GOVERNMENT OF KAZAKHSTAN

COMMITTEE FOR WATER RESOURCES OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION

IDENTIFICATION OF PRIORITY ISSUES IN SEVEN MAJOR RIVER BASINS IN KAZAKHSTAN

PROBLEM IDENTIFICATION AND PRIORITISATION WORKSHOP IN ALMATY FOR THE BALKHASH-ALAKOL RIVER BASIN

WORKSHOP PROTOCOL

20 August 2002

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1 INTRODUCTION

1.1 BACKGROUND

The subject workshop is part of the project: Priority Issues in 7 Major River Basins in Kazakhstan. The funding of this project is provided by the Austrian Government through the World Bank upon request of the Government of Kazakhstan. This project is the first step in the preparation of the Water Resources Development Plan for Kazakhstan. The project is prepared by a team consisting of Kazakh and international experts of Posch & Partners, Austria.

In a first step, individual experts prepared background papers for each river basin outlining the characteristics of the river basin and the major problems. In the following step - representing a first consultation round – the river basin experts presented the essence of these reports in Problem Identification and Prioritisation Workshops. Such workshops were held at the river basin level, giving all stakeholders and interested parties the chance to present their views and to complement the findings. This report summarises the main findings of the workshop in Almaty covering the Balkhash-Alakol river basin.

1.2 WORKSHOP ORGANISATION

The one-day workshop was organised by the project team with the assistance and in close cooperation with the Balkhash-Alakol river basin authority. It took place in Almaty at the Ametist business centre on August 20, 2002. The workshop was chaired by the Kazakh Project Coordinator, Mr. Nariman Kipshakbaev, and co-chaired by the Austrian consultant Fritz Schwaiger. The World Bank was represented by Mr. Roman Solodchenko, Country Programme Manager and Mr. Evgeny Tyrtyshny, Operations Officer.

In a first session, the river basin expert Mr. Alexander Zemlyannikov presented the main findings of his report. Then discussion sessions followed, focusing on the following:

- Discussion of the report with emphasis on water resources, existing infrastructure, water demand and major polluters
- Major problems and possible solutions
- Priority ranking criteria and priority ranking of problems

1.3 PARTICIPANTS

In total 88 people participated at the workshop, representing 53 organizations. A complete list of participants is attached in Annex A.

2 PRIORITY PROBLEMS IN THE RIVER BASIN

After intensive discussions it was agreed that the priority problems are as shown below.

Each problem was assigned to one of three priority levels. The following criteria were agreed and applied for the ranking of the problems:

- Adverse effect on environment
- Reliable water supply of sufficient quantity
- Quality Water Supply, meeting standards
- Affected population - health
  - discomfort
  - economic disadvantage
- Economic productivity (added value)
- Cost of alternatives (opportunity cost)
- Realisation time needed

2.1 PROBLEMS OF FIRST PRIORITY

1. Need for complex scheme of water use and protection for Balkhash-Alakol basin

There is the need to improve water management in the basin, to make an inventory of the water resources (water cadastre) and to introduce a scientific program “Sustainable development of nature and economy in the basin”. A complex approach in solving the water issues is required; it has to take into consideration (i) ecological, (ii) economical and (iii) social conditions, i.e. the basin management principles.

The biodiversity of the Pribalkhash region is considered unique and contains rare types of flora and fauna which are included in the Red Book. One can observe degradation of flora, fauna and lands due to regulation of the water flow and uncontrolled wastewater disposal. The annual ecological damage from desertification and degradation of soil is given at 93 bln. KZT. There is also a poverty and an employment problem. The Pilot project for sustainable land use and biodiversity preservation is being presently implemented in three settlements of Kazkakhstan. It is necessary to proceed with identical activities and to improve the water management system based on inter-sectoral cooperation and inter-branch partnership.

2. Improve rational water use and conservation of water resources

A scientific approach has to be applied to solve the problems of rational water use. It is necessary: (i) to rehabilitate water infrastructure (reduce the high leakages); (ii) to legalize secondary use of biologically treated wastewater and drainage water for irrigation; (iii) to introduce water recycling at industrial plants, especially at the Balkhash industrial plants which use water only for cooling purposes; (iv) to start an education and training program for the population on economic water use and ethics of water consumption; (v) to introduce forest melioration (for water conservation).

3. Improve Ili river water quantity monitoring

There is a lack of observation posts at the rivers and lack of reliable data on water quantity. Most existing water gauges are out of operation. It is necessary to supply and install new water gauges and preferably to arrange its local production.

4. Improve coordination of projects

Quite a number of projects aiming at the rehabilitation and preservation of the water sector, of ecology and other sectors are implemented in the region by international and national organizations. It is necessary to better coordinate all the projects in the basin and to avoid duplication to get better results.

5. Improve water quality monitoring

(a) There is a lack of water quality and quantity monitoring. The Karatal river is polluted by the tailing dump of the Tekeli mining and smelting enterprise (copper – 400 MAC). It is necessary: (i) to rehabilitate the network of hydro posts and hydro chemical observation points; (ii) to introduce water quality monitoring procedures; (iii) to rehabilitate and improve laboratories for water and soil analysis.

(b) It was proposed to use the indicator “integral water toxicity”, defined by biological testing methods, considering the high cost of chemical water quality analysis. This could help to avoid disputes between water saving authorities and water consumers and also to get long-term forecasts of the environmental status. It is necessary to confirm this indicator legally and to add it to the “Rules of surface water protection RND 1.01.03-94”.

(c) No reliable data are available from the bottom sediments in lake Balkhash near the former copper factory. Bottom sediments may cause secondary water pollution. It is necessary to conduct appropriate investigations and scientific research of the bottom sediments.

6. Weak regulatory basis (new water code)

The existing imperfect regulatory basis is one of the main factors of non-effective water management, protection and rational use. It is necessary to improve the existing regulatory basis (new water code) and make sure that it does not conflict with other legislative acts.

7. Institutional problem

A large number of authorities control and manage the water resources, but their functions are not coordinated with each other. It is necessary (i) to put the task of water resources management into the hands of a single organisation and (ii) to upgrade the organisational status of the Committee for Water Resources.

8. Interstate agreements (transboundary problems)

It is required to improve the interstate agreement between Kazakhstan and China, signed in October 2001 for the management of the transboundary river Ili. It is also necessary to develop working papers for its execution and implementation, in particular for issues of incoming water quantity and quality.

9. Flow regulation at Kapchagai for lake Balkhash and Ili delta

The inflow to lake Balkhash is subject to fluctuations (from 100 up to 1500 m^3/sec), depending on the water release at the Kapchagai hydropower plant. It is necessary to regulate the water release from the Kapchagai reservoir not only on the basis of energy requirements, but to give the lake a special status and to acknowledge it as an equal party with ecological water demand when calculating the water balance. New rules of reservoir operations are needed, giving the Ili river an ecological flow throughout the year. (Pease refer also to the suggestion to construct a balancing reservoir under "problems of second priority".)

It is also required to establish a state nature reserve at the Ili river delta and to conduct a social assessment study for the lowland settlements.

10. Emergency funding for deteriorating infrastructure

All water infrastructure like reservoirs, hydro posts, water distribution and irrigation channels in the basin are highly deteriorated. It is necessary to allocate funds for their reconstruction and rehabilitation.

11. Water protection zones and belts (sanitary zones) at ponds

It is necessary to enforce the compliance and the rehabilitation of water protection zones and belts. Private and residential structures have been built all over the area in these zones which are considered as main polluters of the ponds.

12. State financing (dotations) for major water objects (infrastructure) and forming of water user associations

The main riverbed objects need to have state support.

The partitioning of irrigated areas into small peasant farms results in a reduction of irrigated lands and secondly effects negatively the interconnection of the water authorities and mentioned farms. It is necessary to create associations of water users, which will be able to solve technical problems of the irrigation systems and be able to pay for consumed water and for sewage disposal.

13. Owner of waterworks objects (facilities)

As a result of a chaotic privatisation process, quite a number of objects are transferred to private property and some of the objects do not have an owner. It is necessary to solve this issue and to identify owners. Main water objects should be transferred to state management.

14. Non-payment by consumers

The high portion of non-payment, the imperfect collection mechanism and lack of a special water fund is reflected in the poor technical condition of the water infrastructure. Urgent measures have to be undertaken. From some agricultural consumers, the true owners can not be identified, so it is impossible to make them pay for the water. A suggestion is to replace the water fee by a tax payment for such cases.

Peasant farmers use a considerable amount of water, but only a few of them have agreements with the water authority. A farmer needs to contact 3 authorities to obtain such permit which is too complicated. This must be changed to a one-stop-shop.

15. Involve NGO-non government organisations in the sector

It is necessary to attract public organizations, NGOs and independent experts in solving important water issues.

16. Improve drainage system of Almaty city

Reconstruction of storm water system of Almaty city and construction of drainage system for the lower part of Almaty city is required together with appropriate wastewater treatment. Treated drainage and storm water should be reused for irrigation purposes.

17. Reanimation of small rivers

There is a program called “Small rivers of Almaty”, which is still not approved. It includes the reanimation, pollution prevention and preservation of small rivers with effective sanitary zones in Almaty city, in particular of the Large and Small Almatinka, Esentaika (Vesnovka) and others.

19. Water distribution network of Almaty city

The total length of water pipelines in Almaty city is equal to about 3500 km. 1400 km need to be rehabilitated. These are steel pipes which life span has expired already. Losses in the network are approximately 40%. It is necessary to reconstruct the water supply network (distribution network).

20. Improve water pricing system

The current imperfect price policy has a negative effect on the technical condition of the water infrastructure – the majority of the facilities are in emergency condition and there is a lack of funds for repair and rehabilitation. The participants made several proposals for improving the pricing system:

- the water tariff should correspond to the water production cost;
- Price based on a water rent. Capitalization of water resources (economical efficiency), like the Russian experience (Volga ring);
- To change the water fee into a tax (where no owners can be found).
- To establish the price according to types of consumption, e.g. different prices for (i) water supply, (ii) industry, (iii) agriculture and (iv) ecological water use. Also progressive tariffs were suggested (low tariff for a minimum volume, higher tariffs for additional consumption).

21. Improve water supply and sewerage of rural settlements

It was proposed to construct compact drinking water and wastewater treatment plants for rural settlements which are far away from piped water supply systems.

It is suggested to develop rural water supply systems and to reconstruct the systems in accordance with the program “Drinking water” .

2.2 PROBLEMS OF SECOND PRIORITY

1. Construction of a balancing reservoir at Kerbulak

Kapchagai hydropower plant releases water depending on the energy demand pattern. It is suggested to construct a balancing reservoir near Kerbulak (Kulanbasy) village which could balance the flow such that it suits the ecological water demand in the Ili delta.

2. Study of the Ili river discharge capacity and flood forecasting

There is abundance of water this year. Releases from the Kapchagai reservoir are equal to 1100 m^3/sec. This causes settlements, pastures and agricultural lands to be flooded, asphalt roads are being damaged. It is necessary to introduce a program for forecasting water quantities on the Ili river and to study its hydraulic discharge capacity.

2.3 PROBLEMS OF THIRD PRIORITY

None.

Signed by

Nariman Kipshakbaev
Project Coordinator

Fritz Schwaiger
Team Leader

3 ANNEX A – LIST OF PARTICIPANTS

№	Name of participant	Organization	Position
1	2	3	4
1	Nariman Kipshakbaev		Project coordinator
2	Roman Solodchenko	World Bank	Country program manager
3	Evgeny Tyrtyshny	World Bank	Economist
4	Fritz Schwaiger	Posch & Partners	Team leader
5	Eduard Mukhamedov	Balkhash-Alakol river basin authority (RBA)	Head
6	Malik Burlibaev	Kazakh Scientific and Research Institute for Environment and Climate Monitoring («KazNIIMOSK»)	Director
7	Galina Zavina	RSE «Kazgidromet»	Head of department of water cadastre, hydraulic engineer
8	Yermek Murtazin	CNZPS	Director
9	Muratbek Nasyrov	CSE «Almatyvodkhoz» (communal state enterprise)	
10	Vitaly Timoshuk	Talgar DEIS (district enterprise of irrigation system)	Head
11 12	Ayan Aitzhanov Anara Tleulesova	Environmental Protection Administration of Almaty region	Head of department Head of monitoring section
13 14 15 16	Murat Batyrbaev Nina Belikova Gulzhan Sapaeva V. Kirichevsky	Environmental Protection Administration of Almaty city	Deputy head of department Head of analytic control section Senior officer Key specialist of state control section
17 18	Viktor Kim Oleg Zaizev	CSE «Gorvodokanal», Almaty city	Deputy director general Hydro geologist
19	Dauytbek Kozhakov	Public Corporation «Almatygidrogeomonitoring»	Head of section
20	Urziya Kumalakova	Almaty city sanitary-and-epidemiologic department	Sanitary inspector, acting chief
21	Galia Sharipova	Almaty region sanitary-and-epidemiologic department	
22	Bolat Doszhanov	Administration of Bartogay reservoir and Kunaev's Big Almaty Canal	Head of section

23	Olga Semenova	Coordinated hydroelectric system	Engineer PTG
24	Kuralai Karibaeva	Institute of Ecology	Director
25	Token Uzakov	Agriculture department of Almaty region	
26 27	Andrey Biryunov Svetlana Balenko	«Eicos» company	Expert Expert
28 29	Abdrakhman Yedilbaev Pharkhat Abdullaev	JSC «Gornoye byuro»	Director Deputy director
30	Mels Yeleusizov	Ecological Alliance of associations and enterprises of Kazakhstan «Tabigat»	
31	Serikbay Belbolatov	RSE of Ministry of NREP	Representative
32 33	Alexander Zkhay Vladimir Pogorelov	JSC «Membrane technology S.A.»	
34 35 36	Vladimir Bogachev Kasym Duskaev Alexander Parusimov	Regional Environmental Center for Central Asia	Project manager Expert Technical expert, project manager
37 38 39	Akhmetkal Medeu Igor Malkovsky Zhakynbai Dostaev	Institute of Geography	Director Deputy director Doctor of Geography
40 41	Olga Sergienko Usinaliev	RPA (research-and-production association) «EcoInform»	
42	Aleksey Chirkov	JSC «Heat and power engineering company»	Director
43	Bakhyt Khamitova	Information and Analytical Center of MNREP	Director
44	Dulat Kalitov	Satpaev's Kazakh National Technical University (KazNTU)	Chief of chair of hydrogeology
45 46	Mira Akhmetova Olga Kulikova	«Kazmechnabor» SNS	Laboratory manager
47 48 49 50 51 52	Olga Baturova Aleksey Yakovlev Tanakaev Sergey Tabokaev Tleubaev Viktor Kholodov	Close Corporation (CC) «Almaty Power Consolidated» - HPP (heat power plant) -1 -HPP-2 -HPP-3 - Kapchagai HPS (hydroelectric power station)	Key specialist Deputy chief engineer Chief of production and technical department (PTD) Engineer ecologist
53	Yergazy Koshanbekov	Akimat of Balkhash district	Akim

54	A. Irsaev	Balkhash fish inspection	
55	Vladimir Kim	Balkhash DEIS	
56 57	Alexander Zemlyannikov Anatoly Baranov	Design Institute Kazgiprovodkhoz	Chief engineer
58 59 60	Menlibay Myrzakhmetov Yelshibek Zhumartov Klim Ashiryaev	Kazakh Head Academy of Architecture and Construction (KazHAAC)	Chief of chair, Doctor of Science, Professor Professor Assistant professor
61	Tursyn Ospanov	Karatal DEIS	Director
62 63	Mukan Zhanabekov Dmitry Klevzov	Territorial Administration of Ministry of Agriculture, Almaty region	Senior officer Technologist
64	Portnova	Metrology department of district analytical section of state administration	
65	Natalia Kryuchkova	British Embassy in Kazakhstan	Representative
66	Terumi Misuno	Japan Embassy in Kazakhstan	Environmental monitoring expert
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72 73	Bekbaev Zharimbetov	Television company «Yel Arna»	
74	Amir Emirbekov	«KazRadio»	
75	Larisa Chernenko	Newspaper «Vremya»	Journalist
76 77	2 persons	Television company “31 canal”	
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80	D. Erdesov	Balkhash-Alakol RBA	Deputy head
81	K. Turykbaev	Balkhash-Alakol RBA	Head of department ГКиОВР
82	V. Ten	Balkhash-Alakol RBA	Head of department МГиКВР
83	E. Zhulaev	Balkhash-Alakol RBA	Acting chief of water management section

84	M. Aytmukhametova	Balkhash-Alakol RBA	Senior officer
85	A. Bitanova	Balkhash-Alakol RBA	Senior officer
86	M. Akimzhanova	Balkhash-Alakol RBA	Key specialist
87	R. Imanbet	Balkhash-Alakol RBA	Senior officer
88	M. Urazbaeva	Balkhash-Alakol RBA	Specialist