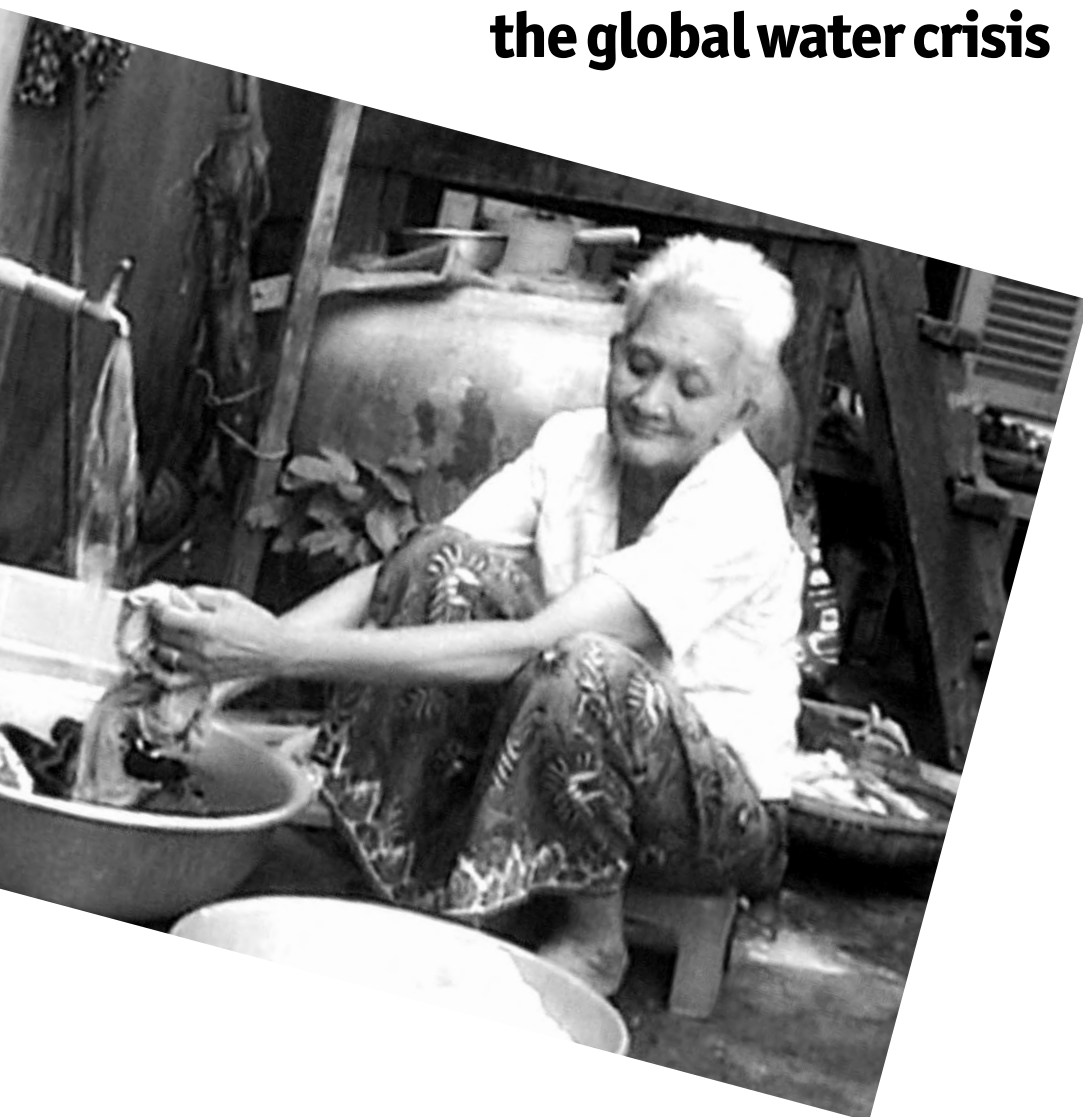


March 2007

Going public

**Southern solutions to
the global water crisis**



**World
Development
Movement**

This report features chapters by managers of, or advisors to, successful public water utilities in the global south

Edited by Hugh Warwick and Vicky Cann
With thanks to Tim Jones, Christine Haigh and Tamina Oliver

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Chapter 2 by Silver Mugisha and Sanford V. Berg

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Chapters 2, 3 and 6 are edited down versions of articles first produced in July 2006 for a seminar organised by WDM and WaterAid for DFID on reforming public utilities. WaterAid is an international NGO dedicated exclusively to the provision of safe domestic water, sanitation and hygiene education to the world's poorest people. It works with local partners in 17 countries in Asia and Africa to bring services to poor communities and to advocate for government action to end the crisis in water and sanitation. The full versions of the articles produced for the seminar are at www.wdm.org.uk/resources

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About World Development Movement

WDM campaigns to tackle the root causes of poverty. With our partners around the world, we win positive change for the world's poorest people. We believe that charity is not enough. We lobby governments and companies to change policies that keep people poor. WDM is a democratic membership organisation of individuals and local groups.

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This report has been supported with financial assistance from the European Union. The contents of this document are the sole responsibility of WDM and the authors and can under no circumstances be regarded as reflecting the position of the European Union.

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Foreword

“ I KNOW WHAT
YOU’RE
AGAINST...
BUT WHAT ARE
YOU
FOR? ”



A handwritten signature in cursive script that reads "Benedict Southworth".

Benedict Southworth,
Director, World Development Movement

During our ‘Dirty Aid, Dirty Water’ campaign, the World Development Movement (WDM) has sometimes been asked, “I know what you’re against ... but what are you for?”

This publication sets out exactly what we are ‘for’: efficient, accountable, transparent and democratic, public provision of water and sanitation services for everyone, especially the poor.

This report is a contribution to the debate about tackling the global water crisis. While there can be no one-size-fits-all solution to the crisis, the cases that follow do provide real food for thought.

Of course, the reform of public water utilities has the potential to be a rather dry subject. It can be hard to avoid the detail of technicalities and processes, and easy to miss the essence of why the reforms are important and how they have enabled people to gain access to water and sanitation.

That is why we have approached managers and advisers from successful public water utilities in the global south - Brazil, Cambodia, India, and Uganda - and asked them to tell the story of the reform of their utility, in their own words. Their perspective from the frontline of the global water crisis is invaluable, based as it is on practical experience and expertise developed over many years.

For WDM, the publication of this report is part of an ongoing campaign to ensure that the public utility reform agenda plays a substantial role within the UK government's aid to the water and sanitation sector. WDM remains concerned that UK aid money is spent on pushing water privatisation in developing countries despite little evidence to show that it really benefits the poorest, with too little money spent supporting public utility reform.

In July 2006, WDM together with WaterAid hosted UK visits from several of the utility managers and advisers who have contributed to this report; they met with the Secretary of State and officials at the Department for International Development (DFID). A number of the case studies that follow were presented to DFID at that time. Since then, together with UNISON, WDM and WaterAid have undertaken further advocacy work in the UK to press DFID for further and faster action. Meanwhile, WDM continues to benefit from membership of Reclaiming Public Water, an international network of activists and public water managers.

By World Water Day 2007, 22 March, the world will be at the midway point for meeting the Millennium Development Goals. There is no time to be lost in tackling the global water crisis; the public success stories set out in this publication will hopefully provide inspiration to all those looking for solutions.

WDM remains concerned that UK aid money is spent on pushing water privatisation in developing countries despite little evidence to show that it really benefits the poorest

1. Introduction



By *Vicky Cann, World Development Movement*

This publication demonstrates that there are successful public water and sanitation providers in developing countries

It is common knowledge that there is a global water crisis. Millennium Development Goal (MDG) seven seeks to halve the proportion of people without sustainable access to safe drinking water and adequate sanitation by 2015. Numerous other MDGs (education, child mortality, gender) also require significant progress in the area of water and sanitation if they are to be achieved.

There is almost certainly consensus on the importance of tackling the global water crisis in order to achieve the MDGs. There is almost certainly consensus that the public sector has not succeeded in improving water and sanitation in many parts of the world. There is almost certainly consensus on the need for major investments in water and sanitation if the situation is to be changed. And there is almost certainly consensus on the need for donor governments to give water and sanitation a high priority.

However, over the past decade, a debate has raged over how to tackle the global water crisis, and in particular, what the role is for the public sector and what the role is for the private sector. During this time, large expectations have been placed on the ability of the private sector to deliver clean water to the poor, and significant aid has been used to support the private sector in this endeavour - with little to show for it.

The evidence is clear that the MDGs cannot be met without major public investment, alongside the improvement and expansion of existing public providers, cooperating with any other existing domestic providers. The key questions now are: how can we improve and expand public providers? Who has the experience to help with this? And how can we tap into this experience?

This publication demonstrates that there are successful public water and sanitation providers in developing countries, and that there are practical ways in which their experiences can be tapped into, disseminated and scaled-up.

A new vision for public utilities

“ There is nothing that the private sector can do that the public sector cannot. The public sector can do everything that the private sector can do and more. ”

- Antonio Miranda, member of the UN Secretary General's Panel on Water and Sanitation

Clearly, there are public utilities around the world which struggle to serve their population. Such public bodies can be inefficient, bureaucratic, unresponsive to the needs and demands of users, possibly corrupt; and with poor ability to tackle leaks, lay new pipes or collect fees.

However, while there are certainly some utilities which are subject to some or all of these failings, this is a clichéd view of the public sector; there is nothing intrinsic to the public sector that means that its utilities have to be like this.

But over the past decade, this cliché has been accepted and donors' aid policies have tried to tackle public utility failure through the introduction of private sector management, even though the private sector has not demonstrated itself to be more adept at tackling the problems.

The bottom line is that with 90 per cent of piped water in public hands, and massive public investment in water and sanitation required, the challenge is to build capacity within public utilities to ensure that they can deliver effective operations in practice.

We need to put an end to the traditional negative image of the public sector, and instead demonstrate an exciting, positive vision of 'public-ness'.

'Public-ness' is something that goes far beyond simple public ownership and management by public employees. It is about both users and staff taking pride in a utility which delivers a good service to all; utilities being driven by what users need and being accountable to both users and governments; staff being valued by their employers, and in turn taking pride in their work and in delivering a good service. Crucially, public-ness is about transparency and, in some cases, community participation in the decision-making of the utility, for example in the area of tariff setting and investment priorities.

This is not a utopian vision but one which is becoming a daily reality amongst a growing number of water and sanitation public providers in the global south. What the following case studies demonstrate is that poor-performing public utilities can be turned around from within to better meet the needs of their users and to make a significant contribution towards tackling the global water crisis.

These cases, and others from around the world which are featured in the book 'Reclaiming Public Water', should be viewed as 'works in progress'.¹ They may not have solved all the challenges that they face, but they are taking positive steps in a number of key areas and the ongoing nature of the reform process means that further improvements are likely.

These cases are diverse in their structures and processes, and while they can be found across the world – in urban, peri-urban, or rural areas – in each country, city or region the specific model varies, reflecting local circumstances and cultures. These utilities may deal exclusively with water or sanitation, or they may tackle both.

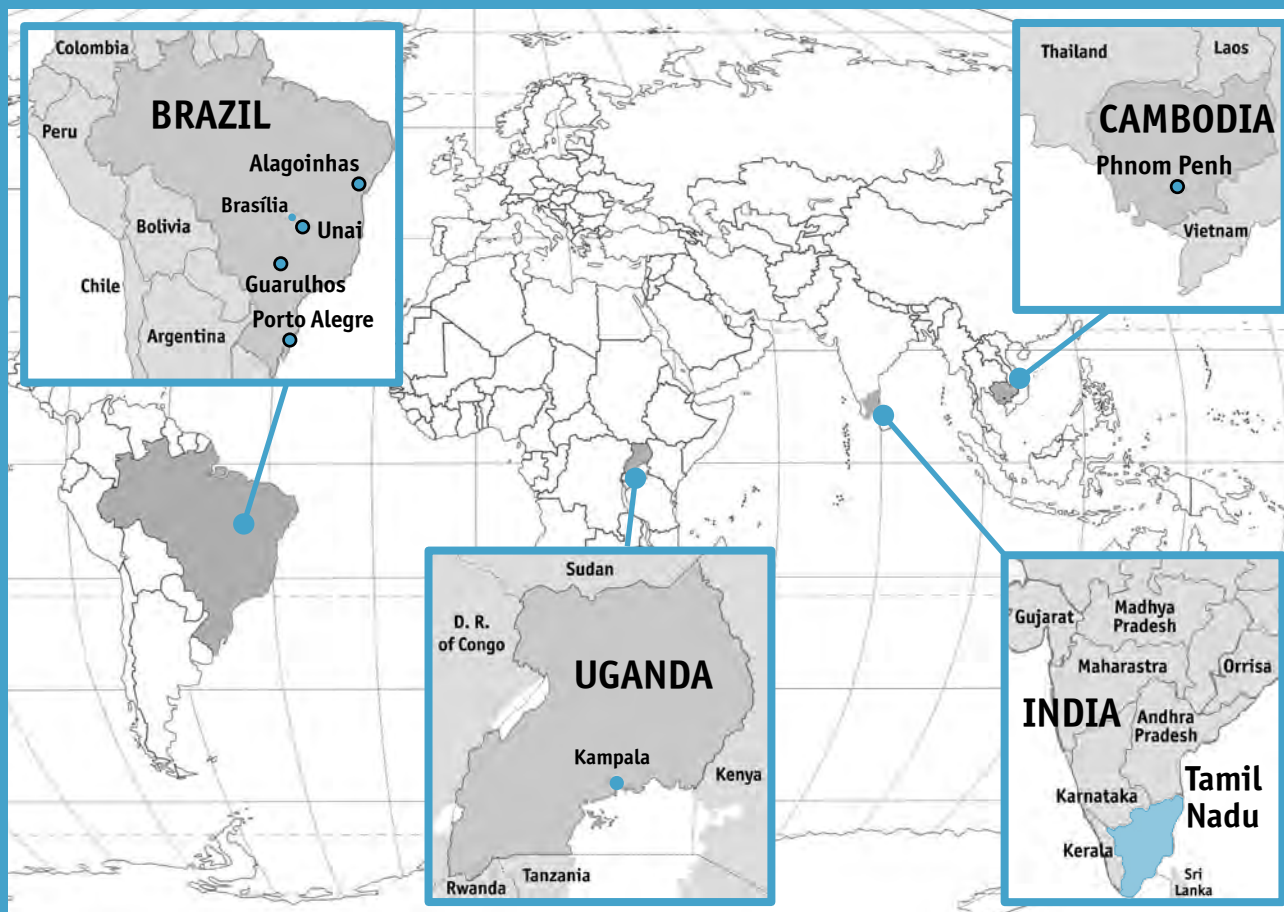
The vision in practice

It is clear that there is no one model for public utilities which suits all circumstances, but we do believe that there are some common themes that can be drawn out from successful examples.

From the case studies we present here (from Brazil, Cambodia, India and Uganda) four recurrent key themes emerge: efficiency, accountability, transparency and community participation.

“Most of the successful utilities have improved water and sanitation via a vision of a public service that serves broader societal objectives, including democracy, environmental sustainability and human security.”²

- Reclaiming Public Water



Efficiency

- In Phnom Penh, Cambodia the public utility has boosted connections from 25 per cent to 90 per cent in 12 years.
- In Uganda, the utility has raised service coverage from 48 per cent in 1998 to 70 per cent in 2006. In these eight years, the utility has gone from producing a loss to tripling its turnover, using the surplus to finance network expansion and maintenance.

Accountability

- The utility workers in Tamil Nadu, India have shifted from thinking of themselves as purely engineers concerned with infrastructure, pipes and taps, to thinking about the people using the system - their needs and demands.
- In Phnom Penh, utility managers attribute high increases in bill payments to developing a utility-customer relationship based on long-term community-building.

Transparency

- In Alagoinhas, Brazil, since 2001 the utility has started to include their own financial information, including revenues and expenses, on each user's bill.
- In Uganda, the publication of a magazine called the Water Herald provides a platform for utility managers to detail relative performance against key targets, plus to explain any incentives earned.

Community participation

- By using the traditional concept of a koodam, the Tamil Nadu utility has succeeded in expanding the participation of women and lower castes within the utility. The koodam is a decision-making space, which treats everyone as equal.
- In Alagoinhas, a democratic municipal conference voted on key policies and chose community delegates to work with the public authority to develop a detailed water and sanitation plan.

The critical issue in terms of the global water crisis is creating new connections, especially for poor communities. To facilitate such an objective, these utilities have found a variety of different ways to lever the funding into the utility.

Getting better value for money out of existing resources by increasing efficiency has been important for all the utilities featured. In this way, existing customers have had their faith in the utility boosted and the new-found capacity can be re-allocated towards connecting new communities. In Tamil Nadu, the utility aims to stretch the annual budget 10 per cent further each year, significantly boosting the number of people connected to water.

Tariff collection can also provide extra resources which can be re-invested back into the utility to fund new infrastructure, but getting the tariffs right is also a complex and potentially politically fraught area. Being accountable, transparent and participative can ensure that communities agree, understand and

respect changes to tariff levels. In Unai, Brazil, tariffs have been the main revenue source for the necessary investments and provision of services. The percentage of tariff revenues directed to investments has remained constant at around 20 per cent.

Finally, some utilities have required external funding from national governments or international donors, in one form or another. In Uganda, when the government received international debt relief it was possible to freeze the debt of the water utility. But the utility has also needed international donor support for its long-term infrastructure projects. Meanwhile, the World Bank, Asian Development Bank, and the government of Japan funded a comprehensive programme in the 1990s to replace the pipe network in Phnom Penh.

There is enormous variety in the good practice amongst public providers and this short paper cannot do justice to all such cases.

Public urban providers

In Botswana, the Water Utilities Corporation (WUC) has been able to meet daily water requirements in all of its operational areas, including both urban and peri-urban areas. WUC substantially increased the proportion of the population with access to safe water over the period from 1970 to 1998. The population served increased from 30,000 to 330,000 while the average daily consumption rose.³

In Bogotá, Colombia, privatisation was rejected and effort put into improving the public water and sanitation provider. It became "one of the most efficient and equitable utilities in Colombia, if not Latin America" and "by 2001, 95 per cent of the population had clean tap water while 87 per cent were connected to the sewage system – quite an achievement considering the rapidly growing population".⁴

Scaling up good practice

One of the challenges we face is how to scale-up all this good practice. As we have said, there is no one-size-fits-all solution to the global water crisis. But there is a role for sharing experiences and expertise, and applying the lessons learnt between utilities with a view to building up capacity.

But how best can a struggling public utility access information and expertise about other, more successful utilities, whether it be in the area of leakage reduction, tariff-setting, boosting community participation or dealing with customer complaints.

Public-public partnerships (PUPs) provide an important way for this to happen. PUPs are not about new facilities, or big enterprises; PUPs are exclusively about capacity building, about solving on-the-ground problems through the exchange of knowledge. PUPs are, in one word, co-operation.

PUPs can take many forms, but perhaps the model with the most potential is that of partnerships between water utilities. This model matches up well-performing public utilities with those that are performing less well, to share expertise on a not-for-profit, cost-covering basis in order to improve the standard of the lesser performing utility. The not-for-profit element is crucial so that money is not diverted from the utility to pay external fees.

PUPs between utilities in different cities, countries and continents already exist. In Indonesia, the public water company PDAM Tirtanadi has supported other smaller utilities in Northern Sumatra through an 'operational co-operation contract', a domestic PUP. The Tamil Nadu utility is now actively working with utilities in Maharashtra state, and elsewhere. In the east and southern African region, the Ugandan utility is providing turnaround support to public utilities in Kenya, Zambia, Tanzania, Malawi and Mozambique.

It is clear that public water utilities in both rich and poor countries have great expertise and skills, but poor country utilities often lack the resources to enable them to share their expertise more widely. Donor support could reverse this situation and enable struggling water utilities to learn from more successful utilities. An emphasis on south-south capacity-building and the sharing of skills and experiences could really help to speed up progress on extending networks to peri-urban or slum networks. Where the expertise of utility staff in the south who are working on these issues on a daily basis, can be tapped into and disseminated across utilities.

There is no one-size-fits-all solution to the global water crisis. But there is a role for sharing experiences and expertise



Public rural providers

In Savelugu, Ghana, a system has been established where water is bought in bulk from the state utility and then the community manages the distribution, maintenance, tariff-setting and collection. Access to potable water has been increased to 74 per cent. The national average for rural areas is 36 per cent.⁵

In Olavanna, India the local community has initiated 60 drinking water schemes, over half of them supported by local government, that are providing reliable water to more than half the local population, in contrast to only about 30 per cent in the 1990s.⁶



Our challenge to donors

WDM believes that the case studies and the discussion around PUPs included within this publication will make an exciting contribution to debate about the future of water supply in developing countries. We also think that these cases should offer real inspiration to donors.

DFID says that 95 per cent of its bilateral water sector funding goes into public and community water provision, but NGOs such as WaterAid and WDM have looked into this matter and cannot find evidence of strong, consistent action from DFID to support the kinds of processes that can help public utilities reform successfully.

In contrast, support for the private sector has been more obvious. Donor governments, such as the UK, have organised conferences to promote private sector water and sanitation provision. Donor governments have used aid conditionality to push privatisation. Donor governments have set up arm's-length agencies to facilitate private sector water and sanitation provision. Donor governments have funded consultants to do public relations exercises in support of privatisation. Donor governments have export promotion departments that help private sector consultants and utility companies do business in other countries.

Donor governments have clearly put political and financial effort into pushing private sector water and sanitation provision and it is time that this changed. WDM believes that donors such as DFID could do far more to support the successful reform of public utilities and capacity-building initiatives.

Our recommendations to DFID include:

- Creating mechanisms to support PUPs in the water and sanitation sector. These could take the form of a public-public partnership facility and support for the UN's proposed water operator partnerships.
- Increasing support for public utility reform processes and PUPs within bilateral funding programmes. All the utilities featured in this report have domestic or international PUP programmes, but they need support.
- Ensuring that water sector reform processes, supported by UK aid money, include these kinds of reform models on the 'menu of options' being explored. Reform processes should also prioritise the needs of the poor and involve full transparency and public participation. Funding may be needed to enable communities to get involved in debates on utility reform.

Donor governments have clearly put political and financial effort into pushing private sector water and sanitation provision and it is time that this changed

- Developing research programmes to maximise the effectiveness of both public utility reforms and PUPs. Research could usefully be carried out into the success factors for reform, how reforms are commonly financed, and how to best serve the poor. On PUPs, research is required into financing and to explore the benefits resulting from existing and historical PUPs.
- Recognising the primary role of governments and their public water and sanitation providers in meeting the MDGs. At inter-governmental meetings, in reports, speeches and policy statements, DFID must clearly recognise that, as with health and education, it is governments working with public and community providers, that are best placed to deliver water and sanitation services.
- Recognising how international financial institutions sometimes promote private sector reform options to the exclusion of all other possibilities, and refusing to fund the projects which stem from these conditions.

The role of workers

In Bangladesh, the government gave the publicly operated employee's co-operative the contract to run the water system in one of Dhaka's zones, with another zone given to a local private company. After the first year's experiment the employee's cooperative results were so good that the Water and Sanitation Authority handed over the private sector's contract to the co-operative.⁷

In Santa Cruz, Bolivia, a co-operative was setup to operate water supply and sewerage; customers now elect the utility's decision-makers. By 1996, water supply had been extended to 272,000 inhabitants and sewerage to 46,700. After achieving these objectives, the co-operative had funds left over that were also used to construct additional sewerage works.⁸

More generally, workers play a critically important role in the success of utility reform processes. Workers that feel respected and treated well, will be better motivated to deliver quality services. As part of the reform process in Phnom Penh an emphasis was placed on appropriate training and higher salaries were paid - up to ten times more than before. In Uganda, the utility worked closely with the union during the reform process and now both staff and managers are rewarded for achieving targets. Those incentives can involve bonuses of up to 50 per cent of salaries.

2. Turning around struggling state-owned enterprises in developing countries: The case of NWSC-Uganda

Abstract



By Silver Mugisha and Sanford V. Berg*



The conventional thinking has, hitherto, been that state-owned enterprises cannot perform well and should be restructured with a view of privatising them or at least putting them under private sector management. In this paper we outline how NWSC, a state-owned water corporation in Uganda has internally restructured itself and improved performance significantly from 1998-2006. We discuss the key managerial approaches and success factors. We also outline the role of the private sector and observe that 'international operators' do not come to manage problems but to earn returns on their investments. We also note that donors still need to play an important role in the restructuring of state-owned enterprises but that such collaboration must be executed in a meaningful manner, encouraging a 'do it yourself policy' for the process owners. African proverbs are interspersed throughout the article to underscore key themes.

* Dr. Silver Mugisha is Chief Manager, Institutional Development and External Services, NWSC, Uganda. Prof. Sanford Berg is a Distinguished Service Professor of Economics and Director of Water Studies, PURC, University of Florida. The authors are very grateful to Belinda Calaguas, Head of Policy at WaterAid and Vicky Cann, Campaigns Policy Officer at World Development Movement for their input into this paper.

Introduction

“A person, who never travels, believes his mother’s cooking is the best in the world.”

- Kiganda, Africa, Proverb

The National Water and Sewerage Corporation (NWSC) was established in 1972 and is wholly owned by the Ugandan government. The corporation is mandated to operate on a commercially viable basis and to manage the water and sewerage service in 22 urban towns.

In 1998 NWSC was not a healthy organisation. The World Bank noted: “Over the last 10 years, the Government of Uganda, in partnership with the World Bank and other Donors, has made a significant investment (over US\$100 million) in the urban water and sewerage sector. These investments have contributed immensely in rehabilitating the existing infrastructure under the NWSC management. Unfortunately, these investments have not been matched with the necessary efficient commercial and financial management capacity that can ensure the delivery of sustainable services in the medium to long-term.”⁹

This conclusion, based on a thorough analysis, found that the corporation had sound infrastructure, abundant water resources, and enabling legislative framework. However, the corporation had a large and inefficient labour force with conflicting and overlapping roles, high unaccounted for water (more than 50 per cent), poor customer service, low collection efficiency (about 71 per cent), substantial accounts receivables (days receivable ratio of about 420 days) and corruption within the work force, especially field staff. There was a running monthly deficit of about Ushs348

million (US\$300,000) despite a high average tariff of Ush1100/m³ (US\$1.00/m³). In other words NWSC was in a near state of bankruptcy.

Apart from the weaknesses, the corporation had to contend with a number of threats, including debt servicing obligations coming due and a VAT law that compelled NWSC to pay taxes on any increases in bills. On the other hand, the government was willing to give support to pro-active managers and the economy was relatively stable. In this respect, the government was willing to freeze the debt (US\$100 million) for some time to give a chance to the corporation to recover, if serious managerial efforts were initiated. Overall, improving operational and financial performance was essential to prevent further deterioration.

This paper outlines the corrective actions undertaken by NWSC management and staff to turn around performance,¹⁰ the sequence of those steps and the outcome of the reform programme. The paper demonstrates to managers of poor-performing utilities the benefits of new initiatives. Such initiatives are not painless, nor can they guarantee success. However, citizens and political leaders are finding the status quo unacceptable: organisational transformation based on feasible commercial plans and team initiatives can improve performance.





A woman accesses clean water in a communal yard

Initiatives undertaken to turn around performance

“ The hunter in pursuit of an elephant does not stop to throw stones at birds. ”

- Ugandan Proverb

Staying focused is crucial. In an effort to address managerial inefficiencies in NWSC, the government appointed a new Board of Directors. The new Board comprised representatives from local governments, the business community, professional bodies, environment, and Ministries of Finance, Water, Health and Small Scale Industries. The composition and structure of the Board enabled

it to exercise its governance functions properly and was able to shield the corporation from political interference and patronage.

The new Board, in turn appointed a new Managing Director, Dr William Muhairwe,* who was given the mandate to re-think strategies for performance improvement.¹¹ The appointment led to an emphasis on commercial viability, with ‘customer care’ as a theme. The Board and new management also arranged performance contracts with government where roles and obligations were clearly spelled out.

* Dr. William T. Muhairwe is a Management Specialist trained in Economic and Business Management and has been managing public companies for the last 15 years in Uganda and abroad. Formerly, Dr Muhairwe worked for the Uganda Investment Authority as its Deputy and eventually Acting Executive Director for 3 years and was responsible for attracting inward private investments to Uganda. He was also, at one time, the MD of the East African Steel Corporation, a Joint Venture Company between the government of Uganda and a private company (The Madhvani Group).

Fortunately for the new team, everyone was aware that the ship would 'sink' if nothing was done to remedy the situation. Dr. Muhairwe decided to adopt the approach of working with everybody, despite origin and colour. And it was the incumbent staff who initiated the programme of change.

At the tactical level, the new Board and management came up with a series of programmes: reversing operational and financial inefficiencies, restoring customer confidence and achieving commercial sustainability.

The Corporation had to improve operating margins by reducing bureaucracy, increasing staff productivity, and encouraging worker involvement. By working with the unions, management was able to reduce excess staff by half from 1,800 in 1999 to 900 in 2001, without any industrial unrest. The tactical programmes were designed to improve moral and alter the expectations of operating staff. Organisational change was accomplished through two other initiatives that reduced the stress of the hierarchy and also encouraged individual performance accountability.

1. Internally-Delegated Area Management

Contracts give more autonomy to Area Managers (Partners),* defining roles and responsibilities more clearly, and creating better incentive plans that allocate more operating risks to Partners.

2. External Services Unit – No organisation can be successful in isolation: collaborations allow managers to learn about the strengths and weaknesses of peer companies. Through this Unit, the Corporation has established a mechanism for sharing experiences and rendering consultancy services to outside companies, on a cost-covering basis.

* Under the IDAMCs, the Head Office enters into an internal non-legalistic contractual arrangement with Partners in Areas. The Partners are a team of senior managers in the Areas/Water utilities, who are bound together by a Partnership Deed detailing how business shall be conducted during the period of the internal contract. The Partners are headed by a Lead Partner, who is the accounting officer of the water utility/Area.

One factor supporting the favourable outcome to date is the performance contract between NWSC and the government of Uganda represented by the Ministry of Water and Ministry of Finance. The targets and reporting procedures have institutionalized accountability, without introducing a separate agency to monitor the firm. At some point, current arrangements will come under review. However, the arrangements have been beneficial to date, in contrast to patterns observed elsewhere. It may be that the second generation of performance contracts have benefited from the experiences of others.

Main performance considerations

“Between imitation and envy, imitation is better.”

- Ekonda Proverb, Democratic Republic of Congo

NWSC performance improvement programmes are both internal and external.

Internally, NWSC developed a programme design outlining clear roles and responsibilities; bottom-up approaches to strengthen programme ownership and support and SMART (Specific, Measurable, Achievable, Realistic and Timely) targets that were later strengthened through use of 'stretched' (tougher) targets. Managers were forced into competition as well, preventing staff already in place becoming stale.

The other major incentive was the threat of privatisation from government and donors. The managers and staff were aware that there were many potential substitutes outside who would take over if NWSC improvements were not forthcoming.

Externally, the corporation enjoyed significant government support, which resulted in a debt freeze and non-interference with the corporation's management. Being somewhat

insulated from political pressures meant that managers could focus on commercial issues in the early years of reform. At the same time, donor support in the form of financial and technical assistance added to the capabilities of the organisation.

Customer and public confidence in NWSC performance improvement initiatives turned out to be another external factor that motivated staff to innovate further. NWSC's turn-around was good news, and captured media headlines. Pride based on genuine accomplishments gave confidence to mid-level managers that they were on the right track.

Accomplishments and challenges (1998-2006)

“ A forest cannot be cut with a broken axe.”

- Bantandu Proverb

The reform initiatives from 1998 – 2006 have had positive impacts (see Table 1 below).

Positive cash flows have financed network expansion and enabled maintenance programs to be scheduled and implemented.

Despite the accomplishments, NWSC still faces challenges in the area of sewerage where the coverage is about 10 per cent. The sewerage investment costs are inherently very high and the Corporation is currently finding it hard to devote resources to such investments. Therefore, achieving the Millennium Development Goals remains a distant goal.

NWSC also faces the challenge of serving the poor communities where cost recovery is questionable. The infrastructure in such communities is very poorly planned and extending services to such areas involves significant difficulties. Nevertheless, the organisation continues to explore cost-effective ways to carry out this task.

The original approach to service for the poor in NWSC was through use of water kiosks/communal taps. However, through experience, it has been found out that the water vendors at these points sell water to the users at a price 4-8 times that offered by NWSC. This 'middle-man' effect defeats the whole objective for which the pro-poor tariff was set. It affects

Table 1. Improvements in NWSC performance 1998-2006		
	1998	2006
Service coverage	48%	70%
Network coverage		Increased by 52%
New connections per year	3,317	23,312
Total connections	50,826	148,312
Unaccounted water	51%	29%
Proportion metered accounts	65%	99.6%
Annual turnover	US\$11 million	US\$34 million
Profit	US\$0.4 million loss	US\$34 million surplus

the willingness and ability to pay and restricts consumption thereby obstructing health enhancement initiatives. In order to address this service problem, NWSC has come up with a *new connection policy*, which aims to subsidize access and charge consumption at affordable rates. The policy also incorporates network intensification in the poor communities in order to reduce connections lengths to individual households. Consequently, each household in the poor community areas is encouraged to connect a yard tap and pay directly to NWSC. This approach is working very well, so far.

Monitoring technical processes and inputs

“ If you want someone more knowledgeable than yourself to identify a bird, you do not first remove the feathers. ”

- African Proverb

Withholding information reduces the likelihood that problems will be correctly identified. In NWSC, the Head Office has established a monthly magazine called the *Water Herald*. This magazine allows utility managers to describe their innovations, identify binding constraints and receive credit for achieving targets. The magazine captures the ‘dos’ and ‘don’ts’ experienced in the previous month, outlining how peers can copy and adapt good practices and avoid pitfalls. The magazine also displays a monthly performance scorecard detailing the relative performances on key criteria and how much incentive awards were earned by staff and water utility management. Incentives

can involve bonuses of up to 50 per cent of salaries.*

The Head Office also established a ‘checkers’ system in May 2005. Performance criteria are agreed upon and compliance is checked on an unannounced basis. Consistent failure may mean that managers of water utilities lose their jobs and/or responsibilities because of breach of internal contracting obligations.

Monitoring customer protection processes

“ A family is like a forest; when you are outside it is dense, when you are inside you see that each tree has its place. ”

- Akan, Ghana

Water and sanitation are prerequisites of human well-being and crucial ingredients of sustainable economic development. As a result, because of the technical difficulties involved in introducing meaningful *in-market* competition, services have remained largely monopolistic. NWSC has utilised a number of approaches to track customer perceptions/complaints; subsequent incentives are directed at helping managers achieve ‘customer delight’ over services.

There are two major approaches used in NWSC to capture customer complaints and compliments. The first process involves capturing formal customer complaints. And the second mechanism is routine customer satisfaction surveys.

*NWSC salary structured is determined by the Board of Directors and is generally competitive among Ugandan companies (public and private). Coupled with incentive payments, this partly explains why staff are motivated and committed to continuous improvements.

The annual average proportion of customers satisfied with NWSC's service quality has improved from 70-75 per cent in 2000 to 85-90 per cent in 2006. The main service quality aspects, which are routinely surveyed, include pressure at the taps, quality of water, and accuracy of bills, reliability and customer handling by interfacing staff. Inadequacies and shortfalls are routinely identified and used as weaknesses to be addressed in subsequent performance improvement efforts.

Putting emphasis on what works: The right mindset matters

**“ Do not throw away
the oars before the
boat reaches the shore.”**

- Mpongue Proverb

The successful implementation of the performance enhancement initiatives across NWSC's operating units suggests that the conventional wisdom regarding non-performance by public companies is incorrect. The NWSC experience clearly shows the benefits of focusing on what works. There is no single textbook solution to the myriad problems facing water utilities, especially in low income countries. Most of these problems are caused by the local managers, poor organisational cultures, citizen non-payments, and political intrusiveness.

Conventional thinking reflects the view that managerial practices under public management settings are fundamentally flawed, reflecting frustration with poor performance of public companies. Nations often become trapped in a 'low level equilibrium' involving low prices, low quality, slow network expansion, operating inefficiencies, and corruption. The situation is 'stable' in a sense as managers pretend

to manage, their utilities pretend to deliver services, and customers pretend to pay.

When an inefficient water utility lacks cash flow, Treasury funding dries up. This can lead to 'desperate solutions': privatisation. However, an independent consultant for NWSC remarked, "governments should never expect to privatise their problems to international companies and think it will work".¹²

Indeed, the private sector participation experience at NWSC suggests that 'international operators' do not come to manage problems but to earn returns on their investments. They leave the country if their profits slacken.

International operators do not have a monopoly on approaches to improving performance. From NWSC's experience, excellent performance can be 'home-grown', but such an outcome requires a set of conditions. Strong leadership, the right tools (legal framework), appropriate skills, and a clear set of shared objectives. Nevertheless, one wonders why have so few water utilities been reformed and transformed? Current managers have knowledge and skills, but they often lack the incentives to make the extra effort and make some difficult decisions. For many utilities, local managers, are the starting points for improvements in performance.

External opinion should be treated with caution. In some cases consultants actually over-estimate institutional problems, or underestimate the capabilities of state-owned enterprises. Their actual intentions may not be consistent with public statements, as some of them seek investment opportunities for the firms they champion.

Other stakeholders represent international banks, which support the 'policy flavour of the month'. While both groups can provide capital through a variety of arrangements, they can prematurely damage initiatives that the company is planning and/or implementing. Conditionality becomes another word for 'policy being dictated by those who are unfamiliar with issues' on (and under) the ground.

Communicating with such groups, and convincing their representatives that the local team can succeed, requires a substantial investment of time. That investment is necessary. In some cases, the dialogue leads to better plans; in others, the local team is able to persuade these important stakeholders that the highest payoff will come through local talent, insulated from volatile political forces. As NWSC entered the process, managers realized that they needed to identify their roadmap, accept constructive advice, respect differences of opinion, and ensure that company values and objectives were at the centre of everything. International consultants have a role in the process, but the ultimate decisions cannot be delegated to professionals who lack a deep understanding of national institutional constraints and unique local opportunities.

Matching performance improvement initiatives to prevailing conditions

“ The new moon can not come out until the other has gone. ”

- Bahunde or Hunde Proverb, Democratic Republic of Congo

The cycle of poor performance in most utility companies in developing countries has often resulted from inadequate cash generation, which in turn affects payment of staff salaries, basic infrastructure maintenance, network expansion and consequently, employee moral. Without a sense of team spirit and clear managerial objectives the system becomes dysfunctional.

Management is crucial at this stage. Performance targets must be set and incorporate high-impact financial improvement indicators such as cash collections. Once the financial operating

efficiency of the company improves, the accruing efficiency gains will help to alleviate cash-flow problems. This also aids morale.

Once the teams have been consolidated and financial operating efficiency improved, the company can move into more complex internal contracting arrangements incorporating both individual and group commitments. The individual contracting element strengthens individual performance accountability within a team and ensures equity in handling workloads.

Managing organisational rigidities and inflexibilities

“ If the rhythm of the beat changes, the dance step must adapt. ”

- Swahili Proverb, East Africa

Managers in bureaucracy-ridden utilities in low income countries can easily become prisoners: constructing the very bars that hold back good performance. Pretending there is no problem is a natural response: those bureaucratic procedures may once have had justifications. However, the cumulative effect of rules, strict hierarchical reporting systems, and committee approvals imprison initiative and destroy ideas for improving performance. The leadership at NWSC has insisted that managers *'break all rules and procedures'* that do not make sense and which are, therefore, roadblocks to innovation. They are urged to put performance and service delivery to the forefront.

Favouritism, tribalism and nepotism, must be addressed head on, since these are common governance problems in developing countries. It leads to bias in managerial decisions and in most cases demotivates the staff. Managers must earn the trust of colleagues, achieved through high performance, authenticity and transparency in all that is done.



Laying of new pipes by NWSC

Realities about moving towards cost recovery frontier

“ If you refuse the elder’s advice, you will walk the whole day. ”

- Ngoreme, Tanzania

Perhaps the most difficult managerial task in developing countries, after turning the organisation around, involves moving towards full cost recovery. This is seen as a ‘rigid’ position taken by some donors, who argue that water companies must reach this stage as soon as possible. The NWSC experience has shown that premature price increases ultimately choke off reform within water companies.

First of all, the cost-recovery idea is good but politically unachievable in the short to medium term, especially in developing countries. Reaching this frontier requires significant tariff increases (doubling, tripling and sometimes quadrupling). Tariff increases require a thorough structured analysis of citizens’ willingness and ability to pay. We know that water that is trucked to peri-urban areas is much more expensive than piped water, but citizens already receiving service will revolt against substantial price increases.

In developing countries, especially in Africa, economies are still evolving and cannot support huge tariff adjustments. Such actions would lead to customer anger and civil disobedience. This would, in turn, have negative effects on the company’s ability to collect bills, leading to poor cash flows. Such actions disrupt network expansion and severely compromise the company’s ability to equitably distribute water supply services to the citizens of the country.

On the other hand, price freezes do not make sense either. NWSC experience has demonstrated

that there are benefits from following an *incrementalist approach*, indexing the tariff nominally against inflation, foreign exchange and key input price changes. This long term approach takes the tariff to cost-covering levels without causing undue agitation and unrest.

Of course, care must be taken that such tariff changes are not used to finance managerial inefficiencies. Managers should not be in the habit of thinking ‘every time there are cash-flow problems, we should increase tariffs’.

This suggestion means that the issue of full cost recovery should be tackled in a phased manner. Big investments like treatment plants, transmission mains and big network systems cannot easily be financed through revenues generated from tariffs. These can be financed through grants from development partners or government subsidies. However, such grants must be properly targeted and implemented in an efficient manner.

The role of donors

“ Water that has been begged for does not quench the thirst. ”

- Soga, Uganda

There is evidence that NWSC is on the right track to meet its operational costs, but the delivery of water and sewerage services is too expensive for NWSC to handle by itself. Therefore, the corporation will continue to request donor support for its long-term capital development projects in order to improve its services to the rapidly growing urban population. The corporation has earned credibility through its performance. Donor confidence and support have led to increased long term capital investments being incorporated in the Medium Term Expenditure

Framework financed by government and donors.

If the present momentum of NWSC-donor collaboration continues, the prospects are good for continued reform and, ultimately, the creation of a viable commercial enterprise.

Concluding remarks

“ There are forty kinds of lunacy, but only one kind of common sense. ”

- African Proverb

The lessons from the NWSC experience show the value of experimentation and decentralization without losing contact with experts at the centre.

A hard working and committed Board of Directors is necessary if an organisation is to make progress. In addition, a dynamic utility management and staff team motivated by clear vision, mission and objectives is fundamental to success and necessary to secure government and donor commitment to support key initiatives.

Monitoring both technical processes and customer relations is very important in water utility management. It requires prompt responses, managerial discipline, reasonable flexibility, and understanding on the part of the monitor. A customer complaint does not always mean that the operator is underperforming. It is the *speed of response* and minimisation of repeat complaints that determine the operator's efficiency. On the other hand, monitoring of technical production processes must not interfere with the operator's decision making portfolio. Micro-management is likely to significantly hamper managerial innovation.

Outsourcing is not a panacea. While it can be a good means in itself, it must be well conceived and instituted at a time when the clientele managers themselves feel that they can manage

but simply have peak workloads that make them less productive. If outsourcing occurs because local managers are inadequate, the problem will not go away. The utility is better trying a 'we can do it ourselves' approach.

There is a need to diagnose the company's performance. If the financial performance and teamwork among managers and staff is low, leader/managers need to start with simple performance improvement programmes, incorporating tailor-made incentive plans and targets. In tandem, the teams need to be coached and developed to improve performance. It is from this point that the company can progressively move into more complex internal contracting arrangements incorporating individual and group commitment plans.

While implementing these performance improvement plans, managers ought to know how to deal with internal managerial rigidities and inflexibilities that hamper performance. These can be potential performance barriers if the managers do not have the self confidence to 'demolish' them wherever they do not make sense.

Finally, realities about moving towards the cost recovery frontier need to be addressed. There are not many water companies that can easily attain this performance level in developing countries. The movement towards such frontier needs to be sequenced to minimize adverse effects on the citizens. Targeted subsidies and grants can be used to fill financing gaps, while moving towards cost recovery.



3. Democratisation of water management: The Tamil Nadu experiment with governance reform

Abstract



By V. Suresh and
Vibhu Nayar*

Tamil Nadu suffers from water scarcity caused by a combination of over-exploitation and low rainfall. In 2003 the water utility began a process of change that resulted in a shift to community participation and decentralisation that focused efforts on reaching the unreached and conserving water sources.

The mindset that had led to the crisis was altered through workshops in which a free exchange of ideas was encouraged. The first major transformation was the consensus that surrounded the Maraimalai Nagar Declaration. This formed the basis of a vision of equity and sustainability that has inculcated the workforce and already generated tangible results.

It is clear from this example that solving water crises does not require a turn to the private sector. The solution lies with better governance of existing resources, both human and water.

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Introduction

“(The) water crisis is largely our own making. It has resulted not from the natural limitations of the water supply or lack of financing and appropriate technologies, even though these are important factors, but rather from profound failures in water governance...Consequently, resolving the challenges in this area must be a key priority if we are to achieve sustainable water resources development and management.”¹³

- UNDP on water governance

While globally there is wide acceptance about the existence of a water crisis, the prescriptions which are put forward to remedy the situation have a time-jaded weariness about them. Many experiments have been tried out: from the typical ‘increase the investment’ and upgrade technology solutions to later strategies like community participation, shifting from supply driven to demand responsive functioning, changing the role of government functionaries from being ‘providers’ to ‘facilitators’ and moving towards greater decentralisation in water supply function.

While some of these strategies may have been individually productive, overall the general impact on the water sustainability and water crisis has been a great disappointment. This paper is about a change effort to deal with the entirety of the water crisis from a different perspective which was tried out in the southern Indian state of Tamil Nadu.

The crisis of water in India

According to the Government of India, coverage of safe drinking water to the rural populace increased from 18 per cent in 1974 to 95 per cent in 2002 through huge investment. A key component of water policy in the early 1970’s, when large scale water supply schemes were launched nationally, was the strategy to tap ground water. The first revolution in water provision, hand pumps, was swiftly followed by piped water, powered pumps and overhead tanks. Communities and engineers embraced the technology centred, investment-heavy systems as the panacea for water supply problems.

The consequent strain on ground water aquifers,* better described as an ‘assault’ on the natural water system, occurred at such a speed that there was no way the water table could recharge and refill itself during monsoons. As one commentator describes it, “The triumphant success of well-drilling in India is now helping to shape a potential catastrophe”.¹⁴

* To illustrate, nationally the number of power driven pump sets tapping ground water rose from around 25,000 in the 1950’s to more than 20 million by end of 20th century. (Planning Commission Report).



The crisis of water in Tamil Nadu

In Tamil Nadu, 96 per cent of all sources of water are based on groundwater. The increase in piped water schemes across the state in the eighties and nineties has had a massive impact on ground water tables. As of 2004, of the 385 water 'blocks' in the state, 138 were identified as over-exploited, 37 as at critical levels, 105 as semi-critical and 8 as saline. Only 97 blocks were identified as safe. Meanwhile, of the total 81,587 rural habitations in the state, about 27 per cent are affected by quality, and of these, about 25 per cent do not have safe sources.

Over-exploitation and droughts have reduced the annual per capita availability of fresh water to 840m³ in Tamil Nadu. This is much below the national average of 1200m³ and is also below the 1000m³ level which is the international measure of 'water scarcity'. Severe water stress will impact long-term availability of drinking water and in turn the productive livelihoods of the people of the state, especially the vulnerable.

The challenge of water security became apparent only recently. Despite occasional good monsoons, the first five years of the new millennium witnessed the cumulative impact of years of poor rainfall in Tamil Nadu. Near drought conditions failed to recharge already precarious ground water tables. Unregulated mining of water and un-coordinated use for irrigation and industry only exacerbated an already precarious situation.

The technocratic approach of the water providers and an absence of a sense of ownership by the users led to a lack of involvement of the users and stakeholders in water management and a reluctance to participate in ensuring sustainable drinking water use practices.

Coupled with an outdated approach and complaints of inefficient service delivery, the water crisis presented itself as a complex multi-dimensional problem calling for inputs from a variety of disciplines, perspectives and experiences.

The challenges of ensuring water governance reform

Whatever the nature of sector reform initiated in the last two decades, of the many problems characterising the water crisis, four stand out:

1. Exclusion of marginalised people – the unreached.
2. Inequity in the distribution of water.
3. Sustainability – management of water sources and conservation of water bodies and sources.
4. An uninvolved technocracy with an entrenched mind set.

Any attempt to bring about water sector reform would need to address these four core areas. It is within this framework that the governance reform in Tamil Nadu Water Supply and Drainage Board (TWAD) was undertaken.

Democratising water management: The process

TWAD has exclusive mandate regarding water delivery for the entire state of Tamil Nadu and supplies water to villages, towns and all cities barring the metropolis of Chennai.

TWAD tried out the conventional strategies of increasing investments, improving technology and community centred water schemes. But these were not effective to deal with increasing water scarcity. There was a growing realisation that something was wrong with existing perspectives. This propelled a rethink within the state level utility resulting in the adoption of the democratisation programme in TWAD.

TWAD was left with no choice but to launch a serious review of its relations with the community and other stakeholders. Critical was the willingness of individual engineers in the organisation to re-examine the way they worked with the community.

TWAD launched an ambitious process of personal change and institutional transformation, covering the entire state-wide department.

Nearly all engineers took part in five day intensive residential workshops.

The change process was structured around interventions at three levels:

1. Workshop: Space for exploration

Where engineers could critically examine, explore and debate personal, professional and institutional issues.

2. Village/Community: Site for experimenting with learning

The place where engineers forge new relationships based on equality, equity, democracy, respecting dignity, ensuring the unreached are reached and emphasising collective solution finding.

3. Workplace: Sphere for internalising learning into formal systems

The workplace, where the formal system had the changed values, norms and visions of functioning rooted.

To ensure a free exchange of views, uninhibited by hierarchies, a Tamil tradition called the *koodam* was adapted to present-day circumstances and made the basis for interaction amongst all participants.

Between May 2004 and June 2006, 350 engineers, from the senior to the youngest, were involved in core five-day workshops. The aim was to evolve a broad consensus among all engineers to accept the imperative of change management. Initially this was at a personal level and thereafter with the stakeholders and community at large, around issues of community ownership, participation and democratic functioning.

As the change process gathered momentum, a change management group was formed to study the process within and outside the organisation. Care was taken to ensure that the change management group was as diverse as possible, accommodating people from different age groups, experiences, educational backgrounds and regions.

To ensure a free exchange of views, uninhibited by hierarchies, a Tamil tradition called the *koodam* was adapted to present-day circumstances

Change processes: Intervention design

There were three broad areas for intervention.

1. Attitudinal transformation

- Among individuals – the nature of relationships between individuals, the Water Board and the community at large.
- Within the organisation – how the organisation relates to ‘consumers’.
- Among key stakeholders – to include changes in the way stakeholders perceive the relevance and importance of the Board and the services it offers.

2. Perspective changes

The priority must be ‘reaching the unreached’ in a manner ensuring equity and social justice. Intrinsic to this process is the shift from accepting total control of policy making and implementation by a single government institution to the acceptance that there are several players in the field,

including the citizens as water users, and a shift to a sustainability enhancement approach to the water system.

3. Institutional transformation

Changing institutional culture of the organisation by internally focusing on improving democratic functioning and respect for individuals and externally respecting the dignity, self-respect and self-dependence of all persons and groups who together, have to partner the task of preserving nature and water systems for future generations.

**The priority must be
‘reaching the unreached’ in a
manner ensuring equity
and social justice**

Maharajapuram Dalit Settlement



Critical issues: Dimensions of the challenge

Eight key areas were identified as critical:

1. Guaranteeing supply of an adequate amount of safe drinking water to all citizens of the state in a manner ensuring equitability without endangering the water system.
2. Encouraging and enabling active partnerships between all stakeholders with a goal of building sustainable water systems.
3. Institutional transformation of management systems, to ensure water systems meet new norms of conservation; appropriate use of technology, knowledge and skills.
4. Reviving traditional water management systems while empowering stakeholders and the local community to play a more active and intense role in managing water systems.
5. Bringing about 'Convergent Community Action' by bringing together the state service provider with an informed, involved and active community.
6. Creating a sense of common ownership aimed at enabling sustainability of water systems.
7. Focusing on capacity building of different stakeholders including government officials, women and local communities, local bodies, NGO representatives and elected representatives.
8. Strategic use of state agencies as the starting point to transform the organisation into a more people focused, community responsive and publicly accountable organisation.

Outcomes

The first major breakthrough came in a workshop in 2004 with what became known as the Maraimalai Nagar Declaration (see box below left).

The momentous significance of the Maraimalai Nagar Declaration becomes apparent when we consider the fact that TWAD depends on revenue from the schemes that it implements. So implementing the declaration would result in reduced earnings, making TWAD more vulnerable.

Initial opposition to the declaration was overcome through discussion and slowly a consensus evolved that it was not only acceptable but also essential for maintaining a sustainable water system. The solution to water scarcity is not to be found from another borehole.

The Maraimalai Nagar Declaration:

- We will evaluate the existing schemes and ensure that the schemes are put into optimal use first
- Then rehabilitation will be undertaken wherever necessary along with revival of traditional sources
- This will be taken up before taking up any new schemes in the block
- We will aim at 10 per cent increase in coverage with the same budget.

The solution to water scarcity is not to be found from another borehole

The Change Management Group

As changes spread and their impact became felt, there had to be a system in place to coordinate, plan, monitor and support the projects; the state level Change Management Group (CMG).

The spirit of the koodam bound CMG members, all of whom are volunteers. The CMG was representative, its 43 members coming from a cross section of the engineering community.

Creating a new vision

A new vision was required. The CMG produced a draft which was finalised after circulation and discussion at districts and village *panchayat* levels. (See box below).

The vision clearly went beyond the realms of what a water engineer would generally be engaged in. For the first time, the utility's functionaries saw their role as guardians of not just water resources, but of nature itself.

For the first time, the utility's functionaries saw their role as guardians of not just water resources, but of nature itself

Accepting a broader mandate for themselves freed them from viewing their roles in a narrow, limited manner allowing for greater creativity and innovation in their functioning.

To breathe life and to give concrete shape to the Vision, in the next phase, the CMG took each component of the Vision and created a detailed template of action to guide the water engineers, known as 'Total Community Water Management' (TCWM).

Our Dream: Secure water for all, forever

Our vision

- 1. Conservation of nature as a guarantee for future water**
- 2. Vibrant, revived and recharged water bodies**
- 3. Assured, equitable and sustainable water for all**
- 4. Successful community managed water supply system through active participation including women and the poor**
- 5. Safe disposal of solid and liquid waste for a clean and healthy environment**
- 6. Cost effective technology options to ensure local maintenance and sustainable financial management**
- 7. Formation of a Common Water Regulatory Authority for judicious use of water for all sectors**



A well supplying water to the Endal village in Tiruvannamalai District. The well had been long forgotten and unused until, through the Change Management process, a senior citizen remembered the existence of the well. Today, the well has become the main water source for the entire village. One young girl says, “We now do not need to cycle 5kms twice daily to fetch water. Water is now coming to our street and has changed not just our water supply but our lifestyles itself.”

Encompassing the Vision, the CMG sets itself to work with the community towards:

- improved service delivery
- protecting and improving the source potential
- reviving traditional water bodies for other uses and recharge
- ensuring equitable water supply especially to weaker sections
- a clean environment in and around water points
- regular disinfection practice and periodical water quality testing
- better practice for low user cost
- judicious use of scarce water and the undertaking of conservation measures

- practicing waste water reuse and recycling
- ‘reaching the unreached’

The state-wide projects involved about 80 Rural Water Supply sub divisions of TWAD Board. The focus of the project was to take up a holistic approach to water supply by involving the community in formulation, implementation and subsequent management of the water supply system including reviving of traditional practices. What follows is a brief summary of the impacts these changes have made in the 140 village *panchayats* from which data was available.

Shift 1: Choice of technology option

An important indicator of the impact of the change process is indicated by the choice of technology opted by the village *panchayats* as advised by the TWAD engineer, in the 147 village *panchayats*. Each pilot village had water supply levels of less than the government stipulated 40 litres per capita per day.

From the department's perspective what is most important is the reduced number of villages choosing investment heavy schemes, constituting only 41 per cent of those selected. In all, 47 per cent of schemes were lower cost alternatives. This was breathing life to the Maraimalai Nagar Declaration. As we shall shortly see this approach was to have a major impact in the cost effectiveness of schemes.

Shift 2: Finding more cost effective solutions

Nearly 50 per cent of schemes are not capital intensive, focusing mostly on rehabilitation: extending pipeline, mini power pumps or hand pumps. This reflects a different way

of decision-making, based on community ownership, choice and willingness to manage the operating costs.

One of the most significant impacts, which portrays the inherent potential of this process, is the reduction in the capital cost per household by 40 per cent in the project villages. It has been found that the average cost per household in non-pilot schemes was about Indian Rupees (Rs) 4436 whereas in the pilot batch the average cost is only Rs1555. In real terms this means the possibility of additional coverage of 400,000 households every year, within the same budget.

Shift 3: Towards community involvement

As a measure of the involvement of the community and its sense of ownership, the project has envisaged 10 per cent of the capital cost as a community contribution, in cash or labour. Over a period of one year, the community has contributed Rs14.2 million in cash (US\$300,000). Over 56,000 households have contributed to implement water supply

Table 2. Nature of scheme opted in CMG villages

Description	No. of Schemes	Percentage
Hand Pump, Mini Power Pump	28	8
Individual Power Pump	128	39
Extension of Pipe Line	23	7
Expanding existing sources	33	10
Rehabilitation of old schemes	97	30
Combined Water Supply Schemes	8	2
Scheme Improvement Programme	13	4
Total	330	100



Raminahalli Community Sanitation Complex

or recharge schemes in 145 village *panchayats*. One of the more significant features has been better targeting of villages in terms of those truly requiring improvement.

In the project about 65 per cent of the schemes have targeted villages with more than 50 per cent of the population below the poverty line. This is in sharp contrast to the generally low targeting of regular schemes.

Shift 4: Towards savings

In line with the Maraimalai Nagar Declaration many of the districts have taken up vigorous scrutiny of all investment proposals in the search for sustainable and cost effective solutions. The savings over the annual budget have been as high as 18 per cent of the regular budget in Namakkal district, 36 per cent in Tiruvallur district and 44 per cent in Erode district.

The finiteness of water availability was a constant message of the project

Shift 5: Towards conservation

The finiteness of water availability was a constant message of the project. The community was encouraged to take up ground water recharge activities including revival of traditional water bodies. Studies measuring the status of water availability were carried out in all the 145 village *panchayats* and shared with the community. The community also participated in the physical implementation of 45 ground water recharge schemes. In all the project villages special *Grama Sabhas* (Village

Assemblies consisting of all the people residing in a village)* were convened on 2 October and 26 January to take up cleaning and revival of traditional water bodies.

An important component of this shift was also the initiation of many programmes leading to better waste water disposal methods, which was identified as one of the essential elements in the new Vision.

Shift 6: Towards reducing operations and maintenance expenses

Adoption of appropriate technology options, ensuring timely maintenance thereby reducing potentially expensive replacements in the future, regulating hours of pumping and supply, maintaining both adequate quality and quantity all had an effect on the nature and functioning of water systems at each village. The regulation of pumping hours included (i) ensuring that the bore pump was not too powerful and (ii) maintaining a cap on the hours of pumping based on ensuring a balance between the quantity of water available in the source and the quantity required for supply. This had a major impact in reducing the hours of pumping thereby reducing electricity costs. Equally importantly, from the angle of sustainability of water source, the regulation of pumping hours ensured the replenishment of the water source.

It is noteworthy that the operations and maintenance expenditure in these villages reduced by about 25 per cent while the revenue generation improved by 70 per cent leading to improved financial sustainability of the schemes.

Shift 7: Towards sustainability

Apart from choice of appropriate low cost, people friendly technology, the Total Community Water Management initiative led to

* The eligible members among the grama sabha in the village elect the 'grama panchayat' or village local body, the lowest tier in the constitutional hierarchy of elected bodies stretching from village to Parliament.

a plethora of innovative schemes. For example tree plantations were taken up in a big way and thousands of saplings have been planted. In Palangarai village, Coimbatore district, more than 7,000 saplings have been planted with over 80 per cent survival rates. This, with the construction of almost 32 check dams, has led to the water table in the village rising up from 1200 feet to 800 feet.

the Total Community Water Management initiative led to a plethora of innovative schemes

Other efforts have included revival of water bodies in the form of desilting water tanks in over 120 of the 140 villages. Rainwater harvesting was revived and restored in 90 per cent of the villages and new forms of solid and liquid waste management were introduced. Soak pits, kitchen gardens and the construction of septic tanks, not the domain of the regular engineer, became the norm.

Other results

The growing confidence of the local community with the engineers translated into direct involvement in the water supply system. As the results of an independent impact study sponsored by UNICEF showed, the impacts of a changed perspective of functioning was not only felt by the local people in the form of changed behaviour and response from the water engineer, they also could see the causal link between that and the improvement of water supply in their villages.

The UNICEF study on 'The Impact of Change Management Training on TWAD Engineers' was conducted by AJ James. James notes that, without any investment by the government, and with public participation, the following outcomes have been reported so far:¹⁵



Thirupulani well for conserving run off from check dam

- Formation of Village Water Supply Committees for self-management of water supply in all 145 village *panchayats*
- Roof rainwater harvesting in 90 per cent of all households with public participation and contribution
- Reduction in O&M expenditure by 10-30 per cent by reducing pumping hours and supply hours to match actual requirements
- Revival of around 140 traditional water bodies
- Segregation of solid waste into degradable and non-degradable wastes and disposal into common compost yards or at household level in about 80 villages
- Construction of household soak pits in about 50 villages

- Tree planting in schools, backyards and along streets by the community (especially children) in 110 villages

Reaching the Unreached: Response of Women and Scheduled Castes (Dalits)

The most important finding of the Impact Assessment study relates to 'reaching the unreached'. Thus, in the response of women's groups in the pilot villages where change experiments had been implemented, 76 per cent reported that the water engineer visited the village regularly, met and interacted with them; 84 per cent reported that the engineer behaved as a community member; and 61 per cent that all this led to joint identification and actual implementation of solutions.

About 78 per cent of the Dalits in the pilot villages reported that the water engineer was regularly visiting the Dalit habitations; 80 per cent said that the engineer provided them the space and encouraged them to talk and participate in village meetings; and 57 per cent reported that action was initiated on solutions identified for problems of water supply.

The study highlighted the importance of institutional and policy support to the water engineers to ensure that the gains made in the last two years were consolidated and taken forward. Equally, the study emphasises the need to focus more attention on deeper levels of community involvement and participation, with care to ensure involvement of marginalised groups.

Water Operators Partnership or Public-Public Partnership

The full importance of the TWAD democratisation experiment is gauged by the fact that TWAD engineers were invited by two other State level water utilities, the Maharashtra Jal Pratisthan and the Jharkand State Water department to conduct planning interventions in their states. The government of India and UNICEF also organised a one-day meeting to share the experience at the end of which a National Level Change Management Forum was formed to chart out future change efforts in all other states on lines similar to the TWAD paradigm shift. There have also been a couple of invitations from water utilities of other countries seeking the help of the Change Management Group of the TWAD Board.

A Dalit part of the Endal village in Tiruvannamalai District





Left: Children and elders from Kadirampatti Village in Erode Taluka. The children are from the Dalit community. This picture was taken as part of a visit by the authors to see the response of the Dalit community to the changed water supply situation.

Greater transparency, openness and democratic functioning threatens not local communities but power elites

Conclusion

Looking back at the three years since the introduction of the new paradigm, much has been achieved, but much more needs to be done. Several issues are clear.

Future interventions seeking to address the water crisis cannot and should not follow the time worn, stereotyped, and jaded way of seeking and pumping in new investments of money and technology while ignoring the more pressing issue of reforming water governance. The issue of governance ultimately is also political as it concerns dealing with issues of power, authority and money. Greater transparency, openness and democratic functioning threatens not local communities but power elites, inside and outside government be they officials, planners, politicians and the new breed of professionals who are now ubiquitous – consultants.

The work in Tamil Nadu shows that investing in governance reform is so hugely cost effective – the training costs are pitifully low compared to the cost of investing in technological options. Then again, when solutions are sought to be

found from within – be it within the culture and practice of the water utility, or from within the traditional and cultural practices of communities - new bonds or relating are forged; bonds which are based on the intuitive and learned genius of the land, which is the only way the change process can get anchored and grow.

This then should be the thrust for international agencies - to persuade, and if persuasion does not work, to pressure governments to initiate measures to bring about greater attention to the three legs of the new paradigm:

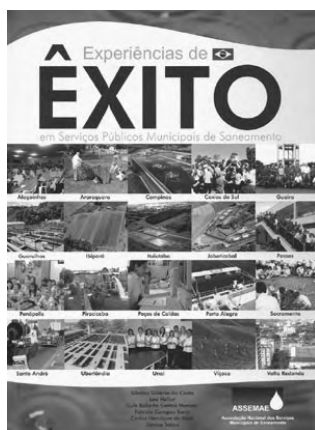
- Reaching the unreached
- Equity
- Sustainability

It is only through such attempts that we can ensure that there are drops of water for our grandchildren and their grandchildren. As one water engineer of the TWAD Board remarked, “It’s the only gift we can give to the unborn fifth generation who we will never see but who will experience the wisdom of the path we have now begun to travel”.

Are international institutions, intelligentsia and concerned citizens of the world listening?

4. Successful experiences in municipal public water and sanitation services from Brazil

Abstract



By ASSEMAE*

Delivery of environmental sanitation is patchy in Brazil with the north and northeast of the country suffering the poorest service. While the debate about how to improve the situation has been going on for two decades at Government level, society has shown its strength by carrying out various successful projects throughout the country. These projects have 'swum against the tide' of privatisation and encompassed a vision of universality, equity and quality. Four case studies are presented here that reveal the techniques that have successfully created change. These have been adapted from the book 'Experiências de Êxito em Serviços Públicos Municipais de Saneamento.'*

* ASSEMAE is the National Association of Municipal Sanitation Services in Brazil. It was formed in order to improve the capacity of municipalities to outline their own destinies, integrating environmental sanitation with local policies.

* Environmental sanitation is a translation from the original Portuguese and as a phrase refers to the provision of water, sewerage and waste water services.

National overview: The challenge

In Brazil universal delivery of environmental sanitation* is hampered by a low level of service coverage and quality, a lack of a legislative-institutional framework and the low level of public investment. The need for environmental sanitation can be seen throughout the nation, although the major problems are concentrated in the north and northeast regions, in small localities, both in rural areas and within the periphery of big cities.

The current situation of water supply and sanitation in Brazil is listed in Table 3 below. Sewage treatment in particular is a national shame.

Water supply and sewerage services in Brazil are provided through three mechanisms (see table 4 below).

Over the past decade, there has been a real lack of consistency regarding the investment of resources in the environmental sanitation sector.

* Environmental sanitation is a translation from the original Portuguese and as a phrase refers to the provision of water, sewerage and waste water services.



The previous government of Fernando Henrique Cardoso, whose economic policy was ruled by the International Monetary Fund, suffocated the public sector while privileging the private sector. However, since the beginning of the Lula administration in 2001, the public sector has received R\$5.2 billion (US\$2.4 billion), approximately 19 times more than under its predecessor.

Table 3. Water supply and sewage collection in Brazil

Table 3. Water supply and sewage collection in Brazil		
Water supply	National 95.4%	South 98.9%
		North 69%
Sewage collection	National 50.3%	South 70.7%
		North 8.5%

Table 4. Water provision mechanisms in Brazil

	Provision through State companies	Provision directly via municipalities	Provision via private companies
Water	71%	28%	1%
Sewage	14.5%	84.5%	1%

Though current resources are far higher than those released by previous governments, there needs to be permanent investment in the sector. The National Secretariat of Environmental Sanitation estimates that 0.45 per cent of the Brazilian GDP for 20 years would be necessary to give access to water supply and sanitation for everyone. This would be achieved if the rates of resource allocation stay at the levels set by the current federal government and providing there is an improvement in the administration of our public services.

While Brazilian society has been debating the terms of a national environmental sanitation policy for almost two decades without reaching a consensus, society has shown its strength by carrying out various successful projects throughout the country. These experiences have shown the ability of public authorities to meet challenges in a creative and democratic way. And they have been recognised in the national and international arena.

They are a demonstration of the ability to 'swim against the tide' and strengthen local authorities, especially since in the 1970s the country adopted a model which was both centralised and distant from the population, that is to say the users of the services.

ASSEMAE

In the 1970s, many municipalities, especially those in metropolitan regions, gave up the administration of environmental sanitation services, conceding them to state sanitation companies.

The National Association of Municipal Sanitation Services (ASSEMAE) in Brazil was born out of resistance to this policy of undermining local administration. It was formed in order to improve the capacity of municipalities to outline their own destinies, integrating environmental sanitation with local policies.

ASSEMAE's paradigm is social participation – the opening up of public services to citizen control

Today ASSEMAE's paradigm is social participation – the opening up of public services to citizen control. ASSEMAE intends to contribute to the process of formulating a public environmental sanitation policy, which meets the principles of a fair and democratic society for Brazil.

These principles are:

1. **Universality** - universal provision of environmental sanitation to the target population;
2. **Equity** - equality in the quality of services, irregardless of the socio-economic conditions of the user and the urban reality where he/she lives;
3. **Integrity** - provision of environmental sanitation services with an integral vision that considers such provision as a set of actions, involving at least, water supply, sanitary sewerage, public hygiene, and rainwater drainage;
4. **Municipal responsibility** - recognition of and respect for municipal autonomy, in line with the constitutional requirements;
5. **Public management** - the understanding that environmental sanitation services are public by definition, provided by an entity public in nature, organised as a direct administration body, autonomous government agency, public company, or joint stock association. In the latter case, the decision-making process must rest in the hands of those responsible for the service;

6. **Participation and social control** - an indispensable prerequisite to guarantee the transparency and legitimacy of diverse interests as well as the accessibility of environmental sanitation services and infrastructure by the population;
7. **Cross-sectoral** - integration of planning and action associated with urban development, public health, and environmental and water resources. This is indispensable for the success of policies and actions, which are complex by nature;
8. **Service quality** - includes regularity, continuity, efficiency, safety, reliability, courtesy and moderation of costs;
9. **Access** - tariff policy should be compatible with the users' purchasing power according to the practice of price moderation.

Here follow four case studies from around Brazil: Alagoinhas, Guarulhos, Unai and Porto Alegre. Each is based on the ASSEMAE principles.

Alagoinhas

In 2001, Alagoinhas was the first Brazilian municipality to approve its own environmental sanitation policy, produced participatively through a conference. The Autonomous Water and Sewage Service of Alagoinhas (SAAE), covering a population of 138,366, promotes sanitary sewerage projects using social mobilisation techniques and gaining the participation of the community.

In January 2004 the media referred to Alagoinhas as one of the best cities in the north-east, just four years after being declared the worst. Described as a 'Revolution in Chaos', this change had its heart in the participation and social control process instituted by the municipality.

Described as a 'Revolution in Chaos', the media referred to Alagoinhas as one of the best cities in the north-east, just four years after being declared the worst

One example of the change was the fall in infant mortality from 46 to 23 per 1000 live births, coinciding with a more than four fold increase in SAAE investment in environmental sanitation, this money coming from the tariffs.

The process began in 2000 with the first municipal conference on environmental sanitation. This led to the creation of the municipal policy on environmental sanitation, voted into law by the city council as the first law in the country that was completely developed through social participation.

Professor Luiz Roberto Santos Moraes of Bahia University points out that: "Conferences are effective forms of mobilisation, they allow the creation of alliances in society through resistance against the neoliberal model of service management, the support to democratic policies on health, sanitation and environment and the construction of citizenship."

In order to develop an integrated project on public policies and social control in 2003, Alagoinhas called the first municipal cross-sectoral conference on health, environmental sanitation and environment in the country. The delegates unanimously agreed that policies should be guided by the principles of universality, equity, the integration of services and cross-sectoral cooperation. They also recommended that public authorities should respect the users' capacity of payment when calculating the tariffs, which should cover both investments and the services' operational and maintenance costs.



This water station in the Alagoinhas municipality brings many benefits to the rural community

Due to the lack of investment Alagoinhas had practically no collective sanitary sewerage system before the end of the 1990s. The census in 2000 revealed that while 95.7 per cent of the city's residences had toilets or bathrooms, 38.3 per cent of the residences discharged sewage into rainwater drainage network, 19.7 per cent into concrete cesspits and 39.1 per cent into rudimentary cesspits.

In 2002, the regulation of SAAE was changed and a model of tariffs for the sanitary sewerage collection service was established, corresponding to 40 per cent of the water tariff.

The sewerage system of the Fonte dos Padres neighbourhood was constructed in 2003. It is composed of 3,397 meters of condominium network, 1,431 meters of basic network and a treatment plant composed of an Imhoff tank and a macrophyte-bed. This is a widespread

system in Europe and in North America, where micro-organisms together with vegetation roots recycle organic matter, nitrogen, phosphorus and remove pathogens.

The installation of the condominium network was carried out through a participative sanitary education process. The simplicity of the network and the robustness of the treatment units result in low demand for maintenance. From 2001 onwards SAAE engaged in the development of basic sanitary sewerage projects. There are already nine systems planned in order to connect 66,152 residents, which represents 57.6 per cent of the city's population.

SAAE and the city hall launched a wide programme to regularise of clandestine water and sewerage connections. Participants now have their water bill as a proof of address and it is required to get credit in the local market.

Guarulhos

Strong social mobilisation brought Guarulhos to the frontline of water management in the country. It was the first municipality to contribute R\$0.01 per cubic meter of water collected for the rehabilitation of the hydrographical basin of the Piracicaba, Capivari and Jundiai Rivers. Environmental sanitation has a primary role in the fight to clean up the basin, which supplies the metropolitan area of Sao Paulo with water. Guarulhos fights for its autonomy and tries to strengthen regional integration for the administration of water resources.

Five years ago, water shortages were part of the daily life of many neighbourhoods in Guarulhos; some areas faced periods of up to 15 days without supply, leading to public protests. As the second most populated municipality in Sao Paulo, Guarulhos decided in 2001 to concentrate all efforts and resources on improving water supply.

Five years on and the water supply scenario in Guarulhos is very different. And this is despite the municipality's low water availability due to it being situated in a high altitude marginal area of the hydrographical basin, thereby requiring SAAE to buy, in bulk quantities, around 90 per cent of the water distributed in Guarulhos, from the state environmental sanitation of the State of Sao Paulo (SABESP).

Even so, SAAE managed to establish a fixed rotation of water supply, normalising it completely. The drilling of deep wells, the inauguration of a new water production system, the extension of the distribution network, the installation of boosters and the construction of central reservoirs in Cabucu and the Sao Joao Garden, all contributed.

Approximately 94 per cent of the population of Guarulhos receives drinking water through the network. From January 2001 to September 2005, around 188.5 kilometres of the network and 49,495 water connections were installed.

For sanitation engineer Joao Roberto Rocha Moraes, superintendent of SAAE of Guarulhos, municipal autonomy is fundamental for progress in public administration since "it allows the municipality to design its development in a totally independent manner, which is not possible in the case of a state company...With



Rosilda de Moura Montarroios
Resident of Continental Park,
Guarulhos for about 12 years

Water Supply in Guarulhos

then:

"Water shortage could last for a whole week. Sometimes they would release water at night and even then just once a week. When a mobile water tanker would arrive in the neighbourhood there was always a fight. I think there were about three or four protests per month. I had two water tanks and I still stored water in buckets."

now:

"The water supply improved gradually in the last five years and our problem has nearly been resolved. Today, there are no water shortages. Nobody complains anymore. I even had one of my water tanks removed. I believe a good job was done. Even though the neighbourhood has grown a lot, there are no more water shortages."



Laying pipes in Guarulhos

autonomous administration we gained agility; all revenues stayed in the municipality. Furthermore, our autonomous administration permits investment in deprived areas which do not generate the returns that the state company usually expects," he affirms.

With the creation of a specific body, the Division of Sanitation in Slums, SAAE improved the quality of life in those areas by introducing water supply and sanitary sewerage collection services. Besides infrastructure work, SAAE also carries out extensive socio-educational activities, increasing the community's awareness about issues related to environmental education, rational use of water, and benefits of the installation of water supply and sanitary sewerage collection systems. The activities aim to encourage popular participation with SAAE and to strengthen citizenship.

SAAE also carries out extensive socio-educational activities to encourage popular participation and strengthen citizenship

The superintendent of SAAE in Guarulhos explains, "the association of sanitation policies with other public policies is one of the strong points of the autonomous service. In Guarulhos, the actions were very promising since they brought together several organisations. When flooding problems seemed impossible to solve, the Secretary of Works, National Guard, SAAE, and Proguaru, a joint stock company with public majority, all acted together. They cleaned and desilted streams allowing the city to pass practically unharmed through the flooding period, compared to what regularly happens in the metropolitan area. This was only possible because the attention of bodies such as SAAE was focused on the actions of the municipal administration. This is the big advantage when you work autonomously."

Water storage in Guarulhos



Unai

The municipality of Unai in Minas Gerais treats 100 per cent of the consumed water and 100 per cent of the collected sewage. Unai continuously invests tariff resources to mirror the steep growth of the urban area. In 10 years, the infant mortality rate has been reduced by 50 per cent in the municipality.

Between 1967 and 2005, the urban population of the municipality of Unai grew by 358 per cent. The great challenge for the municipality was to follow this steep urban population growth, which was double the national average growth, while providing high quality public services.

This challenge was met. Despite the growth, Unai achieved universal water supply and collection and treatment of sanitary sewage. This is reflected by the infant mortality rate fall

(annual infant deaths per 1000 live births) in the municipality of Unai, from 32.8 in 1991, to 16 in 2000.

One of the problems resulting from the expansion of the municipality was the formation of slums. These obstructed SAAE's performance. The situation improved after signing an agreement with the Public Ministry, which aimed to organise water supply by installing connections in slums.

In the 1960s, Unai was not any different from hundreds of other cities in the interior of Brazil. The water consumed by the population was collected in cisterns and the sanitary sewage disposal was unregulated.

The employees have an excellent opinion regarding the institution, feeling satisfied and proud to be part of SAAE's team

Seminar for water workers in the Unai municipality



The solution came with the inclusion of Unai's municipality in the 'Water Supply for Small Communities' programme, which was implemented in 1966 through a contract signed between the Brazilian Government and the Inter-American Development Bank.

The population, represented by the Local Authority, applies pressure to keep tariffs stable. The tariffs applied by the Autonomous Service represent 3 to 4 per cent of the minimum wage.

Tariffs have been the main revenue source for both investment and the provision of service. The historic percentage of tariff revenues directed to investments has remained constant at around 20 per cent.

The Municipal Sanitation Fund was created in order to define how much of the revenue would be directed exclusively to sanitation investments or expansion works. The universal provision of sanitary sewage treatment was reached with investments in the order of R\$3 million (US\$1.3 million) obtained through the Ministry of Environment.

The main source of water is the Preto River which supplies 95 per cent of the urban population of Unai. On average, 200 litres per second are collected from this river, which is well below the critical flow rate of 5,000 litres per second that is used to calculate the maximum collection rate.

SAAE has been guaranteed a collection rate of 396 litres per second until 2019. The other collection points of the municipality, administered by SAAE, also have a defined collection rate and are capable of supplying the system for at least 10 years.

A survey involving the employees is carried out periodically to evaluate the 'organisation's atmosphere'. The employees have an excellent opinion regarding the institution, feeling satisfied and proud to be part of SAAE's team. When problems are identified, management tries to assess and alleviate them in order to create a better working environment.

The Autonomous Service has been collaborating with the municipal Secretary of the Environment on basic environmental education initiatives.

There is also a partnership sponsored by the Public Ministry, between SAAE, the NGO Association of Friends of the Environment (AAMA) and the municipal Secretary of the Environment, for the implementation of a project on the recovery of the forest surrounding the Canabrava spring, which was carried out by SAAE.

Porto Alegre

The Municipal Department of Water and Sewerage (DMAE), responsible for 1,428,696 residents, is the biggest fully municipal provider of environmental sanitation services in Brazil and an example of successful public provision and social control. In Porto Alegre, society is the protagonist of history.

Throughout DMAE's history, its autonomy in relation to Porto Alegre's city hall has been fundamental for the appropriate administration of the service, the maintenance of service quality and in guaranteeing important investments. Flavio Presser, the general director of DMAE affirms that: "The federal government's funding, for instance, was only supplementary to the foundation of the department. The municipal sanitary infrastructure was set up with the system's own revenues."

In 2005, investments from revenue totalled around R\$27 million (US\$11.3 million). This went to projects such as construction, repairs, enlargement and substitution of water and sanitary sewerage networks; reforms in operational units in several areas of the capital; and even a new pumping station for untreated raw water.

Currently, 99.5 per cent of Porto Alegre's residents receive treated water. The sewage treatment capacity of the city covers 26 per cent of the collected sewage volume.

Investments with resources collected through the tariff system are essential for the maintenance of DMAE. However, these investments are not enough to guarantee the universal provision and the level of excellence of water, and most importantly, sanitary sewerage services. "It is estimated that in Porto Alegre, in order to achieve universal provision of sewerage services, an investment of around US\$200 million would be necessary, something impossible just with our own resources," explained engineer Valdir Flores, operations superintendent of DMAE.

The fact is that to carry out mega-projects with their own resources would take many years. Therefore, long-term loans are necessary. An example of such a project is the socio-environmental integrated programme that plans to increase the sanitary sewerage treatment capacity of the capital from the current 26 per cent to 77 per cent.

The main challenges facing DMAE in the next few years are to:

- increase investment;
- expand the collection and treatment of sewage;
- preserve Lago Guaíba, the main spring supplying around 1.4 million inhabitants and;
- improve the participation of communities.

Workers in Porto Alegre responding to community reports of leaks



Porto Alegre is a city with a history of successful participatory initiatives and DMAE's structure contains a deliberative council, currently formed by representatives of thirteen civil society organisations.

However, progress is necessary to establish collaborations between the government and communities to enable local socio-economic development. In Porto Alegre, this policy is part of the municipal government's programme, 'local solidarity governance'.

The 'proper water programme' was created to increase the awareness of communities about the importance of their role in preserving the water that they consume

In the case of DMAE, the idea is to increase the awareness of communities about the importance of their role in preserving the water that they consume. The 'proper water programme' was created from that logic. The focus of the programme is the 500 villages in the most impoverished areas of the city. It is estimated that 30 per cent of the inhabitants of Porto Alegre live there, mostly with irregular water connections that are susceptible to contamination.

In such areas, DMAE considers water an essential element for the mobilisation and organisation of local communities. The teams of the 'proper water programme' work on many issues, including the renegotiation of water bill related debts, the substitution of illegal connections, conducting leak repairs and environmental education. Presser said, "in this way, DMAE is sharing part of the responsibility for the quality of services with the communities,

to such an extent that the users promise to prevent clandestine water connections, conserve the supply network, control consumption and combat the loss of water".

DMAE tries to show the community that water has a production cost that needs to be paid by society, and what DMAE looks for is a type of co-management of water services between providers and consumers.

The first results demonstrate that this work is welcomed. The president of the residents' association of Rubem Berta, Paulo Cesar Santos da Silva observes that "the satisfaction is general, since the special conditions for the renegotiation allow the people to regularise their debts according to their financial conditions. Being punctual with their obligations brings the residents closer to the idea of citizenship." The neighbourhood, located in the north of Porto Alegre, is in fact a town of 35,000 to 40,000 inhabitants, characterised by low incomes and a lack of punctuality regarding payment of bills.

The 'proper water programme' facilitates the dialogue between government and communities in the unregulated areas of the city, by raising people's awareness of the need to collaborate in order to solve local problems. The same is being designed for Vila Asa Branca, also in the north of Porto Alegre. Here there are specific problems of flooding as the town is lower than the canal. But the city hall has not given up working towards a solution. As Presser indicates, "the collective intervention of the city hall in Asa Branca, through several government secretaries, seeks to improve the quality of life of the local residents with the support of the Rotary Club, Senai and other organisations".

In this intervention, the responsibility of the community is to regularise connections and bills and to control leaks. At the beginning of the partnership, 76 per cent of the residents had debts with the department and the unregulated consumption was reaching on average 60,000 litres a month, while the legal consumption was just 15,000 litres.

What is special about the programme in Porto Alegre is that communities have started to assume part of the responsibility for the quality of services

According to Clovis Welter, the community leader of Asa Branca, the community (which contains 950 families) realised that paying water bills on time would allow DMAE to invest in sanitation, one of the chronic problems of the area.

Another characteristic of the 'proper water programme' is working closely with women. According to Presser, "this is because of the important role they play regarding health and water consumption, and since they are frequently the head of the family".

What is special about the programme in Porto Alegre is that communities have started to assume part of the responsibility for the quality of services: the users promise to prevent clandestine water connections, conserve the supply network, control consumption and combat the loss of water. Flávio Presser said: "society should be the protagonist, by establishing partnerships with the State through organisations and entities, without that meaning a transfer in responsibility related to public services to the private sector".

A water treatment station funded by the Porto Alegre municipality



5. From bad service to outstanding water utility: Phnom Penh's experience

Abstract



By Visoth Chea*



Phnom Penh's water supply was devastated by war. Experienced staff had been killed and infrastructure had decayed. Most water distributed through the network was not paid for and corruption was rife. In 1993 the utility, PPWSA, was taken in hand by a new leader who instigated a series of reforms that have relied upon the skills and determination of the people, rather than seeking the quick fix of private intervention. Staffing inefficiencies have gone; the duration, pressure and quality of water through the system has increased; all connections are now metered and most bills paid. So successful have the changes been that Phnom Penh's experience is highlighted as a key example of Public-Public Partnerships in action.

* Assistant General Director, Phnom Penh Water Supply Authority, The Kingdom of Cambodia, November, 2006

General information

The Kingdom of Cambodia, with a land area of 181,035 km² and a total population of 13 million, borders Thailand, Laos, and Vietnam. The capital of this Kingdom is Phnom Penh. It lies at the confluence of three rivers: the mighty Mekong River, Sap and the Bassac Rivers. The level and the quality of water in these rivers change seasonally. The seven districts of Phnom Penh cover a total land area of 375 km². The centre, with its four small districts, covers only 7.5 per cent of the total land area, but contains 55 per cent of the total Phnom Penh inhabitants of over 1.2 million.

Background of Phnom Penh Water Supply Authority

Creation and Development after independence

The first water supply utility was created by the French in 1895. After independence in 1954, it became the Water Supply Authority in 1961. The supply capacity at that time was 15,000m³/day.

With the growth of the city, the Phnom Penh Water Supply Authority (PPWSA) expanded and reached, 10 years later, a production capacity of 150,000m³/day. With a supply network of 282 km, it supplied to about 40,000 households and the revenue covered expenses.

Destruction during the Khmer Rouge

Unfortunately, civil war erupted in 1970. Between 1975 and 1979, the Khmer Rouge occupied the whole country. All the citizens were banished to the countryside and forced to work in the rice fields. Two of the three water treatment plants were taken out of operation. Only one was kept to supply water to the officers and soldiers of the Khmer Rouge regime. Most of the intellectuals, including water utility personnel, were killed.

In 1979, after liberation, all the water treatment plants were brought back into operation as people returned to the city. This

was the hardest time in the history of PPWSA. Because most of the qualified personnel had been killed, ordinary workers who had survived the killing fields, were appointed to operate the treatment plants and eventually become managers. Unqualified staff were recruited and the service became weaker and weaker. There was no international assistance.

Because of low water pressure and an intermittent supply of less than 10 hours a day, people tried their own way, anarchically, to get water by breaking the distribution pipes and connecting them to their underground water tanks. As the tanks were without valves, they overflowed for as long as the utility supplied water. So supply pressure decreased dramatically. No one took care of it and water became a scarce commodity throughout Phnom Penh. At this time, water was for free for everyone.

In 1986, the government permitted PPWSA to collect water fees. But the tariff was very low. Even then, no one wanted to pay. People were used to free water, and the service quality was bad.



Situation after the Civil War

In 1993, PPWSA was supplying to the city 63,000m³ of water a day, 42 per cent of the initial capacity, secured by two water treatment plants, Phum Prek and Chamkar Morn. The other treatment plant, Chrouy Changwar, was taken out of operation due to serious deterioration from lack of maintenance.

The distribution network consisted of about 282km, covering 40 per cent of the central area but serving only 20 per cent of the total downtown inhabitants. Of those pipes, 30 per cent were more than 100 years old. The newest were 40 years old. The age of the pipes and the lack of maintenance resulted in high water loss.

While the number of connections was 26,881 only 13 per cent were metered. This gave rise to inaccurate and improper billing and the actual volume of water sold was only 28 per cent of production.

In addition, there were 1,945 public and private underground water tanks, filled non-stop by water from the network. This increased water losses and exacerbated the low supply pressure and poor water quality.

Advisory meeting to improve water service in Siem Reap City



A further problem was the number of illegal connections. Over 300 were found in 1993. And it turns out that PPWSA staff made most of those illegal connections. Formal applications for water connections were difficult and most of the time, impossible. The going market price for an illegal connection was around US\$1,000.

Considering all of the above, it is no surprise that non-revenue water in 1993 was more than 70 per cent.

And it is no surprise that PPWSA staff were working on the black market. The 500 or so workers had very poor conditions. They were under-qualified, under paid and lacking in motivation. Their work was inefficient; nepotism was rife and morale at rock bottom. Management was no better, abusing the property of PPWSA. So bad was the image of PPWSA that it was considered as a place of punishment for bad government employees. The financial difficulties left the utility unable to pay for electricity and the chemicals for the treatment process (lime, alum and chlorine). The utility was operating under heavy subsidy from the Government. The total annual income covered only 30 per cent of the operating

expenditure. And though the utility was very poor, some of the management were, mysteriously, very rich.

After the Peace Agreement in 1993, a new government was elected and international organisations started to assist in the rehabilitation of the country. Mr. Ek Sonn Chan, an electrical engineer, was appointed head of PPWSA and has been working since then to pull the water authority out of this dark time.

Problems and countermeasures

Problems

PPWSA faced so many problems at the same time (see table 5, below).

What to do? Where to start? How?

Countermeasures

PPWSA's ambitious target was to ensure a higher generation of revenue to cover all costs. To achieve this, a seven-pronged approach was taken.

1. Information

A complete consumer survey was carried out, with the support of the UNDP, to identify the actual number of connections. In 1993 12,980 registered connections were not receiving water from PPWSA while another 13,901 were receiving water but were not registered and never billed. The survey also showed that only 13 per cent of the connections were metered. The consumers file was corrected and updated.

In 1996, a computerised billing system was introduced, thanks to a grant from France. It helps tremendously in customer management and billing. Water meter readers do not have only to read meters, but also to report anyone suspected of stealing water and changes of customers' activity, especially from domestic to commercial use, because the tariff of commercial and industrial use is higher.

A clear procedure for the application of new connections has been put in place and connections need to be established within one week. If the customers are outside the service area, the utility must inform them of when a connection will be made. New connections must be registered in the billing system not later than one day after installation, to keep a proper record.

2. Reduce non-revenue water

Five measures were introduced to deal with the problem of non-revenue water.

- a) All connections must have water meters. In 1993 only 13 per cent of connections were metered. In 1996, 85 per cent of 32,404 connections were metered. Today, all 150,000 connections are metered.
- b) An inspection team has been set up to stop illegal connections. The public are encouraged, and rewarded, if they report any illegal activity. Heavy penalties have been slapped on those found with illegal connections. Any staff of PPWSA found to be associated with illegal connections is sacked immediately. As a result, the number of illegal connections dropped from one a day in 1993 to less than ten a year.
- c) PPWSA is greatly concerned with reducing water loss. A repair team is on standby 24 hours a day. PPWSA staff and the public are encouraged to call a free phone number to inform of leakages.

Table 5. State of PPWSA in 1993

Low billing rate	28%
High NRW	72%
Low collection rate	48%
Heavy subsidy from government	more than 70%
Overstaffing	20 per 1000 connections
Bad service	10 hours a day, low pressure, not drinking water

d) A comprehensive programme to repair and replace the pipe network was carried out from 1993 to 2001 under the assistance of the World Bank, the Asian Development Bank, and the Government of Japan. This has cut down the real losses tremendously. At the same time, where the new pipes replaced old, all customers along the new pipes have been supplied with new, standardised connections.

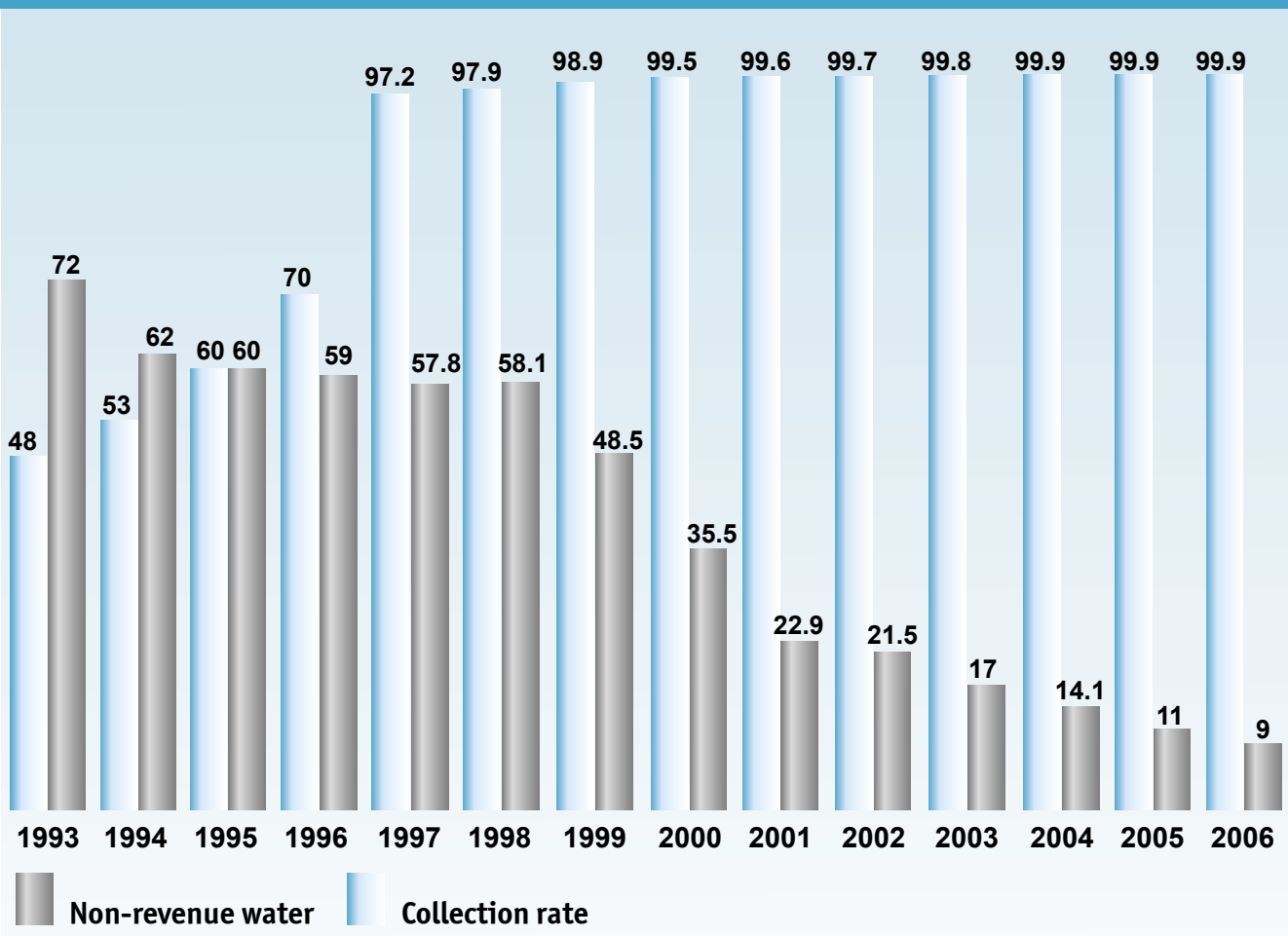
e) With the replacement programme, the supply network has been divided into small zones in order to record and compare consumption at each billing period. Anomalous readings may indicate a problem that needs fixing. The non-revenue water teams have been trained to detect water leaks, even under pavements. In

addition, a system has been introduced from Japan enabling the online monitoring of water flow and pressure in each zone. As of today, PPWSA maintains a service pressure of 3bars within the supply network and is keeping non-revenue water rate below 10 per cent.

3. Improve bill collection

The water meter readers have been encouraged with incentives for good collection and penalties for bad results. Public education as to why payment is necessary is also important. With strong support from the Prime Minister and the concept of 'leadership by example', it has been possible to convince all the consumers, including those high ranking in society who used to be against paying water bills, to pay.

Graph 1. Non-revenue water rate and collection ratio from 1993 to 2006





Application for new connections on site for poor families

A threat of disconnection has been implemented for the non-paying customers. And a debt monitoring programme has been put in place especially to monitor the payment of water bills by institutional customers. But there is a policy of not disconnecting the poor. The collection ratio, the ratio between issued and collected bills, has improved from 48 per cent in 1993 to 99 per cent in 2000.

4. Tariffs, connection fees and bills

Probably the most difficult task has been the need to increase the tariff to a point where it covers all the expenses. To avoid having a huge jump, it has been increased in three steps over a period of seven years, in parallel with service improvement. With the strong support of the Asian Development Bank and the World Bank and the commitment of the government, particularly the Governor of Phnom Penh City and the Prime Minister, a cross-subsidised tariff was approved by the Council of Ministers in June 1997.

The second step was adopted in 2001 in order to reduce the cross-subsidy after complaints by the commercial and industrial customers, who were subsidising domestic users. A third step of tariff adjustment has not yet been considered. The revenue can currently cover costs fully due to the higher collection ratio and low non-revenue water.

A discount is available to those in poor urban communities; since 2005 subsidies to cover connection costs have benefited over 3,000 of the poorest people in Phnom Penh

But before tariffs can be considered, connections have to be established. And the poorest often cannot afford the one off payment of around US\$90. So the PPWSA has allowed the fee to be paid in instalments since 1998.

Additionally, there is a 20 per cent discount available to those in poor urban communities. But still there will be some people who will not be able to afford the fee. For these people the employees of the PPSWA contributed their own money. But since 2005 there has been a subsidy introduced to cover some or all of the connection costs, with people's needs being evaluated by the Local Authority and the PPSWA. This subsidy has benefited 3,134 of the poorest people in Phnom Penh, as of November 2006.

PPSWA offers further assistance to the poorest with bill payment. Payment has been made easier by increasing the number of places payments can be made, reducing transport costs.

A key point that the utility emphasises is the benefits from having an official connection. Independent water sellers charge around 25 times the tariff of the PPSWA (see table 6).

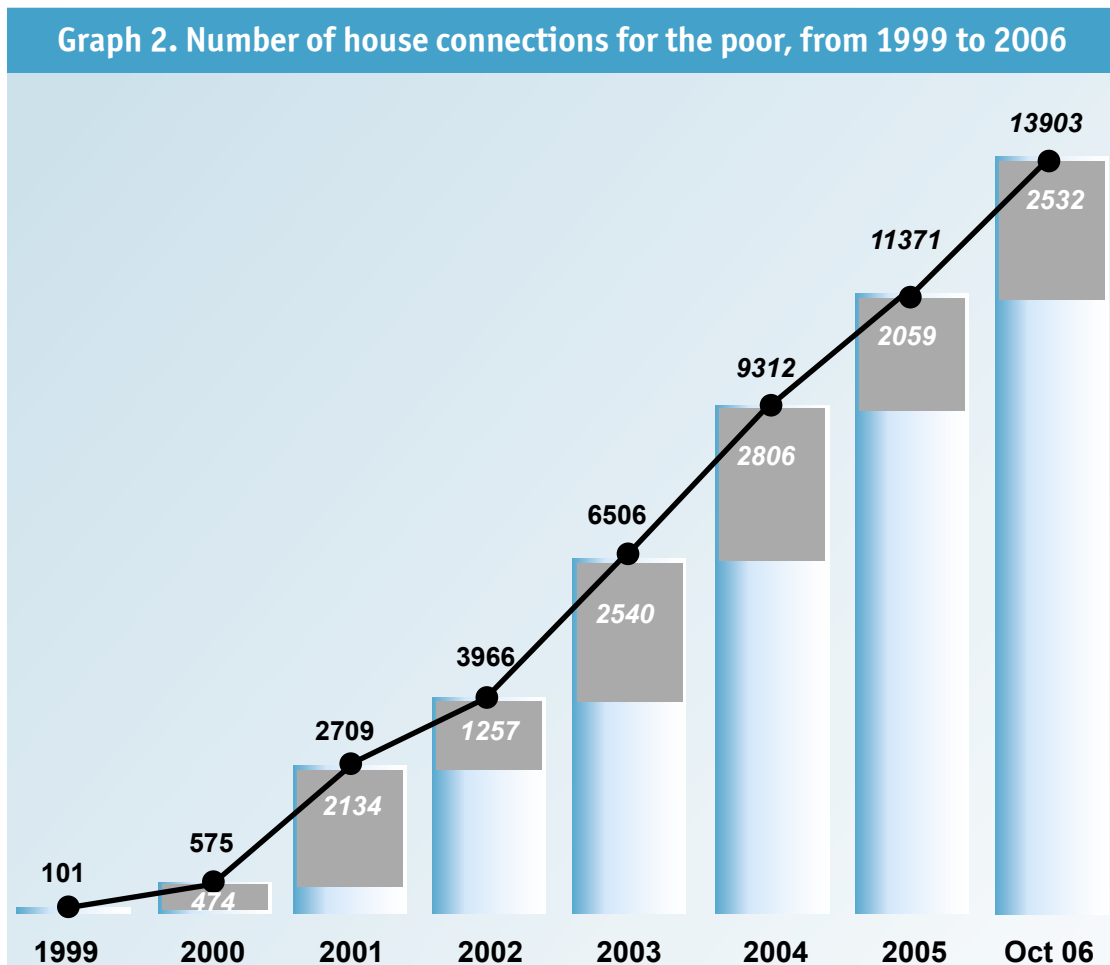
Table 6. Contrast between water costs from PPWSA and private street vendors

7m ³ water from PPSWA	US\$0.91/month
7m ³ water from seller	US\$22.75/month

Since 1998 PPWSA has carried out a policy of 'clean water for the poor'. At the end of October 2006 PPWSA had arranged nearly 14,000 connections for poor households in over 100 poor communities

This means that households can save around US\$260/year. The water from the PPSWA has the additional advantage of being clean and delivered to a tap in the house.

These savings are all part of PPWSA's drive towards social responsibility. Since 1998, in contributing to the reduction of poverty, PPWSA has carried out a policy of 'Clean water for the poor'. A workforce has been appointed to investigate locations of need, broadcast the policy, facilitate application forms on-site, explain that the installation fee can be paid in instalments, and connect water to the poor. At the end of October 2006, PPWSA had arranged nearly 14,000 connections for poor households, distributed over 100 poor communities.





An elderly woman enjoys a clean water connection in her yard

There is an additional advantage to the presence of taps in people's homes. Children used to shoulder the majority of the burden of collecting water, which limited time for school and play. Now time for school and play has been regained.

And now a new water treatment plant of 65,000m³/day is in construction. It enables the continuation of the extension of service coverage. PPWSA has projected its supply coverage beyond the boundary of Phnom Penh city in 2020.

5. Improved quality of service

The old supply network has been replaced and the water treatment plants rehabilitated by 2001 and 2000, respectively. This then allowed water quality to become a priority. Two of the three existing water quality laboratories have been upgraded and equipped to control and monitor the quality of water, not only within the treatment plants but also within the whole supply network, thus meeting the Water Quality Guidelines of the World Health Organisation.

An education team has been set up to broadcast the information the public needs to understand about water supply and the respective duties of suppliers and users. Also, an information desk and hot phone line have been put in place to serve the customers for free. A trusty relationship must be built forever.

6. Strengthen the institution

Initially it was difficult to restructure the whole organisation due to government interference. But PPWSA was granted full autonomy in December 1996, which opened up a new era and allowed the utility to change its culture. Those in higher management have been given more direct responsibility. And more

dynamic young people with better qualifications get fast-tracked to a higher level. Inefficient 'old timers' in high positions are moved into more dormant roles.

Staff training has increased, there are now salaries ten times higher than previously and there is the incentive of performance bonuses (as well as penalties for poor performance). Despite increasing workload, the number of staff per 1,000 connections has fallen dramatically to just four.

7. The power of PUPs

Public-public partnerships are a way in which other utilities can benefit from the lessons learnt by PPWSA. So, for example, PPWSA is keen to offer advice for free to other utilities; provide on-site assistance on a cost-covering basis; assist in non-revenue water reduction; and provide training, again on a non-profit basis. In practice this means that the author of this paper is also an advisor to the Siem Reap Water Utility, travelling to the province, 300km from Phnom Penh for a week every



Staff training: lecture, above and practice, next page

Staff training has increased, salaries are now ten times higher than previously and there is the incentive of performance bonuses

month as well as being head of the PPWSA training centre, where managers and staff from provincial water utilities can learn from the experiences of Phnom Penh.

PUPs also work on the international stage. The Asian Development Bank is keen on creating a twinning programme among public water utilities in south Asia. PPWSA is considered one of the potential partners.

Conclusion: Service expanded

Following the rehabilitation of all three water treatment plans, PPWSA has, at present, a total production capacity of 235,000m³/day. The old distribution network has been replaced, and the new has been expanded to cover not only downtown but also the suburban area. The service now covers 90 per cent of the whole city.

PPWSA takes pride in its team of people who are hard working, responsible and self-motivated. This team has indeed worked hard with a common goal to overcome the difficulties in the past and will be ready to face the challenges of tomorrow.

In 2004, ADB awarded its Water Prize to PPWSA

for dramatically overhauling Phnom Penh's water supply system and demonstrating leadership and innovation in project financing and governance. In 2006, the general director, Mr. Ek Sonn Chan received the Ramon Magsaysay Award for Government Service for the same feat.

PPWSA has shown that through a transparent environment where water utilities have sufficient autonomy, where tariffs can cover costs, where service is equitable and where there is the active involvement of staff and civil society, clean water targets can be met.

Lessons learned from this case study

Water doesn't have to be free. The study demonstrates that access to water does not mean that it has to be free. The urban poor will be considerably better off paying for safe, piped water than they would be buying water of questionable quality from private vendors.

Cost recovery is vital. By developing a tariff structure where the utility fully recovers the cost of water production and distribution, the utility has become financially viable and is able to invest in the water infrastructure.

PPWSA reached full cost recovery in 1998 and is now making modest profits. Without financial viability, the services could not be sustainable or expanded.

Government support is crucial. The tariff restructuring, which paved the way for PPWSA's increased revenues, would not be possible without the support of the Government of Cambodia. PPWSA would also not have had the freedom to innovate if the government had not declared the utility an autonomous body in 1996.

Utilities must be fully autonomous. Although the PPWSA is still government-owned, it has enough autonomy to develop its own payment structure and culture. Civil society must be involved. The remarkable increase in bill collection and reduction in illegal connections has also highlighted the importance of

involving users and civil society in a service that they want and are willing to pay for. The key has been to develop a utility-customer relationship, based on long-term community building rather than short-term contractual relationships. Effective awareness campaigns also enabled PPWSA to increase tariffs with broad public support.

The key has been to develop a utility-customer relationship, based on long-term community building rather than short-term contractual relationships



Spirit of ownership must be in place. PPWSA takes pride in its team of people. The workforce has changed and now is professional and has a work ethic of discipline, competence and teamwork.

Lead to reform. When the general director was appointed in 1993, conditions in PPWSA were terrible. But the 'culture of change' he introduced brought the utility on to the road to recovery. With each reform that PPWSA has taken, he has been its driving force, leading his staff and the community by example.

External assistance is vital. Since the civil war ended, PPWSA has benefited enormously from assistance of the Government of Japan, the Government of France, the Asian Development Bank and the World Bank. Without this, PPWSA could not have achieved its goals. But without its self-motivation, responsibility and transparency, PPWSA would never have gained the confidence of its donors.

Table 7. Difference between 1993 and 2005		
Indicators	1993	2005
Staff/1,000 connections	22	4
Capacity, m3/day	65,000	235,000
Coverage	25%	90%
Supply network	280 km old	1,230 km new
Supply pressure	0.2 bar	3 bar
Supply duration	10 hr/day	24 hr/day
Connections	26,881	150,000
Illegal connections	>300/year	<10/year
Metered	12%	100%
Collection	50%	99.9%
NRW	72%	10%
Total income	0.7 bill. R	67.2 bill. R
Operating expenses	1.4 bill. R	20.4 bill. R
Total expenses	N/A	52.1 bill. R

6. Developing Public-Public Partnerships: Why and how not-for-profit partnerships can improve water and sanitation services worldwide



By *Antonio Miranda**

Introduction

Public-Public Partnerships (PUPs), although much needed since the public sector began to struggle to deliver water and sanitation to the poorest, is a term invented as a reaction to the global push for Public-Private Partnerships (PPPs). It is important to be clear what we mean by the two terms.

PPPs were largely launched as the great idea to solve the problems of bringing investment into the water sector worldwide. But this is a very inaccurate expression to define the relationship between government, the contracting party

who defines the object and who pays, and private sector – the deliverer of the goods and/or services and who receives the payment, and gains the corresponding profit. Such a relationship could not be named a partnership, even if both sides are making some form of financial contribution. In theory, PPPs are about developing new infrastructure facilities, both to expand and improve the existing network, but on the basis that a profit can be made. PPPs are, in one word, businesses.

PUPs, however, are not about new facilities, or big enterprises. PUPs are about capacity-building; about solving on-the-ground problems through transfer and exchange of knowledge, on a not-for-profit basis. Although the name seems to define partnerships exclusively within the public sector, we would expect to include, for instance, civil society organisations and trade unions. Moreover, PUPs are able to cover the full range of water and sanitation issues – for example, from a technical detail of a particular type of pump or filtration system, to modern staff management; from a new way to fix old cast-iron pipes, invented by someone who works in a small village, to the most up-to-date technology for billing and revenue collection. PUPs are, in one word, co-operation.

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Why PUPs?

While there may be a few public water operators with a commercial outlook that might not be willing to co-operate with others on a not-for-profit basis, we expect that most will be keen to share their knowledge in the areas in which they are successful. They not only want to give a helping hand to those in need, for altruistic reasons, but also for more practical reasons: to promote their expertise, and to raise their institutional and political visibility, and at the same time giving new opportunities for development to their staff.

**PUPs effectively
bring together those
in need and those
willing to assist.
PUPs are, in one word,
co-operation**

On the other side of the problem, the operators in need (usually, but not always, the less developed ones) may not have the technical expertise nor the financial capacity to hire consultancy services to do the work; actually, there are public operators which cannot even understand and describe properly the problems they are living with.

For all those reasons, PUPs effectively bring together those in need and those willing to assist. These are roles that can be simultaneously played by one single operator, who needs assistance on some issue and, at the same time, is an excellent performer (hence an offerer) on another aspect.

Some initiatives on PUPs have already been seen in Africa, Central and South America, Asia and Europe, and between regions. Compared to the global potential of PUPs, however, those cases – in terms of number – are insignificant. Also, in these existing cases there is a great emphasis on north-south, or ‘developed-not developed’ partnerships. While not a problem *per se*, they certainly should not form the major part of the PUPs. There is enormous advantage and potential for south-south co-operation, mostly within the same continent, perhaps between close cultures and within a common language.

Overall, it is expected that all public operators have something positive to share, both on the best and also on the worst practices. Commonly, the latter teaches more than the former.

Finally, there is the issue of sustainability, meaning the survival and never-ending improvement, along the years, of the good changes and reforms brought with the process of learning. It is common that in developing and under-developed countries the public operators might be sensitive to elections – a new political leader may make deep changes to the way the operator is governed, for good and for bad. PUPs should provide a better stimulus for institutional reforms, with implementation being carried out with an eye on the long term sustainability of the utility.

Why PUPs do not happen?

In spite of the alarming needs, and of the willingness of many good operators, the main obstacles to a massive increase in PUPs worldwide are:

- the absence of a forum or platform, governed by appropriate rules, where the needs and offers from different utilities are available and can be assessed and negotiated, by interested parties;

- the lack of funds to finance this platform and to cover the costs of the PUPs that might emerge;
- the local legislation existing in many cities and countries, which are an impediment to the spending of local water revenues (or the municipal budget) on dealing with problems somewhere else.

Of course, while some public operators will never be interested in entering into a PUP in any circumstances, the remaining utilities could have a major impact on progress towards the MDG on water and sanitation – that being, to halve by 2015 the proportion of people without safe water and adequate sanitation.

Very pragmatically, the accomplishment (or at least the efforts towards it) of the MDGs on water and sanitation depends on the improvement of the public sector, which delivers for more than 90 per cent of the people with piped water worldwide. Regardless of any ideological preference, that figure will not change, even slightly, within the next nine years (until 2015); therefore there is no other way but to invest in the improvement of the public sector's performance.

In fact, it is noted by several international financial institutions (IFIs), the World Bank included, that this is a reality. However, there has yet to be any real, practical move in this direction, at least with the necessary evidence of willingness – real money.

The donors and IFIs' past experiences in general seems to have brought two different, but predictable reactions against PUPs. First, the promotion of PPPs and other forms of private sector participation, and at the same time the disparagement of the public sector, has left an ingrained cultural bias against the public sector within donor governments and institutions which is difficult to change. Secondly, there has been resistance from donors to invest in capacity building instead of infrastructure works.

But once donors have reconsidered their positions, a lot of time and investment is required to assess new approaches to public operators, including how to promote efficient, sustainable, accountable, transparent, democratic, and fair-tariff practice, in both developed and developing countries. I hope that this might lead ultimately to a situation where a substantial part of the IFIs' management staff will be looking at public providers and how to scale up successful public provision, through solutions from within the public sector itself and from other co-operative partners.

If the ideological prejudice and institutional obstacles against the public sector are removed, the role of PUPs becomes very apparent

If the ideological prejudice and institutional obstacles against the public sector outlined above are removed, the role of PUPs becomes very apparent. As PUPs are not about cement and steel works, and are not-for-profit, they are extremely low-cost. Participants could only expect to recoup their salaries, travel, and subsistence expenses.

A one-digit percentage of the IFIs' annual investment budget on water and sanitation would be enough to cover the costs of hundreds, maybe thousands of PUPs worldwide. Moreover, it would not be 'more money', but a simple re-allocation of the existing budget, for a much better purpose. After all, many works are under-utilised or just abandoned, for lack of institutional and technical capacity.

Concept

A considerable number of publications in recent years mention PUPs, under a broad range of different examples.

The water and sanitation area is related to a wide spectrum of issues – public health, housing, environment, education, social and economic development – and has been the arena of aggressive disputes on the roles of public and private sector for delivering the services.

The fact is that donors have found very significant resources to fund PPPs – from international, regional and national mechanisms, to easy access to credit and technical assistance. There is no corresponding arrangement for PUPs. The most likely practical demonstration of PUPs will be partnerships involving, on the one side, the public operators in need, and on the other side, the offer of expertise from public operators, NGOs, communities, trade unions, academia, research institutions and related bodies. The common denominator for any arrangement within this broad range is the motivation for co-operation on a not-for-profit basis.

A PUPs workshop in Brazil in 2006



Types of PUP

In recent years, a variety of forms of local co-operation or partnerships have developed between the public water operators, communities, trade unions and other key groups.

In its 2005 report, “Public-public partnerships in health and essential services”, the Public Services International Research Unit (PSIRU) concludes that PUPs can include a wide range of different types of actors.¹⁶ A defining feature is that these are partnerships in which there is no for-profit private sector involvement. PSIRU identifies the following key types of PUPs:

- Partnerships between two public authorities
- Partnerships between public authorities and communities (and/or NGOs as well as with trade unions)
- Development partnerships (with an international dimension)
- International associations.

As long as the not-for-profit condition is attended, virtually any stakeholder can play a role in a PUP, even the private sector, as long as there are safeguards against an inappropriate use of the term to make arrangements which are essentially business.



Recent experiences on PUPs

We are aware of a range of existing PUPs arrangements. Many of these models can be described as new forms of partnerships between the public water operators, communities, trade unions, civil society groups and other key actors.¹⁷

Public-collective partnership in Cochabamba (Bolivia): Democratic control over the public utility SEMAPA (via citizens elected onto the company's board) and a strong role for local water committees in distributing bulk water supplied by SEMAPA to the unconnected peri-urban areas.

Public-Workers Partnerships in the province of Buenos Aires (Argentina): In Argentina the water operator of the province of Buenos Aires, OSBA, has established a foundation to advance low-cost technologies and provide advice to other public operators. The water company Sapem in the Argentinean province of Tucuman has benefited from this.

Public utility-public utility partnership (Indonesia): The public water company PDAM Tirtanadi has supported other smaller utilities in Northern Sumatra through an Operational Cooperation Contract, a domestic PUP.

Communitarian water delivery in Venezuela: Local communities, the water utility and elected officials co-operate in communal water councils.

We are also aware of PUPs involving Swedish, Japanese, French and Dutch public water companies working to support weaker public utilities in countries in Central and Eastern Europe.

There is often a keen willingness from citizen coalitions to actively engage in implementing improved public options for water and sanitation. For instance, Porto Alegre in Brazil is probably the most well known example. As we show in this document (page 48) it resulted in successful public water delivery based on democratisation. The aim is to avoid the flaws of past models of public water management

and secure genuine public-ness in public service delivery. Public-ness can be defined as a commitment to the public interest and accountability to the public.¹⁸

However, substantial political change and legislative reforms are needed to allow these approaches to be implemented. In many countries, the best way forward may be to promote more effective regulatory oversight of public utilities. The question is, based on local circumstances, how to ensure that public principles, such as transparency and accountability, are central to the way public utilities are run?¹⁹

The role of NGOs, unions and other actors is essential. With sufficient political and financial support PUPs have a great potential to speed up improvements in public water delivery

The fact is that the latest successful experiences have been able to overcome the trauma of some past cases. It is a matter of having adequate research on the reasons behind why. But in all successful cases, some features were common. The role of NGOs, unions and other actors is essential. This can involve taking advantage of advocacy opportunities, building political support and assisting in the brokering of partnerships to ensure that sound public principles remain at their core. With sufficient political and financial support PUPs have a great potential to speed up improvements in public water delivery.

Breakthrough: A global mechanism

Aiming to overcome one of the main obstacles for massive PUPs, in October 2005 the author offered the United Nations Secretary-General's Advisory Board on Water and Sanitation (UNSGAB) a mechanism able to run a global network. The original idea has developed since then, with substantial support from Public Services International, which is also represented on the Board.

The greatest capacity for improving public water and sanitation operators is within the operators themselves

The rationale behind the mechanism is simple: the greatest capacity for improving public water and sanitation operators is within the operators themselves. Given that most water operators are local or municipal; given that even modest improvements in many of these operators will go a long way to meeting the MDGs; given that no current organisations have the capacity to reach the many thousands of water operators, then the best source of capacity in principle is directly from amongst the operators themselves. The mechanism will allow these operators to systematically communicate amongst each other and with any other organisations or institutions that can be of help, without having to wait for donors, IFIs or other organisations to establish contacts and develop projects.

The PUPs mechanism would be managed by a team who will provide an internet-based platform which will allow participants to establish, of their own volition and initiative, the basis for partnerships. Operators and others will register on the internet site, using set

information screens which will allow them to describe their situation. This system will use database software to create matches among the registrants according to the general descriptions of the problems (demands) and expertise (offers). Then, a list of possible partner(s) will be sent to the demander, who will be able to contact the offerer(s) for details, and will then be able to select the most appropriate partner(s).

Many of the partnerships will be at a very low cost. Where there are significant costs involved, a number of options can be considered:

- a fund could be created to be accessed by PUPs partners, based on a number of criteria;
- the PUPs finance demands could be presented systematically to donors or development banks for support;
- the more wealthy PUPs partner may be able to finance out of their own solidarity funds. The partner costs are to be, always, on a not-for-profit basis.

The PUPs management team should be hosted by a legitimate, credible, broadly-accepted body. Therefore, transparency and accountability are essential, especially because one of the functions of the PUPs management team will be to facilitate access to necessary financing. The current proposal under debate in the UNSGAB is to house a small PUPs management team within the UN, which will allow the necessary linkages and networks among other key international, regional and national actors. The PUPs should seek oversight from a wide range of stakeholders representing the broad spectrum of groups involved in the sector.

UNSGAB 'WOPs'

During the 4th World Water Forum (Mexico, 16-23 March 2006), the UNSGAB announced its Compendium of Actions, renamed as Hashimoto Action Plan after UNSGAB late Chair, Ryutaro Hashimoto. This HAP (available at www.unsgab.org) aims to help achieve the MDGs on water and sanitation. Amongst others, it proposes the creation and implementation of a global mechanism to promote Water Operator Partnerships (WOPs).

The difference between PUPs and WOPs is the possibility of participation of the private sector as a partner (although also on a not-for-profit basis).

The private sector already has more than enough room to promote its business. Its inclusion may cause more confusion and problems than real benefits

Although this inclusion was recognised as welcome in times of a wider debate about the role of the private sector in water services, for many stakeholders and specialists - the present author included - there is just no need for it. The private sector already has more than enough room to promote its business, and worse still, this inclusion may cause more confusion and problems than real benefits.

Nevertheless, the UNSGAB committed to very welcome actions to take forward this proposal, including:

- Advocate the use of WOPs and demonstrate their potential importance and benefits; conceptualise the basic mechanisms for WOPs operations

- Develop, in cooperation with public utilities associations, a prototype of a database and Internet-interface for operating the WOPs-matching mechanisms
- Take into account existing networks for co-operation on water and sanitation issues
- Initiate discussions with IFIs to strengthen the WOPs model and gain their commitment to the WOPs
- Review annually the outcomes of WOPs and assess their contribution.

Meanwhile, the UN Secretary-General was requested to give strong support to the WOPs programme, including specific encouragement to national governments to aid its implementation. UN-Habitat will coordinate support from among UN agencies and the United Nations Department of Economic and Social Affairs (UNDESA), in cooperation with appropriate bodies, will develop a database and Internet-interface for operating the WOPs-matching mechanisms. This Internet-interface will be field tested before its use is broadened to cover other regions. Relevant IFIs will be asked to provide financial and technical support to the WOPs programme.

Moving forward: Roles for donors and stakeholders

While no-one seems to actually oppose the idea of PUPs, there is a general consensus that international political and financial will are needed for their implementation, especially in order to set up a mechanism for promotion and facilitation.

On that basis, the UNSGAB proposal must be studied by all the water and sanitation stakeholders – there is no better starting point. Proposals for modification can be effective if properly justified and if made on time.

Although the UN mechanism may be the clearest proposal to emerge for PUPs so far, it cannot be seen as the sole way to promote PUPs. Of course, there are a range of other

initiatives which can be created or supported by donors and IFIs, jointly or individually.

For instance, many existing regional co-operation networks on water issues might be stimulated to adapt their features to include the promotion of WOPs, as well as to interlink themselves with other regional networks and, eventually, with the global mechanism. In this regard, UNDESA promoted a workshop in Thailand, in July 2006, and another in Kenya, in December 2006, in order to develop this approach. Another similar workshop is planned for Latin America and the Caribbean.

Governments, donors and IFIs can collaborate on the funding of the UN mechanism, which will be implemented very soon. That would be welcomed internationally by the entire range of stakeholders, in a manner that will bring visibility and broad political acceptance for the collaborators.

Additionally, governments, donors and IFIs can create another facility or fund to stimulate and promote WOPs outside the UN initiative. Applications can be received and contests can be made, so that the most promising candidates to WOPs can be financed; there are ways to avoid excesses on duplication of efforts.

Key criteria must include transparency, accountability and multi-stakeholder watchfulness; they will bring the ultimate guarantee of quality, useful partnerships on-the-ground, hence avoiding misfeasance and mismanagement. Whatever the model adopted for promoting and funding WOPs, it will need to be monitored very closely.

The natural, multiple stakeholders – governments, civil society organisations in general, trade unions, academic and research institutions, donors – must be mobilised to ensure more public-oriented reforms in the water and sanitation area. Currently, a plethora of international mechanisms support PPPs (such as the Public-Private Infrastructure Advisory Facility and the Private Infrastructure Development Group) but there is no formal, international support for WOPs.

If we really want to take seriously the need to improve public water operators to enable them to reach the MDGs, then we must also take seriously – and quickly – the initiatives and mechanisms that can be of help in this area

In other words, the most welcome initiatives for promoting WOPs might combine multi-stakeholder supervision with the autonomy of an efficient mechanism, exclusively dedicated to promote the development of the public sector through WOPs. That is the expectation under the UN umbrella, and so it should also be the aim of any other initiative.

If we really want to take seriously the need to improve public water operators to enable them to reach the MDGs, then we must also take seriously – and quickly – the initiatives and mechanisms that can be of help in this area. WOPs are not the only way, but surely they are one of the most relevant ways to provide, universally and within the shortest timeframe, safe water and adequate sanitation – a human right that has been inexcusably neglected so far.

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