Working experience of the International Chu-Tallas water Commission

2011

In 2011 a big date in the modern history of the Kyrgyzstan-Kazakhstan water relateions was celebrated – 10 years of the bilateral Agreement on the Use of Waterworks of the Interstate use on the rivers Chu and Talas.

Due to joint actions and tangible support of international organizations and financial institutes, the sustainable coordination structure was created. It includes Chu-Tallas Waterwork Commission, its permanent Secretariat and expert working groups.

The role of Commission today is not limited only to the harmonization of conditions of water distribution and planning financial participation of countries in the maintenance and rehabilitation of interstate water infrastructure.

After the stabilization period, Commission started realization of the new tasks:

- **Widening the range of its activities,**
- **Improving working efficiency,**
- **Active implementation of the mechanisms of integrated management of water resources,**
- **Enhanced attention to the environmental aspects of bilateral water relations.**

JOINT USE OF INTERSTATE WATERWORK SITES WITH KYRGYZ REPUBLIC

Basic documents regulating relations on interstate waterworks use on Chu and Tallas rivers:

- **Agreemnt on single economic space between Republics of Kazakhstant, Kyrgyzstan and Uzbekistan, signed in Cholpon-Ata city on 30 April 1994**
- **Minutes of the meeting of the Committee on the water resources of the Republic of Kazakhstan of the Commission and the Department of Economy of the Republic of Kyrgyzstan on the exploitation of joint water facilities of interstate use in the basins of the rivers Chu and Talas, Bishkek, 14 March 1988**
- **Agreement between the Governments of Republics of Kazakhstan and Kyrgyzstan on the exploitation of the joint interstate water facilities on the rivers of Chu and Talas, Astana, 21 January 2000**

ISSUES

- ✓ **It is necessary to include changes and addendums to the Agreement as of 21 January 2000**
- ✓ **It is necessary to improve and clarify the mechanism of the participation financing of the exploitation and technical support (repair) of the interstate facilities**

COOPERATION BETWEEN REPUBLICS OF KAZAKHSTAN AND KYRGYZSTAN IN THE WATER RELATIONS AREA.

Normative – legislative acts and other documents regulating water relations :

- **Agreement between the Governments of Republics of Kazakhstan and Kyrgyzstan on the use of water facilities of interstate us on the rivers of Chu and Talas as of 21 January 2000.**
- **Regulations of the Commission of the Republic of Kazakhstan and the Republic of Kyrgyzstan on the use of water facilities of interstate use in the rivers of Chu and Talas.**
- **Methodology of implementation of activities of joint exploitation and provision of working conditions to the interstate facilities in the basins of Chu and Talas rivers.**
- **Protocol decisions of the Commission and the Secretariat of the Commission Chu-Talas meeting.**
- **Protocol decisions of working committees with representatives from water management organizations in the Republic of Kazakhstan and the Republic of Kyrgyzstan.**
- **Technical tasks of working groups of Kazakh and Kyrgyz parts of the Commission Secretariat of the Republics of Kazakhstan and Kyrgyzstan on the use of the interstate water installations of the Chu and Talas Rivers.**

JOINT WORK ON SAFE AND RELIABLE ACTIVITIES OF INTERSTATE WATER FACILITIES OF JOINT USE

- **Approval of documents governing the operation of water facilities of interstate use and participation in the financing arrangements for operation and maintenance;**
- **Approval and implementation of correcting the working regimes of reservoirs and limits of water consumption depending on the factual level of water in the sources and needs of the users;**
- **Establish procedures for joint action in emergencies, coordination of the discharge of floodsand other natural phenomena;**
- **Organization of the exchange of hydrological forecasts, data on water and environmental conditions in rivers Chu and Talas and other current and perational information.**

ZHAMBYL HYDROMETEOROLOGICAL SERVICE CENTER MONITORING LABORATORY ON ENVIRONMENT POLLUTION MONITORS THE QUALITY OF THE SURFACE OF WATERS IN TRANSBOUNDARY RIVERS :

TALAS, ASSA, SHU, AK-SU, KARABALTY, TOKTASH, SARGOU.

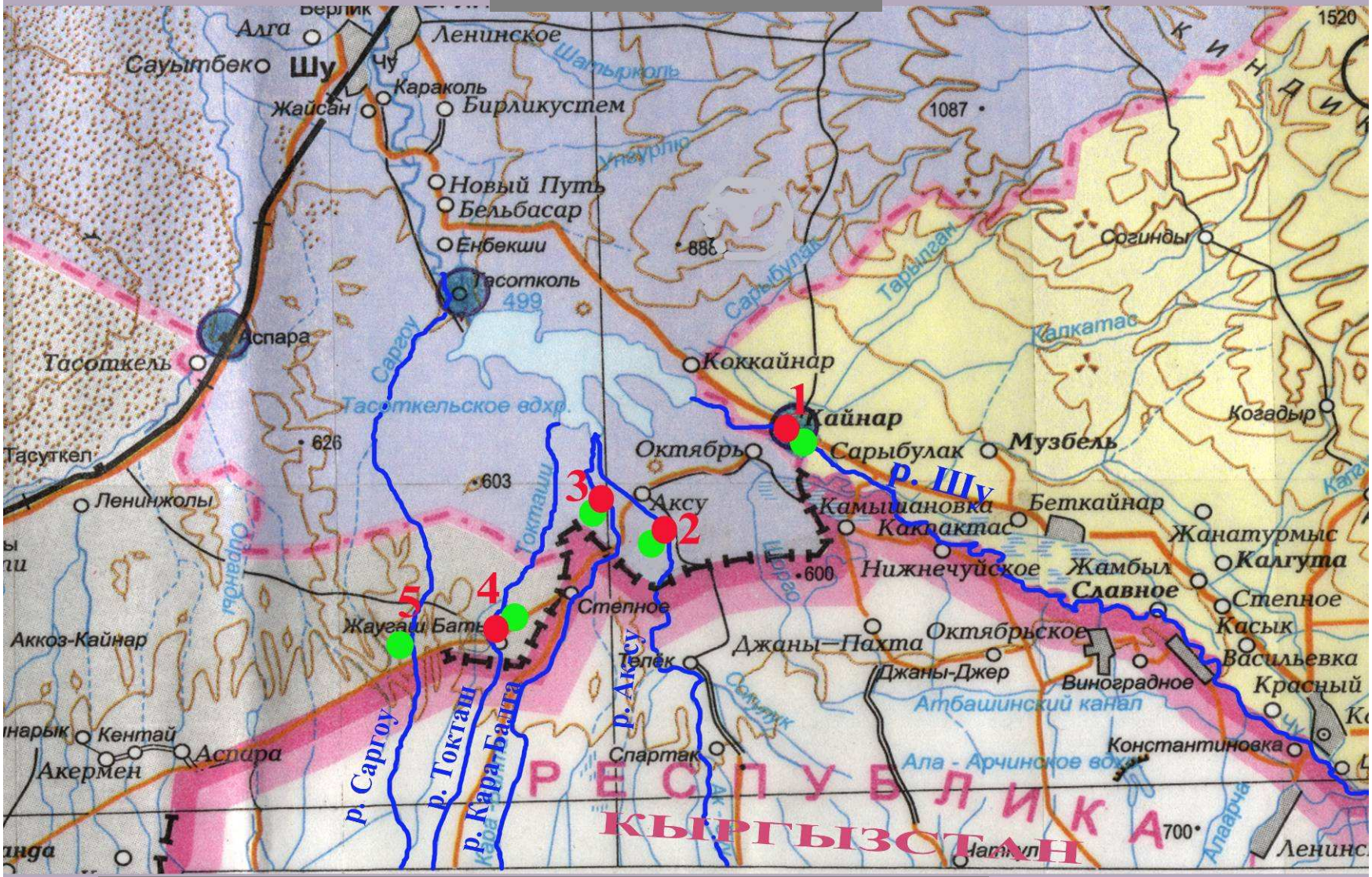
- ***Basin of the r.Shu***

1. Monitoring on the r.Shu is conducted on the range of 0,5 km. down to village Blagoveshenskoe 65 m down waterpost
2. Monitoring of the river Ak-su is conducted in 0.5 km up the Ak-su, 10 km from the source
3. On the Karbalty river monitoring is conducted in the range of 10 km from the source
4. Monitoring on the Toktash river is conducted in the range of 78 km from the source, perifery of the Zhaugash-Batyr village
5. Border with the Kyrgyz Republic is on the river Sargou (according to the agreement with the Office of Environmental and Resource Management Akimat Zhambyl region)

- ***Bassin of Talas-Assin***

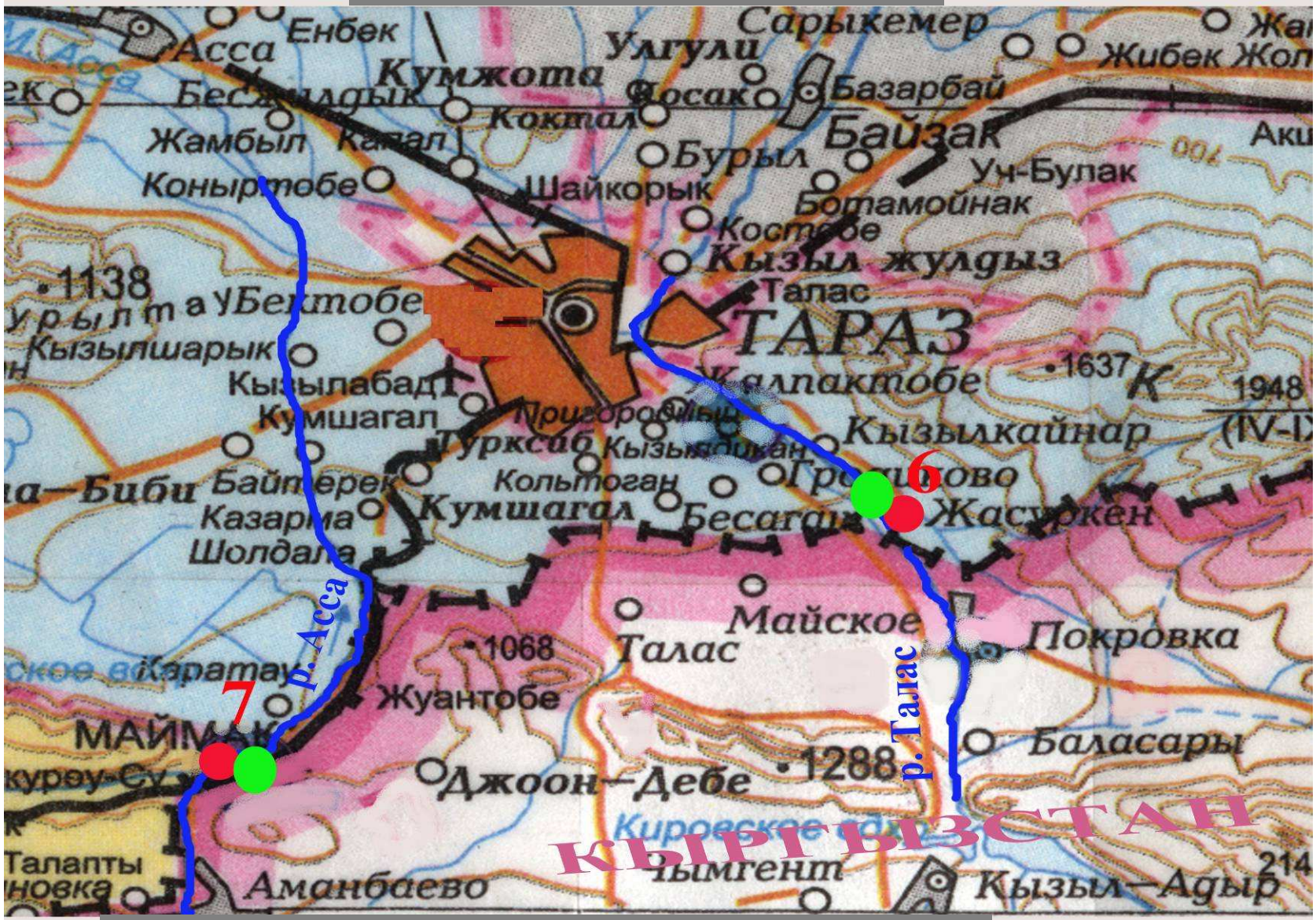
6. On the Talas river monitoring is conducted in the range of 0.7 km upstream the village Zhasorken, in the range of the waterpost
7. On the Assa river monitoring is conducted in the range of 0.2 km upstream the Maymak train station

River Shu Basin



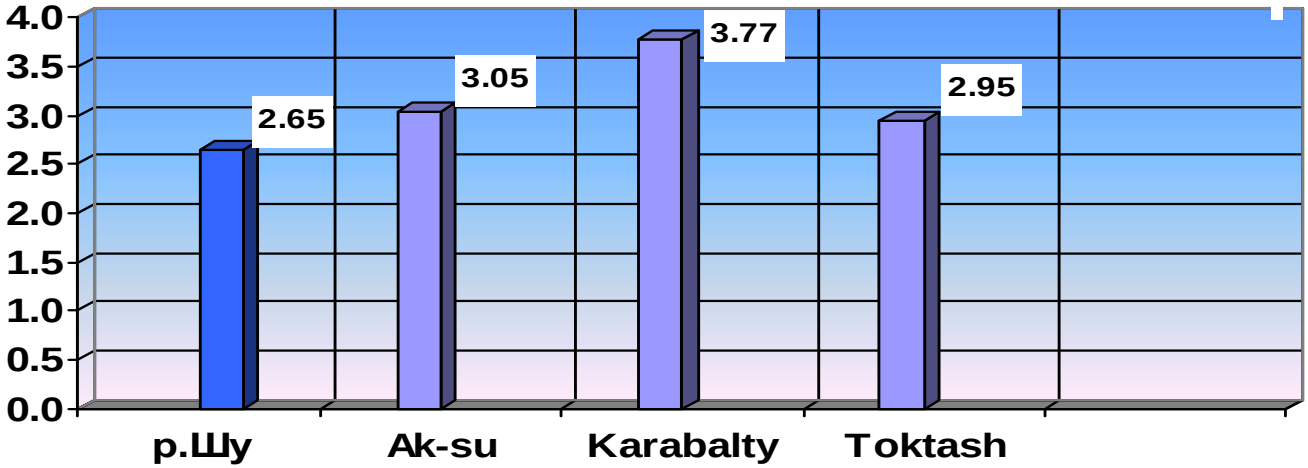
- Hydrological posts
- Range of water tests for chemical analysis

Talas-Alas Basin



- Hydrological posts
- Range of water tests for chemical analysis

QUALITY OF SURFACE WATERS IN ZHAMBYL REGION OF THE RIVER SHU BASIN ACCORDING TO THE INDEX OF WATER POLLUTION (ИЗВ) IN 2010



Karabalty river
ИЗВ— 3,77 - 4 class (polluted).
р. Токташ
ИЗВ– 2,95 - 4 class (polluted).

Shu river
ИЗВ - 2,65 - 4 class (polluted).
Ak-su river
ИЗВ— 3,05 - 4 class (polluted).

Level of pollution in the Shu river in 2010 increased (in comparison with the period 2006-2009.) and ИЗВ comprised - 2,65 units. Contaminants - BOD5, copper, iron, total. 100% of samples taken indicated the excess of maximum permissible concentration (MPC) of these substances. The maximum concentrations of iron - 12PDK, copper - 8, Biochemical Oxygen Demand (BOD 5) - 6 MPC, the concentration of nitrite nitrogen, mineral oil, sulfates, phenols exceeded MPC-about 1-3 times. During the flood of suspended solids content reached 2031 mg / l, and dissolved oxygen in summer reaches - 6 mg / l, which is associated with a decrease in water consumption.

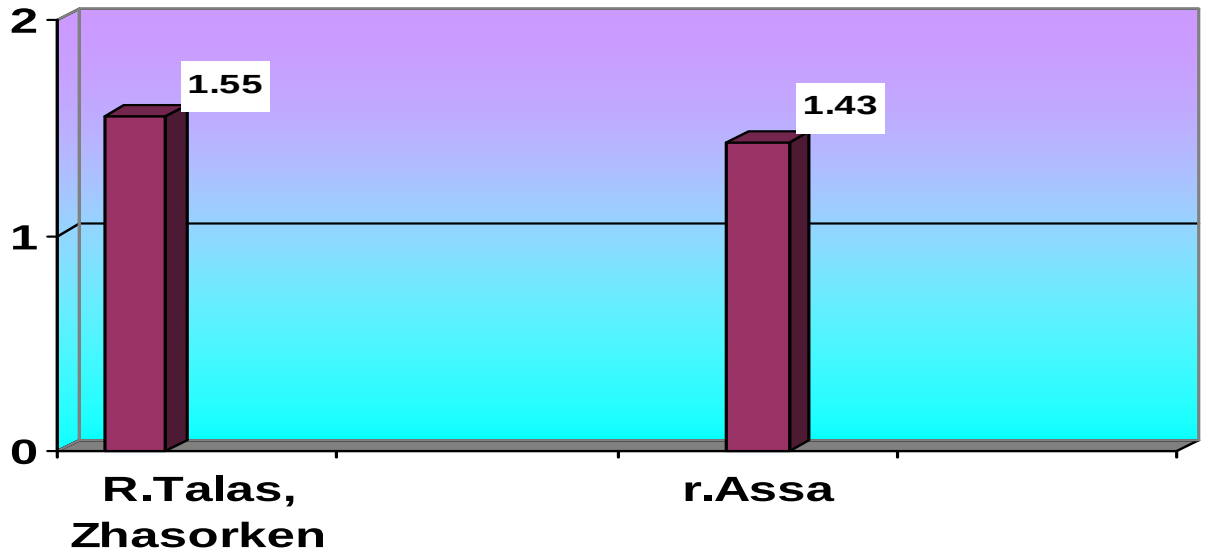
On **r.Aksu** hydrochemical observations were conducted within 5 years. Increase in pollution of the river was in 2010 .

In 100% of the analyzed samples there is increase in MPC of sulphate, copper, iron. 3-6 MAC. In comparison to 2009 there is increase in the concentration of BOD5 and fluorides.?

Karabalta river has the most polluted basin of the Shu river, WPI in 2010 amounted to - 3.77 units. Average annual concentrations of copper-4 MAC, noted the high hardness of 10 mg-eq. / L, the average salinity 1302mg / l, the maximum concentrations of sulphate reached 794 mg / l, the maximum concentrations for BOD5 were 4 MACs, phenol 3, fluoride and oil two MACs.

Toktash river hydrologic range is located 78 km. from the source of the river, parifery of Zhaugash-Batyr. Water quality in the river Toktash estimated as polluted water - Grade 4, WPI is 2.95 units. Average annual concentrations of copper are 4 MACs, sulphate 5 MAC,iron 3 MAC. Maximum concentrations for BOD5 reached 6 MPC, phenol 3, fluoride and petroleum 1.4 MAC.

QUALITY OF SURFACE WATERS OF THE RIVERS TALAS AND ASSA IN 2010



Talas, - 0,7km upstream the Zhasorken village.
ИЗВ (PI) - 1,55 - 3 class(moderately polluted).

Assa river
ИЗВ (PI) - 1,43- 3 **class(moderately polluted)**

The cleanest is river Assa. The pollution index is 1,43 units – moderately polluted. Main polluters are coming from the Kyrgyzstan area – iron, copper, with 3 times more BOD. Average BOD5 concentration, petrolium products, ammonia nitrogen, phenols, fluorides were within the MPC .

In the near the border range of the Talas river, which is situated 0.7 km upstream the Zhasorken village, PI is 1,55 units – moderately polluted, where the BOD is higher in copper, iron, ammonia nitrogen.

The annual average concentration of copper 3 MAC, the maximum reached is 6.0 MAC, the maximum concentration of ammonia nitrogen -3 MPC, BOD5 - 4 MAC

COMPARISON OF PI IN ZHAMBYL REGION FROM YEARS 2006-2010

NAME OF THE SOURCE	YEARS					
	2006	*2007*	*2008*	*2009*	*2010*	*5 MONTH. 2011*
Shu river, Blagoveshenskoe village	2,20	2,34	2,01	1,83	2,65	1,90
Aksu river	2,21	1,67	2,09	2,09	3,05	2,90
Karabalty river			3,96	3,10	3,77	2,86
Toktash river				2,63	2,95	2,02
Talas river, ZHasorken village			1,19	1,08	1,55	1,25
Assa river, train station Maymak	1,54	1,28	1,29	1,25	1,43	1,40

PROPOSALS FOR COOPERATION IN THE AREA OF ENVIRONMENT PROTECTION

In order to determine the quality of transboundary rivers, since 1994, with the Shu-Talas Department of Ecology, Zhambyl Center of Hydrometeorology and the Ministry of Environment of the Republic approved the plan Kyrgyzskoy laboratory to examine Shu river and its major tributaries and the River Talas.

A survey, a list of ingredients for joint studies and exchange of findings were drawn up. The interstate comparisons of the data sharing survey was practically absent. The initiator of the inter-state survey of transboundary transport of Shu-Talas was Department of Ecology, Zhambyl Center for Hydrometeorology.

Analytical studies of the chemical composition r.Shu (from the dam VBCHK) and its major tributaries Karabalta, Aksu, Toktash, Sorgum, Sokuluk, Shorgo (to 26 cross-sections) was held jointly annually from 1994 to 2008 with representatives of Kyrgystan

For the last time a program of joint laboratory findings was organized in 2006, together with representatives of the State Agency of Environmental Protection and Forestry under the Government of the Republic of Kyrgystan. Ongoing work did not give a definite result, and all work is chilled by Kyrgystana.

Suggestions:

- Held jointly with specialists of Kyrgys the survey to identify sources of pollution of transboundary rivers, taking into account the diffuse discharges from the 2 states;
- Set the photocell control of water sampling, to determine the frequency of monitoring and indicators of pollution;
- To discuss the question of unification of the methods and standards for MPC (maximum permissible concentrations). Agree on methods of determination to meet modern standards (methods recognized in the state, accredited methods and laboratories);
-In the debate on the establishment of observation stations on interstate transboundary rivers Shu, Aksu, Karabalta, Toktash, Sargou, Talas, Asa, the best solution is to accep Zhambyl center of hydrometeorology on the definition of surface water pollution from neighboring states;
-to Offer to automate cross-border hydrochemical positions;
- To discuss cooperation in preventing and dealing with emergencies, to approve the warning scheme;

- Carry hydrochemical observations on rivers Aspara and Kayyndy on the border with Kyrgyzstan .

THANK YOU FOR YOUR ATTENTION !