BASELINE ASSESSMENT OF ACCESS TO WATER, SANITATION AND HYGIENE IN SCHOOLS AND HOSPITALS

IN THE NORTHERN OBLASTS OF KYRGYZSTAN (ISSYK KUL, NARYN AND TALAS)

unicef
Baseline Assessment of Access to Water, Sanitation and Hygiene in Schools and Hospitals in the Northern Oblasts of Kyrgyzstan (Issyk Kul, Naryn and Talas)

This publication presents the results of a baseline analysis of national-level statistical material on sanitation, hygiene and access to safe water, and the results of quantitative and qualitative research in three regions of the country. The research also considered issues such as the sanitary and hygiene situation in the Kyrgyz Republic, access to clean drinking water, and awareness of sanitary and hygiene procedures. In addition, risks connected to the level of hygiene and sanitation in schools and healthcare institutions in Naryn, Issyk Kul and Talas Oblasts of Kyrgyzstan were evaluated.

This research was carried out in the framework of a BIOM environmental movement project, with the support and commission of UNICEF’s Water, Sanitation and Hygiene Programme.

The research reflects the opinions of the authors, but not necessarily the positions of the Ministry of Health and UNICEF.

**Reviewers:**

* N. Vashneva, Leading Specialist, Department of Sanitary Epidemiological Surveillance, Ministry of Health
* I. Marchenko, Head of Department, Ministry of Education and Science; A. Choytonbaeva, Director, Kyrgyz Alliance for Water and Sanitation.

The translator of this research are
Contents

List of abbreviations ................................................................................................................................................................. 4

Introduction .................................................................................................................................................................................. 5

The main socioeconomic tendencies in the context of access to water and sanitation in the studied oblasts ................................................................................................................................................................................................. 9

Government policy in the field of access to water, sanitation and hygiene in schools and hospitals in the northern oblasts of Kyrgyzstan, and the organisations involved .................................................................................................................................................................................. 23

Focus 1 – Access to water, sanitation and hygiene at school level ........................................................................................................ 28

1.1. The main characteristics of schools in Talas, Naryn and Issyk Kul Oblasts .................................................................................. 28
1.2. Access to water, hygiene and sanitation in schools in the studied oblasts .................................................................................. 29
1.3. Personal hygiene of students .................................................................................................................................................. 33
1.4. Access to water and sanitation and the health of pupils ........................................................................................................ 39
1.5. Sanitation and hygiene issues in the educational process ........................................................................................................ 45
1.6. Problems with rubbish in the school grounds .................................................................................................................................. 51

Focus 2. Access to water, sanitation and hygiene in rural health points and hospitals ........................................................................................................................................................................................................ 51

2.1. The public health service .................................................................................................................................................. 51
2.2. The topicality of the problem .................................................................................................................................................. 53
2.3. Access to clean drinking water and hygiene in rural health points .......................................................................................... 56
2.4. The link between disease and access to water .................................................................................................................................................................................. 59
2.5. Access to sanitation .................................................................................................................................................. 60
2.6. Rubbish on rural health point grounds and supervision of it ........................................................................................................ 62

Focus 3. Evaluation of the state of sanitation and hygiene in local communities with the example of markets and trading points .................................................................................................................................................................................. 66

3.1. Administration of access to safe water, sanitation and hygiene in markets .................................................................................. 66
3.2. Financial mechanisms to improve the quality of sanitation and hygiene, and access to safe water ........................................................................................................................................................................................................ 67
3.3. Evaluation of the condition of markets .................................................................................................................................................. 69

Research methodology ........................................................................................................................................................................ 71

Appendix 1. Research maps ................................................................................................................................................................. 75

Appendix 3. Responsibility for and monitoring of the condition of safe drinking water sources ........................................................................................................................................................................................................ 78
### List of abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>CDF</td>
<td>Country Development Framework</td>
</tr>
<tr>
<td>CDS</td>
<td>Country Development Strategy</td>
</tr>
<tr>
<td>CIS</td>
<td>Commonwealth of Independent States</td>
</tr>
<tr>
<td>DDT</td>
<td>1,1,1-trichloro-2,2-di(4-chlorophenyl)ethane - insecticide</td>
</tr>
<tr>
<td>DFID</td>
<td>UK Department for International Development</td>
</tr>
<tr>
<td>FDG</td>
<td>Family Doctor Group</td>
</tr>
<tr>
<td>FMC</td>
<td>Family Medicine Centre</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GMPC</td>
<td>General Medical Practice Centre</td>
</tr>
<tr>
<td>HIO</td>
<td>(Family Medicine Centre) Health Improvement Office</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
</tr>
<tr>
<td>RHP</td>
<td>Rural Health Point</td>
</tr>
<tr>
<td>SanPiN</td>
<td>Sanitary Rules and Norms (Russian acronym)</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>SSESD</td>
<td>State Sanitary Epidemiological Surveillance Department, Ministry of Health</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>VDWUA</td>
<td>Village Drinking Water Users’ association</td>
</tr>
<tr>
<td>VHC</td>
<td>Village Health Committee</td>
</tr>
<tr>
<td>WHO</td>
<td>(United Nations) World Health Organisation</td>
</tr>
</tbody>
</table>
Introduction

Sanitation and hygiene are important aspects of the life of modern society. This was not always the case, but with the beginning of sedentary life and large concentrations of people, these issues became more and more acute. The danger of spread of infections and parasitic diseases began to grow – this is no longer just an individual problem of the person suffering, but also becomes a collective threat to any settlement, from a small village to a megapolis. After the dissolution of the Soviet Union, the level of sanitation and hygiene in the Kyrgyz Republic, like in all the other former Soviet republics, fell significantly. This is testified to by the growth in infectious and parasitic diseases associated mortality, including that resulting from limited access to clean drinking water.

Drinking water is a key environmental factor, which can have both positive and negative impact on human health.

In order to ensure public health, through preventative measures and otherwise, the condition, quality, and specificities of drinking water should be determined. These, along with effective systems for cleaning and disinfecting, and also the degree of wear and tear of water supply systems with the potential to lead to secondary pollution, is closely connected to the sources and natural properties of water, which varies in different territories.

The second most important factor for the preservation of public health is practice based on understanding the importance of observing sanitary and hygienic norms and rules. Hygiene and sanitation are important parts of our daily lives. Understanding hygiene norms and applying hygiene skills are essential for prevention of disease, increasing the population’s ability to work and combating organisms that negatively affect the environment.

However, the sanitary system of Kyrgyzstan’s society is in deep crisis today. This sanitary crisis is fraught with serious consequences for the lives of the population and their abilities to make a living. The most serious consequence of this crisis is its effect on youth. Children are often deprived of information about healthy lifestyles and access to essential quality products important for their lives is difficult for them.

This publication presents the results of a baseline assessment of statistical material about sanitation, hygiene and access to drinking water at the national scale, and also the summarised results of qualitative and quantitative research in three regions – Issyk Kul, Talas and Naryn. The research was carried out in March and April 2011.

The main aims of the research, initiated by the UNICEF WASH programme, were to carry out an integrated assessment of current sanitary and hygienic possibilities along with access to clean drinking water, awareness about sanitary and hygienic procedures in schools and healthcare institutions, the impact of the community’s consumption level on accessibility and safety of drinking water, sanitary conditions in public places, and also risks connected to the level of hygiene and sanitation in Naryn, Issyk Kul and Talas oblasts.

In order to reveal the overall situation in the field of sanitation and hygiene for the purposes of this project, the research stage included analysis of existing statistical data provided by the National Statistical Committee, the Ministry of Education and Science, the World Health Organisation, the Centre for State Sanitary Epidemiological Surveillance of the Ministry of Health, and the Ministry of Health itself. Subsequently integrated qualitative and quantitative sociological research was carried out in the regions.

The research authors are grateful to specialists from the Leader Centre for Civil Initiatives (Issyk Kul Oblast), Agenty Peremen (Talas Oblast) and the NGO Resource Centre (Naryn Oblast), which directly participated in the research and collected survey data in the oblasts; and also all the experts and reviewers for their valuable commentary and suggestions that have led to a more accurate and high quality research report.
Overview of the research

The main conclusions of the research are as follows:

I. The urgency of problems in access to safe drinking water, sanitation and hygiene in the regions

- The results of the survey revealed that the problem of sanitation and hygiene is one of the three most urgent problems, along with unemployment and economic instability, in all three of the researched regions of the country. About a third of school directors interviewed in Issyk Kul Oblast (37.6 per cent), Naryn Oblast (34.0 per cent) and Talas Oblast (30.0 per cent) also stated that insufficient access to safe drinking water was also a serious problem. Problems related to sanitation and hygiene worry urban residents more than people in rural areas.

II. Water supply

- Respondents, in many cases, are forced to use water from open sources, faulty water supply systems and other problematic means. Drinking water is most often supplied to houses in Issyk Kul Oblast (40 per cent of schoolchildren interviewed). Just 15 per cent of those interviewed from Naryn and Talas Oblasts have water at home. Water is drawn from wells by 23 per cent of residents of Naryn Oblast and 20.6 per cent of those in Talas Oblast. A lack of water for constant use is most often seen in Talas Oblast (24.6 per cent) and Naryn Oblast (13.0 per cent). In Naryn Oblast several sources of drinking water are used: unprotected springs close to the home (8 per cent), supplies of supply system water in plastic canisters (9.2 per cent) and others.

- The research indicates that only 27 out of 60 schools always have water, 17 never have water, while the other administrations answered that they have water “sometimes” and “rarely”. Out of the 60 schools, there is not and never has been a centralised sewage system in 31 schools, and only 8 schools have a sewage system in working order.

- Ministry of Education and Science statistics from a multifactor analysis of 330 out of 438 studied educational institutions show that the most problematic water supply is for schools in Talas Oblast – only every third school has access to water. There is only a sewage system in three schools out of 109. In Naryn Oblast the situation is not less difficult – there is water supply in 31 out of 58 educational institutions studied and sewage in just 11. In Issyk Kul Oblast there is water in 144 out of 163 schools, and a sewage system in 11 schools.

III. Hygiene and sanitation

- According to the administrators of the schools studied, hygiene problems are most pressing in Naryn Oblast: 60 per cent of directors and deputies noted them as among the most pressing. In Talas Oblast, 47.4 per cent of administrators interviewed believe that hygiene and sanitation issues are acute and priorities on a par with others. In Issyk Kul Oblast, 55 per cent of directors believe this to be a problem on a par with others. The severity and lack of resolution of these problems is higher in schools in rural areas than those in towns.

- In most of the studied schools, there have never been sewage or water supply systems: this is true of 70 per cent of Naryn schools and almost half of those in Issyk Kul and Talas Oblasts. The biggest number of sewage systems in working order were in Issyk Kul Oblast (a quarter of surveyed schools). However, 5 per cent of surveyed schools in Issyk Kul Oblast do not even have a toilet on school territory.

- In practically all the rural schools, the toilet was located on school territory or nearby. In 14.3 per cent of urban schools, it is inside the building. In most cases, school toilets are old, dirty constructions of plank, cinderblock or bricks, kept in unsanitary conditions. During the interviews, most school directors noted that during the last year the septic tanks have never been emptied.
Baseline Assessment of Access to Water, Sanitation and Hygiene in Schools and Hospitals in the Northern Oblasts of Kyrgyzstan

- At the same time as monitoring, the research also included getting a subjective assessment from pupils of the level of cleanliness of school toilets. Pupils in all the regions answered that their toilets are not clean. The most common answers were "in general not clean" (35.1 per cent) and "always dirty" (27 per cent). Pupils in Talas Oblast most often found their toilets clean (40.1 per cent), while this was true least often in Naryn Oblast (24.1 per cent). In general most of the interviewed pupils in Naryn Oblast considered their toilets not clean (72.8 per cent). At the same time, more than half of those interviewed in Issyk Kul and Talas Oblast also considered their toilets dirty (56.2 and 57.1 per cent respectively).

- Water is boiled in schools just for the breakfasts of 1st to 4th grade children and in odd cases these children have access to water to wash their hands. The school directors stated that they have soap for washing hands, but visual observation made it clear than the children had neither soap, nor towels nor tissues in the schools.

- The research data showed that most pupils do not wash their hands at school. Thirty three per cent of teachers surveyed in Issyk Kul schools noted that pupils, as a rule, do not wash their hands at school. The number of such pupils in Naryn and Talas Oblasts was 46.2 and 41 per cent respectively. These are very high levels, indicating a problem that might in the future lead to disease. Among all the schools, the situation is as follows: in general pupils wash their hands infrequently (19.4 per cent) and very rarely (19.4 per cent). Only 18.4 per cent of teachers said that children wash their hands after going to the toilet. Meanwhile, 2.5 per cent of teachers don’t even know if children wash their hands at school or not.

IV. Disease

- Almost a quarter of pupils in the researched schools connect the transmission of disease with non-observance of rules of personal hygiene. The highest rate of disease was noted in Talas Oblast. Centre for State Sanitary Epidemiological Surveillance data shows that a rate of acute intestinal infections in Talas Oblast in 2010 of 668.7 cases per 100,000 population. In Naryn Oblast the rate was 341.9 and in Issyk Kul Oblast 307.4.

V. Awareness of hygiene and sanitation issues

- During the research it was revealed that no special lessons on hygiene are foreseen in the study plan of the Ministry of Education and Science. There was such practice in the Soviet period, when there was a so-called "school component" which should have included lessons on issues such as hygiene education, healthy lifestyles and so on. Currently school administrators are independently making decisions about carrying out such lessons in guidance tutorials or specially allocated time. However, as of 1 September 2011, 1st to 6th grade classes in Kyrgyzstan have safe lifestyle classes, which include hygiene components.

- In all the studied schools, a high percentage of teachers (from 80.2 to 64.2 per cent) noted that pupils need knowledge of hygiene and sanitation. Similar answers to this question were given by school directors. On the one hand, they say that in their schools lessons are carried out on sanitation and hygiene, while on the other hand they believe that pupils need to study these issues more deeply.

VI. Rubbish and domestic waste removal

- The results of the research established that only in half the rural health points (RHPs) and hospitals rubbish is collected in special containers. Such containers are most widespread in Talas Oblast (65.1 per cent) and least in Naryn Oblast (35.9 per cent). More than 80 per cent of respondents from healthcare institutions in towns noted that they dispose of their rubbish in containers, while only 35.3 per cent of respondents in rural areas use containers to store waste before removal. Rubbish is removed from the territory of healthcare institutions at least once a week in only 25
per cent of cases rubbish, while about 10 per cent of respondents stated that rubbish is taken away once a fortnight, and about 11 per cent once per month. More than a quarter of respondents noted that rubbish is not removed, but burned and buried. The problem of waste removal is more acute in rural districts than in towns.

- The sanitary situation in markets, according to experts’ answers, is mainly “satisfactory” and “poor”. Water is supplied to markets irregularly and its quality is poor. Toilets are not cleaned and do not have soap, tissues or towels. Rubbish is stored on market territory. A particular environmental hazard is the presence of carcasses and bones of dead animals, as flies and other insects can transmit agents of infection.

**Recommendations based on the research results**

**In the field of infrastructure and public awareness:**
- Improve the planning and implementation of on-going monitoring of provision of clean water for drinking and washing hands, and also access to toilets at schools in the country;
- Ensure permanent supply of safe drinking water to consumers. Strengthen and rehabilitate main water infrastructure;
- Take measures to develop the sewage system in settlements, schools and healthcare facilities;
- Widen the practice of unified management of water supply and sewage systems by involving specialists from local self-government and rural drinking water users’ associations, and increase the responsibility of local communities;
- Introduce new techniques for environmental sanitation, including ecosan toilets and improved ventilation toilets on the territory of public buildings (schools, RHPs and so on);
- Strengthen the monitoring of sanitary-epidemiological norms and rules in public cafeterias in markets;
- Bring about systematic medical and sanitary awareness among children and adults, particularly in rural areas, about the types of parasitic infections and measures to prevent them. Essential offerings for schools include: study programmes in hygiene and other fields of medical and sanitary awareness; modern methods of study and improved qualifications for teachers; and distribution in schools of printed publications, booklets, newspapers, and materials explaining the aim and norms of hygiene and healthy lifestyles, training children how to care for themselves practically;
- Carry out regular national and regional information campaigns on sanitation, hygiene and sustainable use of water resources, and also provide access among town and village residents to information about the quality of supplied drinking water, and the condition of surface water used for drinking; and
- Develop a national programme to evaluate and prevent potential risks connected with access to water resources and sanitation.

**In the field of institutional development and law:**
- Train local self-government staff and local council deputies on socially-oriented planning for local budgets, and clearly define areas of responsibility of local self-government bodies for lack of water and failure to meet the proper sanitary conditions in a settlement;
- Define and normatively strengthen responsibility and financial provision to meet expenses for the treatment of children who are ill because of lack of access to clean and safe drinking water and appropriate sanitary conditions in schools where such violations have taken place; and
- On construction of new schools, use only designs that include inside toilets and water supply and sewage systems.
The main socioeconomic tendencies in the context of access to water and sanitation in the studied oblasts

The population of the Kyrgyz Republic is about 5.2 million, of whom about a third are urban residents and two thirds live in rural areas. The main challenges in the field of water supply and sewage in the Kyrgyz Republic are technical, socioeconomic, geographical, financial and institutional.

The existing infrastructure for water supply and sewage is in poor condition: out of 1704 centralised water supply systems in the country, many do not work effectively. About 90 per cent of water supply systems use water from underground sources (including springs) and about 10 per cent from surface sources. Many people have no access at all to centralised water supply systems (neither to taps at home nor to nearby street water pumps). For those who do not have access to centralised water supply systems, the level of services in terms of reliability, predictability and water quality is often very low. According to State Sanitary Epidemiological Service reports, on average about 2 per cent of chemical, and 10 per cent of microbiological samples of water quality do not meet republican sanitary norms.

Issyk Kul, Naryn and Talas Oblasts, located in the north of the Kyrgyz Republic, each have their own socioeconomic particularities which are relevant for solving problems of access to clean drinking water, sanitation and sewage.

Economic development varies between the oblasts. The most significant economic growth is noted in Issyk Kul Oblast, as a result of the work of the Kumtor giant, which is particularly influential on the economy of the oblast, as well as income from tourism. In Naryn and Talas Oblasts, a small slump in growth in gross regional product has been noted in comparison with previous years. This has also had an impact on employment and the general wellbeing of the population of the oblasts.

In 2009, every thirty-second resident of the country lived in extreme poverty. Poverty is a firm characteristic of life for the whole society of Kyrgyzstan over the last 15-17 years, but there is a particularly high percentage of poor families among the rural population – 75 per cent of rural residents live in poverty.

Figure 1. Levels of poverty and extreme poverty in 2009.

---


2 Ibid. p.8.

The highest percentage of extreme poverty is found in Naryn Oblast, and also in rural districts of Issyk Kul Oblast. Issyk Kul Oblast is characterised by the highest divide between the poorest and richest residents.

Table 1

<table>
<thead>
<tr>
<th>Oblast</th>
<th>Subsistence minimum</th>
<th>Average salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2009</td>
<td>2009</td>
</tr>
<tr>
<td>Issyk Kul</td>
<td>3461.67</td>
<td>8534</td>
</tr>
<tr>
<td>Naryn</td>
<td>3186.91</td>
<td>4741</td>
</tr>
<tr>
<td>Talas</td>
<td>3613.73</td>
<td>4412</td>
</tr>
</tbody>
</table>

As can be seen in Figure 3, changes in the relationship between average income in the regions over five years and average republican levels are not the same. Figures on the economic situation, possibly, reduce the significance of the informal sector (which has been estimated at equivalent to 60 per cent of nominal GDP). A significant number of families receive remittances from citizens working or living abroad. In 2006, the Asian Development Bank calculated that 16 per cent of families receive remittances equivalent on average to $1331 per family. As most temporary migration is from the poorest regions of the country, remittances are important for increasing the population’s wellbeing and reducing poverty. The official unemployment figure, which in 2006 was 8 per cent, is seriously questionable into doubt: officially all those with land plots are registered as “working” and, on the contrary, informal unregistered activity is widespread, though difficult to evaluate in quantitative terms.

Figure 2. Average remittances by territory (som per month)

---

4 Statistical annual of the Kyrgyz Republic, Bishkek, 2010, pp. 79-87.
State social expenditure

The volume of expenditure on non-financial assets was 4.6 times higher in 2009 than in 2005, while the share of total expenditure was 14.5 per cent. While in comparison with 2005 the share of such expenditure had increased by 5.5 percentage points, by comparison with 2008 it had fallen by 3.4 percentage points.

Survey results

The survey results revealed that the problem of hygiene and sanitation in Issyk Kul, Naryn and Talas Oblasts is one of the three most pressing problems, along with unemployment and economic instability. Other problems mentioned as being acute were political instability and corruption. About a third of respondents from schools in Issyk Kul Oblast (37.6 per cent), Naryn Oblast (34.0 per cent) and Talas Oblast (30.0 per cent) stated that insufficient access to safe drinking water was a serious problem. Hygiene and sanitation problems were more of a concern for town dwellers than rural citizens.
Table 2

The most pressing problems by oblast

<table>
<thead>
<tr>
<th>Issue</th>
<th>Issyk Kul</th>
<th>Naryn</th>
<th>Talas</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level of unemployment in our region</td>
<td>58.7%</td>
<td>48.1%</td>
<td>47.0%</td>
</tr>
<tr>
<td>Environmental pollution</td>
<td>36.7%</td>
<td>38.7%</td>
<td>32.0%</td>
</tr>
<tr>
<td>Insufficient access to clean drinking water for residents</td>
<td>37.6%</td>
<td>34.0%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Growth in illness, appearance of new diseases</td>
<td>22.0%</td>
<td>24.5%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Low level of awareness in the population of sanitation</td>
<td>14.7%</td>
<td>25.5%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Pollution of grounds with rubbish and domestic waste</td>
<td>33.0%</td>
<td>34.9%</td>
<td>35.0%</td>
</tr>
<tr>
<td>Low cultural and ethical standards in the region</td>
<td>16.5%</td>
<td>17.0%</td>
<td>16.0%</td>
</tr>
<tr>
<td>Economic slump</td>
<td>45.0%</td>
<td>50.0%</td>
<td>48.0%</td>
</tr>
<tr>
<td>Political instability</td>
<td>43.1%</td>
<td>26.4%</td>
<td>43.0%</td>
</tr>
<tr>
<td>Corruption in all organisations</td>
<td>42.2%</td>
<td>40.6%</td>
<td>35.0%</td>
</tr>
<tr>
<td>Preservation of forests and meadows</td>
<td>44.0%</td>
<td>34.0%</td>
<td>41.0%</td>
</tr>
</tbody>
</table>

There were similar results in the survey of RHP and healthcare institution staff. In general, in the opinion of respondents, the most pressing problems are economic problems. Thus, the three most acute problems, according to respondents, were high unemployment (76.8 per cent) and economic slump (66.5 per cent). Problems of pollution were the third most important (63.9 per cent).

Statistics reveal low household incomes, most of which is spent on feeding the family. In the last five years the relationship between women’s and men’s salaries has not changed significantly. Thus, the average salary of men is 63.9 per cent higher than the average salary of women. Average salary is only higher than the subsistence minimum in Issyk Kul Oblast. In Naryn Oblast it is about 1500 som lower, while in Talas Oblast the difference is under 1000 som. This situation means that families have to economise, and this in some cases may influence their general sanitary and hygienic conditions.

Most education and healthcare workers are women. As well as receiving low pay, they also have many unpaid additional roles – cleaning RHPs and classrooms, buying cleaning materials and tissues and so on. In this way, society places on them the burden of a large volume of important tasks, without providing corresponding resources.

The outflow of professionals from the oblasts is connected to high levels of migration – both between oblasts (to Chuy Oblast and Bishkek city) and international (to CIS countries Russia and Kazakhstan).

For many citizens of the Kyrgyz Republic, the main source of family income is earnings in other countries. It is estimated that in 2005 about 500,000 Kyrgyz workers worked abroad (23 per cent of the total workforce). Of these, about 300,000 worked in Russia and about 50,000 in Kazakhstan, though the latter figure may have been twice as much in certain seasons.
Thus, for example, the outflow of professionals from Talas Oblast is connected with the proximity of Kazakhstan and the large difference in wages. This tendency has been observed among all professional groups (including doctors, teachers and engineers).

At the same time there is a sustained migration flow within the country, from the regions to the capital, which intensified after the 2005 revolution. The outflow of able-bodied, economically active persons has the potential to exacerbate sanitary and hygiene problems in the oblasts studied, which face acute shortages of both finances and human resources (educated people such as doctors and teachers) who could take the lead in resolving these problems. An upsurge in problems connected to sanitation and access to clean drinking water can also be predicted (as well as in social conflicts connected to this).

Access to water and sanitation in the studied oblasts

Most of the difficulty in providing access to quality drinking water in the country is connected with the consequences of protracted economic crises and radical state reforms after independence, as well as adaptation to a market economy.

The following problems are typical of all oblasts:

- Deficit of financial resources;
- Severe physical wear and obsolescence of the basic infrastructure, including the water supply and sewage networks, hydraulic works and so on; and
- Insufficient state monitoring of use and protection of water resources.

These problems are reasons for the worsening access of Kyrgyzstan’s population to safe drinking water. Thus, today more than 660,000 rural residents use water from irrigation canals and rivers, thus exacerbating the sanitary and epidemiological situation. This is largely responsible for the large growth in water-borne infectious diseases. Eighty-eight per cent of the household and drinking water supply systems use underground sources (944 systems), while 12 per cent use open sources (127 systems).6

Kyrgyzstan has vast water resources, with a total volume of 2458 km$^3$. Of this, 50 km$^3$ is surface river water, 13 km$^3$ underground water resources, 1745 km$^3$ is located in lakes and another 650 km$^3$ in glaciers. There is a total of 8208 glaciers in Kyrgyzstan with a total ice volume of 8169 km$^4$.7

Global warming is leading to a fall in the volume of glaciers in Kyrgyzstan. Forecasts state that by 2025 the volume of glaciers will fall by 30-40 per cent, as a result of which the average yearly flow of river water will fall by 25-35 per cent.

Despite the high level of migrationary outflow from villages to the city, there is a steady tendency of increase in the number of persons living in rural areas without access to clean drinking water, both in the studied oblasts and in the country as a whole. This tendency has been notable since 20008 and is a result of high birth rates in these regions.

---

7 State Agency for Environmental Protection and Forestry under the Government, Concept of Ecological Security, 2007, Bishkek
8 Z. Mendikulova, Rural water supply and sanitation in the Kyrgyz Republic. Situation Analysis, 19-20 April 2005, Tbilisi
The most worrying trends are occurring in Naryn Oblast where since 2002 access to clean drinking water has fallen from 85 per cent to 60 per cent.

- In the survey, school teachers reported that they had to use water from open sources, rivers, defective water supply systems and other inadequate sources. Drinking water is most often supplied to houses among families in Issyk Kul Oblast (40 per cent), while just 15 per cent of those interviewed from Naryn and Talas Oblasts have water at home.

### Table 3

#### Sources of household drinking water (by type of settlement)

<table>
<thead>
<tr>
<th>Source of Water</th>
<th>Issyk Kul</th>
<th>Naryn</th>
<th>Talas</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water is piped to taps within the house</td>
<td>39.6%</td>
<td>20.7%</td>
<td>14.7%</td>
<td>47.7%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Water is piped to taps in the yard</td>
<td>37.7%</td>
<td>23.0%</td>
<td>29.0%</td>
<td>15.5%</td>
<td>36.0%</td>
</tr>
<tr>
<td>Water taken from a well</td>
<td>8.5%</td>
<td>22.6%</td>
<td>20.2%</td>
<td>20.5%</td>
<td>16.1%</td>
</tr>
<tr>
<td>From a protected spring close to home</td>
<td>3.5%</td>
<td>1.1%</td>
<td>5.6%</td>
<td>4%</td>
<td>2.8%</td>
</tr>
<tr>
<td>From an unprotected spring close to home</td>
<td>4%</td>
<td>8.0%</td>
<td>1.2%</td>
<td>4%</td>
<td>4.1%</td>
</tr>
<tr>
<td>From a protected spring far from home</td>
<td>4%</td>
<td>4%</td>
<td>1.2%</td>
<td>1.3%</td>
<td>6%</td>
</tr>
<tr>
<td>From an unprotected spring far from home</td>
<td>1.9%</td>
<td>8%</td>
<td>4%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>From tanks collecting rain water</td>
<td>0%</td>
<td>3.1%</td>
<td>4%</td>
<td>1.3%</td>
<td>1.7%</td>
</tr>
<tr>
<td>From plastic canisters</td>
<td>3.5%</td>
<td>8.8%</td>
<td>0%</td>
<td>4.2%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Water is brought to the house in tanks</td>
<td>4.2%</td>
<td>2.7%</td>
<td>3.2%</td>
<td>4%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Water is taken directly from a nearby river,</td>
<td>1.5%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>1.3%</td>
</tr>
<tr>
<td>No water always available to use</td>
<td>1.2%</td>
<td>13.0%</td>
<td>24.6%</td>
<td>7.9%</td>
<td>20.2%</td>
</tr>
</tbody>
</table>

Water from wells has to be used by 23 per cent and 20.6 per cent of respondents from Naryn and Talas Oblasts respectively. A lack of permanent access to water is most often observed in Talas Oblast (24.6 per cent) and Naryn Oblast (13.0 per cent) – the figure is 20.2
per cent in villages in the northern oblasts of Kyrgyzstan and 7.9 per cent in towns. In Naryn Oblast several sources of drinking water are used, including unprotected springs close to home (8 per cent), water system water in plastic canisters (9.2 per cent) and others. Thus, in the surveyed oblasts in the north of Kyrgyzstan, the situation is observed to be catastrophic in Talas and Naryn Oblasts.

With regard to the urban-rural divide, 50 per cent of pupils surveyed in town schools answered that their families had water supplied to their houses. However, 20.5 per cent of town pupils’ families use well water for drinking. Rural residents more frequently are supplied with water to their yards. Water is also used for drinking from protected and unprotected springs close to the houses by 4 per cent of urban and 3.45 per cent of rural families. Rainwater collected in tanks, and water from plastic canisters is used by both town and village residents. Villagers reported a lack of permanent water supplies almost three times as often as town dwellers.

With regard to provision of water for washing hands, the situation in urban and rural areas is identical to that for presence of drinking water. This is probably explained by the fact that the water from the various sources used for household purposes is also used for drinking.

With regard to access to adequate sanitary and hygienic conditions, in general in the country and in the studied regions, there has been deterioration since 2000. While in 2002 about a third of the population had access to such services, by 2006 this had fallen to a quarter. The population of Talas and Naryn Oblasts had the worst access to adequate sanitary conditions. On the whole, provision of drinking water is better in Issyk Kul Oblast, where a higher number of people (compared to the other two oblasts) is provided with drinking water to their yards or their homes.

While in Naryn and Issyk Kul Oblasts there has been a steady deterioration in conditions, in Talas some progress has been observed, mainly because of support from international projects. At the same time as having the lowest indicators on access of the population to adequate sanitary and hygiene conditions, Talas Oblast also has the highest rate of infectious diseases connected to water.

**Figure 6. Changes in access to adequate sanitary and hygiene conditions in the researched oblasts (in percentages)**

---


10 *Social tendencies in the Kyrgyz Republic, Edition 6, Bishkek 2010.*
Since 2005, a small improvement in access to adequate sanitary and hygiene conditions has been noted in Naryn Oblast and a further deterioration in the situation in Issyk Kul Oblast.

Results of a WHO study\textsuperscript{11} show that 94 per cent of the urban population and 93 per cent of the urban population use “improved sanitary facilities” which are defined as:

- A flush toilet or toilet with hand flushing to a sewage system, a septic tank or a cess pool;
- An improved ventilated toilet with a closed cess pit;
- An ordinary toilet with a closed cess pit; or
- A set-up for composting dirt.

These indicators (94 per cent urban and 93 per cent rural) are to a large degree based on the presence in households of elementary sanitary conditions (ordinary toilets with closed cess pits where the closure, in general, is simply a wooden, rather than a concrete, slab).

Many experts in Kyrgyzstan have recommended improvement in the norms for defining the quality of sanitary conditions in the following way:

- In rural areas: for all households – improved ventilation hygienic pit toilets, but for public buildings (primarily schools), toilets connected to regularly emptied septic tanks.
- In towns: 1) improved hygienic ventilated toilets with closed cess pits, 2) flush toilets connected to the sewage system and, in public buildings, flush toilets connected either to the sewage system or to regularly emptied septic tanks.

The quality of drinking water

In Kyrgyzstan about 85 per cent of constructed water supply systems use underground water sources. However, because of the high cost of electricity for the pumps needed to use underground water, the number of water supply systems taking water from less safe open sources is rising. The problem of pollution of water sources is getting worse, particularly in rural areas, because of the unprotected nature of rivers and wells.

Currently, like previous years, the main reasons for poor quality drinking water are: continuing anthropogenic pollution of surface and underground water, natural factors (an increase in mineral content in aquifer water), a lack of or poor condition of sanitary protection zones around water sources, water treatment techniques, poor plugging and conservation of inactive artesian springs, poor sanitary and technical condition in the existing water supply network and system, a lack of specialised services in most villages to use the water supply system, insufficient monitoring of industry, and irregular water supply.

As of today, 19.1 per cent of water supply systems do not meet sanitary norms, and do not have sufficient sanitary protection zones, water treatment equipment or disinfection arrangements. In the country as a whole, more than 5000 water pumps are in poor condition. Water supply by hour and physical wear and tear on the water supply networks leads to crisis conditions and pollution of drinking water by microbiological and chemical agents.

\textsuperscript{11} Figures from tables on coverage of drinking water supply and removal systems in Kyrgyzstan – UNSD and ESCAP meeting, Bangkok, January 2009.
Baseline Assessment of Access to Water, Sanitation and Hygiene in Schools and Hospitals in the Northern Oblasts of Kyrgyzstan

According to data from territorial State Sanitary Epidemiological Surveillance centres, currently in Naryn Oblast more than 10 per cent of water supply systems do not meet sanitary norms, and do not have sufficient sanitary protection zones, water treatment equipment or disinfection arrangements. Drinking water supply systems which take water from underground sources are not meeting the established standards. Thus, in Naryn Oblast deviation of water quality from the norms on microbiological indicators was recorded in 2009. In Talas Oblast, the situation is somewhat better than in the other oblasts studied, but nevertheless a slight growth in microbiological pollution of the water in water supply systems has been recorded.

Table 4

The quality of water supply system water in distribution networks in the studied oblasts\textsuperscript{12}

<table>
<thead>
<tr>
<th>Region</th>
<th>Physical and chemical</th>
<th>Microbiological</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year</td>
<td>2009</td>
</tr>
<tr>
<td>Talas Oblast</td>
<td>Total</td>
<td>435</td>
</tr>
<tr>
<td>Issyk Kul Oblast</td>
<td></td>
<td>1767</td>
</tr>
<tr>
<td>Naryn Oblast</td>
<td></td>
<td>928</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td></td>
<td>13528</td>
</tr>
</tbody>
</table>

The highest levels of water pollution from both chemical and microbiological agents were found in water supply systems in Issyk Kul Oblast. The particular issue in the Issyk Kul trough is the fact that all pollutants within the territory of the trough, including those from agricultural fields, roads, carwashes and petrol stations end up in the lake by means of percolation into the soil with subsidence. The research revealed that “in Issyk Kul there is a critical situation with drainage. Today, there are no water treatment facilities in guesthouses or settlements that can purify drainage water. The water treatment facilities that do exist do not meet the standards, and in practice they just transfer dirt from one place to another. The largest treatment system in Cholpon Ata resort basically mechanically moves domestic waste from one place to another. As a consequence, this dirt comes out of the system to the land surface. At the end of the day all of this arrives in groundwater and then in the lake. Many buildings on Issyk Kul are being built with their own treatment equipment, but usually they use the cheapest they can find. What is needed now are modern centralised collection networks, which will perform the whole cycle of treatment of drained water.” (interview with expert).

According to the State Report on the Sanitary Epidemiological Wellbeing of the Population of the Kyrgyz Republic for 2010 (see table 10), in 19.3 per cent of cases the level of bacterial pollution of the water supply was not in line with sanitary standards.

Sociological research

Pollution in water supply system water did not meet the standard, more than the figures for microbiological pollution in Talas and Naryn Oblasts, and the national figure.

It is important to note that these figures cover water quality in water supply systems in the studied oblasts. Water quality in surface sources used by the population for drinking in rural areas is not regularly tested.

In 2010 the trend of pollution of water facilities, both those that provide drinking water (category I) and those for sanitation purposes (category II), is continuing. This is confirmed by laboratory research.

<table>
<thead>
<tr>
<th>Category of reservoir and its condition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The proportion of tested water not meeting hygienic norms, %</strong></td>
</tr>
<tr>
<td><strong>Sanitary-chemical indicators</strong></td>
</tr>
<tr>
<td>2009</td>
</tr>
<tr>
<td>I</td>
</tr>
<tr>
<td>II</td>
</tr>
</tbody>
</table>

In 2010, the quality of water from water supply systems fed from surface sources did not meet the established requirements for sanitary-chemical indicators in 9.8 per cent of tests (3.3 per cent in 2009). For microbiological indicators the figures were 25.5 per cent in 2010 and 19.6 per cent in 2009. Drinking water supply systems taking water from underground sources failed the tests in 2 per cent (up from 1.8 per cent in 2009) and 7.7 per cent (down from 8.2 per cent) of cases respectively. The highest level of bacterial pollution of water supply system water was noted in settlements in Issyk Kul Oblast (19.3 per cent).

In urban areas, most water supply and removal systems were built in the 1960s or earlier. Most of them are completely worn out and only conscientious technical servicing and routine maintenance (mainly of pumps) by water system staff keeps the systems in working order. However, the pumps are inefficient, which means that drawing water is very expensive. According to water system reports, the cost of electricity makes up more than 80 per cent of running expenses. For providers of surface water, the main problem is water purification. In many cases water arrives in the distribution network directly from the source. The cost of coagulants and disinfectants is also high, in many cases, because of high transportation costs.

The increase in microbiological pollution of water infrastructure is influenced by the disposal of untreated or insufficiently treated waste water, and unsatisfactory conditions in sanitary protection zones of reservoirs and waterways. Another reason for the reduction in water quality in reservoirs is the lack of sewage systems in residential areas, which means that waste water is released that pollutes reservoirs with domestic waste.

---

13 Ministry of Health, *State report on the sanitary-epidemiological wellbeing of the population of the Kyrgyz Republic in 2010*, p.35

Diseases connected to water

Priority diseases with high epidemic potential

- bacterial diseases: cholera, typhoid, salmonella, bacterial dysentery;
- viral diseases: hepatitis A, polio, enteroviral infections, Norwalk viruses;
- parasitic diseases: lambliasis, amoebic dysentery, ascariasis, oxyuriasis.

New diseases: campilobacteriosis, cryptosporidiosis.

From State Sanitary Epidemiological Surveillance Department data, 2011

Pollution of water resources by various chemical and biological substances is the most dangerous factor leading to depletion and degradation of water resources, in particular drinking water. Emissions of polluted waste water to surface water facilities have fallen in the past five years from 12.2 to 6.4 million cubic metres (with the exception of 2007 and 2008, when 20.0 and 18.5 million cubic metres was released respectively). Waste water containing nitrates, chlorides, chromium, sulphates, oil and oil products, heavy metal salts and other substances is discharged without treatment to open reservoirs and water channels. This affects not just water resources, but ultimately human health.

![Figure 7. Emissions of waste water to surface reservoirs (million cubic metres)](image)

Insufficient development of centralised sewage systems, the lack of effective division of household and industrial waste, and construction in the water protection zones of reservoirs and waterways has created critical conditions for epidemiological safety in water facilities.

Physical aging and ineffective sewage purification facilities that do not meet modern development levels; weak industrial controls; unsatisfactory exploitation and inadequacy to meet the huge volume of waste water emissions mean that norms for treatment of waste water are not being met. Almost 40 per cent of the 350 sewage treatment plants need to be rebuilt and to have intensive treatment facilities installed for waste water.

An example of a typical problem with polluted water in the studied oblasts

Pollution of ground water and open water sources in general comes from the local population. Private housing areas generally do not have centralised sewage systems and

Sociological research

domestic waste is stored in septic tanks outside the houses which do not meet sanitary norms (toilet septic tanks are not isolated, and some waste enters ground water).

Other major pollutants of water are the grazing of cattle in sanitary zones, the washing of cars alongside river banks and canals, and disposal of waste in rivers and irrigation ditches.

Table 6

Excerpt from the ecological management plan for Talas Oblast, 2011

<table>
<thead>
<tr>
<th>Name of enterprise</th>
<th>Size m³/24 hour</th>
<th>Place of emission</th>
<th>Effectiveness of work</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Treatment facility of industrial zone in Talas town, including meat processing</td>
<td>3099</td>
<td>Emission into Talas-Aryk of normatively clean, treated water</td>
<td>Currently the treatment facilities do not work</td>
</tr>
<tr>
<td>plant, town dairy, laundry, vehicle depot.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Brewery in Talas town: bakery included</td>
<td>55</td>
<td>Filtration fields</td>
<td>Currently not working</td>
</tr>
<tr>
<td>3 105-bed hospital in Talas town</td>
<td>600</td>
<td>Filtration fields</td>
<td>Construction incomplete</td>
</tr>
<tr>
<td>4 Transhipment point, Talas gold processing plant in Suluu-May-mak village,</td>
<td>25</td>
<td>Filtration fields</td>
<td>Construction incomplete</td>
</tr>
<tr>
<td>Karabuura district</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Concrete factory in Chong Kapka, Manas district</td>
<td>60</td>
<td>Filtration fields</td>
<td>Not working at full power</td>
</tr>
<tr>
<td>6 Treatment facility in Kyzyl Jyldyz village, Manas district</td>
<td>100</td>
<td>Filtration fields</td>
<td>Not currently working because of complete breakdown</td>
</tr>
<tr>
<td>7 Kirov cheese plant in Kyzyl Adyr village, Karabuura district</td>
<td>90</td>
<td>Emission into irrigation ditch network of normatively clean, treated water</td>
<td>Not currently working because of complete breakdown</td>
</tr>
</tbody>
</table>

List and conditions of treatment facilities in Talas Oblast

Currently, out of seven facilities in the oblast, not one meets the normative requirements. Treatment facilities need to be reconstructed and undergo capital renovation, and construction needs to be complete. In remote mountain villages the population consumes drinking water directly from rivers without knowing the level of pollution.

The treatment plants in Karakol, Balykchy and Cholpon Ata towns, and Jergalan, Kajy Say and Aksuu villages, on the shores of Issyk Kul lake, are in unsatisfactory condition. Waste water from Naryn town just undergoes mechanical treatment and is discharged into the river of the same name. The treatment facilities in Mingkush and Dostuk villages in Naryn Oblast basically do not work.

---

16 Site of the State Agency for Environmental Protection and Forestry under the Government of the Kyrgyz Republic
- www.nature.kg
According to Kyrgyzstan’s hydrological and meteorological service, the most polluted waterways are the basins of the rivers Chu and Syr Darya. In the rivers Chu, Alamedin, Chong Kemin, Issyk Ata, Kechi Kemin and Naryn increased quantities of ammonium and nitrites, copper compounds, zinc, oil and oil products, organic substances and also residual quantities of poisonous chemicals in the DDT and hexachlorocyclohexane groups. High concentrations of copper compounds, zinc, oil and oil products, as well as nitrites, are found in the rivers Tyup, Jergalan, Cholpon Ata and Ak Suu, among others.

The data collected clearly illustrates the interrelationship between access to clean drinking water and acute intestinal infections. The trend of reduction in access to clean drinking water has led to a growth in disease.

In Kyrgyzstan every year about 45,000 persons are registered with parasitic diseases. According to research data from the DFID “Hygiene and Sanitation in Rural Areas”
Sociological research

project, in pilot villages in the northern region about 60 per cent and 50 per cent of pre-
school and school age children respectively were infected by one or more intestinal
parasite. The presence and growth of parasitic diseases, including helminths, is an
indicator of hygiene conditions and sanitary practices in the regions. Official statistics
report that the most widespread parasitic diseases are enterobiasis (79 per cent),
ascardiasis (14 per cent), hymenolepiasis (6 per cent), echinococcosis (1.4 per cent) and
taeniidae infections (0.3 per cent). The annual economic loss from parasitic diseases in
the country is, just according to official statistics, about $100,000.

According to data from oblast State Epidemiological Surveillance Centres and the
Department of State Epidemiological Surveillance at the Ministry of Health, there has
been growth in diseases related to poor quality water:

- in the overall group of intestinal infections by 7.3 per cent. A total of 27,640 cases
  were registered as opposed to 24,747 cases in 2009. The rates were 493.5 and 459.7
  per 100,000 population respectively. The highest prevalence was recorded in Talas
  Oblast (784.3).19

In 2010, 105 cases (1.9) were registered of typhoid as opposed to 135 cases (2.5) in 2009.
Six cases (0.1) were recorded of paratyphoid compared to 21 cases (0.4) in 2009. The main
reasons for typhoid remain the presence of carriers, insufficient provision to the
population of good quality drinking water, unsatisfactory sanitary and technical conditions
in sewage systems and insufficient hygiene skills among the population.

The data above testifies to the insufficiency of funds and difficulties faced by operating
bodies and local self-government bodies, which are responsible for supply of water to the
population. The difficulties make it impossible to guarantee a stable sanitary-
edemic situation, which in turn means that a typhoid or paratyphoid outbreak
carried by recreational or household use of the water system cannot be ruled out.

With the aim of preventing epidemiological complications because of the unsatisfactory
condition of water supply infrastructure and reservoirs in areas where it is used by the
population, territorial state epidemiological surveillance centres took measures in 2010 to
cooperative administratively with those responsible for preventing pollution of reservoirs
and unsatisfactory drinking water quality. A total of 91 responsible persons were fined;
prosecutors’ offices and other law enforcement agencies were given materials in 14 cases,
of which in 9 cases decisions were taken to hold those guilty liable; and use of 52 water
supply systems was temporarily suspended and 175 persons dismissed from work because
inspections not occurring in a timely manner.20

In an interview, N. Vashneva, Leading Specialist in the Department of Sanitary
Epidemiological Surveillance at the Ministry of Health reported that 686 fines were
imposed on responsible persons at a total sum of 58,346 som, and 135 people were
dismissed from work for violations of sanitary-epidemiological norms in healthcare
institutions. In the water supply and sewage systems, 1038 fines were imposed on legal
persons to a total sum of 857,000 som, 19 cases were transferred to prosecutors’ offices,
and the work of 422 infrastructure objects was suspended because of concerns over water
safety.

---

19 Ministry of Health, State Sanitary Epidemiological Surveillance Department, Sanitary Epidemiological Surveillance
and Public Health Bulletin. January 2011, number 1

20 Ministry of Health, State report on the sanitary-epidemiological wellbeing of the population of the Kyrgyz
Republic in 2010, p.41.
Government policy in the field of access to water, sanitation and hygiene in schools and hospitals in the northern oblasts of Kyrgyzstan, and the organisations involved

Access to clean drinking water is one of the Millennium Development Goals indicators and has a significant place in national policy. The Government of the Kyrgyz Republic, in implementing its Comprehensive Development Framework (CDF, 2001) and Country Development Strategies 1 and 2 (CDS, 2006 and 2008) has set itself the task of improving the general wellbeing of the population and the overall economic situation of Kyrgyzstan.21

In the framework of the CDF, the Government already defined a range of key national tasks that required investment in the rural water supply sector:

- gradual rehabilitation of centralised (piped) water supply and sewage systems in towns and villages; and
- improved access for residents of remote areas and local communities to communications, roads and transport services, safe drinking water, and renovated or rebuilt medical and educational facilities.

The Government also committed itself to increase the proportion of the population with access to safe water supply to 90 per cent by 2015 in the framework of the Joint Country Support Strategy’s Aim 3.4 (Ensuring the guaranteed provision of and access to key public services). Aim 3.4 also includes the obligation to increase access of the population to improved sewage systems to 40 per cent by 2015.

The draft Country Development Strategy 2 for 2009-11 (CDS, 2008) highlights the facts that on-going urbanisation has been accompanied by reduced access in newly built settlements to centralised drinking water supply systems and adequate sewage systems.

The biggest difficulties with regard to improved water supply and sewage systems are connected with the weak capacity for management and regulation of the process, and also the high poverty levels in rural areas.

With regard to the legislative framework in the country, a Law “On Drinking Water” has been adopted, and a draft Government Regulation drafted to introduce amendments to this law. As of today, the Water Code of the Kyrgyz Republic has been adopted and a lot of work is going into ensuring its implementation. Reform is envisaged of water management and management structures, and up to 29 items of secondary legislation have been developed and adopted.

The Taza Suu and Manas taalimi programmes have been developed and are being implemented. In order to execute provisions of the Law “On the grounds for technical regulation in the Kyrgyz Republic”, the “Technical Regulations ‘On Safe Drinking Water’” Law has been adopted.

Ensuring children’s access to safe drinking water, sanitation and hygiene is a strategic task of the state, as this affects the rights of future generations (children’s rights) to a favourable environment and safe development.

Article 6 of the UN Convention on the Rights of the Child obliges states to provide to the maximum degree possible for the survival and healthy development of children.

---

Sociological research

Under Article 16(5) of the Constitution of the Kyrgyz Republic of 27 June 2010, the principle of best interests of the child is in force in the country. The Children’s Code of 7 August 2006 requires the Government to reconsider existing mechanisms that work with children and services provided to children. The Code introduces the need to establish basic quality norms for services which play important roles in the protection and wellbeing of children.

State bodies, local self-government bodies, civil society organisations and international organisations are all involved in addressing access for the population, in particular children, to safe drinking water and satisfactory sanitary conditions. Expert interviews, as well as analysis of the legislative framework and state programmes, revealed the following distribution of responsibilities. The functions and responsibilities at the level of line Ministries and Agencies are set out in the table “Key organisations at national level and their functions.”

Almost all the experts noted the important role of various structures at district and local community level, including local self-government bodies, school administrations and territorial state epidemiological surveillance centres.

Evaluation of the quality of drinking water

The key role in the evaluation of drinking water quality is played by territorial state epidemiological surveillance centres. They are required to periodically analyse water quality, respond to complaints, actively cooperate with village drinking water users’ associations and schools, and monitor observance of hygiene rules. In an interview, an independent expert stated that: “School administrations are not responsible for water quality. The responsibility lies with the municipal bodies and organisations responsible for water supply. There are environmental zones which should be observed and be protected. It is forbidden to locate commercial facilities, housing, pastures, fields and so on in protected water supply zones. There are first, second and third level zones, and each has its own requirements. This means that if you have a licence to provide drinking water to the population, you are responsible for providing clean drinking water, and should purify the water if it doesn’t meet the standards and norms. Municipalities are responsible for ensuring that these norms are observed, and they should enclose the protected zones, the first-level zones. Then, when they take water from the sources they are required to purify it. I repeat, this should be done by the organisation responsible for providing water – usually this is the local self-government. For example, in Cholpon Ata, the water supply enterprise is under a Zhilkomsoyuz [residential communal union]. In Kara Balta it is also the local Zhilkomsoyuz, in Mingkush, I think, and the water supply system in Belovodsk is Zhilkomsoyuz. In other places they answer to the municipality. Drinking water quality is monitoring by the sanitary epidemiological stations. They work with water supply organisations, the State Agency for Environmental Protection and so on. Sometimes the water is clean, but the pipes are so antiquated that they have leaks. There is also a danger of contamination from sewage water. This is also monitored by the sanitary epidemiological stations, but the pipe distribution system is under the remit of the local self-government bodies.”

Another important factor in evaluating the quality of drinking water is the laboratories of water supply organisations (vodokanals), which monitor drinking water quality to ensure that it meets hygiene and epidemiological requirements. However, this structure also doesn’t work effectively. “It should be noted that vodokanal laboratories, and also their treatment equipment, is in poor technical condition. They do not have enough reagents and instruments to carry out high-quality analysis. Staff often do not know how to analyse and calculate the reagents (chlorine) for purified water. Residents can ask sanitary
epidemiological stations for information about drinking water quality, and request that research on this be carried out (both for a fee and free of charge). At the same time, it should be noted that this opportunity, as defined in national legislation (Water Code of 12 January 2005, no.8), is almost never used by the population because they are not aware of it, and have no experience of communicating with sanitary epidemiological stations. Often residents intuitively believe that their water is “good” or “bad”, without having the relevant facts to hand. Meanwhile, we drew the conclusion from interviews with staff of national and regional sanitary epidemiological stations that they are prepared to cooperate more actively with the population, as this is part of their terms of reference. We believe that training of the population and staff of sanitary epidemiological stations on mutual interaction would help improve monitoring of drinking water quality and awareness of findings.” (from an interview with an expert)

Rational water use and access to safe sources of drinking water in local communities

Local self-government bodies (mayors’ offices, town administrations, and ayil okmotus) should:

- bear responsibility for pollution of water sources because of decisions by these bodies to permit economic and other activities beside water protection zones;
- provide for and coordinate the activities of the bodies responsible for carrying out water protection activities and monitoring water quality in water supply system sources;
- take urgent measures to end any activity which could lead to a deterioration in water quality or impair drinking water supply systems.

These bodies bear responsibility for:

- renovation and improvement of preschool and school facilities;
- removal of waste from school territory; and
- providing schools with drinking water.

Local self-government bodies should allocate funds from the local budget to carry out these activities.

However, local self-government body staff members report that they do not have funds to carry out these activities. Often these issues are not priorities for local councillors and ayil okmotu staff.

There are also Village Drinking Water Users’ Associations (VDWUAs), on whose territory the water supply system sources are located. They work with the population, raise awareness of observing cleanliness among villagers, fulfil the requirements of legislation and reveal problem zones for water use. However the associations do not always work effectively with schools: “a serious complication in carrying out work at the level of local self-government and VDWUAs is the insufficient understanding of the importance of ensuring access to safe drinking water, particularly at school level. Much depends on the relationship between the school director and ayil okmotu staff, and also initiatives taken by the school administration. Development and dissemination of informational materials is needed for local self-government bodies and VDWUAs on access to clean drinking water and sanitation.” (from an interview with an expert).

Access to clean drinking water and sanitation at school level

The administration and staff of the school should ensure cleanliness and hygiene in the school. The school director bears personal responsibility for observance of sanitary and hygiene norms in the school. According to a specialist on the sanitary and hygiene component of the Taza Suu programme’s implementation department for Chuy Oblast, “schools should carry out preventative work with parents and pupils on cleanliness. Schools should
Sociological research

provide satisfactory sanitary conditions and access to clean drinking water for pupils. However, often the administration states that it doesn’t have the material resources in place. Primarily, this is the fault of the Government, as it does not provide materials for preventative work with the population and does not ensure implementation of law on sanitation and hygiene so that local authorities fully give the mandate to schools.

Teachers are responsible for meeting sanitary conditions in classrooms, and educating pupils on sanitation and hygiene.

The lowest level of responsibility, for example for the presence of soap, toilet paper, clean toilets, and sink taps in schools, lies with the cleaner. The cleaner is monitored by the director and department heads, and teachers can also make admonitions.

Monitoring of the sanitary and hygiene condition of schools is carried out by regional sanitary epidemiological station departments. Based on the results of the monitoring they can make admonitions and also can impose defined sanctions for failure to meet requirements, up to and including dismissal of the school director.”

The research carried out in schools has revealed a divide between the system for bearing responsibility and normative requirements and the real situation. Unfortunately, it should be noted that often the sanitary and hygiene situation in schools depends on the initiative of the administration, though practically always the argument about lack of financial resources is justified. However, there is some positive experience (from a school in Naryn Oblast), where a class teacher, without receiving any additional funds, was able to provide the required level of access for pupils to water and hygiene. A wash basin and bucket were brought into the classroom, and all pupils had their own mugs and towels. There were soap and toilet paper at the wash basin.

Administrations cannot fully provide for the material and technical needs of schools, and only minimal funds are spent on heating, sanitation and so on. For example all standard schools in Soviet times were designed and built with internal toilets, but today, particularly in rural areas, the toilet areas are used as storerooms, archives and so on.

Norms regulating water quality in Kyrgyzstan

The norms regulating water quality in Kyrgyzstan and the monitoring rules were established and are regulated by state sanitary-epidemiological hygiene norms and rules, sub-section 2.1.4 “Drinking water and water supply”. This document, known as SanPiN 2.1.4.002-03, gives clear instructions for both water providers (using the term “Industrial and technical monitoring”), and State Sanitary Epidemiological Surveillance Centres (using the term “State monitoring”) for carrying out monitoring of water quality. The main components of SanPiN are:

- hygiene requirements and drinking water quality norms;
- drinking water quality monitoring by water providers; and
- provisions on defining indicators for drinking water, testing, and development of a working programme for industrial monitoring of drinking water quality.

With regard to requirements for distance from the water supply source, construction norms state that no household should be more than 100 metres from a water collection point. Water quality and distance norms apply in both urban and rural areas.

According to one of the leading experts on drinking water quality from the State Agency for Environmental Protection and Forestry, “Today it is very difficult to determine what isn’t working and what is working. Firstly, the sanitary norms and rules were adopted in 2004, but with adoption of the new Law “On normative-legal acts”, an innovation was introduced in Article 4, under which it stated that all norms in the country should be confirmed by the Government. The Ministry of Health and other organisations received instructions to redraft and confirm their norms. However it turns
out that until the end of last year SanPiN was valid. Epidemiological Surveillance didn’t manage to confirm these by Government Regulation. That means that today the situation is completely unclear. They work by the rules, but these documents do not have legal status. It’s a similar situation with regard to the rules for protection of surface water – they were also cancelled, but not replaced. In general, we are in a legal vacuum with regard to regulation of this issue, therefore it is essential to speed up the process of legitimising the norms for water quality.”

What is more, currently state financial provision for access to clean drinking water remains insufficient to achieve many tasks set, which means that several tasks remain unfulfilled and just exist on paper.

The difficult economic situation in the Kyrgyz Republic does not yet allow for full-scale development of measures to implement state policy for ensuring sanitary-epidemiological wellbeing and improving public health with donor funds and financial support from international organisations.

Total spending on operations and maintenance and reinvestment during the planned period was 2.07 billion som in 2007, and will grow to 2.1 billion som by 2027 using base year prices. About 47 per cent of overall spending on water supply and sewage is spent on operations and maintenance (excluding debt repayment), while about 53 per cent is spent on reinvestment. Expenditure on debt repayment was on average 4 per cent of general expenditure. Excluding debt repayment, about 83 per cent of spending on water supply and sewage is spent in urban areas and only 17 per cent in rural areas. When compared with the required expenses on operations and maintenance just to keep water supply and sewage at the current level, about 2 billion som, current income is less than 0.5 billion som (of which 80 per cent is in urban areas and about 20 per cent in rural areas).

The main conclusion is that current income is insufficient even to support the water supply and sewage infrastructure at its current level. And if income does not increase, the condition of the water supply and sewage infrastructure will deteriorate.

With the aim of improving the rural population’s access to drinking water, an agreement has been signed on financing the “Second Rural Water Supply and Sanitation Project” between the Government of the Kyrgyz Republic and the International Development Association. The aim of the project is to provide assistance to the borrower to improve the access of participating communities to drinking water, and improve sanitary and hygiene practice in rural areas at individual, family and institutional levels.

The Republican Centre for Health Promotion and the Centre for State Sanitary Epidemiological Control primary care continued to implement the educational component of the Asian Development Bank (ADB) project “Provision of infrastructure services at the settlement level” for VDWUAs in the southern regions and Chuy Oblast. Verification has been completed of the first phase of the ADB and World Bank Taza Suu project, and the second phase of these projects is being unfurled. The national State Epidemiological Surveillance oversaw the construction and reconstruction of 42 centralised water supply systems, 16 of which have been completed and put into use. These include a water treatment plant and chlorinator with machine checks of residual chlorine in Cholpon Ata.

22 Reinvestment is investment which is necessary to support valuable infrastructure at its current level (that is, to compensate for amortisation) in order to prevent future deterioration in the basic water supply and sewage infrastructure (for example, replacing of mechanical and electrical equipment, or capital renovation).

Focus 1 – Access to water, sanitation and hygiene at school level

1.1. The main characteristics of schools in Talas, Naryn and Issyk Kul Oblasts

The number of pupils in the studied schools ranges from 140 and 165 in two schools in Talas Oblast to 1280 and 1543 in schools in Issyk Kul and Naryn Oblasts respectively.

The pupils interviewed were almost equally balanced by gender – half were boys and half girls. There was also no rural-urban divide – the number of boys and girls interviewed in rural and urban areas was divided proportionately.

The number of working personnel in the schools ranges from 16 to 24 in absolute figures in the small schools of Naryn Oblast to 125 and 156 in large schools. The number of female personnel was much larger than that of men (among teachers and staff across the studied schools).

Ministry of Education and Science figures for January 2011 report that there were 438 general educational institutions in the three oblasts. Of these, 107 are in Talas Oblast, 138 in Naryn Oblast and 193 in Issyk Kul Oblast. As part of its integrated analysis, the Ministry carried out research in 330 schools and it was revealed that the most difficult water supply situation is found in Talas Oblast schools – only every third school has water supply. There is sewage in only three of the 109 schools.

In Naryn Oblast the situation is not less difficult – there is water supply in 31 out of 58 educational institutions studied and sewage in just 11. In Issyk Kul Oblast there is water in 144 out of 163 schools, and a sewage system in 11 schools.

During our research, we recorded the year of construction of the school and the last time capital renovation had been carried out. It was revealed that in Naryn and Talas Oblasts three schools are in operation that were built in 1925 and 1932, and it is difficult to imagine sewage and modern infrastructure in these schools. Most of the schools were built during the Soviet period:

- In the 1940s, two schools were built – one each in Issyk Kul and Talas Oblasts;
- In the 1950s three schools were built in Issyk Kul Oblast;
- In the 1960s, three in Issyk Kul Oblast, four in Naryn Oblast and five in Talas Oblast;
- In the 1970s, five in Issyk Kul Oblast, six in Naryn Oblast and six in Talas Oblast;
- In the 1980s, two in Issyk Kul Oblast, four in Naryn Oblast and five in Talas Oblast;
- In the 1990s, two in Issyk Kul Oblast, four in Naryn Oblast and one in Talas Oblast;
- In 2008 one school was built in Naryn Oblast and another in Issyk Kul Oblast.

Thus, a plurality of schools were built in the 1970s. Capital renovation has never been carried out in 59.3 per cent of the schools. It is obvious that the sewage and water supply systems are in crisis conditions or do not work at all.

The time between construction and the latest capital renovation varies from 7 to 61 years.

According to the administrators of the schools studied, hygiene problems are most acute in Naryn Oblast: 60 per cent of directors and deputies noted this fact. In Talas Oblast, 47.4 per cent of administrators interviewed believe that hygiene and sanitation issues are acute and priorities on a par with others. In Issyk Kul Oblast, 55 per cent of directors believe this to be a problem on a par with others. The severity and lack of resolution of these problems is higher in schools in rural areas than those in towns.
The most concern about the lack of centralised sewage systems was expressed by residents of Naryn Oblast – 37.7 per cent of school directors interviewed highlighted its importance. For Issyk Kul and Talas Oblast, this problem is on a par with others. Visual observation and interviews with school directors showed that there have never been sewage or water supply systems in 52.5 per cent of the schools researched. The biggest number of sewage systems in working order were in Issyk Kul Oblast (a quarter of surveyed schools). However, 5 per cent of surveyed schools in Issyk Kul Oblast do not even have a toilet on school territory.

Ministry of Education and Science figures show that in Issyk Kul Oblast capital renovation has not been carried out for more than 7 or 14 years in 25 per cent each of schools. The other schools in the oblast have not been renovated for more than 49 or 61 years. In Talas Oblast, 50 per cent of schools had not undergone capital renovation for more than 23-25 years.

1.2. Access to water, hygiene and sanitation in schools in the studied oblasts

According to the administrators of the schools studied, hygiene problems are most acute in Naryn Oblast: 60 per cent of directors and deputies noted this fact. In Talas Oblast, 47.4 per cent of administrators interviewed believe that hygiene and sanitation issues are acute and priorities on a par with others. In Issyk Kul Oblast, 55 per cent of directors believe this to be a problem on a par with others. The severity and lack of resolution of these problems is higher in schools in rural areas than those in towns.

According to Department of Sanitary Epidemiological Surveillance data,24 capital renovation is not being carried out in the cafeterias in Ananevo 1, Chong Sary Oy and Tamchy schools in Issyk Kul district. Connection to water supply systems in 17 points for distributing food (buffets) in Issyk Kul oblast has not yet happened. Nariman and Przhevalsk schools in Karakol town in Issyk Kul Oblast are in an analogous situation, as issues that require attention in order than the personal hygiene of students be observed go unresolved from year to year. In 21 schools in Issyk Kul district of Issyk Oblast, internal toilets are not working because the water supply and sewage systems are out of order.

---

24 Site of the State Sanitary Epidemiological Surveillance Department http://www.dgsen.kg/news
Teachers in surveyed schools highlighted the urgency of sanitation and hygiene problems in general in their oblasts. The most concern about this problem was expressed by residents of Naryn Oblast – 37.7 per cent of those interviewed stressed its importance. For Issyk Kul and Talas Oblast, the problem was on a par with several others.

According to official data in the regions of Naryn, Issyk Kul and Talas Oblasts, the number of schools without sewage systems ranges from 82 to 100 per cent, and the number without centralised water supplies from 20 to 64 per cent. The most acute problems are in the regions of Naryn and Talas Oblast.

Access to sanitation and sewage systems in schools

In practically all the rural schools, the toilet was located not inside the building, but on school grounds or nearby. In 14.3 per cent of urban schools, it is inside the building. In most cases, school toilets are old, dirty constructions of plank, cinderblock or bricks, kept in unsanitary conditions. Participant observation revealed the following information: “School X in village X is very dirty. One gets the impression that the corridors in the school have not been cleaned for a month, in corners everywhere there is rubbish, sweet wrappers and paper. School pupils have very little discipline. There is no water supply system, or water in the school at all, even in the grounds of the school there is no water source. Water for the canteen is brought in plastic canisters from a pump on the neighbouring street. This pump is used by residents of the neighbouring street for household drinking needs and watering livestock. Water is usually brought to the school by pupils. The canteen has a buffet which sells everything: pies, sweets, sunflower seeds, chocolate and so on. You can enter the buffet through the kitchen, but on the way to the buffet there is nowhere where hands can be washed. There is a washbasin in the canteen, but to get there you need to pass through the whole school. It is not possible to wash hands after using the toilet. Most pupils do not keep personal hygiene. The toilet at the school was built recently from sand-cement building blocks, but is in unsatisfactory condition.” (from an observer’s diary)

In rural schools in the country there are no water supply or sewage systems in schools at all. The toilets are located outside, and their condition is unsatisfactory and unfit for use.

Toilets for teachers and pupils, and also for boys and girls, are often separate, but no difference is observed in quality and maintenance. All the toilets are completely insanitary. The administrations believe that school toilets have “adequate and low levels of cleanliness”. It should be noted that during the research the interviewers recorded cases when teachers told children how to answer the questionnaire forms and, in isolated cases, school administrations tried to prevent photographs being taken of toilets, washbasins or rubbish around schools.

The location and condition of school toilets can seriously influence the health of children. Thus, distant, cold toilets can lead to genital-urinary diseases, particularly among girls, and also can have an impact on the level of psychological violence against both girls

---

25 Ministry of Health, State report on the sanitary-epidemiological wellbeing of the population of the Kyrgyz Republic in 2010

26 A sociologist wrote in his diary when carrying out research in a school in Talas Oblast: “Despite our explanations that the interviews were anonymous, many pupils were not completely frank in their answers. Before beginning the interviews with the pupils, we noticed that the deputy head for educational work had instructed the pupils to tell us that the toilets are clean and all the conditions are in place to ensure hygiene. But in actual fact the school’s toilets, like everywhere, were very dirty and stank. In the canteen the floors hadn’t been cleaned, probably, for more than a week, and it was dirty (renovation is on-going in the kitchen). Children eat in the canteen and drink tea in these conditions. When we started to take photographs, the school director got worried and began to object. He asked if we would publish it all in the media, and why we needed it. He asked again why we had come to this particular school. Even after explaining again the reasons of our visit he didn’t calm down and threatened that if we published the results of the inspection of his school, he would sue us in court.”
and boys. Interviews revealed that often children try to go to the toilet as little as possible, especially in the winter, but to wait out until they get home.

Most school administrations noted that septic tanks of toilets have not been emptied within the last year.

From an observer’s diary: “Azimkan Sulaymanov school in Uchemchk village in Karabuura district is a small one-storey building. The children study in two shifts. There is no water supply in the school, and water for the school’s needs is taken from a nearby spring. A pipe has been placed into the spring, and water is taken through this. Children also wash their hands and shoes there, and local livestock also drink from it. The spring water is dirty, and tastes salty – there may be worms in it. The children don’t wash their hands in the school: there are no washbasins in the school except one in the canteen, where 1st to 4th grade children wash their hands when they go for their snack. There’s one toilet in the school, with male and female sections (in satisfactory condition), and no separate toilet for teachers. The school janitor sweeps the toilets once per week. According to the school director, teachers and local residents, several years ago (six to ten years ago), there was an outbreak of typhoid in the school when the school toilet was located close to the spring, and therefore that toilet was filled in and another toilet built further from the spring.

Examples of positive experience of problem solving

The case of building an ecosan toilet in Ivanovka village, Chuy Oblast. 27

Dry toilets do not pollute water: potentially dangerous waste is separated, treated and processed safely. The main principles of such toilets are separation of urine and faeces for disinfection and use as fertiliser.

Ecosan toilets are a great solution for the problem of access to adequate sanitary conditions where there is a lack of water. These toilets can be built within school buildings, as they do not smell.

Examples of use of the system can be found throughout the world.

At the same time as the observation, the survey also included subjective evaluation by pupils of the level of cleanliness of school toilets. In general, pupils in all regions answered

27 Additional information can be found on the site of "Women of Europe for a Common Future!" www.wecf.org
Sociological research

that there toilets were not clean – most answers were “generally not clean” (35.1 per cent) or “always dirty” (27 per cent).

Pupils in Talas Oblast most often found their toilets clean (40.1 per cent), while this was true least often in Naryn Oblast (24.1 per cent). In general most of the interviewed pupils in Naryn Oblast considered their toilets not clean (72.8 per cent). At the same time, more than half of those interviewed in Issyk Kul and Talas Oblast considered their toilets dirty (56.2 and 57.1 per cent respectively).

Rural respondents were more likely to consider their toilets clean. Twice as often they answered that their toilets were always clean, and 10 per cent more often that their toilets were generally clean. Rural pupils less frequently answered that their school toilets were dirty than urban pupils. However the cleanliness of rural school toilets is very disputable – these toilets are located outside, are never washed, and in the best cases are swept. Toilet cleanliness standards depend on living conditions. If children are used to seeing outside toilets which are never cleaned and where faeces can be left on the surface, for them this is a “normal” toilet. We asked the schoolchildren about whether they had water at home. Their answers revealed that usually residents get water from wells or open sources, or have water piped to their yards.

Figure 12. Is the toilet in your school clean?

Figure 13. Sources of household drinking water (from pupils’ answers)
Baseline Assessment of Access to Water, Sanitation and Hygiene in Schools and Hospitals in the Northern Oblasts of Kyrgyzstan

Water supplied to the home is more common in Issyk Kul Oblast (40 per cent) than Naryn and Talas Oblasts (15 per cent). Water from wells is most commonly used in Naryn and Talas Oblasts (23 and 20.6 per cent respectively). A lack of a permanent water source is most common in Talas and Naryn Oblasts (24.6 and 13.0 per cent respectively) – this problem is most severe in rural areas. In Naryn Oblast, several sources of drinking water are used, including unprotected springs close to home (8 per cent), collected rainwater (3.8 per cent), and plastic canisters (9.2 per cent). Rural residents almost three times as often record a lack of permanent water supply: “Many young people from remote villages leave these villages to find work. And there are even villages where elderly people live who have brought their water from far away all their lives. You can see the problem. All their lives they have taken water from ditches and ponds. Many young people left their remote villages to the city just because of water. This is a socially strategic facility, which we need to pay a lot of attention to. There are problem villages which can’t consume simple clean drinking water. That is, it’s a big problem in all oblasts of Kyrgyzstan.” (from an interview with an expert). Rural residents are usually provided with water in their yards, and they also use water from protected and non-protected sources close to home. Collected rainwater, and plastic canisters, are used to an equal degree in rural and urban areas.

Santash (Bayzak) village, Tyup district. School X
There is no water in the school, or indeed in the village itself.
This might also be why no washbasins were found.
There is a sewage system, since Soviet times, but currently it’s not in working order.
Rubbish is collected in a pit and often burned, with the remains buried. The school grounds are clean.
The biggest problem in this school is the toilet. Not only is it 100 metres from the school, it is used by the whole village.
The school doesn’t have a health point, and pupils go to the village hospital if necessary.

1.3. Personal hygiene of students

The personal hygiene of school students is closely connected with access to safe drinking water. Having sources of water has a positive effect on the personal hygiene of students.

With regard to provision of water, the most comfortable conditions are found among residents of Issyk Kul Oblast: almost 40 per cent have water supplied to their homes, and most have water in their yards.

Table 7

<table>
<thead>
<tr>
<th>Sources of water for washing hands at home (by oblast)</th>
<th>Issyk Kul Oblast</th>
<th>Naryn Oblast</th>
<th>Talas Oblast</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water is supplied by pipe through a tap to a sink in the house</td>
<td>39.6%</td>
<td>20.7%</td>
<td>14.7%</td>
<td>47.3%</td>
<td>15.2%</td>
</tr>
<tr>
<td>Water is supplied by pipe through a tap to a sink in the house’s yard</td>
<td>37.7%</td>
<td>23.0%</td>
<td>29.0%</td>
<td>17.2%</td>
<td>35.6%</td>
</tr>
<tr>
<td>Water is collected from a well</td>
<td>8.5%</td>
<td>22.6%</td>
<td>20.2%</td>
<td>20.1%</td>
<td>15.7%</td>
</tr>
<tr>
<td>From a protected source close to home</td>
<td>3.5%</td>
<td>1.1%</td>
<td>5.6%</td>
<td>0.8%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>
### Sociological research

<table>
<thead>
<tr>
<th>Source Type</th>
<th>4%</th>
<th>8.0%</th>
<th>1.2%</th>
<th>4%</th>
<th>4.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>From an unprotected source close to home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From a protected source far from home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From an unprotected source far from home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From rainwater collected in a tank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From plastic canisters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water is brought to the home in a tank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water is taken directly from a nearby river, swamp, pond, stream, canal or ditch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No water available for permanent use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bearing in mind the fact that the survey results reveal a rather high percentage of persons who take water from springs, a good solution to the problem could be capture of sources, which could increase the level of protection of water from chemical and biological pollution.

When analysing access to water in schools, the seasonal factor is significant. Problems with frozen water supplies are most often seen among families in Issyk Kul Oblast – almost 20 per cent of the surveyed pupils noted that this is a common problem (compared to about 10 per cent in Naryn and Talas Oblasts), and 45.4 per cent of Issyk Kul Oblast residents stated that it is a rare problem, but still one they face. More than half of respondents in Naryn and Talas Oblasts stated that their water never freezes in the winter.

Frozen water is a constant problem twice as often in villages as in towns. School administrations were asked whether they had water in their institutions, and what the sources were. According to their answers, only half the surveyed schools in Issyk Kul Oblast and 47.4 per cent in Talas Oblast have water. In 40 per cent of surveyed schools in Naryn Oblast there is no water. It is good if wells are inside the school yard, but in rural areas people use water from open reservoirs, rivers and springs for drinking and cooking food.

In half the studied schools in Issyk Kul and Talas Oblast, the administrations evaluated their water as clean and potable. In the other schools water was categorised as relatively clean and with certain shortcomings with regard to smell, taste or transparency.

One of the research tasks was to get a subjective analysis by teachers of the quality of the water consumed in schools. The results reveal a low level of water quality, despite the fact that no chemical or biological analysis was carried out of the water in the facilities. Teachers defined the water just by appearance and taste. Water was reported to be ideal, tasty and clean in just 10.1 per cent of responses from Issyk Kul Oblast. In Talas, 49.0 per cent of teachers answered that their water was always clean and potable, while in Naryn Oblast the most common answer (26.4 per cent) was that water was relatively clean, but nonetheless potable. In total, 8.3 per cent of teaching staff reported that they had no water at all. Water was reported to be somewhat polluted but sometimes used for drinking by 11.0, 12.3 and 5.0 per cent of teachers in Issyk Kul, Naryn and Talas Oblasts respectively.

---

28 The technique consists of erecting capture chambers around water sources, which prevent pollution or access by livestock, and also contain several simple water treatment systems (sand and gravel filters).
Water was very dirty, but pupils and teaching staff had to drink it for 10.1, 7.5 and 9.0 per cent of respondents in Issyk Kul, Naryn and Talas Oblasts respectively.

![Figure 14. Perceptions of water quality in studied schools](image)

State Sanitary Epidemiological Surveillance Department figures show that water supplied by systems in all the studied oblasts was discovered to have chemical and microbiological content that breached the norms. The highest percentages of such breaches was found in Issyk Kul Oblast (4 per cent for chemical pollution and 19.3 per cent microbiological), while there were less in Talas (0.5 and 4.7 per cent) and Naryn (1.1 and 10.8 per cent).

The administrations of several schools, during interviews, stated that in their educational facilities water purification methods were used including chlorination, ozonisation, boiling and filtration. However, visual observation did not record any such means and practice. Water is boiled in schools just for the breakfasts of 1st to 4th grades, and in isolated cases these children have access to water to wash their hands.

In 2010, in all regions of the Kyrgyz Republic, implementation of the Presidential Decree “On providing food for pupils in schools in the Kyrgyz Republic” continued. Food was provided to about 301,411 pupils around the country. In the 2010-11 academic year, food was provided in almost all schools in the country for 1st to 4th grade pupils. However, in the field there were several material shortcomings in the provision of food for pupils. In most schools in Naryn, Batken and Jalalabad Oblasts there was little kitchen equipment and few fridges available, and adequate facilities were not in place for washing pupils’ hands and dishes. Provision of quality drinking water for remote schools in Osh Oblast (Chong Alay, Alay and Karakulja districts) and Batken Oblast is still problematic.

State report on sanitary-epidemiological wellbeing of the population of the Kyrgyz Republic for 2010.

School directors noted that they have soap for washing hands. However, observation and visual research indicated that there was no soap, towels or tissues in the schools for children. Observation also revealed that children do not have opportunities, daily practice
and encouragement to wash hands. Qualitative figures agree with the quantitative ones: most pupils do not wash their hands at school. In Issyk Kul schools, 33 per cent of teachers answered that pupils, as a rule, do not wash their hands at school. The equivalent figures for pupils in Naryn and Talas Oblasts were 46.2 and 41 per cent respectively. These are very high indicators, revealing a problem which could in the future lead to disease and mortality.

As a whole, the situation in schools in all oblasts is as follows: in general pupils wash their hands rarely (19.4 per cent of all respondents) and very rarely (19.4 per cent). Only 18.4 per cent of teachers said that children wash their hands after going to the toilet. Meanwhile, 2.5 per cent of teachers do not know if children wash their hands in the school.

Statistics and expert assessments reveal that in Kyrgyzstan as a whole there is a trend of growth in acute intestinal infections. Half of respondents in the surveyed schools answered that pupils do not wash their hands, because they do not have facilities for it, and also no towels, heated towel rails, soap or water. But the most alarming thing is that children do not have practice of or rules for washing hands. Children do not understand that clean hands and personal hygiene are directly connected to human health.

During the course of the survey we tried to reveal how often and for what reasons children wash their hands at school and at home, how they dry their hands and what they know about hygiene. Research results reveal that a rather high percentage of children do not wash their hands at school. Visual observation confirmed that in schools elementary conditions for this are not in place – there are no sewage systems, no wash basins, and no soap, tissues and towels.

Table 8

<table>
<thead>
<tr>
<th>What pupils dry their hands with after washing (by oblast)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Issyk Kul Oblast</strong></td>
</tr>
<tr>
<td>We have shared towels for all</td>
</tr>
<tr>
<td>We have one-time use tissues or towels</td>
</tr>
<tr>
<td>All have their own towels</td>
</tr>
<tr>
<td>I have my own tissues</td>
</tr>
<tr>
<td>I don’t dry my hands, they dry themselves</td>
</tr>
<tr>
<td>Toilet paper</td>
</tr>
<tr>
<td>Handkerchief</td>
</tr>
</tbody>
</table>
There are several means of drying hands after washing. The most frequent answer is use of personal tissues. Similar numbers of respondents answered that they have their own towels. Part of pupils do not dry their hands after washing – 17.4 per cent on average across the oblasts, with the highest percentage observed in Talas Oblast (20.8 per cent).

The practice of using a common towel is most widespread in Issyk Kul Oblast. In Talas Oblast, a quarter of respondents use handkerchiefs for drying their hands.

There is a difference in practice between boys and girls in how they dry their hands after washing. In particular, more than twice as many boys as girls stated that they do not dry their hands, but that they “dry themselves” – 26.5 per cent to 12.5 per cent. Meanwhile, a higher proportion of girls than boys have their own tissues (43.2 per cent to 30.2 per cent). The other methods for drying hands were used equally by boys and girls (handkerchiefs, their own towels and shared towels).

Most of the pupils who washed their hands at all wash them two or three times during the school day (55.7 per cent). Hands are washed 20 per cent more in towns than in villages (74.9 and 54.3 per cent respectively).

In urban areas, pupils are less likely to say the facilities do not exist (24.1 to 27.7 per cent), there is no water (29.3 per cent to 36.1 per cent), or there is no soap (0 to 1.7 per cent) as reasons why they do not wash their hands. However, a lack of sinks and washbasins is reported more often by urban pupils (29.3 to 24.4 per cent in villages). This is fully explainable because in village schools water and washbasins in the best cases are located outside. Unexpectedly, 6.9 per cent of pupils in towns reported dirty water as a reason why they did not wash their hands, compared to 0.8 per cent in villages. Thus, dirty water is not just a problem for rural areas.

The most widespread reason for not washing hands reported by pupils is an elementary lack of conditions, including water (34.8 per cent on average across the oblasts) and sinks / washbasins (25.3 per cent across the oblasts). However, both these problems are more acute in Issyk Kul and Talas Oblasts than in Naryn Oblast.
Sociological research

Naryn Oblast. Boys are less likely to connect hand washing with a specific activity: 30.7 per cent of boys wash their hands because they are dirty in comparison with 20.4 per cent of girls. Girls wash their hands after cleaning the classroom or school almost three times more than boys. An almost equal number of boys and girls noted the need to wash hands before eating – 25.9 and 24.3 per cent respectively. However boys wash their hands after eating almost twice as often as girls (6.3 and 3.9 per cent respectively).

**Table 9**

<table>
<thead>
<tr>
<th>When pupils wash their hands (by oblast)</th>
<th>Issyk Kul Oblast</th>
<th>Naryn Oblast</th>
<th>Talas Oblast</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>After every visit to the toilet</td>
<td>72.0%</td>
<td>68.5%</td>
<td>75.0%</td>
<td>69.3%</td>
<td>75.0%</td>
</tr>
<tr>
<td>Before eating</td>
<td>29.2%</td>
<td>14.1%</td>
<td>26.4%</td>
<td>25.9%</td>
<td>24.3%</td>
</tr>
<tr>
<td>After eating</td>
<td>3.1%</td>
<td>1.1%</td>
<td>7.9%</td>
<td>6.3%</td>
<td>3.9%</td>
</tr>
<tr>
<td>After coming in, walking outside, or break</td>
<td>19.3%</td>
<td>25.0%</td>
<td>18.1%</td>
<td>18.0%</td>
<td>21.1%</td>
</tr>
<tr>
<td>If they are dirty</td>
<td>29.8%</td>
<td>30.4%</td>
<td>18.1%</td>
<td>30.7%</td>
<td>20.4%</td>
</tr>
<tr>
<td>After cleaning the classroom or school</td>
<td>3.1%</td>
<td>14.1%</td>
<td>8.3%</td>
<td>3.7%</td>
<td>10.4%</td>
</tr>
<tr>
<td>After physical education or games</td>
<td>1.9%</td>
<td>2.2%</td>
<td>6.0%</td>
<td>7.4%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

In towns, more pupils wash their hands after every visit to the toilet – 77.1 per cent against 70 per cent in villages, before eating 15 per cent more in towns than villages, and after eating 2 per cent more in towns than in villages. However in villages more children wash their hands after walking outside (1.7 per cent as against 21.7 per cent in towns), after physical education and games, and ten times more often after cleaning the classroom or school.

The most common reasons for washing hands at home were similar to those at school, and are connected to activities that can dirty hands – such as going to the toilet and playing outside – and before eating. Of the three oblasts, Naryn has the highest percentage of pupils who wash their hands after going to the toilet – 77.8 per cent, as opposed to 59.5 per cent in Talas Oblast. Naryn children are more likely to believe that they also need to wash their hands after eating (18.4 per cent, compared to 8.8 per cent in Issyk Kul Oblast). Meanwhile, Talas children are more likely to believe that they should wash their hands after working at home – 19.4 per cent, compared to 0.4 per cent in Issyk Kul. Pupils in towns more often wash their hands after every visit to the toilet (72 per cent compared to 65 per cent in villages), before eating (66.5 and 60.3 per cent), and after eating (20.1 and 10.5 per cent).

In general, girls tend to wash their hands more at home than boys in all oblasts. The percentage of girls washing their hands more than ten times a day at home is almost 12 per cent higher than the equivalent figure for boys – 36.6 and 24.7 per cent respectively. Urban pupils tend to wash their hands more often than rural ones. More rural pupils than urban
ones wash their hands between four and ten times a day at home. However, town pupils are more likely to wash their hands more than ten times a day when they are at home.

In both rural and urban areas, the overwhelming majority (with a difference of almost three per cent) believe that it is important to wash hands with soap. However, 2.9 per cent of respondents in towns believed that this practice is not important.

Table 10

<table>
<thead>
<tr>
<th>Why is it important to wash your hands with soap? (by oblast)</th>
<th>Issyk Kul Oblast</th>
<th>Naryn Oblast</th>
<th>Talas Oblast</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hands get tired of dirt and we need to help them</td>
<td>10.0%</td>
<td>10.2%</td>
<td>6.8%</td>
<td>13.7%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Hands need to be cleaned of harmful parasites and bacteria</td>
<td>82.5%</td>
<td>88.2%</td>
<td>87.3%</td>
<td>85.8%</td>
<td>87.5%</td>
</tr>
<tr>
<td>Parents tell me to, but I don’t know why</td>
<td>2.4%</td>
<td>4.7%</td>
<td>0.0%</td>
<td>3.0%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Water is living and helps us</td>
<td>5.2%</td>
<td>3.1%</td>
<td>4.4%</td>
<td>9.4%</td>
<td>1.9%</td>
</tr>
<tr>
<td>So that grandmother / mother / teacher doesn’t get angry</td>
<td>2.4%</td>
<td>2.0%</td>
<td>0.8%</td>
<td>1.7%</td>
<td>1.8%</td>
</tr>
<tr>
<td>I don’t know why I need to wash them, I just wash them</td>
<td>2.4%</td>
<td>1.6%</td>
<td>0.0%</td>
<td>0.9%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Just because they’re dirty and I need to clean them</td>
<td>21.9%</td>
<td>16.5%</td>
<td>14.7%</td>
<td>23.2%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Other</td>
<td>3.6%</td>
<td>1.2%</td>
<td>6.8%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

In general, in all three oblasts most of the surveyed children knew that hands need to be washed to “be cleaned of harmful parasites and bacteria” – from 82.5 to 87.3 per cent. However, the explanations given also revealed options that demonstrated a lack of understanding of why hands should be washed. It should be noted that in Talas Oblast the smallest number of children chose options like “parents say but I don’t know why” or “I don’t know why, I just wash my hands”. However, urban schoolchildren significantly more often gave options that corresponded more to simplified explanations of why it is important to wash hands: “water is living and helps us” and “hands get tired of dirt and we need to help them”. However, children in villages do not understand that hands should be washed not just after going to the toilet, but also after looking after livestock and domestic animals.

1.4. Access to water and sanitation and the health of pupils

Statistics and expert opinion point to a sharp rise in infectious diseases in Kyrgyzstan in general. Half of respondents in the studied schools reported that pupils do not wash their hands, because the facilities are not in place, and also there are no towels, soap or water. But the most alarming thing is that children do not have practice in, or know the rules of,
washing hands. Children do not understand that clean hands and personal hygiene are directly connected with human health.

### Table 11

<table>
<thead>
<tr>
<th></th>
<th>Intestinal disease, total</th>
<th>Viral hepatitis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total 2008</td>
<td>Per 100,000</td>
</tr>
<tr>
<td>Issyk Kul Oblast</td>
<td>649</td>
<td>539</td>
</tr>
<tr>
<td>Naryn Oblast</td>
<td>322</td>
<td>272</td>
</tr>
<tr>
<td>Talas Oblast</td>
<td>639</td>
<td>639</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>12,051</td>
<td>10,641</td>
</tr>
</tbody>
</table>

Sixty per cent of school age children in Karakol town in Issyk Kul Oblast are infected with helminth (parasitic worms). This was stated by vice-Mayor Gulnaz Orozova. In her words, this was discovered after medical examinations in Issyk Kul Oblast. To resolve the problem, the state administration of Issyk Kul Oblast organised an expanded meeting of medical personnel and administrators.

At the meeting it was decided that on 23 and 24 September 2010, the first social mobilisation campaigns and mass dehelminthisation campaigns would be held in all settlements in Issyk Kul Oblast. As a result of implementation of the “Memorandum on cooperation on the a mass health improvement campaign against invasive parasites in Issyk Kul Oblast”, all the population from two years and up will be treated of helminth free of charge.

“'In the last five years, about 20,000 people have been officially diagnosed with helminth in the country,” said Galina Sokolenko, parasite specialist at the Karakol State Centre for State Sanitary Epidemiological Surveillance. “Laboratory examination in the oblast has shown that of 1000 people examined, 36 people are infected with parasitic worms, of whom more than 80 per cent are children.” Some infectious diseases, connected to inadequate levels of sanitation and hygiene, as well as limited access to safe drinking water, are widespread in the country. Despite the work that has been carried out in this sector, the level of disease in the period 1999 to 2006 has not shown a falling trend, apart from scabies and pediculosis which seem to have been reduced because of some improvement in personal hygiene in the population. By contrast, brucellosis has shown a trend of increase, which not only indicates lack of awareness among most of the rural population about care for livestock, safe slaughter methods and correct treatment of meat and dairy products, but also weakness in the work of sanitary epidemiological services in the country.29 "Infectious diseases (typhoid, cholera, helminth, roundworms, lambliaisis, seatworm and others) appear because of failure to follow sanitation and hygiene rules. Treatment of just one person with brucellosis requires 20,000 som. In 2008, 50 million som was spent for treatment of one

---

"disease." (from T. Isakov’s report at the international conference entitled “Environmental security in Kyrgyzstan. Barriers and news solutions on the path to sustainable sanitation.”)

**Statistics of parasitic disease**

Every year, from 250,000 to 300,000 cases of infectious disease are registered in the country. Morbidity with acute intestinal infections, brucellosis and helminth remain high, and there is fear of an outbreak of typhoid.

More than 70 per cent of infectious pathologies (excluding flu and acute respiratory viral infections) are connected with sanitation and hygiene. These are parasitic diseases, which make up 38 per cent; acute intestinal infections (31 per cent); and viral hepatitis (14 per cent). Calculation of economic losses connected with water supply, as a rule, do not take into account spending on restoration of health.

**Enterobiasis.** According to figures from Centres for State Sanitary Epidemiological Surveillance, enterobiasis infection of children who attend pre-schools and early school classes is higher in rural areas than in towns.

**Ascardiasis.** The second most widespread helminth in the country is ascardiasis. Annually, more than 9000 people are reported to suffer from ascardiasis, more than 17 per cent of the total number with helminth.

Last year, 5054 cases (18.5 cases per 1000 investigated) of ascardiasis were registered, as against 4604 in 2008. The highest rates are found among residents of Talas and Batken Oblasts (46.7 and 45.7) and in Osh city (27.6 per cent) as a result of quality laboratory diagnosis.

The main reasons for the growth in disease are insufficient provision of good-quality drinking water and unsatisfactory sanitary and technical conditions in urban sewage systems.

The high figures for the level of infectious disease among schoolchildren is fully logical. Teachers in the surveyed schools noted cases of disease connected with dirty hands.

In general 18.3 per cent in Issyk Kul Oblast, in Naryn Oblast, 23.6 per cent. In Talas Oblast, 29 per cent of teachers answered that in their schools there were cases of infectious disease among children. The highest percentage of disease was noted in Talas Oblast.

**Table 12**

**Trends in helminth infection of the population** for 2008-9 (per 1000 persons examined)

<table>
<thead>
<tr>
<th>Oblast</th>
<th>Parasite</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number examined</td>
<td>Infections revealed</td>
<td>Per 1000 persons examined</td>
</tr>
<tr>
<td>Issyk Kul</td>
<td>Ascardiasis</td>
<td>40,051</td>
<td>450</td>
</tr>
<tr>
<td></td>
<td>Hymenolepiasis</td>
<td>2</td>
<td>0.05</td>
</tr>
</tbody>
</table>


Out of 36,009 people discovered to be infected with parasite, 22,476 (62.4 per cent) were children under 14. Of these children, the group most commonly infected were children of two to four years, who made up 21 per cent. The highest percentage of helminth infection was reported in Talas Oblast, which correlates with the lowest indicator for access to adequate sanitary and hygienic conditions among the oblasts studied.

The most common disease in the three oblasts was hepatitis (31.1 per cent), which was most often reported by teachers from schools in Naryn Oblast (36.0 per cent). Teachers also singled out Bodkin’s disease (8.1 per cent in all schools, with 10.3 per cent the highest reported, in Talas Oblast). Though respondents specified hepatitis and Bodkin’s disease, the following picture can be observed:

**Figure 17. Cases of disease among pupils because of dirty hands**
baseline assessment of access to water, sanitation and hygiene in schools and hospitals in the northern oblasts of kyrgyzstan

figure 18. level of “dirty hand” disease infections

table 13

infectious diseases in the kyrgyz republic in 2010 – 2011.32

<table>
<thead>
<tr>
<th>Region</th>
<th>Hepatitis A</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Absolute number</td>
<td>Indicator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total 0-14 years</td>
<td>0-14 years</td>
</tr>
<tr>
<td>Issyk Kul</td>
<td></td>
<td>49</td>
<td>46</td>
</tr>
<tr>
<td>Naryn</td>
<td></td>
<td>46</td>
<td>43</td>
</tr>
<tr>
<td>Talas</td>
<td></td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td></td>
<td>1291</td>
<td>1152</td>
</tr>
</tbody>
</table>

the diarrhoea is 7.8 per cent in general in all schools, and the highest indicator is 10.0 per cent by teachers in issyk kul oblast.

according to state sanitary epidemiological surveillance department figures for 2010, the most alarming situation is connected to intestinal infections and parasites which, despite measures towards mass dehelminthisation, remain at high levels. the most widespread helminth condition among children is enterobiasis. in 2010, 15,644 cases of enterobiasis were recorded among children. this can be explained by the lack of conditions to observe personal hygiene and limited access to clean drinking water. a particularly high level of enterobiasis among children was noted in issyk kul oblast.

violations of sanitary-epidemiological norms, and unsatisfactory sanitary and hygienic training and education, increase prevalence of infectious disease among children and

32 infectious disease, state sanitary epidemiological surveillance bulletin, january 2010-11.
adolescents. In 2010, 8950 cases of hepatitis A infection and 22,351 cases of acute intestinal infection were registered in schools. Surveyed teachers did not report frequent food poisoning in the studied schools. Only 14.3 per cent of all the surveyed schools indicated that such conditions occur, but not frequently. Food poisoning was reported by 20.2 per cent of schools in Issyk Kul Oblast, 14.2 per cent in Naryn Oblast, and 8.0 per cent in Talas Oblast.

Figure 19. Percentage of schools reporting food poisoning among children

School directors also reported on infectious disease among children. The highest proportions of such cases were reported in Talas Oblast (26.3 per cent) and Naryn Oblast (25 per cent). Experts also reported concerns about the trend of growth in poisoning in schools: "Remember that in Maily Suu town, mass poisoning of children occurred. The Sanitary Epidemiological Station was blamed. But they say that the staff of that organisation could not possibly have afforded to keep a sanitary doctor in every school. That’s why checks are just carried out once a year. It’s just that there are administrators who do nothing about shortcomings revealed. Therefore the school director should bear responsibility for washbasins that don’t work and dirty school toilets.” (from an interview with an expert).

Figure 20. Intestinal infections among children under 14 by territory in 2007 (per 100,000)\textsuperscript{33}

\textsuperscript{33} Data from Ministry of Health, Republican Medical Information Centre
The data and experts testify to violations of sanitary norms which can lead to tragic consequences: “Access to sanitary services for the population, and particularly children and adolescents, is connected to the work of school doctors in schools and pre-schools. Unfortunately, schools and pre-schools are not fully staffed with medical specialists, particularly good specialists, who would know about hygiene and sanitation issues. The vast majority of treatment and preventative activities, and in the best case examinations, are carried out on a one-off basis. It all stops there, but issues of hygiene and sanitation should be addressed by school doctors, sanitary doctors and, most importantly, the older pupils themselves should become more active. Earlier, I remember, in every class there were sanitary activists who kept tabs on the sanitary conditions of pupils, and on whether they were observing the rules of personal hygiene. Nowadays there are no such activists: they are working on issues like governance and so on, but not on hygiene and sanitation – the activeness of pupils is very low. If only such groups were created in every class in every school under the supervision of class monitors, if there were sanitary activists, sanitary bulletins being issued and the personal hygiene of pupils being kept tabs on, the problem could, to some degree, be resolved. But so far we don’t have that.” (from an interview with an expert).

1.5. Sanitation and hygiene issues in the educational process

The hygiene of children and adolescents as a field of health is part of the public health system of Kyrgyzstan, and is state-wide. All activities are carried out based on scientific research, have a unified management structure that encourages collective participation in sanitary and preventative work and awareness-raising on hygiene issues among public associations, medical personnel and the population.

During the research it was revealed that there are no special hygiene lessons required by the Ministry of Education. Such practice existed in the Soviet period, and was included in the so-called “school component” which was to include classes on hygiene education for children, on healthy lifestyles and so on. Today, school administrations themselves make decisions on whether to conduct such lessons as extra-curricular activities or set aside time specifically.
Table 14

Extract from the Action Plan for Implementing the “Strengthening public health in Kyrgyz Republic in 2009-11” Programme

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time frame</th>
<th>Sources of finance</th>
<th>Indicators and implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating demand for healthy lifestyles among pupils in the country’s schools:</td>
<td></td>
<td></td>
<td>Increased number of optional and extracurricular lessons on healthy lifestyles in schools.</td>
</tr>
<tr>
<td>- Develop mechanisms to introduce healthy lifestyle lessons into the study programme</td>
<td>April 2009 September 2009 3rd quarter, 2009 2nd quarter 2009</td>
<td>Ministry of Education and Science Ministry of Health UNICEF Health Programme of MSDSP (Aga Khan Foundation project)</td>
<td>Increased knowledge on healthy lifestyle issues among teachers and pupils</td>
</tr>
<tr>
<td>- Introduce “health education” lessons in the framework of the “Healthy City” programme in Sverdlovsk region of Bishkek</td>
<td>1st quarter 2009 2nd quarter 2009</td>
<td></td>
<td>Cultivation of safe behaviour skills among pupils</td>
</tr>
<tr>
<td>- Include healthy lifestyle issues in training and continuing education courses for school teachers</td>
<td></td>
<td></td>
<td>Implementers: Ministry of Education and Science, Ministry of Health</td>
</tr>
<tr>
<td>- Create and train school health committees on sanitation and hygiene issues in schools in Alay and Chong Alay districts of Osh Oblast and Naryn district and Naryn town in Naryn Oblast.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As a result of expert interviews and assessments in schools it was established that lessons on healthy lifestyles were more often and more regularly carried out in vocational colleges than in senior school classes. Study data testifies to the fact that such lessons are not always available for younger schoolchildren. These pupils, as well as older ones, get confused by the name of the lesson. Most 5th to 7th and 8th to 11th grade pupils relate these classes just to educational activities (extracurricular and educational time) rather than practical action. Some pupils connect the lessons with particular themes or activities that are carried out at school. A roughly equal number of pupils in younger (7.7 per cent) and older (8.3 per cent) groups found it difficult to answer the question about healthy lifestyle lessons. This is most likely because of a lack of understanding about the lesson system and the aims of the course. The reason may lie in mistakes made in the course programme itself, and also in the lack of continuity and regularity of lessons in the course (there are subjects with precise names included in the curriculum, and lessons in these subjects are taught regularly by one teacher). Also the fact that the course is optional, as noted by 53 per cent of surveyed teachers, means that there is a lack of responsibility for them among teachers, and evaluation of the knowledge of pupils does not indicate that the course is serving its purpose as an independent and important subject of study.
Table 15

**Parental activities to teach personal hygiene**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Issyk Kul Oblast</th>
<th>Naryn Oblast</th>
<th>Talas Oblast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most parents are interested in and talk with their children about sanitation and hygiene</td>
<td>37.6%</td>
<td>19.8%</td>
<td>49.0%</td>
</tr>
<tr>
<td>Most parents limit discussions just to washing hands</td>
<td>38.5%</td>
<td>37.7%</td>
<td>17.0%</td>
</tr>
<tr>
<td>Most parents pay no attention to the topic</td>
<td>20.2%</td>
<td>41.5%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Other</td>
<td>0.9%</td>
<td>0.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>No answer</td>
<td>2.8%</td>
<td>0.9%</td>
<td></td>
</tr>
</tbody>
</table>

Schoolteachers affirm that in most of the schools hygiene lessons are conducted – 89.9 per cent in Issyk Kul Oblast, 88 per cent in Talas Oblast and 80.2 per cent in Naryn Oblast, or a total percentage of 86 per cent of all surveyed schools. However, the number of pupils who stated that they had hygiene classes was 25.8 per cent less. It is possible that teachers conduct such classes but pupils completely forget them and cannot say anything about them. If so, the classes are pointless, and not particularly effective. In total, 34.7 per cent of pupils stated that they had had no hygiene lessons this academic year.

**Figure 22. Have there been hygiene lessons in your school this academic year?**

In all schools, a high percentage of teachers – from 80.2 to 64.2 per cent – noted that they taught essential skills in hygiene and sanitation. Similar answers to this question were given by school directors. On the one hand, they say that sanitation and hygiene lessons are given in their schools, but on the other hand they believe that pupils need more such knowledge. The research reveals that teachers conduct guidance tutorials, open lessons, and individual discussions with pupils, on hygiene and sanitation issues.
In the schools researched, no hygiene textbook or teaching manual was named. Teachers answered that they use various brochures, booklets and mass media materials including internet resources, and they show pupils posters and stalls.

Table 16

<table>
<thead>
<tr>
<th>Materials for Teaching on Hygiene</th>
<th>Issyk Kul Oblast</th>
<th>Naryn Oblast</th>
<th>Talas Oblast</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Various brochures and booklets</td>
<td>23.5%</td>
<td>36.5%</td>
<td>50.0%</td>
<td>46.7%</td>
<td>34.1%</td>
</tr>
<tr>
<td>Materials from newspapers and magazines</td>
<td>12.2%</td>
<td>20.0%</td>
<td>37.5%</td>
<td>20.0%</td>
<td>23.5%</td>
</tr>
<tr>
<td>Books and textbooks</td>
<td>25.5%</td>
<td>15.3%</td>
<td>9.1%</td>
<td>15.6%</td>
<td>17.3%</td>
</tr>
<tr>
<td>The internet</td>
<td>1.0%</td>
<td>3.5%</td>
<td>2.3%</td>
<td>6.7%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Posters and stalls</td>
<td>3.1%</td>
<td>3.5%</td>
<td>0.0%</td>
<td>8.9%</td>
<td>.9%</td>
</tr>
<tr>
<td>Methodical materials</td>
<td>4.1%</td>
<td>5.9%</td>
<td>1.1%</td>
<td>8.9%</td>
<td>2.7%</td>
</tr>
<tr>
<td>No books</td>
<td>1.0%</td>
<td>10.6%</td>
<td>3.4%</td>
<td>2.2%</td>
<td>5.3%</td>
</tr>
<tr>
<td>No answer</td>
<td>30.6%</td>
<td>11.8%</td>
<td>4.5%</td>
<td>6.7%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Other</td>
<td>11.2%</td>
<td>14.1%</td>
<td>11.4%</td>
<td>17.8%</td>
<td>15.9%</td>
</tr>
</tbody>
</table>

In the research process we tried to discern which activities are carried out in schools to ensure observance of sanitary norms and rules. About a quarter of surveyed schoolteachers in Issyk Kul and Talas Oblasts do nothing. Most teachers answered that they carry out general cleaning and community cleaning days, and a few respondents inspect, monitor and check, though they do not specify what for... In some schools, doctors read lectures or...
teachers conduct lessons. Other answers included: “We conduct competitions and activities”, “pupils write compositions”, “we prepare posters and sanitation display corners, and disseminate brochures” and “the school has a washbasin, where the pupils wash their hands.”

Table 17

<table>
<thead>
<tr>
<th></th>
<th>Issyk Kul Oblast</th>
<th>Naryn Oblast</th>
<th>Talas Oblast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult to answer, I don’t know</td>
<td>24.8%</td>
<td>23.6%</td>
<td>8.0%</td>
</tr>
<tr>
<td>General cleaning, community cleaning days</td>
<td>15.6%</td>
<td>34.9%</td>
<td>59.0%</td>
</tr>
<tr>
<td>Inspections, monitoring and checks</td>
<td>3.7%</td>
<td>4.7%</td>
<td>8.0%</td>
</tr>
<tr>
<td>Guidance tutorials</td>
<td>13.8%</td>
<td>7.5%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Doctors read lectures and facilitate discussions</td>
<td>5.5%</td>
<td>6.6%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Lessons</td>
<td>4.6%</td>
<td>8.5%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Competitions and activities</td>
<td>9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Pupils write compositions</td>
<td>1.8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>We prepare posters and sanitation display corners, and disseminate brochures</td>
<td>9%</td>
<td>5.7%</td>
<td>6.0%</td>
</tr>
<tr>
<td>We show films</td>
<td>3.7%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>The school has a washbasin, and the pupils wash their hands</td>
<td>0.9%</td>
<td>5.7%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Explanatory discussions and educational work</td>
<td>7.3%</td>
<td>2.8%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Guidelines and meetings</td>
<td>9%</td>
<td>4.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Other</td>
<td>9.2%</td>
<td>0.9%</td>
<td>9.0%</td>
</tr>
<tr>
<td>No answer</td>
<td>14.7%</td>
<td>9.4%</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

The answers to this question lead to the conclusion that school teachers have a very remote understanding of the norms, rules and practice of hygiene and sanitation. In addition, if schools do not have sewage, washbasins, soap or tissues, pupils do not have clear practice of washing hands often, and rubbish lies in the school yard and has not been cleared for years, then children will not have knowledge of hygiene and healthy lifestyles, or thus skills in keeping their hands and bodies clean.

Issues of hygiene and sanitation also baffle pupils in the studied schools.
Understanding of hygiene among rural pupils is wider – they more often state cleanliness, healthy lifestyles, and a lack of bacteria and microbes, washing hands and cleaning teeth, and keeping buildings clean. Urban pupils are more likely to think of hygiene in terms of cleanliness and health.

In general, hygiene lessons were taken this academic year by 65 per cent of pupils in Issyk Kul Oblast and Naryn Oblast and by just 50 per cent of pupils in Talas Oblast. The other half of students either do not remember such lessons or do not know what hygiene is at all.

Hygiene is usually associated with cleanliness and ways of maintaining it, such as washing hands and cleaning teeth. It is notable that on average 23 per cent of all surveyed pupils in all oblasts do not know what hygiene is.

Work has to be conducted to develop the contents of hygiene education activities for pupils. For example, awareness must be raised in hygiene lessons about types of parasitic infections and ways to prevent them. For this, schoolchildren have to be offered study programmes in the field of hygiene and other fields of public health; modern teaching methods and further training of teachers; and dissemination in schools of print materials, booklets, newspapers and materials explaining the aims and norms of hygiene and healthy lifestyles; and taught how to look after themselves in practice.

Meanwhile, the Health Improvement Centre of the Ministry of Health states that work will be carried out with youth. Activities among organised youth will involve introducing educational programmes into the study process. In 113 primary vocational education lyceums, students receive training in a twenty hour “Healthy Lifestyles” programme. An Agreement has been made between the Ministry of Health and the Professional Technical Education Agency under the Ministry of Migration and Social Protection “On introduction of 24 hours on healthy lifestyles into the academic programme for retraining of educators in the professional technical education system.” In 2009-2010, 564 educators were trained on the courses, including 216 education heads; 100 masters of industrial training; 160 healthy lifestyle teachers; and 88 summer school leaders.

Participation of youth on health issues in 2010 occurred through school parliaments and their involvement as volunteers. During optional classes, 9th to 11th grade pupils are taught about reproductive and sexual health and HIV under the “equal to equal”
1.6. Problems with rubbish in the school grounds

The research tasks also included clarifying the situation with regards to household waste in the grounds of schools, rural health points and markets. In the country’s towns and villages, waste collection points have often become unauthorised dumps. This has caused an environmentally unfavourable situation, as there is a lack of properly equipped storage facilities for household waste, which practically remains untreated. Long-term storage of waste leads to dangers for public health and the environment.

Most schools do not organise timely and regular removal of waste, as a result of which unauthorised dumps appear on their grounds.

![Figure 25. There is a waste dump on the grounds of our school](image)

Usually, waste accumulates on school grounds, either partially burned or partially taken to a dump. Some schools organise waste bins on school grounds and systematically take waste out of the grounds.

Focus 2. Access to water, sanitation and hygiene in rural health points and hospitals

2.1. The public health service

The public health service, the main task of which is to prevent deterioration in the sanitary epidemiological wellbeing of the population, is made up of six national-level institutions (the State Sanitary Epidemiological Surveillance Department (SSESД), the Republican Immunisation Centre, the Republican Centre for Quarantine and Dangerous Infections, the “AIDS” Republican Union, the NGO Preventative Medicine, and the Republican Centre for Health Improvement), two city State Sanitary Epidemiological Surveillance Centres (Bishkek and Osh), 48 district and town State Sanitary Epidemiological Surveillance Centres, including seven town and district Centres with responsibility for coordinating sanitary epidemiological activities in their oblasts, two city disinfecting stations, the Kyrgyz railway sanitary epidemiological service, the southern branch of the Health Improvement Centre in Osh city, and the Bishkek city Health Improvement Centre.
By oblast, the highest number of rural health points are the 120 in Issyk Kul Oblast. The smallest number is 48 in Talas Oblast. Meanwhile, the total population of Issyk Kul Oblast is 441,300, Talas Oblast is 229,200 and Naryn Oblast 259,300.

<table>
<thead>
<tr>
<th>Table 18</th>
<th>Healthcare facilities providing primary medical and sanitary assistance in the Kyrgyz Republic, 2008-9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family Medical Centres (FMCs)</td>
</tr>
<tr>
<td>Kyrgyz Republic</td>
<td>79</td>
</tr>
<tr>
<td>National level</td>
<td></td>
</tr>
<tr>
<td>Bishkek city</td>
<td>19</td>
</tr>
<tr>
<td>Osh city</td>
<td>7</td>
</tr>
<tr>
<td>Batken Oblast</td>
<td>7</td>
</tr>
<tr>
<td>Jalalabad Oblast</td>
<td>11</td>
</tr>
<tr>
<td>Issyk Kul Oblast</td>
<td>7</td>
</tr>
<tr>
<td>Naryn Oblast</td>
<td>6</td>
</tr>
<tr>
<td>Osh Oblast</td>
<td>9</td>
</tr>
<tr>
<td>Talas Oblast</td>
<td>4</td>
</tr>
<tr>
<td>Chuy Oblast</td>
<td>9</td>
</tr>
</tbody>
</table>

In all the studied oblasts a trend has been noted of reduction in the total number of doctors by 1000.
Table 19

<table>
<thead>
<tr>
<th>Oblast</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issyk Kul</td>
<td>19.7</td>
<td>18.4</td>
<td>16.9</td>
<td>16.5</td>
<td>15.8</td>
</tr>
<tr>
<td>Naryn</td>
<td>17.8</td>
<td>17.3</td>
<td>16.6</td>
<td>15.6</td>
<td>15.9</td>
</tr>
<tr>
<td>Talas</td>
<td>17.7</td>
<td>16.8</td>
<td>15.8</td>
<td>15.7</td>
<td>14.5</td>
</tr>
</tbody>
</table>

The staffing levels of public health facilities is on average 74.1 per cent in the country. Of this, SSES staffing is at 71.8 per cent, the Republican Immunisation Centre is 66.6 per cent, and the Republic Health Improvement Centre is 87.1 per cent.

With the support of specialists from FMC Health Improvement Offices (HIOs), Village Health Committees (VHCs) are implementing various strategies to improve public health, called Community Action on Health, which is introducing VHCs with the participation of FDG and RHP medical personnel in villages, to allow for the integration of health improvement activities with primary health care.

In 2010, Community Action on Health programmes covered 1254 villages in the country, with a total population of more than 2.7 million, making up 96 per cent of all villages in the pilot districts and more than 60 per cent of villages in Kyrgyzstan. A total of 1312 VHCs were created, which tackle health issues among village residents on a voluntary basis.

2.2. The topicality of the problem

About 30 per cent of surveyed RHP workers believe that hygiene problems are the most important problems in their settlements, and about 47 per cent answered that this problem is equally important as others. The high level of concern can be explained by the fact that medical personnel, like no others, understand the importance and significance of observing hygiene rules. Doctors are also aware that against the backdrop of falling living standards, this issue is not considered the most pressing in the context of a range of human needs. Medical personnel who responded in Talas Oblast were more concerned about this problem than residents of other oblasts. The percentage of rural residents who stressed the urgency of resolving this problem was higher than that among urban residents.

In general, in the opinion of respondents, the most pressing problems were economic ones. Thus, the three most acute problems, according to respondents, were high unemployment (76.8 per cent), economic slump (66.5 per cent) and environmental pollution (63.9 per cent). According to an interview in Karakol, “the Vodokanal water company is municipal property and one of the most crucial systems, providing the town and the nearby villages of Chelpek, Jolgolot and Pristan Przhevalsk with drinking water, and collecting and treating waste water. The number of customers is 41,800, plus 276 state, private and other organisations and enterprises.” (from an expert interview).

---

34 Statistical yearbook of the Kyrgyz Republic, Bishkek, 2010
Figure 26. How pressing is the problem of hygiene for your village / town?

Expert evaluation revealed that the main difficulties faced by Karakol town administration are:
- low quality of water provided,
- technical aging of water supply lines,
- lack of funds to fully replace the water supply system,
- high debts owed by customers: as of 1 January 2004, 6,543,800 som,
- the need to replace 100-300 mm diameter pipes on Telman street (1300m from Kravtsov to Elebaev), Elebaev street (Isakov – Toktogul), and Pionerskaya street (Telman – Stakhanov).

Experts had similar opinions about the issues and difficulties facing the Talas town administration with regard to supply of water to the population, which include:
- high debts owed by customers (3,518,000 som, of which 1,875,000 is owed by households;
- lack of household water meters;
- lack of irrigation water in the town, leading to use of drinking water for irrigation of land plots;
- lack of resources to construct water supply systems in the districts without water and to reconstruct the water supply network because of the extremely difficult financial situation;
- lack of funds to replace obsolete equipment;
- increasing levels of household debt. The population pays 18-23 per cent, which means that personnel are not paid on time; and
- since 1993, specialised vehicles have not been purchased (such as emergency vehicles and excavators).

There are several differences between priorities in the different oblasts. In Naryn Oblast, respondents more often referred to problems of pollution, inadequate access to clean drinking water, growth in disease, appearance of new diseases and low levels of public awareness of sanitation and hygiene issues. Meanwhile, the problem of political instability was more important in Issyk Kul Oblast.

Answers of RHP staff in towns and villages also varied substantially. Problems such as growth in disease, the low level of public awareness of sanitation and hygiene issues, and pollution of grounds with waste concerned town dwellers more than rural residents. “With regard to provision of clean water to the population, I can say that there is a high risk for public health in many villages from interruptions to water supply (provision by hour), which prevents measures being taken by organisations to find alternative water supply sources in...
case of emergency. According to Millennium Development Goal system monitoring on water- 
borne diseases, in order to prevent and eradicate outbreaks, investment needs to be made in 
risk areas, in order to half by 2015 (in comparison with 2002), the number of people without 
access to clean drinking water. However, in fact the disbursement of Asian Development Bank 
(ADB) credit has not led to a real improvement in water supply in the most problematic 
regions of the country, which are primarily in Batken, Jalalabad and Osh Oblasts. In order 
to change this difficult situation, as part of its “Community Based Infrastructure Services” 
project for 2002-7 the ADB disbursed $36 million for the construction and reconstruction of 
water supply systems in 730 villages and seven towns in Chuy, Osh, Jalalabad and Batken 
Oblasts. There was $9 million of co-financing from the Government of the Kyrgyz Republic. An 
analogous project “Rural water supply and sanitation” with a total cost of $24.5 million of 
credit from the World Bank for 2002-7 also had its main goal reconstruction and construction 
of rural water supply systems in 270 villages in Issyk Kul, Naryn and Talas Oblasts. In total, 
including the country’s contribution, about $70 million was spent to increase provision of safe 
drinking water to the population. Over six years, it was planned to carry out renovation work 
and construction of new water supply infrastructure in 1000 villages and seven towns. The 
overall aim of the projects also include improving management of rural water supply 
infrastructure, in order to ensure sustainable provision of reliable and quality water to the 
population at minimal cost, which would reduce the level of acute intestinal disease. As a 
result of a rise in the cost of the rural water supply project per head from $20 to $80, and 
after correction of the ADB and World Bank projects, it is planned to cover 300 villages in Osh, 
Jalalabad, Batken and Chuy Oblasts, and 200 in Naryn, Issyk Kul and Talas Oblasts.” (from an 
expert interview).

Table 20

Level of urgency of problems in settlements, from the survey of healthcare personnel

<table>
<thead>
<tr>
<th>Statement</th>
<th>Issyk Kul Oblast</th>
<th>Naryn Oblast</th>
<th>Talas Oblast</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level of unemployment in our region</td>
<td>86.6%</td>
<td>78.1%</td>
<td>65.1%</td>
<td>73.8%</td>
<td>78.2%</td>
<td>76.8%</td>
</tr>
<tr>
<td>Environmental pollution</td>
<td>52.2%</td>
<td>76.6%</td>
<td>63.5%</td>
<td>75.4%</td>
<td>58.6%</td>
<td>63.9%</td>
</tr>
<tr>
<td>Insufficient access to clean drinking water for households in our region</td>
<td>49.3%</td>
<td>76.6%</td>
<td>44.4%</td>
<td>44.3%</td>
<td>62.4%</td>
<td>56.7%</td>
</tr>
<tr>
<td>Growth of disease and appearance of new diseases</td>
<td>43.3%</td>
<td>64.1%</td>
<td>54.0%</td>
<td>72.1%</td>
<td>45.1%</td>
<td>53.6%</td>
</tr>
<tr>
<td>Low level of public awareness about sanitation and hygiene issues</td>
<td>32.8%</td>
<td>56.3%</td>
<td>39.7%</td>
<td>65.6%</td>
<td>32.3%</td>
<td>42.8%</td>
</tr>
<tr>
<td>Pollution of grounds with rubbish and domestic waste</td>
<td>58.2%</td>
<td>57.8%</td>
<td>60.3%</td>
<td>80.3%</td>
<td>48.9%</td>
<td>58.8%</td>
</tr>
</tbody>
</table>
Sociological research

<table>
<thead>
<tr>
<th>Low level of culture and morals among people in our region</th>
<th>26.9%</th>
<th>48.4%</th>
<th>28.6%</th>
<th>57.4%</th>
<th>24.1%</th>
<th>34.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic slump</td>
<td>67.2%</td>
<td>65.6%</td>
<td>66.7%</td>
<td>85.2%</td>
<td>57.9%</td>
<td>66.5%</td>
</tr>
<tr>
<td>Political instability</td>
<td>62.7%</td>
<td>50.0%</td>
<td>55.6%</td>
<td>77.0%</td>
<td>46.6%</td>
<td>56.2%</td>
</tr>
<tr>
<td>Corruption in all organisations</td>
<td>58.2%</td>
<td>54.7%</td>
<td>54.0%</td>
<td>82.0%</td>
<td>43.6%</td>
<td>55.7%</td>
</tr>
<tr>
<td>Reduction in forests and meadows</td>
<td>59.7%</td>
<td>54.7%</td>
<td>49.2%</td>
<td>57.4%</td>
<td>53.4%</td>
<td>54.6%</td>
</tr>
</tbody>
</table>

In total, just under half of respondents (47.2 per cent) have permanent access to clean water, and about the same proportion of medical staff noted that their facilities did not have water. The problem of water supply is more acute in Naryn Oblast (48.4 per cent) than in other oblasts. In rural areas, water supply is more problematic than in towns. Thus, about 60 per cent of medical personnel in rural areas noted that their facilities did not have water, while in towns only about 2 per cent reported this problem. Qualitative information demonstrates a particularly lamentable situation in some regions: “When we go to Ak Talaa district, those villages located below Naryn town on the river take water from the river Naryn that has already been polluted by town residents. Thus, for example, Orto Saz village is two kilometres from Naryn town. They don’t have clean water. They drink from a swamp.” (from an expert interview)

2.3. Access to clean drinking water and hygiene in rural health points

In those facilities which have water “sometimes” and “very rarely”, water is provided about 14 to 20 hours per day in 30 per cent of cases, while in 20 per cent water is available just one hour a day. Access to water is most problematic in Talas Oblast. In general, water is provided to RHPs by pipe into the building or the grounds (54.1 per cent). This type of water supply is more common in towns that in rural areas, in which water is provided by pipe to the yard or to a pump which is located in the facility’s grounds.
Table 21

What is the main water source for your facility?

<table>
<thead>
<tr>
<th>Water source</th>
<th>Issyk Kul</th>
<th>Naryn</th>
<th>Talas</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water provided by pipe to the building or the grounds</td>
<td>53.7%</td>
<td>51.6%</td>
<td>57.1%</td>
<td>91.8%</td>
<td>36.8%</td>
<td>54.1%</td>
</tr>
<tr>
<td>Water provided by pipe to the yard or the grounds</td>
<td>16.4%</td>
<td>3.1%</td>
<td>15.9%</td>
<td>1.6%</td>
<td>16.5%</td>
<td>11.9%</td>
</tr>
<tr>
<td>Well pipes or bore well</td>
<td>1.5%</td>
<td>4.7%</td>
<td>11.1%</td>
<td>8.3%</td>
<td>5.7%</td>
<td></td>
</tr>
<tr>
<td>Protected well</td>
<td>1.5%</td>
<td>1.6%</td>
<td>4.8%</td>
<td>3.8%</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>Unprotected well</td>
<td>1.5%</td>
<td>1.6%</td>
<td></td>
<td>0.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protected / co-opted / defended well</td>
<td></td>
<td>1.6%</td>
<td>1.6%</td>
<td></td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Unprotected / co-opted / defended well</td>
<td>3.0%</td>
<td>1.6%</td>
<td>2.3%</td>
<td>1.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water in plastic canisters or bottles</td>
<td>4.7%</td>
<td></td>
<td>2.3%</td>
<td>1.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water brought in small jars or cisterns</td>
<td>3.0%</td>
<td>3.1%</td>
<td>1.6%</td>
<td>2.3%</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Surface water (rivers, swamps, ponds, streams, canals, irrigation canals)</td>
<td>3.0%</td>
<td>1.6%</td>
<td>3.2%</td>
<td>3.8%</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>Lack of water within or near the facility</td>
<td>3.0%</td>
<td></td>
<td>1.5%</td>
<td>1.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>From a pump outside the grounds</td>
<td>13.4%</td>
<td>25.0%</td>
<td>4.8%</td>
<td>1.6%</td>
<td>20.3%</td>
<td>14.4%</td>
</tr>
<tr>
<td>No answer</td>
<td>4.7%</td>
<td></td>
<td>2.3%</td>
<td>1.5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Just over half (57.2 per cent) of those surveyed believe that the water in their facility is ideal or clean and potable; about 10 per cent answered that the water is clean but with some shortcomings; just over 14 per cent noted that the water was relatively clean; while 12 per cent said theirs was somewhat dirty. About four per cent of respondents stated that their water quality was very poor: the water was very polluted, sometimes with a strong putrid smell. Respondents evaluated the water quality to be much worse in Issyk Kul and Naryn Oblasts.
Chorification and boiling are the main means of water treatment and disinfection in healthcare facilities. These two methods are most popular in Naryn Oblast. More than a quarter of respondents stated that they have no system for treating water. It is alarming that in Talas Oblast more than half of those surveyed (57.2 per cent) admitted that they do not disinfect water.

Because of the insufficient measures taken to clean water, it is not surprising that about nine per cent of medical personnel stated that diseases connected to poor quality water are often registered, and more than a quarter said that such cases, though rather rare, do occur.

**Hygiene**

In the overwhelming majority of cases, healthcare facilities always have soap or hand washing substances. Only four per cent of the surveyed medical personnel stated that they only sometimes have soap. This is because of the requirements imposed on healthcare organisations to observe sanitary norms in facilities.

More than 98 per cent of respondents stated that they can dry their hands after washing. In general, hands are dried with multi-use cloth towels (69.1 per cent) and paper towels or tissues (38.7 per cent). Cloth towels are more widespread in Talas Oblast (85.7 per cent) and Naryn Oblast (69.4 per cent). In Issyk Kul Oblast, paper towels or tissues are used much more often than in the other oblasts.

Cloth towels are more popular in towns, while paper towels are used more often in rural areas.
Figure 30. How do you dry your hands? Answers by oblast

Cloth towels are generally dirty and wet, and are rarely washed. About 15 per cent of respondents, however, stated that the towels were relatively clean.

2.4. The link between disease and access to water

Medical personnel state in general that there are cases of disease because of poor quality water in their areas.
Figure 32. Are there cases of disease because of poor quality water in your locality?

2.5. Access to sanitation

Universal access to water and sanitation is an important step towards reducing outbreaks of infectious disease. "It has been calculated that about 1.1 billion people on the planet do not have access to safe water sources, and 2.5 billion people lack adequate sanitation. However, now it is also clear that what is needed is not only close attention to water and sanitary and hygienic conditions.

"In order to achieve the primary goal of improving the health of the local population it is essential to improve their attitudes both to hygiene (personal, food and so on) and to general training on healthy living principles, and also to develop initiatives to promote hygiene and integrate hygiene promotion with water and sanitation programmes. Most water-borne infectious diseases are spread through contact of water and food with human faeces. It therefore follows that the number of infectious diseases can be reduced by improving practice on use of human waste products, and also improving domestic sanitation, and the quality of water and food. Thus, provision of safe water to the population, for example, is just a small advance, as it can be infected because of poor hygiene practice at home. Just carefully developed programmes, which integrate improved water sources with improved sanitation and hygiene promotion, can lead to a sustainable reduction in infectious diseases connected with insufficient sanitation."

Sanitation

There is a toilet in the vast majority of healthcare facilities (93 per cent). In towns, all facilities have toilets, while in rural areas only nine per cent of facilities do not have toilets. Lack of toilets is more common in Issyk Kul Oblast than the other oblasts.

The number of toilets depends on the number of personnel and number of beds in the healthcare facility. In some hospitals, there are at least two toilets per floor. According to respondents’ answers, all the toilets are working.

---

Only slightly over a third of toilets (36.7 per cent) are located within the building, while in half of cases they are on the facility's grounds. Conditions are relatively good in Talas Oblast, where about half of toilets (48.3 per cent) are within the building. Infrastructure is more developed in towns than in rural areas: about 84 per cent of toilets in towns are within the building, while in villages only about 13 per cent are. Most toilets do not have urinals (88.3 per cent). There are more toilets with urinals in Issyk Kul Oblast than in the other oblasts.

Despite the fact that more than half the respondents evaluated the condition of toilets as “very clean” or “relatively clean” (13 and 51 per cent respectively), about 30 per cent of medical personnel evaluated toilet cleanliness as “average” and 6 per cent as “very low”. The number of “dirty toilets” was a little higher in Issyk Kul Oblast than in the other oblasts. These results are not surprising, as only about half of respondents answered that their toilets are washed at least once a day. About 17 per cent of medical personnel stated that their toilets are not washed but just swept. This practice is most common in Naryn Oblast (30 per cent) and in rural areas (22 per cent).
Toilets, in general, are cleaned by cleaners, except in Talas Oblast where staff clean them themselves. In the last year, only 14 per cent of septic tanks have been emptied. This indicator is much lower in Talas Oblast (3.3 per cent). In rural areas septic tanks are emptied less often than in towns (10 and 17 per cent respectively).

Only just over a third of respondents answered that there is a well, a pump, a river or an irrigation canal in the grounds of or near their facility. Such water sources are more likely to be near toilets in Issyk Kul and Naryn Oblasts, and also in rural settlements. In some cases toilets are located right next to these sources: within 20 metres of rivers and springs, two metres of ditches, and eight metres of wells.

**2.6. Rubbish on rural health point grounds and supervision of it.**

More than 88 per cent of respondents said that there were rubbish tips close to their facilities. In Talas Oblast, this was more widespread than in other oblasts. As a rule, tips were between five and 300 metres from the facility.
Despite the data above, the vast majority of respondents evaluated the grounds of their facility as “clean” and “often cleaned”. The cleanest healthcare facilities, according to the answers of medical personnel, were in Issyk Kul Oblast.

Rubbish is kept in proper containers at only half of RHPs (49.5 per cent). Such containers are most widespread in Talas Oblast (65.1 per cent) and least in Naryn Oblast (35.9 per cent). More than 80 per cent of respondents in towns answered that they dispose of rubbish in containers, while only 35.3 per cent of respondents in rural areas use containers to store rubbish before removal.

Rubbish is removed from the grounds of the healthcare facility at least once a week in only 25 per cent of cases. About 10 per cent of respondents stated that rubbish is removed once a fortnight, and about 11 per cent once a month. More than a quarter of respondents stated that rubbish is not removed but burned and buried. Problems of waste removal are more acute in rural areas than in towns.
### Table 22

**How often is rubbish removed from the grounds of your facility?**

<table>
<thead>
<tr>
<th></th>
<th>Oblast</th>
<th>Settlement type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Issyk Kul</td>
<td>Naryn</td>
<td>Talas</td>
</tr>
<tr>
<td>Every day</td>
<td>9.0%</td>
<td>9.4%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Several times a week</td>
<td>7.5%</td>
<td>3.2%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Once a week</td>
<td>23.9%</td>
<td>10.9%</td>
<td>7.9%</td>
</tr>
<tr>
<td>Once a fortnight</td>
<td>4.5%</td>
<td>15.6%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Once a month</td>
<td>3.0%</td>
<td>10.9%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Once every two months</td>
<td>-</td>
<td>1.6%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Once every six months</td>
<td>-</td>
<td>4.7%</td>
<td>-</td>
</tr>
<tr>
<td>Less than once every six months</td>
<td>3.0%</td>
<td>3.1%</td>
<td>1.6%</td>
</tr>
<tr>
<td>It’s not removed: we burn and/or bury it</td>
<td>22.4%</td>
<td>26.6%</td>
<td>34.9%</td>
</tr>
<tr>
<td>Other</td>
<td>9.0%</td>
<td>7.8%</td>
<td>7.9%</td>
</tr>
<tr>
<td>No answer</td>
<td>17.9%</td>
<td>9.4%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The overwhelming majority of respondents said that animal remains and plant waste are not kept with other waste (92 per cent). Only 5 per cent of those surveyed store these with other waste. About 88 per cent of respondents noted that they have no special equipment for composting organic waste on the facility’s grounds, and just 10 per cent of those surveyed use organic waste for compost. “The waste removal system and tip in the grounds of hospitals, rural health points and schools, and in villages works very poorly. Rubbish is only removed in Naryn town. In the other villages, even in district centres, it is not removed, but taken, collected and burned.” (from an expert interview).

More than a quarter of medical personnel stated that they suffer a high number of flies and mosquitoes in the summer. Flies and mosquitoes are more common in rural areas than in towns.

Most respondents (77.3 per cent) stated that money is allocated to purchase soap, tissues and towels. Despite the fact that such items are essential for working healthcare facilities, about
19 per cent of medical personnel maintain that separate budget lines for such materials do not exist. The most lamentable situation is in Talas Oblast, where more than a third (36.5 per cent) of respondents stated that money is not set aside to buy these materials. Healthcare facilities in rural areas are more vulnerable in this respect that those in towns (91.8 and 70.7 per cent respectively).

Sanitary inspections in healthcare facilities occur regularly. More than half of respondents reported that sanitary inspections take place once a month, about 40 per cent stated that they occurred once a quarter, and 5.7 per cent once every six months. Healthcare facilities in towns are inspected more often than those in villages.

Independent monitoring of healthcare facilities does not occur very often. Only just over a quarter of respondents answered that such monitoring takes place in their organisations. In Issyk Kul Oblast, medical personnel are more used to independent organisations carrying out inspections. Such checks are also more common in rural healthcare facilities than in towns. Independent checks, in general, are carried out by representatives of Village Health Committees.

The research data show that sanitary-epidemiological monitoring of the state of sanitation and hygiene is not carried out in any of the healthcare facilities.
Focus 3. Evaluation of the state of sanitation and hygiene in local communities with the example of markets and trading points

3.1. Administration of access to safe water, sanitation and hygiene in markets

The local self-government bodies in the studied oblasts are as follows:

- Issyk Kul Oblast includes three towns, five town-like villages, 58 village councils, and 181 rural settlements.
- Naryn Oblast includes one town, two town-like villages, 61 village councils, and 132 rural settlements.
- Talas Oblast includes one town, one town-like village, 35 village councils, and 90 rural settlements.

In rural areas, at the local level, legal responsibility for water supply and sewage services lies with local self-government bodies (ayil okmotus). However, in the villages where water supply systems were rehabilitated or rebuilt with financing from the World Bank / ADB, the property and responsibility for its exploitation and maintenance was given to village drinking water users’ associations (VDWUAs – elected community organisations with several functions, paid for from water tariffs). The duties of VDWUAs and local self-government are almost identical. The VDWUA staff composition is clearly defined in Article 5 of the Law “On Drinking Water”, which defines the duties of local self-government with regard to water provision. As of yet, the functions of VDWUAs have not yet been enshrined in law, but from their current regulations it can be ascertained that the roles of local self-government and VDWUAs are equivalent.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Local self-government and local state administration</th>
<th>VDWUAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functions:</td>
<td>• Provide drinking water of reliable quality and sufficient quantity to the population; • Develop and adopt programmes for the drinking water supply system; • Record and evaluate data on: • The presence and condition of water sources; • Ways to satisfy demand for drinking water (quantity and quality); • The reliability of the drinking water supply system; • Administration of sanitary protection zones and efficient use of water sources;</td>
<td>The main functions of VDWUAs are: • Provision of water meeting the appropriate hygienic standards to the population of a defined territory, based on the principle of full reimbursement of outlay; • Record and evaluate data on: • The presence and condition of water sources; • Ways to satisfy demand for drinking water (quantity and quality); • The reliability of the drinking water supply system; • Administration of sanitary protection zones and efficient use of water sources;</td>
</tr>
</tbody>
</table>

|               | • Recording use of drinking water;                  | • Adopt regulations on household |
| · Based on sanitary epidemiological surveillance findings, suspend provision of drinking water if it is polluted and take measures to restore normal water provision to the population; · With sanitary epidemiological surveillance agreement, make decisions on use of drinking water supply system in emergencies; · Provide the population with information about water quality, consumption norms and methods for conserving water; · Adopt (establish) tariffs for provision of drinking water – in agreement with territorial antimonopoly structures. | and drinking water supply based on existing usage rules for water supply and sewage systems; · Based on sanitary epidemiological surveillance findings, suspend provision of drinking water if it is polluted and take measures to restore normal water provision to the population; · With sanitary epidemiological surveillance agreement, make decisions on use of drinking water supply system in emergencies; · Resolve other issues concerning provision of drinking water to the population. |

| Bases | Article 5, Law “On Drinking Water” | Article 5, Law “On Drinking Water” – one of the owners of the household and drinking water supply system may be rural drinking water users’ associations (VDWUAs). The activity of VDWUAs is regulated by: · The Civil Code; · Law 111 “On Non-Commercial Organisations” of 15 October 1999; · The model VDWUA charter as developed by the Rural Water Supply Department of the Ministry of Agriculture, Water Resources and Processing Industries, and registered with the Ministry of Justice. |

Source: Long-term strategy for rural water supply and sanitation in the Kyrgyz Republic, DFID, 2007

### 3.2. Financial mechanisms to improve the quality of sanitation and hygiene, and access to safe water

The World Bank disbursed $17 million to implement the “Rural Water Supply and Sanitation” project in 200 villages in Issyk Kul, Naryn and Talas Oblasts. In addition, the Swiss Government financed a drinking water supply system rehabilitation project in Karakol ($7.2 million), which lasted until 2008. Thus, as the projects have ended, auxiliary financing for rehabilitation of existing water supply systems and construction of new ones has also halted. This has led to a need to find new sources of finance for investment in and rehabilitation of water supply and sewage systems. It has been confirmed that ADB will give a grant of $30 million, and a grant of $10 million is also expected from DFID.

The main activities in the programme include rehabilitation of existing and construction of new water supply systems, and establishment of VDWUAs in all villages. These associations
answer for use of water supply systems and collect five per cent community contributions for
the water supply system from completion of construction, and for those which are still being
built. As of today, the five per cent contribution total 215,758.7 som (or 79 per cent) for
completed infrastructure and 18,360.5 som for building water supply system infrastructure.

There is a need to support VDWUAs, which are responsible for technical servicing of water
supply systems, with on-going methodological and consultative assistance in the
development and adoption of tariffs for drinking water consumed. In order to motivate the
VDWUAs, they have been given the right to collect a five per cent share of total capital
expenditure during a subsidised period (four years from the moment the water supply
system infrastructure is put to use). As shown above, foreign investment is essential for
rehabilitation and construction of new rural water supply systems. A preliminary
agreement has been reached for the disbursal of $10 million by the World Bank for
construction and rehabilitation of existing water supply systems. Negotiations will be held
to agree favourable terms and a prolonged credit period. A credit agreement was signed on
4 June 2007. The issue of long-term financing is now being discussed with the ADB. The
latest information from the ADB suggests that the new financing of $30 million will be
provided fully on a grant basis.

### Table 25

**Expenditure by state bodies on water supply and sewage (2006 in thousands of som)\(^{36}\)**

<table>
<thead>
<tr>
<th>Ministries and Agencies</th>
<th>State budget, thousand s of som</th>
<th>Of which national budget, thousands of som</th>
<th>Of which local budgets, thousand s of som</th>
</tr>
</thead>
<tbody>
<tr>
<td>General state services</td>
<td>6 580</td>
<td>5 526</td>
<td>1 054</td>
</tr>
<tr>
<td>Defence</td>
<td>10 515</td>
<td>10 355</td>
<td>160</td>
</tr>
<tr>
<td>Public order and safety</td>
<td>6 477</td>
<td>6 477</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>21 295</td>
<td>4 677</td>
<td>16 618</td>
</tr>
<tr>
<td>Health</td>
<td>6 989</td>
<td>4 650</td>
<td>2 339</td>
</tr>
<tr>
<td>Social insurance and social provision</td>
<td>669</td>
<td>476</td>
<td>193</td>
</tr>
<tr>
<td>Housing and public utilities maintenance</td>
<td>577</td>
<td>7</td>
<td>570</td>
</tr>
<tr>
<td>Leisure, culture and religious activities</td>
<td>1 248</td>
<td>576</td>
<td>672</td>
</tr>
<tr>
<td>Agriculture, water resources, forestry, fisheries and hunting</td>
<td>372</td>
<td>370</td>
<td>2</td>
</tr>
<tr>
<td>Mining</td>
<td>46</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Transport and communications</td>
<td>78</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>Other services connected with economic activities</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td><strong>Total for water:</strong></td>
<td><strong>54 857</strong></td>
<td><strong>33 249</strong></td>
<td><strong>21 608</strong></td>
</tr>
</tbody>
</table>

---

\(^{36}\) Special Working Group on Implementation of the Action Plan for Environmental Protection, *National dialogue on sectoral policy on financing of urban and rural water supply and water disposal in the Kyrgyz Republic. Final report 2009*
The contributions of local self-government to water supply and sewage systems in many cases is very low. However, there are cases where they contribute significant funds.

3.3. Evaluation of the condition of markets

One of the indicators of the state of sanitation in local communities, apart from schools and rural health points, is the sanitary conditions in markets and trading points.

As part of the research, seven markets were studied: three in Issyk Kul Province, and two each in Naryn and Talas Provinces. All the markets were rather small, with from three to 14 service personnel working in each.

Access to water in these markets is difficult. Workers in two bazaars stated that they have water always, while in three markets water is only sometimes available, and in the other two not at all. The sources of water are also different – in just one market water is provided through a supply system in a building. In four of the markets water is supplied to the yard, while in two the source is surface water. The water quality meets subjective norms in just two of the markets, where it is considered clean and tasty. In three markets it is “drinking water” and in the other two “relatively clean, but nevertheless drinkable” and “somewhat polluted, but sometimes used for drinking”. Water is just chlorinated in two of the markets. Respondents noted that they sometimes fall ill because of poor water quality.

In five markets, toilets are located in their grounds, in one outside the grounds, and at one there is no toilet. Toilets are not equipped with urinals and most respondents reported cleanliness as “average”. In most markets, the toilet is not washed, but just swept, and antiseptic is not used.

In the grounds of two of the markets there is either a water pump or a well, river or other irrigation facility. But there is no soap or other equipment for washing hands in the markets.

There are rubbish dumps in the grounds of six of the markets. The level of cleanliness was evaluated positively in just one market. The grounds are cleaned in three markets, rarely cleaned in two and never cleaned in one. There are no special containers for rubbish in the markets. Rubbish is removed from the grounds at intervals between every week and once every six months or less.

Table 26

<table>
<thead>
<tr>
<th>How often is rubbish removed from the grounds of your market?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Several times a week</td>
<td>1</td>
</tr>
<tr>
<td>Once every two weeks</td>
<td>1</td>
</tr>
<tr>
<td>Once every two months</td>
<td>1</td>
</tr>
<tr>
<td>Once every six months</td>
<td>2</td>
</tr>
<tr>
<td>Less than once every six months</td>
<td>1</td>
</tr>
<tr>
<td>No answer</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
</tr>
</tbody>
</table>
In two of the markets, animal remains including skins, carcasses and bones, as well as chaff, leaves and other plant waste, are stored with the rubbish. There is no specialised equipment for composting waste in the surveyed markets. Staff confirmed the presence of flies and mosquitoes.

To an open question on action taken to observe sanitary norms, the market administrations reported tidying of the territory, and monitoring by sanitary epidemiological services. Sanitary inspections are carried out between once a month and once a quarter. Independent monitoring is not carried out of the sanitary and hygiene conditions of the markets.

Only two of the markets had special budget lines for purchase of soap, tissues and towels. We tried to understand what the most acute problems were for the markets. However, the administrations of two markets reported that they had no problems. Other staff mentioned shortage or complete lack of clean drinking water, lack of special grounds for a toilet, waste removal from market grounds and the overall low standards of the population.

In six of the seven markets there are public eating facilities. The sanitary and hygiene conditions in these facilities were most often evaluated as satisfactory and unsatisfactory.
Research methodology

For the research, basic criteria were selected to ensure representation for every target group and be proportional in the number of educational institutions in each of the three surveyed oblasts.

The study included participants of primary and secondary school age in towns and villages, without division of the schools by specialisation. Healthcare facilities covered included rural health points; village, district and oblast hospitals; and medical points.

1. Target groups

The target groups for the quantitative and qualitative research were:

- School administrations (directors and heads of department)
- School teachers
- Medium and older pupils (from 5th to 11th grade)
- Healthcare facility workers
- Market administrations, market cafeteria administrations and others.

The research employed two-stage selection. During the first stage, all the large towns were selected in the regions. At the second stage, schools, healthcare facilities and the largest bazaars were randomly selected in towns and villages. As not all the randomly selected schools were accessible (the research was carried out in the spring, and it was not possible to get to some schools because of lack of roads, and also because not all school directors agreed to allow the researchers to take photographs, be interviewed or allow pupils and teachers to be interviewed), these schools were replaced by those which were accessible. Thus the results of the quantitative survey in schools are not fully representative statistically. However they provide indications of the main trends and demonstrate the basic practices and opinions characteristic of the studied region as a whole. The results of the qualitative research and secondary analysis allow an understanding of the fuller picture of the state of water, sanitary conditions hygiene and ideas and practice in the three regions. The markets selected in the towns and villages are highly used and popular. In total, the selection included:

<table>
<thead>
<tr>
<th>Number of settlements</th>
<th>Type of questionnaire</th>
<th>Number of questionnaires completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 towns and 53 villages</td>
<td>Questionnaire for teachers and school administrations</td>
<td>374</td>
</tr>
<tr>
<td>7 towns and 53 villages</td>
<td>Questionnaire for pupils</td>
<td>773</td>
</tr>
<tr>
<td>7 towns and 95 villages</td>
<td>Questionnaire to evaluate the state of rural health points and other healthcare facilities</td>
<td>194</td>
</tr>
<tr>
<td>2 towns and 5 villages</td>
<td>Questionnaire to evaluate the state of markets</td>
<td>7</td>
</tr>
</tbody>
</table>

Total: 1348
2. Conducting the baseline questionnaire of pupils in 60 schools

The tasks of this method were to:
- reveal the level of awareness among pupils of the rules for observing hygiene and sanitation;
- evaluate the hygiene practices of children;
- discover the sources of drinking water at school and at home; and
- get a picture of disease among children.

Ten pupils were interviewed in each school. They were selected randomly, and disaggregated by sex. A total of 773 respondents were interviewed.

3. Conducting the baseline questionnaire of teachers and administrations in secondary schools

The tasks of this method were to:
- reveal the condition of sanitary infrastructure (toilets and sewage) in schools;
- analyse water supply and water quality in educational facilities;
- study hygiene practice among pupils, teachers and community members; and
- reveal the urgency of taking measures to improve hygiene, sanitation and water use at individual, family and territorial levels.

In each of the selected schools, this interview method was used with five staff members – three teachers and two representatives of the school administration. Participants were selected from the most competent individuals by recommendation of the school administration. A total of 374 respondents were interviewed.

4. Conducting structured, face to face interviews with hospital and polyclinic staff

The tasks of this method were to:
- study to what extent sanitary and hygiene norms are observed in the given community;
- reveal the full picture of water condition, access of the population to clean drinking water, knowledge and observance by the population of the main rules of hygiene, and the condition of public and school toilets; and
- collect data about diseases connected with water quality and sanitary conditions.

A structured survey was carried out of doctors and the administrations of hospitals and polyclinics. A total of 194 respondents were surveyed.

During the research 194 questionnaire forms were completed in healthcare facilities. The sample included 56 rural health points, 123 hospitals and 15 other healthcare facilities. The number of completed questionnaires was roughly equal in all three oblasts. More than two thirds of the questionnaires were collected in rural areas, and about a third in towns.

Table 28

<table>
<thead>
<tr>
<th>Oblast</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issyk Kul</td>
<td>67</td>
<td>34.5%</td>
</tr>
<tr>
<td>Naryn</td>
<td>64</td>
<td>33.0%</td>
</tr>
<tr>
<td>Talas</td>
<td>63</td>
<td>32.5%</td>
</tr>
</tbody>
</table>
Type of settlement

<table>
<thead>
<tr>
<th>Type of settlement</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town</td>
<td>61</td>
<td>31.4%</td>
</tr>
<tr>
<td>Villages</td>
<td>133</td>
<td>68.6%</td>
</tr>
</tbody>
</table>

Type of facility

<table>
<thead>
<tr>
<th>Type of facility</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural health point</td>
<td>56</td>
<td>28.9%</td>
</tr>
<tr>
<td>Hospital / polyclinic</td>
<td>123</td>
<td>63.4%</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>7.7%</td>
</tr>
<tr>
<td>Total</td>
<td>194</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The number of rural health point personnel on average was four people. In hospitals and polyclinics, an average of 50 people work.

Table 29

<table>
<thead>
<tr>
<th>Number of staff of a healthcare facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
</tr>
<tr>
<td>Rural health point</td>
</tr>
<tr>
<td>Hospital / polyclinic</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

5. Conducting in-depth interviews with experts working in the Ministry of Health, Ministry of Emergency Situations, and water services, as well as ecologists

The tasks of this method were to:
- study the level of access to sanitary services among the population of the regions in question;
- evaluate vulnerability to disasters in schools and in communities;
- study activities that have taken place in this field; and
- reveal the demand of the population to be provided with clean water, toilets and activities to observe sanitary and hygiene norms.

Twenty respondents were interviewed

Table 30

<table>
<thead>
<tr>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SSESD – deputy director</td>
</tr>
<tr>
<td>2. SSESD – chief specialist</td>
</tr>
<tr>
<td>3. SSESD – chief specialist</td>
</tr>
<tr>
<td>4. Ministry of Education and Science – head of department</td>
</tr>
</tbody>
</table>
6. Conducting visual observation

The tasks of this method were to:

- Create a profile of schools describing water supply systems, types of toilets, and level of cleanliness in all areas of public use.
- Create a photographic view of the various indicators in the various schools.

A profile was created of every school with descriptions and records of the number of pictures taken – toilet, washbasin, water source and cafeteria.

Before mass data collection, pilot research was carried out, as a result of which the whole instrument was corrected and clarified.

The study results were processed using the SPSS specialised package for statistical and econometric modelling.

Because all the research instruments guaranteed confidentiality and anonymity of data, we will not name the specific schools, rural health points and markets. This is particularly since during the field research interviewers and observers faced a lack of understanding in the schools as to why that particular school was chosen, and unwillingness to answer the questions, or attempts to prevent taking photos. The school administrations were assured that we would not reveal precise information about the schools. Therefore the report provides results at the levels of oblast and type of settlement.
Appendix 1. Research maps
Talas oblast

Legend
- Settlements
- Rural health points and other healthcare facilities
- Schools
- Schools and rural health points in one settlement
- Schools, rural health points and markets in one settlement
Baseline Assessment of Access to Water, Sanitation and Hygiene in Schools and Hospitals in the Northern Oblasts of Kyrgyzstan

Naryn Oblast

Legend
- Settlements
- Rural health points and other healthcare facilities
- Schools
- Schools and rural health points in one settlement
- Schools, rural health points and markets in one settlement
- Schools and markets in one settlement
Appendix 3. Responsibility for and monitoring of the condition of safe drinking water sources

Diagram of responsibility and monitoring based on the results of interviews with specialists
Hello, my name is _____________________________. This research is being carried out to research the sanitary and hygiene conditions in schools, healthcare facilities and markets in the country. Our task is to determine the levels of knowledge of different population groups about hygiene questions, and understand practice in the field and the requirements of the facilities.

Your opinions and answers are very important for us, and therefore we ask you to answer truthfully. There are no right or wrong answers. We guarantee the confidentiality of your answers. Interviews will last about 20 minutes. Your answers will be collated on a computer along with answers from others surveyed, and the questionnaire result will only be used in consolidated form.

Date: «______» __________________ 2011

Statistical information
1. Oblast______________________ 2. District ___________________________
3. Settlement___________________________________________
4. School _______________________________
5. Year of construction of school________________
6. Year capital renovation was carried out_______________
7. Number of pupils in your school______________
10. Number of personnel in your school _______________
11. Men ________ 12. Women_______________

Hygiene and state of the environment

12. How pressing is the problem of hygiene in your area?
1. The most pressing problem in the area, and the top priority for resolution.
2. Equally pressing as other problems.
3. Less pressing; there are other more serious problems.
4. Not at all pressing.
5. Difficult to answer.

13. Which of the following problems do you consider pressing for your area? For every statement you need to choose the corresponding category (1 to 5)

<table>
<thead>
<tr>
<th>Problem</th>
<th>Absolutely important</th>
<th>Not a very pressing problem</th>
<th>Average ly pressing</th>
<th>Pressin g problem</th>
<th>Very pressing problem</th>
<th>Difficul t to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level of unemployment in our region</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Environmental pollution</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Insufficient access to clean drinking water for residents of our region</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
### Sociological research

#### Growth in illness, appearance of new diseases

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low level of awareness in the population of sanitation and hygiene issues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Pollution of territory with rubbish and domestic waste</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7. Low cultural and ethical standards in the region</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Economic slump</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Political instability</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Corruption in all organisations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Preservation of forests and meadows</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

#### Is there a centralised sewage system in the school?
1. Yes – the system is in working order
2. Yes, but it only partly works
3. No, and there never was one

#### Is there water in your school?
1. Yes, always
2. Sometimes we have water, and sometimes we don’t
3. We very rarely have water
4. Other

#### What is the main source of water in your school?

<table>
<thead>
<tr>
<th>Source of water</th>
<th>16.11 drinking water</th>
<th>16.12 water for washing hands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water provided by pipe to the building or the grounds</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Water provided by pipe to the yard or the grounds</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Well pipes or bore well</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Protected well</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Unprotected well</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Protected co-opted / defended well</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Unprotected co-opted / defended well</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Collected rain water</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Water in plastic canisters or bottles</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
17. How do you evaluate water quality in your school?
1. Ideal, tasty and clean
2. Clean and potable
3. Clean and potable, but has some shortcomings (smell, taste, transparency)
4. Only relatively clean, but still potable
5. Somewhat dirty, but still used for drinking
6. Very dirty
7. Too dirty, strong putrid smell, very cloudy and so on
8. Other

18. How is water treated / disinfected in your school?
1. Chlorified
2. Ozonised
3. Filtered
4. Boiled
5. No system for treating water
6. Difficult to answer
7. Other _______________

Sanitation

19. Is there a toilet in your school
1. Yes
2. No

20. How many toilets are there in the facility?_______________

21. Is the toilet in working order?
1. Yes, always => Go to question 23
2. Yes, sometimes => Continue survey
3. No => Continue survey
22. If No, why doesn’t it work?

23. Where is the toilet located?
1. Inside the building (attached to a sewage system)
2. In school grounds
3. Outside the school grounds

24. Is there a well, a pump, a river or an irrigation canal in the grounds of or near your school?
1. Yes
2. No => Go to question 26

25 If yes:

<table>
<thead>
<tr>
<th>Distance from toilet (metres)</th>
<th>25.1 River</th>
<th>25.2 Spring</th>
<th>25.3 Ditch</th>
<th>25.4 Well</th>
<th>25.5 Other water source</th>
</tr>
</thead>
</table>

26. The toilet for teachers and pupils is:
1. Separate
2. Common

27. The toilet for male and female teachers is:
1. Separate
2. Shared

28. The toilet for girls and boys is:
1. Separate
2. Shared

29. Is there a separate toilet for young children?
1. Yes
2. No

30. Condition of the toilet
1. Very clean
2. Relatively clean
3. Average level of cleanliness
4. Very low level of cleanliness – always dirty
5. Other________

31. How often is the toilet washed?
1. Several times a day
2. Every day
3. Twice a week
4. Once a week
5. Once a fortnight or more
6. Once a month
7. Once a quarter
8. Once every six months
9. Once every 1-2 years
10. Never cleaned
11. The toilet is swept

32. If the toilet is clean, who cleans it?
1. Cleaner
2. Staff themselves
3. Pupils
4. Other___________

33. Has the toilet’s septic tank been emptied in the last year?
1. Yes
2. No
3. Difficult to answer

34. How far is it from the facility to the toilet?
1. 1 to 5 metres
2. 6 to 10 metres
3. 11 to 20 metres
4. 21 to 30 metres
5. 31 to 40 metres
6. 41 metres or more

Hygiene

35. Do you have soap or other means for washing hands in your school?
1. There is always soap or other means for washing hands
2. We sometimes have soap
3. There is never soap

36. Is it possible to dry hands after washing them?
1. Yes => Continue survey
2. No => Go to question 38
37. If “yes”, how are hands dried?
1. Multi-use cloth towels => Continue survey
2. Paper towels or tissues => Go to question 38
3. Toilet paper => Go to question 38
4. Other__________

38. How clean are the towels:
1. Always dirty and wet, rarely washed
2. Relatively clean
3. Clean, regularly washed
4. Other________

Rubbish and oversight of rubbish on the grounds

39. Is there a rubbish dump on the grounds of your school?
1. Yes
2. No

40. How clean are the grounds of your school?
1. Always clean
2. Often cleaned
3. Rarely cleaned
4. Not cleaned
5. Other________________

41. How is rubbish collected?
1. There are special containers for solid waste, and rubbish is removed
2. Rubbish is partly removed from the grounds of our facility and partly burned
3. Rubbish is dumped

42. Is rubbish often removed from the grounds of your school?
1. Once a week
2. Once a fortnight
3. Once a month
4. Once every two months
5. Once every six months
6. Less than once every six months
7. Other___________

43. What types of diseases were most common among pupils in your school this academic year?
1. Flu
2. Colds
3. Infectious diseases
4. Food poisoning
5. Poisoning because of dirty hands or poor water
6. Other____________________

44. Do children get symptoms like those of food poisoning?
   1. Yes, very often
   2. Yes, but rarely
   3. No, never

45. Are children in your school in need of special knowledge about hygiene and sanitation?
   1. Yes
   2. No
   3. Difficult to answer

46. Which personal hygiene strategies do children in your school employ?

________________________________________________________________________________________________________________________________

__________________________________________________________________________

47. Are special lessons on hygiene carried out in your school?
   1. Yes
   2. No

48. If yes, which textbook / materials are used?

____________________________________________________________________________________

49. What is done in your school to ensure observance of sanitary norms and rules? (Interviewer! Write down everything that the respondent says)

____________________________________________________________________________________

____________________________________________________________________________________

50. Do you have funds specifically allocated for purchase of soap, tissues and towels?
   1. Yes
   2. No

51. How often are sanitary inspections carried out in your school?
   1. Every month
   2. Every two months
   3. Every three or four months
   4. Every six months
   5. Every year
   6. Every five years
   7. Less than once every five years
52. Is independent monitoring (by non-state organisations) carried out of sanitary and hygiene conditions in your school?
   1. Yes
   2. No. Go to question 53

53. Which organisation or individual carries out this monitoring?

________________________________________________________________________________________________________________________________
_________________________________________________________

54. What are the most concrete problems in your school for the improvement of sanitary and hygiene conditions?

____________________________________________________________________________________________________________________________
____________________________________________________________________________________________________

Interviewer!
Write the name and telephone number of the respondent to test the quality of your report

Name ________________________ Telephone_____________________________

Thank you for your participation!
Hello, my name is ___________________________. This research is being carried out to research the sanitary and hygiene conditions in schools, healthcare facilities and markets in the country. Our task is to determine the levels of knowledge of different population groups about hygiene questions, understand practice in the field and the requirements of the facilities.

Your opinions and answers are very important for us, and therefore we ask you to answer truthfully. There are no right or wrong answers. We guarantee the confidentiality of your answers. Interviews will last about 20 minutes. Your answers will be collated on a computer along with answers from others surveyed, and the questionnaire results will only be used in consolidated form.

Date: «______» __________________ 2011

**Statistical information**
1. Oblast____________________
2. District ___________________________
3. Settlement____________________________________________
4. Type of social facility
   1. Rural health point
   2. Hospital / polyclinic
   3. Market
   4. Other (indicate) ______________________
5. Number of personnel / staff in your organisation____________
6. Men _________  7. Women___________

**Hygiene and state of the environment**

7. **How pressing is the problem of hygiene in your village / town?**
   1. The most pressing problem in the area, and the top priority for resolution.
   2. Equally pressing as other problems.
   3. Less pressing: there are other more serious problems.
   4. Not at all pressing.
   5. Difficult to answer.

8. **Which of the following problems do you consider pressing for your area? For every statement you need to choose the corresponding category (1 to 5)**

<table>
<thead>
<tr>
<th>Problem</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level of unemployment in our region</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2. Environmental pollution</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3. Insufficient access to clean drinking water for residents of our region</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4. Growth in illness, appearance of new</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Indicator</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Low level of awareness in the population of sanitation and hygiene issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pollution of territory with rubbish and domestic waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low cultural and ethical standards in the region</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic slump</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political instability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corruption in all organisations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preservation of forests and meadows</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Is there water in your organisation / healthcare facility?
1. Yes, always => Go to question 11
2. Sometimes we have water, and sometimes we don’t => Continue survey
3. We very rarely have water => Continue survey
4. There is no water at our facility => Go to question 11

10. How often do you have water in your organisation / healthcare facility?
1. Up to 1 hour a day
2. From 1 to 3 hours a day
3. From 3 to 5 hours a day
4. From 5 to 10 hours a day
5. From 10 to 15 hours a day
6. From 15 to 20 hours a day
7. Other_________________________

11. What is the main source of water in your organisation / healthcare facility?
1. Water provided by pipe to the building or the grounds
2. Water provided by pipe to the yard or the grounds
3. Well pipes or bore well
4. Protected well
5. Unprotected well
6. Protected / co-opted / defended well
7. Unprotected / co-opted / defended well
8. Collected rain water
9. Water in plastic canisters or bottles
10. Water brought in small jars or cisterns
11. Surface water (rivers, swamps, ponds, streams, canals, irrigation canals)
12. Lack of water within or near the facility
13. Other

12. How do you evaluate water quality in your organisation / healthcare facility?
1. Ideal, tasty and clean
2. Clean and potable
3. Clean and potable, but has some shortcomings (smell, taste, transparency)
4. Only relatively clean, but still potable
5. Somewhat dirty, but still used for drinking
6. Very dirty
7. Too dirty, strong putrid smell, very cloudy and so on
8. Other

13. How is water treated / disinfected in your organisation / healthcare facility?
1. Chlorified
2. Ozonised
3. Filtered
4. Boiled
5. No system for treating water
6. Difficult to answer
7. Other ____________

14. Are there cases of diseases connected with poor-quality water in your locality?
1. Yes, very often
2. Yes, rarely
3. Never
4. Other

15. What diseases are most common in your area? (Choose the two most important)
7. Flu
8. Colds
9. Infectious diseases
10. Food poisoning
11. Poisoning because of dirty hands or poor water
12. Other ____________

Sanitation

16. Is there a toilet in your organisation / healthcare facility?
1. Yes
2. No => Go to question 25

17. How many toilets are there in the grounds? ______________________

18. Are they in working order?
1. Yes, always
2. Yes, sometimes they work, sometimes they don’t
3. No

19. Where is the toilet located?
1. Inside the building (connected to the sewage system)
2. On the grounds of the organisation
3. Outside the grounds of the organisation
4. Inside the building (connected to the sewage system) and on the grounds of the organisation
5. Other____________________________

20. Does the mixed or men’s toilet have a urinal?
1. Yes
2. No

21. Condition of toilet
1. Very clean
2. Relatively clean
3. Average level of cleanliness
4. Very low level of cleanliness – always dirty
5. Other________

31. How often is the toilet washed?
1. Several times a day
2. Every day
3. Twice a week
4. Once a week
5. Once a fortnight or more
6. Once a month
7. Once a quarter
8. Once every six months
9. Once every 1-2 years
10. Never cleaned
11. The toilet is not cleaned but swept
12. Other__________________________

23. If the toilet is clean, who cleans it?
1. Cleaner
2. Staff themselves
3. Other_____________

24. Has the toilet’s septic tank been emptied in the last year?
1. Yes
2. No
3. Difficult to answer

25. Is there a well, a pump, a river or an irrigation canal in or near the grounds?
1. Yes
2. No => Go to question 27

26. If yes

<table>
<thead>
<tr>
<th>26.1. River</th>
<th>26.2 Spring</th>
<th>26.3 Ditch</th>
<th>26.4 Well</th>
<th>26.5 Other water source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance from toilet (metres)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hygiene

27. Do you have soap or other means for washing hands in your organisation / healthcare facility?
1. There is always soap or other means for washing hands
2. We sometimes have soap
3. There is never soap

28. Is it possible to dry hands after washing them?
1. Yes => Continue survey
2. No => Go to question 31

29. If “yes”, how are hands dried?
1. Multi-use cloth towels => Continue survey
2. Paper towels or tissues => Go to question 31
3. Toilet paper => Go to question 31
4. Other______________

30. How clean are the towels?
1. Always dirty and wet, rarely washed
2. Relatively clean
3. Clean, regularly washed
4. Other__________
31. How many people visit your organisation / healthcare facility every day?
1. 1 to 30 people
2. 31 to 60 people
3. 61 to 100 people
4. 101 to 150 people
5. 151 to 300 people
6. 301 to 500 people
7. 501 to 800 people
8. 801 to 1000 people
9. 1001 to 2000 people
10. 2001 to 4000 people
11. 4001 or more people

31. Is there a specially equipped area for infants – a baby changing room or table – in your facility?
1. Yes
2. No

Rubbish and oversight of rubbish on the grounds

32. Is there a rubbish dump on the grounds of your organisation / healthcare facility?
1. Yes => Go to question 34
2. No => Continue survey

33. How far is the dump from your organisation / healthcare facility (in metres)? ____________

34. How clean are the grounds of your organisation / healthcare facility?
1. Always clean
2. Often cleaned
3. Rarely cleaned
4. Not cleaned => Go to question 37
5. Other______________

35. Is rubbish kept in special containers?
1. Yes
2. No

36. Is rubbish often removed from the grounds of your organisation / healthcare facility?
1. Every day
2. Several times a week
3. Once a week
4. Once a fortnight
5. Once a month
6. Once every two months
7. Once every six months
8. Less than once every six months
9. Other

________________________________________________________________________________________________________________________

37. If the grounds are not cleaned, why not? __________________________________________________________________________

________________________________________________________________________________________________________________________

38. Are animal remains (skins, carcasses, bones and so on) and plant waste (chaff, leaves and so on) kept with other waste?
1. Yes
2. No

39. Is there a specially-equipped place for composting (collecting waste for fertilising) of organic waste on the grounds of your organisation / healthcare facility?
1. Yes
2. No

40. Do you have a lot of flies in the summer?
1. Yes
2. No

41. Do you have a lot of mosquitoes in the summer?
1. Yes
2. No

42. What is done in your organisation to ensure observance of sanitary norms and rules? (Interviewer! Write down everything that the respondent says) __________________________________________________________________________

42. Do you have funds specifically allocated for purchase of soap, tissues and towels?
1. Yes
2. No

43. How often are sanitary inspections carried out in your organisation / healthcare facility?
1. Every month
2. Every quarter
3. Every six months
4. Every year
5. Every five years
6. Less than once every five years
8. Other________________________

44. Is independent monitoring (by non-state organisations) carried out of sanitary and hygiene conditions in your organisation / healthcare facility?
   1. Yes
   2. No

45. Which organisation or individual carries out this monitoring? ______

____________________________________________________________________________________________

46. What are the most concrete problems in your organisation / healthcare facility for the improvement of sanitary and hygiene conditions?

____________________________________________________________

Thank you for your participation in the research!
Hello, my name is __________________________. This research is being carried out to research the sanitary and hygiene conditions in schools, healthcare facilities and markets in the country. Our task is to determine the levels of knowledge of different population groups about hygiene questions, understand practice in the field and the requirements of the facilities.

Your opinions and answers are very important for us, and therefore we ask you to answer truthfully. There are no right or wrong answers. We guarantee the confidentiality of your answers. Interviews will last about 20 minutes. Your answers will be collated on a computer along with answers from others surveyed, and the questionnaire results will only be used in consolidated form.

Date: «______» _____________ 2011

**Teachers’ statistical information**

1. School number ______________________________
2. Oblast____________________ 3. District ______________________________

**Hygiene and state of the environment**

4. **How pressing is the problem of hygiene in your area?**
   1. The most pressing problem in the area, and the top priority for resolution.
   2. Equally pressing as other problems.
   3. Less pressing: there are other more serious problems.
   4. Not at all pressing.
   5. Difficult to answer.

5. **Which of the following problems do you consider pressing for your area? For every statement you need to choose the corresponding category (1 to 5)**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Absolutely important</th>
<th>Not a very pressing problem</th>
<th>Average ly pressing</th>
<th>Pressin g problem</th>
<th>Very pressing problem</th>
<th>Difficul t to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level of unemployment in our region</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Environmental pollution</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Insufficient access to clean drinking water for residents of our region</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Growth in illness, appearance of new diseases</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Low level of awareness in the population of sanitation and hygiene issues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Pollution of territory with rubbish and</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
6. How do you evaluate water quality in your school?
1. Ideal, tasty and clean
2. Clean and potable
3. Clean and potable, but has some shortcomings (smell, taste, transparency)
4. Only relatively clean, but still potable
5. Somewhat dirty, but still used for drinking
6. Very dirty
7. Too dirty, strong putrid smell, very cloudy and so on
8. Other ________________________________

7. How often do your children wash their hands at school?
1. Often, when they are dirty and after going to the toilet
2. Not very often
3. Very rarely
4. Children, in general, don’t wash their hands at school

8. For what reasons do children not wash their hands at school?
1. No washbasins or sinks
2. No towels or other means to dry hands
3. No soap
4. No rules / practice of washing hands
5. Other ________________________________

9. Have there been cases of disease in your school because of dirty hands?
1. Yes
2. No => Go to question 11

10. If yes, which diseases? ________________________________

11. What types of diseases were most common among pupils in your school this academic year?
1. Flu
2. Colds
3. Infectious diseases
4. Food poisoning
5. Poisoning because of dirty hands or poor water
6. Other

12. Do children get symptoms like those of food poisoning?
   1. Yes, very often
   2. Yes, but rarely
   3. No, never

13. Do you know if the parents of your pupils talk with them about personal hygiene?
   1. Most parents are interested and discuss issues of sanitation and hygiene
   2. Most parents are limited to issues of hand washing
   3. Most parents pay no attention to this issue
   4. Other

14. Are lessons about hygiene conducted in your school?
   1. Yes
   2. No => Go to question 17

15. What kind of lessons?

16. Which textbooks, articles and learning aids do you those?

17. Do children in your school need special lessons about hygiene and sanitation?
   4. Yes
   5. No
   6. Difficult to answer

18. What other personal hygiene activities are held for children in the school?
   Interviewer! Write everything that the respondent says
   1. Difficult to answer, I don’t know

19. What is done in your school to observe sanitary norms and rules?
   Interviewer! Write everything that the respondent says
   1. Difficult to answer, I don’t know
20. Is independent monitoring (by non-state organisations) carried out of sanitary and hygiene conditions in your school?
   1. Yes
   2. No. Go to question 22

21. Which organisation or individual carries out this monitoring? (Interviewer! Write down everything the respondent says)
________________________________________________________________________________________________________________________________
________________________________________________________________________________________________________________________________

22. What are the most concrete problems in your school for the improvement of sanitary and hygiene conditions? (Interviewer! Write down everything the respondent says)
   1. No problems
________________________________________________________________________________________________________________________________
________________________________________________________________________________________________________________________________

Interviewer!
Write down the name and telephone number of the respondent to test the quality of your report

Name ________________________ Telephone_____________________________

Thank you for your participation
Hello, my name is ____________________________. This research is being carried out to research the sanitary and hygiene conditions in schools, healthcare facilities and markets in the country. Our task is to determine the levels of knowledge of different population groups about hygiene questions, understand practice in the field and the requirements of the facilities.

Your opinions and answers are very important for us, and therefore we ask you to answer truthfully. There are no right or wrong answers. We guarantee the confidentiality of your answers. Interviews will last about 20 minutes. Your answers will be collated on a computer along with answers from others surveyed, and the questionnaire results will only be used in consolidated form.

Date: «_____» ____________ 2011

Pupil’s statistical information
1. School _________________________2. Oblast, district _________________________
3. Pupil’s age ________ year

Water, water conservation and access to water:

5. Do you wash your hands at school?
   1. Yes =>Go to question 7
   2. No

6. If no, why not? (Interviewer! Write down everything the pupil says)

7. On average, how many times a day do you wash your hands at school? ________ times

8. When do you wash your hands at school?
   Interviewers! Note all the answers that the pupil says
   1. After every visit to the toilet
   2. Before eating
   3. After eating
   4. After having been outside in the break
   5. When they are dirty
   6. Other (Interviewer! Write it down!) ______________________________

9. What do you dry your hands with after washing them after the toilet?
   1. We have a shared towel
   2. We have paper towels or tissues
   3. Every child has their own towel
   4. I have my own tissues
5. I don’t dry my hands, they dry themselves
6. Toilet paper
7. Other (Interviewer! Write down!) ______________________________

10. Do you wash your hands at school with soap?
1. Yes, always
2. Sometimes
3. No, without soap

11. When do you wash your hands at home?
1. After every visit to the toilet
2. Before eating
3. After eating
4. After having been outside
5. When they are dirty
6. Other (Interviewer! Write it down!) ______________________________

12. On average, how many times do you wash your hands at home? ________ times

13. Do you wash your hands at home with soap?
1. Yes, always
2. Sometimes
3. No, without soap

14. Do you think it’s important to wash hands with soap?
1. Yes
2. No =〉Go to question 16
3. I don’t know =〉Go to question 16

15. Why? Interviewer! Don’t write the list! Note which answers the pupil says
1. Hands get tired of dirt and we need to help them
2. Hands need to be cleaned of harmful parasites and bacteria
3. Parents tell me to, but I don’t know why
4. Water is living and helps us
5. So that grandmother / mother / teacher doesn’t get angry
6. I don’t know why I need to wash them, I just wash them
7. Just because they’re dirty and I need to clean them
8. Other (Interviewer! Write down!) ______________________________

16. Where do you get water from at home for …?

<table>
<thead>
<tr>
<th>16.11 ... drinking</th>
<th>16.12 ... washing</th>
</tr>
</thead>
</table>

100
<table>
<thead>
<tr>
<th>Source of Water</th>
<th>Hands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water is piped to taps within the house</td>
<td>1</td>
</tr>
<tr>
<td>Water is piped to taps in the yard</td>
<td>2</td>
</tr>
<tr>
<td>Water taken from a well</td>
<td>3</td>
</tr>
<tr>
<td>From a protected spring close to home</td>
<td>4</td>
</tr>
<tr>
<td>From an unprotected spring close to home</td>
<td>5</td>
</tr>
<tr>
<td>From a protected spring far from home</td>
<td>6</td>
</tr>
<tr>
<td>From an unprotected spring far from home</td>
<td></td>
</tr>
<tr>
<td>From tanks collecting rain water</td>
<td>7</td>
</tr>
<tr>
<td>From plastic canisters</td>
<td>8</td>
</tr>
<tr>
<td>Water is brought to the house in tanks</td>
<td>9</td>
</tr>
<tr>
<td>Water is taken directly from a nearby river, marsh, pond, stream, canal or ditch</td>
<td>10</td>
</tr>
<tr>
<td>No water always available to use</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
</tr>
</tbody>
</table>

17. Do you sometimes have problems getting water at home in the winter because it’s frozen?
1. Yes, always
2. Sometimes, but rarely
3. No, the water never freezes
4. Difficult to answer

**Sanitation**

18. Do you have a clean toilet at school?
1. Yes, always clean
2. Yes, generally clean
3. No, generally dirty
4. No, always dirty
5. Difficult to answer

19. Do stinking masses or streams leak from the toilet?
1. Yes, always
2. Yes, sometimes
3. Yes, rarely
Hygiene

20. What do you think hygiene is? Can you tell me something about the word? What do you think hygiene includes?
1. I don’t know, difficult to answer

Interviewer! Write down everything the pupil says

21. Have there been classes on hygiene in your school this academic year?
1. Yes
2. No => Go to question 23
3. Don’t know => Go to question 23

22. What did they tell you in the hygiene lesson
Interviewer! Write down everything the pupil says
1. I don’t know, difficult to answer

23. What have you all been ill with most often this academic year?
19. Flu
20. Colds
21. Infectious diseases
22. Food poisoning
23. Poisoning because of dirty hands or bad water
24. Other __________

24. Have there been any diseases connected with food poisoning this academic year?
7. Yes, very often
8. Yes, but rarely
9. No, never

Interviewer!
Write down the name and telephone number of the respondent to check the quality of your work

Name ________________________ Telephone __________________________

Thank you for participating in the research!