition of users economic mechanism has not been completely introduced yet. Water is used on a basis of water use plans approved by local governments (Khukumat) and water management organizations.

b. Information systems, monitoring, hydrological tools, water quality and environmental estimation

Creation of a modern Information System is an important chain of the general state policy in the field of water resources. Due to lack of funds we keep it by out-dated technologies and at low technical level. Therefore it is necessary that Central Asia states hold shares for long- and short- term water forecasts. At present time Tajikistan has 57 hydrometeorological stations and 97 gauging stations, of which, first of all, 5 and 9 sites respectively require reconstruction. River water quality has deteriorated because of emergencies. Disposal of polluted flows decreased 2,6 times compared to 1990, while use of pesticides and fertilizers decreased 5 times. However the problem still exists and can be aggravated with economic growth, therefore preventive measures are needed.

c. Health impact, pollution control, public awareness, and other water related aspects

According to the document of the World Health Organization's (WHO) European regional office "Objectives to achieve health for all" (Copenhagen, 1991) and the Strategy of Tajikistan on health protection up to 2005 all people should have access to adequate drinking water supply, and pollution of groundwaters, rivers, and open water bodies should not pose a threat to public health. President's Program on public health reform (2000-2001) states that diseases can be prevented with minimum financial expenditures through reduced impact of environmental risks, for example, provision of population with good drinking water and sanitation conditions, and improvement of environment situation. In this context the national program "Clean Water and Sanitation" was elaborated in order to remove situation when 48,3% of population has no access to tap water, to improve existing and to construct lacking sewerage systems. For raising public awareness and developing adequate public opinion it is important to:

- increase role of mass media in initiation of clean drinking water problems and careful treatment of water resources;
- prepare community and economy to idea that there is necessity in water saving and investments;
- increase role of public, particularly makhallia committees (local autonomous bodies);
- to create and demonstrate films, performances, posters, etc. in the field where creative potential of intellectuals can be more useful than that of engineers.

d. Research and engineering

In view of rational irrigation water use we need to improve principles of soil-agrolandscape, reclamation, and water allowance zoning, to introduce scientifically based irrigation regimes and advanced water saving technologies, to improve reclamation state of lands, and to improve environmental situation.

7. Present examples in view of acquired experience in catchment management, and transboundary initiatives

Substantial experience in catchment management was accumulated in Sogdii province repair and operation service. This is represented by conflict-free operation of Kayrakkum reservoir at interstate level. Its operation is based on annual intergovernmental agreements, ICWC's decisions, and decisions on transfer of electric energy in summer and winter periods. Works on transfer to double-lifting of pumping station "Mahram-0" in Kanibadam rayon and bank protection measures are carried out together with Uzbekistan. Water supply from Kayrakkum reservoir to Kyrgyzstan is solved on a partnership basis. In its turn the same principles are used regarding water supply to Tajikistan's lands from transboundary rivers.

It is necessary to arrange similar cooperation on Nurek reservoir on the Vakhsh river.

8. Proposals on the first stage of GWP Program of Actions in Central Asia and the Caucasus

1. Elaboration of principles on the interstate water allocation, including economic mechanisms.
2. Improvement of the technical state of water structures.
3. Prepare provision about information exchange framework at national and regional level with further establishment of common water monitoring system.
4. Development of water use policy at the regional level in view of coordinated national interests.
5. Revival of basin water management and use principles.
6. Improvement of the national water legislation.
7. Improvement of the interstate administration system for integrated use and conservation of transboundary water objects.
8. Development and improvement of the legal base of interstate relations in part of water use and conservation.
9. Establish mechanism coordinating international assistance.
10. Share holding on maintenance of interstate water structures according to mutually agreed list.

Appendix

Publications on water resources of Tajikistan

1. Resources of mountainous Tajikistan. Kh.M.Mukhabatov. Russian Academy of Science. Tajik Academy of Science, Moscow, 1999.
2. Water resources of Tajikistan, parts II and I. I.G.Tahirov, G.D.Kupayi. Dushanbe, 1994.
3. Water quality control. T.Salimov. Dushanbe, 2001.
4. National Program "Clean Water and Sanitation". IF AS Tajik branch. Dushanbe, 2001.
5. Water Code of the Republic of Tajikistan.
6. Environmental Law of the Republic of Tajikistan.
7. Program on meeting the crisis of agroindustry in Tajikistan and on priority directions in the development of its sectors up to 2005.