

Best Practices of PPP projects in the water services sector

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Abstract

A public-private partnership (PPP) scheme is a "product providing tool" becoming more and more popular worldwide due to the inability of the public sector to finance a number of projects. Especially in some parts of the world like Africa, the need to utilize PPPs is crucial for certain projects like water supply and sanitation. Only 62% of the population in Africa has access to adequate water supply infrastructures. The number drops down to only 47%, regarding rural populations. Sanitation is also very low (60% average, 45% for the rural populations). This paper aims to present three case studies from Africa where PPP projects were successfully implemented. The projects had to do with water supply networks construction and provision of better water supply services (tariffs etc.). Finally, the proved to be the most crucial PPP success factors, such as political backing, public acceptance, devolution of authority, stakeholder involvement etc. are being presented and discussed.

Keywords: PPP, success factors, water supply, sanitation, Africa.

Public Private Partnerships (PPPs)

Public-Private Partnerships (PPPs) are defined as: "the combination of a public need with private capability and resources to create a market opportunity through which the public need is met and a profit is made" (UN, 2005). In other words PPPs bring public and private sectors together in long term partnership for mutual benefit. The PPP label covers a wide range of different types of partnership, including (PPPs-The Government's Approach, 2000):

- The introduction of private sector ownership into state-owned businesses, using the full range of possible structures (whether by flotation or the introduction of a strategic partner), with sales of either a majority or a minority stake;
- The Private Finance Initiative (PFI) and other arrangements where the public sector contracts to purchase quality services on a long-term basis so as to take advantage of private sector management skills incentivised by having private finance at risk. This includes concessions and franchises, where a private sector partner takes on the responsibility for providing a public service, including maintaining, enhancing or constructing the necessary infrastructure; and

- Selling Government services into wider markets and other partnership arrangements where private sector expertise and finance are used to exploit the commercial potential of Government assets.

The public sector is turning to PPP projects as the state financing is limited or is redirected to other priorities. At the same time the private sector can provide the same work cheaper, or a better outcome with the same budget. Additionally the private sector is a better manager and takes better account of the risks involved. Also by transferring those risks that the private partner can better manage, the total risk that the public sector has to undertake is reduced. The provided services are improved and the assets are being better utilized through PPP. Finally, by taking advantage of private sector innovation, experience and flexibility, PPPs can deliver services more cost-effectively than the traditional approaches can. The resulting savings can then be used to fund other needed public services.

Motives, objectives and expected results

The basic motives for using PPPs are (Kanakoudis et al., 2005;2006;2007):

- 1 The need to secure state budget allocations;
- 2 The quality improvement of public infrastructure and services provided;
- 3 The mobilization of private sector's know-how in projects planning and implementation (know-how pooling);
- 4 The significant limitation of the project's life-cycle cost;
- 5 The effective risk allocation.

In bringing the best of the public and private sectors together, the key test of any partnership arrangements is not whether it is classified to public sector or to the private sector. Instead, what matters is whether it provides the structure most likely to deliver the Government's objectives. The Government develops public private partnerships with three broad objectives in mind (PPPs-The Government's Approach, 2000):

- 1 To deliver significantly improved public services, by contributing to increases in the quality and quantity of investment;
- 2 To release the full potential of public sector assets, including state-owned businesses, and hence provide values for the taxpayer and wider benefits for the economy;
- 3 To allow stakeholders to receive a fair share of the benefits of the PPP. This includes customers and users of the service being provided, the taxpayer and employees at every level of the organisation.

1 The expected results of PPPs are (Kanakoudis et al., 2005;2006;2007):

- 2 The better exploitation of existing public funds;
- 3 The differentiation of the way public infrastructure projects and services are being implemented, in order to advance innovation;
- 4 The know-how transfer from the private to the public sector;
- 5 The need to guarantee the desirable level of projects social benefit and the quality of provided services on a constant basis.

The public sector should examine the possibility of PPP when: a) the provided service/project cannot be implemented with the existing public funds and/or know-how; b) the private sector can reduce the cost of the project, improve its quality and deliver it faster.

PPPs in water services

Water is essential for human life and health, as well as for economic activity and the preservation of the ecosystem. The UN Millennium Development Goals (MDGs) (WHO, 2005) include improved access to safe drinking water and basic sanitation as a target. While the proportion of the population using safe sources of drinking water in the developing world rose from 71% in 1990 to 79% in 2002, 1.100 million people are still using water from unimproved sources. On the other hand, while sanitation coverage in the developing world rose from 34% in 1990 to 49% in 2002, 2.600 million people still lack toilets and other forms of improved sanitation.

Today, there is a move towards deregulation and the use of business employed by private companies (Magara et al., 2007). Other systems, such as the participation of local independent administrative corporations in the management of the water supply and appointment of superintendents for public facilities, are also being introduced. Facilities developed so far will need renovation in the near future and the costs of rebuilding are expected to increase enormously. However, since future increases in water demand are not expected to equal those of the past, collecting the funds necessary for rebuilding facilities is not always easy. Since the water supply service is funded from the revenue from water rates collected from customers, precise response to customer needs will help to develop future business. It is important for water suppliers to provide their customers with a variety of information on subjects ranging from water quality to water rates and facilities and to obtain their agreement and support. Water suppliers collaborate with other suppliers and private companies in various forms, as shown in figure 1. As each of these forms of collaboration have their own characteristics, a wide-ranging review on how to choose the best management system to address problems of water suppliers is required from the viewpoint of customer service. At the same time in order to promote sustainable water services various collaborations among water suppliers and facilities are being made with relevant private sectors and entities in fields other than the water supply service (figure 1).

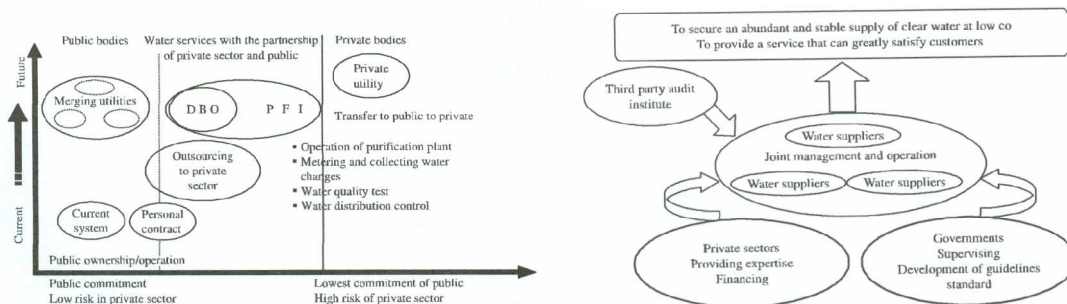


Figure 1: The models of PPPs in water service. New scheme of PPP for sustainable water service. (Magara et al., 2007)

Contractual arrangements

The contractual arrangements can be service/management contracts, leases, operation/maintenance concessions, capital investments or divesture and asset ownership. The different levels of partnership are established to improve levels of efficiency, effectiveness, responsiveness and adequacy of public services. Such "partnerships" may include small independent providers, NGOs or the private sector. In most cases, the arrangements are service or sector oriented. While one option might be appropriate for power provision, for example, other partnerships would be more appropriate for another sector. Table 1 illustrates the different PPP options for water and sanitation provision.

Table 1: Allocation of key responsibilities under the various options for private sector participation (UN, 2006)

Option	Asset Ownership	Operations & Maintenance	Capital Investment	Commercial Risk	Duration
Service Contract	Public	Public and Private	Public	Public	1-2 years
Management Contract	Public	Private	Public	Public	3-5 years
Lease	Public	Private	Public	Shared	8-15 years
Concession	Public	Private	Private	Private	25-30 years
Build Operate Own Contracts (BOO)	Private and public	Private	Private	Private	20-30 years
Divesture	Private or public	Private and public	Private	Private	Indefinite (may be limited by license)

Source: World Bank, 1997. "Toolkits for Private Participation in Water and Sanitation".

The potential benefits from implementing PPP projects are: cost reduction; effective risk assessment and management; improved services provided; increased revenues & other indirect financial benefits (employment growth, economic development reinforcement, etc.). The potential risks of PPP projects are: the public sector may lose the control of the project; the political risks; the accountability question matters; the unreliable services; the lack of competition; and the blurriness in the partners' selection procedure.

Urban Water Sector reform in Senegal case study

In 1995, only 54% of the urban population in Senegal had access to safe water, leading to an urgent need for reform. The Government recognised that greater autonomy in terms of the management process was needed to ensure both improved productivity and operational efficiency, and that some financing would have to come from non-state sources. All these requirements pointed towards involving the private sector, while the Government's main interest was to maintain control over the assets. Setting up an enabling government framework for private investment, increased efficiency and improved service delivery were among the highest priorities.

In 1994, the Government created a steering committee of the ministers of each government agency involved with water supply and sanitation. At a workshop in 1994, the committee concluded that a state asset-holding company should be formed, which would retain the assets and

the right to extract water, and that, an operating company should be created to produce and deliver water. It was decided that a professional operator would own at least 51% of the stocks; the other 49%, being owned by a joint venture formed by Senegalese investors, former workers of Société Nationale d' Exploitation des Eaux du Sénégal (SONEES) and the State.

The committee also recommended water tariffs restructuring to ensure the full cost recovery (and thus the financial sustainability) and the "social dimension" of the project. The technical subcommittee drew up a list of functions for the state asset-holding company and the operating one. This included recommendations that the "payment" of the private operator should be linked to the network efficiency (measured through the reduced volume of the Non Revenue Water, and the increased billing and collection efficiency), and that the operator should undertake a part of the capital expenses. The committee suggested that in light of the needs and constraints of the sector, an affermage contract was the preferred option (Brocklehurst et al., 2004). (Under an affermage contract, a private company is paid a fee which is the price for the volume of water produced and sold that the operator requires to cover all his costs for running the system).

One of the major objectives of the urban water sector institutional reform was to establish long-term financial viability through increased efficiency and effectiveness. This was necessary for a number of reasons: to alleviate the burden on the State of having to provide direct and indirect subsidies to the sector and thus free up resources to be used elsewhere; to make it possible for the sector to generate enough resources to finance part of the future capital expenditures; to bring the indebtedness to a level compatible with the sector's capacity to service it; and finally, to attract private investors to finance an increasing part of future investment needs.

The financial policy of the sector was defined on the following basis: (a) the only support to come from the State would be in the form of on-lending of donor's financing; there would be no on-going operating subsidies; (b) there would be no excessive increases in water tariffs; increases would be introduced gradually, set initially at a constant rate but adjusted upwards or downwards according to progress in reaching financial equilibrium; (c) the social tariff (the subsidized first block of the tariff for consumption under 10-cubic meters per month) would be retained in order to ensure affordability.

A ten-year affermage contract governing operations of the system was co-signed by three parties: a) the Republic of Senegal, represented by the Ministère de l'Hydraulique; b) SONEES; and c) a private operating company formed especially for this purpose, Sénégalaise des Eaux (SDE). SDE also signed a performance contract with SONEES for the same duration. The contract outlined SONEES' responsibilities with respect to making infrastructure available to the operator and prompt execution of work relating to system investment.

Related to adjustments to tariffs in accordance with the Contract Plan, SDE's main obligations included: (a) using the productive capacity of the infrastructure in an optimal manner; (b) maintaining and repairing infrastructure at its own cost; (c) renewing a minimum of 14.000 meters and 6.000 connections per year; and (d) meeting World Health Organisation standards for water quality.

Main outcomes

More water to more people. Since the reform process began, the volume of water produced for use in the urban water sector had risen each year, from 96.3 Mm³ in 1997, to 114.6 Mm³ in 2002, a 19% increase. Approximately 74% of this water is used in Dakar.

Better financial health. The government agreed to implement, through time-bound actions plans, corrective measures to reduce the high water usage of public sector clients, budget annual public agency consumption, and pay government water bills within two months of issuance. Looking at the cash flow can also assess the financial health of the sector. The cash balance of SONEES has been positive since 1996, when major sector investment started, as predicted by the financial model.

Changes in tariff. Senegal uses an "increasing block tariff" (IBT) structure, comprising a subsidized "social tariff" for levels of consumption below 20m³ in a 60-day period, a regular tariff for consumption over this, and a "dissuasive tariff" for consumption above 100m³ per 60 days. The tariff consists of the rate of charges for operation and maintenance of the system a component to cover costs of SONEES and ONAS (the state organisation responsible for sanitation) and other components.

The subsidies targeted at the poor in the water sector are in 3 forms: (a) subsidised connections through a social programme, financed by government funds (some of which have been provided by the World Bank); (b) construction of stand posts in areas where there are people without private connections, financed by the Government with funds from the World Bank, and supply of water to these posts at low rates (the stand posts are managed by private operators recruited by SDE in consultation with the local community); (c) subsidies for low levels of consumption financed through a cross-subsidy between customer categories and delivered through an increasing block tariff, with a social tariff for household consumption less than 10m³ per month.

Key factors for successful implementation

The choice of an affermage contract, which was enhanced by the addition of strong financial incentives to reduce leakage and improve billing and collection efficiency, was innovative. It addressed the needs of the Government and kept the assets in their hands, and operations and maintenance functions were clearly defined. Furthermore, the nature of the contract fostered a partnership between the Government and the private operator.

Strong political will and good leadership from the relevant ministry was present throughout the reform process and there was little interference from the part of the Government. It was a well-designed process that allowed for flexibility and innovation when necessary.

Lessons learnt

- 1 There can be no sustainable reform without political commitment, stakeholder ownership and strong internal leadership;
- 2 Sector investment must be planned in parallel or in synergy with the utility reform and should be financed by external support agencies;

- 3 Governments must remain committed to sector investment and implement it in a timely manner, as delays in rehabilitation and extension work will jeopardise improvement in service;
- 4 Establishing a climate of trust and cooperation among the key actors will make reform sustainable and robust. This can be done by undertaking capacity-building activities;
- 5 The state asset-holding company must be institutionally autonomous, professionally competent and have clear financial targets;
- 6 Employment issues and staff job security must be addressed up front;
- 7 The form of any contract with the private sector must be closely based on, and entirely consistent, with the development aims of the sector.

Expansion of Water Supply in Rural Areas in Ghana case study

The Ghana Water and Sewerage Corporation, a state company under the Ministry of Works and Housing, was responsible for both urban and rural supply and sewerage for a population of some 15 million people. Most of the corporation's staff and resources, however, were devoted to the urban sector, with just two or three staff working in rural services. As a result, donors and NGOs who wanted to work in rural water and sanitation found them setting up large regional projects that were almost independent from the Government, both in their policies and in their implementation.

By the mid-1980s, the Government realized that the water situation was unsustainable and increased the water tariff tenfold. A stakeholder group was established to adopt best practices associated with the International Drinking Water Supply and Sanitation Decade (1981-1990). The result was a draft sector strategy, which was discussed and refined with line ministries, local government, and private sector. Once the national policy for rural water supply, sanitation and hygiene education was finalized, it was implemented as a pilot project in the Volta region, supported by the UNDP and the Dutch Government. It was then scaled up as the First Community Water and Sanitation Project (CWAP-1), a \$20 million World Bank-supported program (Larbi, 2005). The Community Water and Sanitation Agency (CWSA) was created in stages. First, the functions related to rural community water supply were placed in a separate division, facilitating better monitoring of donors' grants. Later in 1998, the division was made into an independent agency, whose main tasks were coordination and facilitation (not implementation) of community-managed water supplies.

At the same time CSWA was created, the Government devolved certain responsibilities from the national level to districts and communities. The district assemblies became responsible for processing and prioritizing community applications for water supply, awarding contracts for hand-dug wells and latrine construction, and running a latrine subsidy program. In order to be eligible for assistance, communities had to establish gender-balanced water and sanitation committees, complete plans detailing how they would manage their system, contribute 5% of capital costs in cash, and pay all operational and maintenance costs. The final element of the strategy was an unprecedented private sector provision of goods and services, covering borehole drilling, operations and maintenance, latrine construction and community mobilization.

By 2000 the reforms were complete and CWSA had settled into its role of helping the district assemblies implement a national community water and sanitation program. CWSA formulates strategies, standards and guidelines for the sector, coordinates the work of NGOs and donors, and encourages private sector participation in water and sanitation activities. The communities have primary responsibilities for managing their water and sanitation services, while small-scale sector firms take care of repairs and spare parts.

The national Government of Ghana played a crucial role in developing policy but is not involved in implementation. The Ministry of Works and Housing (the parent ministry of CSWA) sets the overall policy for the sector, while the Ministry of Local Government and Rural Development supports district assemblies and tries to mediate between district assemblies and line ministries. The Ministry of Finance does not yet accord water and sanitation sufficient priority, as indicated by the low percentage of funds allocated in the Poverty Reduction Strategy Paper (PRSP).

Main Outcomes

Coverage in rural water and sanitation is now being extended at a rate of 200,000 people (over 1% of the population) per year and accelerating. Good progress has been made: CSWA is fully established and functioning, with the active support of several bilateral and multilateral agencies. Attaining the MDG of 68% of rural water coverage in 2015 looks now feasible, as the percentage of coverage of rural water was 30% in 1980, 35% in 1990 and increased to 41% in 2000.

In terms of cost recovery, the Ghanaian case is typical of poor countries where communities and local government must pay 5% of capital costs. Of the balance, 90% comes from the largely donor-funded CSWA budget. In practice, however, this policy is flexible: poor people are often identified at community level and exempted from paying, as a form of a community-managed cross-subsidy.

Key Factors for Successful Implementation

Strong political leadership was evident. The national mood in Ghana in the 1980s was one of general support for reform and innovation. Rural water had been neglected and the sector as a whole was stuck in a downward spiral of inadequate cost recovery and poor service. Politicians made a decision to reverse that trend by increasing tariffs, seeking grants and loans, and separating the urban from the rural sector. Successive governments from different parties have all prioritized water and sanitation as important contributors to economic and social development; therefore, reform of the sector has not been used as a political issue. Clear legislation was critical, specifically the acts of parliament from 1998 that defined the policies and roles of most sector agencies. CSWA demonstrated strong commitment and leadership in supporting devolution of decision-making to local governments to implement their mandate.

Bottlenecks to Smooth Implementation

The role of the World Bank in making loans available and supporting sector reforms and decentralization has been crucial. However, certain payers regarded the imposition of certain conditionalities to access grants (e.g. fixed percentage contributions to capital costs, minimum

proportion of people demanding latrines in a community, and private sector involvement) as too rigid.

Ghanaian NGOs were initially helpful and constructive in their contributions to the policy debate. However, they later demonstrated some antagonism towards private sector involvement, apparently backed by international anti-globalization movements.

Lessons learnt

- 1 Demand-driven approaches work since communities are capable of making decisions, maintaining services, and making their contributions to capital costs, operations and maintenance. A strong and well-structured information campaign is necessary to empower communities to make an informed choice.
- 2 Support to communities is needed, particularly in the form of financial management training, in order for the selected boards to continue overseeing facilities on behalf of communities. The CWSA and the districts should provide guidance on such things as tariff setting, service upgrading to house connections, additional point source facilities - tasks in which private sector involvement is fundamental.

The Sebokeng and Evaton case study (McKenzie et al., 2006;2007)

Emfuleni Local Municipality is one of the major municipalities in Gauteng, located approximately 50km south of Johannesburg - South Africa. The municipality incorporates the towns of Vereeniging, Vanderbijlpark, Sebokeng and Evaton. The area has a long history of political and financial turmoil, with the result that it has regularly experienced severe cash flow problems over the past 20 years. This has resulted in low maintenance budgets and generally low levels of infrastructure investment. The Sebokeng and Evaton areas are predominantly low-income residential areas supporting a population of almost 500,000. The combination of low income coupled with high unemployment has resulted in a general deterioration of the internal plumbing fitting over a period of many years.

As a result of the low levels of maintenance, poor quality fittings and corresponding low payment levels for services, the water reticulation system experiences very high levels of leakage and wastage in many areas, particularly Sebokeng and Evaton, where the wastage was estimated to be in excess of 25Mm³/annum compared to the annual supply of 34Mm³/annum - i.e. almost 80% of the water supplied to the area. The high leakage levels led to an annual water bill to the Emfuleni municipality of approximately ZAR120 million (\$15.8 million) per year for Sebokeng and Evaton alone.

In 2004, the municipality requested proposals from suitable, qualified teams through an open tender process to address leakage/wastage problems. Several proposals were received and one of the successful proposals involved a small scale PPP in the Sebokeng and Evaton areas. Payment to the project team was based on the savings achieved, with no financial risk to the municipality. The project was, in effect, a small scale PPP with a simple risk-reward format.

The main objective of the Sebokeng-Evaton leakage reduction PPP was to reduce water leakage and levels of wastage in the Sebokeng and Evaton water distribution systems. While the technical aspects of the project

are clearly noteworthy (since it is currently the largest installation of its type in the world), the project is also unique in the way in which it was managed and commissioned within a three month period which few, if any, believed could be achieved. The rapid implementation resulted in huge water savings being achieved at the earliest possible date, which are already providing massive financial benefits to the water supplier and local community.

The leakage levels in Sebokeng and Evaton are unacceptably high, as indicated by the minimum night flow (MNF) of 2800m³/hr recorded before work began on the project. This is one of the highest MNFs recorded anywhere in the world and is a symptom of the high household leakage, which in turn causes high sewer flows at night when few, if any, residents use water. The project involved the design, construction and commissioning of a large pressure management installation that could be used to reduce system pressures during off-peak periods - a very simple but effective approach.

Project team

Unlike many previous water demand management projects, the Sebokeng-Evaton project was completed as a small scale PPP between the consultant and the client. The key players were:

- The client, Metsi-a-Lekoa: a ring-fenced water utility for med by Emfuleni Local Municipality and managed by CEO Sam Shabala;
- The funds required to complete the project were raised privately by WRP and DMM through Rene van Westhuizen of Standard Bank;
- The contract on which the project is based was funded and facilitated by the municipal infrastructure investment unit (MIU) and Metsi-a-Leoka, with support from the Alliance to Save Energy's Watergy program;
- The consultant's team comprised Gauteng-based WRP Pty in association with DMM. Additional specialist structural design support was provided by Platinum Consultants, and conceptual design support by Coplan. In addition, Tim Waldron, the CEO of Wide Bay Water in Australia, acted as a specialist reviewer. Other team members include IRCA (occupational health and safety), Batho Pele (a community awareness company) and WK Construction (the main contractor);
- Finally, the overall auditing of the savings on which the payments are made on a monthly basis to the consultant is undertaken by an independent and completely neutral auditor. Many previous PPPs have failed due to the absence of a technical auditor, and in this case the project team was very fortunate to enlist the services of such a person at no cost to the project through USAID's Watergy program.

Main Outcomes

The project began on 1 April 2005 and was operational by 30 June that year - just three months later. The actual construction was finalised in September, when the installation was officially opened by the former mayor of Emfuleni and the director general of the Department of Water Affairs and Forestry. Since it began operation, the installation has saved Emfuleni local municipality in excess of 14Mm³ of water through reduced water purchases from the bulk supplier, representing some 28% of the total predicted water demand. This is a net financial saving of over ZAR40 million (\$5.2 million) to the municipality (after

all payments to the project team are taken into account), as audited by the independent auditor. The savings achieved exceed the initial optimistic projections of 20% documented in the project proposal, and it is anticipated that the annual savings for the first full year of operation will exceed 8Mm³.

Lessons learnt

- 1 PPPs can be small scale projects and need not be the typical mega-projects normally associated with this type of venture.
- 2 Funding for such projects remains a key constraint and one that has not been addressed. Very few consultants will be willing or able to take on the financial risk for such projects. Those who are able to do so, may only be able to find appropriate security for one such project and may have to wait until the first project has been completed before tackling another - which may result in delays to future projects simply because the consultant cannot source appropriate funding.
- 3 The red tape associated with the funding of such projects is horrendous and is delaying new projects by many months, if not years. Even with a normal bank loan, the funding for the Sebokeng-Evaton project took more than five months to secure.
- 4 Risk-reward contracts need not be 50/50 -type projects- this one was an 86/14 project in favour of the public entity. Without such a weighted distribution of the savings, Emulfeni Local Municipality might not have considered the project to be in the interests of its customers. The selection of the split in savings is a critical element of any risk-reward contract, and requires very careful planning and preliminary investigations. Both parties must be satisfied with the outcome for the project to be successful.
- 5 The inclusion of a cap on savings is an essential element of any risk-reward contract to provide the client with the security that the consultant will not be overpaid for its services.
- 6 The use of an independent auditor is a key element in any risk-reward contract. To date there have been no disputes or concerns from either side and the independent auditor has been a critical component in the success of the project.
- 7 By introducing a five-year operation and maintenance period, the client effectively ensures that the savings will be maintained. The consultant must ensure that the savings continue throughout the contract period or it will not be paid. In effect, the client is paying around 10% per year of the savings to ensure that they are sustained, and the other 90% (plus) continues to accrue to the municipality. After the five-year period has elapsed, it is likely that a new contract will be awarded for another few years - the savings are so large that it would be foolish to risk losing 90% in an attempt to save 10%.
- 8 The greatest risk to the consultant is not necessarily that the savings are not achieved, but rather that the client does not pay the agreed savings. In the case of the Sebokeng-Evaton project, the support and honesty of the client has been the key to the success of the project.
- 9 The project is the first phase of a long-term plan to reduce wastage to normal levels and improve the overall level of service to the community. One of the unexpected benefits from the project has been the identification and repair of many water network problems that had not previously been identified. As the pressures were reduced in some areas, problems were experienced by some residents that should not have occurred, due to missing or blocked water pipes. As these

problems have been identified and addressed, the water supply system is operating more efficiently and many residents now experience higher pressures and a more reliable supply. This is an additional and unexpected benefit.

Discussion

PPP has attracted a lot of attention in the international context. Changes and reallocations in the national budget underline the necessity of increased engagement of private funds. The different countries have different levels of experience and legislation, but the general tendency is towards the increased importance of PPP. Several factors such as public acceptance and strong partners are regarded as essential for success. In the near future, the ability of the administrations to create regional capacity for the implementation of PPP at a regional and local level will define the broad-scale success of PPPs. It becomes quite evident that PPP should become a mainstream option in most of the countries with a heavy public sector legacy. However PPPs are not a panacea. Central and regional public bodies must develop the abilities to assess a PPP concept, calculate risks and benefits and decide for the most viable solution.

Table 2: PPP Success and suitability factors (Kanakoudis et al., 2006)

Full Understanding/Acknowledgement of the Social Character of PPP	Delimitation of Competence Fields (for both Sectors)
Public / Community Acceptance	Quality & Product Standards Definition
Political Backing	Legislative Framework and Empowerment
Public Interest Observance	Maturity of Technology / Project Concept
Profit Assurance for the Private Sector	Guaranty of Meritocracy and Performance
Management Transfer from Public to Private Sector	Evaluation during the Contracting Procedures
Knowledge Transfer	Establishment of an Independent Authority for Conflict Resolution
Public Guarantees for Loans	Assistance in the PPP Drafting Phase

The basic requirements for a PPP project successful planning and implementation

The basic requirements for PPP's success are (Kanakoudis et al., 2005;2006;2007):

- 1 the formation of strong «partnerships»;
- 2 the public acceptance;
- 3 the management transfer from public to private sector;
- 4 and finally the guarantee of meritocracy and the performance evaluation during the contracting procedures.

The main contribution of the public sector in the achievement of PPP goals has to do with: a) the project planning; b) the economic terms of the partnership, c) the preparation of the legislative platform; and d) the political backing process. Additionally the public sector acts as the coordinator that ensures the social benefits of the project. The governments should not consider PPPs as «easy solutions» on difficult matters. A lot of efforts should be made to ensure a cooperation context that will lead to success.

Successful PPPs require that all partners and stakeholders promote sustainable development through the formulation and implementation of specific policy measures. These include strong political commitment from government to promote water supply and sanitation, sustained consistently over a long time period, is critically important to the success of national sector programmes. Government should formulate clear legislation and regulatory systems that will give guidance and confidence to all partners, especially to private operators working in the sector, to determine their own policies and plans and to protect their financial interests and property rights. Devolution of authority over water supply services and operational responsibilities from national to local governments and communities should be encouraged as an efficient means to improve the service standards and accountability. Local governments and communities need professional support from strong PPPs in order to implement their water supply programmes effectively. Qualified local, national and regional enterprises should be given the opportunity to compete for PPPs. Governments should consider involving small-scale providers, especially community-based organisations and private local SMEs, which hold a comparative advantage and can play a key role in reaching unserved groups of households in both rural and urban areas. In partnering with private sector operators, governments should select appropriate contractual arrangements that are compatible with their socioeconomic constraints and objectives and address the specific needs of poor consumers. PPP contracts should clearly define pro-poor arrangements through establishing adequate tariff systems and policies for service charges and make them affordable and equitable for low-income residents. When selected as options in the context of a higher-autonomy partnership, lease agreements, affermage contracts, and concessions should be used as efficient contract arrangements to improve responsiveness, faster innovation, and in the case of concessions, to attract private investment. Governments should ensure that tariff levels and structures benefit all consumers, including low-income ones, by selecting appropriate pricing systems, such as the increasing block tariff and uniform volumetric charge. When governments decide to provide full or partial subsidies, this should be restricted to providing one-time assistance for household connections and stand posts, especially in poor areas, so that consumption will remain equitable for all consumer categories. Government should provide direct subsidies when its funds are certain to be available for this purpose and ensure that subsidy mechanisms remain targeted and transparent.

Problems reported from PPPs case studies

The involvement of the private sector in providing water, sanitation and electricity has been controversial (Farlam, 2005). Afeikhena Jerome from the Johannesburg-based National Institute for Economic Policy (NIEP) says that "the results of water privatisation present a mixed picture with some improvements in the reliability and quality of services and population served, but instances of much higher water charges and bouts of public opposition leading to cancelled schemes" (Jerome, 2004). World Bank research shows several cases where more people received basic services following private participation in water and sanitation provision in developing countries (Harris, 2003).

A number of significant challenges have been raised wishing to conduct successful PPPs (Farlam, 2005). The complexity of such arrangements and the high costs involved should cause governments to take a careful

approach to PPPs. They should also recognise that PPPs pose many of the same problems inherent in procurement or privatisation and are not a panacea for development. The principles that underlie PPPs as affordability, cost effectiveness, value for money, transparency and risk management should form part of the way that they approach service delivery in general. Such partnerships are a means towards the goal of better service delivery and improved infrastructure (Farlam, 2005).

Conclusion

The present paper demonstrated three case studies (in Senegal, Ghana and South Africa) of water sector related PPP projects. Table 3 includes their main outcomes. In all cases the main goals (provide more water of better quality to more people, get a financially viable sector and provide tariffs to the poor that can be afforded) have been accomplished.

Table 3: Main outcomes from the PPP application in the case studies

Senegal	Ghana	South Africa
More water to more people	Growing coverage in rural areas	Savings in terms of money and water
Better financial health of the sector	CSWA established & functioning	
Social tariff	Paying exemption for the poor	

These case studies revealed the success factors for feasible PPP projects. Table 4 summarises the success factors for PPPs' successful implementation. In the cases of Senegal and Ghana the formed PPPs were large scale partnerships, whereas in the South African case the PPP was a small scale performance based project.

Table 4: Summary of the success factors implemented in the case studies' PPPs

	Senegal	Ghana	South Africa
Strong political commitment but not interference	√	√	√
Public acceptance	√	√	√
Legislation and regulatory systems	√	√	
Devolution of authority	√ *	√ *	√
Stakeholder involvement	√	√	√
Strong leadership	√	√	√
Operational responsibilities from national to local governments and communities		√	√
Government has to ensure that tariff levels benefit all consumers	√	√	
Governments provide full or partial subsidies, when needed	√	√	
Independent auditor			√
Type of contract		Affermage PPP	Performance Based

* Government maintained control over the assets

The future challenge is the effective promotion of PPPs in medium-scale projects that can be viable. In the past a lot of efforts have been made for the promotion of PPP in «big» projects. The challenge of tomorrow is the effective promotion of PPP in medium-scale projects, of questionable viability and at a regional or sub-regional level.

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