

Republic of Uzbekistan - Country Report

NATIONAL REPORT ON GLOBAL WATER PARTNERSHIP

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1. Quick appraisal

1.1. Major limitations in water on the national level

Water resources of Uzbekistan are the part of total Aral sea basin resources. According to different specialists water resources share formed within the republic constitutes only 9-11% from the total basin resources (11.4-13.9bln.m³ ; 10.5-10.8 bln.m³ under 90% availability). Water resources share is 16% for Syrdarya and 6% for Amudarya.

One of the main water resources components is ground water originating by precipitations,

irrigation water infiltration, percolation from water bodies and underground inflow.

Total water resources of Uzbekistan are 19.7 bln.m³ and operational supplies are 6.8 bln.m³ from which 3.75 bln.m³ are fresh waters under demand (by 2010) 4.078 bln.m³. Thus, water deficit is 0.328 bln.m³. Actually average annual consumption is 6.35 bln.m³ from which 3.366 bln.m³ are used for drinking water supply, 0.718 bln.m³ for industry, 1.825 bln.m³ for irrigation and 0.118 bln.m³ for pastures watering.

Ground water resources are spread unevenly. Karakalpakstan Republic, Khorezm and Navoiy oblasts are highly deficiently.

Ground water pollution is increasing issue which is caused by surface flow quality aggravation (there is hydraulic relation between surface and ground water). In almost all irrigated areas allowable concentrations of phenols, oil products, sulfates, chlorides, nitrates and other harmful substances are exceeded.

Due to high water salinity (4-10g/l and more) in Karakalpakstan Republic, Khorezm and Navoiy oblasts, partially in Ferghana valley, first aquifer can not be used even in irrigated agriculture.

Republic posses huge resources of return waters which annual flow is estimated as 25-28 bln.m³.

Due to high salinity only 30-40% can be used without mixing and 15-20% after mixing with fresh water.

At the same time there are issues connected with return water withdrawal because main volume of it is formed outside irrigated lands. From total return water volume only 12-14% are re-used within irrigated lands, 15-20% - downward from irrigated lands, 25-30% are returned to the rivers and 35-45% are disposed into natural depressions.

All water resources of Central Asia are distributed between the countries and branches. According to this distribution Uzbekistan's share is 72.4 bln.m³ (under 90% water availability) including 61.1 bln.m³ for irrigation and 11.3 bln.m³ for non-irrigation needs. Because of limited sources 12 bln.m³ are compensated from ground and return waters.

Besides, 61.1 bln.m³ were foreseen for 4.8 mln.ha with irrigation system efficiency 0.75-0.78. Actual efficiency is 0.63-0.64 and in certain regions it is even 0.50-0.52. As a result irrigated farming uses this water for 4.270 mln.ha instead of planned 4.8 mln.ha.

1.2. Major issues in water sector with regard for regional and transboundary impact
As was said before, main volume of water resources used by Uzbekistan is formed beyond its territory and water supply to various economic branches depends on many factors, regional and transboundary impacts.

They are as follow:

- Operation regime of large water reservoirs on transboundary rivers; its transformation for energy generation has big importance;
- Availability and observance of interstate, intergovernmental and inter-branch treaties, agreements and protocol decisions;
- Observance of established water intake limits from Syrdarya and

- Amudarya trunk;
- Observance of daily releases from reservoirs;
- ICWC decisions effectiveness and governments support for necessary environment creation.

2. Major stakeholders in water sector

For better understanding this issue should be divided into two parts.

First part - water ownership.

Second part - water objects ownership.

In accordance with Article 3 Chapter 1 of "Water law" "Water is property of state-national value of the Republic of Uzbekistan, should be rationally used and is protected by the state".

According to Article 4 Common Water Fund of the Republic of Uzbekistan includes:

Rivers, lakes, water reservoirs, other surface water bodies and water sources, canals and ponds;

Ground water and glaciers. Water objects can belong to:

State property

(water reservoirs, canals ,pumping stations, collectors, water structures, wells, main pipelines, etc). State property can be transferred to different state and other organizations for operation.

Collective property:

(water structures under administration of collective farms and cooperatives, joint-stock ventures, water users associations, etc.).

Private property;

(water structures under private administration: single shallow wells, small pump units, small canals and structures).

3. Public awareness and participation in water resources management

To be honest, it worth to note, that public in the republic is weakly informed about water deficit but practically experiences this issue. Public concern is felt in the areas of the lowest humidity. Many people complain for lower water supply which is unsatisfactory for irrigation by traditional methods and required to limit water withdrawal in upper reaches.

But all these actions are single and can not be considered as organized public action. Until now there are no NGOs being able to participate in water management. Some NGOs like "Aral sea saving Fund" due to lack of skilled specialists and understanding of the problem of water management can not influence this process.

In spite of that there is some positive shift. For example, WUAs have being established to manage water within the association. Perhaps, rayon and oblast level associations involvement is needed. Problem of public participation on interstate level remains complicated.

4. Institutional preconditions

Existing system of water resources management where administrative principle dominates does not meet modern requirements because of water deficit, states independence and transition to market.

Current structural transformations touch inter-rayon and inter-oblast irrigation systems and WUAs establishing. Planned transformations include gradual transition to basin and system principle of management.

5. Legal aspects

Current and planned legislation for water resources regulation. All water related issues are regulated by "Water law" brought in 06.05.1993 by Cabinet of Ministers (No. 385 of 06.05.1993 and No. 174 of 07.04.1992).

6. Potential analysis

- a) Existing potential in political, legal and economic aspect, water administrating Water resources management is executed by governmental structures (Ministry of Agriculture and Water Management and its local units). For long period strict system of water management has being formed at inter-farm, rayon, inter-rayon, oblast and republican level. Each level has own management structure with its administrative staff and operational personnel. All water management costs are covered by state.
- b) Information systems of monitoring, hydrological tools, water quality assessment, ecological evaluation.
For operative water resources management workable information systems have been established including collection and processing data (daily, 10-days, monthly, quarterly and annual) on water intake, reservoir operation regime, water use, etc. Data collection and processing are computerized.

For system monitoring gauging stations are being created which number exceeds 16 000. On large hydro-units automation systems are installed.

Water quality assessment is provided by State Committee for Nature Protection and Glavgidromet. River water quality is evaluated for chemical composition, salinity and harmful substances concentration. Due to increased water diversion in upper and middle reaches and collector-drainage waters release water quality is aggravating in lower reaches. Particularly difficult conditions are in lower reaches of Zerafshan, Chirchik river and on small rivers of Ferghana valley.

- c) Assessment of influence on health, pollution regulation, public awareness in water resources issues

To reveal clear link between environment pollution and population health is very difficult because it depends on many factors including man physical and psychological status under impact of many pollutants accumulating in water, air and food.

Center "Water related ecology" have evaluated ecological state of 176 rayons and revealed harmful influence on health by polluted water and air. Many rayons are facing fresh water deficit because of its uneven distribution over the area and big diversion for irrigation. In spite of this, surface water resources remain main source of drinking water supply.

Sanitary service has developed classification of surface water bodies according to their pollution and indices of danger. For water quality characteristic 7 pollution indicators are used.

Population has not full information about water resources quality. Because Glavgidromet and Nature Protection Committee disseminate their bulletins only among separate organizations and this information is not reflected in mass media. That should be done in the future. GEF project Component B activity is very useful for this purpose.

- d) Research and technology
SANIIRI and SIC ICWC annually conduct research in water resources management perfection.

7. Current examples (positive and negative, well functioning local organizations, transboundary initiatives)

Ten year experience of joint water resources management and use showed that acceptable decisions can be always found. As example can serve conflict resolution in 1995 and 1997 due to lack of interstate agreements on rational use of water and power resources of Naryn-Syrdarya reservoir cascade. Parties understood and confirmed that all sides interest should be taken into account.

As good example can serve as well activity of BWOs, Big Ferghana canal, South-Golodnostepsky canal and Zerdolvodhoz. Recent years these units were

transformed with transferring to them some canals and structures that improved management operativeness and correctness.

8. Proposals to include in the first stage of action program consideration of the following directions:

1. Staged transition to basin and system principle of water management;
2. WUAs establishing: issues, ways of solution;
3. experience of paid water use in some states: positive and negative sides, recommendations for improvement;
4. Land reform and its impact on water resources management;
5. Perfect information systems creation for water resources quality management improvement.