

**Public Private Partnerships
*and the Poor***

Series Editor: M. Sohail

Public Private Partnerships *and the Poor*

Case report 1: Karachi, Pakistan

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Section 1

Introduction and background

1.1 Concept of Public Private Partnership

A public private partnership is an institutional concept which was primarily introduced by international donor agencies as an alternative to straight public service provision. It exists in various forms and formats in different contexts depending upon the objectives of the project/programme, socio-economic conditions, and the institutional capacities. Public private partnership, in a conventional sense, can be defined as a contractual arrangement between an agency or unit of the public sector and a private organisation for a defined scope of services. There are several pre-conditions that can lead to the public private partnership as a choice for service delivery, particularly in the water and sanitation sector. One, it requires recognition at the macro scale for it to be useful in service delivery. Two, it is normally effective in contexts where free market practices have a reasonable background. Three, it requires an aware clientele that considers the provision of an urban service to be a chargeable product depending upon the nature of production. Four, it needs a clientele that is socially and economically stable enough to pay for the services. And five, it needs a capable private sector that has the capacity to efficiently provide and sustain the contracted part of the service to the identified clientele.

In addition, public private partnership has been applied in situations where conventional public sector modes of service delivery have lost efficiency and where efficiency in operational and financial terms is needed.

1.2 Application of Public Private Partnership in the form of a working example

Where the public private partnership alternative has been chosen rationally, it has produced positive results. In Brussels, a wastewater treatment plant was built through a Build-Own-Operate Transfer (BOOT) mechanism valued at US\$360 million. As Belgium is a developed country with advanced market-oriented practices in service delivery, the project has been moving forward smoothly. By contrast, in Bucharest, Romania, a water and sanitation service project to serve 2.3 million people was undertaken with a 25-year concession contract. There was considerable unrest over the issue of tariffs between the winning contractor and the government (for more details on other contexts see Table 1).

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Table 1.1. Europe

Location	Purpose of project	Relevant financing	Financing	Worth	Contract type	Additional details/ status
EUROPE						
Brussels Belgium	Construction of a WwTP on the northern edge of the Brussels region to serve a population of 1.1 M. Project also includes a 7km pipeline to link the city's main collectors to the new WwTP.	Four bidders: Bouygues, Vivendi, SIdE, BSUB (Besix + Seghers + United Utilities + Bechtel)	Construction financed by winning developer. Fee payable on completion of build phase.	BFr-10-15Bn (\$240-360M).	BOOT. 4-5 year construction period followed by 20-year operating concession. Ownership then reverts back to the Brussels Region.	Winning bidder announced in October.
Bucharest Romania	Provision of water and sewerage services to 2.3M people.	Winning bidder: Apa Noa Bucuresti SA (Vivendi)	Initial investment likely to be financed out of equity.	\$1Bn over contract duration	25-year concession	Some concerns voiced over tariff structure. First rebating period after Year 5 resulted in an extremely competitive winning tariff, lowering the long-term average to an unsustainable level. Critics claim Vivendi will be able to negotiate to attain an unfair increase in tariffs.
Cumhuriyet Turkey	Supply of potable water to Istanbul municipal area until 2040.	Bidders include Degremont + Mapa, OTV/EMIT, Ansaldo Aqua+Yuksel, Atac, Austrian Energy+Nissh, Iwai+Tekser, Hyundai Heavy Industries, Lurgi Bamag, Earth Tech + Kiska	IJIC soft loan (interest 2.5% over 25 years)	\$911M total credit for the project	Fixed price turnkey construction on FIDIC terms	Client is Dsi (Department of State Hydraulics). Consultants are a consortium led by Nippon Koei, including Gibb. Tenders closed.
Poznan Poland	Provision of water and wastewater services to a 650,000 population	Consultancy team led by Paribas (includes WRc)	Debt and equity (no specific constraints on ratio). Assured cash flow since the city has approved some tariff increases. Tariffs currently in line with Polish average.	Likely Plz500M (\$115M) over 20 years.	Long-term concession	Would be the first water concession in Poland. Close to commencing bidding process.

SECTION 1: INTRODUCTION AND BACKGROUND

Table 1.1. Europe

Tallinn Estonia	Privatisation of AS Tallinna Vesi	AS Supreme Securities and Severn Trent Water International are acting as advisors to the city of Tallinn.	Private operator can have financial partners but must hold at least one-third of the votes in any consortium.	30 million new shares+28 million of the city's shares in Tallinna Vesi on offer at a global starting price of \$35M (\$0.60/share).	Sale of majority stake (50.4%) in the company	The Board of Municipal Property has published an invitation for companies wishing to participate in the tender process. This will involve a pre-qualification stage for which applications must be presented by 17 July. The deadline for submission of final offers has been fixed at 27 October.
UK Ministry of Defence	Project Aquatrine. Public Private Partnership to operate, maintain, finance and upgrade the provision of water and sewerage services to 3000 MoD sites. Three regional packages: A (SW & Wales), B (Scotland), C (SE, Midlands & North)	11 pre-qualified for package A	Developer to arrange financing	Anticipated 25-year CAPEX; (a) £500M (\$750M), (b) over £100M (\$151M), (c) £500M (\$750M)	25-year PFI deals	MoD has issued invitations for outline proposals to seven of the 11 companies which pre-qualified for package A. These are in use in August. No more than four will then be issued with an invitation to negotiate. Contract award due early 2003. Packages B&C are due to follow a similar process which will be initiated at the end of the year.

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Table 1.2. MENA

Location	Purpose of project	Relevant financing	Financing	Worth	Contract type	Additional details/ status
MENA						
Ashkelon Israel	Supply 150,000m ³ /d of desalinated water	N/a	Mostly private with some public involvement	\$125-150M	BOT of unspecified length	An international tender was scheduled to be issued in September. It will be issued in September. It will now be published soon following the direct intervention of the prime minister, Ehud Barak. The issue has now become a debate between Mekorot and the government. Mekorot is aiming to supervise construction and operation by the winning bidder in the framework of a turnkey project. The government prefers a straight BOT contract.
Awali-Beirut conveyor, Lebanon	Construction of a 50km pipeline and tunnel network, WTP and service reservoirs to provide Beirut with 250,000m ³ /d of water.	Seven international consortia pre-qualified.	Developer financing (debt and equity) World Bank partial risk guarantee to commercial lenders	\$200M	28-year BOT (3- year construction, 25-year operate phase)	Pre-qualifiers were to be invited to purchase tender documentation in July. The Council for Development and Reconstruction now says this process will be delayed for at least two months until September.

SECTION 1: INTRODUCTION AND BACKGROUND

Table 1.2. MENA

Hidd Bahrain	Capacity expansion of the Hidd power and desalination complex	ESB International (Ireland) advising the Ministry of Electricity and Water (NEW)	N/a	\$300M	Privatisation cancelled. Bahrain's Ministry of Finance had planned to expand the Hidd plant via a BOT.	ESB directed to recommend a shortlist of companies to undertake the scheme by month end. Tender documents for the addition of 630MW of capacity will be issued by the end of the third quarter. Hidd comprises four 7.5MGD desalination units. NEW may opt to increase Hidd's desalination capacity at a later date.
Shuweihat, UAE	Independent water and power project (IWPP). 1500MW combined plant with 100mgd desalination capacity	Ten international pre-qualifiers	N/a	N/a	Successful bidder to take a 10% stake in a new utility company which will implement the scheme on a BOO basis	Largest IWPP in Abu Dhabi's privatisation programme. Developers have been given until 25 September to submit their proposals. The Abu Dhabi Water and Electricity Authority (ADWEA) is expected to choose a developer by early next year and the project is scheduled for commissioning in May 2004.

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Table 1.3. Africa

Location	Purpose of project	Relevant financing	Financing	Worth	Contract type	Additional details/ status
AFRICA						
Cape Town, South Africa/ Unicity	Create a ring-fenced utility for water supply and wastewater treatment when local government is restructured later this year.	Price Waterhouse Coopers retained as advisers to Cape Metropolitan Council (CMC).	Likely to be municipally owned, though foreign partner could be invited to take equality. Some management contracts could be let.	Current CAPEX requirements: Water R100M/yr (\$15M/yr). Substantial investment needed to extend and improve WwTPs.	Utility would be contracted to supply bulk water to new Unicity council or contracted to service clients direct.	Depends on outcome of November local government elections. CMC will submit its recommendations to Unicom at the end of August. Unicom is the interim body overseeing the combination of the seven local government administrations into one Unicity council.
Cape Town, South Africa/ Skuifraam Dam	Augment water supplies to the greater Cape Town area (five-year additional supply)	Cape Metropolitan Council	DWAF financing unlikely. Department policy is that budgetary allocations should be reserved for social projects that are not necessarily commercially viable.	R86-M (\$125 M)	Possible BOT	If a BOT approach is followed, then funding and construction will be contracted out through a competitive bid process to a single concessionaire. Skuifraam was on hold until recently because of environmental concerns but confirmation to proceed is now expected within weeks.
Durban South Africa	Expand and rehabilitate existing water and sewerage systems	A team of Halcrow and Price Waterhouse-Coopers advising Durban Metro Water Services (DMWS)	N/a	R9Bn (\$1.28Bn)	25-year concession or publicly quoted utility company	DMWS to decide on preferred option by month end.

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Table 1.3. Africa

Ghana	Restructuring of Ghana Water Company (GWC) into two business units (A&B)	Stone & Webster retained as consultants for both units. Four pre-qualified for Unit B: Vivendi, Saur, Northumbrian, IWL	World Bank/ other donors + private investment	\$600-900M	Unit. A: 25-year lease (includes construction and operation of a WTP in the Accra-Tema metropolitan area + some renewal work) Unit B: 10-year lease to operate and maintain GWC's urban distribution networks	Unit A: pre-qualifications close 1 September. Tender documents are being prepared for both units by the government and the Water Sector Restructuring Secretariat with the aim of awarding contracts at the same time, possibly early next year.
Kenya	Improve the management of urban water supplies and the provision of sewerage services.	IFC in preliminary discussions with National Water and Sewerage Corporation, Ministry of Finance, Ministry of Environment and Natural Resources + Ministry of Local Government	N/a	N/a	Long-term concessions and medium-term leases for Nairobi and the coastal region	National Water Policy calls for the separation of ownership and operation in water undertakings + limited private arrangements. Ongoing review of PSP options
Lagos, Nigeria	Upgrade and modernise water and wastewater assets	IFC retained by state government of Lagos + Arthur Andersen (accounting), Gide Loyrette Nouel (legal), Deloitte & Touche (regulatory) and a consortium of Management Systems, Consult 4/ Ortech and Stoveland Consult (technical).	Strong public sector financing likely (World Bank, IBRD)	\$1Bn	Different approaches likely for different parts of the city. These range from a long-term concession to subsidised concessions and some management contracts.	IFC to submit phase I work by month end or early August.

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Table 1.4. Asia

Location	Purpose of project	Relevant financing	Financing	Worth	Contract type	Additional details/ status
ASIA						
Beijing No. 10 China	500,000m ³ /d WTP	Bids received from Vivendi/ Marubeni, SLdE/New World In structure, Thames Water/ Bovis Mitsui, Anglian Water/ Mitsubishi + Impregilo	N/a	\$250M CAPEX	23-year BOT (3-year build, 20-year operate)	Preferred bidder due soon.
Karachi Pakistan	Provision of water supply and sewerage services	Karachi Water and Sewerage Board	ADB (sewerage) and WB (water) loans to support PSP	N/a	Long-term concession	Process stalled. Loans cancelled because no PSP action taken. Major objections from NGOs and consumer groups
Manila Philippines/ East Zone	Provision of water and sewerage services to 4.6M people in the city's east zone	Manila Water Company (Ayala/ International Water)	Five-year \$55M loan from four local banks. Two-year draw down and three-year repayment period. MWC has started talks with IFC, ADB, and other financial institutions to increase this loan to \$100M in 2002	\$1.7Bn over the duration of the contract	25-year concession	MWC is in the process of revising its financial model to start negotiations for the second phase loan. The loan will be used for CAPEX and concession obligations beyond 2001. NRW currently assessed as 44%.
Manila West/West Zone	Provision of water and sewerage services to 7.4M people in the city's west zone	Maynilad Water Services (SLdE/ Benpres Holdings)	ADB/EIB loans for initial capital investment programme (2000-2002) + \$135M of equity provided by Benpres, SLdE and Lyonnaise Asia Water	\$350M (2000-02), \$4.5Bn (1998-2021)	25-year concession	Maynilad estimated NRW losses of 63% of daily output in April. Water consumption for April fell slightly to 21.47Mm ³ though Maynilad's revenues were up at \$3.07M. Figures for May were not available at press time.

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Table 1.4. Asia

Singapore	Supply the Public Utilities Board (PUB) with 20mgd of desalinated water by 2005	PUB	N/a	N/a	BOO(T). Duration to be decided	Tenders will be called soon for consultancy services for the preparation of bid documents. Tenders for the scheme will be called by the middle of next year
Thailand	Develop PSP options for the Metropolitan Waterworks Authority (MWA) and the Provincial Waterworks Authority (PWA)	Financial and regulatory advisors short-listed to advise the PWA.	Private sector	Estimated \$1Bn for the PWA	PWA considering dividing the country into several regions and awarding concession contracts. MWA considering corporate model for metro Bangkok, possibly a sale of stock with the government as the major shareholder.	Ongoing World Bank studies (to December) to address water reform, tariffs, regulation and PSP options. Some contracting out of UFW reduction (Thames Water).

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Table 1.5. North America

Location	Purpose of project	Relevant financing	Financing	Worth	Contract type	Additional details/ status
NORTH AMERICA						
Atlanta Georgia/ water	Two WTPs and a 2400-mile network of distribution mains.	United Water Services Atlanta (SLdE/United Water).	Capital programme managed by the city.	Fixed annual fee of \$21.4M payable in monthly installments. Incentive and/or penalty payments for exceeding contract water quality parameters during the year.	20 year O&M.	A consultant team including Brown and Caldwell and Price Water House Coopers has completed its performance review of the contract. It found UWSA's overall performance acceptable with the strongest performance in water production operations, employee matters and capital projects. As a result of privatizing the water system, the city will be achieving cost savings of about \$20M/yr.
Atlanta Georgia/ wastewater	Operate and maintain parts of the city's wastewater system (WwTPs, sludge management/ disposal)	Brown and Caldwell, Price Water house Coopers advising the city	Municipal tax-exempt finance or developer capital if a turnkey approach is selected	N/a	Long term O&M or DBO	Advisers in ongoing discussions with the city to develop conceptual issues. The city plans to issue combined RFP/ RFQ documents over the summer. The procurement process will be complete in early 2001 with contract award scheduled for the spring.

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Table 1.5. North America

El Paso Texas	80-120mgd surface water treatment plant, planned	N/a	City finance	\$100M	Design build, city operation	This would be El Paso's third surface WTP and could approach 300mgd if other regional systems participate in the project. Procurement procedure is unclear since the city is in the process of negotiating water rights for the plant.
Houston, Texas	90-100mgd Northeast surface water treatment plant + transmission lines	Six requests for submittal: US Filter, Azurix, Montgomery Watson, Bewater, Severn Trent, Bear Stearns	Straight developer financing or combination of tax-free municipal bonds and private finance	\$175M capital	Proposed DBO	Still to be decided between PPP arrangements and traditional design-bid-build approach. Final decision expected soon. Plant will be under contract by year-end.
San Ysidro, California	25mgd advanced primary South Bay International WwTP and sea outfall	No proposals. US Filter is incumbent operator	N/a	N/a	One-year O&M contract with four one-year options to extend the term	RFP issued 19 May, proposals were due 28 June. International Boundary and Water Commission has issued an amendment extending the date for receipt of proposals to 14 July.
Seattle, Washington/ Cedar River	275mgd ozone treatment plant, raw water intake and pumping station	Three teams short-listed: Azurix/CDM, Black and Veatch, CH2M Hill/Mortenson/ OMI	City financing through tax- exempt revenue bonds	\$106M capital + npv \$70M for 25 years of O&M	DBO. Initial 15- year term with two five-year extensions at Seattle's discretion	Proposals due 9 August.

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Table 1.6. Latin America

Location	Purpose of project	Relevant financing	Financing	Worth	Contract type	Additional details/ status
LATIN AMERICA						
Agues Cordillera (Enersis), Chile	Supply water and sewerage services to 88,000 clients in Santiago's eastern Vitacura, Las Condes and Lo Barnechea suburbs	Empresa Metropolitana de Obras Sanitarias (EMOS) made a \$193M winning bid. EMOS outbid Bewater which offered \$179M.	Mostly equity	N/a	Auction of 100% stake	Awaiting ratification by Chile's antitrust commission, which must give its approval in the next few weeks for the contract to be signed.
Corposana, Paraguay	Privatisation of the national water utility, Corposana	Salomon Smith Barney. Morgan Stanley + NM Rothschild prequalified to prepare bidding rules	N/a	The government has not yet documented the financial status of Corposana but sources estimate the company's debt to be \$500M. Investment of private capital/ long term concession	Investment of private capital/ long term concession	Winning adviser will have six to eight months to prepare a process that would transfer Corposana into private hands within the next 14 months.
Cosama, Brazil	Upgrade and operate the Manaus city water utility, a subsidiary of Cosama	SLdE	Says its operation is being supported by the Brazilian government through the development bank – Banco Nacional de Desenvolvimento – which would participate in project funding	Minimum sale price \$100M; + \$290M over the duration of the concession	Concession auction of 90% stake (30-year contract duration)	SLdE won the concession on 29 June with a bid of R\$193M (US\$108M). This was just 5% above the minimum bid price. Brazil's Construtora Andrade Gutierrez was the only other participant in the auction.
Essbio, Chile	Obtain controlling interest in Chile's Region VIII water utility, Essbio. Construction of two WwTPs in Concepcion and Los Angeles	Bidding guidelines purchased by Enersis, Andes Sur (Thames/ EDP), Vivendi, Inversiones Aguas de Chile, Bewater, Anglian, Inversiones Thames Water + IWL	Strategic partner to finance development plans	\$150M over 15 years	42% interest at auction + 10% if shares offered on local stock market do not sell	Sale of bidding guidelines closed 7 June. Chile's state business administrator will accept offers in late September. Transfer of control by year-end. Process is proceeding despite unofficial plebiscite.

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Table 1.6. Latin America

Essam Chile	Provision of water and sewerage services in Chile's Region VI	Chilean government accepting offers from investment banks to prepare a study on whether Essam requires private capital.	N/a	\$80M	N/a	Study expected to take three to four months to complete.
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1.3 Relevance and usefulness with reference to Karachi

Karachi was the capital of Pakistan until 1959 when the seat of government was transferred to Islamabad. Since that time the population has multiplied and continues to grow at about 5 per cent per year, somewhat higher than the 4.5 per cent national urban average. The city remains the capital of Sindh Province and houses about 29 per cent of the entire provincial population in one million dwellings covering a metropolitan area of over 3,530km².

The economy of Karachi is based ultimately on trade and industry. There are over 2000 industrial units in the organized sector producing a wide range of goods such as textiles, paper and cardboard, leather, glass, rubber and plastics, garments, pharmaceuticals, detergents, food and beverage, etc. There are also concentrations of units in heavy industries such as shipbuilding, ship breaking and repairs, steel making, vehicle assembly, electrical goods, oil refinery and machine tools. The city is also a centre of learning, with a number of universities, more than five polytechnics, over fifty colleges, and more than 3,300 primary, middle, and high schools. Healthcare is delivered by some 10 major hospitals and a large numbers of clinics and dispensaries. Karachi continues to be the country's main financial centre (KWSB, 2000).

The city is built on flat-topped parallel hills devoid of vegetation, with wide intervening plains between the two dry riverbeds of the Malir and Lyari rivers. These rivers only flow for short periods of the year and act year round as recipients for the city's wastewater.

The water supply and sanitation service in Karachi has evolved in proportion to the need. This need was directly governed by the rising population and intensifying trade, commerce, and industrial activities. Water supply to the city depends on sources which are as far away as 150km. There is a massive conveyance factor associated with the supply. Similarly, although the city has three sewerage treatment plants, a large amount of sewage passes into the sea untreated. The Karachi Water and Sewerage Board (KWSB), which is the agency that provides water and sanitation service, declines in performance for several reasons. One reason is the non-payment of dues in the domestic sector which hampers operations. People are reluctant to pay because they do not get the service. Some believe that KWSB should provide water for free, even though they pay for water from private vendors.

Public private partnership, in such a situation, can only be a useful option if it focuses on raising the level of functional and financial efficiency.

Section 2

Private Sector Participation in KWSB

2.1 Administrative and legal status

The supply and distribution of water in Karachi has been undertaken by a variety of agencies in the past. The Karachi Joint Water Board, constituted in 1953, was the first body tasked to execute the first major expansion of Karachi's water supply system from the Indus river source. Project execution was later on entrusted to the Karachi Development Authority (KDA) on its establishment in 1957. Distribution and retailing of treated water remained the responsibility of the Karachi Metropolitan Corporation (KMC), some 22 other independent agencies, and bulk users.

Over the years, the division of responsibility for production and distribution proved increasingly difficult to integrate and manage. It was subsequently decided to form a new authority to operate the entire water supply system. Accordingly, in 1981, the Karachi Water Management Board (KWMB) was created to redress the situation. KWMB was assigned responsibility for water distribution throughout the metropolitan area and was given enhanced powers of cost recovery.

KWMB operations were never a viable proposition as it did not have a revenue base of its own and relied on KMC to collect the water rates. During its existence some improvements were nevertheless made, particularly a change of tariff structure and doubling of tariffs. All this while, responsibility for maintenance of sewerage remained with the Karachi Metropolitan Corporation.

Appreciating the need for a unified institution to handle water supply and sewerage services, as well as to draw assistance from international lending agencies, the government enacted the Sindh Local Government (amendment) Ordinance of February 1983 leading to the creation, within KMC, of the Karachi Water and Sewerage Board.

In 1996 a new Act called the Karachi Water and Sewerage Board Act 1996 was enforced which separated KWSB from KMC and gave it an annual budget that had to be approved by the government. It also provided the legal framework, specification of function, financial guidelines, and delegation of powers.

In 1994-95 a private sector participation strategy (PSP) was introduced. A World Bank mission on water and sanitation visited Karachi to hold discussions with the Chief Minister (CM) Sindh and offered support to the provincial government to explore the possibility of PSP as a solution to the worsening situation of water and sanitation. At the

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invitation of the Sindh government, a follow-up World Bank mission in January 1995 presented to the then CM a blueprint for radical reform of Karachi's water and sanitation sector with PSP as the focal theme. KWSB was advised of these deliberations after a policy decision had been taken by the provincial government.

The government of Sindh described the following three considerations as being of crucial importance: (i) the entire PSP process would be totally transparent, (ii) the best available expertise would be acquired, and (iii) there would be close association with the World Bank in order to benefit from the Bank's experience of handling privatisation projects in the water sector in different countries.

The World Bank suggested a shortlist of eight leading international organisations possessing vast experience in water sector privatisation for consideration of the Sindh government.

At the suggestion of the World Bank, the Sindh CM and senior officials of the government and KWSB attended a PSP seminar in Paris in June 1995 to demonstrate the commitment of the government to the idea of PSP. On his return, the CM constituted a high-powered Steering Committee to oversee the PSP consultancy and ensure that the initiative did not fall prey to bureaucratic red tape. This Steering Committee comprises (i) Additional Chief Secretary, Planning and Development, GoS (ii) Secretary, Local Government, GoS (iii) Director General, EXPACO (iv) Administrator KMC/Chairman, KWSB and (v) Managing Director, KWSB.

Terms of Reference (ToR) for engaging an international bank were initially framed by the World Bank. The ToR required the consultants to:

- Develop a PSP Strategy and submit to GoS a design of the preferred approach for the Karachi water supply and sewerage sector involving the private sector in renewal, improvement, expansion, operations, and maintenance.
- Conduct a detailed technical and financial feasibility study of the scenarios considered, assess the impact of introducing the PSP approach on key criteria, and present for consideration by GoS a project finance strategy for mobilising the investments needed in water and sewerage sectors.
- Prepare pre-qualification and bidding documents.
- Assist GoS in the bidding process and draft the final contract documents.

Following clearance of the ToR by the Steering Committee, the eight organisations were invited to submit detailed technical and financial proposals. The proposals were evaluated by the Steering Committee, with specialist advice provided by the World Bank, and were subsequently presented to the GoS for clearance.

The CM constituted a high-powered Ministerial Committee to review the entire case and present its findings. The Committee reconfirmed the decision of the Steering Committee to award the PSP consultancy to Banque Paribas (a firm with sound experience in water and sanitation sector) with the recommended ToR.

SECTION 2: PRIVATE SECTOR PARTICIPATION IN KWSB

As the executing agency, KWSB has been coordinating the PSP consultancy project carried out by Banque Paribas/Halcrow. The consultant's report on Phase-I was submitted and approved with certain modifications.

The agreed procedure is divided into three phases. The first phase covers the development of the most appropriate PSP strategy. This phase is now completed. The second phase covers the preparatory work for PSP. This phase is also completed and a detailed feasibility report has been submitted to the GoS. The third phase, which is underway, covers the implementation of the recommended and agreed programme.¹

The government has been advocating and supporting privatisation from different forums. The ministers in their speeches to the Sindh Assembly repeatedly resolved to implement the PSP as a top priority task. Similarly, the management of KWSB was also vocal about the issue through press briefings and seminars. It also published promotional literature in Urdu and English.

In order to publicise and develop a broad-based consensus on the need for PSP in KWSB, an intensive media campaign was launched. This included meetings, debates, seminars, workshops and question-answer sessions on the PSP with a cross-section of people and organisations. A series of articles and letters to the editors in leading newspapers were also published. In addition, press notes were issued, journalists briefed, and extensive dialogue held with NGOs and trade unions. Brochures were printed and widely circulated and televised, debates held, all designed to reach as wide a spectrum of the citizens of Karachi as possible. Individual citizens, along with business and advocacy groups, participated in wide-ranging debates on the subject.

As a result of a well-defined media campaign, print and electronic media gave good coverage to various developments, covering almost all aspects of PSP in KWSB. During the public awareness campaign, efforts were made to ensure that accurate and impartial information is made available on the on-going process with regard to PSP strategies as proposed by the consultants and approved by the GoS.

The KWSB thinks that the PSP has the capacity to generate an efficient and equitable water supply and sanitation system that will be available to all cross sections of society. According to the government the PSP aims to improve the water supply and sanitation for all the residents of the city without reservation.² From the range of stakeholders that are associated with water and sanitation, the apparent beneficiaries will be all but the urban poor who reside in unplanned areas without any legal title or regularised status.

According to reports, Phases I and II have been completed. The draft feasibility study has been prepared and submitted by the consultants to KWSB. The bidding and pre-qualification documents have also been prepared. The bidding process has started. However, the current political situation in the province has slowed down the procedural steps.³ Also, certain quarters have approached the Sindh High Court (SHC) against the PSP. Trade union, ex-officers of KWSB, and citizens' groups have been active in this

1. For details on the subject, see the Feasibility Study of PSP in KWSB, 1998 by Banque Paribas and Sir William Halcrow and Partners.

2. The assumption was viewed by the government agencies. The actual response of people is entirely different as found during this study.

3. For PSP in delivery of services. See Sindh Fiscal Resource Study, by Arshad Zaman Associates (Pvt) Ltd., prepared for the World Bank, 1998.

regard. The SHC has issued orders to temporarily freeze the whole process. While the process has been temporarily frozen by the Sindh High Court, it was found that the Government of Sindh has recently begun exploring the possibilities of the privatisation of KWSB. The Finance Minister of Sindh, in several statements, expressed the keen interest of his government to look into the possibilities of exploring the issues of privatisation afresh. This aspect raised many concerns among the pertinent stakeholders. To discuss these concerns, a city workshop was organised by the Research Team on 'Privatisation of KWSB' comprising research scholars of NED University, Karachi and Loughborough University, UK to discuss these matters at length. The key points discussed in the workshop are mentioned below:

2.2 Viewpoint of Stakeholders

- One participant asked how better service delivery could be ensured through privatisation.
- Another issue raised was that there are more than several hundred *katchi abadis* in the city of Karachi from which 326 settlements are being surveyed by the OPP where people have laid their own water and sewerage lines and spent around Rs.450 million on these services. The government also invested around the same amount on these services. In this way around Rs.900 million have already been spent on water and sanitation. But the government has not recognised the people's investments and their efforts, and these efforts and investments of people are not part of any planning process. It is not clear how the people's investment will be accounted for in any planning and development move, even those related to privatisation.
- A participant referred to 'population increase as the root cause of water problem because 35 gallons of water is required per person and in this way the minimum requirement of water may be 5 billion gallons. Whereas 25 per cent of government water is supplied to industries and at present around 750 million gallons of water is provided by the private sector in Karachi'.
- One participant was of the view that people totally rejected the PSP strategy. Some communities were also strictly against the privatisation and high tariffs. Some communities have very strong objections on this issue and they are not willing to pay 300 per cent tariff increases when there is no guarantee of customer satisfaction.
- It was also pointed out that one should look at the reasons why the independent committee rejected privatisation. There were two major reasons. The World Bank backed out for the greater good of citizens and said it was not viable. There are also some individuals who fielded legal cases against it and the case of CBA is still proceeding.
- Another participant was of the view that the foreign companies were only interested in maximising their profits. It was estimated that the private operator will earn somewhere around Rs.17.5 billion on a net investment of Rs.2 billion.
- One participant emphasised the need to control leakages in the system. Earlier there was a joint water board then bulk water supply was given to KDA. At first there was only the water board then it became a water and sewerage board, and five DMCs were created. In the present system there is 40 per cent leakage.
- It was commented that there are three major issues in this regard, (i) the efforts of privatisation and what is the major reason behind it? Its basically the agreement of IMF

SECTION 2: PRIVATE SECTOR PARTICIPATION IN KWSB

and World Bank. That's why it has to be given to foreign operators. (ii) What kind of institutional arrangement is required in the new setup, i.e. the change which is taking place. (iii) The citizens must know what is the basic reason and how the process is taking place.

- It was also commented about the water source available and its improvement. There is no documentation available in this regard. The government do not have physical/actual documentation. Supply-side relationships are also not clear. Therefore a basic understanding is a must.
- A participant from Lyari commented that 'we are poor people we cannot buy the water'. Secondly we should consult those 178 city councils which are going to emerge very soon. We should ask them to decide this issue first. This is our water and we do not want any person to take up this responsibility. This is our water and a foreigner comes and sells us our own water to get/earn money from us and go. Is this a desirable solution?
- Another participant commented that if there is a problem it is our own. We should decide about it. We should let the government know that these are our own weaknesses and therefore internal reorganisation is required. We should put privatisation aside and reorganise ourselves.
- Another participant commented that the important thing in the present condition is that we do not know about our problems, assets, and liabilities. There should be a programme to understand the overall scenario and only then we should take the step of privatisation. We should not give our assets to foreigners and we should sell it locally. The political government/elected people are also there to support these foreigners. We should know who is behind these political people?

Finally a conclusion was drawn in the workshop. Privatisation is too early. We need information first. We must know. Is the water a commodity or basic human right? A debate on this issue is also going on in civil society. Therefore we still have to analyse what is the best option available to us today.

In addition, a detailed study has been carried out to document and analyse the viewpoints of the various stakeholders on privatisation (Ahmed and Sohail, 2000). A summary of the viewpoints is presented herewith:

- The KWSB staff were largely against PSP. They were of the view that certain administrative changes and stringent measures of revenue recovery could improve the water supply and sanitation service.
- Water traders pointed to the fact that poor people are already paying a colossal amount of money for very poor service.
- While builders and developers generally favoured privatisation, they mentioned that the objective of privatisation should be to improve the level of service.
- The local politicians were averse to the idea of privatisation. They were of the view that unemployment will increase considerably if privatisation is undertaken.
- The consultants considered privatisation as a means to generate private monopolies. They did not consider PSP as a user-friendly choice for the poor.
- The concerned citizen groups had a mixed opinion. A group considered privatisation as a viable option since the present system did not provide enough protection to the

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paying citizens. Another section cited its reservation since the privatisation would end public control and give rise to unemployment.

- The city administrators also rejected the idea of privatisation on the same grounds.
- Residents of both planned and unplanned areas were against privatisation.

Section 3

Examples of partnerships and potential sectors

In the context of Karachi, two vital examples are hereby presented, the *awami* tanks in Orangi Town and bulk water consumers of KWSB. The *awami* tanks are an example of an existing public private partnership under an informal contractual means. Bulk water supply is a segment of water supply service of KWSB where the customers are willing to pay more for a better quality service.

3.1 Awami tanks in Orangi Town

Orangi Township is situated in the Orangi hills in western Karachi. It is the city's largest *katchi abadi* or 'squatter' settlement and covers an area of more than 8,000 acres. Its population of about 900,000 live in 94,122 houses which they have constructed themselves with help from the informal sector. For the most part the township was created by land-grabbers and middlemen through the illegal occupation and subdivision of state land. The few health and education facilities in the settlement are provided by the informal sector and are generally of poor quality. Piped water has been available for most of the settlement since 1984. Before that it was provided by the Karachi Metropolitan Corporation (KMC) and the private sector through tankers.

The vast majority of Orangi residents are working class. They are poor but not destitute. Average earning per household in 1989 was about Rs.1,650 (US\$41.50) per month against an average Karachi household income of RS.2,100 (US\$45.25).

3.1.1 Situation of water supply in Orangi previously and now

Although the Orangi Township was planned and started developing in 1965, the piped water supply was only provided in 1984. Geographically, Orangi lies in District West which was linked to the Hub River source. The Hub River, which is a rain fed stream, has been used as a water supply source since 1982, primarily for the areas of District West. The project was completed in three phases and was finally completed in 1995. During this period the supply was largely adequate and proved a major cause of the rapid expansion of the settlements in Orangi. But during the poor rainfall of the past three years the water level in the Hub dropped dramatically and now is virtually nil. At present, the areas in District West in general and Orangi in particular are severally hit by water shortage. While there are no exact estimates available the water need of Orangi is about 60mgd. Hub provided 100mgd, which used to fill a large part of the water supply need of the area. Two measures have been taken by the KWSB and city administration to tackle the shortages: supply water through tankers and up-grade or modify the pumping facilities of the Indus source. The tanker service has been linked up to various formats of water provision, and

there have been improvements. Improvements include upgrading the North-East Karachi pump house to increase the pumping capacity from 25mgd to 50mgd, constructing a 25mgd pump house at Khawaja Ajmer Nagri (of direct benefit to Orangi), inter connection of 48" and 36" diameter pipes (to link up District West with Indus source network), installation of new valves, sinking of 12 tubewells in Orangi, Baldia, Manghopir, and Surjani Town, and the construction of 50 water storage tanks of 10,000 gallons each in Orangi and Baldia (although this corresponds to some of the *awami* tanks built in Orangi and Baldia, many are yet to be built).

3.1.2 *Awami* tanks – review and analysis

Some years back, new pipes were laid in Orangi Town. The system collapsed in only a few months, however, so there was absolutely no source of water to these areas. At this point, local people thought about the idea of providing water through *awami* tanks. In some places the government surveyed the areas/locations and built *awami* tanks. People also built *awami* tanks on a self-help basis from where the water was distributed in a uniform fashion.

A few *awami* tanks exist in Gulshan-e-Bihar. Most of the residents of Yaqoobabad, Khalid bin Waleed Colony, and Rais Amrohvi Colony obtain their water from these tanks, which are of different sizes and volumes. Water is supplied totally free. Initially private tankers were commissioned to supply water to *awami* tanks. They charged Rs.200-250 per trip. It was found that these tankers used to obtain the water from the hydrants for free. Karachi Water and Sewerage Board (KWSB) could not run this system successfully. Over time the water supply began to fall. It became so scarce that water riots were about to start. Social workers tried to deal with the situation by lobbying the concerned departments, and finally the issue was handed over to the Pakistan Rangers.⁴

The Pakistan Rangers surveyed the water-deficient areas and then started providing water through their own tankers. Each tanker contained 1,200 gallons, or 200-250 canisters. The water was then supplied according to a set timetable. The system is still working.

A problem with this system of supply is that people who have fewer vessels get less water. This often leads to managerial problems. Residents devised an alternative method, whereby a large tank was constructed at the top of a hill. An open pond was constructed, linked by two cement pipes. This is an expensive method, however, and the pressure often falls.

Some people in the area built a tank at a local mosque. For most residents these are temporary solutions. Sometimes a donkey cart also supplies water to the area. It charges Rs.60 for 15-20 gallons approximately. It gets water from the leak in the main pipeline. The water is very polluted and not fit for drinking.

Several people were interviewed in Orangi Town about the *awami* tanks. These interviews were done in February – June 2000 in the following areas:

- Gulshan-e-Bihar
- Gulshan-e-Zia

4. Pakistan Rangers are the para military regiments that are delegated the task of maintenance of law and order and to support the civil administration for the purpose. They also engage in developmental works in specific occasions.

SECTION 3: EXAMPLES OF PARTNERSHIPS AND POTENTIAL SECTORS

- Ghaziabad
- Yaqoobabad
- Mansoor Nagar

The following views, opinions, and observations were recorded:

- Underground water pipes have been laid in most areas by different government departments/ agencies. With a few exceptions, water never flowed through these pipes.
- In some areas of Gulshan-e-Bihar and Ghaziabad, the water supply is released for 10 to 15 minutes each day. The water pressure is extremely low, however, and only reaches the low-lying areas.
- Water from the pipelines is contaminated and is not fit for drinking.
- The pipelines have been stolen and/or vandalised in some areas. According to common perception, this is done by the staff of contractors or members of a local political group.
- In most of the areas there is no piped water supply. *Awami* tanks are the only way to get any water.
- Usually water is supplied to the *awami* tanks by the Rangers using their own tankers. This has made water availability relatively easy.
- *Awami* tanks are not all supplied the same; some get water twice a week, others once a week, and still others only once a fortnight.
- In some cases, one tanker load of water is divided between two or three *awami* tanks.
- In some cases, the people have to go to the Rangers' post themselves. Often they have to wait for four or six hours. Usually the water is supplied during the night.
- It is feared that when the Rangers are recalled, the existing water supply system through the *awami* tanks will be directly affected.
- In the past, residents could buy tankers of water. In peak summers, they could cost as much as Rs.1000 per tanker. Even today, the private tankers are selling water for Rs.300 to 400. The water sold by these tankers is from boreholes and is highly contaminated and not fit for drinking. People do still drink it in dire emergencies though.
- The Rangers are supplying the water free of charge. Most people who have an *awami* tank are happy with the supply.
- During the daytime, no tanker was observed filling the *awami* tanks, nor the people were found distributing the water through *awami* tanks. However people often came with their vessels and filled them up. Water was retrieved manually using a rope and pail. Only one tank had a tap. Usually the *awami* tanks were full, which shows that they are being supplied regularly.
- The only government-built water tank was found in Ghaziabad. People have even stolen the tap heads. Most tanks have been cooperatively built by the people themselves. Such tanks are constructed close to the 'building materials manufacturing yards' (*thalla*).

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- There is no specific location for *awami* tanks. In some cases people provided land from their own plots, and tanks are also constructed in the mosques.
- Water is not sold from *awami* tanks under any circumstances.
- *Awami* tanks are different sizes, but most are medium-sized and capable of providing water to two or three lanes of houses.
- People whose houses are far from the *awami* tanks have many complaints. Their womenfolk, most of whom observe purdah, cannot fetch water during the daytime. If a smaller water tank could be built at the corner of each lane then the issue would be conveniently resolved. Another option is that the water supply pressure in the lines is increased so that water reaches every house without any problem.
- Most people think that water supply using *awami* tanks is only a temporary measure. They want the pipelines to be fully repaired and to have water supplied twice a day.
- In a very few cases the water from *awami* tanks is rationed by the canister load. Usually the people collect as much as they desire or need.
- In every community, there are some people – usually elderly and retired – who manage the *awami* tanks. They remain when water is supplied by the water tanker. They also visit the offices of the Rangers or KWSB and do the usual follow-ups.
- After the *awami* tank is filled people come to fetch water. Sometimes people are notified house to house. Where *awami* tanks are in the mosques, an announcement is made.
- In mosques the household supply is done through small motors. In other cases, people obtain water through water pipes. Organisers, however manage the whole process.
- On days when the supply is inadequate, the people often fight and quarrel to get their water.
- In order to resolve the problems of *awami* tanks, water provision should be done daily or every other day. There should be enough water to meet the people's needs. The pipelines should be repaired so that they can carry water again. The KWSB should initiate this process and it should be monitored by the Rangers.
- Ever since the settlements were established, there has been a shortage of water and this is still the case. None of the administrations pay any notice. Other related problems are also spreading.
- The *awami* tanks cannot be run on commercial grounds. Attempts should be made to improve their performance. Every alternate lane should have an *awami* tank.
- One option could be that the money that the government is spending on providing water for the *awami* tanks should be spent repairing the pipelines instead.
- According to area people the responsibility of looking after and running the *awami* tank system lies with the people themselves. They must improve the system on a self-help basis.
- Private tankers operate in these areas. The private tankers are a necessity as the supply of water through the Rangers' tankers is often inadequate. This leads to people using impure water (from the private tankers).

- Public private partnerships are usually not wanted by the people. They emphasised the need to improve the existing system without any extra burden on the citizens.

3.2 Bulk Water Consumers of KWSB

3.2.1 Bulk water supply – some basic facts and figures

Although bulk water supply is not categorised by quantity supplied, water connections of 2" diameter and above are designated as bulk water supply outlets when they also fulfil the tariff conditions laid down for the service (see Table 3.1)

Table 3.1. Estimated average discharge of water (in Gallons)

Size of connection	Estimated average discharge of water	Estimated average discharge of water per annum (gallons)
½"	1,250	456,250
¾"	2,500	912,500
1"	5,000	1,825,000
2"	20,000	73,000
3"	40,000	14,600,000
4"	80,000	29,200,000
6"	260,000	94,900,000
8"	400,000	146,000,000
12"	900,000	328,500,000
18"	2,000,000	720,000,000

Bulk water supply provides almost one-third of KWSB's revenues (see Table 3.2).

Table 3.2. Bulk Water Supply – Estimates of Receipts (1999-2000)

Year	Bulk water supply receipts (million Rupees)	Total KWSB receipts (million Rupees)	Percentage of total receipts
1998-1999	830.00	2305.00	36%
1999-2000	905.50	2504.233	36.16%

The tariff structure of the bulk water supply has changed over time. In 1981 it was calculated on the basis of net annual rental value of the property. In the following years it was calculated on the basis of unit water costs (see Table 3.3).

3.2.2 Profiles of selected bulk water consumers

The exact number of KWSB bulk water consumers could not be ascertained as the records were old and had not been updated for the past four years. According to staff, however, there were more than 700. This includes various military and sensitive installations in the

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Table 3.3. Tariff review for Bulk Water Supply (amount in Rupees.)¹

No.	Category	From 1 st Apr 1981	From 1 st Dec 1985	From 1 st Jul 1989	From 4 th Aug 1992	From 1 st Nov 1994	From 1 st Jul 1995	From 1 st Nov 1996	From 1 st Apr 1998
1.	Commercial/ industrial not connected with water line	6.5% NARV*	9.75	15.00	23.00	30.00	39.00	49.00	49.00
2.	Commercial/ industrial connected with water line (un metered)	9% NARV*	13.5	21.00	32.00	42.00	55.00	69.00	69.00
3.	Metered domestic (per 1000 gallons)	1.96	5.50	8.50	15.00	20.00	26.00	34.00	44.00
4.	Metered industrial/ commercial (per 100 gallons)	1.96	9.00	14.00	25.00	33.00	43.00	56.00	73.00

1. Source: KWSB, *Basic Facts and Figures*, 2000.

* Net Annual Rental Value – it is a measure to determine the basic market value of the concerned property.

** Water bills sent to the consumers also include the relevant government taxes as applicable.

Table 3.4. Database of Consumers 1998-99

Category	Number of connected properties	Number of un-connected properties	Total number of properties
Residential	387,020	131,194	1,518,214
Flats	208,533	14,686	223,219
Residential cum commercial	17,712	497	2,209
Industrial commercial	35,576	25,528	61,104
Hospital/school/ mosque/ imambargah	131,025	38,498	169,523
Under construction	1,563	1,895	3,458
Vacant/others	---	1,311	1,311
Shops	20,236	107,562	127,798
Total	785,665	321,171	1,106,836

city (as reported by the KWSB staff member responsible). Eighteen bulk water consumers were surveyed. For further details relating to bulk water consumers refer to Public Private Partnerships and the Poor, Case Report 2: Bulk Water Consumers of the Karachi Water and Sewerage Board.

Section 4

Analysis

4.1 Terms of Reference

The terms of reference for the large consumers were formulated according to the specific requirements of the consumer. These terms of reference include the nature and extent of services to be provided by the KWSB as well as the billing, recovery, and tariff conditions. The terms of reference of the military installations was kept strictly confidential. The consumer's specific requirement prevailed even on the contractual conditions. It was reported that in some cases proper terms of references did not exist. As the KWSB was formed in 1983, most of these institutions were already connected to the bulk network and thus continued to obtain the same services without any revision of tariff and billing modes.

A standard procedure of bulk supply connections is adopted for the medium and small-scale consumers.⁵ The consumers notify their respective water requirements which is approved by the KWSB after necessary review. They continue to obtain the water according to the prescribed rates and tariffs. Backup maintenance and upkeep is in the normal clauses of the contracts, but it is seldom fulfilled by KWSB in situations of breakdowns or scarcity of water. Very large consumers, such as Pakistan Steel Mills, had to construct part of the supply infrastructure themselves. For medium and small-scale consumers, KWSB provides the connections up to the property line. Internal piping and management is done by the consumers themselves.

4.2 Tariff and Billing

With the exception of the very large consumers, a standard rate of tariff prevails for bulk consumers. The tariff is specified into four categories (see Table 3). With very few exceptions, the bulk consumers found the tariffs satisfactory, however they were critical of the billing and recovery procedures. Many consumers were of the view that KWSB charges excessively, and that the supply was less than the allotted/contracted quantity. There were no remedials for any decline in the service. For example KPT and Pakistan Steel have to own and manage a fleet of water bowsers to supplement their water needs. Other consumers have to buy from private water vendors. There were several chronic billing disputes that are still not resolved. The Defence Housing Authority did not pay its water bills for about three years, which was a big setback in KWSB's accounts. Similar happenings with respect to other bulk water clients cause financial difficulties for KWSB.

5. No hard and fast definition exists for large, medium or small scale consumers. However, according to KWSB staff, small scale bulk consumers are those whose requirement is less than 100,000 gallons per day; medium scale are those who consume less than 500,000 gallons and large scale are consumers who use more than 500,000 gallons.

Industrial and commercial consumers are willing to pay higher tariffs for greater water quantities. However, as water is in limited supply, their demands cannot be met.

4.3 Operation and Maintenance

Almost all the consumers have arrangements to carry out routine operation and maintenance of the infrastructure on their premises. KWSB staff does provide backup support but only in emergencies. Only when a breakdown occurs will KWSB staff undertake repairs. Routine maintenance is almost absent on the part of KWSB. KWSB is also unable to check the water thefts from the supply lines to the bulk consumers which hinder in the supply to a great extent.

4.4 Client/Consumer Satisfaction

The bulk consumers were critical of KWSB's inability to satisfy users' demands. A major issue in this respect was the inadequate quantity of supply. Abrupt and anomalous breakdowns, infrequent supply, poor quality of water, loss of supply pressure, and the inability of KWSB to respond to crisis situations were some of the common complains expressed by the consumers. It is obvious that KWSB is extremely constrained on the quantity that it can supply, an area where it will require new projects to augment its requirements. For the other areas, it was the absence and erosion in the management capacity of KWSB to respond to the consumer needs that was the problem.

4.5 Re-Structuring of KWSB

Few consumers thought KWSB needed to be restructured, but the alternative to this was not clear. Some consumers thought privatisation would improve KWSB's performance, how it would be done was not clear.

4.6 Future Requirements

According to the reported needs, there is a massive future demand for water in the bulk consumer sector. This demand is of two kinds. Many consumers planned to expand their operations. There are also several projects and new installations that are either planned or under consideration. However those consumers are skeptical of KWSB's ability to provide this water quantity even in the next five years. It was generally found that the bulk consumers located along the National Highway had fewer complaints related to supply as they were near to the main source of water pumping and distribution. The consumers in District West faced acute problems during the past three years when supply from the River Hub dried out.

4.7 Possibilities and Prospects of Public Private Partnership

From the existing situation the prospects of public private partnership in the bulk consumer sector are bright for several reasons. One, most of the bulk water consumers have a growing water requirement which the KWSB has been unable to meet, mainly because of the lack of capital to finance the increase in supply. It is very likely that many bulk consumers would enter into a partnership contract with KWSB to finance new supplies. Two, the performance of KWSB in revenue recovery could be enhanced if an better systems and contracts were worked out between the contracting parties. The high occurrence of disputes in the bulk supply sector can be controlled this way. And three,

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public private partnerships could be used to manage issues of operation and maintenance of the infrastructure related to supply and storage.

Section 5

Conclusions

5.1 Privatisation of Karachi Water and Sewerage Board (KWSB)

- The privatisation strategy that has been prepared by the decision-makers only remedies the financial problems and does not guarantee a service improvement.
- It will be difficult to implement the current KWSB privatisation plans given the prevailing political and administrative climate in Sindh.
- The lack of commitment from the different ranks of KWSB management will pose a serious problem in applying the privatisation strategy.
- The dynamics that led to the creation and application of privatisation clearly suggest that it has been imposed from above without gauging the fundamental grassroots realities.
- While the KWSB has been declared as financially impotent, the reasons that have led to this state of affairs are neither documented nor analysed during the decision making.
- The various linkages that operate in the water supply and sanitation sector are not taken into account.
- In the proposed privatisation strategy, there is no convincing evidence about how the system would improve after privatisation, since the proposed private operator is advised to focus only on tariff enforcement and improving revenue collection.
- The proposed tariff rates will be very high compared to the existing rates, and this is not accounted for or analysed.
- People are aware of the overall performance of KWSB and the crises in water and sanitation sector. In principle they are not against privatisation.

5.2 *Awami* tanks

The study and analysis of *awami* tanks clearly shows that communities, with support from government agencies, can act cooperatively to address their basic needs. It is significant that despite the acute shortage of water in Orangi Town, the low economic status of the households, and an overall feeling of desperation, there has been no communal conflict in the routine operation of *awami* tanks. The low level of supply to the *awami* tanks has adversely affected the potential for indigenous expansion, however. The communities' assumption that the piped water supply will return soon also impedes the extension of *awami* tank operations. From the overall water supply scenario of the city in general and Orangi in particular, it has become clear that Orangi's piped water supply will remain

grossly inadequate for the foreseeable future. Makeshift solutions, with optimum capacity to deliver, have to be tried, tested and replicated. It is also obvious from the study that government alone cannot deliver the services because of their limited capacity to address the problems. There will have to be partnerships that evolve from the people's initiative.

5.3 Bulk water consumers of KWSB

The following are the conclusions drawn from the study:

- It is apparent that the bulk water supply will remain the most important service component with respect to the revenue generation for KWSB. The revenue losses and short falls that occur from the other sector will be compensated, at least partly, from the bulk water supply sector.
- The bulk water supply sector possesses tremendous demand potential. It has sound commercial feasibility. If fulfilled then the revenue from the bulk supply sector can compensate the losses and short falls from the other sectors. This approach can make the KWSB a financially viable organization. According to the rough estimates drawn on the basis of the feedback from the bulk consumers and the staff of KWSB, there is a minimum demand of 100 mgd in the bulk sector which is rising at a rate no less than 10 per cent. Planned projects and enterprises in the commercial and industrial sector are a citation in this regard.
- The KWSB has several managerial deficiencies in its bulk water operations. They adversely affect the trust of the clients. The information regarding closure of water service is not properly communicated to the consumers. Similarly the operation and maintenance plan of KWSB, which demands service closures, is not shared with the consumers thus affecting their performances.
- Billing and tariff disputes are a major issue. In some cases, they have also led to court cases and litigation. However, one of the major reasons for this state of affairs is the non-standard tariff that is applied to consumers. This opens the way of prolonged negotiations and delays, which affect the recovery of KWSB revenue. Besides most of the government agencies and authorities do not pay their dues promptly and obtain immunity behind their official hierarchy. The KWSB has to ultimately suffer from such unethical practices. The case of DHA is one example which remained a defaulter of KWSB for a considerable period of time.
- Bulk connections are prone to water thefts. At many instances, the bulk lines are broken and water is stolen unabated. The line to Quaid-e-Azam International Airport is an example. Besides leakages are also a usual problem which further reduce the water quantities actually supplied.
- Absence of scientific quantification of water is a concern for consumers. They remain sceptical of the amount supplied and are hesitant to pay the full amount. The KWSB has yet to convert all the bulk water supply connection to metered outlets.
- Bowser service, which is run as the emergency or relief option in cases of breakdown or shortage is grossly inadequate. With the passage of time the operational fleet of bowsers of KWSB has reduced considerably. At present it is less than 20. The bulk consumers have to manage and maintain a fleet of bowsers of their own. Alternatively the bowsers are obtained from the water vendors/contractors working in the market. This is an added disadvantage to the consumers.

SECTION 5: CONCLUSIONS

- KWSB has inherited a large number of bulk consumers from KDA and KMC. There are many lacunae that exist in the contractual agreements that need to be revised. However due to managerial inefficiency, it is not done. In majority of the cases the KWSB has to suffer due to these contractual shortcomings.

Section 6

Recommendations

6.1 Privatisation of Karachi Water and Sewerage Board (KWSB)

- Conceptually, the objectives of the privatisation need to be revised. From the dynamics that have led to this situation, it is apparent that the financial aspects have been the key factors around which the PSP strategy was devised. There should be a strategy that plans to deliver optimum service to the masses at an affordable and acceptable charge.
- If through the process of privatisation water is transformed from a public good into an economic good, and its supply is transferred from a public utility to a commercial enterprise, then it may not succeed. An approach should be adopted to improve supply to the people through the appropriate participation of the private sector.
- Structurally, KWSB's services may be disaggregated. If an alternative strategy has to be recommended it should be based on the concept of unbundling the water and sewerage services. The areas of production of potable water in bulk, distribution network of the metropolitan city area, water distribution in bulk for identified and organised areas, sewage collection, transmission and treatment, etc. could be handed over after decentralisation to the following organisations:
 - a) Production of raw water and its treatment to KDA
 - b) Distribution and conveyance of water to various points in the city to KWSB
 - c) Retail distribution of water and management of sewerage and sewage collection to District Municipal Corporations/CBOs/NGOs
 - d) Any of these unbundled units could be contracted out to the private sector through a carefully considered arrangement.
 - e) A regulatory body should be formed to ensure the smooth functioning of all the organisations, undertaking necessary but minimum coordination between them, keeping a watch on the performance and achievement of negotiated targets, and looking after the interest of all consumers in an equitable manner. If this concept is accepted by the GoS, details will have to be worked out by consultants in association with professionals, NGOs/CBOs, and other relevant organisations.
- As highlighted by various stakeholders and as is also apparent from KWSB's balance sheet, a concentrated effort must be made to recover maximum water charges based on the existing billing structure. However any recovery drive must only proceed along with visible hallmarks in service improvement. Various options for recovering dues can be studied. Water bills can be tied up with land revenue, for example, or attach to

/included in electricity, gas, and telephone charges. This will give easy access to the maximum number of consumers. If KWSB recovers up to 80 per cent of its outstanding dues, it may not need to be privatised at all.

6.2 Awami tanks

Awami tanks offer an important case study of a water supply mechanism that has developed in low-income communities. The tanks could be greatly improved by improving the design and construction. Currently they are built with cement blocks without any plastering or waterproofing, so water is lost due to seepage. Low-cost techniques are known and available. The use of motors or simple manual pumps would improve efficiency. Communities could also negotiate a mechanism with KWSB for the regular supply of water on payment of corresponding charges, which obviously will be much less than the commercial tankers. This alone will enhance the performance of *awami* tanks considerably. And finally, the reality about the non-performance of the piped water supply should be clearly communicated to the people of Orangi so that they can consider realistic options and survival strategies. The prospects of public-private partnerships can also be explored, especially in the wake of the forthcoming local government plan that the government is implementing with keen interest.

6.3 Bulk Water Consumers of KWSB

The following are some recommendations in relation to the issues highlighted in the study:

- KWSB must measure accurately the quantity of water supplied to the bulk consumers in order to follow up the consumer's use and needs. This will be the first step towards revenue generation and recovery.
- The KWSB should explore the possibility of supplying water to the main heads of the bulk consumers (as is done in the case of SITE). The internal distribution and storage should be left to the consumers.
- Management practices within KWSB need a great deal of improvement. Answering complaints, solving billing disputes, and answering requests for new connections are some pertinent issues where better management is desperately needed. As little improvement can be expected within the KWSB staff ranks, KWSB should appoint management consultants to improve its performance.
- A pilot project should be instituted to test the validity of public private partnerships. This can be done with any of the large or medium-sized consumers. If successful, KWSB can gradually enhance service provision through this contractual mode.
- Tariffs must be developed in consultation with bulk consumers. A standardised policy may be adopted to avoid confusion and conflicts between the KWSB and consumers. A Water and Sewerage Tariff Management Committee should be constituted comprising representatives of KWSB and bulk consumers. This will help reduce the disputes and deficiencies to a great extent.

Annex A

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