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WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR EUROPE
ВСЕМИРНАЯ ОРГАНИЗАЦИЯ ЗДРАВООХРАНЕНИЯ
ЕВРОПЕЙСКОЕ РЕГИОНАЛЬНОЕ БЮРО

Protocol on Water and Health

TARGETS AND TARGET DATES TO ACHIEVE SUSTAINABLE WATER MANAGEMENT, SAFE DRINKING WATER SUPPLY AND ADEQUATE SANITATION ACCORDING TO THE PROTOCOL ON WATER AND HEALTH IN THE REPUBLIC OF KYRGYZSTAN

Second meeting of the AHPFM, 1 July 2009, Geneva **Proposal submitted by Kyrgyzstan**

The project proposal was adopted at the second meeting of the high-level Steering Committee for the National Policy Dialogue on integrated water resources management under the EU Water Initiative in Kyrgyzstan (Bishkek, 17 June 2009) and the Chairman of the Steering Committee was entrusted to present this proposal at the second meeting of the AHPFM.

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Applicant's official name and address

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Main implementing agency

According to the decision of the high-level Steering Committee for the National Policy Dialogue on integrated water resources management in Kyrgyzstan, , the leading agency in the implementation of the project shall be the Ministry of Agriculture, Water Management and Processing Industries of Kyrgyzstan.

Contact person

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Organizations to be involved

- Ministry of Foreign Affairs of Kyrgyzstan
- Ministry of Finance of Kyrgyzstan
- Ministry of Justice of Kyrgyzstan

- Ministry of Health of Kyrgyzstan
- State Agency for Geology and Mineral Resources at the Government of Kyrgyzstan
- State Agency for Environment Protection and Forestry at the Government of Kyrgyzstan
- National Agency for local governments of Kyrgyzstan
- "Bishkekvodokanal" enterprise
- National Academy of Sciences
- Non-governmental organization

Language of the document

Russian/English

Location

The project will be implemented in Kyrgyzstan

Summary

The overall aim is to provide assistance to Kyrgyzstan in the implementation of specific provisions of the Protocol on Water and Health to the 1992 UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes ("Water Convention"), thereby "promoting at all appropriate levels, nationally as well as in transboundary and international contexts, the protection of human health and well-being, both individual and collective, within a framework of sustainable development, through improving water management, including the protection of water ecosystems, and through preventing, controlling and reducing water-related disease" (Article 1 of the Protocol).

The specific objective is to provide assistance to Kyrgyzstan in establishing and publishing national and/or local targets for standards and levels of work that should be reached or maintained in order to ensure a high level of protection of human health and well-being, as well as sustainable management of water resources, namely, development and approval of agreed objectives with the participation of all national organizations involved.

Kyrgyzstan is not a party to the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes. However, according to Articles 21 and 22 of the Protocol on Water and Health, Kyrgyzstan may accede to the Protocol without being a Party to the Convention.

On June 14, 2007 Kyrgyzstan, in a letter¹ to the European Commission, expressed its intention to start, as part of the EU Water Initiative, the National Policy Dialogue on integrated water resources management (NPD-IWRM) 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.

To achieve this objective, it is planned, in particular, to examine the Protocol on Water and Health from the point of view of a possibility of acceding to it by Kyrgyzstan.

A Roadmap has been developed in Kyrgyzstan for the NPD-IWRM implementation. This Roadmap is based on a selected complex of priority political actions. The Roadmap envisages the examination of the Protocol by the Steering Committee. This Roadmap was approved at the first meeting of the Steering Committee held in Bishkek, Kyrgyzstan, on October 29, 2008. After the meeting, a Memorandum of Understanding was signed between the Ministry of Agriculture, Water Management and Processing Industries of Kyrgyzstan and the United Nations Economic Commission for Europe (UNECE).

It is expected that the following key Ministries, Agencies and non-governmental organizations will be involved in the implementation of the project on targets and target dates according to the Protocol on Water and Health in Kyrgyzstan:

1. The Ministry of Agriculture, Water Management and Processing Industries. The Ministry includes the Department of Water Management, which is responsible for water resources management; water supply to the population and the economic entities; development of standards and limits of water consumption; State accounting and control of water consumption. It is the responsibility of the Ministry of Agriculture, Water Management and

¹ The letter of the Minister of Agriculture, Water Management and Processing Industries to Ambassador Adrian Van der Meer, representative of the European Commission in Kazakhstan

- Processing Industries to provide overall coordination of the examination of the Protocol on Water and Health and to consider acceding to it by Kyrgyzstan.
2. The National Agency of Local Governments of Kyrgyzstan. According to the Decree of the President of Kyrgyzstan of December 27, 2008, the Department of Rural Water Supply has been taken out of the structure of the Ministry of Agriculture, Water Management and Processing Industries and made part of the National Agency of Local Governments.
 3. The State Agency of Environment and Forestry at the Government of Kyrgyzstan. This Agency provides: general management of water protection activities; State control and coordination of State institutions and enterprises to enforce provisions of environment protection legislation and by-laws, including the area of water resources; State control of compliance with the regulations and standards of waste water discharge into water bodies and other collectors; State accounting of sources of pollution and contamination of water bodies.
 4. The Ministry of Health involved in water resource management matters provides: development and harmonization of regulations on the quality of drinking and non-potable water for households, State surveillance of compliance with sanitary regulations on the maintenance of water objects and water management systems used to provide for drinking, household and recreational needs of the population.
 5. The Agency for Geology and Mineral Resources involved in water resource management provides: State accounting of groundwater resources; development and coordination of regulations on the use and protection of groundwater; State control of the use of mineral and thermal waters.
 6. Public participation is an important condition for the implementation of the target setting process, since Article 6, paragraph 2, of the Protocol provides that Parties "shall make appropriate practical and/or other provisions for public participation, within a transparent and fair framework, and shall ensure that due account is taken of the outcome of the public participation." The Kyrgyz Alliance on Water and Sanitation (KAWS) is currently a member of the Steering Committee for the National Policy Dialogue on water supply and sanitation, supported by OECD under the auspices of the European Union Water Initiative. KAWS has practical experience in improving water supply and sanitation in Kyrgyzstan, and can therefore be the leading organization on public participation in these matters. The issues of environment protection can be taken care of by the Ecological Movement "BIOM", and research issues can be the responsibility of the Institute of Sustainable Water Supply and Sanitation "Keremet".

Target groups

National and local authorities can use clearly established national targets as a basis for the allocation of resources. Transparent and politically approved targets may also serve as a secure basis for applications for international aid and for increasing the opportunity to access international funding.

Hence, the following target groups will be directly involved in the project:

- State institutions responsible for water management, safe drinking water supply and adequate sanitation in Kyrgyzstan, including Ministries, local governments, water utilities, users and environmental NGOs;
- The European Union and other donors, international financial institutions operating in the water sector of Kyrgyzstan, will be also involved in the project.

Main users

Users that depend on water management, sanitation and, in more general terms, all consumers of water resources of Kyrgyzstan, i.e. the whole population, will gain long-term benefits from the project.

Expected outcomes:

- (a) Nationally agreed upon and approved targets and target dates according to the Protocol on Water and Health in the Republic of Kyrgyzstan;
- (b) Established of a Steering Committee dealing with the provisions of the Protocol on Water and Health and providing a mechanism for coordination and problem solving at the national level;
- (c) An Action plan to be approved by the Government.

Main activities

In line with the existing draft *Guidelines on targets, assessment of progress and summary reports*², the situation in the country will be analyzed and the implementation of established responsibilities and obligations in water and health matters will be coordinated. On the basis of this analysis, a realistic plan for improving the situation in the country according to the established priority targets and target dates will be developed. This activity is based on the logical structure of the target-setting process (see Fig. 1) and Annexes 1, 2 and 4 of this document.

Draft budget

Tentatively, the budget of the project is estimated to be 145,500 USD (Annex 3).

Should the project be approved, co-financing of its implementation will be provided through the National Policy Dialogue on integrated water resources management in Kyrgyzstan (one meeting of the Steering Committee, about 5,000 USD) and the Government of Kyrgyzstan (12,500 USD). Expert assistance is expected from the Parties to the Protocol on Water and Health; travel expenses of experts will be covered from the budget of the project.

² Draft Guidelines developed by the Task force on indicators and reporting (ad hoc group on the meeting of the parties of the Protocol on Water and Health) under the leadership of Switzerland. The draft is available at: http://www.unece.org/env/water/meetings/documents_TFIR.htm.

Introduction

Water resources and water consumption

Available water resources in the Republic of Kyrgyzstan are substantial: about 50 km³/year of surface river flow, 13 km³ of potential groundwater resources, 1745 km³ of lake water and 650 km³ in the glaciers. The main source of supply for rivers is melting waters of seasonal and eternal glaciers.

Kyrgyzstan uses only 10-17% of available resources, of which 3% are used for water supply, 6% - for industrial purposes, and about 90% - for irrigation.

The area of irrigated lands in Kyrgyzstan is about 1.04 million hectares, and 0.85-0.91 million hectares per year are irrigated. The current technical condition of irrigation and drainage systems is poor by most indicators. The majority of irrigation facilities have reached the physical limit of their service life.

Specific water consumption for drinking and household purposes is characterized by significant variability. In the capital of the Republic – the city of Bishkek – collective water supply systems cover about 82% of the population, in other cities, regional centers and rural centers – no more than 55%. Only 19% of rural population has access to centralized water supply networks. In total, 93% of the population has access to adequate drinking water.

Quality of drinking water and public health³

In Kyrgyzstan, about 11% of water resources do not meet the sanitation and hygiene requirements, 15% of water supply systems are using open sources. The pollution of sources is getting worse every year, in rural areas in particular. Centralized wastewater treatment systems cover only 24% of the country's population. Wastewater treatment and disinfecting facilities in rural water supply systems are absent.

The majority of public water supply and sanitation systems were built in 1950s-1970s, hence, the physical depreciation of pipelines, equipment as well as disinfection and water treatment systems in Bishkek exceeds 50%, and in other cities and regional centers this level is more than 70%.

According to the State Department of Sanitary and Epidemiological Surveillance at the Ministry of Health of Kyrgyzstan, the lack of adequate sanitation, as well as low quality of drinking water, are the major factors contributing to high morbidity from enteric infections, typhoid fever, dysentery, viral hepatitis and parasitic diseases, especially in the southern part of the country.

Among water-related outbreaks of diseases, the most frequent one is typhoid fever. In 2007 recorded typhoid fever and paratyphoid morbidity had increased by 40%. It was mainly caused by inadequate access to safe drinking water.

³ "Environmental Performance Review of Kyrgyzstan", approved by the Kyrgyz Government at the meeting of the UNECE Committee on Environment Policy (Geneva, January 29, 2009), contains a detailed analysis of the situation in environment protection and water resource management and defines concrete steps for improvement of the situation. Unlike the previous one, the Review of 2009 does not include a detailed analysis of health issues; therefore Annex 5 presents an analysis of drinking water quality and public health.

About 40-45% of infectious diseases occur due to helminthiasis. High morbidity from helminthiasis among the population is caused by neglecting personal hygiene rules as well as by poor quality of drinking water. Annually, between 35,000 and 45,000 people are infected with helminthiasis. According to DFID project data on hygiene and sanitation, between 61% and 79% of children in some rural areas were infected with the four primary parasitic infections: enterobiasis, ascariasis, lamblia and Hymenolepidiasis.

Water policy and legislation

The fundamentals of today's water policy were laid down in the Draft Water Strategy in Kyrgyzstan (2003), yet this document has been neither approved nor implemented by the Government.

The key legal document is the Water Code of Kyrgyzstan, adopted in January 2005, which provides a legal framework for developing this sector according to market principles. According to the Code, the drafting of legislative and regulatory documents on water lies with the State Water Administration, and the approval of these documents falls under the responsibility of the National Water Council. However, these entities have not yet been established.

Although the Water Code lays down the principles of water management by hydrographic basins, the structure of the Department of Water Management of the Ministry of Agriculture, Water Management and Processing Industries is still shaped by the administrative and territorial principles, i.e. it still manages water according to the administrative borders of regions and districts.

In Kyrgyzstan, the processes of involving all stakeholders in water management are intensifying. About 500 Associations of water consumers (AVPs) are registered in the country, but these entities have not become sustainable yet, and the prospects of establishing a hierarchical vertical structure of AVPs, including basin-wide and nation-wide federations of AVPs, are still unclear.

In order to improve the quality of drinking water to the population, in 1999 the law on "Drinking water" was adopted in Kyrgyzstan. New standards for the quality of drinking water were established, and a long-term strategy for water supply and sanitation in rural areas was developed. The Government decided to hand over the administration of rural water pipelines to rural local governments and drinking-water consumers organizations (SOOPPVs) without any compensation, and these entities are directly responsible for obtaining and paying loans, for the maintenance and use of water pipelines. They also establish water supply fees and schedule the work of water pipelines.

In 2002, the Kyrgyz Government established the "Taza Suu" ("Clean Water") programme, which includes projects such as "Availability of infrastructural services at the level of populated areas" and "Rural Water Supply and Sanitation" financed by the World Bank and the Asian Development Bank. The projects are aimed at rehabilitating and constructing rural water pipelines and increasing access to safe drinking water to the population, enhancing the responsibility of water industry for the quality of water and sustainable functioning of water pipelines. Within the "Taza Suu" programme an inter-departmental working group was established to draft a new Law – the General Technical Regulation on safe drinking water.

In the course of further reforming the water sector of Kyrgyzstan it is necessary to provide means to support sustainable institutional development, capacity building and human resources, which is closely associated with direct investments into the infrastructure. These should be the key aims of the project.

Activities of non-governmental organizations

The Kyrgyz Alliance for Water and Sanitation has practical experience in the preparation of the strategy of the rural water supply in Kyrgyzstan. The Alliance works closely with the community on initiatives and movements in the field of water and health related activities. Currently, the Kyrgyz Alliance for Water and Sanitation is the member of Coordination Committee of the National Policy Dialogue, with OECD as key strategic partner, on water supply and sanitation in Kyrgyzstan and has practical experience of the water supply and sanitation situation all over the Kyrgyzstan. KAWS, BIOM and Keremet are also active NGOs in the field of water and health in Kyrgyzstan and would play an active role in the proposed project.

Main aim

Following the existing draft *Guidelines on setting targets, evaluation of progress and reporting*⁴, the national situation will be analyzed, the responsibilities and commitments in the areas of water and health will be streamlined and harmonized, and a realistic plan for improvement with prioritized time-bound targets adapted to the national situation will be elaborated. These activities are based on the logical framework for the target setting process as explained further below.

Objectives

1. Organizing consultations among Ministries and Agencies involved in water resource management and protection and public health services.
2. Examination of the main provisions of the Protocol on Water and Health.
3. Assessment of the current situation in terms of the water and health problems
4. Creating a list of responsibilities and obligations for the Ministries and Agencies involved regarding the water and health problems
5. Establishing a list of objectives and relevant activities for the Ministries and Agencies involved.
6. Analyzing existing problems and drawbacks and publishing the final report.
7. Planning further activities related to the Protocol on Water and Health
8. Developing an action plan with time frames and expected outcomes. Targets and indicators should be established and agreed.
9. Organization of meetings and workshops with all competent stakeholders. The outcome of these meetings will be the Action plan, which will clearly indicate responsibilities of every stakeholder.
10. Coordination of the schedule by all the stakeholders (organizations, Ministries and Agencies at the national level).
11. Raising public awareness about the programme, aims, objectives and targets.
12. Definition of indicators for monitoring and assessment of the progress. The indicators must reflect activities by the stakeholders at the national and local levels and comply with the provisions approved by the meetings of the parties.
13. Coordination of assessment methods.

⁴ The draft methodology is being developed by the Task Force on Indicators and Reporting (a subsidiary body under the Meeting of the Parties to the Protocol on Water and Health) with Switzerland as lead country. Draft available at: http://www.unece.org/env/water/meetings/documents_TFIR.htm.

The format of the National Report will comply with the requirements and standards of already existing mechanisms of summary report preparation under the Protocol. The report will reflect an assessment of the policy.

Methodology and project activities

Methodology

1. Consultations for representatives of Ministries and Agencies involved in water management, water protection and public health in the format of round table discussions.
2. Assessment of the current status of water and health issues in the existing reports, and additional assessments.
3. Analysis of existing problems and drawbacks and publication of the report
4. Organization of a kick-off national meeting to present the general information to the stakeholders, and a national meeting at the final stage of the project to review and assess the progress and discuss the follow-up activities.
5. Development of the Action plan with all stakeholders.
6. Transparent and fair public participation.
7. Establishing indicators for monitoring and assessment of the progress.
8. Coordination of assessment methods.
9. Monitoring and assessment of the project will be done by:
 - Ministry of Foreign Affairs of Kyrgyzstan;
 - Ministry of Finance of Kyrgyzstan;
 - Ministry of Justice of Kyrgyzstan;
 - Ministry of Health of Kyrgyzstan;
 - State Agency for Geology and Mineral Resources at the Government of Kyrgyzstan;
 - State Agency for Environment and Forestry at the Government of Kyrgyzstan;
 - National Agency of Local governments of Kyrgyzstan.
 - "Bishkekvodokanal" enterprise;
 - National Academy of Sciences;
 - Non-governmental organizations.

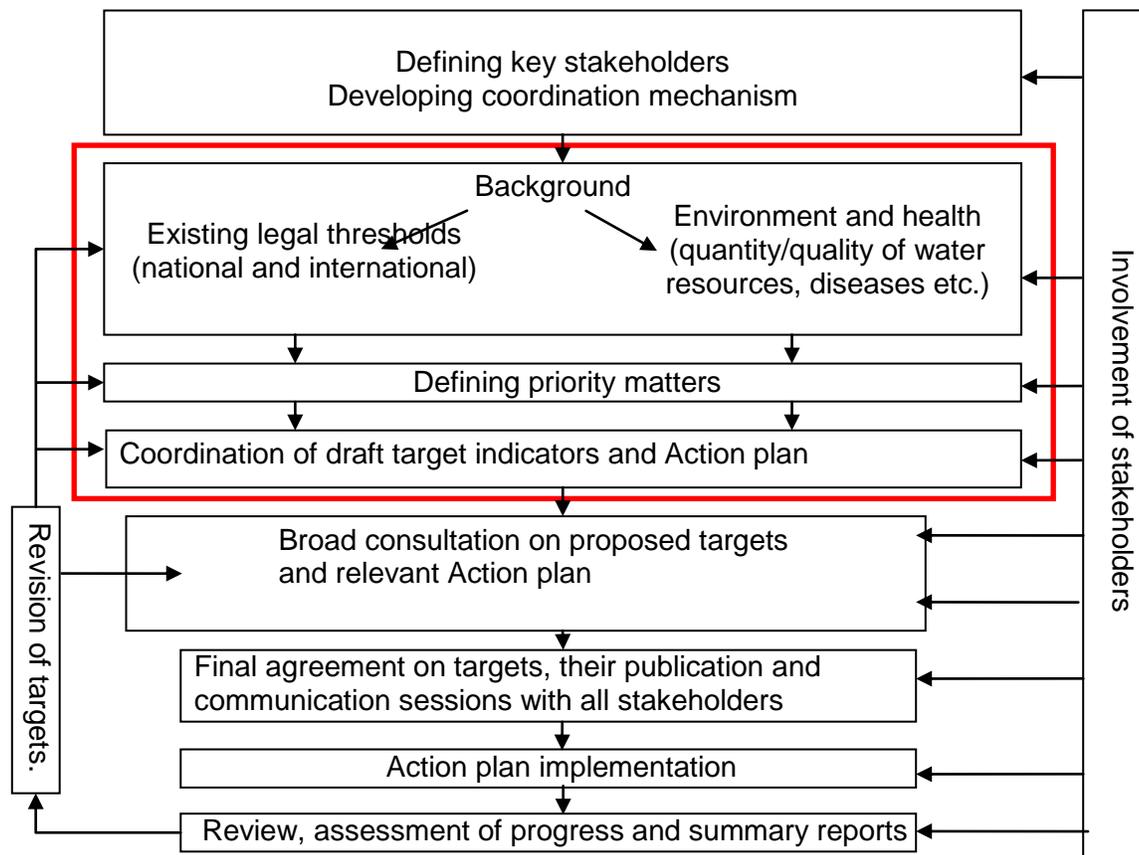
Project activities

Activities in Kyrgyzstan are based on the methodology developed by the Task force on indicators and reports (an ad hoc group for the Protocol on Water and Health) under the leadership of Switzerland.

This draft methodology, which will culminate in Guidelines, demonstrates the steps to be taken and aspects to be considered while establishing the targets, implementing relevant actions and preparing reports on assessment of progress in public health and sustainable water resource management in accordance with Articles 6 and 7 of the Protocol.

Nevertheless, the scope of the work should be adapted to specific national and local conditions of Kyrgyzstan. Specific measures for establishing targets and implementation of relevant actions are shown in Fig. 1.

Figure 1: Logical structure



Annex 1 shows key project activities for a period of one year.

During individual and collective consultations in April 2009 the division of responsibilities among key Ministries, Agencies and NGOs in establishing targets and indicators was tentatively agreed upon (see Annex 2).

Nevertheless, consultants, advisors and other experts must support these institutions in defining targets.

It should be noted that public participation, including participation of local, national and international NGOs, is a very important condition for setting the targets, since according to Article 6, paragraph 2, of the Protocol, the Parties “shall make appropriate practical and/or other provisions for public participation, within a transparent and fair framework, and shall ensure that due account is taken of the outcome of the public participation.

The budget of the project provides for long-term and short-term consulting services and NGO experts.

Long-term consultants will work on the matters related to public health services (15 corresponding provisions in Article 6); water resource management and environment (12 corresponding provisions in Article 6); and water supply and sanitation (12 corresponding provisions in Article 6). It is anticipated that short-term consultants will provide their expertise on administrative and institutional aspects, and will also assist in reporting according to the Protocol, including the activity of key Ministries and Agencies. Nominated representatives of NGOs will provide expert services on public participation, as indicated in 19 relevant provisions in Article 6 of the Protocol.

Preparation and implementation of such "appropriate practical and/or other provisions for public participation" is a part of the proposed Project. This envisages a project activity of "pursuing transparent and fair framework for the public participation" for the whole project. Practical steps (i.e. nomination of a NGO Coordinator, NGO management, nomination of an NGO representative at the Task Force and for the meetings of the Coordination Council) are part of the Project implementation.

Therefore the budget of the project includes financial support of local and national NGOs: (a) to organize the target-setting process (financial support for organizing three meetings of NGO representatives); and (b) to pay the fees directly to consultants (financial support for expertise and contribution to public participation in the frame of the Protocol).

Foreign organizations to be involved and the status of discussions

- UNECE and WHO Regional Office for Europe: will provide expert advice on established aims and targets and relevant summary reports. Logistical expenses of UNECE and WHO representatives participating in the meetings will be covered by the project budget.
- The European Commission: the project falls under the activities of the European Union Water Initiative as a part of the National Policy dialogue on integrated water resources management (version of October 30, 2008): co-financing of one of the meetings of the Steering Committee is part of the project proposal. Support for the project implementation will also be sought through the on-going and future projects of the European Union.
- Turkey (TIKA Agency): In the course of consultations between UNECE and Turkey in the beginning of May 2009, TIKA expressed its readiness to consider supporting the project.
- Other countries: Support for the implementation will be sought from Finland, Norway, Switzerland and other countries, as well as from international financial institutions during the second meeting of AHPFM in Geneva (July 1, 2009)

Action plan (Annex 4)

12 months: November 1, 2009 – October 31, 2010

Monitoring and assessment

1. An intermediate report will be presented 6 months after the launching of the project.
2. The final report will be presented upon the completion of the project, but no later than 30 October 2010.

3. Donors will establish a monitoring and assessment mechanism.
4. A publication will be completed no later than 3 months after the project completion.

Annex 1**Main activities within the framework of the project**

Activity/month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Project activity framework												
Establishment of the Coordination Council (on the basis of the existing Steering Committee for the National Policy Dialogue process on integrated water resources management under the EU Water Initiative)	x											
Establishing and implementing a transparent and fair framework for public participation	x	x	x	x	x	x	x	x	x	x	x	x
Target-setting activities												
Presentation of the Protocol to the stakeholders at the national level			x									
Baseline analysis (existing legal, institutional, managerial, financial basis; existing framework for public participation)	x	x	x	x	x	x						
Exploration of strategies and visions of key-players	x	x	x	x	x	x	x					
Gap analysis and prioritization of activities		x	x	x	x	x	x					
Agreement on a draft programme of measures supported by the main stakeholders						x	x					
Consultations with stakeholders on the programme of measures (governmental entities, private sector, water users, general public)							x	x	x	x	x	x
Development of relevant legal and administrative tools for implementation (e.g. draft governmental Order on targets and target dates and on reporting)							x	x	x	x	x	x
Drafting targets and target dates					x	x	x	x	x	x	x	
Agreement on targets and target dates												x
Publications and public relations work												
Publications and public relations work	Publication: At least 5 month after project end PR work, such as press conferences: continued, particularly during Steering Committee meetings											

Responsibilities of Kyrgyz organizations involved in the implementation of the project⁵

Relevant to Article 6 (2)	Description	Responsible organization
(a)	Drinking water quality	Ministry of Health
(b)	Reduction of outbreaks and incidents of water-related diseases	Ministry of Health
(c)	Area, territory or the population size/proportions to be served by collective drinking water supply systems or where the supply of drinking water should be improved by other means	Agency of local governments; "Bishkekvodokanal"
(d)	Area, territory, or the population size/proportions to be served by collective systems of sanitation or where systems of sanitation should be improved by other means	Agency of local governments; "Bishkekvodokanal"
(e)	Performance to be achieved by such collective systems and by other means of water supply and sanitation, respectively	Ministry of Health
(f)	Application of recognized good practices to the management of water supply systems	Ministry of Agriculture and Water; Agency of local governments; "Bishkekvodokanal"
	Application of recognized good practices to the management of sanitation systems	Ministry of Health
	Protection of waters used as sources for drinking water	Env. Protection Agency
(g)	Occurrence of discharges of untreated waste water	EP Agency
	Occurrence of discharges of untreated storm water	EP Agency
(h)	Quality of water from waste water treatment plants	EP Agency
(i)	Removal or reuse of sludge from collective systems or other sanitation installations	EP Agency
	Quality of waste water used for irrigation	Ministry of Agriculture and Water; EP Agency
(j)	Quality of water used as a source for drinking water	Ministry of Health, Agency of local governments; "Bishkekvodokanal"
	Quality of waters which are generally used for bathing	Ministry of Health

⁵ This list was examined during the meeting of the Steering Committee (17 June 2009); it will be updated during project implementation.

	Quality of waters used for aquaculture or for the production or harvesting of shellfish and crustaceans	<i>This item is irrelevant to Kyrgyzstan and does not require a definition of targets in according to Article 6 Paragraph 2 of the Protocol</i>
(k)	Application of recognized good practices in the management of enclosed waters generally available for bathing	Ministry of Health
(l)	Identification and rehabilitation of particularly contaminated sites	All organizations concerned
(m)	Effectiveness of systems for management, development, protection and use of water resources	Ministry of Agriculture and water; EP Agency
(n)	Frequency of publishing information	Coordination Committee

Requested funds

Category	Costs	Amount, USD
Local consultancy services	<p>1 Project manager (12 months) 1000 USD/month, in total 12,000 USD</p> <p>5 long-term national consultants (water resource management, water supply and sanitation, environment protection, public health service), 400 working days, 100 USD/day, in total 40,000 USD</p> <p>Technical experts from the administration (5 short-term experts on administrative and institutional aspects according to Article 6, as well as on reporting according to Article 7. 60 working days, 100 USD/day, in total 6,000 USD</p> <p>2 NGO experts (provisions for public participation) 40 working days, 100 USD/day, in total 4,000 USD⁶</p>	62,000 USD
International consultancy services	2 international consultants, 30 working days, 300 USD/day	9,000 USD
Meetings and workshops	<p>3 Steering Committee meetings: 15,000 USD</p> <p>6 working group meetings: 6,000 USD</p> <p>3 NGO coordination meetings 3,000 USD</p>	24,000 USD
Travel expenses and per diem	<p>Travel expenses of international consultants (1,600 USD per two persons): 3,200 USD</p> <p>DSA for 30 days (160 USD/day): 4,800 USD</p> <p>Travel expenses and DSA for UNECE staff and WHO Regional Office for Europe staff: 4 trips to participate in the Steering Committee meetings and/or working group meetings (12,000 USD)</p> <p>Local travel expenses for local participants, hotel accommodation: 3 trips to participate in the Steering Committee meetings (3,000 USD)</p>	23,000 USD

⁶ Representatives of NGOs propose to increase this budget item to 8,000 USD.

Preparation and publication of materials	Preparation of materials, booklet model drafting and design: 3,000 USD Publication of a booklet in the Kyrgyz, Russian and English languages: 21,000 USD Web site designed and population: 3,500 USD	27,500 USD
Other costs	Translation services (1000 pages, 10 USD/page)	10,000USD
Unforeseen expenditures		7,000 USD
Co-financing (International organizations)	Through the National Policy Dialogue on integrated water resources management (5,000 USD)	- 5,000 USD
Co-financing (national)	Contribution of the Government: leasing of the office (6,000 USD), office equipment (4,000 USD), communication costs (2,500 USD)	- 12,500 USD
<u>TOTAL</u>		<u>145,500 USD</u>

Annex 4**Implementation plan**

Outcomes of the target-setting activities	Objectives
Preparation of the presentation of the Protocol and targets in accordance with Article 6 to the stakeholders involved at national level	Preparation of the Coordination Council meeting
Presentation of the Protocol and targets according to Article 6 to the stakeholders involved at national level	Coordination Council meeting with the participation of Ministries and Departments involved in water resource management and protection and public health services.
Explaining the rationale of the Strategy and the vision of roles of various stakeholders in the process	Assessment of the current status of water and health problems. Developing a list of obligations of Ministries and Departments involved in water and health matters. Developing a list of objectives and relevant activities for the Ministries and Departments involved.
Analysis of existing problems and drawbacks	Current problems and drawbacks analysis. Scheduling further activities.
Harmonization of the joint programme supported by major stakeholders	Publication of the analysis of existing problems and drawbacks. Development of an action plan with a schedule of activities and expected outcomes. Targets and indicators must be established and agreed upon.
Distribution of the programme for more extensive consultations	Organization of meetings and workshops with the participation of the stakeholders. The outcome of these meetings shall be the Action plan, indicating precisely the responsibility of every stakeholder for their relevant activities.
Discussion of the programme by stakeholders	Approval of the Action Plan by all the stakeholders (communities, Ministries and Departments) at the national level.
Public communications on the programme within the meeting of the Coordination Council	Coordination Council meeting dedicated to public communication about the program, objectives and targets.
Establishing monitoring indicators	Developing targets to be used for monitoring and assessment of progress by key stakeholders. Indicators will reflect various activities to be implemented by various stakeholders at the national and local levels. They will comply with parameters adopted by the Parties during the meetings.
Coordination of assessment methods	Approval of indicators for assessment methods.
Establishing the format and frequency of national reports. Establishing format and contents of the final report within the meeting of Coordination Council.	Coordination Council meeting to develop a structure of the national report to meet the requirements and standards of already existing mechanisms of report presentation. This report will provide assessments of progress.
Publication of the results	Preparation of materials, booklet modeling, drafting and design. Publication of a booklet in the Kyrgyz, Russian and English languages.

Annex 5

Water-related diseases in Kyrgyzstan⁷

Drinking water quality and the health of the population

206 water supply systems (19.1%) in Kyrgyzstan lack adequate sanitary protection zones, water treatment facilities or decontamination plants. Delivery of water by the hour and the physical depreciation of the water supply networks result in emergency situations and contribute to drinking water contamination with microbial and chemical agents.

The highest levels of bacterial pollution of the main water have been observed in the populated areas in the Issyk-Kul (20.8%), Jalal-Abad (18.5%), Chu (14.0%) regions and in the city of Osh (16.7%).

Degradation of water bodies in the areas of public water use

Discharges of contaminated wastewater from industrial and agricultural sources, effluents from the fields as well as population's economic activities have the greatest effects on the watercourses in the Chu and Syr Darya river basins. In 2008, between 6.7 and 7.3% of surface water samples used for public use did not meet the sanitary standards for chemicals and between 16.1 and 17.0% of the samples did not meet the standards for microbial quality. Effluents treated to standard quality account for only about 36% of the total volume of wastewater.

Disproportions in the development and a poor state of the water supply and sanitation systems

84.2% of the population of the Republic of Kyrgyzstan has access to centralized drinking water supply systems, yet sanitation is only available in 28.4% of the cities and urban settlements and in about 3% of the rural settlements. 40% of the 350 wastewater treatment facilities do not provide effluent treatment to standard quality.

Waste water treatment plants on the coast of Lake Issyk-Kul are in a poor condition. No decision has been taken on the issue of building a wastewater pumping station in the city of Jalal-Abad and local area treatment facilities in the town of Mailuu-Suu, hence the rivers Changuetsai and Mailuu-Suu remain permanently polluted. Wastewater in the city of Naryn is only subjected to mechanical treatment and is discharged into the river Naryn. Wastewater treatment facilities in the towns of Min-Kush and Dostuk of the Naryn region are practically out of operation. Treatment facilities in the town of Kara-Suu have not been operating since 1990.

Anthropogenic environment pollution with toxic waste from mining industries

There are statistical records on 36 tailing dumps and 25 mining waste heaps. Of particular concern are the tailing dumps that have been set up in the towns of Mailuu-Suu, Min-Kush, Shekaftar, Sumsar, Kaji-Sai, Ak-Tiuz and Kann. Landfills for waste that is not recyclable occupy 162.3 hectares of land. The volume of waste deposited in mining waste heaps and tailing dumps is over 700 mln. m³.

⁷ As provided by the Ministry of Health on 3 June 2009

Trends towards higher rates of enteric infections

The incidence rate of acute enteric infections remains high and has increased by 10.6% since 2007 (478.9 in 2007 and 535.9 in 2008). Age-wise, 75.9% of those affected are children under 14, of which 32.4% are children under 1 year. The highest incidence rate is observed in the Jalal-Abad, Osh, Talas regions and in the city of Bishkek.

80 cases of paratyphoid and 116 cases of typhoid fever were reported in 2008. The Jalal-Abad region has been for a number of years an area of particular concern in terms of typhoid and paratyphoid diseases: 100 cases in 2006, 159 cases in 2007 (the Nookan district and the town of Mailuu-Suu account for 88.1% of all cases). Inadequate supply of good quality drinking water results in people using water from unsafe sources. This remains the principal cause of infection with typhoid fever.

Assistance is needed for:

- Setting health-related targets as per the Protocol on Water and Health;
- An expert evaluation of the prevalence of water-related diseases;
- Developing and implementing a programme of surveillance of water-related diseases;
- Organizing training activities;
- Strengthening the laboratory service in regions with increased rate of acute enteric infections and parasitic diseases (test systems identifying agents of typhoid and paratyphoid diseases, quick test methods, etc.);
- Implementing the Bathing Water Quality Directive;
- Implementing computerized monitoring of drinking water quality at the Centres of State Sanitary and Epidemiological Surveillance in the Chu, Jalal-Abad, Osh and Batken regions;

Given the close relationship between water supply, sanitation and hygiene, the Taza Suu project was designed to reduce the incidence rate of acute enteric infections among the general public.

First, it should be noted that the allocation of credit funds were not earmarked to the regions with high incidence rates, or to tackling the problems of waste water treatment in a meaningful way. The originally planned volume of new construction and renovation of rural water supply systems under the project has decreased almost twice, users' homes have not been connected to the water supply system, and the selection of new sources of water and their protection zones has not been based on available evidence.

Sustainability of the ADB project "Availability of infrastructural services at the local habitat level" has been negatively affected by the lag in the implementation of the educational component that only started in the second half of 2006.

At the same time, limited availability of water worsens the conditions of using it for personal and household hygiene, making it difficult to develop lasting skills of personal and social hygiene. To date, almost 30% of schools and 20% of pre-school children's establishments have no access to mains water and 70% and 40%, respectively, are not connected to centralized sanitation systems.

According to the regional centers of state sanitary surveillance, 206 water supply systems (19.1%) do not meet sanitary standards, lack adequate sanitary protection zones, water treatment facilities or decontamination plants. Over 5000 standpipes (17.3%) across the republic are out of order. Delivery of

water by the hour and the physical depreciation of the water supply networks result in emergency situations and contribute to drinking-water contamination with microbial and chemical agents.

All these circumstances together cause a high rate of morbidity among the public, including children, from acute enteric infections and parasitic diseases.

The incidence rate of the **general group of enteric infections** remains steadily high and has increased by 10.6%, from 478.9 in 2007 to 535.9 in 2008. For two years high incidence rates have been observed in the Talas and Batken regions and in the city of Bishkek, where the rates are, respectively, 1.5, 1.4 and 1.6 times higher than the national average rate. As for the age distribution of those affected, 75.9% are children under 14, of which 32.4% are children under 1 year. The highest incidence rates are found in the Jalal-Abad region (figures are per 100,000), Osh region (478.1) and Talas region (450.4) and in the city of Bishkek.

The aetiological pattern of dysentery is dominated by *Shigella flexneri* – 73%, which is characteristic of the water route of infection. Around 45000 cases of parasitic diseases are reported in the country annually.

According to official statistics, the annual economic cost of parasitic diseases in the population is about 100,000 US dollars. Studies by Chemonix Inc. and the Finnish Environment Institute estimated annual losses incurred by Kyrgyzstan due to the treatment of water-borne diseases to be 125 million US dollars. Estimates of economic losses related to water supply usually do not include costs of health rehabilitation.

It is well known that better access of the population to sources of safe drinking water can reduce morbidity and mortality from diarrhoeal diseases by 15% and by a further 55% if the population's health culture is improved and the urban and rural settlements are better developed.

To prevent the sanitary and epidemiological situation worsening due to the poor condition of the water supply facilities, the republic's sanitary and epidemiological service imposed administrative sanctions: 85 senior officials have been fined, 23 case files have been handed over to the prosecutor's offices and other law-enforcement authorities, operation of 21 facilities has been suspended, and 87 people have been dismissed.

At the Fourth Session of the Coordination Council it was indicated that in addition to higher tariffs substantial financial support will be required from donors and the government, if the Millennium Development Goals on the population's access to safe drinking-water and adequate sanitation are to be achieved. This is in accordance with the key outcomes of the National dialogue on sectoral policies.

Typhoid fever

The incidence rates of typhoid fever and paratyphoids remain a serious public health problem in the republic. In 2008, a high incidence rate of paratyphoids was observed in the country, with 80 cases reported (1.6 per 100,000 of population), the rate of typhoid fever remaining at the level of the previous year – 116 cases, or 2.3 per 100,000.

The Jalal-Abad region has been an area of particular concern for a number of years in terms of typhoid and paratyphoid diseases: 100 cases in 2006, 159 cases in 2007. However, incidences of paratyphoid and typhoid in the Nooken district and the town of Mailu-Suu account for 88.1% of all cases.

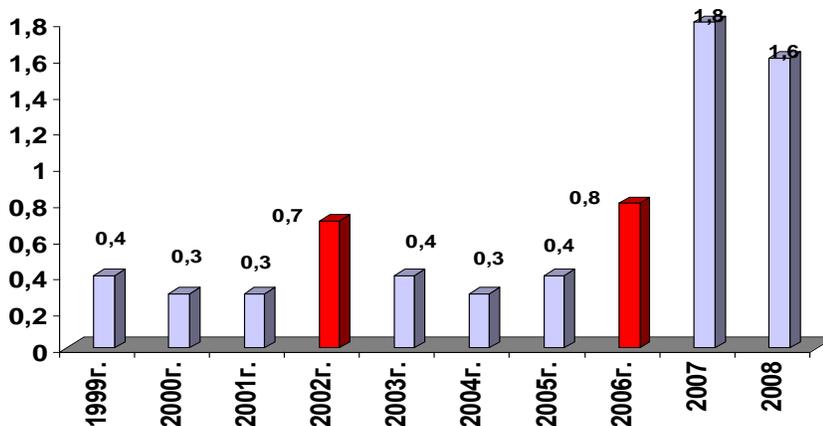
Inadequate supply of the population with drinking-water continues to be the principal cause of both typhoid fever and enteric infections.

The epidemiological situation with paratyphoid B continues to cause concern across the republic, with 39 cases (2008) reported in the city of Osh (against 48 in 2007), 10 cases in the Osh region (against 18 in 2007), 5 cases (against 10 in 2007) in the Batken region and 26 (against 11 in 2007) in the Jalal-Abad region. It should be noted that the annual reporting of the incidence in these areas has alerted health professionals to typhoid fever, which is why no incidents have been recorded of late diagnosis, complications or mortality.

To carry out immunisation of the population of the southern regions against typhoid fever, the Ministry of Health of the Kyrgyz Republic since early 2008 has been negotiating with the company Berna Biotech of Switzerland with a view to purchasing the vaccine Vivotif against typhoid fever. The populations to be vaccinated in the regions of concern in terms of typhoid fever have been identified, and vaccine deliveries have been scheduled for 2009.

Figure 1 Trends in the incidence rate of paratyphoid in the Kyrgyz Republic in 1999-2008

Динамика заболеваемости паратифом в Кыргызской Республике 1999-2008гг.



Annual reporting of the incidence in these areas has alerted health professionals to typhoid fever, enabling them to provide timely diagnoses, perform appropriate treatment and avoid complications and lethal outcomes.

Acute enteric infections

The pattern of acute enteric infections is as follows: 25.4% are cases of gastroenterocolitis with an unknown causative agent, 61.2% gastroenterocolitis with a known causative agent, and 17.3% bacillary dysentery.

The aetiological pattern of dysentery is 73.0% *Shigella flexneri*, 15.7% *Shigella sonnei*, 11% others. The group of gastroenterocolitis with a known causative agent is dominated by *St. aureus*, *Klebsiella*, *Proteus*, *Citrobacter* and *Enterobacter*.

Children's mortality from acute enteric infections (diarrhoeal diseases) remains high. In 2008, 151 children under the age of 14 died (98.6% of total cases), including 111 children (72.5%) under 1 year of age. The highest children's mortality in 2008 was in the Osh region where 51 children under 14 died from diarrhoea, of which 40 children (78.4%) were under 1 year of age. In the Batken region 41 children under 14 years of age died.

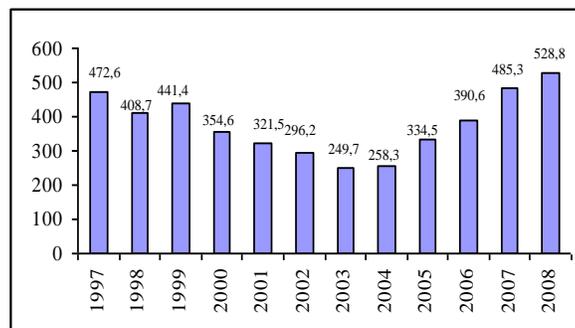
Overall, the high incidence rate of acute enteric infections is due to inadequate health education among the children and among a considerable portion of the adult population, against the background of poor supply of good quality drinking water, particularly in rural areas, as well as due to widespread unregulated street food trade.

To prevent importation and spreading of enteroviral infections in the Kyrgyz Republic, the Chief state sanitary officer issued regulation No. 37 dated 7 May 2008 instructing virology laboratories at health facilities to raise their level of preparedness for possible cases of this disease, both actual and suspected, and to ensure that they are provided with laboratory diagnostics.

The national laboratory of virology at the department for state sanitary and epidemiological surveillance of the Ministry of Health of the Kyrgyz Republic has been working to diagnose poliomyelitis and enteroviral infection from cases of acute flaccid paralysis, contact and healthy persons from high-risk groups and neurological cases, as well as to test samples from background objects.

89 virology tests of samples of effluents and water from open water bodies were performed in 2008 for polio- and enteroviruses, rotaviruses and viral hepatitis A antigen.

47% of the total volume of diagnostic tests in the Republic was tests performed to confirm the group of enteric infections.

Figure 2 Trends in the incidence rate of acute enteric infections in the Kyrgyz Republic, 1997-2008**Динамика заболеваемости ОКИ
по республике 1997-2008 гг.****Table 1. Percentage of cases of bacillary dysentery and opportunistic pathogenic bacteria in patients with acute enteric infection (AEI) confirmed by coprological tests in laboratory in 2008**

	Name of the regional state surveillance centres	Total AEI	of which					%
			Bacillary dysentery	Confirmed by lab. tests, %	GEC known.	Confirmed by lab. tests, %	GEC unknown.	
1	Naryn	1027	39	28	269	27	719	73
2	Karakol	1780	134	69	879	53	769	47
3	Talas	1569	72	24	448	30	1049	70
4	Tokmok	4317	614	48	545	15	2644	85
5	Osh (city)	1365	93	73	372	29	746	71
6	Karasuu	3526	37	51	747	21	2742	79
7	Jalal-Abad	4139	400	83	1386	37	2357	63
8	Batken	3227	162	13	377	12	2540	88

The high rate of laboratory confirmation of dysentery and AEI is observed in the Issyk-Kul and Jalal-Abad regions. The table above shows that the percentage of dysentery cultures in the Talas, Naryn and Batken regions is low. Laboratory confirmation of acute enteric infections is poor in the Chu, Osh and Batken regions.

The pattern of shigellosis in 2008 was as follows: 84% *Sh. flexneri*, 14% *Sh. sonnei*, 3.7% *Sh. boydii*, which indicates the predominance of the water and nutrition factors in the spreading of enteric infections.

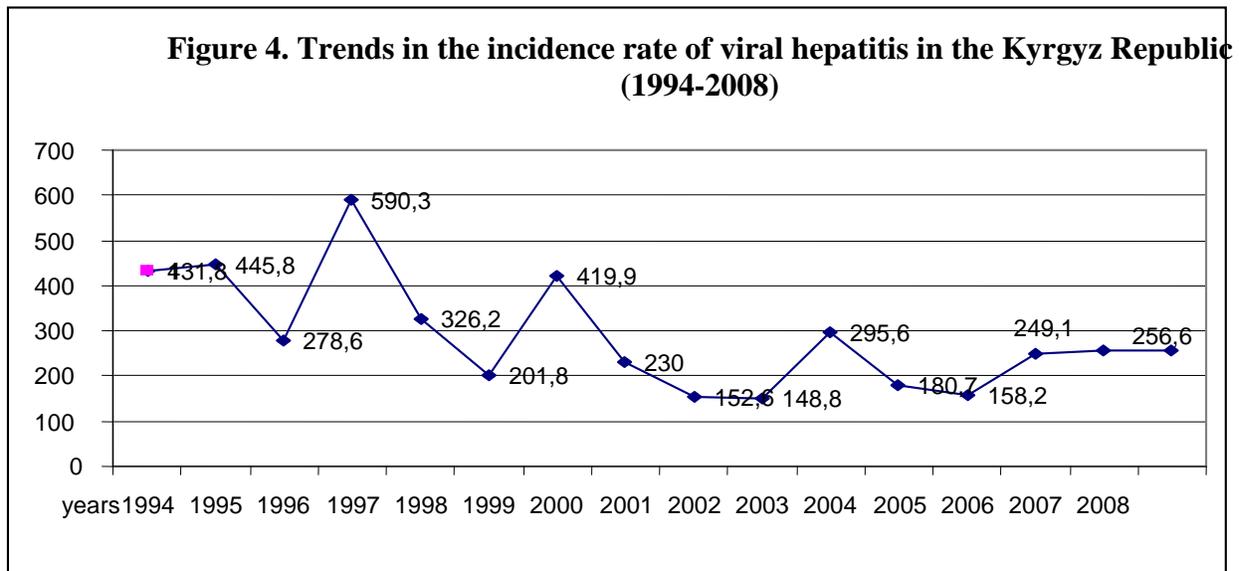
Figure 3. Mortality from AEI in the Kyrgyz Republic in 2000-2008, in absolute figures



13184 cases of viral hepatitis were reported in 2008, as against 12970 cases in 2007 (intensity rate 256.6 as against 249.1), the increase being 2.9%.

The aetiological pattern of viral hepatitis in 2008 was 94% hepatitis A, 5% hepatitis B and 1% hepatitis C. Contributors to the increase in viral hepatitis A were the Batken region where the intensity rate is (422.9 these per 100,000 population), the Talas region (334.3), the Osh region (276.0) and the city of Osh (264.8), the national rate being 239.0.

The long-term trends in the incidence rate of viral hepatitis over the period 1994-2008 show an increase due to viral hepatitis A with its characteristic periodical increases every 3-4 years. The peak was observed in 1997 when the national rate was as high as 590.3, while the lowest rate was reported in 2003 – 148.8.



Considerable progress has been achieved in reducing the incidence rate of viral hepatitis B in children of the inoculation age (under 4 years), and a reduction by a factor of more than 20 is observed in the number of hepatitis B cases among those who have not been inoculated due to the age limitation.

92.3% of health workers at the country's health facilities who are at risk of contracting the infection were vaccinated with three doses against hepatitis B in 2008. No cases of hepatitis B were reported among the vaccinated health workers.

Persons between 20 and 29 years of age still remain the most significant age group at risk for viral hepatitis B, accounting for 37% of all cases.

In 2008 the incidence rate of viral hepatitis C remained at the level of 2007, with 154 reported cases as against 153 in 2007. As for the age distribution of the incidence rate, adults above 20 years were the predominant age group accounting for 88.3% of all cases. The greatest number of cases was recorded in the age group 30-39 years of age (24.6%) and in the group above 40 years (54.4%).

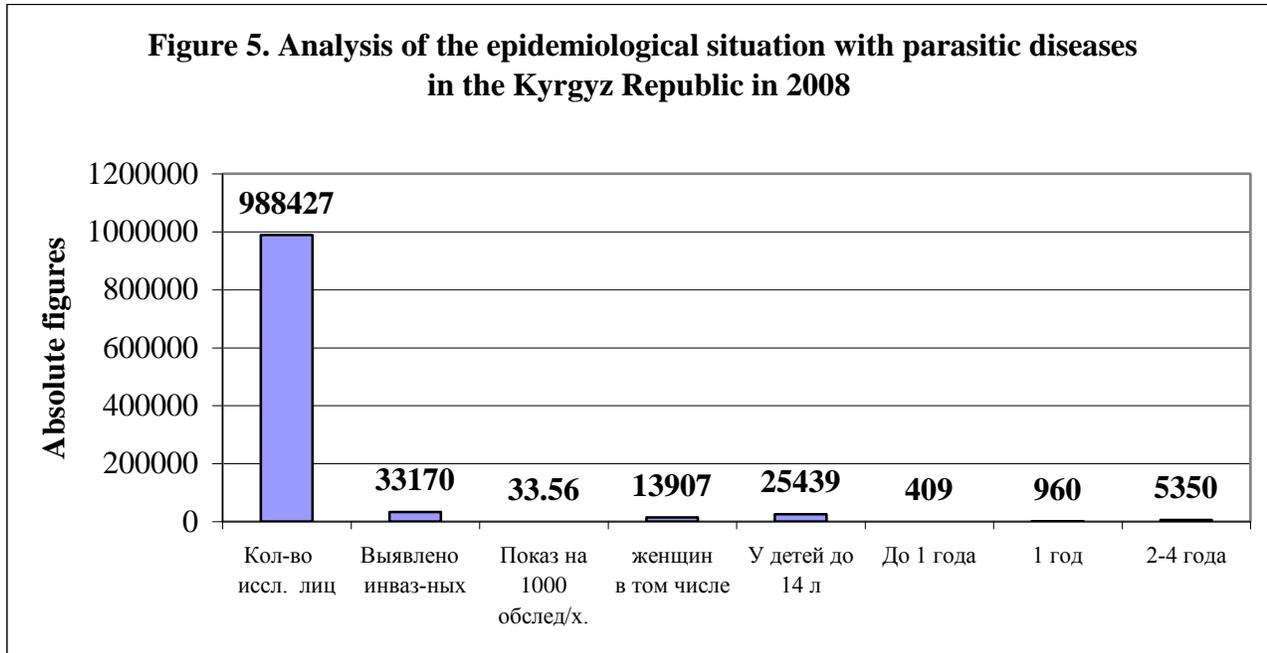
Given the exposure of health workers to viral hepatitis infections, an immunisation campaign has been conducted among them covering 14500 persons in all regions of the republic.

About 40-45% of cases of communicable diseases are helminthiasis. The high rate of helminthic infection in the general population is due to failure to observe personal hygiene, as well as due to poor water quality. Officially, between 35000 and 45000 people are registered in the country every year as infected with helminths. According to a DFID project on rural hygiene and sanitation, between 61% and 79% of children in some villages were infected with the agents of the four principal parasitic infections – enterobiasis, ascariasis, lamblia and hymenolepiasis. The occurrence of parasitic diseases is still an urgent public health problem. The proportion of parasitic diseases in the overall pattern of infectious pathology is rather high and in 2008 was 33%. Given the importance of the problem, a targeted integrated programme has been developed in the Kyrgyz Republic for the period 2007-2011 to combat parasitic diseases, aiming to prevent and reduce these diseases.

A mass campaign of dehelminthisation and social mobilisation of the population was conducted in the Batken region with technical support from the Vishnevskaya-Rostropovich Foundation and

international agencies operating in Kyrgyzstan. Two rounds of dehelminthisation were carried out, covering 96.5% of the region's population (356297 people, twice – in April and in October 2008). As a result, the rate of helminthic infestation of the population decreased from 70% to 21.4%. Similar action is planned in the rest of the republic.

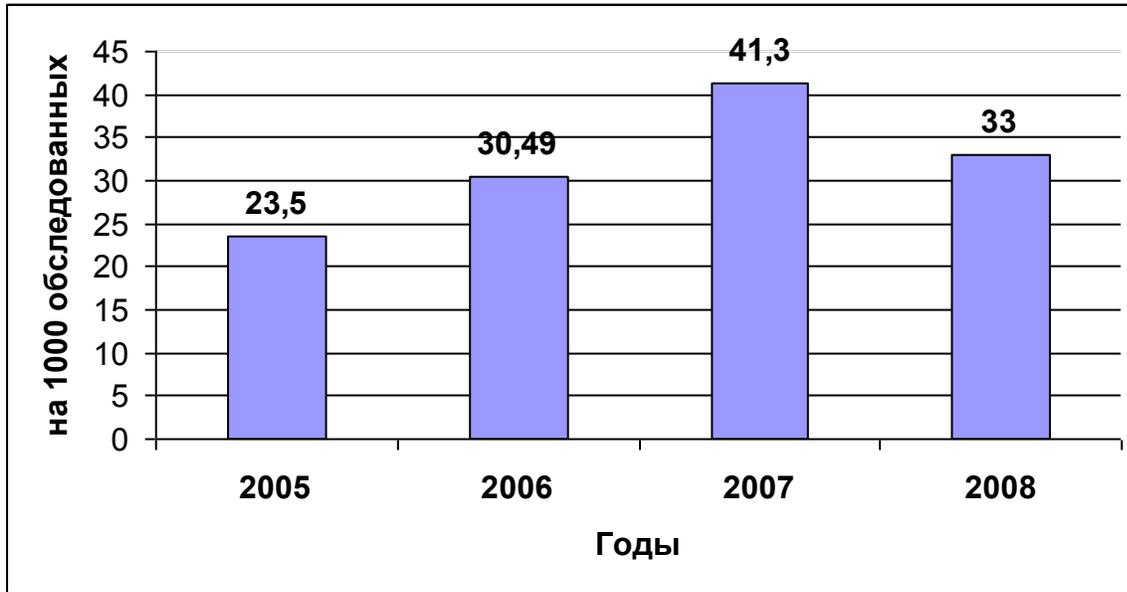
988427 parasitology tests were performed in the Kyrgyz Republic in 2008 detecting only 33170 cases of parasitic disease (3.3%) as against 29419 cases (2.7%) in 2007, which testifies to improved diagnostics used in detecting the disease.



Of the 33170 cases of parasitic diseases detected (33.56 per thousand tested), 13907 are women (41.9%), 25439 are children under 14 years of age (76.7%), 409 are children under 1 year (1.2%), 960 are children of 1 year (2.9%) and 5350 are children between 2 and 4 years of age (16.12%) (see figure above). As shown in figure 5, children under 14 years of age account for 76.7% of the infested cases, with school age children and children between 2 and 4 years suffering most.

Although the general level of parasitic diseases has been decreasing, the proportion of helminthiasis has remained high over the past 7 years.

Figure 6. Trends in the rate of helminthic infestation of the population of the Kyrgyz Republic in 2005-2008, per thousand tested



Of the total number of cases of parasitic diseases detected in the Kyrgyz Republic, 82.4% were cases of helminthiasis and 15.01% were protozoa.

Enterobiasis accounted for the largest share in the pattern of helminthiasis. Data for 2008 show that enterobiasis occurred in 53% of cases, ascariidiasis in 25%, hymenolepiasis in 3.9%, lambliasis in 15.0%, echinococcosis in 2.3%, alveococcosis in 0.13%, beef tapeworm infection in 0.19%, teniasis in 0.06%, opisthorchiasis in 0.006% and toxoplasmosis in 0.04%.

