KYRGYZ REPUBLIC

NATIONAL POLICY DIALOGUE ON INTEGRATED WATER RESOURCES MANAGEMENT

PROCESS AND RESULTS FOR THE PERIOD OF 2008-2013

EUWI
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KYRGYZ REPUBLIC

MINISTRY OF AGRICULTURE AND MELIORATION
DEPARTMENT OF WATER MANAGEMENT AND MELIORATION

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

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EUROPEAN UNION WATER INITIATIVE

NATIONAL POLICY DIALOGUE ON INTEGRATED WATER RESOURCES MANAGEMENT

PROCESS AND RESULTS FOR THE PERIOD OF 2008-2013

BISHKEK 2013

This publication contains an overview of work progress and results achieved under the National Policy Dialogue on water policy in Kyrgyzstan, focusing on integrated water resources management and water supply and sanitation.

The National Policy Dialogue in Kyrgyzstan has been conducted under the European Union Water Initiative, with financial support from the European Commission, and the Governments of Germany (through GIZ), Denmark, Norway, Finland and Switzerland.

A Steering Committee was created to guide the dialogue process. Since its creation it has been chaired by Chyngyz Uzakbaev, Sanjar Mukanbetov and Abdybai Dzhailoobaev.

UNECE and OECD EAP Task Force helped to substantiate the dialogue process. The support was provided, and specific projects to inform the dialogue were managed by Rainer Enderlein, Bo Libert, Gulnara Roll, Iulia Trombitcaia and Peep Mardiste (UNECE); and by Alexandre Martoussevitch (OECD EAP Task Force Secretariat).

This overview was based on summary materials and recommendations of the National Policy Dialogue Steering Committee meetings. The project implemented within the dialogue supported by the Norwegian Ministry of Foreign Affairs was led by Harsha Ratnaweera. Technical reports by the working group experts, representatives of the ministries, agencies and NGOs were summarised by Kirill Valentini, Nina Vashneva, Anara Choitonbaeva and Leif Iversen. The work of national experts was co-ordinated by Erkin Orolbaev.

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MINISTRY FOR FOREIGN AFFAIRS OF FINLAND

TABLE OF CONTENTS

CDWUU	Community Drinking Water users union
EBRD	European Bank for Reconstruction and Development
EECCA	Eastern Europe, Caucasus and Central Asia
EU	European Union
FAO	United Nations Food and Agriculture Organization
GIZ	German Agency for International Co-operation
IWRM	integrated water resources management
KR	Kyrgyz Republic
Kyrgyzgidromet	Hydrometeorology Agency at the Ministry of Emergency Situations of the Kyrgyz Republic
Kyrgyzjilcommunsoyuz	Public Enterprise "Kyrgyz Association of Enterprises and Entities of Housing and Communal Economy"
NPD	National Policy Dialogue
NGO	non-governmental organisation
OECD	Organisation for Economic Co-operation and Development
RBM plan	river basin management plan
SPZ	sanitary protection zone (established along water courses and around water bodies)
UNICEF	United Nations Children's Fund
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
WHO	World Health Organization
WHO/Europe	WHO Regional Office for Europe
WSS	water supply and sanitation

The Water Code of the Kyrgyz Republic, adopted in 2005, formed a reliable legal framework for modernisation of National Water Policy in line with key principles of Integrated Water Resources Management (IWRM). The new water legislation contains all the required standards for expedited reforms of the water sector.

Primarily the following can be referred hereto: the articles of the Code related to introduction of paid water use, establishment of democratic management institutions such as National Water Council and Basin Councils, formation of independent associations of water users, introduction of hydrographic management principles, expansion of public participation in discussion and managing decision-making, etc.

However most progressive ideas were not properly implemented and their introduction was limited mainly to pilot projects. The formation of associations and federations of water users in the irrigation sector (Water Users Association and Federation of Water Users Association) can be considered as the most significant achievement in this field, as they maintain the majority of on-farm irrigation systems. The number of rural public associations of drinking water users increased throughout the country.

Additional initiation was needed to enable activation of pending reforms. In this respect, the National Policy Dialogue (NPD) became a sufficiently effective catalyst. It was started in Kyrgyzstan in 2008, with support from the European Union. The NPD as a key coordinating instrument is a part of the EU Water Initiative launched at the World Summit on sustainable development in Johannesburg. Currently it is implemented in 9 out of 12 countries of Eastern Europe, Caucasus and Central Asia.

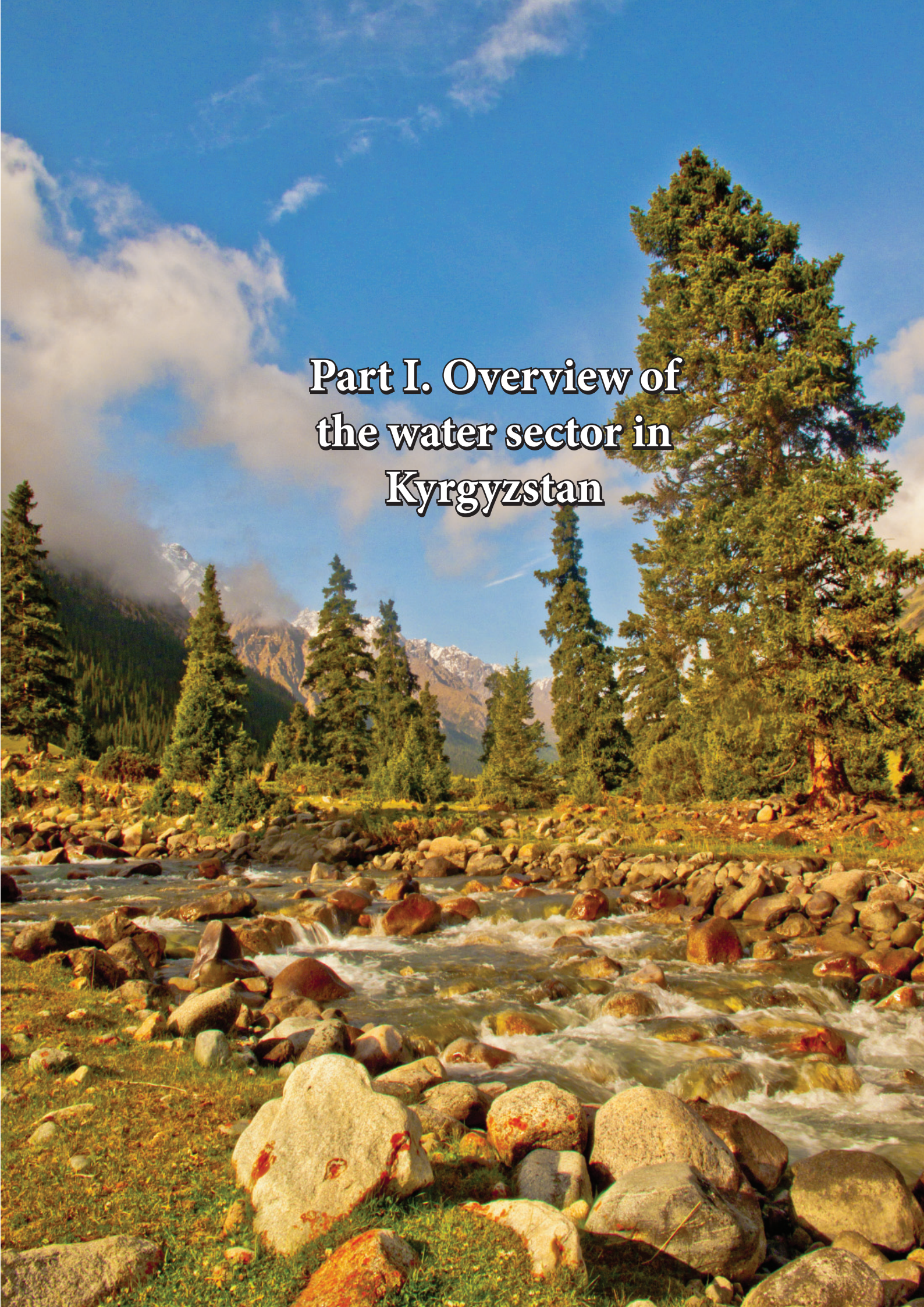
The United Nations Economic Commission for Europe (UNECE) and the Organisation for Economic Co-operation and Development (OECD) are strategic partners of the EU Water Initiative in Eastern Europe, Caucasus and Central Asia (EECCA). NPD's main goals to be achieved with support from UNECE are: to enhance the level of water resources management in accordance with principles of the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the EU Water Framework Directive; to reduce morbidity related to poor quality drinking water; and to strengthen water supply and sanitation systems in compliance with the Protocol on Water and Health. The other key goal of the Dialogue to be achieved under support of the OECD is to improve economic aspects and financing mechanisms for water management and water supply and sanitation (WSS).

The Dialogue is of high political significance since it is performed under the governance of chief executives of central environment, water resources and WSS management authorities.

This publication presents an overview of first results achieved under the National Policy Dialogue on water policy in Kyrgyzstan, focusing on integrated water resources management and water supply and sanitation.

Map of Kyrgyzstan

Source: UN Cartographic Section, 2009.



Part I. Overview of the water sector in Kyrgyzstan

1. The state and use of water resources

Kyrgyzstan is a country with a population of around 5.5 million and land area of 198 thousand km^2. Around 94% of its territory is located at a height of over 1000 m above sea level. Glaciers cover over 4,2% of its territory. Current fresh water reserves in mountain glaciers account for 650 km^3, and these have been decreasing steadily over recent decades. The reserves of water resources concentrated in Lake Issyk-Kul and other water reservoirs exceed 1745 km^3 or 71% of total reserves of national water resources. There are more than 3500 rivers belonging to the hydrographic basins of Syrdaria, Amudaria, Chu, Talas, Ili, Tarim rivers and Lake Issyk-Kul. Total annual river outflow (run-off) varies between 44-50 km^3 in different years (including return water).

Although the majority of surface waters originate in the country, not more than a quarter of river outflow is used annually for the needs of internal water consumption; the rest flows to the territories of neighbouring countries. The volume of return waters is studied poorly and is estimated at 1,3 km^3/year. The annual volume of wastewater is 0,71-1,02 km^3/year, however this figure is understated since it does not consider wastewater of decentralised drainage in rural areas. There are 106 fresh groundwater fields, 20 of them are used for household and industrial water supply. The projected fresh groundwater reserves account for over 13 km^3/year. A total of 44 groundwater fields with potential fresh water reserves of 11 km^3/year and operation reserves of 5.3 km^3/year have been properly studied. As a whole, except for certain areas of South Kyrgyzstan, the country has sufficient reserves of drinking water for the long-term future.

The maximum indicators for water intake (13,93 km^3/year) and water use (10,05 km^3/year) were reached in the Kyrgyz Republic in 1988. However during the period of 2005-2012 water intake volume went down to 7,5-10 km^3/year, mainly due to the reduction in industrial output. The use of groundwater went down from 1,0 to 0,77 km^3/year. The structure of domestic water consumption in the country has remained stable over recent decades - around 90% is used annually for the purposes of irrigated farming and around 6% for industrial purposes, less than 3% for household demands including the drinking water supply of urban and rural populations. Forestry, fishery, energy and other water consuming economy sectors and services jointly use less than 1% of total domestic water consumption.

Irrigated agriculture is a leading economic sector of Kyrgyzstan. Irrigated land area is 1,02 million ha. The irrigation infrastructure consists of 1030 irrigation and collection-drainage systems including 326 systems registered with public authorities, others are in the ownership of respective local administrations, federations and associations of water users. The irrigation system is rarely used as a source of household and drinking water supply.

Most natural waters in Kyrgyzstan are considered as pure in accordance with the valid qualification system. There is no tendency noted for substantial quality deterioration of water resources. Nevertheless, it has been noted that pollution standards are regularly exceeded in the Chu river basin and southern regions of the country, mainly in the vicinity of big settlements. Major sources of water pollution are agriculture, industrial entities, municipal sewerage systems and household waste. Water resources are exposed to potential danger caused by tailing dumps and mine dumps by the mining industry located on slope washes and river beds where radioactive, cyanides-containing substances and salts of heavy metals are disposed of.

A substantial factor affecting quality of water resources is unregulated economic activity in water protection zones and surface water areas as well as the unsatisfactory condition of sanitary protection zones (SPZs) of groundwater fields.

2. The state of water infrastructure

The majority of Kyrgyzstan's water infrastructure was built between 1950 and 1980. Parts of the irrigation infrastructure date from the first half of the 20th century. Despite efforts to maintain funding levels, after the collapse of the USSR, funding of the irrigation sector was reduced by 4-5 times (in real prices) in comparison with the level of 1980s – early 1990s. Many irrigation and collection and drainage systems are outdated and operate at zero balance-sheet value. Under conditions of critical investment deficit, state-owned enterprises and independent water users of the agricultural sector have to operate irrigation infrastructure at a minimum permissible technical level with the growing risk of manmade accidents.

As a result, infrastructure is largely in poor condition. This disrepair can be seen in terms of disintegration of canal lining, damage of metal and concrete water development facilities, degradation of communications (roads, communication and energy supply lines). Wear and tear of the machinery and vehicles used in the sector almost reached physical limit since they have not been upgraded for many years.

Due to irregular removal of sediments and sludge from irrigation and drainage networks, the capacity of unlined canals decreased by some 15-25%. The capacity of pumping stations and electric wells has also been reduced (20% on average), due to wear of equipment.

During the period 1991-2012 due to unregulated water use and damage to canal lining, water loss increased (up to 23-40% of water intake). At the same time, there was a reduction in the quantity and duration of watering of agricultural crops compared to established standards.

The existing drinking water supply and sanitation infrastructure in Kyrgyzstan is also in critical condition, and most of the 1074 centralised water supply systems of the country are functioning inefficiently. The physical wear of the network, equipment and water disinfection and treatment facilities in Bishkek is more than 50%, in some cities and regional centres - more than 70%. Currently, there is no centralised water supply system in nearly 30% of rural settlements, and the quality of drinking water is very poor in the existing water supply system. Low pressure and regular interruptions of water supply do not meet technical specifications or the requirements of water users. This, in turn, negatively affects the collection of WSS tariffs and often leads to conflicts.

The unsatisfactory condition of the water supply, wastewater and sanitation infrastructure in Kyrgyzstan is caused not only by the lack of investment in maintenance, repair and development of this sector, but also by the lack of experienced staff, poor production control, lack of stand-by equipment, spare parts and purpose-built vehicles for alternative delivery of drinking water.

In most settlements there are no specialised water supply maintenance services. However, compared to the water systems in state or municipal ownership the on-farm irrigation network was even more distressed by the early 2000s. Considerable progress was made through the formation of associations and federations of water users in rural areas, as well as strong financial support from the World Bank and the Asian Development Bank. However, in general, the current condition of the entire water infrastructure in Kyrgyzstan is still considered unsatisfactory according to most expert estimates.

3. Quality of drinking water and public health

In Kyrgyzstan, about 11% of water resources including 15% of surface water do not meet sanitation and hygiene requirements. Pollution of water resources increases every year, in rural areas in particular. The centralised wastewater treatment systems cover only 24% of the country's population. As a rule, there are no water treatment and disinfecting facilities in rural water supply systems. Specifically poor sanitation conditions and low quality of drinking water are major factors of high morbidity of the population in the South of the country.

Therefore during recent years, the majority of cases associated with the use of poor-quality water are registered in rural areas of Kyrgyzstan. The main efforts of public health, public administration and local self-government are directed to overcoming these tendencies. As a result, by 2010 health programmes covered 60% of villages with a population of more than 2.7 million people. By 2010, 1 312 rural health committees had been established to promote health issues among the village residents on a voluntary basis.

In Kyrgyzstan, among common water-related (direct or indirect) acute enteric infections, the most frequently recorded are typhoid fever, paratyphoid fever, bacillary dysentery and hepatitis A. The cases of typhoid fever recorded annually in the form of periodic local outbreaks mainly occurred in the Jalal-Abad region. In the whole country, the enteric infections incidence remains at a consistently high level; the morbidity rate sometimes reaches 332.4 (2001) to 490.2 (2010) per 100 0000 people. The worst indicators relate to a group of enteric infections caused by insufficient quality of drinking water in Batken (morbidity rate of 980.0) and the Jalal-Abad region (552.8). Rotavirus infections account for 26% of enteric diseases. In terms of age structure 81.6% falls to children under 14 including 40.6% of children under 1 year old. The breakdown of enteric infections is: enteritis of unspecified etiology 65.2%, infection of specified etiology 29.6%, and dysentery 5.2%. The low level of laboratory verifiability of etiological structure of acute intestinal infections (34.9%) is noted across the country.

About 40-45% of infectious diseases occur due to helminthiasis. Annually, between 35,000 and 45,000 people are infected with helminthiasis. According to British Department for International Development (DFID) project report "Hygiene and sanitation in rural areas", between 61% and 79% of children in some rural areas were infected with the four primary parasitic infections: enterobiasis, ascaridiasis, lambliasis and Hymenolepidiasis.

An impartial assessment of the situation is hampered due to insufficient records of child morbidity associated with water related cases caused by enterohaemorrhagic Escherichia coli. Over recent years, cases of cholera have not been registered in the country.

4. National water policy, regulatory and legal framework

The fundamentals of domestic and foreign water policy of Kyrgyzstan as a framework are stated in the Water Code of the Kyrgyz Republic. This ideology as a whole complies with the key principles of Integrated Water Resources Management worked out by the world community. However, the further specification of water policy in the form of the National water strategy as stipulated in the Water Code were not set out until recently. Within the last 15 years, drafts of the Water Strategy concept were developed but none of them was adopted officially. With reference to the activity of the National Water Council of the Kyrgyz Republic that resumed in 2013, it is expected that efforts on development and adoption of the final revision of the National Water Strategy will be completed successfully.

The current legal framework for regulating issues related to water and public health and use of Kyrgyzstan's "water fund"* involves hundreds of documents including regulatory legal acts, decrees of the President of the Kyrgyz Republic, resolutions and ordinances of the Government and Parliament of the Kyrgyz Republic, technical standards and regulations, decrees of the ministries and departments, methods, instructions and other official documents.

The key water-related legal acts of Kyrgyzstan include the following:

- water laws – the Water Code (2005), the law "On Drinking Water" (1999) and law "On Water" (1994);
- environmental laws – the law "On environment" (1999) and the law "General technical regulation on provision of environmental safety" (2009г.);

* "Water fund" – in the Water Code of Kyrgyzstan (Article 2), it is defined as *"the collection of water bodies, water resources and water economy constructions and the lands of the water fund"*

- the laws regulating complex sanitary-epidemiologic requirements - the law "On health protection of citizens of the Kyrgyz Republic" (2005), law "On public health" (2009), the law "On protection of consumers rights" (1997);
- the laws regulating procedures related to quality of water resources as well as certification of entities performing this activity – the law "On environmental expertise" (1999) and the law "On the basis of technical regulation in the Kyrgyz Republic" (2004);
- the laws regulating the quality of drinking water – the law "Technical regulations "On safe drinking water" (2012);
- the laws on structure of the Government of the Kyrgyz Republic, local administration and local self-governance, land, subsoil, energy, emergencies, public associations of water users as well as other laws related directly or indirectly to regulation of use and protection of water resources and public health.

A significant part of current legislation is of the framework type and bylaws are required to clarify mechanisms for realisation of legislative regulations. However, the standards and technical regulations applicable in Kyrgyzstan are based primarily on a system of standards developed in the USSR over 1960 -1990, or modern standards of the Russian Federation and international standards. The outdated standards used frequently do not take into account the specifics of conditions of water resources and water use in the Kyrgyz Republic, the occurrence of new technologies and monitoring facilities, or new approaches to the regulation of water quality developed by, for example, the countries of the European Union.

Many requirements of national standards and regulations are not adhered to due to lack of public funding of relevant activities, as well as the poor condition of technical and human resource capacity. However, over recent years some measures have been taken in Kyrgyzstan to improve the regulatory framework in these areas and to introduce new technologies. For example, the Department of Water Management and Melioration under the Ministry of Agriculture and Melioration of the Kyrgyz Republic endowed with authorities of state water administration prepared a long list of regulatory legal acts to be developed, revised or additionally adapted to the standards of the Water Code.

To date, a number of documents from the list have been developed and adopted. Some of the standard-setting activities are performed by other agencies concerned. In 2012 based on the initiative of the Ministry of Health of the Kyrgyz Republic, the new Technical Regulation was introduced to govern principles, procedures and organisational measures ensuring safe drinking water. It should be noted that the content of this regulation is harmonised with the EC Directive «On the quality of water intended for human consumption» (98/83/EC) and the World Health Organization Guidelines for drinking water quality. In general, poor activity and lack of co-ordinated actions of the ministries and departments are typical issues for Kyrgyzstan with regard to modernisation of the water-related legal framework.

5. Management structure

Following adoption of the Water Code in 2005, the reforms of water sector management structure have not been performing actively in the context of IWRM. Therefore, the current management scheme in Kyrgyzstan is still characterised by poor development of horizontal links and lack of co-ordination of interaction between key ministries and departments. The executive vertical structure normally includes national, regional, basin, district and local (municipal and system) management levels. For example, the management structure of the irrigation sector includes seven water basins authorities (established on administrative-territorial principles), forty district water authorities, three irrigation reservoir administrations of national significance, as well as several administrations for regional canals and reservoirs of local relevance.

Other departments use simpler management schemes but on the basis of the principle stated. For example, the key functions of the Ministry of Health related to monitoring drinking water quality are performed by the Department of Disease Prevention and Expertise, which governs 50 regional centres of state sanitary and epidemiological surveillance and a laboratory network to perform microbiological and sanitary-chemical research.

At present, out of all most important water management functions provided by the current legislation, the central and regional public authorities perform only the functions of water infrastructure management and providing water to consumers. As a result:

- The combination of regulatory, supervisory and production (economic and administrative) functions is maintained in a number of executive agencies involved in water resources management;
- State mechanisms for overseeing the use of water resources have been eliminated unreasonably;
- The management and monitoring functions for surface and ground water resources are performed by separate executive agencies following administrative-territorial and not hydrological principles, contrary to the principles of the IWRM ecosystem approach;
- Two basin councils in Talas and Kugart basins were formally established but were not actually functioning, and the first meeting of Chu council was held in February 2013. Also there was no success in forming other structures provided for by the Water Code of the Kyrgyz Republic - State Water Administration and Water Inspectorate, the Commission on Irrigation and Drainage and Dam Safety;
- In February 2013 after a long-term pause the National Water Council had resumed its activity;
- Until recently, there was no central co-ordinating authority responsible for the area of drinking water supply and wastewater disposal (sanitation);
- There is no long-term or medium-term planning of water management and protection based on basin water plans except for the pilot projects implemented in the framework of external donor support but these have not been developed further;
- The administration system for water relations, water infrastructure management and water protection areas often prefer reactive policy aiming at performance of instructions from higher authorities, to control accidents and other force majeure events. However, the preventive measures, as well as perspective development programmes, are neglected.

The split of functions and authorities in the field of water relations, water resources management and water economy between government agencies is governed by the laws on the Government structure of the Kyrgyz Republic, the Water Code and the adopted Regulations on these bodies. The mandate of the Government of the Kyrgyz Republic in the field of water relations is to co-ordinate the interaction of the ministries and administrative departments implemented by the **Administration (Office) of the Prime Minister** as well as the development and implementation of state water programmes and a number of other functions under the Water Code of the Kyrgyz Republic.

The National Water Council plays the role of national supervising and co-ordinating body whose aim is the preparation of strategic documents related to the water sector and submission to the Government of the Kyrgyz Republic.

The authority of **Jogorku Kenesh of the Kyrgyz Republic (Parliament of Kyrgyzstan)** includes development and improvement of water, land, environment and other laws, ratification of international treaties in the field of water relations, annual approval of subsidies for irrigation and drainage (within the public budget), among other functions.

At first view, the most significant role in this hierarchy is assigned to the **Department of Water Management and Melioration of the Ministry of Agriculture and Melioration of the Kyrgyz**

Republic, which is endowed with the key functions and powers referred to in the Water Code of the Kyrgyz Republic as responsibilities of the State Water Administration, including: development of a national water policy, organisation of rational distribution and integrated water resources use, state control and co-ordination of activities ensuring water legislation, administration, operation and maintenance of irrigation and drainage infrastructure, monitoring and public accounting for water use, organisation of development of legal and regulatory acts, tariffs for paid water use and other regulatory documents in the field of water relations. At present, because of limited capacity, the Department of Water Management and Melioration is not able to provide all functions and powers assigned.

The following bodies are involved in water fund management:

- **Ministry of Health of the Kyrgyz Republic** (the state control and regulation of water quality in the sources and pipelines used for drinking and recreation needs of the population);
- **State Agency for Environment and Forestry at the Government of the Kyrgyz Republic** (protection of "water fund" and supervision of compliance with regulations on wastewater disposal);
- **State Agency for Geology and Mineral Resources at the Government of the Kyrgyz Republic** (management, regulation of groundwater use and protection);
- **National Institute of Standards and Metrology of the Kyrgyz Republic** (metrology provision of water resources monitoring and product certification);
- **Ministry of Emergency Situations of the Kyrgyz Republic** (prevention and emergency recovery of water objects, protection of the population, civil and industrial facilities from water damage effect);
- **Hydrometeorology Agency at the Ministry of Emergency Situations of the Kyrgyz Republic** (monitoring and forecasting of regime of surface water bodies);
- **National Statistical Committee of the Kyrgyz Republic** (public accounting and supervision of statistical reporting on the condition and use of water resources, and population morbidity);
- **Ministry of Foreign Affairs of the Kyrgyz Republic** (regulation of intergovernmental water relations and supervision of compliance with international agreements in this field);
- **Ministry of Justice of the Kyrgyz Republic** (registration and state control of compliance with regulatory and legal acts relevant to the field of water resources management, water economy, health and sanitation);
- **The bodies of local state administration and local self-government** (protection of the rights of water users, supervision of the execution of regional regulatory acts governing conditions of maintenance and operation of sanitary protection zones of water supply sources, other water protection areas and other water fund lands, water resources use, sanitary standards, arrangement of activities to prevent emergencies and rectification of the consequences).

The following bodies perform the functions of administration, operation and maintenance of centralised water supply, sewage systems and treatment plants:

- in Bishkek - Municipal Utility «Bishkekvodokanal»;
- in Osh - municipal utility «Oshgorvodokanal»;
- in other cities and regional centres of the country – public water utility «Kyrgyzjilcommunsoyuz»;
- management functions for rural water supply and sanitation in 2012 were assigned to the Department of Water Supply and Sanitation at the State Agency for Construction and Regional Development under the Government of the Kyrgyz Republic (previously, the Department of Rural Water Supply under the Ministry of Agriculture and Melioration of the KR);
- management of operation and maintenance of water systems in other water-consuming

sectors of the economy, such as hydropower, mining production, industry and services, is carried out by specialised departments or entities who are the owners of these systems. Water supply to industrial and other entities which do not have their own water systems is based on contracts with local utilities of water supply and sanitation;
- management of operation and maintenance of centralised rural water supply systems is carried out by specialised organisations and rural community drinking water users unions (CDWUUs).

The following key institutional issues hinder development of the water sector in Kyrgyzstan:
- limited capacity for performance of managing decisions due to lack of funds, human resources and material and technical facilities;
- insufficient co-ordination of activities of implementing agencies and water use subjects due to limited application of effective mechanisms of interaction;
- shortage of staff and insufficient qualifications of employees at all levels of water the governance system;
- use of outdated technologies and management procedures, due to the lack of sufficient motivation to upgrade them;
- imperfect departmental information systems impeding the adoption of effective management decisions on the basis of reasonable and comprehensive data;
- lack of an integrated approach to the planning and implementation of management decisions on the basis of national water strategy, basin water plans, schemes of integrated water resources management and other strategic documents;
- limited participation of NGOs, water users and local communities, research organisations in the process of planning, discussing and making management decisions affecting their interests;
- too frequent rotation of senior staff and reorganisation of government having a negative impact on their work.

However, it should be noted as a positive trend that in Kyrgyzstan in the last decade, through support of the government and external donors, public organisations are developing rapidly and actively performing management of operations and maintenance of irrigation infrastructure and rural water supply systems. For example, by 2012, 477 Water Users Associations and 28 Federations of Water Users Associations provided services to about 73% of the irrigated land in the country. In 2010 health improvement programmes covered 1 254 villages across the country, with a population of more than 2.7 million people, representing more than 60% of villages in Kyrgyzstan.

1312 Rural Health Committees were established to promote health issues among rural populations on a voluntary basis. In the sector of water supply, drainage, sanitation and environment in Kyrgyzstan the following NGOs are functioning actively: Central Asian Alliance for Water and Sanitation and the Kyrgyz Alliance for Water and Sanitation. The environmental group «BIOM» and other NGOs of the environmental profile contribute significantly to the promotion of sustainable use of ecosystem services and public awareness on urgent environmental issues, water supply, drainage and sanitation.

6. Funding of water management and protection

To date the funding of maintenance and development of water infrastructure is performed using the following economic instruments:
- payment for irrigation water supply service, and other irrigation services;
- payment for water supply and sanitation sewerage services provided to households and industrial users;
- subsidies from the state budget;
- compensations for damages;
- external loans and donor support.

The regime for paid water use in Kyrgyzstan's irrigation sector began operating in 1996 but gained final legal effect in 1999 under the law «On setting of tariffs for drinking water supply services» (1999). Since 2010, the tariff rates for irrigation water supply are at the level of no more than 0.03 KGS/m^3 (some 0.05 Euro cent), for water users in the industry and energy sectors - at 0.10 KGS/m^3, and for the entities of science, culture, education and health at 0.01 KGS/m^3.

Rates were kept low for an extended period with a reference to the inability of the rural population to pay more. These low rates have contributed to the widespread degradation of the irrigation network. The actual amount of fees (user charge revenues) collected annually is 70-125 million KGS. As a result, the Government of the Republic has to allocate annual irrigation subsidies from the public budget and to apply external support measures. Since 2000 the public budget covered, on average, about a quarter of the cost of maintenance of the inter-farm irrigation network. Donor support from the European Union compensated for about 20% of annual expenditures. The loans provided by the World Bank and the Asian Development Bank for the rehabilitation of irrigation canals and facilities filled a significant gap of the irrigation budget: about 40%. This substantially limits financing of other socially important projects.

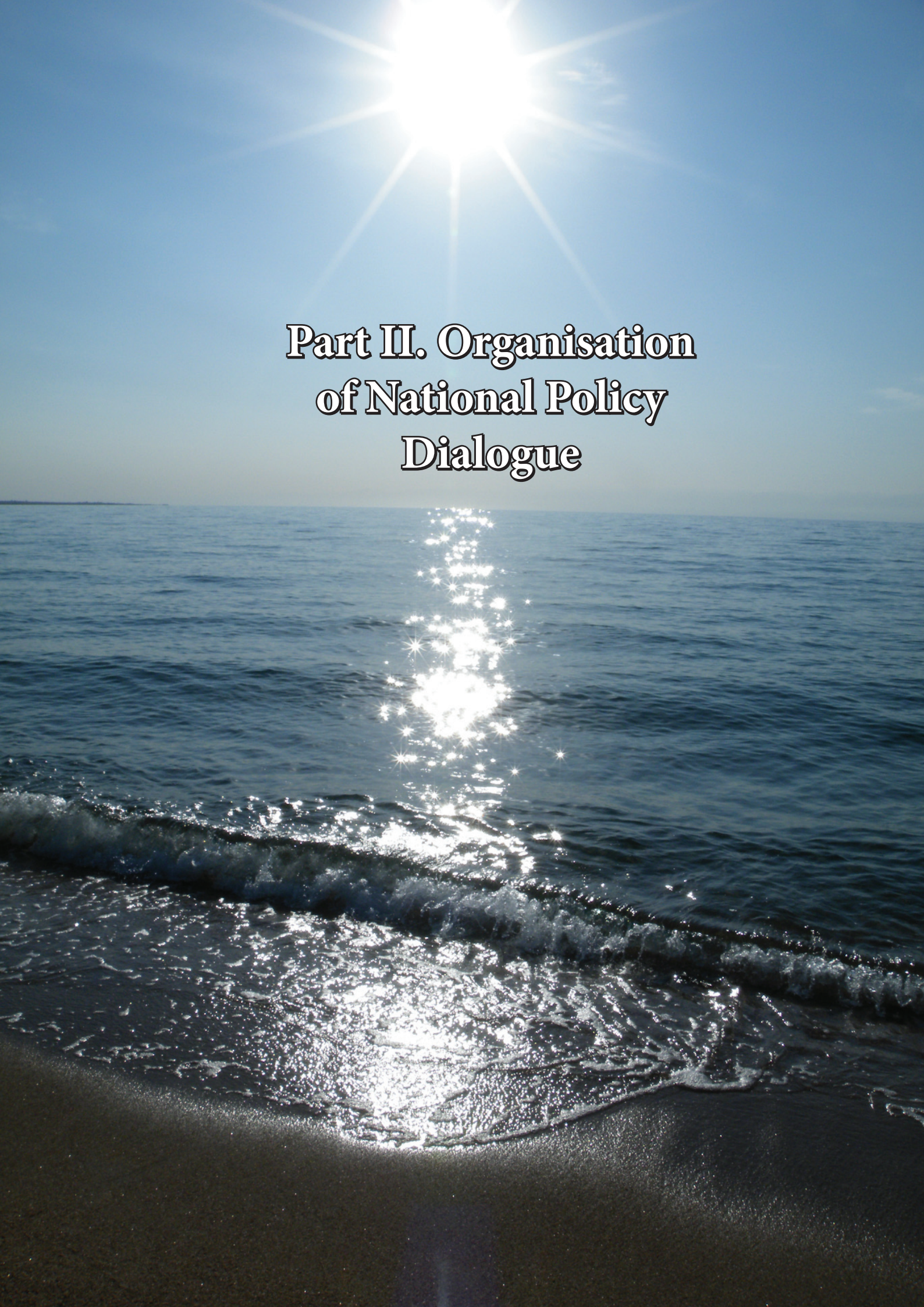
The acute investment deficit is typical for the sector of domestic water supply and sanitation. According to OECD estimates, in order to ensure overall access to improved systems of water supply, sewerage and sanitation, at least 20 billion KGS will be required while the annual capital expenditure on water supply and sanitation does not exceed 3.5 million KGS (0.23% of the national budget expenditure). The sales revenues of water utilities often covers only 80-85% of the costs incurred (for example, water utilities of Balykchi and Karakol in 2010).

Therefore, progress in the field of improving access to drinking water is achieved primarily through the implementation of projects supported externally by the Asian Development Bank, the World Bank, the European Bank for Reconstruction and Development, German Agency for Development and Co-operation (GIZ), Swiss Agency for Development and Co-operation (SDC) and other donors, whose total investment over the past decade was over 180 million US dollars. Based on calculations performed in the framework of National Policy Dialogue on financing water supply and sanitation in Kyrgyzstan, it was found that even extreme measures such as increasing fees for water supply and sanitation up to 2.5% of average household income and increasing budget funding of the sector up to 2% of the expenditure of the public budget would not allow for fully achieving the Millennium Development Goals by 2015, without substantial external support.

The legal framework for financing water protection measures is specified in Article 15 of the Law «On Environmental Protection»; it provides that natural resources (including water) are used on paid basis: this includes fees for the use of natural resources, and the charges for pollution and other negative environmental impacts. Payments for environment pollution are regulated by the law of the Kyrgyz Republic «On the rates of environmental pollution charges» and «Instructions and guidelines on the definition of environmental pollution charges» adopted by the Government of the Kyrgyz Republic. The rate of environmental pollution charges is set at 1.2 KGS for an equated ton of pollutants and is charged from the users of natural resources performing the following types of impact on the environment:

- air pollutant emissions from stationary and mobile sources;
- discharges of pollutants to surface water bodies and groundwater fields;
- waste disposal.

Payment of pollution charges does not exempt the users from the obligation to implement environmental protection measures, as well as from penalties for environmental rules violations and compensation for damage caused by the environment pollution, to the economy, health and property of citizens. However, the analysis of statistical data on the results of collecting such charges since 2006 shows that the share of receipts from water-related pollution charges is not more than 10% of the total amount of pollution charges; and in monetary terms it does not exceed 3 million KGS per year. One should note also that most of these funds are actually used to cover administration costs of environmental protection bodies rather than for funding water protective measures. In fact, the lack of investments typical of all water-consuming sectors of the national economy is a key factor hindering the development of the water sector in Kyrgyzstan.



Part II. Organisation of National Policy Dialogue

1. Establishment of a Steering Committee

In June 2007, in a letter* to the European Commission, Kyrgyzstan expressed its intention to start as part of the EU Water Initiative the National Policy Dialogue on integrated water resources management and apply it to support this process. The main objective of this Dialogue is to improve the use of water resources and to provide a contribution to the achievement of the respective Millennium Development Goals.

The organisational procedures provided by the «Plan of implementation of priority policies» included formation of the Steering Committee as a key mechanism in charge for governing and co-ordinating the NPD process. The Steering Committee was established in 2008 in accordance with the Memorandum of Understanding between the Ministry for Agriculture, Water Resources and Processing Industry of the Kyrgyz Republic and UNECE. The Department of Water Resources and Melioration under the Ministry of Agriculture and Melioration of the Kyrgyz Republic is a public authority in charge of the National Policy Dialogue development process.

During the same period, Kyrgyzstan launched the National Policy Dialogue on Financing urban and rural water supply and sanitation. This dialogue was held under the guidance of the Steering Committee created by Order of the Prime Minister of the Kyrgyz Republic dated 22 July, 2008, № 377-p. Its main purpose was to strengthen the capacity of the Government of the Kyrgyz Republic in terms of planning and implementation of priority investment in water and sanitation infrastructure. In 2008-2009 the meetings in the framework of the dialogue were held under the chairmanship of the Ministry of Economic Development and Trade.

Following political changes in 2010 and subsequent changes in the structure of the Government of the Kyrgyz Republic, it was decided to merge the two processes within a unified National Policy Dialogue on water policy. During the period of 2008-2013 nine meetings of the Steering Committee were held, where the current issues on the condition and development of the national water sector in Kyrgyzstan were reviewed. The top-priorities for NPD activities for the coming years include supporting and assisting measures related to the following:

- improvement of national water policy, including its financial and economic aspects;
- institutional reform of the water sector provided by the Water Code of the Kyrgyz Republic;
- adjusting water sector standards to the actual situation in Kyrgyzstan;
- activities on protection of water resources;
- activities on expansion of access to quality water resources and water supply and sanitation services;
- activities on prevention of spread of water-related diseases.

2. Identifying and involving stakeholders

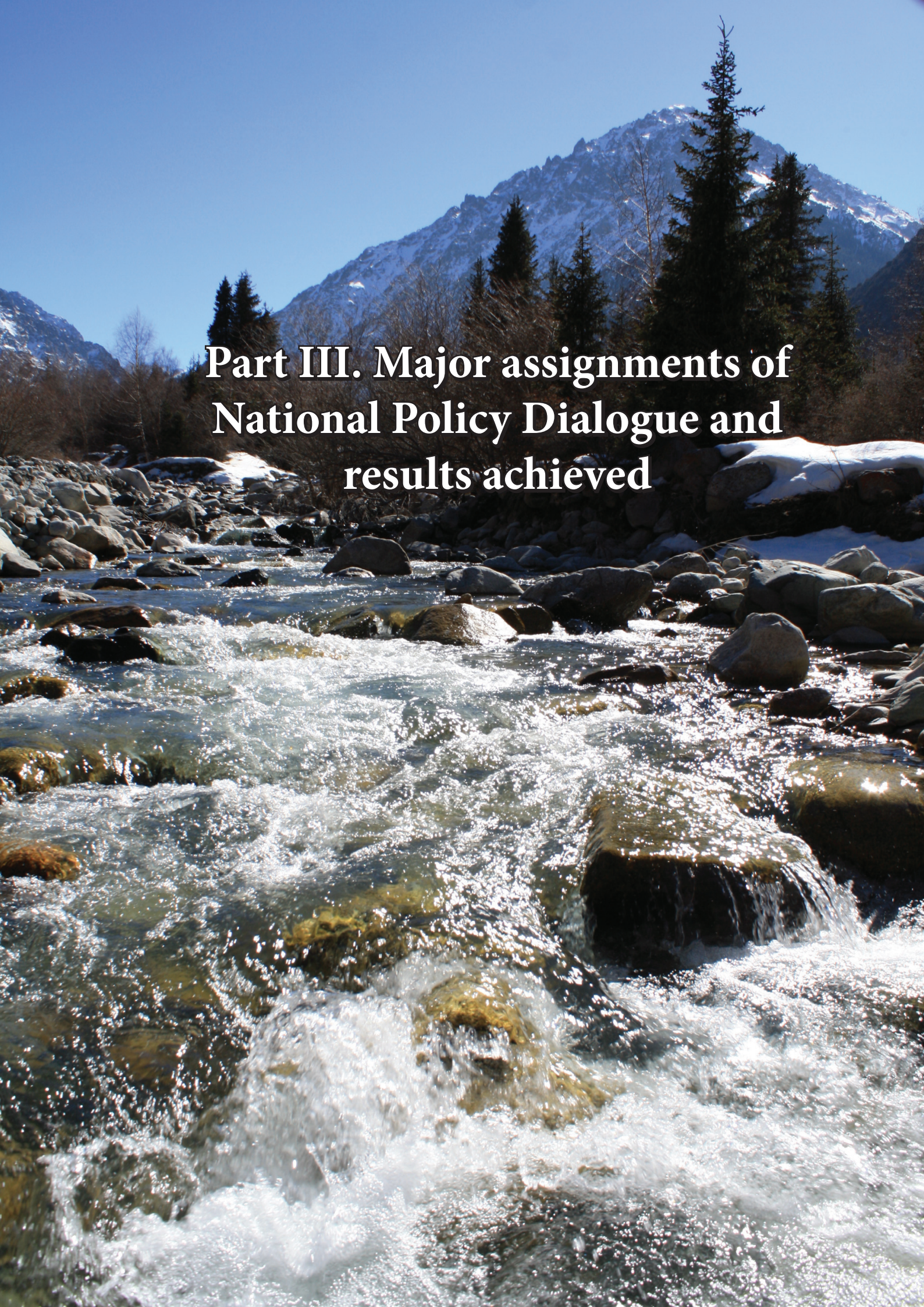
The formation of the Steering Committee of the National Policy Dialogue ensured a solid platform for discussion of challenging water policy issues in the Kyrgyz Republic with all stakeholders involved. It also allowed the public to participate in discussions and decision-making. The Steering Committee consists of the representatives of key ministries, administrative departments and public organisations involved in water resources management and protection, water management, and health care. The following designated representatives participate in the meetings of the Steering Committee on a regular basis:

* Letter from the Minister of Agriculture, Water Resources and Processing industry to Mr. Adrian van der Meer, Representative of the EC in Kazakhstan, Kyrgyzstan, Tajikistan.

- Department of Water Management and Melioration under the Ministry of Agriculture and Melioration of the Kyrgyz Republic;
- Department of Disease Prevention and Expertise under the Ministry of Health of the Kyrgyz Republic;
- State Agency for Geology and Mineral Resources of the Government of the Kyrgyz Republic;
- State Agency for Environment and Forestry of the Government of the Kyrgyz Republic;
- Agencies of Hydrometeorology under the Ministry of Emergency Situations of the Kyrgyz Republic;
- Department of water supply and sanitation under the State Agency for Construction and Regional Development of the Government of Kyrgyzstan;
- Ministry of Foreign Affairs of the Kyrgyz Republic;
- Public and municipal utilities operating centralised water supply and sewerage systems, namely Municipal water supply utility "Bishkekvodokanal" and Public Enterprise "Kyrgyz Association of Enterprises and Entities of Housing and Communal Economy";
- Water management and melioration (basin and local) authorities under the Ministry of Agriculture and Melioration of the Kyrgyz Republic.

In addition to these key participants, representatives of other ministries and departments (e.g. the Ministry of Finance and the National Statistical Committee of the Kyrgyz Republic), academic institutions and international organisations were involved, depending on the agenda of the meetings of the Steering Committee.

An important condition for the effective functioning of the Steering Committee was participation of representatives of water-related non-governmental organisations concerned.



Part III. Major assignments of National Policy Dialogue and results achieved

In accordance with priorities established by the Steering Committee in 2008-2009 the following issues were taken into account in the framework of the National Policy Dialogue:

- organisation of water management and protection planning activities based on the hydrographic (basin) principle of IWRM;
- setting of targets in the context of the Protocol on Water and Health;
- enhancement of economic instruments, financial planning and funding arrangements in the water sector in Kyrgyzstan;
- co-ordination of projects of international and donor organisations in the water sector of Kyrgyzstan.

1. Organisation of water basin planning for water management and protection

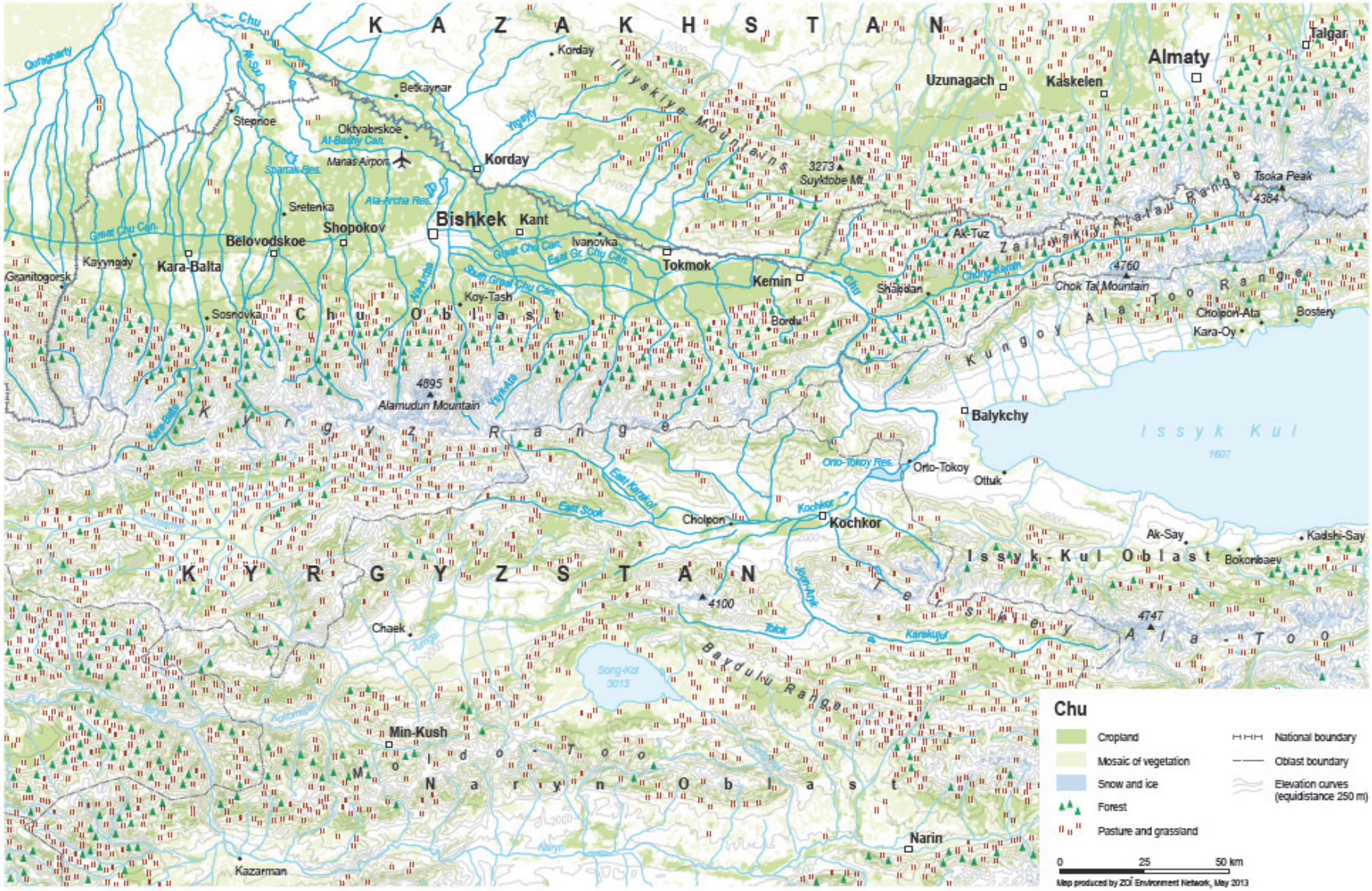
In Kyrgyzstan, the preparation of pilot river basin management (RBM) plans started under the World Bank-funded «Water Management Improvement Project». By 2011, two such plans were developed for Talas and Kugart river basins, but further development was stopped due to termination of funding, lack of an adequate legal framework amongst other reasons. In this regard, it was decided to activate works on further improvement of the system of integrated planning in the Chu river basin, the most complicated region in Kyrgyzstan in terms hydrography. To implement this solution the working group was formed consisting of international consultants and local experts. This group focused on preparation of the Concept for Chu Basin Management Plan and a package of legal documents for creation of Chu Basin Council. Both of these tasks were successfully implemented within the period of 2012-2013.

According to the draft Concept, the main objective of the Chu Basin Management Plan should be medium-term planning of activities related to water resources management and protection, maintenance and development of water infrastructure, as well as the prevention of emergency situations in the Chu river basin. The concept outlines the following key objectives of the Chu Basin Management Plan:

- To ensure sustainability of water ecosystems in the Chu basin, by regulating manmade load and implementing water protection measures;
- To improve water quality in the natural water bodies and water supply systems;
- To provide the population and all water-consuming sectors of the economy with guaranteed access to quality water, while taking into account water use priorities;
- To ensure standard technical conditions and development of water management facilities and communications infrastructure;
- To improve management, operation and maintenance of water infrastructure facilities;
- To reduce the incidence of diseases associated with poor quality water consumption;
- To prevent and mitigate adverse impacts of water resources on subsistence conditions of the population, and civil, industrial and natural objects.

Finally the draft Concept of the Chu Basin Management Plan fully considers the current situation in the country and the positive aspects of past experience:

- Schemes of integrated water resources use and protection (IWRUP schemes) operated during the Soviet period and now used in the Russian Federation;
- IWRM/RBM plans in the countries of Europe and Central Asia;
- Recommendations for long-term strategic planning developed by the Technical Committee for the Global Water Partnership;
- RBM plans in countries of high economic development levels;
- Pilot RBM plans developed in Kyrgyzstan.



Chu Basin map

The Concept note included a detailed action plan, a list of the most probable risks when preparing the Chu Basin Management Plan, the list of targets for its implementation and a recommended list of implementers. At the 9th meeting of the Steering Committee in March 2013 the draft Concept note was approved and recommended as a basis for further work related to the Chu Basin Management Plan preparation. It was decided at the same meeting to focus efforts of the working group of experts on an inventory and summary of available databases featuring the conditions and use of the water fund and water infrastructure in the Chu river basin, as well as on detection of key issues to be addressed within the Chu Basin Management Plan framework.

In parallel with preparatory works related to the development of the Concept of Chu Basin Management Plan, a number of organisational measures on the establishment and support of the Basin Council for Chu River were performed in the framework of the Dialogue. For this purpose, a package of documents was developed. Based on these documents, provisional regulation on Basin Council for Chu River, list of staff and the assignments related to organisation of the Council's meetings were approved by special ordinance No 21 of the Director General of the Department of Water Management and Melioration, dated 11.02. 2013. As a result of this ordinance, in late February 2013 the 1st meeting of the Basin Council was held where the roles, rights and responsibilities of the members of the Council, the rules and procedures, priority objectives on Chu Basin Management Plan preparation were discussed. These initial results were also reviewed and approved at the 9th meeting of the NPD Steering Committee.

2. Target setting in the context of the Protocol on water and health

Kyrgyzstan has significant reserves of fresh water resources, being sufficient to meet the drinking water needs of the population in the long term. However, over recent years there has been a high morbidity rate associated with the use of unsafe drinking water, especially in rural areas. The main reasons for this negative trend are the poor conditions of the drinking water supply and treatment facility infrastructure, violation of the regulatory standards for maintenance of sanitary protection zones of water sources, use of untreated water from surface water courses and reservoirs, as well as non-compliance with the rules for personal hygiene. To address this critical issue, measures had to be implemented that will protect water resources, improve access to quality water resources and water supply and sanitation, and prevent the spread of water-related diseases.

The activities on target setting have been supported by UNECE, the European Union, the Government of Finland and the project «Target setting in the context of the Protocol on Water and Health in the Kyrgyz Republic», funded by the Ministry of Foreign Affairs of Norway. These joint efforts under the NPD were conducted during the period 2011-2013.

The project was implemented by the working group of experts with representatives of the ministries, administrative agencies, NGOs and the private sector. Official statistical data were provided by the National Statistical Committee of the Kyrgyz Republic. Information from departmental databases of the Department of Water Management and Melioration, the Ministry of Emergency Situations of the Kyrgyz Republic, the Ministry of Health of the Kyrgyz Republic, the State Agency for the Environment and Forestry, the State Agency for Geology and Mineral Resources, materials and reports from International projects implemented in Kyrgyzstan, reporting indicators of public and municipal water utilities and NGOs were made available.

The project activity was based on the «Guidelines on the setting of targets, evaluation of progress and reporting» developed by UNECE and the Regional Office for Europe of the World

Health Organization (WHO). The main elements of the methodology include the following:

- identification of key stakeholders and establishment of co-ordination mechanisms;
- baseline analysis of the background situation including an assessment of the current regulatory legal framework, water infrastructure, environment and public health;
- identification of issues and setting of priorities;
- justification of the targets, programmes of measures and indicators;
- provision of consultations to government agencies and NGOs on proposed targets and measures to be achieved;
- coordination of targets and their publication to inform all stakeholders;
- coordination of a programme of measures and indicators to be achieved.

Baseline analysis was the first step in target setting, and it included the assessment of the following key indicators:

- condition and use of water resources;
- legal and regulatory framework;
- management structure;
- condition of water supply, drainage and sanitation;
- monitoring of the sources, water supply, drainage and sanitation systems;
- external donor and credit support in terms of development of water supply, drainage and sanitation.

Taking into account the results of the preliminary analysis of the situation at the 7th meeting of the Steering Committee in April 2012, the decision was made to prioritise nine areas out of all the areas specified in the Protocol (see Table 1).

Data obtained within the process of situation analysis served as a background to substantiate targeted values for respective indicators for nine key areas and recommended implementation periods presented in the Annex 1.

The «Guidelines on the setting of targets, evaluation of progress and reporting» provide for consultation with all stakeholders, the publication of results of target setting and their alignment with key government bodies. In pursuance of these recommendations, the interim performance results, including a preliminary assessment of targets and possible deadlines for their implementation, have been discussed at extended meetings of the working group with representatives of civil society and NGOs participating.

In particular, in August 2012 further consultations were held with representatives of rural community drinking water users unions (CDWUUs), allowing for consideration of public opinion regarding composition and content of the targets proposed by the working group of experts. Interim results on drafting work were reported at the 7th and 8th meetings of the National Policy Dialogue Steering Committee. In November 2012, the draft report on «Target setting in the context of the Protocol on Water and Health in the Kyrgyz Republic» was sent for comments and suggestions to the ministries and departments concerned. As a result, the official opinions have been obtained containing positive evaluation of project activities and specific proposals on revision of the document.

All constructive suggestions were subsequently considered by experts of the working group during revision of draft documents. The final results of the work in this direction were considered and approved at the Ninth Meeting of the National Policy Dialogue Steering Committee in March 2013. The final minutes of the meeting contain decisions on the direction of the targets developed for approval, as per procedures established in the Kyrgyz Republic.

Table 1

Targeted areas of Protocol on Water and Health*

Targeted area	*Key objectives of targeted areas*
Area I	**Quality of drinking water supply**
Area II	**Reduction of the scale of outbreaks and incidents of water-related diseases**
Area III	**Access to drinking water**
Area IV	**Access to sanitation**
Area V	Level of performance of collective systems and other systems for water supply
Area VI	Level of performance of collective systems and other systems for water sanitation
Area VII	Application of recognised good practices to the management of water supply
Area VIII	Application of recognised good practices to the management of water sanitation
Area IX	Occurrence of discharges of untreated wastewater
Area X	Occurrence of discharges of untreated storm water overflows from wastewater collection systems to waters within the scope of the Protocol
Area XI	**Quality of discharges of wastewater from wastewater treatment installations to waters within the scope of the Protocol**
Area XII	Disposal of reuse of sewage sludge from collective systems of sanitation or other sanitation installations
Area XIII	Quality of wastewater used for irrigation purposes
Area XIV	**Quality of waters, which are used as sources for drinking water**
Area XV	Quality of waters used for bathing
Area XVI	Quality of waters used for aquaculture or for the production or harvesting of shellfish
Area XVII	Application of recognised good practice to the management of enclosed waters generally available for bathing
Area XVIII	**Identification and remediation of particularly contaminated sites**
Area XIX	**Effectiveness of systems for the management, development, protection and use of water resources**
Area XX	**Frequency of publication of information on the quality of drinking water supplied and of other waters relevant to the Protocol**

* Priority areas for Kyrgyzstan are in bold.

3. Enhancement of water sector financing and economic instruments for water management

Implementation of this assignment of the National Policy Dialogue was supported by the Organisation for Economic Co-operation and Development and was focused on financial and economic aspects of water policy in Kyrgyzstan.

3.1. Enhancement of urban and rural water supply and sanitation in the Kyrgyz Republic

Recommendations to improve financing of urban and rural water supply and sanitation services in the Kyrgyz Republic have been developed by the OECD EAP Task Force with the assistance of an international consultancy - WS Atkins International Ltd, and have been discussed at several meetings of the NPD Steering Committee*.

In the framework of this assignment an agreement on major challenges faced by the water supply and sanitation in the Kyrgyz Republic was achieved and attention drawn to the following features of these challenges: technical, socio-economic, environmental, geographical, financial and institutional. The realism of key assumptions of the baseline scenario («business as usual» or «no new policy in the sector») was unanimously recognised.

Major policy measures of the baseline scenario were also agreed aimed at reducing the existing financing gap in the amount of $ 1.5 billion KGS. The measures were as follows:

- Gradual increase of tariff rates for the resident consumers (households) from the low present levels where WSS bill amounted to less than 0.5% of household income, up to a maximum affordable level (2.5% of household income) in 20 years.
- Increasing WSS tariff collection rate from low current levels (<25% in rural areas and <50% in urban areas) up to 60% in rural areas and 85% in urban areas in 5 years.
- Increasing public budget expenditure for water supply and sanitation from the current level of about 0.3% to 2% of the national expenditure budget within 20 years (the level already achieved in many EECCA countries).

Following a discussion of three alternative development scenarios, the Steering Committee unanimously decided that a scenario assuming achievement of the Millennium Development Goals for water supply and sanitation by the year of 2022 («preferred scenario») ensures the best balance between necessary improvements in water supply and sanitation services in the Kyrgyz Republic and the realism of demand for additional external funding (the latter should reach 1 billion KGS or 22 million EUR) and overall financing for WSS.

3.2. Improving the use of economic instruments for water resources management in the Kyrgyz Republic: the case of Lake Issyk-Kul basin

This activity was carried out under the support of the Organisation for Economic Co-operation and Development in accordance with the decision of the 6th Meeting of the Steering Committee. The work was performed with the assistance of consultants from Atkins Ltd, local experts and the support of other partners involved in the National Policy Dialogue in the Kyrgyz Republic funded by the EU and the governments of Switzerland and Norway.**

* The detailed report is presented in the publication OECD (2011) "National Policy Dialogue on Financing Strategy for Urban and Rural Water Supply and Sanitation in the Kyrgyz Republic".

** The detailed report is presented in OECD (2013) "«Improving the use of economic instruments for water resources management in the Kyrgyz Republic: the case of Lake Issyk-Kul basin».

This activity provided an assessment of existing economic instruments and suggestions on how reforming there of could enhance water resources management and mobilise sufficient financial resources for priority activities and measures in the water sector.

The evaluation performed has shown the feasibility of reformed and proposed new instruments that are potentially more efficient in terms of incentives for environmental protection and income generation. They are simple to use and, most likely, will be acceptable from the political and social points of view. They are as follows:

- WSS tariff reform – the focus should be on a sharp increase of collection rates and gradual tariff increase to the sustainable cost recovery level;
- Introduction of charges for surface water intake for enterprises (including fees for non-consumptive uses of water) to comply with the principle of the economic value of water resources as specified in the Water Code, 2005;
- Reformation of environmental pollution charges: creation of incentives for pollution prevention and control;
- Introduction of an excise tax on certain types of products polluting water resources significantly (e.g.: pesticides and lubricants) combined with a compensation system for return of unwanted taxable products - this measure will help to reduce diffuse water pollution, especially in agriculture;
- Improvement of charges for vehicle admission to the territory of the Issyk-Kul Biosphere Reserve charging proportionally for duration of stay of the vehicle and its passengers on the territory of the reserve (today these factors are not considered when charging).

The economic instruments for an effective response to current challenges and problems in the water sector do exist. Political and economic considerations, based on insufficient or incorrect information and incorrect assumptions, impede the implementation of economic instruments for WRM in Kyrgyzstan. For example, experience shows that real consumer willingness to pay for water infrastructure services tends to be higher than the estimated willingness to pay for these services, but under the condition that the price increase is followed by improved quality of services. In this regard, the Government of the Kyrgyz Republic will benefit from development of national water strategy and policy. This will help to fully understand what additional measures would facilitate reforms. A thorough consideration of additional measures allows for identifying groups of influence and enabling reform, which is especially important under conditions of fragile democracy.

3.3. Assessment of subsidies impacting the water sector in the Kyrgyz Republic

Based on decisions taken at the 8th Meeting of the Steering Committee, the following objectives were set forth:

- to identify subsidies affecting water use, availability and quality of water in Kyrgyzstan;
- to evaluate environmental, social and financial efficiency (benefits and "disadvantages") of subsidies;
- to develop recommendations for decision-makers on reforms or elimination of subsidies impacting negatively the water sector.

Major recommendations on improvement of existing instruments and introduction of new, more efficient ones, as well as reforming certain types of subsidies are as follows:

A. To introduce two-part tariffs for supply of irrigation water from the public irrigation system.

In this case, the first component of the tariff is designed to cover the fixed costs of operations, maintenance and repairs of the public irrigation system. This first component should be charged as part of a **land tax** differentiated by the extent to which irrigation and drainage networks are available. If they are available, the rate of land tax should be higher, and the tax should be levied on irrigated land plots temporarily unused at the same rate as on the ones that are in use.

B. To introduce two-part tariff for water supply and sanitation in the settlements with high seasonal water demand by tourists and (or) a large proportion of the population working abroad.

It is proposed that the first component of the tariff be for covering the fixed costs of operating, maintaining and repairing the water and wastewater systems. Rates should be charged proportionally to the demand for water from the corresponding commercial consumers and residential users - a fixed monthly fee per one connection (apartments or private houses; for commercial consumers the monthly fee should be slightly higher). The second component of the tariff - volumetric, is intended to cover the variable costs; it is charged for the actual amount of water consumed by respective household.

C. To introduce (or improve) the imposition of excise tax and equivalent customs duty levied on the following products, imported or produced in the Kyrgyz Republic:

- pesticides and herbicides;
- motor oil;
- synthetic detergent agents.

The rates of excise tax and duties should be differentiated considering the level of environmental hazard (and toxicity) of the taxable product.

D. To introduce a fee to enterprises for the discharge of pollutants into the sewage system, depending on the composition and weight of discharged substances in the same manner as for the discharge of pollutants into the environment.

E. To introduce payment for water as a natural resource – so far only in respect of surface water used by industrial enterprises or used for energy generation.

The amount of charges for the first stage will be 0.1-0.5 KGS per 1 m3 (i.e. will be nominal). The charges will primarily burden only the financially reliable sector of the economy and energy tariffs will not exceed 5%.

F. To improve payments for vehicles admission to the territory of Issyk-Kul Biosphere Reserve – charges shall be proportional to the duration of stay of the vehicle and its passengers on the territory of the reserve (currently this is not considered when charging fees). It will allow for replenishing local budgets and enhancing the resource base in order to perform environmental activities, including protection of water bodies.

G. The auxiliary measures required - the application of measures B and E at the same time requires significant enhancement of social support measures targeted to low-income households, especially in rural areas. However, the experience of other countries suggests that this would require just a small share of additional budget revenues expected after the introduction of measures C-F stated above.

4. Co-ordination of activities of water-related partners and projects in Kyrgyzstan

One of the NPD's key areas of focus was to establish sustainable mechanisms for co-ordination of water-related projects supported by donors and international organisations. Annually, dozens of international projects are implemented in Kyrgyzstan; some of them are directly related to the water sector. Therefore, there is a need to strengthen the co-ordination of foreign credit institutions and donors supporting development of water management and protection among themselves and with key partners in Kyrgyzstan.

The role of the Dialogue in this process was to discuss the results of various projects, to consider their efficient use and prevention of overlapping activities, and to disseminate information on progress made in the framework of specific projects among all stakeholders. In this regard, the agenda of the Steering Committee meeting provided a venue for presentations by representatives of International projects, mainly related to the implementation of integrated water resources management in Kyrgyzstan.

It should be emphasised that for a number of projects the Steering Committee serves as a Managing Committee. The foreign and local experts were interested in the special session of the Steering Committee where the earlier surveys and on-going activities in Kyrgyzstan under the framework of UNECE, OECD, UNDP, the European Union (including TACIS), the World Bank, the Asian Development Bank, EBRD, FAO, and the agencies and foundations for International Development of the UK, Germany, Norway, Finland, Switzerland and other countries were presented.

Of the projects reviewed by the Steering Committee, the ***World Bank-funded "Water Management Improvement Project"*** deserves particular focus. Its implementation period is 2008-2013, and it is aimed at addressing the following objectives:

- to perform standards of the Water Code of the Kyrgyz Republic related to reforms of the water management system;
- to update water-related regulatory legal framework in the Kyrgyz Republic in terms of IWRM and the Water Code of the Kyrgyz Republic;
- to support capacity development and enhancement of associations and federations of water users;
- to support reforms of technical and financial performance indicators used by the Department of Water Management and Melioration under the Ministry of Agriculture and Melioration of the Kyrgyz Republic;
- to support capacity development and enhancement of *Kyrgyzhyrdromet* bodies;
- to provide technical and methodological support to establish a sound management information system (MIS) and database of the Department of Water Management and Melioration;
- to develop and implement information dissemination programmes;
- to develop and implement personnel training and re-training programmes for public water authorities and water users associations;
- to support introduction of advanced technologies for water use, irrigated farming, water resources monitoring, etc.

The project completion is scheduled for 2013, however, the works are expected to be continued in this direction in the short term under a new joint project co-sponsored by the World Bank and Swiss Agency for Development and Co-operation.

In accordance with the ***European Union Co-operation Programme for Central Asia, the project "Water Resources Management in Central Asia"*** was implemented in 2008-2012.

The project goal was to determine and take the priority steps required to overcome obstacles on the way to enhanced water resources management in IWRM context. The recommendations were developed under the Project on introduction of IWRM mechanisms and application of the Water Framework Directive in Central Asia considering current economic difficulties.

The current problems of Kyrgyzstan's water sector were surveyed under this project in terms of delayed institutional reforms, lack of effective co-ordination of interaction of regulatory bodies, insufficient water management planning, water management, limited measures ensuring sustainability of water ecosystems, water quality improvement, etc. The universal institutional model for the introduction of IWRM principles and tools was proposed under this Project to guide all Central Asian countries.

A survey was prepared on economic instruments applied for water and water quality management in the region. Based on this survey, the project working group has developed pragmatic recommendations for the implementation of IWRM mechanisms and application of the Water Framework Directive in Central Asia, taking into account the real constraints and risks associated with difficulties of the current economic situation in the region.

As a part of the National component «Development and implementation of IWRM strategy in Kyrgyzstan», the joint EU and UNDP project «Promoting IWRM and Fostering Transboundary Dialogue in Central Asia» (2009-2012), the overview of previous activities was prepared on IWRM implementation in Kyrgyzstan and recommendations were made on financing systems for improving the national irrigation sector. Based on these reviews, the proposals in support of the National Water Council of Kyrgyzstan and recommended action plan for development of investment and tariff policies in the irrigation sector of the Kyrgyz Republic were developed.

Activities under the «**Trans-boundary Water Management in Central Asia Programme» implemented by the German Agency for International Co-operation**, are aimed at optimising co-operation in the water sector in Central Asia and enhancing living standards in the region. As a rule, the implementation of the national pilot project is funded by the Ministry of Foreign Affairs of Germany. The following projects are related directly to the area stated in the framework of the Dialogue:

- Projects to support development of water management systems and to strengthen the capacity of regulatory bodies for trans-boundary rivers in Central Asian;
- Projects to develop procedures and technologies for joint planning of water management and protection activities in trans-boundary river basins;
- Projects to support development of databases on trans-boundary rivers Chu and Talas, etc.

It should be noted that the content of some water-related international projects implemented in Kyrgyzstan is the same to a certain extent. This situation reasonably highlights the activity of the Steering Committee under NPD with reference to information exchange and enhancement of co-ordination of donor organisations, national implementing agencies and expert communities.

Five years of National Policy Dialogue activities in Kyrgyzstan show initial performance results of NPD for this period.

One should note that the initial phase of the Dialogue's organisation in Kyrgyzstan was not simple. Therefore, it was necessary to provide preliminary consultations with the ministries and departments involved, hard explanatory work on the role and benefits of NPD where UNECE representatives and consultants and DWRM management took an active part.

When forming the list of the Dialogue's participants, the additional issues were related to changes in government structure of the country. However, by early 2013 joint efforts succeeded in involving experts of all stakeholders, including NGOs and civil society, in the Dialogue's process. One of the reasons for successful achievement of this goal was the situation where major trends of NPD activities were formulated in general and the certain priority subjects selected by Dialogue participants at its different stages.

As a positive aspect one can note highly qualified local experts and representatives of various sectors involved in the Dialogue process. The majority of the basic documents reviewed at the meetings of the Steering Committee were prepared specifically by the working groups, consisting of local experts with the support of international consultants. The valuable human capacity developed through the NPD process should be substantially strengthened and aimed at the most pressing objectives of the water sector.

Over the past five years one of the key roles of the NPD has been as an effective mechanism to co-ordinate water-related projects implemented with the support of international and donor organisations. Regular meetings of the Steering Committee created the conditions for a broad discussion on a number of project proposals, progress and final results of the implementation of specific international projects. Herewith, it was possible not only to correct some problems, but to avoid duplication within various projects and to bring together various projects for more effective results with minimum costs.

Since representatives of international and donor organisations are regular participants of most meetings of the Steering Committee, the results of the joint discussion of essential issues allow these organisations to clarify approaches for forming their own policies and plans for supporting the Kyrgyz water sector.

An equally important objective of the NPD was to enhance co-operation between national authorities to ensure integrated management and protection of water fund. For this purpose, the development problems and challenges of major water-consuming sectors of the national economy – irrigation, water utilities and industrial water supply, etc., as well as issues of monitoring, protection of water resources, negative impact prevention and remediation measures were discussed repeatedly at the meetings of the Steering Committee.

Consequently, one can note two positive trends when achieving the stated goal. First, the representatives of non-governmental, civil society organisations could participate in discussions and adoptions of recommendations on a wide range of water issues on an equal basis in the Dialogue framework, while gaining knowledge and presenting their ideas to decision-makers.

Secondly, many participants of the Dialogue – the representatives of central implementation agencies, regional and municipal organisations - could be informed on urgent problems of related sectors and, thus, had an opportunity to help in overcoming disunity typical for the institutional system of Kyrgyzstan.

One should emphasise that the first steps made in this direction require further action. For example, in the immediate future, the NPD may act as an advisory body that develops expert advice and recommendations for decisions of the National Water Council and the State Water Administration as specified by the Water Code of the Kyrgyz Republic.

Moreover the experience accumulated when organising the Dialogue can be used for wider dissemination of timely information among stakeholders.

As for the specific areas of work carried out under the auspices of the Steering Committee, they were at various implementation stages when preparing this publication.

The activities related to target setting in the context of the Protocol on Water and Health, as well as improvement of financing mechanisms in the water sector of the Kyrgyz Republic through development of tariff and tax policy are almost completed and the priority objective is a practical implementation of the results obtained.

At the same time, the works associated with development of river basin management plans in line with IWRM principles are largely constrained due to lack of compliance of the existing management structure of water sector with institutional reform ideology as specified in the Water Code of the Kyrgyz Republic. Therefore, to date, in the framework of the Dialogue the arrangements are made only for the establishment of the Basin Council for Chu River, as well as preliminary works for legal and methodology frameworks to prepare basin management plans.

It is appropriate to consider the completion of the basin planning concept as an initial step in this direction. The success of further development of this complex process will largely depend, on the one hand, upon the progress in the reform of water management system in the country as a whole, and on the other hand, upon feasibility awareness of development and implementation of basin management plans by all stakeholders.

The above stated means that the perspective capacity of the Dialogue is far from being exhausted and NPD's integrated activity should surely be developed further. For instance, future work could focus on monitoring the implementation of targets established in the context of the Protocol on Water and Health; supporting development of the Basin Council and basin planning in the Chu River basin; enhancing financing mechanisms; strengthening co-operation with international and donor organisations active in the water sector in Kyrgyzstan.

ANNEX 1
Targets and priority measures to achieve these objectives in the Kyrgyz Republic in the context of the Protocol on water and health

Targets and priority measures to achieve these objectives in the Kyrgyz Republic in the context of the Protocol on water and health

Target area I. Quality of the drinking water supplied

A key problem is the deterioration of water quality on microbiological and chemical parameters in water supply systems in a number of cities and in rural areas in 2010 compared with 2005.

Proposed targets and target dates

1.1. To organise development and approval of plans for drinking water safety for Bishkek and Osh by 2015; by 2020 for other cities and regional centres. (Responsible organisations*: Ministry of Health of the KR, State Agency for Construction and Regional Development, State Agency for Geology and Mineral Resources, local governments of Bishkek and Osh, local governments of small towns, Production and operational management "Bishkekvodokanal", municipal enterprise of Osh "Oshgorvodokanal", NGOs);

1.2. To ensure conformity of annual drinking water samples in the drinking water supply systems of rural settlements with effective microbiological and chemical standards: more than 90% conformity by 2017 and more than 95% by 2020. (Responsible organisations: State Agency for Construction and Regional Development, local governments, rural public associations of drinking water consumers);

1.3. To ensure conformity of annual drinking water samples in the cities Karakol, Balykchi, Cholpon-Ata, Talas and Jalal-Abad, with effective microbiological and chemical standards: more than 85% conformity by 2015 and more than 95% by 2022. (Responsible organisations: State Agency for Construction and Regional Development, local governments of Karakol, Balykchi, Cholpon-Ata, "Vodokanal");

1.4. To introduce separate testing of laboratory tests results of drinking water in centralised water supply systems for each indicator that exceeds maximum permissible standards by 2020. (Responsible organisations: State Agency for Construction and Regional Development, Ministry of Health of the KR, local governments of Bishkek and Osh, local governments of small towns, State Agency for Construction and Regional Development, "Vodokanal", rural public associations of drinking water consumers);

1.5. To include the issues of quality drinking water supply in the strategic plans of socio-economic development of cities and villages by 2014. (Responsible organisations: local governments of Bishkek and Osh, local governments of small towns, rural public associations of drinking water consumers);

1.6. To organise three industrial laboratories, including at least one mobile laboratory by 2020 with resources provided by the State Agency for Construction and Regional Development in the framework of the ADB and the World Bank projects, (Responsible organisations: State Agency for Construction and Regional Development, local governments, rural public associations of drinking water consumers).

Target area II. Reduction in the scale of outbreaks and incidents of water-related diseases

A key national problem of this target area is the maintenance of high level of AII cases, particularly among children in rural areas of the Southern regions of Kyrgyzstan.

* Here and below in the list of responsible organisations, the key coordinating body is mentioned first.

Proposed targets and target dates

2.1. To develop and implement throughout the country, an integrated state supervision of water-related diseases by 2015 and by no later than 2017, within the available resources of the Ministry of Health of the KR. (Responsible organisations: Ministry of Health of the KR, Kyrgyz Government Medical Academy, KRSU);

2.2. To monitor for water-related diseases in pilot regions at least 70% of children by 2015 and at least 90% of children by 2020. (Responsible organisation: Ministry of Health of the KR);

2.3. To cover preventive vaccination of the population against typhoid and hepatitis A to reduce the morbidity level for typhoid and hepatitis A by 2020 in comparison with 2010: by 10% for typhoid and by 30% for hepatitis A assuming adequate financial support is available (Responsible organisations: local authority of Bishkek and Osh; local authority of small towns; Ministry of Health of the KR; Ministry of Education and Science of the KR; State Inspectorate for Sanitary, Veterinary and Phytosanitary Safety; State Agency for Construction and Regional Development; municipal enterprise "Vodokanal", rural public associations of drinking water consumers, NGOs, associations of Village Health Committees).

Target area III. Access to drinking water

A key national problem in this field is the lack of public access to centralised drinking water supply systems and the need to improve the quality of water supply services.

Proposed targets and target dates

3.1. Based on the achievements of the second phase of the "Taza Suu", completed in 2012, to provide by 2020 increased access to improved water sources for at least 20% of the rural population of the KR compared with 2010. (Responsible organisations: Ministry of Economy of the KR, Ministry of Finance of the KR, local authority, State Agency for Construction and Regional Development);

3.2. To assess the status and required investment for the improvement of water supply systems in 100% of schools and preschool institutions by 2015. On this basis to develop a programme of rehabilitation and development of these systems to 2020, provided sustainable funding sources are available. (Responsible organisations: Ministry of Economy of the KR, Ministry of Finance of the KR, Ministry of Education and Science of the KR, local authorities, State Inspectorate for Sanitary, Veterinary and Phytosanitary Safety, Department of Water Supply and Sanitation, ARIS, NGOs);

3.3. To develop and begin to implement a comprehensive programme of economic, administrative and technical measures to promote the rational use of water in drinking water supply systems in the framework of the programme of drinking water supply and sanitation development in communities of KR by 2015. (Responsible organisations: local authorities, Department of Water Supply and Sanitation, Ministry of Economy of the KR, Ministry of Finance of the KR, State agency for Construction and Regional Development , State Agency for Environmental Protection and Forestry, NGOs).

Target area IV. Access to sanitation

A key national problem in this field is the provision of common access to improved drainage systems and sanitation.

Proposed targets and target dates

4.1. To provide access for at least 40% of the population of the KR to improved sewerage facilities and sanitation by 2017, especially in Balykchy and Karakol and new buildings in Bishkek. (Responsible organisations: Ministry of Finance of the KR, Ministry of Economy of the KR, "Vodokanal", local authorities of Bishkek, Balykchi and Karakol);

4.2. To provide not less than 80% of schools and at least 90% of preschool institutions with improved sanitation facilities by 2015, including new buildings in Bishkek (not less than 70%). To provide at least 90% of schools and 100% of preschool institutions with these facilities by 2020. (Responsible organisations: Ministry of Economy of the KR, Ministry of Finance of the KR, Ministry of Education and Science of the KR, local authorities of Bishkek and Osh, local authorities of small towns);

4.3. To develop and implement technical regulations governing the construction and operation issues of the improved sanitation systems (including small ones) by 2015. (Responsible organisations: State Agency for Construction and Regional Development, State Agency for Environmental Protection and Forestry, Ministry of Economy of the KR, Ministry of Finance of the KR, Ministry of Health of the KR, local authorities of small towns, local state administration).

Target area XI. Quality of discharge of wastewater from wastewater treatment installations to waters within the scope of the Protocol

A key national problem in this field is the need for extensive improvement of wastewater treatment discharged into natural water bodies from water disposal systems.

Proposed targets and target dates

11.1. To rehabilitate and modernise equipment and wastewater treatment technologies for 20% of the existing treatment facilities by 2017, primarily in Osh and district centres; at least 40% of sewage treatment plants by 2020. (Responsible organisations: local authority of Bishkek and Osh, local authorities of small towns, local state administration, Ministry of Finance of the KR, Ministry of Economy of the KR, State Agency for Construction and Regional Development, "Vodokanal", enterprises and organisations and the owners of departmental and other treatment facilities);

11.2. To develop and approve regulations governing the conditions of reception of sewage into the centralised sewerage system, wastewater discharge into water bodies and the use of treated wastewater by 2015. (Responsible organisations: State Agency for Environmental Protection and Forestry, State Agency for Construction and Regional Development, municipal enterprise "Vodokanal", Ministry of Agriculture and Melioration, local authority bodies of Bishkek and Osh, local authority bodies of small towns).

Target area XIV. Quality of water used as sources for drinking water

A key national problem in this field is the increasing trend of deterioration in water quality based on sanitary-chemical and microbiological indicators of water supply sources safety.

Proposed targets and target dates

14.1. To develop the Technical Regulations on the selection of sources for centralised drinking water supply and the protection of groundwater against pollution and deterioration by 2015. (Responsible organisations: Ministry of Economy of the KR, Ministry of Health of the KR, State Agency for Environmental Protection and Forestry, State Agency for Construction and Regional Development,

municipal enterprises "Vodokanal", rural public associations of drinking water consumers, NGOs, local authority of Bishkek and Osh, local authorities of small towns);

14.2. To examine the state of sanitary protection zones of centralised drinking water supply sources and the existing and potential sources of contamination in the Chu river basin by 2015 and on this basis to develop a comprehensive programme for their rehabilitation. (Responsible organisations: State Agency for Environmental Protection and Forestry, State Agency for Geology and Mineral Resources, Ministry of Health of the KR, local state administration, local authority, municipal enterprises "Vodokanal", Ministry of Agriculture and Melioration, State agency for Construction and Regional Development, local authority of Bishkek and Chu region cities, rural public associations of drinking water consumers);

14.3. To complete similar work for sanitary protection zones for the water pipes of other cities and regional centres by 2020. (Responsible organisations: State Agency for Environmental Protection and Forestry, State Agency for Geology and Mineral Resources, State Agency for Construction and Regional Development, Ministry of Health of the KR, local authority, local state administration, "Vodokanal");

14.4. To develop a registry of centralised and decentralised water intakes for drinking purposes from the Chu basin by 2016, and by 2020 for other regions of the KR. (Responsible organisations: State Agency for Environmental Protection and Forestry, State Agency for Construction and Regional Development, State Agency for Geology and Mineral Resources, Ministry of Emergency Situations, Ministry of Health of the KR, local authority, municipal enterprises "Vodokanal");

14.5. To develop a national strategy for the protection of water resources by 2014. (Responsible organisations: State Agency for Environmental Protection and Forestry, Ministry of Agriculture and Melioration, State Agency for Geology and Mineral Resources, State Agency for Construction and Regional Development, Ministry of Economy of the KR, Ministry of Finance of the KR, Ministry of Health of the KR, Ministry of Emergency Situations, NGOs).

Target area XVIII. Identification and remediation of particularly contaminated sites

A key national problem in this field is the degradation of industrial and agricultural waste landfills and increasing trends in territorial pollution with industrial and consumable waste as well as the lack of proper landfills for the disposal of toxic non-utilisable waste.

Proposed targets and target dates

18.1. To rehabilitate and provide normative content for storage of household and industrial waste in the areas of Balykchi, Karakol and Cholpon-Ata in the framework of the programme "Sustainable Development of Issyk-Kul" by 2017. (Responsible organisations: local authorities of Balykchi, Karakol and Cholpon-Ata; State Agency for Environmental Protection and Forestry; Ministry of Emergency Situations; State Inspectorate for Sanitary, Veterinary and Phytosanitary Safety; NGOs).

Target area XIX. Effectiveness of systems for the management, development, protection and use of water resources

A key national problem in this field is the unsatisfactory pace and inconsistency of reform measures in the context of the IWRM principles of institutional structure in the water sector of the KR as a whole, including its systems of management and protection of water resources and management of water and wastewater infrastructure.

Proposed targets and target dates

19.1. To develop and implement legal acts governing rational exploitation issues as well as the protection and use of water resources, harmonised with international standards and the norms of the European Union by 2020. (Responsible organisations: State Agency for Environmental Protection and Forestry, Ministry of Agriculture and Melioration, Department of Water Management and Melioration, Ministry of Emergency Situations of the KR, State Agency for Geology and Mineral Resources, State Agency for Construction and Regional Development , Ministry of Health of the KR, municipal enterprises "Vodokanal", NGOs);

19.2. To develop the Chu basin water plan by 2015; to develop basin water plans for other basins on the territory of the KR by 2020 and to regulate their water use. (Responsible organisations: Ministry of Agriculture and Melioration of the KR, Department of Water Management and Melioration, State Agency for Environmental Protection and Forestry, Ministry of Emergency Situations of the KR, State Agency for Geology and Mineral Resources, Ministry of Health of the KR, NGOs);

19.3. To improve existing programmes, guidelines and manuals for the training and professional development of staff in "Vodokanal", rural public associations of drinking water consumers and other organisations engaged in management, operation and maintenance of water supply, sewerage and sanitation systems by 2015, and in the future to organise regular training sessions/workshops for professionals in these organisations. (Responsible organisations: Ministry of Economy of the KR, Ministry of Emergency Situations of the KR, State Agency for Construction and Regional Development, State Agency for Environmental Protection and Forestry, State Agency for Geology and Mineral Resources, Ministry of Health of the KR, Ministry of Education and Science of the KR, local authorities, municipal enterprises "Vodokanal", rural public associations of drinking water consumers, NGOs).

Target area XX. Frequency of the publication of information on the quality of drinking water supplied and of other waters relevant to the Protocol

A key national problem in this field is the limited access for suppliers and water users, for local authorities and the population, especially in rural and remote areas, to operative information that characterises the condition and use of water resources, infrastructure, water supply, drainage and sanitation.

Proposed targets and target dates

20.1. To develop and adopt legal acts regulating the methodology and procedures for accounting and statistical reporting on the use of water resources, sanitation facilities and sanitation by 2015, and to ensure their widespread implementation from 2017. (Responsible organisations: National Statistical Committee, Department of Water Management and Melioration, State Agency for Environmental Protection and Forestry, State Agency for Geology and Mineral Resources, State Agency for Construction and Regional Development, State Inspectorate for Sanitary, Veterinary and Phytosanitary Safety, local authorities, Municipal enterprises "Vodokanal", rural public associations of drinking water consumers, mass media, NGOs);

20.2. To develop a new version of the Water Cadastre of the KR by 2017 and to ensure the release of statistical compilations on the condition and use of water resources on a regular basis. (Responsible organisations: Department of Water Management and Melioration, State Agency for Environmental Protection and Forestry, State Agency for Geology and Mineral Resources, National Statistical Committee, Ministry of Emergency Situations of the KR);

20.3. To develop a methodology for the public monitoring of the strategic documents on water supply, sanitation and hygiene implementation by 2014. (Responsible organisations: State Agency for Construction and Regional Development, Ministry of Health of the KR, State Agency for Environmental Protection and Forestry, mass media, NGOs);

20.4. To raise awareness among decision-makers, on a regular basis, about the positive experience of water supply and sanitation management and access of the population to safe drinking water and sanitation by 2014. (Responsible organisations: NGOs, mass media, Ministry of Education and Science, Academy of Management under the President of the KR).

Department of Water Management and Melioration
Ministry of Agriculture and Melioration of the Kyrgyz Republic
4a, Toktonaliev st., Bishkek 720055, Kyrgyzstan
Tel: 996-312 54 90 95
Fax: 996-312 54 90 94
E-mail: basssein@mail.ru

United Nations Economic Commission for Europe
Palais des Nations
CH-1211 Geneva 10
Switzerland
Tel: 41-22-917 3448
Fax: 41-22-917 0621
E-mail: water.convention@unece.org

Organisation for Economic Co-operation and Development
2 rue André-Pascal, 75775 Paris Cedex 16, France
Tel: 33 14 524 9294
Fax: 33 14 430 6399
E-mail: water-npd@oecd.org