Water Infrastructure of Georgia - Problems and Solutions

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GREEN Alternative

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1. Water management

1.1. Water resources of Georgia

Georgia is the richest country in the South Caucasus in terms of available water resources. Water balance calculations suggest that, theoretically, Georgians have four times or more water available per capita than their neighbours in Armenia and Azerbaijan. Distribution of water resources in Georgia is uneven, however, in large part due to the range in precipitation from thehumid western part of the country to the semi-aride east. Georgia has 860 lakes and reservoirs with total area of 170 km2 and 26,000 rivers with total length of 59,000 km.

The country lies in two major water basins, with the western portion of Georgia draining to the Black Sea and the eastern part to the Caspian Sea. The Rioni River is the largest tributary to the Black Sea in Georgia, draining approximately 20% of the country. Additional contributions to the Black Sea come from smaller rivers such as (moving southerly) the Kodori, Enguri, Supsa and Chorokhi. Drainage to the Caspian Sea is dominated by the Mtkvari River. While the main stem of the Mtkvari drains 23% of the country, other rivers such as the Iori and Alazani to the north of the main stem join Mtkvari downstream in Azerbaijan. With the Mtkvari originating in Turkey, and tributaries joining in Georgia from Armenia, the Mtkvari is clearly the most important trans-boundary water resource to Georgia and its neighbors.

1.2. Legislation

The existing water legislation in Georgia is considered to be comprehensive and detailed with more than 30 laws and statutory acts. Besides general environmental legislation, which defines the basic environmental and sustainable development principles, there are a number of legal documents which manage natural resources including water resources. The most important law among the laws regulating water resources is the Law on Water, which includes the requirements for pursuing common state policies in protection and consumption of water resources, rational consumption of water, providing population with clean water, avoiding the adverse impact of water and effective elimination of the results of such an impact, etc.[1].

1.3. Institutional setting

The regulation of water resources falls within the competence of several state agencies, authorities of autonomous republics and local self-government bodies in Georgia.

State management and protection of water resources as well as state control and the creation of a common monitoring system is the prerogative of the Ministry of Environmental Protection and Natural Resources[2]. The Ministry defines the state policy in the sphere of protection and consumption of water resources, thresholds of pollutants in effluent waters, the Ministry also issues permits for consumption of water resources, conducts state inventories of water consumption and controls the compliance with water protection and consumption rules[3].
The Ministry of Labor, Public Health and Social Safety conducts state, sanitary supervision of compliance with sanitary-hygienic norms and sanitary-epidemiological rules[4]. The Ministry defines and approves sanitary-hygienic rules and norms, including norms for the quality of the environment

[1] Law on Water, 1997, article 4
[2] Law on Protection of the Environment, 1996, article 13
[3] Law on Water, 1997
[4] Law on Environmental protection, 1996, article 13

and the maximum concentration of pollutants in drinking and recreational water (water from the water supply system, surface waters and waterside waters), the Ministry also conducts state supervision of these issues[5].

The authorities of the autonomous republics (within the limits of their competence) are responsible for the protection and consumption of water resources on the territories of those areas. Besides, they are responsible for the management of surface waters of national significance located on the territory of those autonomous republics. The authorities of the autonomous republics must take part in the elaboration of complex measures for the protection and consumption of water resources as well as elaboration of hydro-economic balances. They are also obliged to supervise the protection and rational consumption of water resources on their territories, conduct state inventories and registration of water consumption, etc.[6].

Local self-government bodies are obliged to supervise the measures directed at protection and rational use of water resources under their jurisdiction, control protection and consumption of water resources, elaborate complex measures for protection and consumption of water resources as well as elaborate hydro-economic balances. They are also obliged to supervise the protection and rational consumption of water resources on their territories, conduct state inventories and registration of local water consumption[7].

2. Water supply and sanitation infrastructure of Georgia

2.1. Short description of infrastructure

At present, all 85 cities and districts of Georgia are provided with centralized water systems. Totally there are 156 major water intakes. Drinking water is mainly withdrawn from the ground sources. A total design capacity of the ground drinking water sources is 3.1 million m³ a day. Wastewater discharge systems operate in 41 cities and districts, 30 of which have wastewater treatment plants with a total design capacity of 1.6 million m³ a day (including regional treatment facilities in the Gardabani district with a capacity of 1.0 mil. m³ a day, which serve Tbilisi and Rustavi).

The total length of waterways and water distribution networks in Georgia is 9,500 km, and the length of wastewater networks and sewers is 4,000 km. In general, the sanitary and technical condition of the water intake of most water supply facilities is inadequate, which is apparent from regular outbursts of mass water-borne infections. Today many water intakes have no protected sanitary zones. 60% of water facilities and 50% of wastewater networks and sewers are beyond their service lives.

Maintenance and repair works have not been carried out at most of the water utilities for a long time. This has resulted in frequent accidents in water and wastewater systems, leading to drinking water losses and contamination of the receiving and ground water bodies. The average water losses in Georgia reach 30-50% of the volumes supplied. Most of the settlements of Georgia receive water with interruptions. There is no accurate registration of water produced and consumed. The situation is worsened by a lack of laboratory water control, which means that supplied water often does not comply with State Standards or sanitary and epidemiological requirements.

[5] Decree #279/n by the Minister of Labor, Public Health and Social Safety, August 16, 2001
[6] Law on Water, 1997, article 11
[7] Law on Water, 1997, article 12

The more alarming problems exist in collection and treatment of domestic sewage and industrial wastewater. The energy crisis which ensued on the dissolution of the Soviet Union, and significant electricity tariffs increases due to a lack of financing, have negatively influenced almost all wastewater treatment facilities of the country. The technological processes were interrupted, the microorganisms used for biological treatment were lost, and pipes and conduits were clogged up. Therefore most of the wastewater treatment facilities have become disabled and the wastewater is discharged untreated into the open water bodies, ultimately causing contamination of rivers and basins of the Black and the Caspian Seas. This contamination of water resources is the main reason for mass intestinal and infection diseases in Georgia.

Lack of a well thought-out sectoral policy, the lack of institutional set-up and regulation are among the main reasons for the technical and financial problems in the water and sanitation sector in Georgia. Since the 1990's there has been almost no national water sector management system in Georgia nor a united water management policy, due to a critical political and economic crisis.

At present, agencies which could be responsible for the development and implementation of the sector policy and water and wastewater reforming programmes, sector regulation, development of sector investment programmes and resource mobilization for their implementation (budget financing and/or external loans), hardly tackle these issues. There is no clearly defined state sector policy and, consequently, no state body is responsible for its implementation. The fact that water and waste water sector rehabilitation is not among the priorities of economic and social policy is also reflected in a low level of budget financed capital investments. There is no adequate regulative framework for tariff policy which could ensure a sufficient level of income for water and wastewater utilities and affordability of water and wastewater services for low-income households. Therefore, the available funds are obviously insufficient to cover the justified costs of the utilities.

Currently the social factor (assessment of the acceptability of the tariffs) is not taken into account in the process of tariff design and no grass roots activities are conducted with the purpose of raising people’s willingness to pay for the services. In most cases water and wastewater utilities performance is regulated by outdated SNiPs and overly tough environmental norms, which leads to excessive capital and operating costs. Comparing these norms and standards with those applied in foreign countries confirms the possibility for more effective use of the available resources. Relevant methodological acts and by-laws need to be developed or updated to reflect the new reality. Currently there are no united water and wastewater utilities coordination centers in Georgia which could provide methodological and practical assistance to the utilities in implementation of the competent and unified policy and introduction of modern technologies and techniques.

One of the most acute problems the sector is facing is the lack of professional human resources, both at the managerial level and specialists of water supply and sewage enterprises, and at the level of municipalities and ministries.

The main consumers of water supply and sewage disposal services are the population, budget organizations, industrial enterprises, public utility enterprises and the private sector. Relationships, obligations, rights and functions between the water supply and sewage sector and other subjects of legal relations in Georgia are regulated by contracts between water utilities and service consumers. The contracts form a basis for relationships between them. The facilities of engineering infrastructure and other main assets of the water supply and sewage systems of Georgian towns and settlements are, for the major part, municipal property. Relationships between municipalities and water utilities are built on contracts for utilization of municipal infrastructure on the basis of economic control rights.

2.2. Water supply systems and Water quality in Georgia

The data on water quality in Georgia is collected by the Environmental Baseline Monitoring Center of the State Department of Hydrometeorology. The data are transmitted and treated manually. According to the Department of Hydrometeorology, 131 sampling points are chosen in Georgia for baseline water quality monitoring in the rivers and reservoirs. Due to a lack of funding, only 26 points are monitored at regular basis (i.e., samples are taken and analyzed each month), another 26 at irregular basis (i.e., samples are taken and analyzed 2 or 3 times per year), and the remaining 70 points are not monitored at this time. The collected data are provided by Department of Hydrometeorology to the Ministry of the Environment of Georgia.

The State Department of Hydrometeorology of Georgia regularly collaborates with the following agencies at national level: Ministry of the Environment, Ministry of the Agriculture, Ministry of the Energy, Ministry of Urban Planning, Institute of Hydrology, Hydro-project Institute, Tbilisi State University, Georgian Technical University, National Agency on Climate Change, and various private and non-governmental organizations.

The Georgian Department of Hydrometeorology regularly provides meteorological information to the World Meteorological Organizations. Hydrological information is only sent upon the request on the WMO. Coordination also occurs with the various International organizations with an interest on the water issues.

The infrequency of monitoring, and questions as to the quality control on sample collection and analysis compared to international norms, complicates any ability to draw conclusions on true ecological health and threats to Georgian water resources.

Based on published and unpublished data and qualitative interpretations by experts, one can draw some tentative observations:

- Ambient surface water quality probably exceeds Georgian (and comparable international) norms many times over throughout the main stems of both the Rioni and Kura rivers;

- The main stem of the Kura is reportedly affected downstream from the cities of Borjomi, Gori, Tbilisi and Rustavi;

- Tributaries to the Kura of concern include the Vere river in the Tbilisi area, the Alazani river downstream from Telavi, the Mashavera river downstream from Madneuli, and the Suramula river downstream from Khashuri;

- Relatively greater impacts on the Rioni river are reported to be downstream from Kutaisi and at Poti near the Black Sea;

- Groundwater quality at the source is believed to be very good but essentially no data are available to support this claim. Data are insufficient to assess whether more vulnerable groundwater (such as in alluvial deposits) is being contaminated by municipal, agricultural or industrial pollution;

- Ambient water quality has improved somewhat since the break-up of the Soviet Union, not from the introduction of pollution control technologies, but from dramatic reductions in industrial production and subsequent waste - water discharges; and

- Relatively high nutrient readings (especially ammonia) in surface waters are likely to result form untreated discharges of municipal waste water. Synthetic organic chemicals, oil

products and metal contamination probably originate from industrial sources since only 10% of industrial discharge is treated.

The Ministry of Environment and Natural Resources Protection receives annual reports of water use. For example, in the year 2000 reports on 90% of total national water use reached the Ministry, with 345 users reporting. Total water use was 2,010 billion m3 with 39% going to irrigation, 36% to thermal power production, and 25% to municipal water supply. From this total, 398 million m3 was returned as permitted discharge, predominantly as municipal waste water (71%) and cooling water (27%). The slowdown in industry is apparent since less than 2% of discharge volumes came from industry. One note, however, is that these data are not controlled for accuracy through independent surveys by the Ministry, and users typically estimate rather than measure use, so there may be significant inaccuracies and inconsistencies. The Ministry also receives records from hydropower stations (nearly 100 stations withdrawing almost 15 billion m3 per year), though such "once-through" use is considered nonpolluting.

As it was mentioned above, drinking water is provided through centralized systems in all 85 cities and districts of Georgia. The top four systems in terms of population served are Tbilisi (1,272,000), Kutaisi (241,000), Rustavi (159,000) and Batumi (137,000). Centralized distribution to some extent is present in approximately 870 smaller towns and villages. The Ministry of Labor, Health and Social Affairs estimated that, in 1999, 75% of Georgians living in urban areas were served by centralized systems delivering water to individual dwellings. Of the remainder, 8% received water from taps in their yards, 3% from public taps, 10% from unprotected springs, and the balance through other means. The situation in rural areas was quite different, with 37% being served by unprotected wells and springs, 20% by water piped in their yards, 13% from public taps, 10% piped to individual dwellings, 13% from rainwater harvesting, and 4% from protected wells and springs.

Water abstracted from underground sources in Georgia is usually delivered to the network without treatment; however, in most of the large cities disinfection is applied. In medium and small settlements water is not disinfected at all or disinfected only seasonally, for reasons mainly related to financing of chlorine procurement and problems of the technical operation of chlorination facilities.

Since Georgia's independence in the early 1990s, due to financial constraints maintenance and repair works at most of the water utilities have been neglected. This has resulted in poor sanitary technical conditions in water utilities, thus resulting in outbreaks of water-related illnesses.

The quality of drinking water is of particular concern. The Ministry of Labor, Health and Social Affairs has been able to maintain a minimum level of water system surveillance, though questions of quality control do arise, and this must be taken into account in interpreting official statistics. Test methods, especially for microbiological constituents, are not directly comparable to World Health Organization recommendations. Drinking water standards were set by the Ministry of Labor, Health and Social Affairs in August 2001, and were generally adapted from old Soviet norms.

In total (and depending on data source), approximately 18% to 24% of samples collected from centralized water systems in the years 2000 and 2001 violated Georgian norms for chemical and microbiological constituents. Samples from 13 towns and cities exceeded microbiological norms by 50% or more.

Perhaps a more direct measure of concern regarding drinking water is the occurrence of water-borne disease outbreaks. Water-related diarrhoeal illnesses affected Rustavi during 1997-1998 with 1902 reported cases and in 2000 with 450 reported cases. Outbreaks between 1997 and 2000 also affected Kobuleti (3582 cases in 1997-1998), Khashuri (244 cases), Borjomi (294 cases in 1997-1998), Poti (267 cases in 2000) and five other cities (361 cases). Outbreaks of amoebiasis have occurred in Tbilisi each year since 1997, with a total of 2423 cases up until 2001. Senior

officials in the Ministry of Labor, Health and Social Affairs in charge of epidemiological surveillance believe that there is significant underreporting of illness (i.e. most people affected do not visit their clinics and the illness goes unreported.) Therefore, they believe that the actual number of cases is far greater.

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2.3. Problems of wastewater treatment

Wastewater collection systems operate in 41 cities and districts, 30 of which have wastewater treatment facilities with a total design capacity of1.6 mil.m³/day (including regional treatment facilities in the Gardabani District with a capacity of 1.0 mil. m³/day, serving Tbilisi and Rustavi). All wastewater treatment facilities were designed and constructed as mechanical and biological treatment plants. The total length of the wastewater networks and sewers is 40,000km.

Wastewater is collected through centralized municipal sewerage systems, and in most cases, due to relief peculiarities, flow to the treatment facilities by gravity. At present, none of the treatment facilities operates with the design capacity. Biological treatment is not employed anywhere. At best, wastewater is treated only mechanically.

Municipal waste-water plants, too, were often constructed poorly and, due to inadequate operation and maintenance, have degraded further. The case of the regional treatment plant in Gardabani (serving Tbilisi, Rustavi and Gardabani) is instructive in this regard. According to unpublished reports (prepared in 1999 for a possible donor grant), while the plant was initially designed to treat 1 million m3 per day, only an estimated 600,000 m3 per day pass through the plant. This reflects the fact that only 43 out of 100 connections to the sewer collectors were actually installed. The rest of the waste water (estimates range from 30% to 50% of the total) from Tbilisi discharges directly to the Kura River without even rudimentary treatment. Some components within the treatment plant (such as the sludge digesters) were never completed. Needed improvements to waste-water collection and treatment systems are extensive and encompass all components.

In the settlements without treatment facilities, wastewater is discharged directly to the receiving water, usually through several outlets. In the settlements where wastewater treatment facilities exist and operate, only mechanical treatment is applied (if any). In the settlements where wastewater treatment facilities do not operate, wastewater is discharged directly into the receiving water either through emergency outlets passing the treatment facilities or after all or a part of the technological chain without treatment.

All wastewater treatment facilities were constructed before 1990. The design technology is now outdated and does not comply with modern requirements, especially with regard to sludge treatment. Moreover, the technology relied on almost free electric energy and natural gas.

The energy crisis which followed the dissolution of the Soviet Union, the significant electricity tariff increase and the lack of financing have negatively influenced almost all Wastewater Treatment Facilities of the country. The technological processes were interrupted, the microorganisms used for biological treatment were lost, and pipes and conduits were clogged up.

For today the water and wastewater infrastructure is in rather poor condition, many facilities are being destroyed, and the equipment is completely worn out and partly lost that can increase the

spread of water-borne diseases. Concern has been expressed that waste water from health centers and hospitals, including those that treat patients with tuberculosis, may not be disinfected at municipal plants. Possible “hot spots” include: (1) the Kvabliani river and its tributary the Otskhe River downstream of Abastumani village; (2) the Mtkvari river and its tributaries the Borjomula River and the Gujaretistskali river in the Borjomi region; (3) the Mtkvari river and its tributary the Ksani River in the Mtskheta region; and (4) the Vere river within Tbilisi city limits. Water quality and health data to assess the validity of these concerns are lacking.

3. Consumer rights and water tariff

In Georgia the main consumers of water supply and sewage disposal services are the population, budget organizations, industrial enterprises, public utility enterprises and the private sector.

The facilities of engineering infrastructure and other main assets of the water supply and sewage systems of Georgian towns and settlements are, for the major part, municipal property. Relationships between municipalities and water utilities are built on contracts for utilization of municipal infrastructure on the basis of economic control rights.

There are no approved methods or procedures of calculation of water and wastewater tariffs in Georgia. In practice principles of development and approval of tariffs are almost similar at all water utilities in Georgia, and are established separately for water supply and sewerage. Each city and district has its own tariff rates for all consumer categories.

In case of a lack of water metering devices, the payment for water supply services is calculated on the basis of *norms*. A norm of water consumption per capita for domestic consumers of Tbilisi Water LLC is 800 l/day/capita. For domestic consumers of water companies in other cities it varies between 60 and 500 l/cap/day.

The tariff approval procedure consists the following steps: The Water and waste water utility calculates the tariff and confirms the necessity of changing it, taking into account the market changes and sector demands; Then it submits the documents to the city administration for consideration by the relevant departments; The revised and updated version is submitted to the legislative assembly of the city/head of the municipality, where a special expert commission is established to assess and produce a statement, based on which a new tariff is approved and further registered in the Ministry of Justice; And finally the information is made public through publication in the official press.

Tariffs for water and wastewater services in 2003-2004 in cities of Georgia remained unchanged. In Tbilisi the tariff per m3of water in 2004 was equal to GEL 0.04 for households (the average annual exchange rate in 2003 was: 1 USD= 2.16 GEL), and wastewater tariffs were GEL 0.01, GEL 0.05 (incl. VAT) in total. Monthly payments for W&WW services based on norms amounted to GEL 1.2 per person. The tariffs for other consumer categories in Tbilisi were GEL 1.2 per m3 of water and GEL 0.4 per m3of collected and treated wastewater respectively.

In other selected cities of Georgia the average household water tariff per m3 was equal to GEL 0.11 per 1 m3, and GEL 0.56 per 1 m3 for other consumers. Wastewater household tariff averaged GEL 0.07 per 1 m3. The average monthly W&WW payment based on norms amounted to GEL 0.40 per capita per month.

Water and wastewater services tariffs vary widely between different cities and districts of Georgia and depend on the geographical location of the area served by W&WW utilities. If a settlement is situated on the plane, it has gravity water networks, and the cost of services provided is less than

in the settlements where water is pumped, and where energy costs are therefore higher. Thus, the costs of services and the tariff rate are higher for such towns.

In 2003-2004 the average W&WW tariffs did not exceed 4 US cents (in the equivalent GEL), including Tbilisi, and 10 US cents on average in Georgia excluding Tbilisi; i.e. they remained very low compared to international standards. The W&WW tariffs did not include depreciation costs, as inclusion of this component in full could have resulted in a sharp increase of the existing tariffs.

At present in Tbilisi the tariff per m3 of water since 2007 equals to GEL 2.40 for households. The new tariff has resulted from the city council's decision to double the tariff on water from 1st January, 2007.

The level of cost coverage from household tariffs in all selected settlements of Georgia was very low. The approved household tariff in Tbilisi covers only of 29% of water and wastewater service costs. Other cities experience the same. The figure below indicates the level of cost coverage from household tariffs in several cities.

Cross-subsidizing of household water and wastewater tariffs is applied everywhere in the republic. Exceeding tariffs for other consumers is more than 10 times higher in some cities. The biggest difference between tariffs for households and other consumers is observed in Batumi, Tbilisi, Kobuleti, Kaspi and Kutaisi. In other settlements the difference is smaller; up to 5 times.
It is also worth mentioning that the difference in wastewater tariffs for households and other consumers exceeds the difference in water tariffs in all places. For instance, the difference in Batumi is 40 times for water and 50 for wastewater.

In 2007 the Tbilisi Water Company started to install collective water meters in some Tbilisi districts. Vashlijvari district was one of the districts where installation of collective metering was completed.

According to research, conducted by the Green Alternative, in May of 2007 despite the fact that collective bills showed that consumption was much lower (Gel 1.99 per capita) people were still paying fixed water fees of 800 l of water per day per person (Gel 2.40 per capita), representing a clear violation of citizens' rights.

4. MDG-7 achievement in Georgia

In September 2000, 189 UN-members accepted the Millennium Development Goals (MDG), having established clear time-bound objectives, achievement of which will promote progressive development. Georgia is one of the countries which signed the Millennium Declaration, thus undertaking the integration of the Millennium Development Goals into the national development strategies, as well as periodical reporting on the goal achievement progress.

Following the undertaken obligations, on 26 August 2003, the Georgian Government Decree on establishment of a governmental commission for preparation of a MDG implementation report was signed. The commission was headed by the Prime Minister of Georgia. The five working groups were set up in accordance with the relevant development goals: Poverty and development, education, health, environmental protection and gender equality. The working groups included representatives of ministries and agencies, as well as experts from NGOs and international institutions. After the revolution of November 2003, a new Georgian Government renewed the commission and assigned its activity on a permanent basis (Governmental Resolution No. 7, 31 March 2004).

One of the goals (Goal 7) of the Millennium Development is sustainable environmental development. The aim is that, before 2015, the number of the population who do not have sustainable access to safe drinking water and "basic sewerage" should be reduced by half. In spite of the fact that the MDG (including those related to water supply and sewerage) were formulated in 2000, the baseline year was accepted as 1990.

Sustainable drinking water access in MDG terminology means:

- Access to an adequate amount of safe water (including treated surface water, as well as untreated but not polluted water sources, such as springs and wells);
- In urban areas, water sources may be a fountain or a stand-pipe tap located no further than 200 m4 from a dwelling;
- It is assumed that rural households should not spend considerable time to get water;
- An adequate amount of water is a volume corresponding to physiological/metabolic, hygienic and domestic consumption requirements.
- Access to “basic sewerage” in MDG terminology means:
- Defecation facilities preventing the contact of people, animals and insects with the excrements;
- Appropriate facilities are understood in MDG as simple, but protected cesspools and toilets discharging into the sewerage piping;
- To ensure effective performance, the facilities should be duly constructed and operated.

However, the accessibility of a service is not always an indication of its sustainability and safety. Hence, the MDG costing methodology should be based on a system of indicators, reflecting population access to *sustainable and safe* water supply.

In order to achieve the water related MDG-7 it is necessary for Georgia to:

(a) Provide drinking quality water for the consumer through distribution networks of the centralized water supply system

(b) Provide access to the centralized water supply system for the consumers who have not had it so far.

In order to comply with the items it is necessary to perform an overhaul and rehabilitation of the pipelines, to raise their conveyance capacity to the level which permits supplying the consumers with the necessary amount of water sufficient, at least, for satisfying their physiological and hygienic needs.

Typical obstacles for MDG achievement in Georgia is connected with the lack of financial resources for the investments and possible affordability problems of water tariffs for the poor. Affordability is a key barrier for the poor to get access to the Water and Wastewater infrastructure. If service affordability is not taken into account, it will be very difficult to provide Water and Wastewater services to the population with low incomes.

To overcome the obstacles it is necessary to attract financial resources in the framework of national priority action programmes for water and wastewater infrastructure and to take into

consideration affordability of water tariffs for poor. Another problem in water and sanitation management is lack of transparency and public participation in decision making process.

5. Description of water projects in Georgia

5.1. Kobuleti water project[8]

20.35 million Euro Kobuleti water project was submitted in EBRD in April 2007 with the objective to rehabilitate water supply and wastewater treatment services.

Investment program comprises investments to rehabilitate the water network as well as to upgrade the wastewater services. The project will install meters to all customers and will include a financial operational performance improvement programme for the company as well as support to the city.

EBRD was supposing sovereign loan of EUR 1.5 million to the Republic of Georgia to be on-lent to the Kobuleti Water Company. The project was also assuming Grant co financing come from the following sources: Millennium Challenge Corporation/Millennium Challenge Georgia (USA) EUR 5.55 million, Ontwikkelings Relevante Export Transacties (Holland) EUR 5.28 million, World Bank/ Global Environmental Facility EUR 3 million and a local contribution of 3.62 million.

Despite the fact that the project was supposed to be approved in July 10, 2007 by the EBRD board the status of the project is still unknown for the public.

5.2. Kutaisi water project[9]

11 million Euro Kutaisi Water Project was approved and signed in July 11, 2006 by the EBRD. The objectives of the project were rehabilitation well fields, transmission pumping stations and the water supply network; installation water meters for 100 percent of households and assistance the Company to improve its financial and operational performance.

EBRD was supposing up to EUR 3.0 million loan to the Republic of Georgia to be on-lent to the Kutaisi water company.

Despite the fact that the project was approved and signed by the board of EBRD the status and results of the project is still unknown for society.

5.3. Poti water project[10]

8 million Euro Poti water supply project was approved and signed by the EBRD in July 11, 2006. The project was aiming performance improvement and commercialization of the Company and establishing the new tariff policy and installation of meters should also create an economic incentive for the rational consumption of water.

EBRD was supposing sovereign loan of up to EUR 3.5 million on-lent to the Company. City of Poti contribution was of up to EUR 1 million and grant financing of up to EUR 3.54 million. It should be noted that the Grant portion is needed in order to keep affordability within acceptable levels.

[8] http://www.ebrd.com/projects/psd/psd2007/37560.htm
[9] http://www.ebrd.com/projects/psd/psd2006/36491.htm
[10] http://www.ebrd.com/projects/psd/psd2005/35601.htm

5.4 Tbilisi water project[11]

In April 2007 municipality owned Ltd "Tbilisi Water" submitted Euro 25 million project in EBRD. The project was aiming introduction of collective metering for residential blocks and preparation a public-private partnership for the Tbilisi Water Company. Despite the strong opposition of civil society related to lack of transparency and ignorance of public participation in decision making process, EBRD approved the project in July 10, 2007.

A few days after the EBRD's approval of the Tbilisi water project, Tbilisi City Hall and the Ministry of the Economy announced a tender[12] for the Tbilisi water company not envisaged by the EBRD project and making completely unclear processes in the water sector.

It is important to mention on international experience in privatization of water supply and sanitation system. As experience shows in case of selling water supply systems tariffs on water can be risen. For example, the universal experience of water privatization in the UK was a sharp increase in the cost of water. On average, prices rose by over 50% in the first 4 years in England and Wales. In addition a review of the Drinking water Inspectorate (DWI) reports in 1998 concluded that there were still weaknesses in companies' performance and in the ability of the DWI to enforce standards by taking action.

In 1995 the study was carried out by the consultancy ITT comparing the costs of water provision between Swedish and UK cities of comparable size. The study revealed that Swedish companies enjoyed considerably lower costs than their private British counterparts. Furthermore, the average return on the capital invested by Swedish companies was positive allowing for full cost recovery, but accounted for nearly a third of that noticed in England.

Transparency and public participation

According to the United Nations international covenant on the "right to water"[13]: "The right of individuals and groups to participate in decision-making processes that may affect their exercise of the right to water must be an integral part of any policy, programme or strategy concerning water. Individuals and groups should be given full and equal access to information concerning water, water services and the environment, held by public authorities or third parties."

Despite the fact that a number of requests were made to the EBRD by the Green Alternative, Tbilisi City Council and Tbilisi Water Company to provide the feasibility study and audit of the water company included in the project, and to organize public consultations regarding some components of the project, neither nor were disclosed the feasibility study and the audit report of the water company nor were public consultations held.

According to the Pre feasibility study of the project[14], international firm of accountants was obliged to make a full Credit Analysis of Tbilisi but till today it is unknown if such analysis was performed at all.

In addition it is also unknown for society why the government made decision to privatize profitable organization. While in the country there does not exist any regulation body controlling such water related issues as water tariffs etc. it might become the main reason of failure that would have negative impact on Tbilisi citizens.

According to EBRD project summary document before signing the project feasibility study, describing company's full financial, technical, economical and environmental review and audit report of the project were supposed to be made.

[11] http://www.ebrd.com/projects/psd/psd2007/37321.htm
[12] http://www.economy.ge/geo/main.php?news=128
[13] http://www.law.wits.ac.za/humanrts/gencomm/escgencom15.htm paragraph 48;
[14] Pre feasibility study of the project: Article 12, page 122;

Despite existence of such conditions the project was approved by the EBRD without making either feasibility study of the project or audit report of the company. The only document that was made by the project was Pre feasibility study of the project.

Collective metering

One of the goals of the project is to meter blocks of flats so that one water-meter will measure the amount of water used. As a result the fee for water has to be paid collectively by the residents of the block based on the number of family members.

It is noteworthy to mention the approach of the project regarding the individual metering. According to Pre feasibility study of the project the company is not obliged to install individual metering and collective metering is the only solution in this situation because installing individual metering would be far more expensive for consumers. Moreover, "The company should be quite clear that its responsibility ends at the property boundary; it has no responsibility for internal plumbing, even in common areas"[15].

Maybe the water company is not obliged to repair internal plumbing free of charge but in this case it is quite vague whose responsibility is repairing of pipes in the blocks and who will take responsibility on quality of these works. Taking into consideration the fact that plumbing is the major source of losses, repairing the internal plumbing is very important issue for achieving a positive environmental impact.

It also should be noted that the water company is obliged to bill consumers. The amount of water bill should be determined according to water-meter. So it can be sum up that the water company is obliged to install individual water meters for fair distribution of water bills. One of the main problems of collective metering is the cutting off of users that pay honestly for water that will increase tension among neighbors.

According to pre feasibility study the idea of individual metering was rejected with the claim that in Tbilisi each apartment needs four water meters[16], thus significantly increasing the project costs. However, it is not clear why four water meters were mentioned when there is only one incoming water supply per household in the whole city (hot water has not been provided to Tbilisi citizens for almost 17 years).

Regulation Problems

At present there is no regulation agency in the country responsible for issues such as control of wastewater etc. There is no clear methodology of water tariff setting and it is also quite vague how city councils are making decisions on water tariff (Economic calculations are never attached to city councils decisions).

In addition it is also unknown for society why the government made decision to privatize profitable organization and how the government is going to make supervision over the privatized objects.

Legal Violations

After project approval by the EBRD the Tbilisi City Hall and the Ministry of the Economy announced a tender for the Tbilisi water company not envisaged by the EBRD project. It is vital to note that the tender was announced without any decision by Tbilisi City Council, thus violating the Georgian Law on Privatization[17], and rendering this privatization illegal.

[15] Pre feasibility study of the project, Article 9.4.2, paragraph 3;
[16] Pre feasibility study of the project, Article 9.4.2, paragraph 4;
[17] Georgian Law on Privatisation Article 3(5);

6. Conclusions and Recommendations

Summarizing all above-mentioned, it could be concluded that, the lack of a well though-out sector policy, the inadequacy of the institutional set-up and regulation are among the main reasons for technical and financial problems in the water and sanitation sector in Georgia. Therefore, elaboration of national policy for water use and protection should be an issue of the highest priority for Georgian government.

Also special strategy for the improvement of Georgia's Water and Wastewater sector should be elaborated. It is expedient to assign responsibility for the development of a strategy for the improvement of Georgia's Water and Wastewater sector to a specially created intergovernmental Coordination Committee consisting of representatives of the Ministry of Economic Development, the Ministry of Finance, the Ministry of Environmental Protection and Natural Resources, the Ministry of Health Protection, Labour and Social Security of Georgia, representatives of water and sanitation utilities and non-governmental organizations concerned. At the same time, the process should be transparent and open for all interested parties.

The experience from other countries should be considered in the course of the development and implementation of the policy/strategy. Also, foreign technical assistance and donor funds for the development of the strategic should be attracted as far as possible.

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