



TRANSBOUNDARY PROBLEMS OF INTEGRATED WATER RESOURCES MANAGEMENT IN THE KURA-ARAZ RIVER BASIN

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Necessity of Integrated Water Resources Management

Main objective of contemporary:

water-related international conventions

and directive documents

is to ensure the fair use of water resources without harming the environment and taking

Most countries of the world admitted that realization of this principle depends on the provision of integrated management of water resources

IWRM concept

The main principles of IWRM was defined in International Conference on Water and Environment in 1992 (Dublin) and in International Meeting on Sustainable Development in Yohanesburg in 2002 is the process

which promotes the coordinated development, use and management of water, land and related resources in an equitable manner without compromising the sustainability of vital ecosystems"

IWRM should cover the followings :

1

- **IWRM coordination with river basin**

2

- **Water resources management at river basin planning various purposes of usage**

3

- **Significant integration of social, economic and environmental factors in planning use and management of water resources**

4

- **Participation of non-governmental and public organizations and transparency in decision-making process of IWRM**



Caucasus



Black sea

Caspian sea

Greater
Caucasus

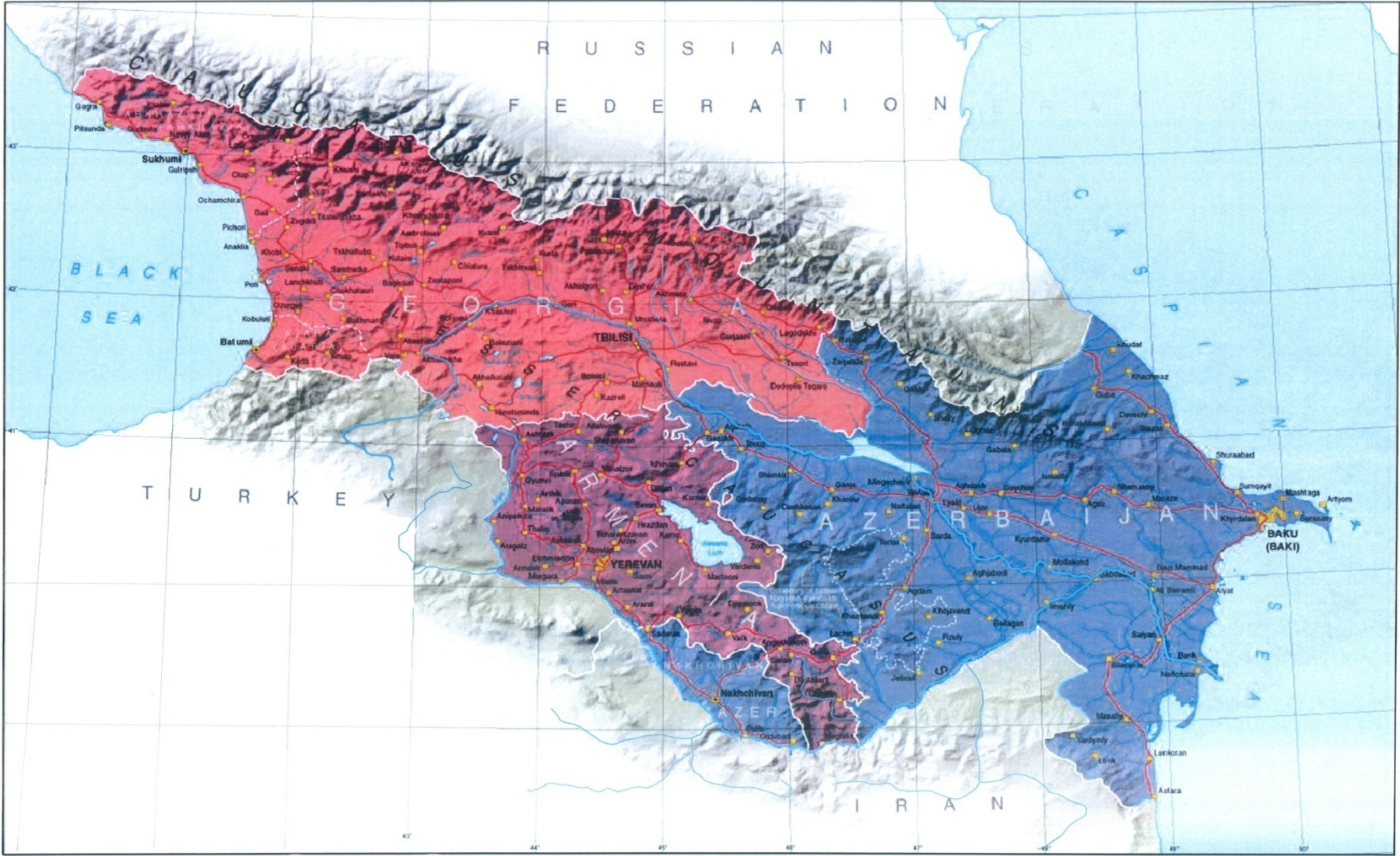
Caucasus

Lesser
Caucasus

Kolkhida
lowland

Kur-Araz
lowland

The scheme of transboundary rivers of South Caucasus



The institutions responsible for water management in Georgia

Ministry of Environmental Protection and Natural Resources-provides subsurface water management

Ministry of Public Health – takes control the quality of the water used for drinking

The institutions responsible for water management in Armenia

Agency for Water management at the Ministry of Nature Protection- provide water management including subsurface water

Ministry of Public Health – takes control the quality of the water used for drinking

The institutions responsible for water management in Azerbaijan

The Ministry of Ecology and Natural Resources - implements out groundwater exploration and monitoring

“Azersu” OJSC – provides household water supply countrywide and industrial water supply to some enterprises

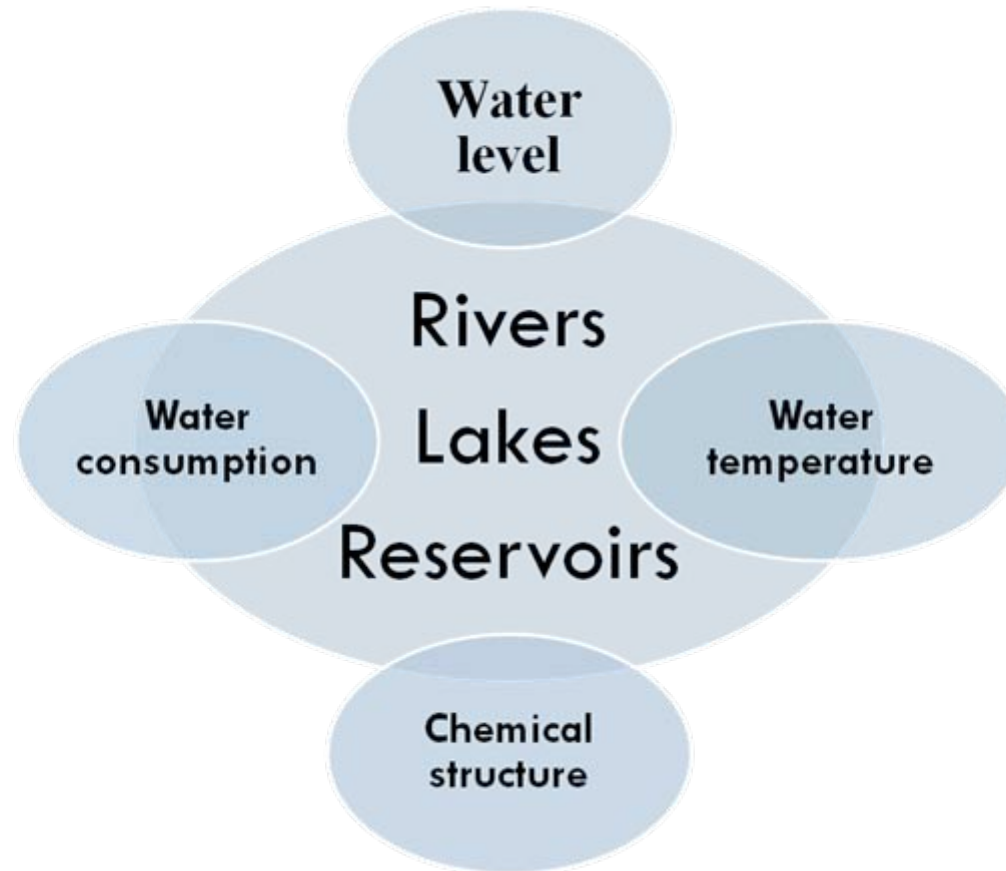
Melioration and Water Economy OJSC – provides agricultural water supply

The State Water Resources Agency of the Ministry of Emergency Situations – deals with protection of strategic water plants, floods, realizing monitoring and other issues

Ministry of Public Health – takes control the quality of the water used for drinking

Monitoring of water objects

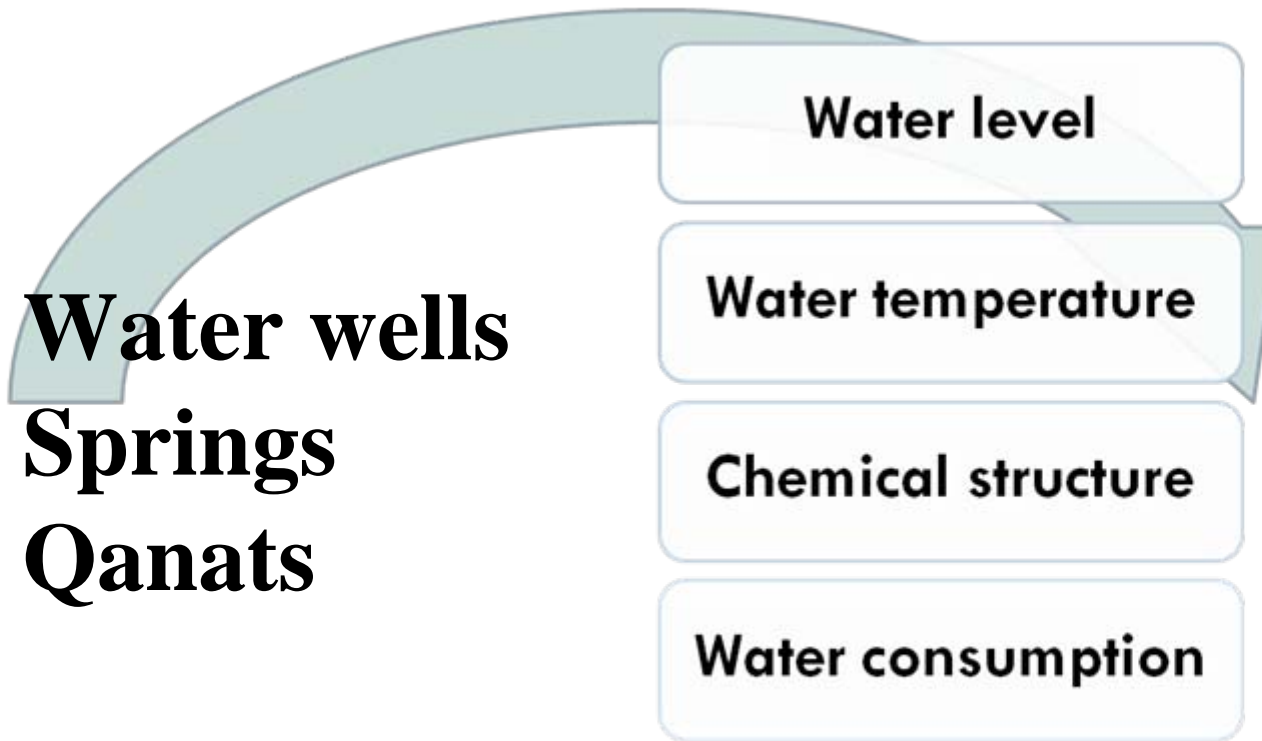
Surface water



Observations in water objects is carried out 2 times a day

Monitoring of water objects

Ground water



Observations in groundwater is carried out 3 times a month

The legislative framework for the water governance in Azerbaijan



In addition, the Cabinet of Ministers has approved rules for use of water, sanitary protection zones, water cadastre and other regulations.

Unlike other countries in the Caucasus, Azerbaijan ratified the convention of UN, on "Protection and Use of Transboundary Watercourses and International Lakes" (Helsinki, 1992)

Reconstruction of water sector

In recent years in Azerbaijan is implemented:

- creation and reconstruction of water supply systems in all cities and in most villages
- creation and reconstruction of sewerage systems
- creation and reconstruction of irrigation and drainage systems
- creation and reconstruction of water treatment plants
- creation of large and small water reservoirs and etc.

The works are realized by Government of Azerbaijan with the financing of investments of:

- the World Bank
- the Asian Development Bank
- the Islamic Development Bank
- the KfW Bank of Germany
- Sweden's SECO organization
- the Japanese International Cooperation Agency
- the Korean International Cooperation Agency
- the Saudi Development Fund and other financial institutions

Ecological problems in Kura-Araz rivers basin

1

- Excessive pollution of transboundary Kura, Aras rivers and their tributaries

2

- Municipal, industrial and agricultural pollution

3

- Bacteriological contamination of groundwater in the irrigated areas, cities and cattle farms

4

- Degradation of river basins as a result of quarrying activities

5

- Exhaustion of reserves in local areas as a result of uncontrolled use of groundwater, water absorption outside standard conditions

THE MAIN TRANSBOUNDARY PROBLEMS IN KURA-ARAZ RIVERS BASIN



There are no serious problems associated with the use of water resources between countries

The main problem associated with pollution of water sources

THE MAIN TRANSBOUNDARY PROBLEMS IN KURA-ARAZ RIVERS BASIN



Waste waters of big cities of Georgia and Armenia are discharged into the Kura, Araz rivers and their tributaries without any biological treatment

Waste water of large industrial facilities of Georgia and Armenia are discharged into the Kura, Araz rivers and their tributaries without any treatment

Suffer country of Kura-Araz transboundary contamination-Azerbaijan



Azerbaijan is located in the lower part of the Kura-Araz rivers basin, plays a role of transit land for surface and groundwater flowing from the Mountain Ranges of the Greater Caucasus and the Lesser Caucasus down to the Caspian Sea



Therefore all negative influences of pollution is reflected in Azerbaijan territory



All pollutants from the neighboring countries are discharged in the Kura, Araz rivers and directed to the territory of Azerbaijan along transboundary flow

Suffer country of Kura-Araz transboundary contamination-**Azerbaijan**



Kura, Araz rivers and their tributaries flow into the Azerbaijan territory with the heavy metals, organic links in a dirty state



Water sources are polluted in the occupied territory of Azerbaijan, underground and surface objects, high capacity Sarsang reservoir is exploited by invaders

For regulation problems

First of all, every basin country should be follow recommendations of the Helsinki Convention 1992 regarding transboundary water objects



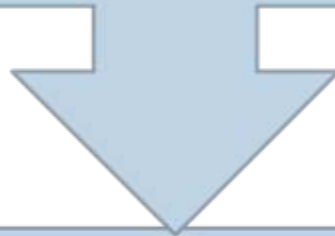
For regulation problems

Independent monitoring system should be created by participating of international organizations ,including UNESCO and UNECE commissions, WWC, INBO and others on the transboundary water objects



For regulation problems

Evaluation of quality and quantity of water inflows between transboundary countries is expedient



The creation condition of groundwater feeding, chemical and bacteriological structures should be explored as a complex under the influence of polluted surface water

For regulation problems

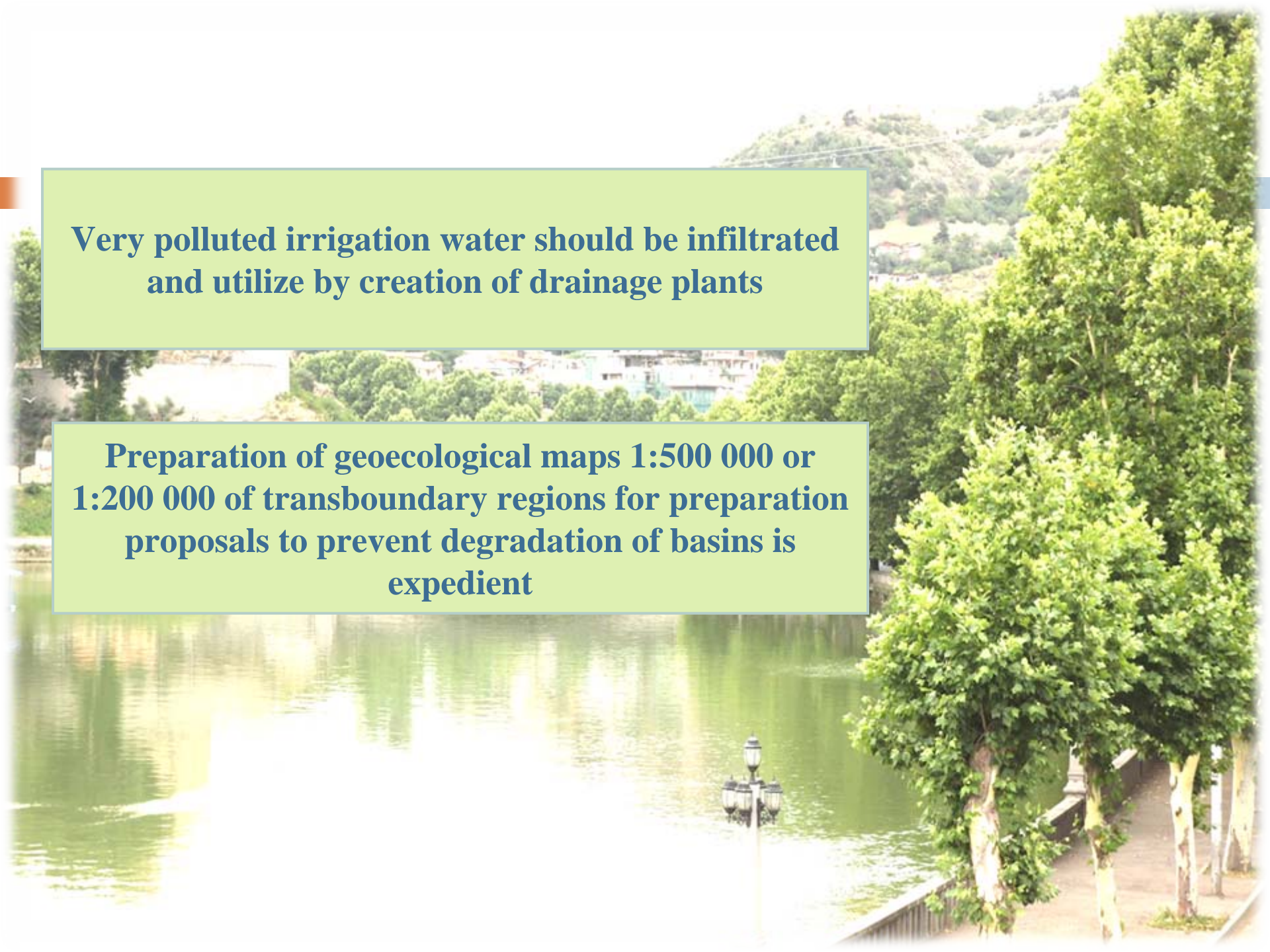
Measures for the localization of pollution process should be prepared and implemented

All surface and underground water objects, water intakes should be inventory, water cadastre must be created

For regulation problems

Current and potential polluted water sources should be inventoried by participation of international organizations

Waste water treatment plants should be modernized and at least should be prevented river discharge of untreated water of big cities

A scenic view of a river with a fountain, trees, and a hillside in the background. The river is in the foreground, with a fountain spraying water. The background shows a hillside with buildings and trees.

Very polluted irrigation water should be infiltrated and utilize by creation of drainage plants

Preparation of geocological maps 1:500 000 or 1:200 000 of transboundary regions for preparation proposals to prevent degradation of basins is expedient

For regulation problems

	Every country should be prepare integrated water resources management scheme for its own territory

	Basin countries should achieve the preparation of integrated water resources management scheme by participation international organizations

Thank you