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**THE EAP TASK FORCE'S GROUP OF SENIOR OFFICIALS ON THE REFORMS OF THE WATER
SUPPLY AND SANITATION SECTOR IN EASTERN EUROPE, CAUCASUS AND CENTRAL ASIA**

THE EU WATER INITIATIVE'S EECCA WORKING GROUP

**MONITORING THE WATER SUPPLY AND SANITATION
SYSTEM IN THE KYRGYZ REPUBLIC**

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INTRODUCTION

This report was prepared based on the outcomes of the Project on Monitoring the Water Supply and Sanitation System in the Kyrgyz Republic implemented by the *Kyrgyzhilkommunsoyuz* by the order of the Organization for Economic Co-operation and Development in October 2006-February 2007. The water supply and sanitation system monitoring in the Kyrgyz Republic was carried out consistent with the Terms of Reference and covered eleven water utilities in the republic during years 2000-2005 (for the *Kyrgyzhilkommunsoyuz* system as a whole); some indicators were taken from the statistics about the water utilities which are a part of the *Kyrgyzhilkommunsoyuz*.

The project objective was to improve the system of monitoring the water supply and sanitation services in the countries participating in the project by means of comparative analysis of the water and sanitation utilities' performance and dissemination of approach based on a set of indicators developed by the World Bank.

1. CURRENT CONDITION OF THE WATER SUPPLY AND SANITATION SECTOR IN THE KYRGYZ REPUBLIC

1.1 Institutional Features of the Water Supply and Sanitation Sector

Water supply and sanitation sector management framework in the cities and regional centres in the Kyrgyz Republic underwent some decentralization in 1998-2001 and water utilities were transferred into the supervision of the local governments under the respective decrees of the republic's Government.

The *Kyrgyzhilkommunsoyuz* (KZhKS) is only directly in charge of the water utilities in three localities – Urban Village of Orlovka, City of Karabalta, and Village of Belovodskoe – which were transferred as part of departmental heating facilities and based on which Orlovskoe, Karabaltinskoe, and Belovodskoe Heating and Water Supply Production Associations were set up.

At the same time, although the water utilities were transferred to the local level, the utilities entered into co-operation agreements with the KZhKS; they keep co-operating constructively and they do get real assistance from the KZhKS in addressing strategic issues – implementing uniform technical policy (maintaining partnership relations with the CIS countries, exchanging experience, and purchasing complex engineering equipment not manufactured in Kyrgyzstan, as well as chemical agents), in the financial, economic, legal, and regulatory areas; the KZhKS assists the water utilities with the approval of favourable electricity tariffs for them).

1.2 Asset Ownership

Water supply and sanitation sector assets in the Urban Village of Orlovka, City of Karabalta, and Village of Belovodskoe are owned by the state. Assets of the water utilities transferred to the local level are in municipal ownership of the local governments.

1.3 Regulating Water and Sanitation Utilities

Under the current legislation of the Kyrgyz Republic (Law No. 10 of the KR on Local Governments and Local Public Administration in the Kyrgyz Republic as worded on 21 January 1998; Law No. 152 on Municipal Ownership of Property of 19 August 2005; 2004-2006 Concept of Municipal Property Management in the KR; Decree No. 296 of the Government of the KR of 26 April 2004, etc.), local public administration is an executive and managing authority in oblast, city, and region and it ensures the operation and development of the life-support system and services for the population which are the duties of the local governments.

Therefore, local governments ensure the overall guidance and have all the powers to ensure the development, coordination, and day-to-day management of the water and sanitation utilities which include water supply networks and facilities and sanitation facilities and supply lines which service respective areas and do not belong to the state-owned or private enterprises.

Under the guidance of the local public administration, water utilities ensure the preparation and implementation of the draft social and economic development programmes; carry out activities to ensure their sustainable and reliable operation and uninterrupted provision of services to the population; regulate the pricing policy, participate in the social dialogue of partners, etc.

The National Agency for Local Governments of the KR, in its turn, coordinates the activities of the local governments themselves regarding the issues of reform implementation, development of the best framework for interaction among, and delineation of functions of, public authorities and local governments, improvement of legal framework, etc.

1.4 Tariff Regulation of Water and Sanitation Utilities

Under Decree No. 364, since May 1994 tap water and sanitation tariffs (per m³) have also been approved at the local level by the heads of the oblast and Bishkek City public administrations.

Under Article 21 paragraph 2 of Drinking Water Law No. 81 of the Kyrgyz Republic of 2 September 2000, tariffs for drinking water supplied to the population for public and daily living needs are set for cities, regional centres, and urban villages by the local governments (local public administration) as advised by the enterprises engaged in the operation and maintenance of the water supply and sanitation networks and facilities in coordination with the area anti-monopoly authorities.

As regards the tariff policy and the danger that the sole service provider would have a monopoly power over the market and it would decrease the level of wealth of the population, there are no objective conditions for that in the Kyrgyz Republic; it is secured by the tight regulation of the economic entities by the State Commission (National Agency) for the Anti-Monopoly Policy, local governments, *Kyrgyzzhilkommunsoyuz*, and other entities.

Housing and community amenity services are deemed to be social services and setting prices at full cost recovery for 2005-2010 would be highly problematic due to low income level of the overwhelming majority of the population.

Therefore, the issues of ensuring the affordability threshold for vital water supply and sanitation services for the population are analyzed very thoroughly.

Since water supply and sanitation services come within the purview of the Law of the Kyrgyz Republic on Natural and Authorized Monopolies, the anti-monopoly authorities exercise permanent regulation and control over those enterprises.

Water and sanitation utilities are in the State Registry of Monopoly Holders; they are controlled tightly for compliance with the existing pricing requirements and operate in close contact with the area anti-monopoly policy authorities.

Tariffs are only revised when there are objective reasons to do so – when energy tariffs go up; minimum wage is raised at the national level; tax legislation or environmental requirements change, etc.

In order to provide practical assistance to the utilities, under Decree No. 445 of 17 July 2003 of the Government of the republic, *Kyrgyzzhilkommunsoyuz* developed sectoral Guidance on Setting Tariffs for Water Supply and Sanitation Services and Maintenance of the Intra-building Networks, which was agreed upon by the Ministry of Finance, Revenue Committee, and the State Department for the Anti-Monopoly Policy and sent to the KZhKS, including municipal water utilities, for guidance and practical application.

Enterprises ensuring life support do not apply tariffs for households or budget consumers which did not undergo expert examination or were not agreed upon by the anti-monopoly authorities or the State Energy Agency.

The underlying documents which guided the utilities in the revision of household tariffs for those services were: Decree of the Government of the Kyrgyz Republic No. 236 of 30 April 1998 on Measures to Implement the National Araket Poverty Reduction Programme, Decree No. 520 of 5 August 1998 on the Concept of Reform of the Housing and Community Amenities in the Kyrgyz Republic, and Drinking Water Law as amended.

Transition of the life-support enterprises and entities to self-financing and self-sufficiency is closely linked to the social protection measures of the population. The rate of households' payments for housing and utilities relative the level of costs for providing them was maintained in 2000-2006.

1.5 Current Performance Monitoring Approaches

Performance of the water and sanitation facilities is monitored based on the volumetric in-kind output indicators on-site by the utilities' technical staff.

To this end, daily entries are made in the technical log books of the pumping stations based on the water meter readings and, in absence thereof, based on the working hours of the pumps and their installed capacity per hour or other methods of recording (*e.g.*, based on the capacity of the tanks on the premises of the pumping station).

Those primary accounting data are then included in the statistical Report on the Operation of the Waterworks in Stand-Alone Water Network, which shows the amount of water intake from underground sources supplied into the network as per daily entries in the technical log books made based on the readings of the water meters installed at the water lines at points of their connection to the street distribution network of the waterworks. Specificities of record-keeping for mechanical waterworks equipped with treatment facilities, not equipped with treatment facilities, and gravity waterworks are reflected in the instructions of the National Statistics Committee of the republic. Similar instruction on the operation of the sewer establishes the procedure for wastewater passage depending on the technology used.

Cash flow is monitored based on the data on the bills issued by the customer relations service by user category (households, budget sector, other users, and owner's consumption, if any, for production needs as part of the heating and water supply association).

Kyrgyzzhilkommunsoyuz specifically designed a form on the output and actual payments for it which shows the amount of drinking water sold (wastewater passage) by user group, tariffs, and cost of services. The table allows keeping close track of the collection rate, maintaining cumulative statements of accounts receivable and uncollectible arrears, and taking measures.

In order to monitor cost items consistent with the economic classification, both state statistical reports and sectoral methodologies and forms are used, which take into account the specificities of operation of the water utilities and which are filed quarterly together with accounting statements and balance sheets. The data received were and are used by the KZhKS to monitor the progress of reform of the housing and community amenities in the republic.

At the same time, it should be pointed out that once the water utilities were transferred to the local level, opportunity was lost to summarize all the technical, economic, and financial indicators in a centralized manner at the national level. Therefore, *Kyrgyzzhilkommunsoyuz* has to request assistance from the National Statistics Committee of the republic when the KZhKS gets a task from the country's Government.

Given that the local governments, which are in charge of the water utilities, are coordinated by the National Agency for Local Governments, it would make sense to focus all the analytical, statistical, financial, and economic records regarding the water utilities at that authority.

2. ECONOMIC PERFORMANCE INDICATORS OF WATER AND SANITATION UTILITIES IN THE KYRGYZ REPUBLIC

2.1 Analysis of Operational and Technical Indicators of WSS Utilities

2.1.1 Service Coverage of the Population

Cities and urban villages of the republic are covered with the centralized water supply and sanitation services at approximately 90 percent. For the localities included in the sample for monitoring purposes serviced by the *Kyrgyzzhilkommunsoyuz* water utilities, the indicator is somewhat lower and equals 65 percent for water supply and 25 percent for sanitation in 2005.

Figure 1. Indicators 1.1, 1.2, and 1.3 Coverage with Centralized Water Supply Services

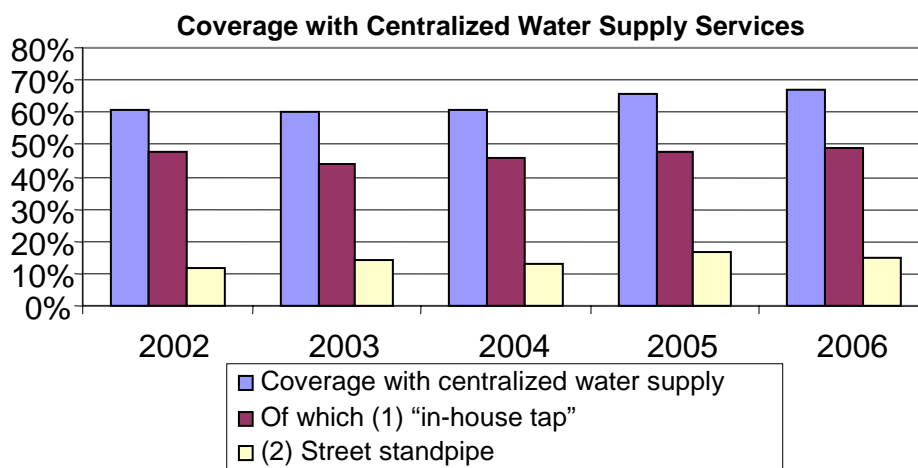
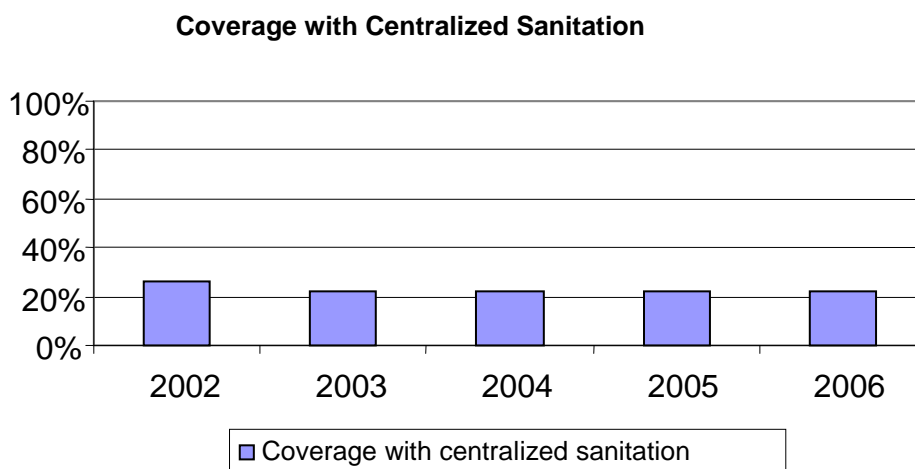


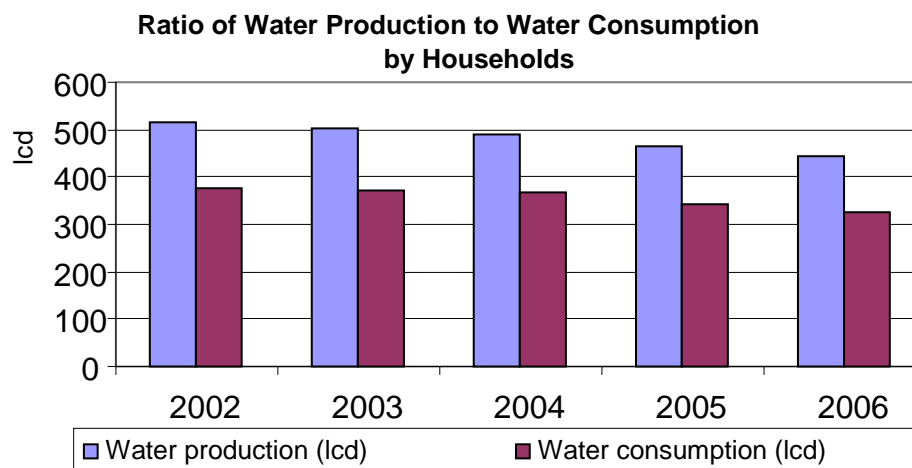
Figure 2. Indicator 1.4 Coverage with Centralized Sanitation Services



2.1.2 Water Consumption and Production

Average water production went down from 517 lcd in 2002 to 450 lcd in 2005 in the republic over the analyzed period. Average consumption amounted to 378 lcd in 2002 and 344 lcd in 2005.

Figure 3. Indicators 3.1 and 4.1 Water Production and Consumption



2.1.3 Non-Revenue Water

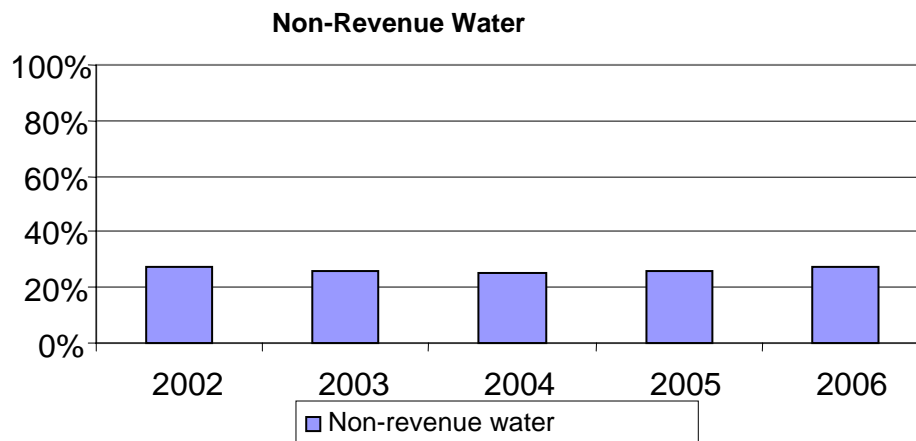
Volume of unaccounted-for water (in percent) at water utilities ranges from 9 percent to 66 percent. For example, in the City of Balykchy it amounted to 66 percent in 2002 and 56 percent in 2006; in the City of Kara-Balta, 41 percent in 2002 and 35 percent in 2006, respectively; and at the remaining nine utilities it amounts to 23 percent on average. The indicators for Balykchy and Kara-Balta are very poor and they suggest that the useful life of the water supply networks constructed in the 1960s has ended – 80 percent of them need to be replaced.

It was recommended for all the water utilities to find and attract investors for the reconstruction of the water supply networks and purchase and installation of water meters (see the Table).

Table 1. Volume of Unaccounted-for Consumption (in millions of soms) as Percentage of the Annual Water Production

| Ordinal Number | Water Utility | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------------|----------------------------|------|------|------|------|------|
| 1 | Osh Water Utility | 25 | 25 | 25 | 25 | 25 |
| 2 | Dzhalal-Abad Water Utility | 23 | 23 | 23 | 25 | 23 |
| 3 | Naryn Water Utility | 9 | 9 | 9 | 9 | 9 |
| 4 | Kara-Kol Water Utility | 32 | 22 | 14 | 12 | 21 |
| 5 | Balykchi Water Utility | 66 | 53 | 59 | 66 | 56 |
| 6 | Tokmok Water Utility | 24 | 24 | 25 | 25 | 24 |
| 7 | Kant Water Utility | 23 | 22 | 22 | 23 | 31 |
| 8 | Chui Water Utility | 20 | 21 | 22 | 23 | 23 |
| 9 | Belovodsk Water Utility | 27 | 24 | 27 | 27 | 28 |
| 10 | Kara-Balta Water Utility | 41 | 44 | 34 | 41 | 35 |
| 11 | Vodniksuu Water Utility | 17 | 17 | 28 | 17 | 17 |

Figure 4. Indicator 6.1

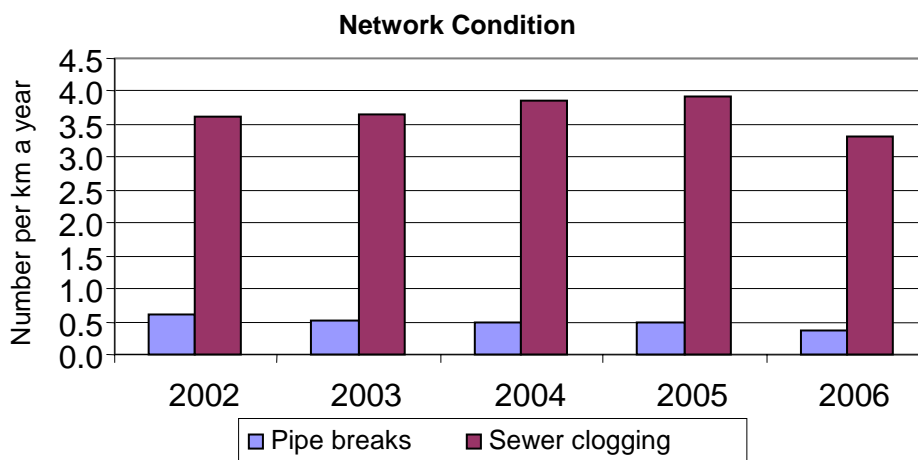


Use of Meters

Metering of the water consumption by households remains at a very low level in the Kyrgyz Republic. According to the monitoring data, the indicator did not exceed 1 percent during the analyzed period.

2.2 Network Condition

Figure 5. Indicators 9.1 and 10.1 Pipe Breaks and Accidents (Clogging) in the Sewer Network, number per km a year



2.3 Analysis of Financial Indicators

For a number of objective reasons, water utilities of the republic's cities and regional centres are in a difficult financial situation. The explanation for that is that since the transition to the market, *i.e.*, since 1991, no budget allocations have been made for upgrading the engineering equipment, capital repairs of the water supply and sanitation facilities, networks, or treatment facilities; income lost due to the provision of services to households at favourable tariffs by the local governments is not offset as provided for by the Concept; payments are not collected in full in the budget and social and cultural sectors, especially those funded from the local budgets to which one third of the total volume of services is provided; uncontrolled migration to large cities and related understatement of the number of users – charges are only levied based on the number of registered residents rather than based on that actually using the services – as well as lack of individual meters considerably reduce the income amount.

Local governments do not include in the tariffs of water utilities of the republic's cities and regional centres the investment component for development of the water supply and sanitation facilities.

Existing water intakes and water networks were constructed in the 1950s-1960s; wear and tear of the public water networks is as high as 70 percent; active search for investors has been underway for many years.

In absence of targeted funding for the water supply and sanitation infrastructure, proceeds received from users are only enough for urgent and emergency operations.

According to the National Statistics Committee of the Kyrgyz Republic, in 2001, 22.1 percent of the street water supply networks had to be replaced; and in 2005, 37.3 percent.

While ensuring uninterrupted supply of vital services in the required amount consistent with their contractual obligations and without any major disruptions, the life-support enterprises themselves experience major financial difficulties with purchase of chemical agents, network repairs, replacement of obsolete engineering equipment, settlements with the budget, and payments for electricity and they are unable to pay wages and salaries in a timely manner which disrupts the normal pace of operation and lowers its reliability.

Once profitable enterprises, water utilities have steadily grown to be a loss-making sector in recent years.

2.3.1 Cost Recovery by Tariff

Decrees of the Government of the republic set the share of charges at 50 percent during stage I (2000); actual charges for tap drinking water amounted to 46.2 percent in 2000. Average cost of production, treatment, and supply of 1 m³ of drinking water amounted to 2.25 soms for *Kyrgyzzhilkommunsoyuz* as a whole. Households paid an average of 1.04 soms for 1 m³ of drinking water.

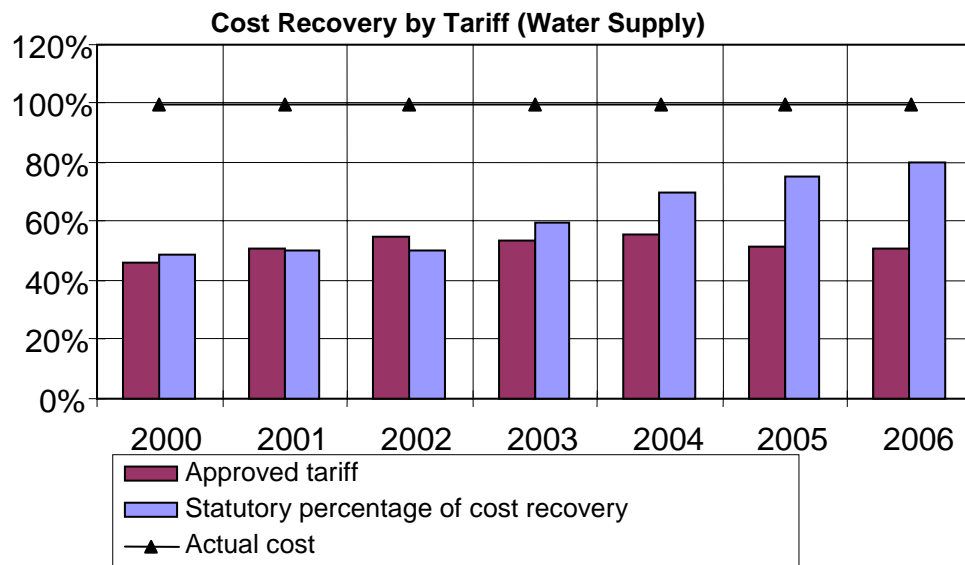
Average cost of wastewater treatment and collection amounted to 1.74 soms; households paid an average of 0.84 soms for 1 m³, or 48.3 percent.

The following table shows the relation between tariffs for households and actual cost in 2000-2006.

Table 2. Relation between Tariffs for Households and Actual Cost in 2000-2006

| No. | Indicator | Unit | Year | | | | | | |
|---------------------|-------------------------------------------------------------------------------------------------------------------|---------------------|------|------|------|------|------|------|------|
| | | | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Water Supply | | | | | | | | | |
| 1 | Actual cost of 1 m ³ of water | Soms/m ³ | 2.25 | 2.67 | 3.08 | 3.59 | 3.91 | 4.34 | 4.55 |
| 2 | Approved average tariff per 1 m ³ of water for households | Soms/m ³ | 1.04 | 1.35 | 1.69 | 1.92 | 2.17 | 2.24 | 2.31 |
| 3 | Share of household charges in production costs | Percent | 46.2 | 50.6 | 54.9 | 53.5 | 55.5 | 51.6 | 50.8 |
| 4 | Memorandum item: Share of household charges as provided for by the Housing and Community Amenities Reform Concept | Percent | 48.9 | 50.0 | 50.0 | 60.0 | 70.0 | 75.0 | 80.0 |

Figure 6. Relation between Household Tariff, Statutory Percentage of Cost Recovery, and Actual Cost in 2000-2006 (Water Supply)

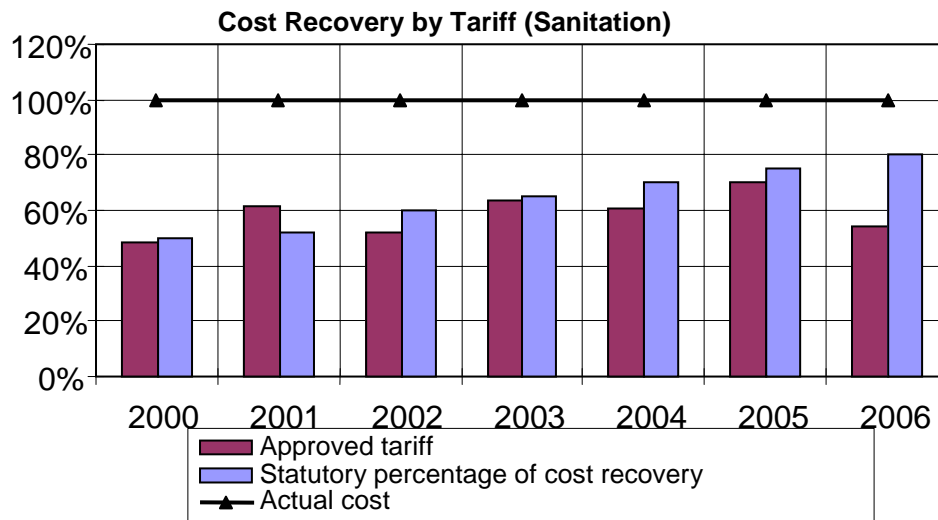


Actual approved tariff did not go up considerably during the analyzed period; moreover, it decreased during the past three years from 2004 until 2006. For example, decrease in the share of recovered cost of production, treatment, and supply of 1 m³ of water by the household tariff in 2005 is accounted for by the fact that the 2005 cost went up by 11 percent (4.34 soms versus 3.91 soms) compared to 2004 and the household tariff only increased by 3.2 percent (2.24 soms versus 2.17 soms). Moreover, the difference between approved tariff and statutory percentage of cost recovery was almost 30 percent in 2006.

Table 3. Relation between Household Tariffs and Actual Cost in 2000-2006

| No. | Indicator | Unit | Year | | | | | | |
|-------------------|--------------------------------------------------------------------------------------------------|---------------------|------|------|------|------|------|------|------|
| | | | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Sanitation | | | | | | | | | |
| 1 | Average actual cost of 1 m ³ of water | Soms/m ³ | 1.74 | 1.87 | 2.62 | 2.61 | 3.33 | 3.00 | 4.14 |
| 2 | Average approved household tariff per m ³ of water | Soms/m ³ | 0.84 | 1.15 | 1.37 | 1.66 | 2.03 | 2.11 | 2.23 |
| 3 | Share of household charges in production costs | Percent | 48.3 | 61.5 | 52.3 | 63.6 | 61.0 | 70.3 | 53.9 |
| 4 | Share of household charges as provided for by the Housing and Community Amenities Reform Concept | Percent | 50.0 | 52.1 | 60.1 | 65.0 | 70.0 | 75.0 | 80.0 |

Figure 7. Relation between Household Tariff, Statutory Percentage of Cost Recovery, and Actual Cost in 2000-2006



Decrease in the share of household charges in the production cost in 2006 is accounted for by a considerable increase in cost by 38.0 percent (4.14 soms versus 3.00 soms) while the average household tariff only went up by 5.7 percent.

The water supply and sanitation data were obtained by *Kyrgyzzhilkommunsoyuz* from the monitoring of those indicators carried out continuously by primary entities based on the provided data.

The data shown suggest that at stage II (2005) the charge rate is set at 75 percent, which is equivalent to 5-percent annual increase in the share of household tariffs in the service production costs.

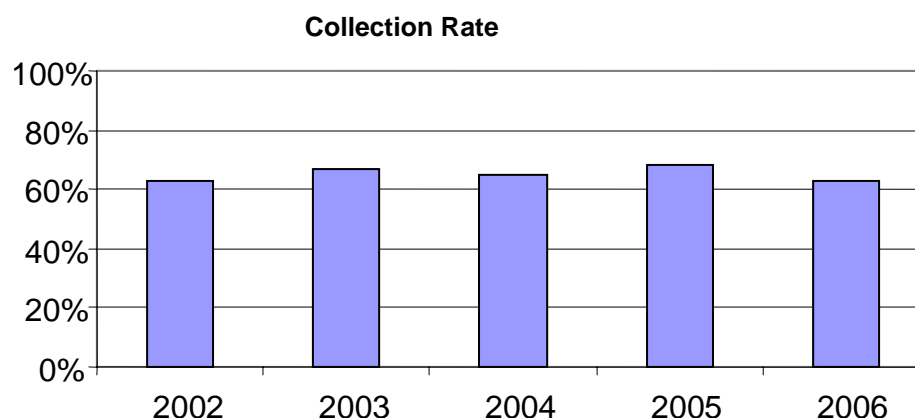
De facto the services are also sold to the population at affordable tariffs – households paid an average of 51.6 percent of actual cost (2.24 soms versus 4.34 soms) for 1 m³ of tap drinking water and 70.3 percent (2.11 soms versus 3.00 soms) for wastewater collection. Although for objective reasons both the cost and household tariffs increased considerably in absolute terms from 2000 until 2005.

For the waterworks, average cost went up from 2.25 soms to 4.34 soms, or 1.9-fold, and average household tariff increased from 1.04 soms to 2.24 soms, or 2.2-fold. The cost of collection of 1 m³ of wastewater increased from 1.74 soms to 3.00 soms, or 1.7-fold; and average household tariff, from 0.84 soms to 2.11 soms, or 2.5-fold.

For example, over the analyzed period, in 2000-2006, for the *Kyrgyzzhilkommunsoyuz* system as a whole, as far as water supply is concerned, profit was only generated in 2002 in the amount of 1.04 mln soms and profitability amounted to 2.13 percent and in 2004 in the amount of 140.0k soms and profitability of 0.3 percent. In other years expenses exceeded income by 2.86-7.48 mln soms and loss totalled 24.41 mln soms over six years.

Increase in the share of households in service consumption from 60 percent to 68.7 percent and decrease in the collection rate from 80 percent to 63 percent in 2000-2005 played a certain role in loss-making – while in 2000 households did not pay 4,902.4k soms worth of bills, in 2005, it was 7,162.4k worth of bills.

Figure 8 Indicator 23.1 Collection Rate



Monthly turnover for households amounted to 2,042.4k soms in 2000 and delay in payments was 2.4 months; in 2005, with the turnover of 1,614.6k soms it was 4.4 months; for the water supply as a whole for all user categories the delay in payments went up from 3.3 months to 4.7 months.

The payment discipline leaves much to be desired. While in 2000, 72.9 percent of services received were paid for in a timely manner, starting from 2003, it was 65.0 percent and in 2005, 60.5 percent. Arrears as a whole practically have not decreased – 21,141.0k soms in 2000 and 20,444.7k soms in 2005.

In the past the emphasis was placed on the industrial users, sort of, subsidizing households; proceeds from drinking water they received covered losses from services sold to households.

The share of industrial users has remained practically the same for the past five years – 20.7 percent in 2000 and 19.8 percent in 2005; their arrears to service-providers have also been at the same level – 10,745.0k soms in 2000 and 10,510.6k soms in 2005.

Thus, the condition of infrastructure has deteriorated; therefore, general upward revision of household tariffs has started.

Table 4. Current Arrears by User Category

| No. | Year | Share of charges, percent | | | | Current arrears, thousand soms | | | |
|--------------------------|--------|---------------------------|------------|-----------------|-------------|--------------------------------|------------|-----------------|-------------|
| | | Total | Of which | | | Total | Of which | | |
| | | | Households | Budget entities | Other users | | Households | Budget entities | Other users |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | 2000 | 85.8 | 89.0 | 66.8 | 97.8 | 4,270.0 | 732.2 | 3,181.3 | 356.5 |
| 2 | 2005 | 70.6 | 64.7 | 45.7 | 86.0 | 7,729.2 | 2,610.5 | 3,332.4 | 1,786.3 |
| Average delay in payment | | | | | | | | | |
| | Months | | | | | | | | |
| 1 | 2000 | | | | | 1.7 | 1.3 | 4.0 | 0.3 |
| 2 | 2005 | | | | | 3.5 | 4.2 | 6.5 | 1.7 |

According to the National Statistics Committee of the republic, in 2001 proceeds from water sold for the country as a whole amounted to 314.0 mln soms, expenses, to 325 mln soms, *i.e.*, losses amounted to 11.0 mln soms. The only region in the republic where profit was generated from water supply was the City of Bishkek where profit amounted to 12.2 mln soms and where costs included capital expenditure, purchase of equipment, and capital repairs worth 8.4 mln soms.

In 2005, for the republic as a whole proceeds from water supply amounted to 322.6 mln soms; expenses, to 391.7 mln soms; and losses, to 69.1 mln soms, *i.e.*, losses increased 6.3-fold. Key economic indicators describing sanitation in the republic as a whole are as follows:

Table 5. Key Economic Indicators for the Sanitation Sector in 2001 and 2005

| No. | Indicator | Unit | 2001 Report | 2005 Report |
|-----|---------------------------------------------------------|----------|-------------|-------------|
| 1. | Income | Mln soms | 92.95 | 101.75 |
| 2. | Expenses | Mln soms | 95.45 | 106.75 |
| 3. | Profit (+); loss (-). | Mln soms | - 2.50 | - 5.00 |
| 4. | Memorandum item: From line 2; Capital expenditure | Mln soms | 8.46 | - |
| 5. | Capital repairs | Mln soms | 2.40 | - |
| 6. | Purchase of equipment | Mln soms | 0.33 | - |

There are also problems with attracting skilled labour because the monthly average wage was just 2,681 soms, or USD 67 in 2006, *i.e.*, it practically equals the minimum consumer budget for working-age population, which is 2,527 soms, or USD 63.

Remuneration level could only be raised by means of tariffs but local governments are very reluctant to raise them.

3. FOUND AND POSSIBLE DATA SHORTCOMINGS

Since not all the indicators presented for monitoring purposes are available in the current statistical, accounting, and financial records, it is difficult to check their reliability for some water utilities which do not work with *Kyrgyzzhilkommunsoyuz* on a permanent basis.

Under the Tax Code of the Kyrgyz Republic, there are also different income accounting methods – based on sales (output) and bills issued; based on actual proceeds, *i.e.*, payments, and mixed accounting.

There is room for some “improvement” of the utilities’ indicators; *e.g.*, measures are being taken now to reduce arrears.

Utilities which shifted to the international accounting standards are a separate issue. The following trend was identified: sales are recorded based on the bills issued and then no efforts are made to have households settle their arrears because they are simply veiled. The service is provided; the utility accomplished its task; and only chronic losses, increasing deterioration of the network, and the number of networks in need of replacement indicate that the water utility is in a difficult situation.

4. ADVICE TO ENSURE SUSTAINABLE PERFORMANCE MONITORING OF UTILITIES

With regard to those water utilities which have operated to-date in close contact with *Kyrgyzzhilkommunsoyuz*, sustainable monitoring of their performance is in place indeed and there are no problems regarding the issue.

To that end, *Kyrgyzzhilkommunsoyuz* developed respective analytical tables and explanatory notes on filling them out; data are provided together with balance sheets and financial statements on a cumulative basis since year-beginning (quarter 1, six months, nine months, and year).

The analytical tables data are supported by those in the balance sheets and statistical and financial statements.

In particular, data are provided in the following forms to the *Kyrgyzzhilkommunsoyuz* quarterly:

- - In-kind indicators regarding production programme implementation by user category;
- - Income, expenses, profit/loss;
- - Cost broken down by item;
- - Output and actual payments by user category and tariff; it is easy to determine from it the share of charges in actual cost, *i.e.*, production costs, and to keep track of the progress of reform of the housing and community amenities;
- - Employment data by category of staff; wage bill;
- - Information on the material support of indigent employees.

A major shortcoming of the existing state statistics about water utilities is that not all the indicators broken down by user category – both in value terms and in-kind – are included and service tariffs are not shown, which is offset by the sectoral background documentation; collecting them takes both additional working time and material costs.

Technical indicators describing the water utilities' performance, such as number of pipe breaks per day or per year and number of population getting water supply services with daily interruptions – are practically missing from the statistical statements and it is necessary to take excerpts from the log books kept by foremen and section heads. Many water utilities did not present some indicators during the monitoring. For this reason, financial indicators are poorly linked to the technical condition of the water utilities and their accident rate.

In order to rectify the situation, they should be incorporated in the reporting – in forms 1 – water supply and 1 – sanitation – broken down by user category, tariff, collection rate; accident rate and uninterrupted water supply of the population indicators should also be included.

That would allow eliminating promptly failures in the network and reducing water leaks from the water supply system.

Table 6. Description of Input Data for Indicator Calculation

| No. | Indicator | Data Source |
|-----|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | 01.1-01.3 Coverage with water supply services | Statistics authorities' data on the number of population residing in localities and primary accounting of water (sanitation) utilities for number of users and serviced population. |
| | 02.1 Coverage with sanitation services | Annual statistics compilations of the republic's National Statistics Committee include data on coverage with the centralized water supply and sanitation services; population using street and yard standpipes, etc. |
| 2 | 03.2 Water production 04.1 Total water consumption and by category | Current statistical statements on the operation of the waterworks (stand-alone water supply network). Daily entries in the utility's log books; customer relations service's data and personal accounts. Details are available in the statistical statements on the waterworks operation. |
| 3 | 07.1 Metering level | If water meters and meters are available, based on their readings; in absence thereof, based on the working hours of pumps and their installed capacity per hour or capacity of the tanks on the premises of the pumping station or cross-section of water pipes and velocity of water flow in them. |
| 4 | 09.1 Pipe breaks | Every case is recorded in a log book. |
| 5 | 10.1 Accidents/clogging in the sanitation system | Every case is recorded in a log book. |
| 6 | 11.1 Unit operational costs of WSS; operational costs breakdown. | Production costs and costs are determined under Decree of the Government of the Kyrgyz Republic No. 445 of 17 July 2003 On Approval of the Regulation on Setting Prices/Tariffs for Goods (Operations, Services) of the Economic Entities Regulated by the State. Sectoral Guidance on Setting Tariffs for Water Supply and Sanitation Services No. 02-03/68 of 17 February 2005. Sectoral Guidance on Setting Tariffs for Maintenance of the Intra-Building Water Supply and Sanitation Systems of Residential Apartment Blocks No. 02-02/18 of 18 January 2006. Key cost items forming the cost of services are grouped as following according to their economic content: |

| | | |
|----|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>Material costs:</p> <ul style="list-style-type: none"> - Inputs; - Purchased spare parts, semi-finished products; - Services of outside entities; - Fuel and energy for technological needs, wages, social security contributions, depreciation, other costs. <p>The data are provided in the following statistical forms: 5-3 <i>Report on the Costs of Production and Sale of Products (Operations, Services) of Enterprise/Entity</i>; No. 1-FKhD <i>Report on Key Financial and Economic Indicators of Enterprise/Entity</i>; balance sheet, and sectoral analytical tables which are filled out by the utilities on a cumulative basis quarterly.</p> |
| 7 | Remuneration costs | Data come from the aforementioned statements, as well as the statistical report on labour. |
| 8 | 13.2 Electricity costs | Shown in the aforementioned reports; determined by the methods specified in the statements on the operation of the water supply system. |
| 9 | 16.1 Complaints | As per utility's log books. |
| 10 | 18. Proceeds from water supply and sanitation by user category and for utility as a whole. | Sectoral form regarding output and actual payments; specific user invoices; statements regarding them; water use standards approved in the established manner depending on the level of amenities available on the residential premises; approved tariffs for each user category. |
| 11 | 21.1 Ratio of industrial tariff to household tariff | Sectoral form and approved tariffs. |
| 12 | 22.1 Connection fee | According to utility calculations; depend on the technical conditions of connection; contractual price can be set. |

ANEEX 1. INDICATORS AND ITS CALCULATION METHOD

| Ref | Data item | Unit |
|------|---------------------------------------------------------------------------|-------------------|
| 1a | Utility name | |
| 1b | Contact name, address, telephone, fax & email | |
| 2a | Country | |
| 2b | Region | |
| 2c | City or town | |
| 3a | Type of service provider | |
| 3b | Extent of private sector participation | |
| 5 | GNI per capita (Atlas method) | US\$/person/year |
| 5a | GNI per capita (PPP method) | US\$/person/year |
| 6 | Exchange rate | LC / US\$ |
| 6a | PPP conversion factor | ratio |
| 9 | Month in which fiscal year starts | |
| 30 | Total population in area of responsibility - water supply | 000 |
| 30a | Total population in area of responsibility - wastewater | 000 |
| 32a | Provides water service? | Yes or No |
| | Provides sewerage service? | Yes or No |
| | Does the Utility provide other services? If yes describe | Yes or no |
| 32b | Nature of service area | |
| 34 | Nr towns served with water | |
| 35 | Nr towns served with sewerage | |
| 36 | Total number of staff | # |
| 36a | Total number of staff - water | # |
| 36b | Total number of staff - wastewater | # |
| 37 | Means by which customers can make a complaint | |
| 37a | Number of complaints - total | # / year |
| 40 | Population served - water | 000 |
| 40a | Population served - direct water supply & shared taps | 000 |
| 40b | Population served - public water points | 000 |
| 41 | Number of water connections | 000 |
| 53 | Connections with an operating meter | 000 |
| 54 | Length of water distribution network | km |
| 55 | Volume of water produced | million m3 / year |
| 58 | Volume of water consumed metered | million m3 / year |
| 59 | Volume of water sold | million m3 / year |
| 59a | Volume of water sold to residential customers | million m3 / year |
| 59a1 | Volume of water sold to residential customers through direct supplies | million m3 / year |
| 59a2 | Volume of water sold to residential customers through public water points | million m3 / year |
| 59b | Volume of water sold to industrial & commercial customers | million m3 / year |
| 59c | Volume of water sold to institutions & others | million m3 / year |
| 59d | Volume of water sold treated in bulk | million m3 / year |
| 60 | Number of water pipe breaks in the distribution network | # / year |
| 61 | Duration of supply | hours / day |
| 61a | Number of customers receiving intermittent supply | 000 |
| 63 | Required number of tests of treated water for residual chlorine | # / year |
| 64 | Number of tests of treated water for residual chlorine carried out | # / year |

| | | |
|------|------------------------------------------------------------------------------------------|--------------------------|
| 65 | Number of tests of treated water for residual chlorine that passed the relevant standard | # / year |
| 70 | Population served - sewer connection | 000 |
| 71 | Number of sewer connections | 000 |
| 74 | Length of the sewer system(s) | km |
| 79 | Number of blockages in the sewer system(s) | # / year |
| 81a | Total volume of wastewater collected | million m3 / year |
| 81b | Volume of wastewater collected - residential | million m3 / year |
| 81c | Volume of wastewater collected - industrial & commercial | million m3 / year |
| 81d | Volume of wastewater collected that is treated to primary level | million m3 / year |
| 81e | Volume of wastewater collected that is treated to at least secondary level | million m3 / year |
| 90 | Total W & WW operating (billed) revenues | LC / year |
| 90a | Total billings to residential customers | LC / year |
| 90b | Total billings to industrial & commercial customers | LC / year |
| 90c | Total W operating revenues | LC / year |
| 90d | Total WW operating revenues | LC / year |
| 90e | Total W billings to residential customers | LC / year |
| 90f | Total W billings to industrial & commercial customers | LC / year |
| 90g | Total W billings to institutions & other customers | LC / year |
| 90h | Total W billings for treated bulk supplies | LC / year |
| 90i | Total WW billings to residential customers | LC / year |
| 90j | Total WW billings to industrial & commercial customers | LC / year |
| 91 | Total W & WW (cash) income | LC / year |
| 94 | Total W & WW operational expenses | LC / year |
| 94a | Total W operational expenses | LC / year |
| 94b | Total WW operational expenses | LC / year |
| 96 | Labour costs | LC / year |
| 97 | Electrical energy costs | LC / year |
| 99 | Contracted out services costs | LC / year |
| 112 | Total gross fixed assets including work in progress | LC |
| 112a | Gross fixed assets including work in progress - water | LC |
| 112b | Gross fixed assets including work in progress - wastewater | LC |
| 114 | Total debt service | LC / year |
| 120 | Year end accounts receivable | LC |
| 146 | Fixed charge per month for W & WW services for residential customers | LC / month |
| 146a | Fixed charge per month for W services for residential customers | LC / month |
| 146b | Fixed charge per month for WW services for residential customers | LC / month |
| 147 | Connection charge - water | LC |
| 148 | Connection charge - sewerage | LC |
| | | |
| | | |
| | IBNET qualitative indicator | Response required |
| | Planning | |
| | P.1 What best describes the utility's planning process? | A, B or C |
| | | |
| | Human resources | |
| | The management of your utility undertakes the following: | |
| | HR.1 Has a skills and training strategy for all staff ? | Yes / No |
| | HR.2 Has an annual appraisal and target setting system for managers? | Yes / No |
| | HR.3 Has an annual appraisal and target setting system for all staff? | Yes / No |
| | HR.4 Has a reward and recognition programme for all staff? | Yes / No |
| | HR.5 Has the ability to recruit and dismiss staff (within an agreed plan)? | Yes / No |
| | | |
| | Oversight of the utility | |

| | | |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| | R.1 Who has general oversight of the Utility's services and prices? | A, B, C or D |
| | | |
| | Source of finance | |
| | What are the main sources of finance for investment? | |
| | F.1 Grants or Government transfers to the utility? | Yes / No |
| | F.2 Borrowing from International Financial Agencies (multi or bi laterals)? | Yes / No |
| | F.3 Government owned banks? | Yes / No |
| | F.4 Commercial banks or Bond holders? | Yes / No |
| | Customers | |
| | C.1 Does the utility offer more than one level of service for household or shared water supplies (excluding free standpipes)? | Yes / No |
| | C.2 Does the utility offer more than one level of sanitation or sewerage service/ technology for households (excluding free public toilets)? | Yes / No |
| | C.3 Does the utility offer a flexible/ amortized repayment option to spread the costs of connection to the water and/or sanitation network? | Yes / No |
| | C.4 What would be the monthly water bill for a household consuming 6m ³ of water per month through a household or shared yard tap (but excluding the use of standposts)? | LC |
| | How does the Utility find out the views of its customers? | |
| | C.5.1 Letters, telephone calls etc from customers | Yes / No |
| | C.5.2 Responding to customer complaints | Yes / No |
| | C.5.3 Questionnaire survey | Yes / No |
| | C.5.4 Other | Yes / No |

Indicators

| IBNET indicator | Units |
|-----------------------------------------------------------|--------------------------------|
| 01,1 Water Coverage | % |
| 01,2 Water coverage - household connections | % |
| 01,3 Water coverage - public water points | % |
| 02,1 Sewerage Coverage | % |
| 03,1 Water Production | litres/person/day |
| 03,2 Water Production | m ³ /conn/month |
| 04,1 Total Water Consumption | litres/person/day |
| 04,2 Total Water Consumption | m ³ /conn/month |
| 04,3 Residential consumption | % of total consumption |
| 04,4 Industrial/commercial consumption | % of total consumption |
| 04,5 Consumption by institutions & others | % of total consumption |
| 04,6 Bulk treated supply | % of total consumption |
| 04,7 Residential consumption | litres/person/day |
| 04,8 Residential consumption - connections to main supply | litres/person/day |
| 04,9 Residential consumption - public water points | litres/person/day |
| 06,1 Non Revenue (formerly Unaccounted For) Water | % |
| 06,2 Non Revenue (formerly Unaccounted For) Water | m ³ /km/day |
| 06,3 Non Revenue (formerly Unaccounted For) Water | m ³ /conn/day |
| 07,1 Metering Level | % |
| 08,1 % Sold that is Metered | % |
| 09,1 Pipe Breaks | breaks/km/year |
| 10,1 Sewer system blockages | blockages/km/year |
| 11,1 Unit Operational Cost W&WW | US\$/m ³ water sold |

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 11,2 Unit Operational Cost W&WW | US\$/m3 water produced |
| 11,3 Unit Operational Cost - water only | US\$/m3 sold |
| 11,4 Operational Cost split - % water | % |
| 11,5 Operational Cost split - % wastewater | % |
| 11,6 Unit Operational Cost - wastewater | US\$/WW pop served |
| 12,2 Staff W&WW/'000 W&WW conn | nr/'000 W&WW conn |
| 12,1 Staff W/'000 W conn | nr/'000 W conn |
| 12,5 Staff WW/'000 WW conn | nr/'000 WW conn |
| 12,4 Staff W&WW/'000 W&WW pop Served | nr/'000 W&WW pop served |
| 12,3 Staff W/'000 W pop Served | nr/'000 W pop served |
| 12,6 Staff WW/'000 WW pop Served | nr/'000 WW pop served |
| 12,7 Staff % water | % |
| 12,8 Staff % wastewater | % |
| 13,1 Labor costs vs operating costs | % |
| 13,2 Electrical energy costs vs operating costs | % |
| 14,1 Contract out serv costs vs operating costs | % |
| 15,1 Continuity of service | hours/day |
| 15,2 Customers with discontinuous supply | % |
| 15,3 Quality of water supplied: nr tests for residual chlorine | % of nr required |
| 15,4 Quality of water supplied: samples passing on residual chlorine | % |
| 16,1 Complaints of W&WW services | % of W&WW conn |
| 17,1 Wastewater - at least primary treatment | % |
| 17,2 Wastewater primary treatment only | % |
| 17,3 Wastewater secondary treatment or better | % |
| 18,1 Average revenue W&WW | US\$/m3 water sold |
| 18,2 Average revenue W&WW | US\$/W conn/year |
| 18,3 Average revenue - water only | US\$/m3 water sold |
| 18,4 Revenue split - % water | % of total for W & WW |
| 18,5 Revenue split - % wastewater | % of total for W & WW |
| 18,6 Water revenue - residential | % of total water revenue |
| 18,7 Water revenue - industrial/commercial | % of total water revenue |
| 18,8 Water revenue - institutions & others | % of total water revenue |
| 18,9 Water revenue - bulk treated supply | % of total water revenue |
| 18,10 Wastewater revenue per population served | US\$/WW pop served |
| 19,1 Total revenues per service pop/GNI | % GNI per capita |
| 19,2 Monthly water bill for a household consuming 6m3 of water per month through a household or shared yard tap (but excluding the use of standposts)? | US\$/year |
| 20,1 Residential fixed component of tariff | US\$/conn/year |
| 20,3 Residential fixed component of tariff - water | US\$/conn/year |
| 20,4 Residential fixed component of tariff - wastewater | US\$/conn/year |
| 20,2 Residential fixed component of tariff | % of average bill |
| 20,5 Residential fixed component of tariff - water | % of average bill |
| 20,6 Residential fixed component of tariff - wastewater | % of average bill |
| 21,1 Ratio of industrial to residential tariff | ratio |
| 21,2 Ratio of industrial to residential tariff - water | ratio |
| 21,3 Ratio of industrial to residential tariff - wastewater | ratio |

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 22,1 Connection charge - water | US\$/conn |
| 22,2 Connection charge - water | % GNI per capita |
| 22,3 Connection charge - sewerage | US\$/conn |
| 22,4 Connection charge - sewerage | % GNI per capita |
| 23,1 Collection period | days |
| 23,2 Collection ratio | % |
| 24,1 Operating cost coverage | ratio |
| 25,1 Debt service ratio | % |
| 27,1 Gross fixed assets - water & wastewater | US\$/W+WW pop served |
| 27,2 Gross fixed assets - water | US\$/W pop served |
| 27,3 Gross fixed assets - wastewater | US\$/WW pop served |
| | |
| IBNET qualitative indicator | Response required |
| Planning | |
| P.1 What best describes the utility's planning process? | A. |
| | B. |
| | C. |
| Human resources | |
| The management of your utility undertakes the following: | |
| HR.1 Has a skills and training strategy for all staff ? | Yes / No |
| HR.2 Has an annual appraisal and target setting system for managers? | Yes / No |
| HR.3 Has an annual appraisal and target setting system for all staff? | Yes / No |
| HR.4 Has a reward and recognition programme for all staff? | Yes / No |
| HR.5 Has the ability to recruit and dismiss staff (within an agreed plan)? | Yes / No |
| Oversight of the utility | |
| R.1 Who has general oversight of the Utility's services and prices? | A. |
| | B. |
| | C. |
| | D. |
| Source of finance | |
| What are the main sources of finance for investment? | |
| F.1 Grants or Government transfers to the utility? | Yes / No |
| F.2 Borrowing from International Financial Agencies (multi or bi laterals)? | Yes / No |
| F.3 Government owned banks? | Yes / No |
| F.4 Commercial banks or Bond holders? | Yes / No |
| Customers | |
| C.1 Does the utility offer more than one level of service for household or shared water supplies (excluding free standpipes)? | Yes / No / Not applicable |
| C.2 Does the utility offer more than one level of sanitation or sewerage service/ technology for households (excluding free public toilets)? | Yes / No / Not applicable |
| C.3 Does the utility offer a flexible/ amortized repayment option to spread the costs of connection to the water and/or sanitation network? | Yes / No |
| C.4 - see 19.2 | |
| How does the Utility find out the views of its customers? | |
| C.5.1 Letters, telephone calls etc from customers | Yes / No |
| C.5.2 Inviting customers' views through radio, TV or other publicity | Yes / No |
| C.5.3 Questionnaire survey | Yes / No |
| C.5.4 Other | Yes / No |
| | |
| PPP indicators | |

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 18,1 Average revenue W&WW | US\$/m3 water sold |
| 18,2 Average revenue W&WW | US\$/W conn/year |
| 18,3 Average revenue - water only | US\$/m3 water sold |
| 19,1 Total revenues per service pop/GNI | % GNI per capita |
| 19,2 Monthly water bill for a household consuming 6m3 of water per month through a household or shared yard tap (but excluding the use of standposts)? | % GNI per capita |
| 20,1 Residential fixed component of tariff | US\$/conn/year |
| 20,3 Residential fixed component of tariff - water | US\$/conn/year |
| 20,4 Residential fixed component of tariff - wastewater | US\$/conn/year |
| 22,1 Connection charge - water | US\$/conn |
| 22,2 Connection charge - water | % GNI per capita |
| 22,3 Connection charge - sewerage | US\$/conn |
| 22,4 Connection charge - sewerage | % GNI per capita |