

Privatization of Social Policy of Water Supply in the South Caucasus: A Boost to Regional Development or “Stealing Water from the Poor”?

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Abstract

Private Sector Participation (PSP) has recently become common in the water supply (WS) sector. There is a belief that the private sector is better placed to mobilize capital and ensure stronger political autonomy and operational efficiency of a water utility. In case of the South Caucasus (Azerbaijan, Armenia and Georgia), water is often a limiting factor for social and industrial development, so that privatization has been proposed as a means to boost both of them. However, while being a boost to industrial development on one hand, privatization of the WS may result in the failure to ensure social and environmental goals on another hand, and result in “stealing water from the poor”. This paper aims to identify whether PSP in WS is an appropriate tool for regional development in the South Caucasus, and if so, to identify the conditions required for sustainable PSP.

Keywords: private sector, water supply, social policy, regional development, South Caucasus

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1 Introduction

It is axiomatic that water development projects, by their very nature, will have impacts in and around the regions where they are located. The question, thus, is not whether water management projects can affect regional development, but rather how a water development project can be planned, implemented, and managed from the very beginning in order to maximize net benefits for regional development (Biswas et al., 2004).

Provision of reliable and clean water to domestic, commercial, and industrial consumers is an important issue since the world is rapidly becoming more and more urbanized. It is particularly relevant to the South Caucasus region, which consists of three former Soviet countries: Armenia, Azerbaijan and Georgia.

At a certain stage, industrial growth and the attendant employment opportunities may become constrained, unless the consumers receive the appropriate quantity and quality of water they need (Biswas et al., 2004). If adequate water supply is not available to consumers, they will face the following problems:

- Increased costs for those who lack access to piped water. This refers to the money paid to private vendors, or the costs of sinking, equipping and maintaining a well;
- Increased time and physical effort needed in collecting water. The burden of fetching water - the source of which is frequently located outside of the house, in some cases 200 meters afar - may go to the expense of income-generating activities or the education for school-aged girls;
- Reduced water consumption levels. The more time, effort and money is spent to get water, the less it is consumed;
- Increased health burdens. Inadequate water quality and the under-provision of water incur a great public health danger, whereas an absence of the collection and treatment of sewage is the primary source of infectious diseases in a town;
- Economic costs in terms of lost productivity. As a result of disease, labor productivity drops, resulting in less GDP and less income generated (Mukhtarov, 2005).

Precisely due to the above mentioned effects, the poor municipal WS services are among the major obstacles to regional development in the South Caucasus. The infrastructure is in dire need for reconstruction and expansion, and policy has proven to be inappropriate (ADB, 2004).

As a solution, international organizations, led by the World Bank, have been actively promoting the policies oriented at private sector participation (PSP) in the sector. However, PSP policy applied in Africa, Asia and Latin America has proven controversial and has induced social conflicts sometimes with violence and victims, as it happened, for example, in Cochabamba (Bolivia) in 2000. The main concerns associated with PSP in relation to the so-called “commodification” of water likely occur after privatization. “Commodification” means the treatment and allocation of water - like any other good - only to those who can afford it (Barlow and Clarke, 2001; Hall, 2000). That is why the opponents of PSP in the water supply sector have labeled it “stealing water from the poor.”

This study aims to analyze prospects for PSP in the South Caucasus, whether it would have a positive impact on regional development, and if yes, what the key factors are that would ensure PSP to be a boost to regional development rather than “stealing water from the poor.” The findings of the study are highly important not only for the countries in the South Caucasus, but also for other newly independent states¹ and countries in Central and Eastern Europe, which consider PSP as a means for urban WS sector reform.

The paper consists of five parts. The second part reviews the theory of PSP involvement and identifies the factors that generally determine success or failure of PSP in the water supply and regional development. The third part overviews the WS policy in Azerbaijan and PSP as a means to promote regional development. The fourth part is devoted to the pilot case study of the provincial town of Imishli (Azerbaijan), where the privatization of the water supply has unveiled interesting relations between social policy and regional development in a transitional context. The final part identifies the most appropriate PSP model and the risks, which need to be ameliorated, and proposes appropriate policy steps.

¹ *These are the states that gained their independence after disintegration of the Soviet Union in 1991.*

2 PSP Involvement in WS Services: Arguments for and against

One of the most hotly contested issues in the contemporary public sector discourse is about the role of the private sector in the management of public goods, to which water supply belongs.

The main argument for PSP stems from the currently observed failure of the public sector to effectively manage the WS infrastructure, mostly due to the following problems (Johnstone and Wood, 2001b):

- *Gamekeeper-poacher problem.* With the government as both the owner and provider, the manager of the utility is subject to a number of conflicting influences which it may not be able to balance if clear priorities are not established;
- *Flexibility and autonomy.* At the level of operations, bureaucracy is one of the main constraints in the public sector, while it is not the case to the same extent in the private sector;
- *Absence of competitive discipline.* Since public utilities are not subject to the disciplines of the market, they have less incentive to minimize costs (and maximize tariff collection rates) and to provide services in a manner that the consumers demand;
- *Access to capital.* Private companies can mobilize capital cheaper and faster than the public ones. They may also be better placed to access technical skills, such as human capital (Johnstone and Wood, 2001b; Nickson, 1996 cited by Johnstone and Wood, 2001a; Ingram and Kessides, 1994; Idelovitch and Ringskog, 1995; Mody, 1996).

However, there are serious social and environmental concerns related to PSP in the WS sector. The main social concerns are rooted in an inherent conflict of private interests (maximization of profits) with social and ecological considerations in water development projects (Faruqui, 2003). For example, with costs and prices of water provision higher and demand lower in poorer neighborhoods, private companies are unlikely to have sufficient incentive to improve access in these areas (Johnstone and Wood, 2001b). The other concern is related to the affordability of water after privatization (Blatter and Ingram, 2001). A private company being primarily

interested in cost savings and the maximization of sales could cut spending on maintaining good quality of water (Faruqui, 2003).

Among environmental concerns, there is lack of incentive for private suppliers to conserve water, as they are interested in increased consumption rates and sales of their services. For example, excessive abstraction took place in China, South Africa, England and Wales and caused, in some cases, the drying up of streams (Faruqui, 2003).

Probably disappointing for the participants in the debate, the problem is rooted not in who owns and operates, but in how one owns and operates the system. Efficient utilities are those that are run as self-sustaining commercial enterprises accountable to people. Whether ownership is public or private is less important (Faruqui, 2003; Johnstone and Wood, 2001b).

There is a list of universal principles of WS that have to be adhered to. Gleick et al. (2002) describe these principles as follows:

- *Continue to manage water as a social and environmental good.* This means that the entire population, within the scope of a contract, should be provided with basic water requirements of 50l/capita/day (Johnstone and Wood 2001b); natural ecosystems should be protected and subsidies provided for the poor to afford minimum water requirements (Faruqui, 2003);
- *Use sound economics in water management.* This means that the price of water should reflect all costs and be designed to encourage water conservation. Subsidies should be provided primarily to the poor without altering the water price, not to decrease conservation incentives. At the same time, it is important to permanently revise the subsidies system to ensure that they reflect the needs of the poor and other goals of urban water policy;
- *Maintain strong government regulation and oversight.* Governments should retain or establish public ownership or control of water sources. Public agencies should monitor water quality. Responsibilities of each partner should be precisely determined. Clear dispute-resolution procedures should be developed prior to privatization. Independent technical assistance and contract review should be standard. Negotiations over privatization contract should be open, transparent, and include all affected parties.

If these principles are respected in the process of reform, a PSP arrangement will be successful. However, the main problem is that with an increase in regulation and environmental and social standards of policy, the attractiveness of the sector for private investors drops. Therefore, the right balance in the combination of these principles is required in each specific place with respect to the general principles outlined above.

In general, PSP cannot be viewed separately from broader water management issues. One such important issue is decentralization, especially emphasized in the Almaty “Guiding Principles for Reform of Urban Water Supply and Sanitation in Newly Independent States” (OECD, 2000a). In this document, decentralization is envisaged as based on four elements:

- decentralizing responsibility for water supply and sanitation services to the municipalities, avoiding excessive fragmentation;
- establishing the legal, regulatory and institutional framework for sound and municipal finance, including effective planning, supervision and fiscal control within municipalities;
- clarifying the legal status of water utilities and their relations with local governments rights for infrastructure;
- establishing a framework for treating the inherited debts of water utilities.

However, relations between decentralization and PSP are not straightforward. Although they are often suggested for implementation together, it is not uncommon that decentralization actually discourages PSP (WB, 2000; OECD, 2000a, etc.). When the centralized systems with big economies of scale are divided into smaller municipal systems, they are not as attractive to private investors as before. It has been observed that there is little commercial interest in PSP in water utilities serving less than 50,000 people (OECD, 2003). This problem might be potentially solved by creating municipal unions to reach the required economy of scale and attract PSP, as it happened in Poland (Mukhtarov, 2005; Castalia, 2003). Another potential problem with decentralization is that the actual transfer of water utilities to municipalities, which are not ready to take over the systems, might be harmful. Decentralization should proceed gradually with the thorough preparation of municipalities to take over the system. On the other hand, it is also important to develop political will to decentralize the sector and not allow the justification of centralization by the current lack of municipal capacity (Mammadzadeh, 2005).

3 Water Supply Sector in the South Caucasus and Prospects for PSP

As a heritage from the Soviet Union, all three countries in the region - Armenia, Azerbaijan and Georgia - have had quite a developed system of WS services coverage in comparison with other countries with similar levels of GDP per capita (WB, 2000). Nevertheless, water system coverage does not mean access to water because settlers living on higher floors in apartment blocks have to invest in pumps and water tanks due to the low water pressure and availability of water - only for 2 to 4 hours a day and sometimes even not at all. Moreover, for more than 20 years, the infrastructure has not been renovated and currently is in dire need of replacement (ADB, 2004). As for management techniques, a centralized system inherited from the soviet past dominates the sector and utilities are mostly publicly owned and operated. The section below discusses the specific features of each country in the region.

3.1 Armenia

Drinking water coverage is 85 percent on average, whereas it is 99 percent in Yerevan and 56 percent in the small cities. All urban and about 20 percent of rural areas are equipped with wastewater collection and treatment systems. In contrast to other countries in the region, there is metering of consumption in almost 50 percent of the connections, whereas it is 80 percent in Yerevan. Nevertheless, the physical state of the infrastructure has degraded to the level that the unaccounted-for-water² has reached 65 percent as an average for the country.

The sector structure is quite different from the other two countries: the capital Yerevan has its separate municipal water company, which has been under a management contract funded by a World Bank loan since 1999 with a consortium of Acer and Company Armenian Utility (led by ACEA s.p.a. with C. Lotti and Association and Wrc.). The management contract expired on April 30, 2005, and the new loan has been prepared to continue it. As for the 34 municipalities and 490 rural communities outside the capital, they are managed by the state company Armvodokanal. Armvodokanal has been under a management contract with Saul

² *Unaccounted-for-water is the index used to measure water lost in the pipe-lines due to various reasons (leaks, stealing etc.)*

since December 2004. Recently, one utility from the Armavir region (Nor Akunk) split from Armvodokanal in order to pursue a loan from KfW.

The government is interested in the development of the sector and in attracting foreign expertise to sector management. The entire sector is now managed through management contracts, although financed by subsidized loans (World Bank/IDA and KfW with zero interest and a 40 year repayment schedule). It is unlikely that water tariffs will be increased dramatically in the near future; however, the tendency to cost recovery of water operations will be maintained (Global Water Intelligence, 2005).

3.2 Georgia

The water supply coverage is 86 percent of the population (99 percent for Tbilisi, 82 percent for large cities and 56 percent for small towns). Unaccounted-for-water is 45 percent. The water sector is in deep financial crisis, but at the same time, the new government is reluctant to increase tariffs, fearing social unrest. Most finance comes from international donors and subsidized loans.

A limited liability company/association of the Georgian water utilities, Gruzvodokanal, is the primary organization in the Georgian water and sewerage sector and provides technical and advisory assistance to all municipal utilities and minor water suppliers in small towns and large villages. There are 85 municipal water utilities in the country, and 41 cities have wastewater collection systems. Municipalities are fully in charge of establishing water tariffs (Global Water Intelligence, 2005).

The WS sector is in public hands and the government is hesitant to agree to management contracts for communal services after the failure of the AES-led management contract for Tbilisi's electricity system. According to predictions of Global Water Intelligence (2005), there will be no significant projects undertaken in the country in the near future due to a reluctance to borrow and a fear of a complex water tariff reform. Donor assistance will dominate the development of the sector. The sector is centralized; cross-subsidization is very common and cost-recovery is not even formulated as a policy goal. There is no long-term vision that would articulate the direction of sector development or connect it with other water resources issues; policy is short-term and emergent or so to say "blind wandering". The WS sector is

absolutely unattractive for private investors/operators, whereas the government is hesitant to give the green light to PSP as mentioned above (Global Water Intelligence, 2005).

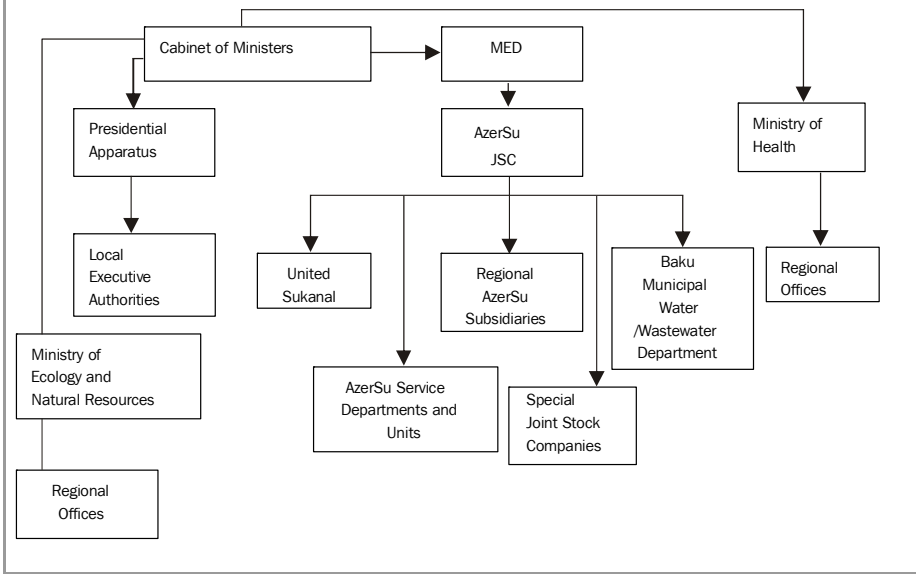
3.3 Azerbaijan

Water supply coverage is 80 percent of the population (piped connections 70 percent, Baku 96 percent, areas outside Baku 56 percent), but most of the infrastructure is in a dilapidated state and needs to be renovated. According to different estimates, unaccounted-for-water is 65 percent to 75 percent. As for sewerage connection, the country average is 44 percent, whereas it is 86 percent in Baku, and 36 percent elsewhere (Global Water Intelligence, 2005).

The poor state of the WS infrastructure has its roots not so much in deficient design and use of poor materials as in inappropriate water policy, paying little attention to maintenance and rehabilitation of the systems (WB, 2000).

In June 2004, the structure of the WS sector in Azerbaijan was changed by the Presidential Decree #252. While in the past the WS of Absheron Peninsula (Baku and Sumgait cities) was separated from the WS of small cities and rural areas, now they have been consolidated within a newly created organization called AzerSu JSC. In addition, before the Presidential Decree, water supply function was separated from wastewater collection and treatment; whereas after the Decree, these functions have also been consolidated. Structurally, however, AzerSu is an agglomeration of the Absheron Regional Water Company (established in 1995) and Azersukanal, an agency that used to serve water everywhere else in the country. Rural water provision is delegated to the community level, but AzerSu is in charge of the development of large investment schemes and the development programs for community water services. While AzerSu is an operator of the facilities, the assets are owned by municipalities and are to remain in municipal ownership according to the national Water Code.

Figure 1 **WS Sector Structure in Azerbaijan**



Source: Mukhtarov (2005).

Any water supply policy should be based on a comprehensive strategy, which would a) formulate the needs of the water sector in a given situation; b) set the goals of water supply; c) prioritize goals; and d) show how to reach the goals under certain constraints. Currently, Azerbaijan lacks a conceptual approach to water supply (Mammadzadeh, Abiyev, Mammadov, pers. comm.; SECO, 2003; WB, 2000). It is not clear how to improve the allocation of responsibilities in the sector and which principles should govern such an allocation. The government insists on maintaining a state monopoly on water services in the country through the Azersu JSC. The functions of AzerSu are essentially concentrated around the provision of water and sanitary services, and performing maintenance, repairs and associated minor construction work using its own personnel and materials.

Based on a review of policy documents and interviews, it can be argued that the current water policy in Azerbaijan is being implemented according to the following principles:

- “Blind wandering” when, in the absence of a strategic vision, the Government of Azerbaijan (GoA) responds only to urgent needs of the systems, being unable to foresee and prevent problems (WB, 2000; SECO, 2003);
- Centralized management when water utilities are subordinated to and dependent on LEA and AzerSu. Municipalities and local communities do not participate in the management of WS services (WB, 2000);
- Supply-based management when there is ignorance of the population demands, wishes and needs (SECO, 2003). Metering and conservation incentives are largely absent in the Azerbaijani domestic water supply (ADB, 2004);
- Cross-subsidization of domestic water users at the expense of commercial and public organizations. Tariffs remain a politically determined issue (Mammadzadeh, pers. comm.).

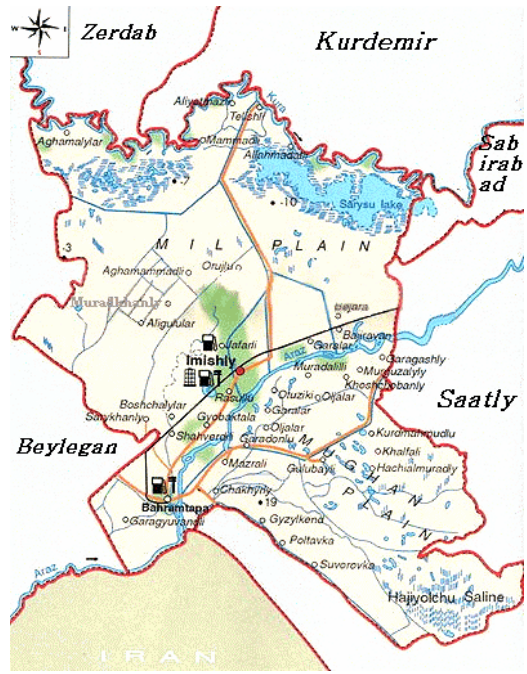
After the Presidential Decree in 2004 for the centralization of the sector structure and the failure of the Management Contract for 25 years with Barmek Holding in the electricity sector (June 2006), both the private sector and the government of Azerbaijan are reluctant to go for PSP in the near future. There are, however, several previously designed projects, which stipulate PSP; however, the hard process of negotiations over the institutional design of these projects has been on its way for several years.

It is impossible to say beforehand whether conditions for successful PSP might be established unless a pilot study is made. Particularly for this purpose, the German Development Bank (KfW) decided to carry out a pilot project by passing a water supply services provision to the private company BerlinWasser in the Azeri town of Imishli. Analysis of this pilot project is of utmost importance both for academic and practical purposes of regional development in the South Caucasus. The next section presents the results of this analysis.

4 Case Study of Imishli (Azerbaijan)

Figure 2 **Imishli Rayon**

The town of Imishli is situated in the central part of Azerbaijan, 250 km to the South-West of Baku. The main source of drinking water is the Araks river, and the water supply infrastructure was built in 1968 for 10,000 people. In 2004, the population reached 36,000, and only 35 percent of the town dwellers had access to piped water supply before the project.



Source: Mukhtarov (2005).

In 1997, the German Government signed with the Government of Azerbaijan the Program on Assistance to Infrastructure Utilities of Azerbaijan. The assistance was supposed to be financed by a KfW soft credit. At the first stage of the program, the water infrastructure needed to be rehabilitated and certain institutional changes undertaken in one of the secondary towns. The second stage of the program included the rehabilitation of infrastructure and institutional changes in two bigger cities of the Kura-Araks Lowland: Sheki and Ganja, a project which already started in the spring 2005 (SECO, 2005).

The project aimed at both physical rehabilitation and institutional changes in management. The objectives of the project were stated in the Foundation Contract 2000, and the lease contract, 2000, as follows:

- reach water supply level so that the main part of the population in Imishli (35,000) would have a minimum supply of 50l/day. This implies the rehabilitation and expansion of the system and the application of innovative approaches such as public standpipes and water trucks;
- reach WHO standards of supplied drinking water (irrespective of whether piped water or truck delivered water);
- reach 80 percent of the collection rate;
- decrease technical water loss (leakage) to 30 percent;
- reach recovery of operation costs (100 percent).

4.1 Strengths and Failures of the Project

As a result of the project, 60 percent of the whole pipe network (21.6 km from 34 km) has been replaced by new cast iron and plastic pipes imported from Germany. The water coverage was extended from 850 households in 1998 to 1,630 in 2005. Two mains that deliver water from the intake to the town have not been replaced, but washed. The chlorinating and pump stations have been built, and two new wells drilled. However, the sewage system has not been dealt with in this project. Apart from physical renovation of the infrastructure, one of the project's main strengths is that it introduced the full pricing of water, and established metering.

It is possible to argue that the scope of the project was not sufficiently wide enough to cover all citizens for water supply, and priorities have not been applied to the investment allocation process - the result of which is that neither water coverage (objective 1), nor water quality (objective 2) were achieved.

Therefore, the project failed to address two important issues: the affordability of water to all and the compliance of the water supply services and drinking water quality to the WHO standards.

4.2 Affordability of the Water Supply Services

Two tests have been made to check affordability: the so-called macro-affordability and micro-affordability tests.

A macro-affordability is calculated by dividing the average income of an Imishli dweller by the average amount he/she spends on water. This indicator equaled 1.4 percent, which is well below the limit of 4 percent (set by OECD). Therefore, on the scale of average, the water price was perfectly affordable.

However, at the household level, water proved to be unaffordable to all. This has been found as the result of a micro-affordability study, which is the percentage of an individual household's income spent on water expenditures. Those users that have no piped water supply and have to purchase it from trucks mostly (8 income deciles out of 10) can not afford water in necessary amounts. Plus, there are also users who have neither piped supply, nor trucked supply; these users have to buy from local private vendors, and this appears to be unaffordable to all users.

4.3 Drinking Water Quality

Water quality appeared to be another important issue. Being outside of the strict regulatory control, the Imishli Water Company did not invest in the microbiology laboratory in Imishli and does not carry out routine monitoring of the microbiological quality of water. This heavily contradicts the WHO Guidelines (2003) since the most common and most dangerous source of water-borne diseases are microorganisms.

Naturally, it is easy to blame the Imishli Water Company for their failure to ensure safe water according to WHO standards. However, there are deeper reasons for failure, which are as follows: 1) the weak regulatory capacity of the Azeri Government, 2) inherent risks associated with a private company taking over the monopoly of the WS provision, 3) incomplete feasibility and assessment studies before the project, and weak oversight of the investor - the KfW.

4.4 Lessons Learned from the Imishli Case Study

There are three main lessons that must be learned from the Imishli experience with PSP for further application in the Caucasus and FSU municipal water supply. These are as follows:

- A private water company, even if managed by an experienced operator, does not have enough incentives to provide good quality water and has a tendency to cut costs. There is an outcry for a strong regulator which can a) make information available to it and b) enforce the regulations;
- The capacity of regulators, such as AzerSu (State Water Agency), Local Executive Authorities and the Ministry of Health as regulators, should be strengthened. AzerSu proved unable to ensure affordability of services and service delivery to all consumers, and the Ministry of Health failed to enforce water quality legislation and the contractual obligations of the company;
- The role of donors should be more than simply financing; as sponsors, they have a leverage that could be used for regulation.

The project in Imishli had a pilot character and was aimed to test a set of new principles of water utility management in the context of Azerbaijan. In the absence of consensus on the water sector strategy and on the ways to implement the reform process, it would be too optimistic to expect a project that was successful in all aspects.

However, the specificity of the WS sector is that pilot experiments cannot pursue only the aims of capacity building and “testing hypotheses”, as the stake of water supply is too high for this. Therefore, apart from piloting new approaches, improving WS services was an aim in the project. This aim, however, has been only partially accomplished within the project.

5 Conclusions and Recommendations

5.1 Factors that Determine Success or Failure of PSP

The research has shown that PSP involvement is a controversial tool heavily debated in the literature. The main concerns of PSP in WS are associated with the “monopolistic position of WS supplier” risks of negative social and environmental effects. In order to ensure the sustainability of PSP involvement, three main principles (factors) should be applied:

- continue to manage water as a social and environmental good;
- use sound economics of WS;
- apply strong regulatory oversight.

Even though it is quite difficult for governments to regulate PSP in the WS sector, particularly those in the region of South Caucasus as well as Central and Eastern Europe, the literature review showed that it is also difficult to attract the private sector with long-term investment in these countries. This is because of the extremely high investment risks that can be classified as follows: economic (commercial) risks, financial risks, political risks, environmental risks and capacity risks. All of these risks need to be overcome in order to attract the private sector.

5.2 Current State of the WS in the South Caucasus in Relation to PSP

Currently, the WS sector of the South Caucasian countries suffers from two main problems: 1) deteriorated infrastructure and 2) institutional and managerial weaknesses. There is no conceptual approach to WS, and it is unclear how responsibilities should be effectively allocated in the sector. This impedes the adoption of an appropriate legislative and regulatory framework and the creation of an attractive investment climate for private sector investors/operators. The WS sector in all three countries is centralized with weak or absent municipal governance; and taking into consideration the lack of capacity of local governments and, more importantly, the lack of political will to decentralize such an important social sphere as Water Supply, actual steps toward decentralization are unlikely in the region for near future.

5.3 Recommendations

As the result of the study, it has been identified that the models that would assist long-term goals of the WS sector of Azerbaijan, Armenia and Georgia are *concessions* and *BOOT contracts*. They offer both investment and institutional changes, ensure political autonomy of a utility and usually are 25 or more years in duration. However, due to the following risks, neither concession nor BOOT contracts are possible at the current stage of the South Caucasus's development:

- the sector structure does not allow for economy of scale, which is necessary for concessions;
- the absence of a sector strategy in Azerbaijan and Georgia creates unpredictability for future policy;
- uncertain legislation does not ensure investors' security rights and does not articulate a tariff-setting mechanism;
- high political, financial, and environmental risks.

Currently, the most urgent need is to elaborate the WS sector strategies and to agree on the reform goals and instruments. The next priority is the development of an appropriate legislative and regulatory framework, with subsequent municipal capacity building and the involvement of municipalities in the decision-making processes of the water utilities.

A set of recommendations proposed for the particular case of Azerbaijan are given in the table below. These recommendations, being tailored for Azerbaijan, however, are highly relevant to Armenia and Georgia as well as to the newly independent states and countries in Central and Eastern Europe.

If these recommendations are followed in a flexible and adaptive way, there is a high chance that PSP policy in the WS sector of the South Caucasian republics will significantly contribute to regional development and will not be labeled as “stealing water from the poor.”

Table 1 Recommendations on the Further Reform of the WS Sector with PSP Prospects				
Recommendation	Municipalities/ Local users/ Local entrepreneurs	National Government	International Financial Institutions	National Non-Governmental Organizations/ Mass Media
1. Determine sector strategy	Intensify the dialogue between the stakeholders and learn from the experience collected and shared by the international financial institutions; Find an optimal allocation of risks between the stakeholders through “trial and error” method.			
2. Target the decentralization of the sector and build municipal capacity	Capacity building in order to take over water utilities in the future.	Commit for decentralization; Promote Public-Public Partnerships; Create national forums for sharing experiences.	Organize regional workshops, design special training courses for municipalities.	Promote the awareness of the population about the importance of local participation.
3. Sector structure that allows economies of scale	Creation of Municipal Unions to create economies of scale.			

4. Explanatory work with the central officials			Through projects; Through special training in two areas: 1) raising awareness about the modern WS sector structure; 2) about appropriate management tools.	
5. Development of an epistemic community (long-term)		Set new departments in scientific institutes; Address this issue in higher education curriculum.	Help in learning experience across the countries.	Provide communication of academia to the public.
6. Legislative reforms		Adopt a conventional "concession" law, include tariff-setting mechanism in legislation; indicate performance standards in legislation.	Promote guidance in legislative reforms.	
7. Build a regulatory framework	Regulate utilities through access to participation and information.	Set a multi-sector regulator that would be independent, transparent and accountable to the public.	Regulation as a financing organization.	Carry out monitoring of the WS projects and publish the results in the press.
8. Strengthening of regulatory capacity of the Government	See municipal capacity building.	Public-Public Partnerships, experience, technical equipment.	Help with training and Public-Public Partnerships.	
9. Ensure public acceptability of transition to cost-recovery and financial autonomy of water utilities	Provide information for targeted subsidies.	1) Targeted pro-poor subsidies (innovative approaches); 2) Transition subsidies; 3) Tariff increases should follow service improvements; 4) Awareness raising among the population on water as a commodity.	Awareness raising campaigns.	Awareness raising campaigns.
11. Obligatory demand and WTP ³ studies for WS projects		Enforce as a regulator.	Provide methodology.	Monitor and spread.
12. Share transaction costs for project design		Share costs/provide guarantees.	Share costs/provide guarantees.	
13. Integrated River Basin Management System (long-term)	Coordination between agencies, joint planning and finding a mechanism for the allocation of water resources for different needs with consideration of future demands.			

Source: Mukhtarov (2005).

³ WTP is an acronym for "willingness to pay".

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