

# Regulating Public and Private Partnerships for the Poor



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Centre for Water Science,  
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Malaviya National Institute of Technology  
Jakarta Water Supply Regulatory Body  
Jordan University of Science and Technology  
Philippine Center for Water and Sanitation  
WEDC, Loughborough University  
WSESP, Kwame Nkrumah University of  
Science and Technology

**Richard Franceys  
Esther Gerlach**



*'Regulation is how the incentive to ensure service delivery at lowest cost is built into reforms and how the cost savings from the incentives are shared with the users. Effective regulation requires effective regulatory tools and effective skills.'*  
*Estache, 2005*

# **Regulating Public and Private Partnerships for the Poor**

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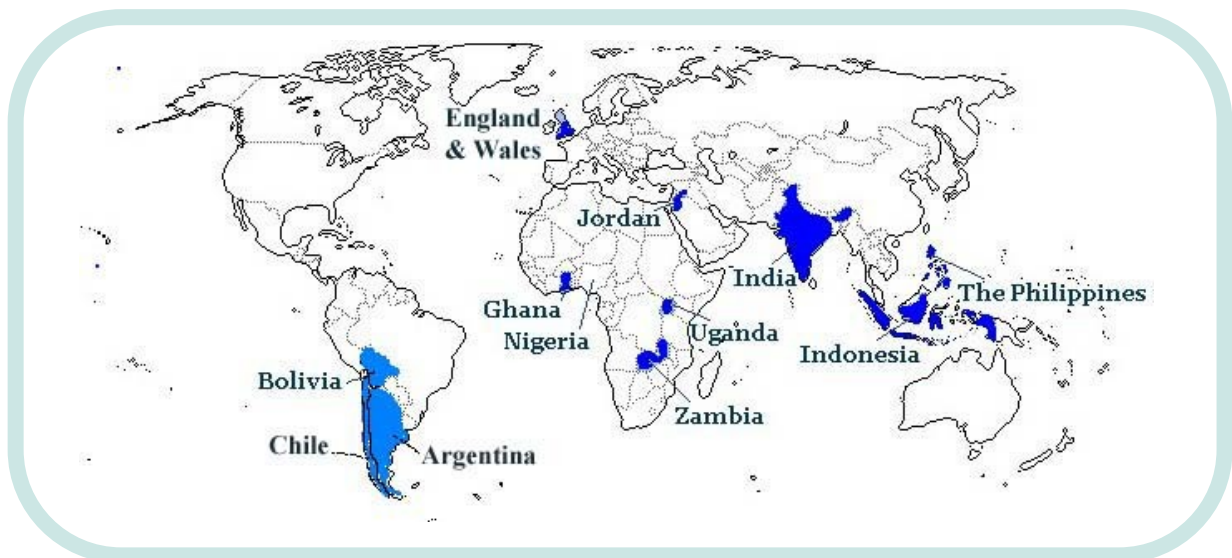
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[www.silsoe.cranfield.ac.uk/iwe/projects/regulation](http://www.silsoe.cranfield.ac.uk/iwe/projects/regulation)

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## **Regulating Public and Private Partnerships for the Poor**

Richard Franceys and Esther Gerlach, with Lyn Capistrano, Srinivas Chary, Sam Kayaga, Kwabena Nyarko, Andrew Trevett and Andy Narracott

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The boundaries, colours and other information shown on any map in this report do not imply any judgement on the legal status of any territory.  
Key Facts References: Human Development Report, UNDP; World Development Report, World Bank and Mid-term Assessment, WHO/UNICEF.*

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The involvement and contributions of participants at the Inception and Research Review Workshops is also gratefully acknowledged.



Partnerships for the Poor Review Workshop, World Water Day, 2005 - back row left to right: Peter Robbins, Open University; Michael Hantke, SISS, Chile; Ziad Al-Ghazawi, JUST, Jordan; Paul Banda, NWASCO, Zambia; Sam Kayaga, Loughborough University; Joe Morris, IWE; Alejo Molinari, ETOSS, Argentina; Andy Narracott, IWE; centre row: Richard Franceys, IWE; Peter Howsam, IWE; Kevin Sansom, Loughborough University; Gerald Osuagwu, Federal Ministry of Water Resources, Nigeria; Kwabena Nyarko, KNUST, Ghana; Esther Gerlach, IWE; Kwabena Manful, IWE; Achmad Lanti, JWSRB, Indonesia; Front row: Alizar Anwar, JWSRB, Indonesia; Andrew Trevett, IWE; Kwabena Sarpong Manu, Ghana; Maria Paniagua, Spain; Dennis Mwanza, WUP Africa; Lyn Capistrano, PCWS-ITNF, The Philippines; Barry Walton, UK

Also present at the Inception Workshop: Eng. Jamal Alkawasmeh, Ministry of Water & Irrigation, Jordan, Brian Allum, Thames Water, Ken Caplan, Building Partnerships for Development, Oswald Chanda, NWASCO, Zambia, Leah Hibbin, CARE International, Alain Mathys, Suez Environnement, and special guests: Stuart Braley, Severn Trent Charitable Trust Fund, Sir James Perowne, Chairman, WaterVoice Central, Philip Fletcher, Director General, Ofwat





# Regulating Public and Private Partnerships for the Poor

## **Research Chapters**

*The case studies are listed in order of length of economic regulation, expecting more regarding service to the poor from those with longer experience, acknowledging that ensuring economic regulation is effective is necessarily the initial and primary goal.*

1. **Regulating Public and Private Partnerships for the Poor** *Richard Franceys*
  2. **Economic Regulation** *Richard Franceys*
  3. **Regulating for the Poor: Literature Review** *Esther Gerlach*
  4. **Case study: England & Wales** (Ofwat/WSRA, 1989) *Richard Franceys*
  5. **Case study: Chile** (SISS, 1990) *Andrew Trevett*
  6. **Case study: Argentina** (ETOSS, 1993) *Richard Franceys*
  7. **Case study: Ghana** (PURC, 1997) *Kwabena Nyarko & Samuel Odai*
  8. **Case study: Philippines** (MWSS-RO, 1997) *Lyn Capistrano & Esther Gerlach*
  9. **Case study: Bolivia** (SISAB, 1999) *Andrew Trevett*
  10. **Case study: Jordan** (PMU, 1999) *Esther Gerlach*
  11. **Case study: Zambia** (NWASCO, 2000) *Sam Kayaga*
  12. **Case study: Indonesia** (JWSRB, 2001) *Esther Gerlach & Alizar Anwar*
  13. **Case study: India** *Marion Gessler & Urmila Brighu*
  14. **Case study: Uganda** *Kevin Sansom*
  15. **Regulating for the Poor: eConference** *Esther Gerlach*
  16. **Regulating for the Poor: Alternative Providers** *Esther Gerlach*
  17. **Regulating for the Poor: Customer Involvement** *Richard Franceys*
  18. **Regulating for the Poor: Technical Tools** *Richard Franceys*
  19. **Regulating for the Poor: Legal Tools** *Peter Howsam & Esther Gerlach*
  20. **Regulating for the Poor: USO Guidelines** *Esther Gerlach & Richard Franceys*
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## Research Summary

Incentive based, economic regulation of monopoly water and sanitation providers is a powerful tool for improving services. Regulators determine the maximum water price ('price cap') needed to finance a desired level of outputs. Prices in high-income countries have tended to increase faster than inflation as society demands higher standards. Prices in lower-income economies have usually been significantly lower than costs and also need to rise, particularly to fund service expansion. The total revenue requirement (from which the price cap is derived) is determined, using the 'building block' approach, by adding anticipated operating expenditure to planned capital expenditure (for capital maintenance as well as for improvements in quality, security of supply, service standards and service extensions), plus an acceptable cost of capital (to service any debt finance for example). Both opex and capex plans need to include efficiency targets derived from comparisons between a number of providers. Water providers are allowed to retain any further efficiency savings achieved within the price cap for a period (five years for example) which is an incentive to achieve even higher efficiency, before the benefits are shared with customers in reduced prices or enhanced standards for the future.

This model has been adapted around the world with varying degrees of success, usually in the context of a Public Private Partnership. Until recently the approach has tended to be reactive rather than proactive regarding early service to the poor. There is now a recognised need for adequate economic regulation of public providers, as well as private companies, in lower-income countries, to deliver similar mechanisms for financeability and efficiency and as a pre-requisite for developing effective pro-poor urban services.

This DFID research project seeks to give water regulators the necessary tools to require the direct providers to work under a *Universal Service Obligation*, to ensure service to the poorest, even in informal, unplanned and illegal areas, acknowledging the techniques of service and pricing differentiation to meet demand.

Looking to achieve early universal service, the research also considers how the role of small scale, *alternative providers* can be recognised in the regulatory process. *Customer involvement*, at an appropriate level, is seen as the third key aspect. The research investigates mechanisms for poor customers, and most importantly potential poor customers, to achieve a valid input to regulatory decision-making to achieve better watsan services within the context of social empowerment and sustainable development.

# Chapter 1

# REGULATING PPPs FOR THE POOR



SISAB, Bolivia



ETOSS, Buenos Aires



PURC, Ghana

## INTRODUCTION

This summary, the first of twenty in the Regulating Public and Private Partnerships for the Poor research series, gives an overview of the economic regulators in the world of water and reports on their declared goals relative to social equity, that is service to the poor. The research has been undertaken in the context of the decline and perhaps demise of the PPPs—the Public Private Partnerships. The summary therefore concludes by considering the role of economic regulation in the context of public water provision which is in even greater need of sustainable revenues to finance the delivery of improved

*‘Regulation makes urban services efficient in the long haul to ensure that public interests are always taken into account’*

*Sustainable Cities Task Force*

**What are PPPs?**

**The growth and decline of PPPs?**

**Regulation for PPPs**

**Who are the Water Economic Regulators?**

**Where do they operate?**

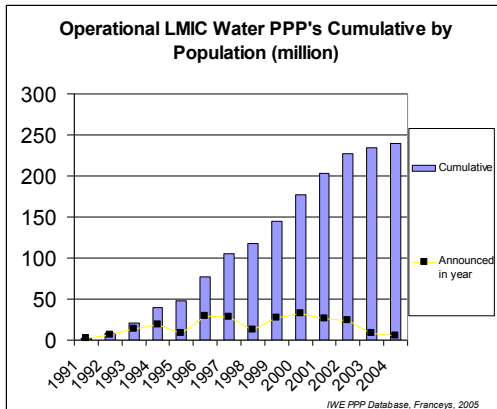
**How do they relate to the spread of PPPs?**

**What are they doing about service to the poor ?**

**Who are the poor?**

**Regulation and the Public Providers**

# Public Private Partnerships—Drivers for Regulation



## Changes in the world of PPPs

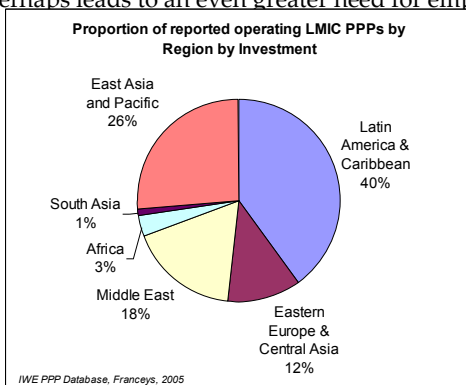
Following the rapid rise in PPPs during the 1990s, particularly in the higher-income Latin America & Caribbean region, there has more recently been a decline in new contracts in Low and Lower Middle-Income economies.

This trend has been accelerated by the significant financial losses experienced by several private sector operators, usually following exchange rate devaluations which governments chose not to acknowledge in price setting, with subsequent contract termination.

In parallel there has been a very effective anti-PPP campaign managed by global NGOs and anti-globalisation activists which has led to the cancellation of some, perhaps successful, PPPs. Considering the different PPP models, the comprehensive concession approach had been most effective in delivering improved services that included differentiated service to the poorest with some significant expansion of service areas ('Beyond Boundaries', Weitz & Franceys, Asian Development Bank, 2002). Overall there may well have been a failure of Governments and/or their Regulators as well as the private companies to deliver on their promises to be in anything like the oft proclaimed 'partnership' which demands 'acting together' and 'deciding together' by some definitions.

There is now a movement towards the use of national operators and smaller scale service/management contracts models. It is therefore even more important to ensure that the needs of the poorest are met where there are not the comprehensive requirements of an all-embracing concession and where there is no international involvement sharing best practices around the world.

Which perhaps leads to an even greater need for empowered



## The 'P' Words of 'privatisation'

- Private Sector Participation
- Privatization
- Disinvestment
- Capitalization
- De-monopolisation
- Equitization
- Opening of capital
- Peopleization
- Ownership reform
- Disincorporation
- **Public Private Partnerships**

## What is a PPP?

'A public-private partnership is a cooperative venture between the public and private sectors, built on the expertise of each partner, which develops or improves facilities and/or services needed by the public through the appropriate allocation of resources, risks, rewards and responsibilities.'

*Adapted from Canadian Council for Public-Private Partnerships*

## PPP Contract Types

- *Service Contracts*
- *Management Contracts*
- *DBO, Design, Build, Operate*
- *BOT, BOOT, Build, (Own) Operate, Transfer*
- *Lease*
- *Concession*
- *Divestiture*

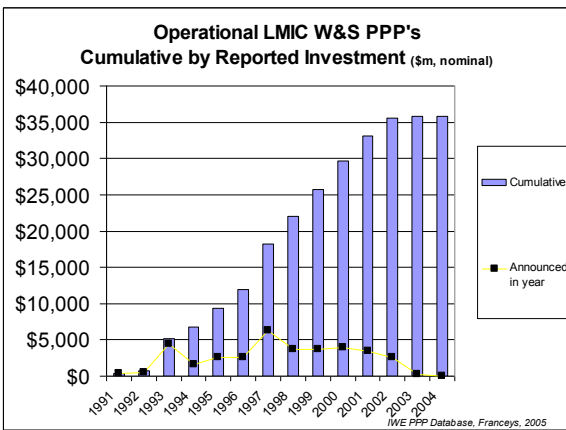
## Who is private?

International operators  
 National operators  
 Small and Medium Enterprises  
 Micro Enterprises  
 NGOs  
 Neighbours on-selling  
 Neighbours on-selling connections

## Why economic regulation?

Because of the capital intensity of networked water and sanitation it is only viable to have a single, monopoly provider. All monopolies tend to be captured by vested, producer, interests over time, whether through 'professional hobbyism', trades union protectionism or political opportunism. Incentive based economic regulation can limit monopoly

# Global PPPs and the Poor



The initial expectation of PPPs was that the private companies would deliver, from private sources, the finance necessary to upgrade water and sanitation services around the world. However, with a few exceptions, the private equity markets were not convinced enough to invest their money in pipes buried in the ground in low-income economies. The figure above illustrates the promises made at the time of contract signing, much of which has never been delivered. The table below shows where the promises were made.

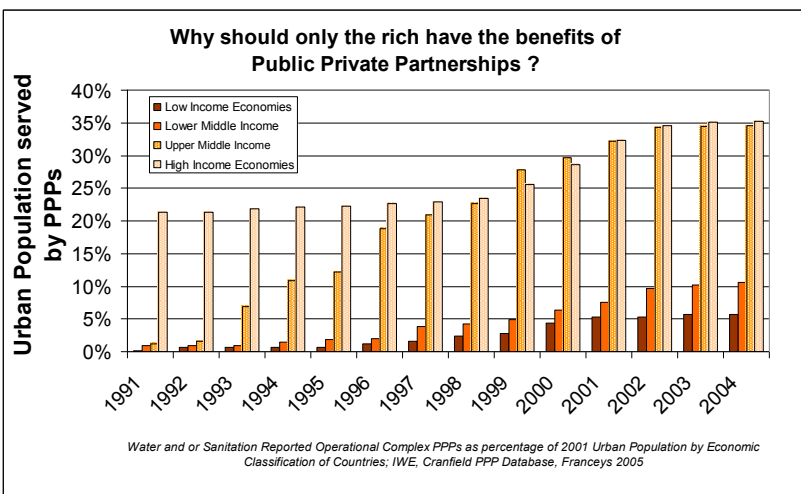
	Proposed capital expenditure (billion)	Population served - Water &/or Sanitation (million)	Percentage Total Population served by PPP	Percentage Urban Population served by PPP
Total Reported/Planned	\$206.56	699.3	11.4%	24.9%
Total Operational	\$126.0	530.4	8.6%	18.9%
<i>Operational by Income Level</i>				
High Income Countries	\$87.8	254.3	26.6%	35.3%
Upper Middle Income	\$20.6	132.7	26.4%	34.7%
Lower Middle Income	\$14.8	99.1	4.6%	10.7%
Low Income Countries	\$2.7	44.3	1.8%	5.7%



SISS, Chile

Brazil State Water Regulators

Similarly, many governments were not sufficiently convinced to allow 'foreign control' of their monopoly public water supplies, a reluctance which was most marked in the poorer countries where governance can be weak and governments need to be cautious about being taken advantage of by foreign suppliers, a caution based on hard



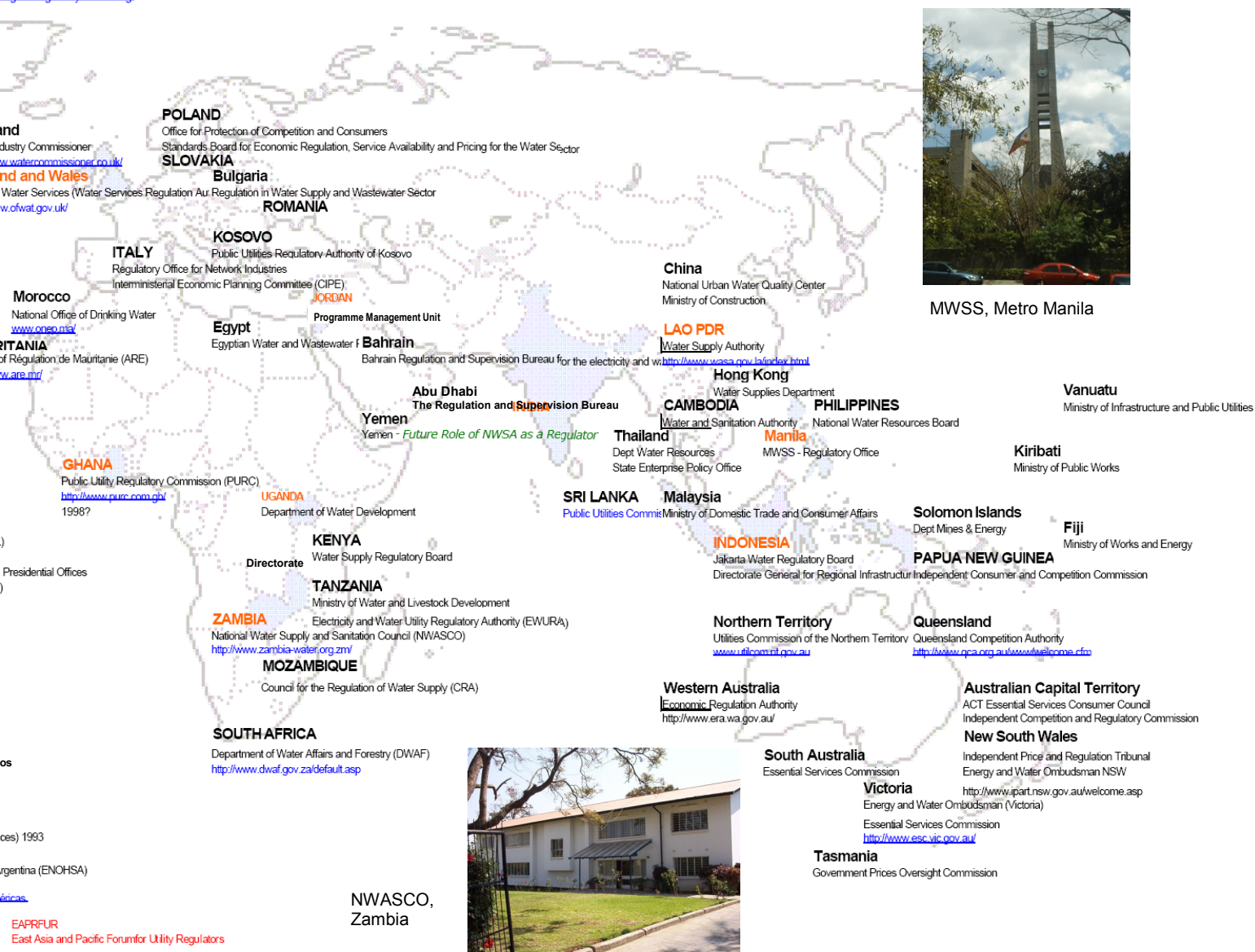
Regulating Public & Private Partnerships for the Poor

The end result, illustrated by the figure on the left, is that the upper middle-income countries appear to have embraced private sector involvement to a similar extent to the high-income countries. Although this does not represent a balance within (most) countries it appears to show a governance need for the private sector to be present to at least act as a comparator by which public providers can be judged. Each pattern, public or private, needs the spur of comparative competition. However, the reluctance of both governments and the private sector to work together in lower-income economies, where the public health benefits of clean water and sanitation are highest, reaching just over 10% private urban involvement in lower middle-income and just over 5% in low-income countries, might well be seen to disadvantage the poorest. The challenge now is to use economic regulation to deliver service to the poor through public providers.

# Global Water Regulators



Regulatory Network (GRN)  
[www.globalregulatorynetwork.org/](http://www.globalregulatorynetwork.org/)



MWSS, Metro Manila



NWASCO, Zambia



Ofwat, England & Wales  
 Ofwat comprises only on a couple of floors close to the top of this tower block in Birmingham, just as SISS, Santiago, only occupies one floor of the multi-story car park pictured above left and SISAB one floor at the top of the tower in La Paz on the front cover. 'Lean regulation' ?

Whilst the multi-laterals and bi-lateral donors have been strongly promoting private sector involvement, often rejected by many politicians, activists and citizens, they had also been preparing the way for monopoly private providers by assisting in the setting up of economic regulators. As can be seen from the global map above, the idea of regulation has proved popular. Although there is often confusion between the requirement for an economic regulatory process, as opposed to the common presumption that there needs to be yet more restrictive 'regulations' set in place, most of the regulators themselves have a very good understanding of what they are trying to achieve. They also remain very aware of the limits of their freedom to operate within a governance setting where the power to set tariffs is jealously guarded by politicians who appear to prefer to recommend themselves to their electorates by awarding below cost prices rather than by delivering improved services, particularly to the poor.



Regulatory interests at Research Workshop — left to right: Gerald Osuagwu, Federal Ministry of Water Resources, Nigeria; Michael Hantke, SISS, Chile; Paul Banda, NWASCO, Zambia; Achmad Lanti, JWSRB, Indonesia; Alejo Molinari, ETOSS, Argentina

# Regulators and the Poor: Web-based Visions, Missions

In an overview of the declared aims of the regulators we investigated the vision and mission of the regulators mapped on previous the page and any other information that was available on their websites regarding service to the poor and social equity. We found no mention of such issues in the websites for regulators in Ghana, The Philippines or Zambia. There was mention in the websites for Argentina, Bolivia, England and Wales, South Africa, Jamaica and Trinidad and Tobago. For examples see below:

## NAMIBIA

*Ministry of Agriculture, Water and Rural Development  
Department of Water Affairs*

Essential water supply and sanitation services should become available to all Namibians, and should be accessible at a cost which is affordable to the country as a whole.

This equitable improvement of services should be achieved by the combined efforts of the government and the beneficiaries, based on community involvement, community participation and the acceptance of mutual responsibility.

Communities should have the right, with due regard for environmental needs and the resources available, to determine which solutions and service levels are acceptable to them. Beneficiaries should contribute towards the cost of services at increasing rates for standards of living exceeding the levels required for providing basic needs.

## GHANA

The Public Utilities Regulatory Commission is an independent body set up to regulate and oversee the provision of the highest quality of electricity and water services to consumers. The Bureau of Consumer Services (BCS) within the PURC Secretariat has the responsibility of ensuring (in collaboration with other bureaux) that the regulated utilities deliver good quality of service to meet consumer expectations.

## JAMAICA

### Mission Statement

To contribute to national development by creating an environment for the efficient delivery of utility services to the customers whilst assuring that service providers have the opportunity to make a reasonable return on investment.

### Social Tariff - Social Water

Social water refers to the provision of the minimum levels of potable water and sewerage services to persons who cannot afford the full cost of such services. The definition is also expanded to include water supplied to the public at large in circumstances where collection of payment from the user is impractical. The relevant stakeholders, including the OUR and the Ministry of Finance and Planning, shall agree on revenue sources for social water including:

- Tariffs and user fees;
- Cross subsidies;
- Direct subsidies.

## TRINIDAD & TOBAGO

*Regulated Industries Commission (RIC)*

### Mission

to ensure that good quality and efficient utility services are provided at fair and reasonable costs in Trinidad and Tobago

### Social Action Plan

to protect consumers, intended for low income and vulnerable groups

### Consumer voice

Public consultations held for setting quality and service standards

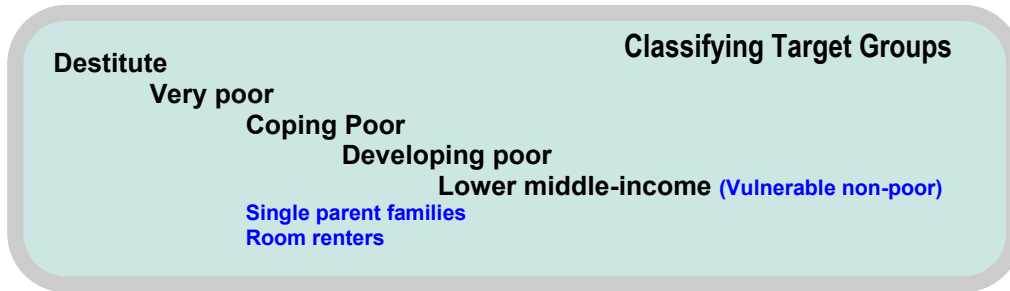
## ENGLAND & WALES

Having banned disconnections, introduced free metering and instituted a 'Vulnerable charging scheme' for those with a specified medical condition, and/or large family receiving social welfare payments, the government then amended legislation in 2003 to require the economic water regulator, as a primary duty, to 'further the consumer objective'. In addition the new 'Water Services Regulation Authority' must 'have regard to the interests of—

**Individuals who are disabled or chronically sick; Individuals of pensionable age; Individuals with low incomes; Individuals residing in rural areas;**



## and consideration of social equity



Considering how economic regulation might enable water providers to better serve the poor it is necessary to acknowledge that poverty comes in many shapes and sizes, with different characteristics over a 'spectrum of poverty'. Reflecting on a number of different sources (see for example 'Focusing Partnerships', Plummer, Earthscan, 2002), the researchers recognise the spectrum above as capturing a minimum number poverty segments which should be recognised by a watsan provider if they are to be effective. There are many different aspects of poverty which illuminate the challenge:

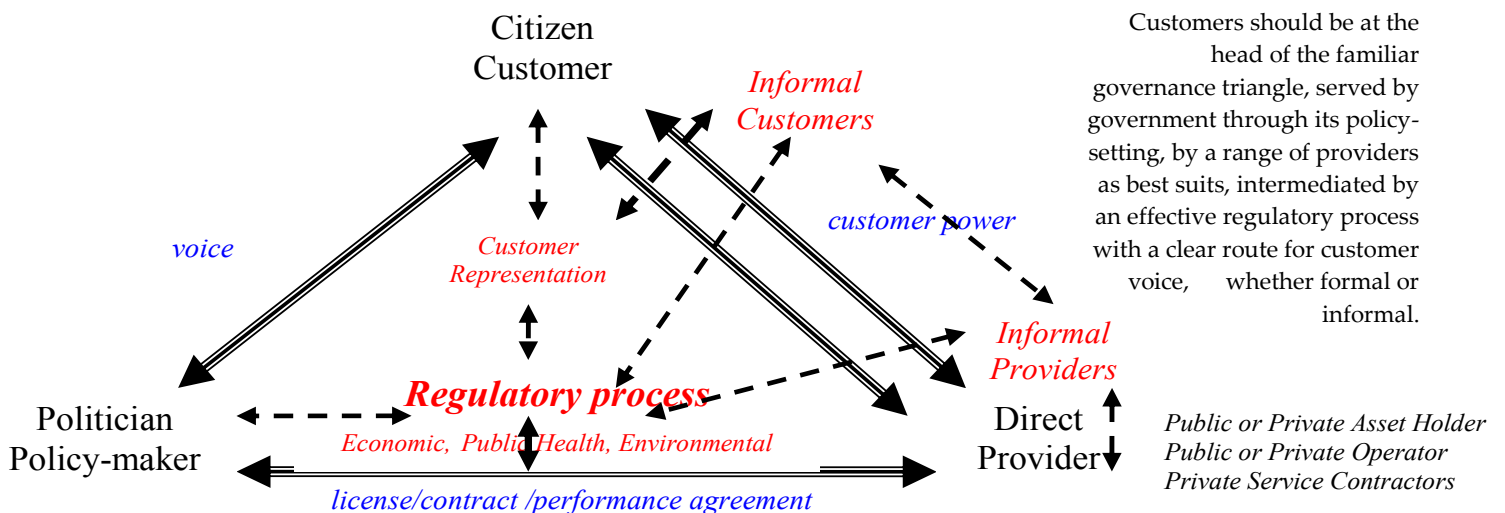
Who are the poor?

- The income poor: 'material lack (<\$1 per day, <\$2 per day in some economies)
  - The 'health and education poor'
  - The 'quality of life poor'
  - The 'housing poor': slums/informal/unplanned/illegal areas poor
  - The 'powerless poor': 'insecurity and vulnerability, bad social relations, low self-confidence and powerlessness'
- Aspects of poverty
- Unemployed; Underemployed; Randomly employed – daily incomes; Over-borrowed; Disabled

### The regulation game

"...if regulation is the impartial referee in the football match between the government/policy-makers and the utility direct providers (agreeing fair prices in return for societal desired standards), with the customers in the stands expecting a good performance, and the customer forum/customer committee as the biased linesman shouting off-side whenever the game seems to be going against customer interests . . . . at present the poor are perhaps playing a different game altogether, on the dusty waste ground outside the main stadium. Playing a game between the poor and their alternative providers with no referees/regulator and government. Our challenge as a sector is to ensure that the poor are invited to join in the main match, perhaps standing on the hill at one end rather than sitting in the main seats - but definitely part of the experience. And to stretch the picture perhaps way too far, with the alternative providers also now in the stadium, selling drinks and ice creams to all the crowd!

## How can regulation help to make water accessible to the poor ?



# Regulation and the Public Providers

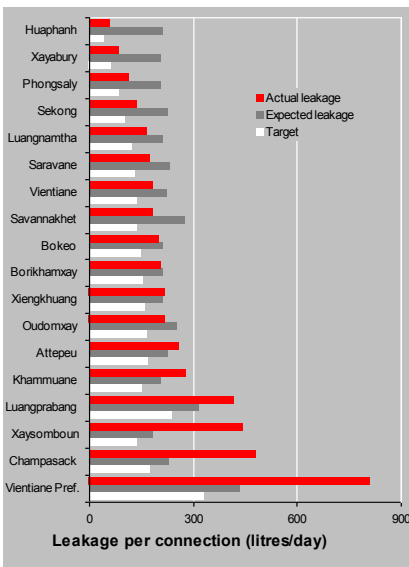
There are already a number of economic regulators overseeing the prices and service levels of public water and sewerage providers, for example:

- PURC, Ghana
- NWASCO, Zambia
- Water Commissioner, Scotland
- Water Resources Commission, Philippines
- SISAB, Bolivia
- WSA Lao PDR

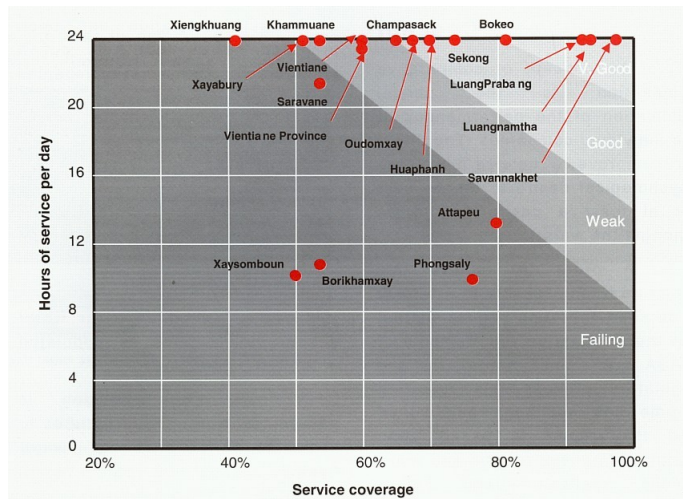
## Water Supply Authority Lao PDR

Vision: "A first class water supply infrastructure that delivers the highest service possible that represents best value to customers now and in the future"

Mission: "To regulate in a way that provides a potable, sustainable and affordable water supply for all by 2015"



Left: "Exposing worst offenders: leakage rates by company in Lao PDR From Water Supply Authority, Annual Report,



Above: "Level of service performance of water companies in Lao PDR", WSA, 2002

The relatively new Water Supply Authority of Lao PDR is using comparative regulation to promote improvements of the public water providers of the main towns (some fairly small) of the country as shown by the figures from WSA's Annual Report. League tables and 'naming and shaming' utilities when they fail to submit data on time is reportedly delivering results as they strive to produce on time for subsequent reports.



Water Regulators at the Research Inception Workshop - l to r: Oward Chanda, NWASCO, Zambia; Philip Fletcher, Ofwat, England and Wales; Achmad Lanti, Regulatory Body of Jakarta, Indonesia

## The Regulatory Spectrum

There is no single model of regulatory office, every country has to adapt the principles to suit its own structure of governance. There can be:

- Regulation by government department
- Regulation by performance agreement
- Regulation by contract
- Regulation by competition or fair trading authorities
- Advisory regulators
- Expert Panels
- Independent regulators
- City-wide regulation
- State/Province regulation
- National regulation
- Multi-utility regulation

## How independent are the regulators?

A survey by Asian Development Bank (2005) found that less than 40% of East Asian infrastructure regulators described themselves as even nominally independent. The study suggests that it is critical to ensure that regulators are not given more discretion than the political culture can absorb.

"New regulators should rely much more on transparent rules than on discretionary power, and some responsibilities should be delegated to outside experts ... hearings should be public, contracts and licenses should be also wherever possible." In high-income countries as well, governments have demanded that regulators submit to political demands—as in the case of the UK where government threatened the Rail Regulator with immediate legislation to curb his powers if he dared to upset their plans to move against the private Railtrack.

# Chapter 2

# ECONOMIC REGULATION

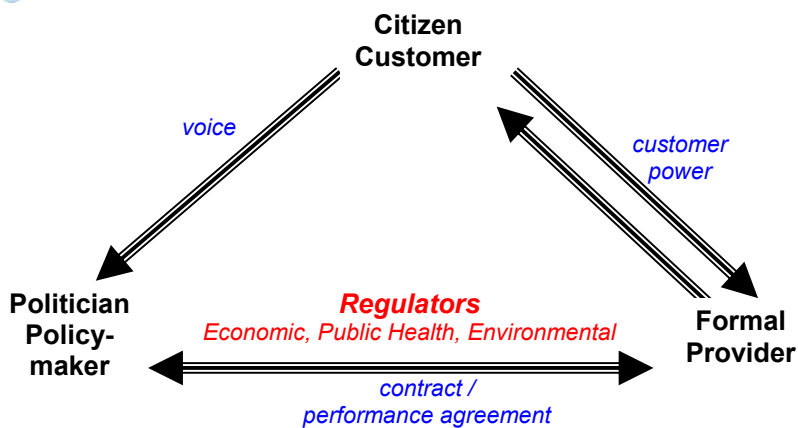


What is economic regulation ?

Why economic regulation?

Who is involved in regulation?

Regulating is not 'regulations' ?



*'You cannot privatise without regulation, but you can regulate without privatisation'*

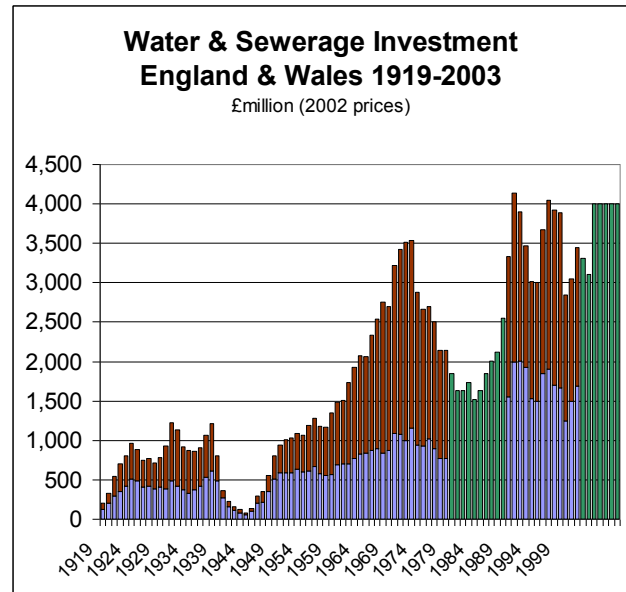
Research and photos: Dr Richard Franceys

# Economic Regulation

Regulation of water supply incorporates aspects of water quality regulation, environmental regulation, particularly of water abstraction and waste water discharges, and economic regulation to oversee a monopoly provider. This research is based on an understanding of economic regulation as the process of acting as an *'impartial referee'*, balancing, judging, adjudicating and refereeing the various stakeholder interests, not the writing of 'Regulations'.

Water (and sewerage, but not on-plot sanitation) is the most capital intensive of all the networked industries – therefore ensuring that these necessary fixed assets can be financed *and* maintained adequately, necessarily incorporating quality improvements and service expansion, is a key role of economic regulation.

The level of capital investments in England and Wales is shown in the graph (right). Of particular concern to the water industry is the implication of the increase in investment from 1950 onwards. There is a growing proportion of 50 year old assets which are reaching the end of their reasonable lives and will soon begin to require replacement or significant overhaul. The alternative to capital maintenance, practised in many systems, has been termed 'inter-generational transfer; whereby a failure to pay costs now is simply transferred to future generations through failing assets. This approach has also been demonstrated in London where one third of pipes are reportedly 150 years old



Source: author's analysis

and half are approximately 100 years old. The result is excessive leakage and poor quality service to customers, particularly during periods of drought.

Because of this capital intensity, water and sewerage are almost always managed by a single, monopoly, supplier. Therefore economic regulation also has to ensure that customers are not disadvantaged by having to pay excessive prices to an inefficient supplier where there is no competition. Water supply (again, sanitation less so), although a 'private good' in economic terms (rival and excludable) also carries considerable 'externalities', that is benefits to society over and beyond the initial consumption, both in limiting common water resources depletion, and in protecting receiving waters from waste water disposal. Therefore government has a wider societal, public health and environmental benefits interest in water supply in addition to ensuring that citizens receive an important basic needs product at a fair price.

To achieve all these goals requires a subtle, perhaps impossible, balancing act as illustrated by the traditional triangle diagram on the front page. Note that the many variations of this triangle diagram usually put the government or the water provider at the top. We prefer to see the customer there. However the triangle diagram is, not surprisingly, too simplistic to represent the actual process of regulation where there are many more stakeholders involved and where the key balancing act is to achieve the outputs desired by customers and society as against the inputs that customers and governments are willing to contribute.

A more complex view of regulation, as it applies in England and Wales, is shown overleaf.

**England & Wales**  
**'Selling privatisation',**



# Incentive Based Regulation

The original form of economic regulation was based upon 'rate of return regulation'.

The principle of this form of regulation is that government (the regulator) fixes a rate of return on capital allowed to the provider which is then included in the tariff along with agreed operating and capital expenditures. Any over or under-recovery of this return is managed through an adjustment to the price in succeeding years. The rate of return approach, practised mainly in North America, is understood to cost capital at around 4% to 5% on average (in nominal terms). In practice most public utilities are also operating under a 'rate of return' approach, though the assumed return might be nominal or even negative.

Rate of return regulation has three disadvantages:

- (i) It gives regulated firms an incentive to maximise the amount of capital employed, as the return, in cash terms, is based on capital expenditures. Thus
- (ii) it pushes regulated firms towards 'gold-plated' investment (three back-up systems rather than one), over-design of hardware, early replacement of computers, vehicles, etc. and
- iii) firms regulated under this system have little incentive to improve technical and price efficiency.

'An army of lawyers, economists, accountants, and what not is needed to first amass the data needed to regulate the industry, second, to ascertain that these data are reliable, and third, to compute expenditures and a fair rate of return'.

Incentive based regulation sets prices for a period, in the case of England and Wales for five years (ten years was tried initially but found to be too long when situations and requirements and EU legislation are changing requirements within a shorter period). These prices include an amount for the cost of capital but allow any out-performance by the companies to be retained as additional profit until shared back with customers at the next price review.

This has proved to be a powerful mechanism to improve efficiency.

## SOCIO-POLITICAL ENVIRONMENT

### PLANNING INPUTS

Customers

The Media

Office of National Statistics ONS  
RPI Retail Price Index  
Inflation  
Construction Cost Price Index

Water Charging Consultations

Utility Regulation  
DEFRA

Department for Environment, Food & Rural Affairs

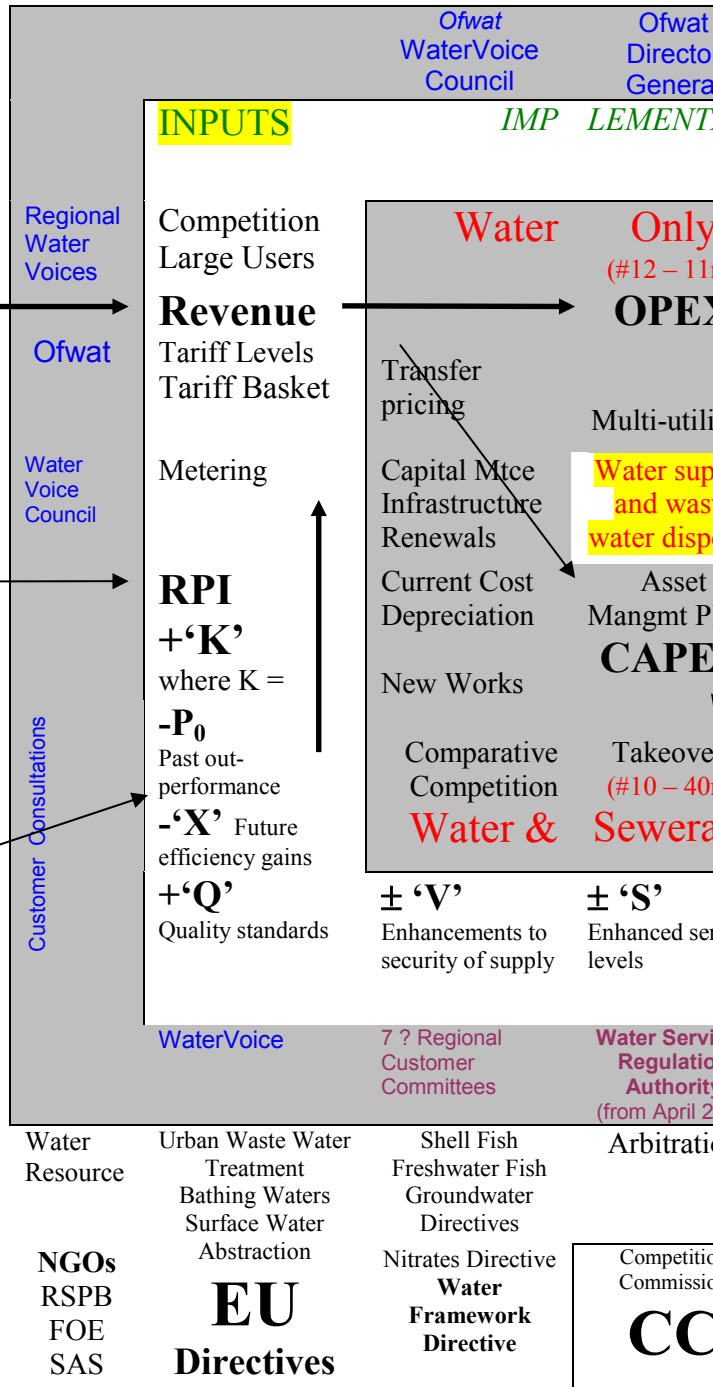
DWI

Drinking Water Inspectorate

EA

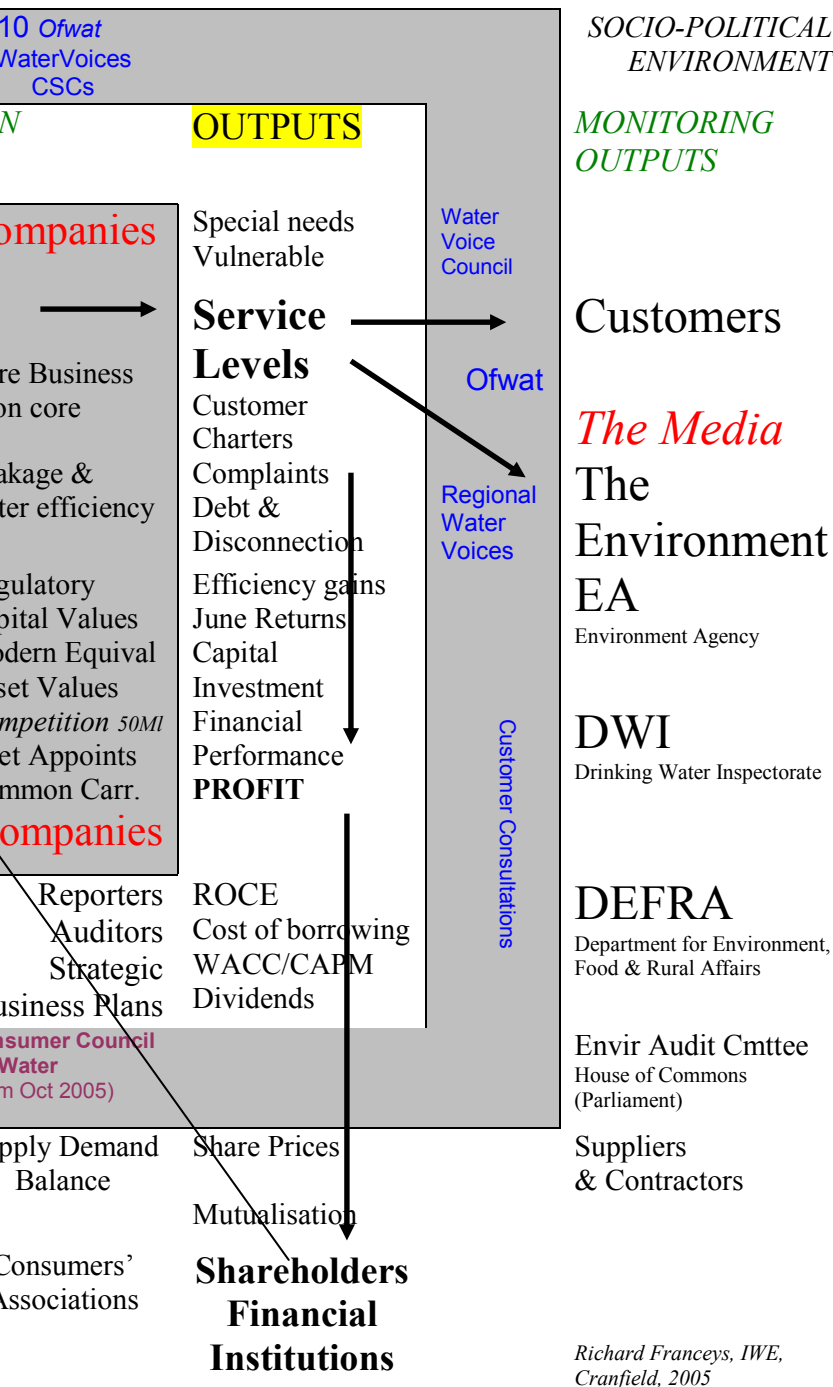
Environment Agency

Abstraction License Review  
River Quality Objectives  
Wetlands - SSSI



Although called a price cap approach it is in practice a revenue cap. For the regulator to ensure that the companies can finance their operations and capital investment he has to ensure that the total revenue is sufficient. Therefore any adjustments of tariffs, reductions for the poor for example, within the 'tariff basket' (the overall revenue requirement) necessarily lead to increases in tariffs for others.

## 'K' Factors



The diagram shows some of the many stakeholders involved in the regulatory process. Balancing all these many factors and interested parties is a challenge, particularly when so many of the numbers can be adjusted in accounting terms, quite legally, but potentially to the detriment of customers.

For example, is investment in leakage reduction operating expenditure or capital expenditure? If opex, then 'profits' will decrease. Is it better for a company to spend now (and reduce profits) to reduce leakage or wait for a problem in water resources and then require a new reservoir which can be charged to capex? The regulator has now instituted mandatory leakage targets to overcome this challenge—though at an 'Economic Level of Leakage' to try and balance the costs and benefits—which means leakage is approximately 15%-20%.

Similarly, regulated firms could potentially 'mislead' the regulator by contracting out pipe-laying or consultancy services to an unregulated division of the same firm at inflated prices, in this way channelling profits out of the regulated core and so beating down profits. This (showing that the regulated core is losing money) gives them ammunition to convince the regulator that he must set a (comfortably) high price cap at the next price review.

Countering transfer-pricing is difficult. Finding out whether costs are inflated is not as simple as it looks. In one instance the regulator Ofwat hired an engineering consultant to assess the cost of laying one metre of pipe. The latter found that this cost varied by as much as a factor of two across the country. Which figure is now the real or realistic figure? The regulator now requires companies to report each year on the extent of their business undertaken within the business group. Similarly, econometric models have been developed, based upon costs declared by the water companies, which compare all providers and set target costs such that approximately two-thirds of companies have to become more efficient if they are to recover their costs.

*Richard Franceys, IWE, Cranfield, 2005*

where RPI is the price of a weighted basket of goods, that is, an indicator of annual inflation and  $K = -P_0 - X + Q + V + S$

$K = -P_0$  (a sharing of past efficiency gains) -  $X$  (an estimation of future efficiency gains) +  $Q$  (Environmental Quality Enhancement, Water supply and/or waste water) +  $V$  (Security of Supply) +  $S$  (improvements to service levels)

# Asset Management Plans & Capex

Economic regulation has required the development of various techniques to ensure best value for customers as well as financial viability for providers. Asset Management Planning means 'applying formalised and structured approaches to condition, performance and serviceability assessments of current assets' (South West Water), also described as "techniques and strategies to optimize investment, minimize risk, and improve customer service and contractual compliance' (Newcastle University). The goal is to optimise the output of fixed assets by not replacing only according to age but according to age and condition and risk of failure. Using statistical techniques to judge *performance* against *condition* it is possible to set priorities for capital

Renewal timing matrix for E&M assets						
Electrical and mechanical (average life 20 yrs)		Condition grade				
		1	2	3	4	5
Performance grade	Excellent	Good	Adequate	Poor	Awful	
1	Excellent	2014	2010	2006	2001	1996
2	Good	2013	2010	2005	2000	1996
3	Adequate	2012	2009	2003	1999	1995
4	Poor	2010	2007	2002	1998	1995
5	Awful	1998	1997	1996	1995	1995

Performance & condition scoring to determine asset replacement priorities in 1994 (Banyard, ICE, 1995)

maintenance.

The figure (right) from Ofwat, illustrates the power of comparative competition. The E&W regulator has used this approach to such an extent that water companies have not been allowed, under competition law, to take over other water companies if it is seen as likely to reduce the number of comparators that might reduce the opportunity to understand costs and drive in future efficiency. On occasion where a takeover has been allowed the company has had to deliver a price cut to compensate customers now for the potential loss of the future price cuts.

Having set risk based priorities through asset management planning the regulator uses 'Reporters' (external technical auditors) to comment on the companies' investment proposals, regarding both the proposed technical solution and the proposed costs. Alternative 'BATNEEC' solutions (*Best available technology not entailing excessive cost*) have on occasion even been suggested by Customer Committees. Ofwat then uses comparative competition to drive down these costs, whilst requiring the same outputs, as shown in the graph (right; Ofwat) which illustrates what the water companies requested in their business plans (red)

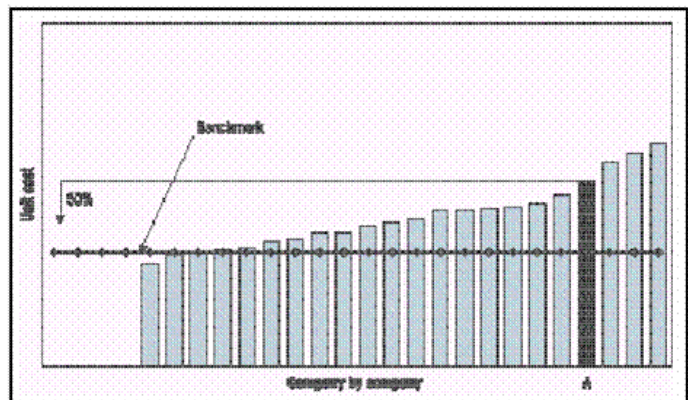
## 'Dealing with uncertainties'

### IDOKs

Interim Determinations on 'K' are allowed within the five year period if changes in allowable costs or required outputs has changed sufficiently to breach a 'materiality threshold' of at least 10% of a company's turnover.

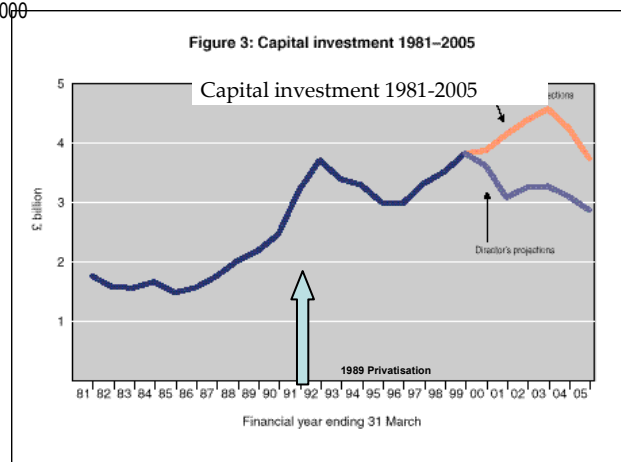
### Shipwreck Clause

The 'shipwreck clause' enables price limits to be reset, between Periodic Reviews, if the appointed business – suffers a substantial adverse effect, which could not have been avoided by prudent management action; or enjoys a substantial favourable effect, which is fortuitous and not attributable to prudent management action. In this context, substantial is quantified as an effect of a magnitude greater than 20% of turnover (MD167, Ofwat, 2001)



Typical standard cost histogram (Ofwat, 2000)

'In this instance, 22 companies submitted standard costs and these varied as shown in the histogram. The spread is typical of estimates for other standard costs. Following review, audit and challenge, the benchmark is selected as the third lowest reported cost. Company A's standard cost (black column) is significantly above the benchmark. For capital maintenance, Ofwat has assumed that there is scope to reduce the difference by 50%. These reductions form the basis of Ofwat's judgements on relative capital efficiency arising from the cost base.' Water and Sewerage Service Unit Costs and Relative Efficiency, 1998/1999, Ofwat, March 2000



# Strategic Business Plans & Opex & Cost of Capital

Based on the Asset Management Plans the price determination process requires the companies to produce Strategic Business Plans (in draft form, then final form after comments and clarifications). These detail the outputs the companies are expected to achieve along with the costs of achieving those outputs.

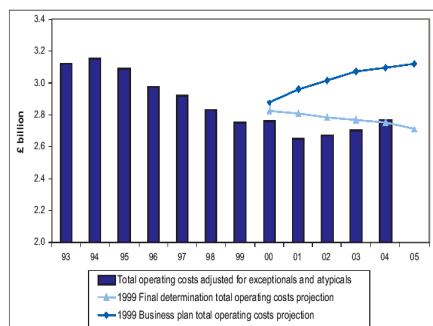
**Cost reflective prices:** Revenue requirement (to be shared out over customer base) =

**Opex** (Operating expenditure) + **Capex** (Capital Expenditure) + **Cost of Capital** (Cost of borrowing money from lenders (interest) and from investors (dividends)) + **Tax**

What is driving the changes in bills?

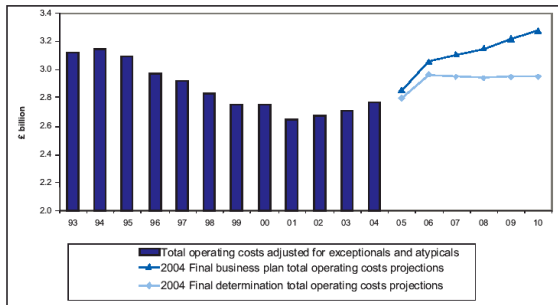
Average household bill in 2004-05		£249
Less	(1) past efficiency savings and outperformance	(3)
	(2) scope for reduction through future efficiency improvements	(13)
Plus	(3) maintaining base services	18
	of which (a) changes in revenue	(6)
	(b) changes in operating costs	10
	(c) changes in capital maintenance	7
	(d) changes in impact of taxation	5
	(e) financing	2
	(4) maintaining security of supplies to all customers	11
	(5) the impact of improvements in services	33
	of which (a) drinking water quality	9
	(b) environmental improvements	21
	(c) service performance	3
Average household bill in 2009-10		£295
Change from 2004-05 to 2009-10		£46

Figure 13 Water and sewerage industry – operating costs 1993-2005



Opex expectations in Company business plans and regulators' judgement: PR99 and PR04

Figure 14 Water and sewerage industry – operating costs performance and projections 1993-2010



## Cost of Capital—what is a 'reasonable' level of profit?

The private companies, in covering their costs, have to make an adequate return on their investments, that is profit, which can be returned to shareholders through dividends or reinvested in the business to enhance the long-term value. In setting prices therefore the regulator has to determine a 'cost of capital' which allows for interest to be paid on money borrowed (debt) as well as dividends to be paid on shareholders' investments (equity).

The 'weighted average cost of capital', recognising different costs of debt and equity, also requires the regulator to decide a 'reasonable' level of borrowing or 'gearing'.

Deciding on these 'reasonable' levels of profit and gearing is a decision taken by the regulator based on a detailed study of corporate finance and influenced (unduly?) by representations from the financiers in the City of London.

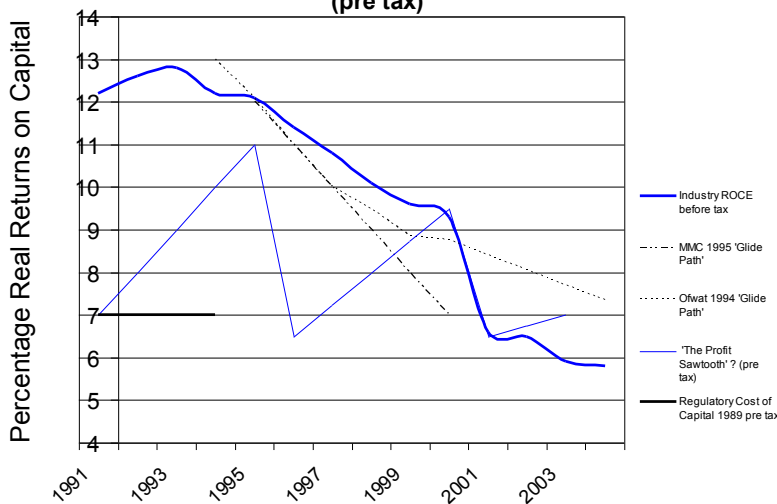
In the 1999 Price Review the Regulator set a target cost of capital of 4.75% 'real'. In the 2004 Review the real,

post-tax return is set at 5.1% (incorporating a 7.7% real post-tax cost of equity) but with additional allowance to ensure financeability of the \$32billion investment required during the five year period.

Gearing is presently assumed to be approximately 55% (net debt to Regulatory Capital Value).

In addition to the cost of capital the Regulator has to make allowance for taxation. In the first years after privatisation the government had allowed for special consideration of tax which left the level close to zero. Now that the companies have to pay conventional tax charges the level is rising to approximately 26% which is adding £5 per year to the

## England and Wales Return on Capital Employed (pre tax)





# Regulation

## Results of Regulation and Private Sector Involvement since 1989, in England and Wales:

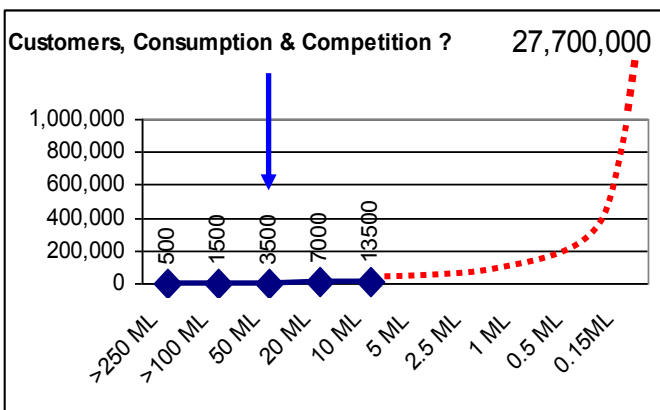
The percentage of river and canal water classified as good or fair has risen from 84% to 94%  
 Bathing water compliance risen from 66% (1988) to 98.5%  
 Sewage treatment works compliance risen from 90% to 99.8%  
 Compliance to drinking water standards from 99% to 99.98%  
 Properties risk of low pressure fallen from 1.3% (1993) to 0.04%  
 Percentage of written complaints answered within 10 working days has risen from 82% (1992-93) to 99.9% (Ofwat, 2005)

Ofwat has approximately 200 staff (only filling two or three floors of Centre City Tower, Birmingham, pictured below) and a budget of £11.4million of which approximately one third relates to the regional customer representation. Key tasks of Ofwat are to undertake the five-yearly Price Review and between Price Reviews to monitor and publish comparative data of prices and service levels for the 12 smaller water only companies and the 10 water and sewerage companies for England and Wales.



Ofwat now has an additional duty to promote competition in water supply for those users consuming more than 50 ML per year. However this only involves approximately

Number of consumers in England and Wales relative to water consumption per consumer, illustrating the limited introduction of competition, 3,500 out of 27 million



Regulator Ofwat was initially responsible for ten regional customer service committees, seeing customer involvement as

a critical aspect of regulation. The then WaterVoice Central, based on the first floor of the building in Birmingham New Street, pictured above, assisted customers served by South Staffordshire Water (water only) and Severn Trent Water (water and sewerage) in the English Midlands.

For the 2004 Price Review, Will Dawson, then



Regional Manager for WaterVoice Central filed the documents pictured left for use by the 'PR04 Subgroup' of volunteers who tried to

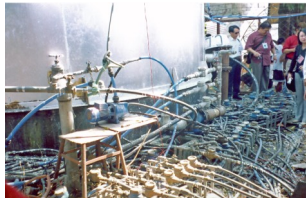
understand the approximately 450 papers whilst attending about 30 meetings/events focused on the price review in addition to normal WaterVoice activities. WaterVoice has now become the Consumer Council for Water, independent of regulator Ofwat.

### WaterVoice Central – views of members:

*Privatisation has caused efficiency; It has released capital that the [government borrowing limits] wouldn't allow – which is nothing to do with privatisation really; There has been higher investment – assets were neglected under public ownership; the companies are not truly private, they are operating within monopolies; they shovelled costs onto customers through the interim price determination; good effect on management since it was public, the feather bedding of managers is nothing like it was; you need pressures in there to make it work; Privatisation has driven improvements; manpower cuts have been dramatic; transparency and ability of customers to call the companies to account is excellent*  
*Not sure we represent the poor; we have our successes and failures (eg. sewer flooding); we don't have much power; some things we have unquestionably failed; Without us they would get away with more; I get most satisfaction from the audit committee, working one to one, getting complaints down; Customer representation is important; The fact that we are here gets things published, e.g. on web sites; we cause a ripple-out of transparency; we provide an exhaust channel for complaints which otherwise might get sent elsewhere; Privatisation is still a*

# Chapter 3

## REGULATION For the Poor LITERATURE REVIEW



What does the published literature say about economic regulation of water and sanitation services, economic regulation in lower-income countries and particularly economic regulation for the poor ?

*A regulatory vision:  
'A water industry that delivers a world-class service,  
representing best value to customers now and in  
the future'*

*Office of Water Services, England and Wales*

*Author: Esther Gerlach*

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# Economic Regulation for the Poor: Literature Review

In view of the enormous challenge for regulation in the global water and sanitation sector, this summary paper aims to critically examine the situation from a research perspective. The existing body of knowledge on the subject of water utilities regulation has been reviewed, and the paper presents key concepts and regulatory developments in developed and developing countries in the field of economic regulation and the social responsibilities it has taken on. Works of academics and practitioners have been included, mapping out different perspectives and contentious issues. Much in the same way that the review informed the research at the planning stage and continues to inform its analysis, it now introduces the reader to the “regulatory challenge” ahead.

## 1. REGULATION

### Defining ‘regulation’

The growing academic interest in the theory of regulation and regulatory developments is reflected in the growing body of literature available on the subject. The term ‘regulation’ is used at different levels of generality, and its precise definition differs from discipline to discipline. Usually it is understood to refer to different forms of government intervention into society or, more specifically, market-based activities to induce or curtail certain types of behaviour. The latter corresponds to economists’ narrower interpretation of the meaning of regulation as being mainly concerned with economic actors and firms in particular. Standard textbooks also define regulation as the promulgation of specific rules to be monitored and enforced by a public body. The broadest definition offered includes all forms of social control by public or private agents with regulatory effects, whether these are the result of deliberate intervention or merely chance occurrences (Baldwin and Cave 1999).

Regulation of economic activities has a long history in the United States, where early and groundbreaking theories of regulation originated. Regulatory reform (or de-regulation), now underway worldwide, and the privatisation of the British utilities added further perspectives and have widened the academic discourse. Many observers have commented on the conceptual confusion arising from different interpretations and usage of the term ‘regulation’ by academics and practitioners from different backgrounds (Black, 2002, Prosser, 1997, Jordana and Levi-Faur, 2004). Jordana and Levi-Faur (2004) assert that there is little use and sense in searching for an authoritative and consensual definition. They also make the important point that the various interpretations reflect the changes in the socioeconomic context of regulation. It is not the aim of this paper to review the many and varied theories of regulatory development and conceptualisation which have emerged from economics, law and political science. For the purposes of this review it will suffice to note that definitions of regulation range from narrow interpretations of regulation relating to economic activities to all-encompassing views which include issues of governance, legislation and social

control under the heading ‘regulation’.

Economic regulation, which broadly refers to government interventions into the market (Posner, 1984) is particularly relevant to the utilities. The lawyer sees economic regulation as the area of interventionist law which addresses instances of inadequate competition and natural monopoly (Ogus, 2001), which is particularly relevant to water services and hence water utilities regulation. The legal rules, however, are not sufficient to achieve regulatory objectives, as Majone (quoted in Jordana and Levi-Faur, 2004, p.12) points out. Regulation, he asserts, “requires detailed knowledge of, and intimate involvement with, the regulated activity.” There is indeed a tendency to associate ‘regulation’ with the activities of utility regulators, as noted by Baldwin and Cave (1999) in the case of post-privatisation Britain, where regulatory decision-making has become increasingly influenced by social policy objectives. The gradual shift in emphasis from “pure” economic regulation to a greater level of social regulation has generated a substantial literature. This review will proceed with examining the current ‘state of the art’ of utilities regulation in industrialised countries, including its social and economic rationales, as well as regulatory principles and best practice. Section 2 will then turn to the specific challenges found in developing country settings.

### Utility regulation

#### *Regulatory rationales*

Generally, the motivations for introducing regulation are manifold, but instances of ‘market failure’, where regulation is deemed necessary to safeguard public interest objectives, top the list of rationales presented in the literature (e.g. Armstrong et al. 1994, Baldwin and Cave, 1999, Bishop et al. 1995, König et al. 2003, Ogus and Veljanovsky, 1984). Of the various types of market failure, the prevention of monopoly abuse is seen as the main justification for regulation of utilities and infrastructure. Ogus (2001) here emphasises situations of natural monopoly, where economies of scale are such that the competitive potential is almost reduced to zero and the market is supplied at lowest cost by a single firm (Baldwin and Cave, 1999, Parker, 1999). Regulation, König et al. (2003) argue, is then required to control profit-seeking behaviour of private providers or to protect customers from inefficient (or low service standard) public monopolies. The authors identify customer’s lack of access to adequate information regarding the services they receive, wider societal concerns and ‘essential’ qualities of certain services as additional forms of market failure which may require regulatory intervention. Ogus (2001) sees an economic justification for what has become known as ‘social regulation’ in such information asymmetries and externalities. Armstrong et al. (1994) point out the low demand elasticity associated with most utility services, where allocative inefficiencies threaten to cause substantial losses in welfare.

History shows how utility regulation is intrinsically linked

with the wider political and social framework. Black (2002) reports a shift in the normative goals of regulation towards an inclusion of social goals. The British privatisation experience, which involved a drastic reorganisation of ownership and regulatory structures, serves as an illustration of these developments. Beginning with British Telecoms in 1984, the Thatcher government ended an era of public ownership by implementing a large-scale privatisation programme of its utilities. Within less than a decade, telecoms, electricity, gas and water services had changed into private hands. Dedicated industry regulators were appointed for each sector to prevent monopoly abuse by the newly created national or regional private monopolies (Bishop et al. 1995). The transition of public policy from the traditional welfare state with state-coordinated service provision towards private provision (and sometimes ownership) under regulatory supervision is often referred to in the literature as the “rise of the regulatory state” (Minogue, 2002, Cook et al. 2003).

Parker (1999) summarises the rationales for this combination of privatisation and state-directed regulation: In the absence of a competitive market, regulation was premised to act as a price control mechanism and a driver for efficiency improvements. The primary duties of the newly established regulators were to ensure the satisfaction of reasonable consumer demand and the financeability of service provision or, in other words, the ability of companies to finance their activities in terms of service maintenance and investment programmes. Reviewers of the privatisation process frequently comment on its negative side-effects. Young (2001) reports how achieving social equity was soon proving a challenge in a competitive market and resulted in a heated public debate as rising consumer debt stood in stark contrast to perceived excess company profits and managerial pay. Waddams Price and Young (2003) present evidence that some vulnerable groups were adversely affected by the changes following privatisation. Access inequalities to utility services, described as a “necessary condition of participation in a modern society” (p.102), resulted from the erosion of cross-subsidies inherent in the nationalised public services and entrenched the social exclusion suffered by large sections of society. Graham and Marvin (1994) claim that utility sector privatisation entailed a complete change in service ethic with an overriding profit motive. Social dumping of marginal users, which often correspond to poor domestic customers, could be observed as a simultaneous trend to “cherry-picking” as utilities concentrated their operations on the more lucrative market segments. Affordability problems were particularly marked in the water sector, where heavy capital investment was required and prices continued to rise in response to new environmental and quality standards. Controversies centred on disconnection of water services. Within three years of creation of the regional monopolies the number of disconnections had risen sharply to an annual 21,000 households, prompting fears for public health with this loss of universal access (Prosser, 1999, Graham and Marvin, 1994). At that time, Graham and Marvin (1994) called for stronger state protection of universal access to basic utilities services and strong regulators to safeguard equity principles. Prosser

(1994) equally criticized the disregard of the social dimension in the utilities regulation debate. He alleged an over-emphasis on economic principles, which neglected the social considerations he perceived as becoming “absolutely central to regulatory credibility and performance” (p.156).

Ugaz and Waddams Price (2003) see the UK experience as proving the relevance of distributional concerns, which they contend were given little attention upon privatisation, to public perception. Social concerns sparked a new wave of government involvement to tackle access, equity and distributional aspects of the essential utility services, reinforced by the 2000 Utilities Act, which included explicit social obligations for gas and electricity regulators. In the case of water and sewerage services, disconnection of residential services for non-payment reasons was banned in 1999 along with pre-payment metering options. The 1999 Water Act also introduced vulnerable charging schemes to assist certain customer groups, whilst its latest revision specifically instructs the regulator to consider the interests of the disabled or chronically sick, pensioners, those on low incomes and residents in rural areas (Water Act 2003, 39, 2C). Nevertheless 20% of the population found themselves obliged to commit an unreasonably high proportion of household income to water bills in 2003, and thus experienced “water poverty” as defined in Fitch (2003b), whilst findings of a review by Narracott (2003) confirmed an under-representation of vulnerable customers’ interests in the regulatory system. The National Consumer Council (2002) attributes this marginalisation to their being “pigeon-holed as being ‘hard-to-reach’” (p.4).

Even a far more elaborate social security system than in other countries who have experimented with utilities privatisation and liberalisation and virtually universal connection levels have not prevented utilities regulation from becoming highly politicised in the UK, Waddams Price and Ugaz (2003) point out. In addition to its primary goal of maximising economic efficiency, the remit of regulation has been extended over the years to include social dimensions (Prosser, 1999). There is now a greater emphasis on distributional and other supplementary aims compared with a purely economic view of market failure correction. Much of the contemporary regulatory debate has been confused by the failure to distinguish between the economic and social rationales for utilities regulation, Prosser (1997) argues. He distinguishes three types of regulatory tasks with different regulatory rationales. Monopoly regulation, which aims to increase allocative efficiency in the absence of effective competition, and regulation for competition both find their justification in purely economic reasoning. Social regulation, in the case of utilities, is founded on the belief that services should be made accessible to the widest possible range of social groups. Having explored the ‘why’ and ‘what’ questions of utilities regulation, the next section will look more closely at regulatory design and procedure. There is a vast literature on ‘how to regulate’, ranging from economic analysis of various regulatory approaches to critical evaluations of appropriate institutional arrangements. As regulation of household water services is the subject of primary interest, the focus of this

review is on conduct regulation rather than regulation of market structure, seeing that the nature of the industry is such that there is little scope for introducing competing networks.

*Principles of economic regulation*

*Incentive regulation – driving efficiency*

The standard textbook identifies efficiency and cost reduction as the major objectives of regulation (Baldwin and Cave, 1999). In the absence of information asymmetries, economic regulation would be a simple matter of calculating optimal prices, determining cost reductions to be achieved by a firm and issuing instructions to this effect. This statement implicitly underlines the crucial role information plays in the regulatory process as recognised by the New Regulatory Economics (Armstrong et al. 1994). Due to their informational advantages over regulators, firms have to be given incentives to reveal their efficiency potential and implement cost reductions. The key design issue for incentive regulatory systems lies in achieving the right balance between incentives and the distribution of efficiency gains, or profit, between shareholders and customers (Vass, 2003b). Baldwin and Cave (1999) discuss the relative advantages of the two available alternatives, rate of return regulation ('cost-plus pricing') and price capping. The degree to which a company will be compelled to improve long-run efficiency is determined by the rewards offered. As with a fixed rate of return a company benefits little from improved efficiency, rate of return regulation is considered a low-powered incentive mechanism.

RPI-X, the best-known variant of the price cap which has become the most distinctive feature of British utility regulation (Rees and Vickers, 1995, Armstrong et al. 1994), provides higher-powered incentives for outperforming efficiency targets. Efficiency gains are retained as economic profit by the company for a certain period of time and passed on to customers at regular price reviews, when price controls are set for the next regulatory period. This 'regulatory lag' is described as the key feature distinguishing RPI-X from rate of return regulation (Armstrong et al. 1994). When it was first introduced, RPI-X was perceived as the superior alternative due to its greater inherent cost efficiency incentives and operational simplicity. After two decades of RPI-X regulation, it has proven more complex and problematic than anticipated. Rather than being gradually replaced by the introduction of competition as expected it had to be supplemented with quality controls (Armstrong et al. 1994, Rees and Vickers, 1995). For all its successes, RPI-X has failed to eliminate the fundamental problems of regulation, which are discussed below.

*Regulatory risk*

In addition to the information asymmetries, the economic of regulation is complicated by problems of policy commitment and regulatory capture by other interests (Armstrong et al. 1994, Rees and Vickers, 1995). Determining a company's efficiency potential and setting a price cap accentuates the information problem. Whilst operating costs should be observable from published company accounts, information

relating to capital expenditure, the value of existing assets, cost of capital, and projected productivity and demand is not readily available. In his discussion of the RPI-X mechanism, Vass (2003b) exposes the problems of inconsistent or underdeveloped methodologies for resetting price controls. Whilst perceived 'excess' profits have undermined confidence of the British public, relationships between regulators and investors have become strained following a series of 'unnecessary' disputes. Appeals processes can substantially add to the cost of regulation, which is often cited as an important factor.

The commitment problem primarily relates to the danger of opportunistic behaviour on the part of the regulator. Specifically, it refers to *ex post* opportunism, the temptation for regulators to break the 'regulatory contract' after a firm has made capital expenditures by tightening policy such that the company will find itself unable to recover the investment. This exploitation of the sunk cost nature and irreversibility of infrastructure investments bears the risk of underinvestment as investors expect guarantees of a 'fair' return on investment and an increase in the cost of capital where uncertainties persist (Armstrong et al. 1994, Rees and Vickers, 1995). But the commitment problem is not exclusively connected with regulatory discretion, as Rees and Vickers (1995) point out. A change of government may involve a change of regulatory policy with similar results. Baldwin and Cave (1999) cite 'windfall taxes', which can and have been employed to recapture large industry profits during initial regulatory periods, as an example of political intervention which may reduce incentives if regulated firms suspect that the tax will be repeated.

The literature also warns of making the premature assumption that regulators will always choose to act as guardians of the public interest. Armstrong et al. (1994) trace the evolution of 'capture theory' back to the Chicago School economists, who considered the option of regulators becoming aligned with the industry to the extent that they act in the interest of incumbents rather than consumers and potential competitors. Laffont and Tirole (1991) develop the early capture theories further to include other interest groups who would compete in the 'market for regulatory decisions'. Armstrong et al. (1994) find evidence in favour of limiting regulatory discretion where there is risk of capture, but conclude that the literature offers little insight beyond the implied need to balance authority and incentives for regulatory authorities - as well as companies - to maximise social welfare.

*Institutional structure of regulation*

The stability of the 'regulatory bargain' depends as much, if not more, on the structure and behaviour of regulatory and political institutions as on the form of regulation adopted (Rees and Vickers, 1995). Much debate has centred on the independence of regulators and how to establish and maintain arms-length separation between government, operators and regulators. In the UK, individual regulators specialising in a single industry were expected to allow quick and unbureaucratic decision-making (Baldwin and Cave, 1999).

König et al. (2003) see personal accountability and predictability of decisions as advantages of UK-style individual regulators. Fast professional development is cited as an additional benefit of single-industry regulators by Parker (1999), who also provides arguments in favour of multi-industry regulators. Cross-sector knowledge transfer can improve efficiency and effectiveness, economise on regulatory expertise as well as providing a more consistent approach across the various regulated industries. Without stating a preference, König et al. (2003) provide arguments in favour of regulatory commissions. Spreading decision-making power amongst several members reduces the risk of capture and can provide different perspectives on a given problem. The authors also see the potential of greater stability and continuity in the event of changing governments as discussed previously. The more practically-oriented publications such as König et al. further discuss institutional design issues such as appointment of regulators and funding arrangements, which otherwise receive comparatively little mention.

#### *Water industry regulation*

Relative to the large body of literature on the various aspects of regulation, there are few published accounts of sector-specific research. The British water regulator OFWAT (Office of Water Services) generally features in the literature on British regulatory reform, and there is an emerging literature describing regulatory experiences in developing countries, which will be the subject of later parts of this review. The basic approach to water utilities regulation shares many of the principles already discussed, with quality issues assuming greater significance in the water industry than in other infrastructure sectors. Klein (1996) maintains that regulatory mechanisms - within or independent of government - can be found in all countries to counterbalance the monopoly elements inherent in piped water systems. He emphasises the paramount importance of regulating and monitoring performance standards relating to service quality aspects. There he distinguishes health and safety issues arising during the production process (environmental impacts) and service provision (water quality) as well as the quality of customer service.

In the UK, regulatory responsibilities are divided between several agencies. Strict environmental and quality regulation is exercised by the Environment Agency and the Drinking Water Inspectorate respectively, influencing OFWAT's regulatory decisions, which lie in the economic domain. The preceding section has already hinted at the link between price and quality regulation, which is reflected in the water industry's price cap, RPI+K. The K factor reflects the scheduled increase in real prices. Armstrong et al. (1994) identify investment as a crucial determinant of K, as companies need to be enabled to meet statutory environmental and quality standards. The peculiarities of the water industry have influenced regulatory procedure. In response to the limited potential for competition, OFWAT has placed greater emphasis on refining benchmarking techniques. Armstrong et al. mention the opportunities for yardstick competition, i.e. efficiency comparisons between the

regional water monopolies. Klein (1996) suggests a possibility of generating such yardstick information across different countries. Recent OFWAT publications set out the regulatory approach to encouraging investment "at the right level and at the right time" (OFWAT, 2004, p. 34). In consultation with stakeholders the regulator has established clear procedures regarding the determination of the 'unknowns' discussed above to ensure financeability but sharing the benefits of greater efficiency with customers.

#### **'Good' regulation**

Several concerns regarding regulatory performance and regulatory conduct have transpired during the discussion of the literature so far. Authors have commented on the effectiveness and efficiency of regulation in correcting market failure and achieving social equity objectives under different regulatory arrangements. Some have questioned regulatory authority and legitimacy of decision-making. Regulatory discretion and the various monetary and non-monetary costs of regulation have been subject of debate. The majority of authors have implicitly and explicitly suggested regulatory principles such as credibility, independence, accountability, trustworthiness, competence and commitment as well as transparency, fairness, consistency, and predictability of decision-making. These attributes of 'good regulation' have occupied a host of academics, consultants and government advisors, and this section discusses some of the literature that has been produced.

#### *Regulatory performance and legitimacy tests*

Berg (2000) identifies three elements that determine the effectiveness of regulation. A regulatory agency must be provided with a well-defined legal mandate and adequate organisational resources to successfully carry out its duties. The agency itself then needs to develop a set of core values or operating principles which are consistent with its policy objectives. He acknowledges that newly created agencies are likely to deviate to greater or lesser extent from this ideal case, and the factors typically evolve over the lifetime of government agency. The legal mandate serves as a basis of regulatory authority whilst circumscribing the boundaries of regulatory jurisdiction divides responsibilities between the line ministry and the regulator. Berg argues that explicit legal statements regarding the regulator's functions are desirable, and the provision of appropriate instruments facilitate the achievement of regulatory objectives. Agency values play a crucial role in establishing the legitimacy of the regulator in the eyes of the other stakeholders involved in the regulatory process.

This question of regulatory legitimacy or 'worthiness of public support' is central to the effectiveness of regulatory systems. It has also elicited debates on the justification of regulatory discretion and the extent to which it should be limited. Prosser (1997) summarises the argument with respect to the economic and social rationales of utilities regulation: Whereas regulators derive legitimacy from their technical expertise in increasing allocative efficiency, which requires rational and non-arbitrary

decision-making, distributive concerns (i.e. the social rationale, which is of key importance to utilities) involve choices which some parties prefer should rest with government holding the democratic mandate. Baldwin and Cave (1999) suggest that regulatory performance is best evaluated against five key benchmarking criteria, a suitable combination of which can be argued to legitimise regulatory arrangements or decisions: The *legislative mandate* satisfies the need for authorisation by a democratically elected body, but does not solve the problem of discretionary decision-making as legislation is often framed in ambiguous terms. *Accountability* of the regulator to a democratic institution can act as a substitute for imprecise mandates. Fairness, accessibility and openness of regulatory procedure are the basis of the '*due process*' argument, which calls for stakeholder participation in regulatory policy. Decisions may further be justified by the level of regulatory *expertise*, but this criterion relies on public trust in the reliability of expert judgements and may fail to satisfy the accountability criterion. Finally, *efficiency*, both in the implementation of the legislative mandate (productive efficiency) and the production of desirable outcomes (allocative and dynamic efficiency), can be used as a claim for legitimacy. However, in addition to being difficult to assess objectively, efficiency of utility regulation is entangled in Prosser's (1997) argument regarding regulatory rationales. König et al. (2003) concur with these five 'key test of regulatory legitimacy', but seem more realistic regarding the trade-offs involved in attempting to improve regulatory performance on all counts simultaneously.

#### *Principles of good regulation*

Baldwin and Cave (1999) claim that their five benchmarks are consistent with the principles of regulation highlighted in the regulatory debate. This debate has been driven by the practical need for well-designed and balanced government interventions, and is thus not confined to theoretical academic discourse. According to the five 'Principles of Good Regulation' endorsed by the British Government, regulators should aim for *proportionality* of interventions relative to the risk and costs of compliance. The *accountability* principle demands that regulators should be able to justify their decisions and remain open to public scrutiny. *Consistent* application of rules is expected to heighten predictability and relieve uncertainties amongst the regulated. *Transparency* involves effective and timely stakeholder information and consultation, and *targeting* of interventions allows for flexibility in meeting clearly defined targets and systematic review of the effectiveness of specific regulations (Better Regulation Task Force, 2003). The Australian counterpart task force (quoted in Berg, 2000, p.161) identified a total of nine best practice principles: *Communication* and *consultation* to promote stakeholder information and participation, *consistency* and *predictability* of decision-making, *flexibility* in the selection of policy instruments and their adaptation to changing conditions, *independence* to remove undue political influence, *effectiveness and efficiency*, *accountability*, and finally *transparency* of the regulatory process. Berg (2000) takes the international experience so far as evidence that these principles (or agency values, in his terminology) are required

to support regulators in their activities. Quoting Stern and Holder (1999), Berg (2000) then separates the principles of good regulation (or good 'agency governance') into those relating to agency design and those relating to the regulatory process. Good agency design hinges on clarity of roles, autonomy and accountability, whereas participative, transparent and predictable processes enhance the legitimacy and effectiveness of newly established regulators vis-à-vis other non-government stakeholders.

#### *Implementing 'good' regulation*

Researchers have approached the issue of implementing good regulatory practice from different angles. A number of authors have highlighted the effect of discretionary decision-making on companies' investment decisions as well as the cost of capital, both of which ultimately influence consumer prices and quality of service. Armstrong et al. (1994) merely raise this issue of regulatory risk in their discussion of RPI-X, whereas Vass (2003a) directly links the problem with the question of regulatory independence. His conclusion is that both regulatory and ministerial discretion should be constrained to protect regulatory objectives from individual interests, whereby independence of economic regulation serves to control the dangers of political interference. In his view, this approach to risk minimisation has the additional benefit of promoting public confidence, which becomes a central concern as contemporary regulatory regimes attract criticism for a perceived lack of accountability and transparency as much of the literature confirms.

Minogue (2004) examines the accountability and transparency principles and draws attention to the variety of instruments that can be employed to satisfy public demand for more 'openness' in regulation. He shows that increased transparency of regulatory systems and accountability of actors are not goals *per se*, but instead fulfil the purpose of maintaining an equilibrium state of regulatory objectives and outcomes for regulatory regimes that are embedded in the prevailing administrative doctrine and are thus predisposed to certain policy instruments. The 'traditional' public administration approach prefers a more legalistic approach to regulation, in which expert review is expected to provide justification for regulatory decisions and thus accountability. Under the 'consumer sovereignty' doctrine, information is emphasised as a means to improve consumer choice, and finally, 'citizen empowerment' advocates maximum public scrutiny through direct involvement of informed citizens. Each scenario draws on a different combination of the four 'transparency tools' (voice, choice, representation and information). Minogue also shows that certain trade-offs are associated with the pursuit of accountability and transparency, and how the holding to account of all activities may result in an increasingly rigid regulatory system.

Vass (2003a) directly comments on the British principles of 'better regulation' as they relate to the utilities sector. With regard to the transparency principle, he argues that a clear statement of policy objectives ought to be supplemented with the promotion of clear expectations amongst customers and

the general public. The ubiquitous negative portrayal of 'profit', for instance, is counterproductive for confidence in incentive-based regulatory system. Targeting, he explains, is related to the cost-effectiveness of regulatory interventions, and the consistency principle should not be mistaken for rigidity. Consistency relates to the objectives of regulation and does not preclude a level of regulatory discretion to adapt rules flexibly in the light of new information and accumulated experience.

## 2. REGULATING WATER SERVICES IN LOW AND MIDDLE INCOME COUNTRIES

In much of the developing world, low-income households do not enjoy access to safe, convenient and reasonably priced water services at the same level as their wealthier counterparts at home and abroad. Over the past two decades governments have implemented infrastructure reforms, usually involving



Children playing in a slum in Metro Manila, Philippines

neo-liberal economic strategies as promoted by international financing institutions (Cook et al. 2003, (Nickson and Franceys, 2003)). Although the policy changes in the water sector are less markedly inclined towards private sector participation, utility ownership, operation and oversight functions have become redefined in attempts to improve water utilities performance. The various models of regulation which have been experimented with and the very specific challenges to regulation which have emerged in developing country settings will be the subject of this section.

### The context for water services

Before moving on to the workings of utilities regulation in lower-income economies, this first part will take a step back with the intention to familiarise the reader with the 'local realities' in the target countries. The literature is reviewed to gain a basic, but sound, understanding of the problem of

urban poverty and the fragmented water markets that serve low-income households, which constitute an important aspect of the operating context for water regulators in the developing world.

### *The concept of urban poverty*

The concept of 'poverty' revolves around various aspects of deprivation. Hossain and Moore (2002) suggest that poverty reduction strategies driven by international organisations have resulted in an over-emphasis on quantitative definitions of poverty', often in highly narrow economic terms. Friedmann (1996) distinguishes four major approaches to conceptualising 'poverty'. The bureaucratic approach prefers precisely defined absolute and relative poverty lines, which usually measure the lack of financial resources, and are essentially political definitions according to Friedmann. The moralistic approach, referring to the "destitute", "indigent", "deserving poor", or popular classes, for instance, implies moral judgements. Academics speak of "structural poverty", "exclusion" and marginalisation", and tend to associate poverty with external conditions, such as the prevailing socio-economic order. Finally, the disempowerment explanation, founded in social activism of poor communities, includes social, political and psychological dimensions, such as lack of access to resources, lack of voice in the political process and lack of self-confidence. Hossain and Moore (2002) argue that in policy terms, poverty is a matter of perception rather than simple facts, and with this perception the conceptualisation of poverty varies over time. The definition of poverty has now shifted from classical poverty lines to including non-monetary criteria such as health, education, lack of voice and power. The multiple dimensions of poverty, which encompass aspects of insecurity, vulnerability, indignity, and repression, are now widely recognised by practitioners as well as academic researchers, who acknowledge the significance of social exclusion in assessing the origins and implications of poverty (Courmont, 2001, World Bank, 2001).

A study of the literature on water supply and sanitation services shows that the urban poor are normally assumed to be slum dwellers, squatters or occupants of multi-tenancy buildings of a sub-standard quality, and vice versa residents of such areas are assumed to be poor. It is less apparent in



Informal housing in Jakarta, Indonesia



which locations researchers expect to find poor urban communities, although some authors specifically refer to the expanding urban fringe and peri-urban areas. The diversity of the poor is now being emphasised (UN-HABITAT, 2003a, Plummer, 2002b), but there remains the practical problem of incorporating measures of security, empowerment and opportunities into the standard measures of poverty. Some broad classifications are needed to define the beneficiary target group for this research, i.e. which urban poor communities can reasonably be expected to benefit from the economic and social regulation to be introduced. Plummer (ibid) explains how the degree of poverty affects household priorities: Whilst the “very poor” have no money at all to spare for water services, the “middle poor” prioritise water over sanitation, whilst the “better off poor” cut back on service expenditures only in emergencies. The micro-financing literature, which distinguishes the “destitute”, “extremely poor” and “very poor” from the “moderately poor” and “vulnerable non-poor” who are at risk from marginalisation and deprivation, offers a further useful starting point (e.g. Cohen and Sebstad, 1999, Hasan, 2003, Simanowitz, 2004).

*Water services for the urban poor*

Problems with assessing the adequacy of water services have long been recognised, but are still subject of review and debate. The often-quoted Global Water Supply and Sanitation Assessment 2000 Report only refers to “improved” access to



Water kiosk in Nyeri, Kenya

drinking water, providing its own definition of what is considered an “improved source” (WHO and UNICEF, 2000). Satterthwaite (2003) gives a passionate account of how “nonsense statistics” obscure the true level of urban poverty and the extent of the challenge that lies ahead in providing water to all those presently un-served or under-served. He challenges reports from various countries who report high service coverage achievements, when in fact large proportions of the population rely on the classical “poor people’s solutions” such as standpipes and kiosks. Even where “adequate” supplies are on the increase in

absolute terms, official coverage statistics are often found to be misleading, as they “confound growing numbers of connections with growing population” (Foster and Araujo, 2004, p.18). Webb and Iskandarani (1998) introduce the concept of household water security, which draws upon existent theory relating to the concept of food security, and combines aspects of availability, access and actual water use on a macro-scale, suggesting that poor households are particularly water insecure. Although the paper neither exclusively nor specifically addresses the issue of urban water supply, the underlying concept of considering water as a resource, an economic commodity and a human entitlement provides interesting ideas for developing a corresponding concept of ‘urban household water security’, which could replace the purely technical notion of “adequate access”.

Poor urban communities face various problems in accessing networked water services, many of which are related to water companies’ perceptions. Slums, housing large urban communities, have been described as the “water engineer’s nightmare” (Katakura and Bakalian, 1998). Reasons other than distance from existing networks and accessibility problems explaining the operators’ reluctance to connect residents of slums and shantytowns include the perceived problems of affordability and non-payment and the lack of security guarantees for pipelines and connections installed on land of insecure or disputed ownership (Almansi et al. 2003, McPhail, 1993, WaterAid, 2001). Almansi et al. (2003) show that frequently access is delayed, if not denied, by cumbersome administrative procedures. A detailed literature review on the “connection charge barrier”, which according to Clarke and Wallsten (2002) will continue to “make a mockery of any policy intended to connect the poor”, has been carried out for this research programme’s sister project. It was found that the issue of “charging to enter the water shop” had not been addressed in any systematic way in the literature (Gerlach, 2004). The results of the research confirmed the suspicion that connection costs in many cases are not only too high, but also lack predictability, thus seriously hampering service access for the urban poor (Franceys, 2005). Alternative options of accessing water services are examined in the next section, which establishes current knowledge on actual and existing water markets in developing country cities.

*Urban, developing country water markets*

*Coping with inadequate services*

There is widespread agreement on the fact that the continuous pressures of rapid population growth and rising poverty levels far exceed the capabilities of conventional public service provision, which more often than not suffers from inadequate infrastructure networks, historic underinvestment and managerial inefficiencies. Service failures occur on a multitude of levels, and service for poor people is usually equivalent with poor quality service (World Bank, 2003, Brocklehurst, 2002). Official service coverage statistics often mask the extent to which households, and in particular the poor and vulnerable, rely on costly or time-consuming coping strategies

and alternative means of securing drinking water supplies (Zérah, 1997, UN-HABITAT, 2003b). As attention focused on the centralised monopoly providers and their various shortcomings, there was only occasionally note of the widespread occurrence of water vending in the literature (Zaroff and Okun, 1984), and alternative providers were not “rediscovered” until the late 1990s. Today there is growing interest in the irregular and fragmented urban water markets where a variety of agents occupy the many gaps left vacant by the utilities, and in particular (but not exclusively) caters for lower and lowest income households, where there are no options for self-supply. Many case studies have examined the nature of alternative providers (e.g. Solo, 1998, Collignon and Vézina, 2000, Llorente and Zérah, 2003, Conan, 2003) and governments, donors and advisors acknowledge their role in



terms of the number of people they serve, and their ability to successfully match services with the needs of a diverse and often financially and socially disadvantaged clientele (UN-HABITAT, 2003b, World Bank, 2003, Brocklehurst, 2002, Stallard and Ehrhardt, 2004, Plummer, 2003, McIntosh, 2003).

#### *Types of alternative providers and market share*

The African Water Utilities Partnership (Plummer, 2003) classifies alternative providers into intermediate and independent service providers. Intermediate providers effectively act as utility extensions by purchasing bulk quantities of water and distributing it, whereas independent providers develop their own sources and supply systems, sometimes in competition with the utility. A small number of “pioneers” operate independent distribution networks with individual household connections; but vendors and resellers are the most commonly found type of alternative provider (Conan, 2003). The long list of types of alternative providers ranges from water tankers supplying un-served areas, water carriers providing a door-to-door delivery service, water points and kiosks owned or managed by communities or NGOs, and privately managed utility stand posts to water being sold by neighbours or landlords with a household connection. Though many of the alternative providers’ businesses are not officially registered, cases of illegal distribution of utility water have also been reported (McIntosh, 2003, WPEP, 2000. The definition of an alternative

provider becomes somewhat ambiguous, with blurred boundaries between local entrepreneurs operating within the informal economy and those engaging in outright theft and fraud.

Alternative providers’ market share varies widely across the developing world, ranging from 5-15% in South Asia and 20-45% in South East Asia (Conan, 2003), to some 25-50% in Latin America (Solo, 1998, 1999) and up to 80% in African cities (Collignon and Vézina, 2000). Their significance is neatly summarised by Solo (1998), who finds that in Port-au-Prince, Haiti, alternative providers “produce about 10 percent of the urban water supplied, distribute about 20 percent of the city’s water, and reach some 70 percent of the households”.

Alternative providers are beginning to conquer traditional strongholds of public service provision, such as India (Zérah, 1997), and there is an emerging market for bottled water, with sales on the rise reported from many countries (Foster and Araujo, 2004, Conan, 2003, Raghupathi, 2003, Llorente and Zérah, 2003). Researchers find the significance of alternative providers increases outside of major urban centres (Collignon, 1998, Solo, 1999).

#### *Successes and failures of alternative providers*

The overriding concern of opponents and sceptics are the rates charged by alternative providers, frequently described as “exorbitant” and “overcharging” (Zaroff and Okun, 1984, Espinosa and López Rivera, 1994, Vézina, 2002). An overriding profit motive, anti-competitive monopolist behaviour, occasional illegal involvement of corrupt utility staff, and the threat of capture by local elites or mafias are feared to exclude vulnerable groups and reinforce existing inequalities (Mitlin, 2002). The safety of largely unmonitored drinking water supplies has also been questioned. Secondary concerns include possible irregularities and unreliability of supplies and independent providers’ activities undermining long-term sustainability, as exemplified by the over-abstraction of local groundwater resources (Zaroff and Okun, 1984). In contrast to these criticisms stands the unanimous agreement on alternative providers’ good understanding of the market, their customer responsiveness, and remarkable resourcefulness in finding simple, but effective solutions under the most adverse operating conditions. Stallard and Ehrhardt (2004) advise private sector participation (PSP) projects to cooperate with alternative providers on account of their ability to serve customers beyond the reach of conventional projects and their ability to cater specifically for the poor through innovation, flexibility and economical solutions. Authors positively note the generally good and often personal relationships between suppliers and customers (Solo, 1999, Raghupathi, 2003). Knowledge of customer habits and preferences and the financial situation of the households served allows alternative providers to adjust payment plans to customers’ income schedules or even delaying payments (Troyano, 1999). Whilst Llorente and Zérah (2003) criticise alternative suppliers for only providing peripheral solutions, Solo (1999, 1998) cites their readiness to see beyond the official city limits and experiment with innovative, unconventional

technologies as admirable strengths. Community management is portrayed as an option allowing for extensive household participation in designing and delivering services, albeit not without certain capacity and sustainability problems (Mitlin, 2002).

*Constraints on alternative providers*

The lack of official recognition of alternative providers' functions and their ambiguous legal situation are presented as a core problem by Plummer (2002). Communication with public authorities is likely to be non-existent, and the attitude of formal (private) monopoly providers, protected by exclusivity clauses in their concession agreements, may range from tolerance to outright hostility (Collignon and Vézina, 2000). Obel-Lawson and Njoroge (1999) report that even where official policies have been reformed they are unlikely to accommodate independent providers. The ambiguous operational framework increases alternative providers' business risk to the extent that it becomes virtually impossible to raise money for investments from commercial banks. Without access to public subsidies and conventional financing, independent small-scale businesses invest family savings and are consequently forced to achieve full recovery of all costs (Solo, 1999). Insecure investments severely restrict planning horizons, with typical amortisation periods ranging from less than three months in the case of vendors and resellers to approximately three years for independent suppliers (Conan, 2003, Troyano, 1999, Drangaert et al. 1998). Recent study results indicate that profit margins are lower than presumed, and operators are surviving on modest incomes (Vézina, 2002, Collignon and Vézina, 2000, Conan and Paniagua, 2003).

**Regulation in the developing country context**

*Regulatory rationales in developing countries*

The beginnings of utilities regulation in developing countries are usually associated with post-privatisation reforms under the guidance of foreign advisors. Incentive regulation based on England and Wales' OFWAT model has become a popular export to developing countries (Nickson and Franceys, 2003, Parker, 1999). However, some authors have voiced their disapproval of such policy transfer experiments, the sparse literature on which suggests that "blueprints are borrowed, but honoured in the breach more than the observance" (Cook et al. 2003, p.24). Many see the reasons for regulatory failure in the failure to address the local realities described above. Minogue (2003) detects a disparity between regulatory 'best practice' as promoted by donors and existing (and different) administrative, political, legal and economic conditions in the developing countries under reform. Laffont (2005) finds the initial reliance on conceptual frameworks borrowed from the Western World not surprising, noting that there is a distinct lack of theoretical understanding of economic regulation in developing countries. Academic researchers are only beginning to build the foundations for a theory of regulation that recognises the constraints and objectives of economic regulation in developing economies (Parker and Kirkpatrick, 2002, Laffont, 2005). Parker and Kirkpatrick (2002) suspect this

theory may be substantially different to the accepted theory which originated in high-income nations.

In view of the major service gaps commonly found in developing countries it is now becoming clear that regulatory rationales necessarily differ from those in developed countries. Widespread poverty pushes social objectives higher onto the political - and hence regulatory - agenda. Practitioners state the challenge more boldly as finding "reasonable ways to improve substantially and on a large scale the service provision for the poor" in an environment that is characterized by inefficient social redistribution systems and a large share of the population surviving at or below the poverty line (GTZ, 2004, p.7). Minogue (2003) argues that regulating for development and poverty alleviation may require a higher degree of political intervention on behalf of the poor than conventional models of independent regulation permit, even if such independence should be aspired to. Together with Cook (Cook and Minogue, 2003) he proposes to think of regulation as the 'bridge' between often conflicting efficiency and welfare objectives. What under the conventional 'fixed bridge model'



Metropolitan Water works and Sewerage System Regulatory Office

would amount to regulatory capture, is simply making allowances for the special circumstances of developing countries in terms of the scale of the need and institutional and capacity deficits under the suggested 'flexible swing bridge' model. This notion is supported by Stern and Holder (1999), who emphasise the need to reach clarity about regulatory objectives and requirements whilst retaining flexibility and creativity with respect to optimal institutional setups for each country and industry.

*Regulatory failures and constraints*

Nickson and Franceys (2003) note that experiences with water regulation remain limited. Nevertheless the literature is full of anecdotal evidence of regulatory failures, mostly relating to some form of capture. Shirley and Ménard (2002) suggest that it was the bureaucratic and legal institutions' susceptibility to political interference and corruption which ultimately weakened regulators in Latin American and African case study countries. Trémolet and Browning (2002) demonstrate

that not even autonomy necessarily protects against overrule of regulatory decisions by political interests. Esguerra's review (2002, cited in Mitlin, 2002) of the world's largest water concessions in Manila reveals that the (under-) bidding private companies subsequently tried to influence the regulatory process to rule in their favour. Instances of undue intervention on the part of regulators, effectively leading to 'micro-management' of the service providers' operations, have also been observed (Nickson and Franceys, 2003). Nickson and Vargas' (2002) analysis of the perhaps most spectacular failure of PSP identifies weak regulatory capacity as one of the decisive factors in the termination of the Cochabamba concession following the high profile water conflict in Bolivia. In spite of attempts to create an appropriate regulatory framework, the conflict was characterised by almost continuous political intervention and pressure on the regulator to endorse pre-determined government decisions. Regulatory budget constraints, lack of qualified staff, an ambiguous legal framework and the lack of consumer participation exacerbated the problem.

The above evidence only confirms earlier warnings about constraints that political and economic environments impose on the new regulators. In 1999, Parker summarised the prerequisites for UK-style regulation as political commitment to regulatory independence and a "reasonably stable" economy. He fully acknowledged the need to beware of trying to copy a system which has achieved many benefits for consumers and investors in its home country into a setting where the right balance of regulatory independence and accountability may be even more difficult to achieve. Anticipated problems include the continuation of customary political appointments, which undermine the credibility of regulators and thus investor confidence, recruitment problems, and a high risk of political intervention, intensified by the lack of vocal parliamentary opposition and free press (Parker, 1999). A more recent review identifies the lack of regulatory capacity as a major challenge to successful regulation in developing countries (Cook et al. 2003). Cook et al. add the limited potential to recruit skilled regulatory personnel, a problem which is further complicated by low civil servant salaries, to Parker's above list. Developing countries, they argue further, are predisposed to 'gaming' as the potential lack of government integrity, independent media and judiciaries allow for greater exploitation of the information asymmetries inherent in the regulatory process. Under these circumstances, further research needs to focus on understanding and addressing information asymmetries, appropriate regulatory instruments, institutional aspects of regulation such as incentives, regulatory structures, and capacity building, and how the principles of 'good regulation' can realistically be incorporated into regulatory reform in developing countries (ibid).

What these papers fail to note is the fact that the sequence most commonly observed is that regulatory arrangements follow after negotiations for private sector involvement have begun (Nickson and Franceys, 2003). Not surprisingly, early regulation efforts have focused on contractual arrangements,

where price-sensitive contract deliverables, at least initially, take precedence over other considerations (Halcrow, 2002). In McIntosh's (2003) view this reduces newly created regulatory bodies to contract administrators. The Asian Development Bank (2001) confirmed that regulation in the region had indeed not evolved significantly away from mere contract administration. McIntosh (2003) claims that most developing countries have only implemented regulation by contract over the past decade. Halcrow management consultants (2002) use the terms 'regulator' and 'contract supervisor' interchangeably, which opens up questions regarding foreign advisors' understanding of the nature of regulation in developing countries (2002). The problem of sequencing and inequalities between negotiating partners in terms of experience thus becomes acute (Budds and McGranahan, 2003, Mitlin, 2002). Johnstone et al. (cited in Mitlin, 2002, p.17) note that the high level of concentration in the international water market may tip the balance in favour of private companies "who know a lot more about regulatory options and their potential consequences than the regulators themselves".

#### *Privatisation, regulation and the poor*

Although some authors continue to blame the World Bank for neglecting the effects of service privatisation on low-income households (Bayliss, 2002), a growing interest in the impact of privatisation on poverty can be detected in the literature (Brocklehurst, 2002, Budds and McGranahan, 2003, Clarke and Wallsten, 2002, Estache et al. 2000, Gutierrez et al. 2003, Weitz and Franceys, 2002). Irrespective of the views on dangers and benefits of private sector participation in service provision expressed by the authors, the critical issues converge; affordability problems associated with tariff rises, cost of connections and widespread elimination of illegal connections, and the challenge of achieving universal service coverage feature in the majority of accounts. Critics and champions agree that adequate regulatory structures need to be in place for privatisation to have the desired effect of connecting and protecting the urban poor. Where privatisation has been successful, Cook (1999) argues that the largest gains have been achieved by effective regulation rather than privatisation itself. Plummer (2002) adds that the regulatory framework is "perhaps the most critical aspect of the external operating context for the success of all PPPs" (public private partnerships, p. 4-7).

At the same time the privatisation literature dispels some myths, which are neatly summarised by McIntosh (2003): Blaming private operators for tariff increases, convenient as it may be especially where international water companies are involved, is a case of confounding causes and effects. PSP is no miracle cure for decades of mismanagement and underinvestment. Tariff increases, McIntosh argues, are absolutely crucial to finance ambitious connection targets. Poor households' alleged low willingness and ability to pay has merely used to conceal government's reluctance to charge. The consistently higher prices paid to alternative providers prove this point. In line with the findings of privatisation critics (Budds and McGranahan, 2003, Gutierrez et al. 2003)

McIntosh concedes that without explicit directions, PSP will not solve the problem of serving the urban poor. Laurie and Crespo (2002) put some of the benefits of the Bolivia privatisation experience, reported for instance by Barja and Urquiola (2001), into perspective, arguing that in the case of the La Paz - El Alto concession the achieved service expansions have been over-emphasized, obscuring "significant anti-poor elements" which are rooted in regulatory weaknesses and a lack of democratic participation.

In recognition of the fact that PSP and its associated efficiency gains do not automatically deliver benefits for the urban poor, donor initiatives are now developing 'pro-poor' PSP strategies (Brocklehurst, 2002, Stallard and Ehrhardt, 2004). Early lessons from privatisation experiences indicate the importance of pro-poor contract design and the supporting policy and regulatory frameworks. Komives (1999) concludes that the typical concession contract performs better if tangible objectives are formulated, these are supported by financial incentives to serve the poor, policy barriers are eliminated, and services retain a high degree of choice and flexibility. Exclusivity clauses and strict technical service specifications are examples cited as counterproductive by restricting or eliminating options available to poor households. Subsequent research commissioned by development banks initially focused on pro-poor transaction design and contract preparation, covering key elements of sector reform ranging from appropriate legal frameworks to tariff structures and subsidy allocation (Brocklehurst, 2002), but is expanded upon in a more recent report by Stallard and Ehrhardt (2004). The regulation

literature followed suit and, in line with the findings of 'pro-poor PSP' studies, elaborated on regulatory strategies designed to turn poor services into services for the poor.

### From poor regulation to pro-poor regulation

#### *Establishing the poverty focus*

Trémolet (2002) notes that regulatory agencies are rarely mandated to protect poor consumers, a complex task requiring specialist skills and dedicated resources. Smith (2000) emphasises that an effective pro-poor regulatory strategy must prioritise service expansion and cost minimisation in order to remain sensitive to the affordability concerns of the poorest. The broad consensus in the literature is that the key to meeting the challenge lies in matching customer needs and preferences with relevant and accessible services. Stallard and Ehrhardt (2004) compare this first step of developing the necessary understanding with market research. Attention should be paid to the characteristics, attitudes, expectations, aspirations and financial circumstances of the poor. Trémolet and Browning's (2002) report linking regulatory frameworks and tri-sector partnerships provides excellent arguments in support of early involvement of multiple stakeholders to create a flexible and innovative environment of mutual support and recognition of interests and constraints. Smith (2000) as well as Stallard and Ehrhardt (2004) acknowledge the role of partnerships in performing broader regulatory functions such as assessing the needs of poor customers. The latter advise against relying on frequently inaccurate official statistics and see local partners as potential contributors to community surveying.

#### *Regulatory mechanisms*

##### *Price and service differentiation*

Smith (2000) advocates more pragmatism in regulatory controls on pricing and service quality. Tight price regulation may actually remove incentives to serve the poor, who may be more costly to serve, and high technical, health, safety and environmental quality standards may come at a price that turns the poor away from regulated services. In response to these affordability concerns, Baker and Trémolet (2000) propose to allow an "acceptable relaxation in quality" of services to ease access of the poorest. They note that stricter enforcement of quality standards can add significant costs to the service, though enforcement is generally weak. The authors admit that optimal quality standards are difficult to determine, which speaks in favour of Smith's (2000) model of nurturing competitive markets, where choice reveals consumer preferences. There is a general agreement that minimum standards tend to be oriented at first world standards rather than acceptable standards that meet the basic needs of the poor, and specifying the technology to be employed can stifle innovation and adaptive, low-cost solutions. However, a slightly more prescriptive approach may be preferable as far as performance targets are concerned. Stallard and Ehrhardt (2004) suggest that coverage targets, for instance, should be specifically tied to locations rather than



*The regulatory challenge ahead:* Inducing utility providers to replace defunct standpipes (above) with regular piped water connections in slums and informal

statistical figures, with built-in flexibility to respond to circumstances. Outcomes should take precedence over input standards, Baker and Trémolet (2000) concur. They also emphasise the role of publicising quality information, in which community organisations could play a role, as a cheap and effective means to address the problem of information asymmetries, as long as a suitable balance can be maintained between public education and interest group lobbying. Stallard and Ehrhardt (2004) propose that above the required minimum standards public information campaigns could actually replace regulatory oversight, whilst still promoting quality improvements.

#### *Tariffs and subsidies*

The design of appropriate tariff systems is a critical regulatory task, which goes hand in hand with subsidy allocation. It has become an established fact that subsidies more often than not have bypassed their intended beneficiaries. Clarke and Wallsten (2002) find that only in Eastern Europe have monopolists used subsidy schemes to promote access to infrastructure services for the poor. Many authors give reasons and examples of how the prevailing tariff and subsidy systems entrench social exclusion. Tariffs are generally set too low to turn poor households into attractive potential customers, and subsidy schemes are plagued with high errors of inclusion (subsidies are captured by the non-poor) and exclusion, i.e. subsidies failing to reach the - often unconnected - poor (McIntosh, 2003), (Whittington et al. 2002, (Boland and Whittington, 2000). While there is no scope for debating appropriate pricing mechanisms within this review, it is essential to note that even consumer organisations support the view that the poor stand to gain from raised tariffs (Simpson, 2002). Only an increased revenue base can stimulate much-needed network expansions and service improvement.

Trémolet (2002) makes the explicit link between pro-poor tariff and subsidies required to meet cost recovery levels. She highlights the need for innovative delivery mechanisms for subsidies. To date subsidies are usually incorporated into the tariff designs in the form of cross-subsidies. Boland and Whittington's (2000) critical evaluation of objectives and considerations governing tariff development reveal some of the limitations and even negative impacts associated with cross-subsidy schemes. They find no evidence to support the assumption that increasing block tariffs (IBTs), originally devised to assist low-income households in developed countries through below-cost first blocks without introducing overall revenue distortions, increase the likelihood of households connecting to the system or encourage poor households' water use. IBTs promote public health no more than uniform tariffs with built-in rebates, nor do they achieve equity or resource conservation. Boland and Whittington provide convincing arguments that in spite of their widespread popularity, IBTs have wrongly been promoted as the most suitable choice in developing countries. IBTs also penalise shared connections, which are commonly found amongst connected low-income households, a point also raised by several others (Inocencio, 2001, Weitz and Franceys, 2002). Many authors support the 'access priority', maintaining

that subsidising new connections should be prioritised over actual consumption subsidies (McIntosh, 2003, Whittington et al. 2002, Simpson, 2002, Weitz and Franceys, 2002, Brocklehurst, 2002). Some authors assert that subsidies should never cover the full cost of provision (Brocklehurst, 2002, Stallard and Ehrhardt, 2004).

Regulators not only face the challenge of balancing competing objectives in developing tariff structures, but also have only limited control over subsidy levels, as Trémolet (2002) points out. However, Chisari et. al (2003) demonstrate that the choice of regulatory system (i.e. price cap or rate of return regulation) influences the choice of technology and hence the level of investment (and hence subsidy) likely to be required. Subsidies often are used as political instruments, as Boland and Whittington's (2000) observations confirm: Subsidies reflect *subjective* notions of fairness rather than objectively promoting equity. The main purpose of tariffs is to cover revenue requirements (ibid), but there are uncertainties surrounding government commitment to agreed levels of subsidy (Trémolet, 2002). The problems of administering subsidies and monitoring performance become more complicated when subsidies are directly linked with service provision (for example, through output-based aid mechanisms), and when subsidies are allocated to small-scale alternative providers (ibid). Stallard and Ehrhardt (2004) suggest that subsidy payments should be linked with specific services but remain technology and provider neutral. Subsidy payments in the form of direct transfers to customers are generally favoured as the economically best solution (Trémolet, 2002, Chisari et al. 2003), with cross-subsidies rated second-best. Chisari et. al (2003) introduce a universal service fund as an alternative option to finance universal service obligations (USOs), where these have been introduced by the regulator.

#### *Incorporating alternative providers*

While it is now almost an undisputed fact - supported by international development agencies (Brocklehurst, 2002, Stallard and Ehrhardt, 2004) - that regulation should encompass both utilities and alternative providers, very few tentative suggestions can be found in the literature as to what these future regulatory arrangements should look like.



NGO-facilitated focus group discussion in Metro Manila

Insufficiently flexible solutions are a major concern, feared to destroy effective and original solutions (Troiano, 1999). Collignon and Vézina (2000) warn that an over-emphasis on technical standards and formal procedures can prove counter-effective by increasing overheads with associated price rises and service deterioration, ultimately forcing independent providers out of business before satisfactory substitutes can be offered. The literature identifies price, water quality, market entry and market share as main aspects of regulation (Plummer, 2002, Baker and Trémolet, 2000). Plummer (2002) recommends relaxing performance standards and exclusivity rights given to utilities, supporting alternative providers in securing legal contracts, revising tariff regimes, addressing land tenure issues and disseminating a "spirit of inclusion" amongst the incumbent large-scale service providers. Most authors agree that a healthy level of competition should be encouraged to promote service extensions to poor households, with alternative provider licences providing a degree of formality. Baker and Trémolet (2000) raise the point that relaxed rules should be a temporary measure. Self-regulation by provider associations has been proposed as another option (Stallard and Ehrhardt, 2004), as positive experiences are reported in the literature (WPEP, 2000, Conan, 2003, Plummer, 2003). Trémolet and Browning (2002) propose replacing costly 'traditional' regulation through price and quality standards with making performance data publicly available, thus relying on the regulating effects of reputation.

### *Customer and civil society involvement*

The centrality of information has received frequent mention in the preceding discussion of pro-poor regulation. Brocklehurst (2002) stresses needs-responsiveness as a central feature of regulatory design. Stallard and Ehrhardt (2004) advocate continuous engagement with the beneficiary communities from the project design stage through to establishing feedback mechanisms allowing for interaction between customers, operators and government/regulators. They emphasise the need for cultural sensitivity and an understanding of the special challenges facing the poor. A host of participatory and surveying techniques are available for consumer consultation and gathering site-specific information. Establishing accessible and inclusive regulatory processes is a more difficult challenge, as Foster (2003) reports from Latin America, where the failure to create mechanisms for interaction within the legal framework nurtured a negative public perception of regulation. She finds that regulators in the region have developed creative ways of improving the 'opaque, technocratic and non-participatory' image of the regulatory process, engaging the public in capacity building activities and public consultations. Permanent interaction in the form of customer representation remains the exception, but has been implemented in Buenos Aires, where representatives of consumer associations form an advisory body to the regulator. The regulator in Jakarta has introduced customer representation modelled after England and Wales' WaterVoice, but so far this has not been evaluated in the literature. As Simpson and Shallat (2004) report, consumer organisations are currently participating in informal sector regulation, such as water vending (Kenya) or community-

managed cooperative water systems (Philippines). More formal arrangements include membership in regulatory boards in some African countries and membership in the water company's board (Senegal).

Within formal regulatory frameworks, customers currently enjoy a very limited level of influence, and there are few, if any, reported attempts of including poor or unconnected households in the process. Smith (2000) sees poor access to transport and communication links as an impediment for the poor to become involved. Extreme poverty seriously limits participation as daily wage-earners lack time and financial resources and perhaps education and confidence to participate meaningfully. Although these issues are little discussed in the regulation literature, they can be gleaned from discussions on accountability and consumer voice (Ear-Dupuy, 2003). Smith (2000) insists that stakeholder engagement must go beyond formal hearings. Regulators should take a proactive stance and reach out to the disadvantaged by visiting communities, establishing consultative and advisory bodies, and educating citizens about their rights under the regulatory system. Ugaz (2002) regards the involvement of consumer associations as an indication of attempts to incorporate the voice of the poor. She presents a basic set of considerations which affect the design of consumer involvement. Decisions need to be taken regarding which participants are to join the system, how to encourage, train and empower them to overcome knowledge barriers and transcend unequal power relations between the various actors involved.

### **SPECIAL ISSUE 1: Service Obligations and the Concept of Universal Service**

This section introduces the various types of obligations which governments have sought to impose on service providers in order to protect public interest objectives. Amongst these, the concept of 'universal service' frequently appears in the literature on networked industries. Much of literature provides justifications for the introduction of 'universal service obligations' in the context of monopoly services or, more recently, and mainly in the telecommunications sector, in a competitive environment. Choné et al. (2000) introduce the underpinning notions of 'equal access' and 'affordable tariffs', as well as some of the constraints related to USOs. Ubiquity, the provision of service connections in all locations, and non-discrimination, which refers to the same tariff irrespective of customers' location and cost of connection, form the geographical component of USOs. The relatively sparse literature with a developing country focus tends to emphasise welfare aspects, or the social component of USOs (e.g. (Gasmi et al. 2000), (Clarke and Wallsten, 2002), (Chisari et al. 2003)). The water sector is notably underrepresented in the discussions, according to which the main challenge for regulators consists in correcting the market distortion introduced by the USO and, as Choné et al. (2000) explain, in "determining optimal rules for allocating and funding those USOs" (p.250). The section examines the current understanding of the concept of universal service, contrasting

its present meaning with its historical origins as well as applications in developed and developing countries.

Simmonds (2003) develops a comprehensive definition of the contemporary universal service concept in his evaluation of service obligations imposed under EU legislation. These obligations emerged in the course of European market liberalisation as the express commitment of the Union to protect certain 'general interest services' that are deemed essential in economic and social terms. The Commission here distinguishes between universal and public service obligations (USOs and PSOs). Public services, it is emphasised, do not necessarily have to be provided by the public sector, nor does the term imply public ownership of the service infrastructure. Community legislation further states that universal service, designed to guarantee "access to certain essential services of high quality at prices [everyone] can afford", is an evolutionary concept, which is shaped by technological innovations, changing general interest requirements and users' needs (The European Parliament and The Council, ):3). The political use of terms, Simmonds argues, has thereby caused some confusion. In the strictest sense, PSOs refer to any type of government obligation imposed on service providers for public interest purposes, and encompass both USOs and specific public service obligations, which do not include the element of universality. Simmonds' concept of universal service is based on a very broad definition of access, which includes notions of equity and equality. It is centred on consumers' needs and expectations with regards to access, service quality, choice, security of supply and appropriate mechanisms for redress and compensation, but also considers wider societal interests, such as environmental concerns and the protection of vulnerable groups. Independent scrutiny and stakeholder consultation, Simmonds argues, are vital to ensure openness in management, price-setting and funding. To accomplish this "societal idea" (p.10) of universal service, he recommends a set of regulatory instruments, designed to promote socially conscious service delivery.

In the context of telecommunications, the origin of the term 'universal service' has been traced back to the early 1900s. Mueller (Anonymous1997), in his account of the development of telephone networks in the USA demonstrates that universal service at the time did not have the connotations of affordability and non-discriminatory service for all that it has today. The AT&T Bell Laboratories' slogan "One system, one policy, universal service" effectively intended to preserve AT&T's monopoly profits. The term 'universal service' thus arose from fierce market access competition, with 'universal' implying *everywhere*, rather than extending services to everybody (Verhoest, 2000). Verhoest's (ibid) discussion of the "myth of universal service" illustrates with reference to the EU telecoms sector that even in the European context the concept of universal service was basically market-related, and not necessarily a result of deliberate social policy. This fact is often obscured by the political use and misuse of a term with a dual economic and social meaning. Historically, the concept of universal service clearly developed with reference to the market, and Mueller (Anonymous1997) defies conventional wisdom by demonstrating that it was not a result of regulatory

intervention by government.

As the concept of universal service has significantly evolved away from its early economic roots, it is interesting to note that in Europe service obligations are not consistently imposed on all public interest services. There is a notable scarcity of references to the water sector in both the academic literature and existing laws and regulations, compared with an extensive literature evaluating and analysing universal service in, for example, telecommunications. Under current EU legislation, USOs apply to the telecoms and postal services, and public service obligations are imposed on the gas and transport sectors. Simmonds (2003) notes that although the Community recognises water as a service of general economic interest, it is mainly environmental considerations which have driven the regulation of the sector. The US American National Association of Regulatory Utility Commissioners (NARUC), in contrast, recognise the financial implications of maintaining safe drinking water supplies for in view of environmental threats. NARUC perceive a national commitment to household affordability as essential and recommend a national 'universal water service' policy to protect "high quality drinking water at affordable rates for every American" (EPA, 1998).

As previous chapters have clearly shown, there is a tremendous need for improving access to affordable water services in developing countries. However, authors discussing universal service in these settings have tended to focus on the funding implications of extending service obligations to include underserved rural areas and the urban poor (e.g. (Clarke and Wallsten, 2002, Chisari et al. 2003). They do, nonetheless, provide some insight into the understanding of the universal service concept. Chisari et al. (2003) note that service obligations or connection targets have often been used in the context of public-private partnerships as policy instruments to accelerate access to utility services for the poor. The authors discuss USO and obligatory service (OS) as the "standard tools" available to governments, which have been used by regulators in the Latin American countries under review and are projected to remain a feature of utility services, notably in the water and sanitation sector. Both USO and OS are described as subsidy mechanisms, the implications of which need to be considered in the light of the regulatory objective of ensuring financeability of operations. OS is defined as compulsory service to all households wishing to connect under the existing tariff structure, whereas affordability concerns feature in the USO. The USO thus extends the notion of 'universal access', which is supported by OS, with an ambition to promote socially desirable consumption levels through tariff control. The authors further raise the issue of unidirectional and bidirectional service obligations (obligation to serve and obligation to use), highlighting water and sanitation service as a likely candidate for the latter. Whilst OS is deemed appropriate for services with geographically variable supply costs and where availability



fails to reach socially desired levels, USO would be the chosen instrument for essential products or services, which some consumer groups find difficult to access unless tariffs take into account their ability to pay, possibly further excluding them from other markets. Clarke and Wallsten (2002) see the justification for universal service policies in externalities associated with service uptake, 'merit' good qualities of services and political or development goals. Any combination of these factors may induce governments to provide subsidies to poor or rural consumers. Water and sanitation services qualify because of the public and environmental health benefits associated with adequate consumption levels. The authors point out that the 'merit good' argument begs the question why some services are mandatory and other, arguably more important, are not legislated for.

### SPECIAL ISSUE 2: The Ultimate Regulator - Customer Involvement

Consumers as service recipients are arguably the best monitors of service quality and reliability. As they are directly affected by regulatory decisions, they should be informed and consulted about planned changes (Plummer, 2003). So far communication between utilities and poor communities has been suffering serious shortcomings, where it has not been neglected altogether. The UK National Consumer Council (2002) deems customer involvement essential to "design and deliver goods and services that meet people's needs, improve standards, identify problem areas, and provide value for money." In the case of developing countries with their often "uninspiring track record" in public service provision, Burra et al. (2003) emphasise that urgently-needed, practical solutions must be rooted in the experiences of those who have to live with the problems. Isolated, bureaucratic approaches are best avoided by opening the policy-making and regulatory process to external groups, who bring in fresh perspectives (Berg, 2000). Engagement of all stakeholders, including (potential) customers, does not only improve the quality of decisions, but can also improve the legitimacy of regulation (Smith, 2000, Foster, 2003). Additional benefits of involving consumers mentioned in the literature include reduced risk of regulatory capture and increased accountability (ECLAC, 2003). McIntosh (2003), echoing ideas expressed in the 2004 World Development Report, suggests confronting the governance crisis through a civil society that demands accountability of policy-makers. He emphasises the role of NGOs as advocates of the un- and underserved poor and in monitoring policy implementation. Especially for the poorest, consumer and/or community engagement can make an important contribution to empowerment.

There are special challenges in involving the poor, and regulators wishing to establish customer representation will have to proceed in a proactive way. Even the UK experience shows that domestic customers are in a weaker position compared to the resources and lobbying power of commercial customers (National Consumer Council, 2002). People may be unaware of their rights and the assigned tasks of regulators (Berg, 2000). Again, this is not exclusively an issue in

developing countries, as the same ignorance has been reported amongst applicants to a British water charity: Fearing disconnection of their water supply, they sought help with their rising water debt not knowing that disconnections had been banned by the government some years ago (Fitch, 2003a).

In view of the social disadvantages and serious time limitations that restrict the participation of poor people, formal mechanisms of customer representation and involvement may not prove feasible. Hanchett et al. (2003) warn of unrealistic expectations for establishing inclusive ("mixed") customer committees. As the poor are excluded from formal service provision in many instances, creativity will be needed to give due consideration to their special circumstances and concerns when incorporating them into the regulatory process.

Customer involvement, perhaps traditionally viewed as some form of customer representation, may initially take the form of information, but will have to extend into a real dialogue between customers, providers and regulators. Arnstein's ladder of citizen participation is the classical measure for the level of influence over decisions granted to the public (Arnstein, 1969). Whatever level of involvement is decided to be appropriate, it is important for authorities to clearly state the objectives and conditions of participation to avoid false expectations (Working Group on Public Participation, 2002). There is a vast literature available on the theory of participation, and resource books detail the various methods that have been tried over the years. Abelson et al. (in: van Ryneveld, 1995) provide a concise set of principles for evaluating the different approaches, and particularly explore the usefulness of deliberative methods in recognition of the need for a two-way dialogue and consensus-building amongst all participants of the debate. Citizens' juries, consensus conferences and the like have become increasingly popular and may stimulate broader and more meaningful participation than traditional methods such as surveys and focus groups have done in the past. Further research will be required into participatory methods that can accommodate the poorest.

A parallel examination of current arrangements in the England and Wales regulatory system is appropriate as currently 20% of the population are experiencing "water poverty", defined by Fitch (2003b) as a "situation faced by householders who are obliged to devote an unreasonable high proportion of their income to paying for water" (p.15).

Although there is evidence of regulators in developing countries trying to set up customer representation mechanisms, there is little to be found in the published literature. Several authors attribute public opposition to water sector reforms to a failure on the part of the regulators to defend consumer interests (Foster, 2003) and adequately engage them in the regulatory process. Whilst Shirley and Ménard (2002) report that in none of the cases they reviewed consumers were involved in the regulatory process, Foster (2003) finds that Latin American regulators are demonstrating

“significant creativity in developing mechanisms for interaction with civil society” (p.1). Public consultations modelled after US-style public audiences are most widespread as are capacity building programmes. Contrary to Shirley and Ménard’s findings, she cites the Buenos Aires regulator ETOSS as most advanced: A Consumers Commission, which gives members an opportunity to review Board decisions, was established in 1999. Given the total lack of reference to any kind of formal or official involvement of low-income households, it can be suspected that so far none of these attempts have included the poorest.

As mentioned previously, formal hearings may not prove appropriate in a developing country setting. Regulators will have to proactively pursue customer involvement objectives. Smith (2000) suggests visiting communities and perhaps establishing specialist consultative or advisory bodies. However, to make customer representation meaningful, whatever type of involvement is chosen, consumer bodies must be truly representative and able to speak for those without the power and resources to ensure their voices are heard. There are different tools and techniques outlined in the literature, but it is pointed out that it may take time before consumer involvement has evolved into an active partnership between all interested parties (e.g. Berg, 2000). Troyano (1999) notes that while it is important to guarantee stakeholder participation, this should not happen at the expense of operational efficiency. Finding an optimum strategy for each case will much depend on local factors, but certain organisational options for customer bodies are worth considering. In the UK utilities sector, for instance, Simmonds (2002) distinguishes between two types of arrangement: In the integrated model, customer representatives are affiliated with the regulatory office, whereas independent consumer councils are external, as their name suggests. Accounting for the regional characteristics of the water industry, customer representation in the UK to date has had a regional structure and focus as opposed to the single national body, which exists for other utility sectors. Independent consumer councils have attracted criticism as they are feared to duplicate the regulatory task of consumer protection potentially adding an unnecessary level of bureaucracy and threatening to induce rivalry between regulatory bodies and consumer bodies. Detached from regulatory staff, independent consumer bodies might struggle to gain access to vital information and receive due recognition from companies (Simmonds, 2002).

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# Chapter 4

## Case Study: **ENGLAND & WALES**



### KEY FACTS (UK)

**Population**  
59.1 million

**Urban population**  
89.0%

**GDP per capita 2002**  
26,150 US\$

**HDI rank**  
12/177

**Population living < \$11/day**  
15.7%

**Exchange rate**  
\$1 = 0.53 United Kingdom Pounds

**Urban household water connections**  
100%

**Urban improved sanitation**  
100%

**Water Poverty Index**  
71.5

**Study city**  
Central Region

**Population**  
8,514,000

**Regulator**  
Ofwat

**Service Providers**

### REGULATING PRIVATE PROVIDERS: English Midlands

England and Wales, high-income countries with universal coverage for water supply and sanitation (mainly sewerage), privatized the water industry in 1989 and introduced an economic regulator, Ofwat. With an initial sole primary duty to ensure that the private companies could finance their investments, one of the drivers for E&W privatisation, government has subsequently amended legislation in 2003 to require, as an additional primary duty, the regulator to 'further the consumer objective'. In addition the new 'Water Services Regulation Authority' (replacing the Director General of Ofwat) must 'have regard to the interests of –

*Individuals who are disabled or chronically sick;*

*Individuals of pensionable age;*

*Individuals with low incomes;*

*Individuals residing in rural areas'*

*'Being regulated is a privilege'*

*Severn Trent Managing Director to WaterVoice Central, July 2005*

Case study author Dr Richard Franceys

# The Water Sector and Institutional Framework

The example of economic regulation of the 1989 divested (privatised) water sector in England and Wales relates to a high-income country. However, many aspects of the experience in forming and developing some level of partnership between government, an ‘independent’ regulator, civil society, the private sector and consumers, particularly with regard to serving the poor, are instructive.

When the government-owned infrastructure was initially sold to the private sector (through a sale of shares to the public and to staff) it had been starved of investment. The perception was that service was poor. Water consumers ‘knew’ that the water quality was inadequate (although the statistics did not always support this belief) and, with more reason, knew that the environment was suffering. Civil society was - and remains (MORI, 2002) - deeply sceptical of private sector involvement in the provision of such a vital basic need.

Serving the poor was not a significant driver in the privatization. The reform was designed to meet various political goals as well as to deliver better water supply and wastewater disposal, as required by upcoming European Directives, without affecting the public sector borrowing requirement. However, the case of England and Wales demonstrates how important the needs of the poor and the vulnerable became as the process developed. The case also demonstrates how it is possible to adjust partnerships significantly, through regulation and license amendments in a continuous process of change, long after contracts have been agreed.

The privatization of water and sanitation in England and Wales continues to evolve. The balance of power and benefits between the various stakeholders continues to change as the socio-political culture evolves under pressure from consumer demands, environmental legislation and political change. The privatization is still susceptible to new stakeholder pressure as evidenced by several successful nongovernmental organization (NGO) campaigns as well as by an incoming government wanting to make good on its criticisms developed when in opposition.

With the monopoly companies to be sold off completely (though operating under a 25-year license – so not that much different from a concession contract? - the fixed term license subsequently changed to a rolling license without much discussion) regulation became necessary.

Environmental concerns over abstraction and wastewater discharge were managed by the Environment Agency (initially the National Rivers Authority) and drinking water quality by the Drinking Water Inspectorate. The Office of Water Services (Ofwat) was established as economic regulator to oversee the price of water and service levels, both critical for low-income customers. Ofwat (to be renamed the Water Services Regulation Authority in 2006 with a board rather than single regulator) is relatively independent from central Government, funded by a charge on the private water companies and accountable to Parliament. Ofwat’s primary responsibility has been to ensure that the private companies can finance their water supply and sanitation responsibilities while achieving operating and capital efficiencies within a price cap. Any increase in “excess” profits - the reward of companies that outperform regulatory expectations of efficiency gains - is shared with customers at the end of each incentive period, when profitability is reset to the presumed cost of capital.

Besides tackling the investment backlog by constructing new fixed assets, the newly private companies had to remodel themselves as customer service organizations. Many of their staff members were described as having had a “local council mentality.” Investing in training and information technology was necessary at the same time as rationalizing operations (closing local depots, running works unmanned) and cutting staff. Some companies also began to diversify into other activities to escape regulatory control, although without any early profitability (Ogden and Glaisster 1996).

Overall these changes have significantly improved water quality, customer service and wastewater treatment and the companies have become increasingly efficient. Prices had to rise to support the necessary investment programme and, although unpopular with consumers, privatization appeared to be delivering benefits. The regulator has had to institute many systems to monitor that progress. Initial annual reports of the regulator were minimal compared with the hundreds of pages that became normal ten years later. Ofwat has always proclaimed its belief in ‘light-handed regulation’, proclaiming that regulation costs each customer less than \$0.95 per year (Ofwat, 2005). The 22 water companies that have to supply the information to Ofwat believe it is more costly to them, costing one company (Wessex) more than \$5.50 per person per year by their estimation. Ofwat has used the information given by the companies to promote the concept of “comparative competition,” using the data to show up one company against others as a powerful way of forcing improvements. Incentive based regulation has



Director General of Water Services, Philip Fletcher, speaking at the Inception Workshop for this research

# Service to the Poor

Within a couple of years of privatization, trouble began with a drought in 1992 (which would not have been recognized as a “drought” in many parts of the world) that coincided with a significant rise in disconnections for non-payment. The poor were responding to higher prices in an economic recession by failing to pay their bills. Water became dramatically politicized. Customers thought the water was of poor quality, tasted bad, and was too expensive (although the expensive bottled water they bought, by some measures of a poorer quality, lost out to tap water in blind tasting). At the same time, there was a debate over excessively generous salary increases for directors of privatized utilities.

The regulator undertook the first price review in 1994 but, rather than clawing back all the impressive efficiency gains immediately (characterized as the sawtooth effect of price cap regulation), he planned for the cost of capital to shrink from its average 12% peak to its target rate of about 5 or 6% over a 10-year “glide path”. This gentle reduction in profitability quickly came to be seen as overly generous. In fact, it probably represented \$7 billion additional profit to the water companies over the following 5-year period (author’s analysis). Regulation is very difficult to get “right.” Meanwhile the media were portraying their own version of events as shown in the box (right) which transcribes a conversation with a poor household, which was included in a television documentary in 1993. Although there was a time lag of four years before changes were introduced by a new government, the pressure that civil society exerted on the process through such programmes was significant.

The incoming government in 1997 subsequently charged a “windfall tax” on all privatized utilities, which fell hardest on water, based on the idea that they had been sold too cheaply. The new government also

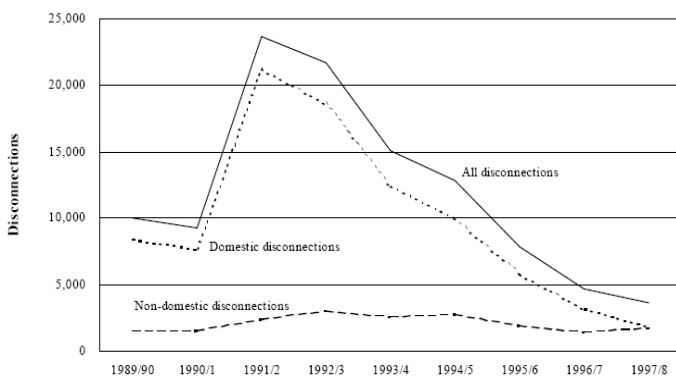
**“Water, Profits and Poverty”**

“Nick Blandford is a refuse worker with Rochester City Council in Kent. Even in the era of plastic bags it remains dirty job. One consolation after a day handling other people’s garbage is the thought of a long, hot bath. But one Tuesday earlier this year he was in for a shock when he got home. His wife, Rose, a part-time cleaner, had been off work after a hysterectomy, and their income had dropped sharply. They had failed to pay a £253 (\$477) water bill and Southern Water had decided “enough was enough.”

“They just turned up and said the water was off because of non-payment of the bill. And there wasn’t a lot I could do as I have just been off work for three months—no money coming in, only my husband’s, which is a dead-set wage, doesn’t vary at all. I went round to John next door—I was in tears and told him what had happened and he sat me down and offered to supply water. When we needed it John filled up a five gallon drum with water and also three big buckets which he passed over the fence and I carried into the house.” That went on for three days until Southern Water were persuaded to turn them back on.

Rose Blandford, who was forced to carry heavy buckets after a major abdominal operation, remains bitter about Southern Water: “I think they are really low to have done such a thing to anybody, not only myself, but that could have been someone with children or a pensioner. It is not very nice.” In a statement Southern Water said it cuts people off only after an extensive procedure; that it keeps a “Special Needs Register”; and reconnects most homes within 24 hours.”

Water disconnections, England and Wales



Above: Water disconnection from 1989/90 to 1997/98, England and Wales (House of Commons, 1998)

demanding ‘free metering installation’ (eventually enforced by legislation, including the right to reversal to unmetered supply if metering proved more expensive to that particular householder), free leak repairs on customers’ premises, that is on customers’ own external pipes, and the banning of domestic disconnections.

The private water companies responded to the political climate and dramatically reduced disconnections, if only to look better in the annual comparative figures Ofwat was publishing. But it was the combination of a second embarrassing drought - which led to one company having to hire every suitable tanker in the country to transport water to a rapidly emptying reservoir - and the threat of having standpipes in the streets, coupled with ever increasing

## Tariffs and Disconnections

prices, which led to regulatory tightening.

The first regulator, Ian Byatt, was always aware of the wider issues of water privatization, stating that “while regulation has clearly delivered in economic terms, there are a number of social issues which have met with varying degrees of success” (Byatt 1997).

Through guidelines issued to the companies in 1992, the director general of Water Services brought the number of disconnections down to pre-privatization levels. The regulator observed: “It was necessary to push the companies into much better procedures and better payment methods for customers who have difficulty in budgeting. The fact remains that there are some customers who cannot afford to pay their bills—and they need a sympathetic approach by the water companies” (Byatt 1997).

Some private companies experimented with prepayment water meters, which allow use of water over

### Metering Debate...

England and Wales have been moving from 2% domestic metering in 1989 to about 27% now, costing at least \$30 per household per year but with no noticeable reduction in water use. One water company official privately asks ‘Why not charge those with sprinklers a £100 (\$189) additional fee and remove the need for meters?’

a fixed time period (not based on volume). Poor customers seemed to prefer to budget for their water this way, although some reportedly had to store water in baths and buckets to tide them over until they could afford to pay for the connection again. However, after appeals by local councils to the courts, prepayment meters were declared illegal as they caused ‘disconnection without due consideration’ by the companies and welfare authorities.

The National Consumer Council report that the majority of poor consumers with ‘basic skills difficulties’



### The Power Sector and the Poor

Disconnections are still permissible in the gas and electricity sectors along with much appreciated ‘pre-payment meters’

The government has also introduced £200 (\$377) winter fuel payments, free TV licenses for over-75’s and a £100 (\$189) payment to over-70s towards council tax bills.’ (The Times, 2004 ) Gas and electricity payments can also be deducted before payment of state social benefits, removing the risk of non-payment and subsequent disconnection.

There is no such allowance for water.

or ‘families with young children’ use payment cards or token meters for non-water utilities which are still valued as they enabled consumers to control their expenditure (NCC, 2003). Water customer committees who would like to reinstate this option for the people



Above: typical suburban/‘peri-urban’ housing

### Debt and Bailiffs

In order to collect bad debts it is now necessary to give advance notice of the bailiffs arriving due to Data Protection Act etc ... which of course rather defeats the objective of collecting goods to sell to pay off the bad debts as householders remove all valuable items!

Pictured left: The Water Regulators for England and Wales, left to right: Dame Yves Buckland, Chair, Consumer Council for Water, Philip Fletcher, Director General of Water Services; Professor Jeni Colbourne, Chief Inspector, Drinking Water Inspectorate, Sir John Harman, Chair, Environment Agency



# Adapting Service Provision for the Poor

In their own attempts to help the poor, and of course maximise revenue, companies have adopted much more flexible payment systems that allow customers to pay small amounts weekly or monthly rather than the established pattern of twice yearly. The companies have also established "PayPoint" terminals in small shops, where those on low incomes can pay small amounts without expensive bank charges. They have also had to invest significantly in debt collection techniques which include tens of thousands of court summons for non-payment.

In response to the demands of the newly elected Government the 'Vulnerable Groups' scheme was introduced, which limits metered bills to the average of the water company area. The scheme was focused upon metered households on low incomes (receiving income-related state benefits) with three or more children under 16 or with a specified medical condition that required above average use of water. However, the scheme is only being used by 0.4% of the perhaps 440,000 eligible population (Fitch and Price, 2002), 7,202 households by 2003/04 (EA, 2005) and is now being reviewed with consideration to extending the range of medical conditions and to changing the age limit and number of children in order to qualify (DEFRA, 2003a).

The poor also benefit from the ban on domestic disconnections, although it is uncertain who "won't" and who "can't" pay. This leads to perverse incentives such that some Citizen's Advice Bureaux are reportedly recommending that users pay their cable and satellite television bills before their water bills. There is concern that the ban on disconnections is leading to an increase in debt and bad debts which the companies will have to write off at the expense of other customers. In fact, the average size of household debt fell initially but subsequently has risen to £188 (\$355) per indebted household customer (Ofwat, 2005) along with an increase in revenue necessarily, though extremely reluctantly written off as a proportion of household revenue, rising from an average of 1.3% in 1998-99 to 1.65% in 2001-2002 to 2.2% by 2004/05.

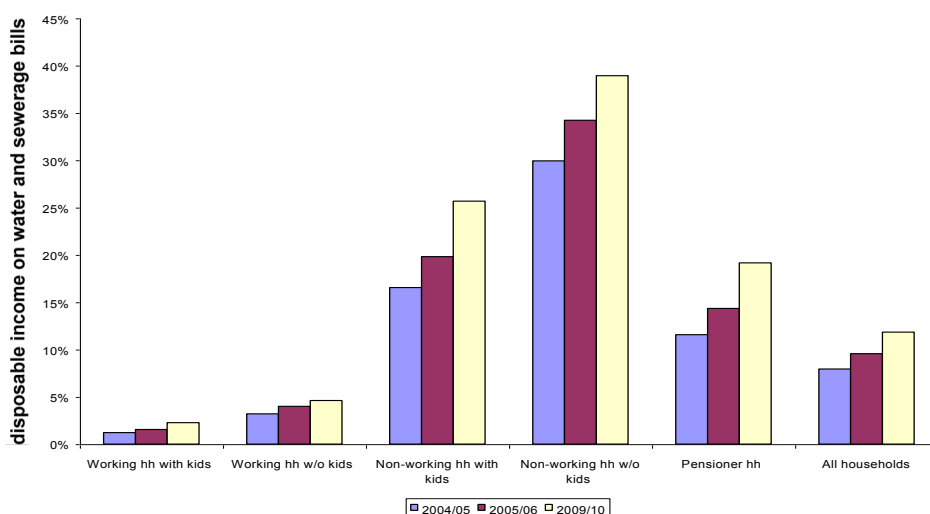
## Severn Trent Trust Fund

To address 'water poverty', now that the private water companies have no right to disconnect, six of them have set up charitable trusts, funded by donations from the companies with \$5.25 million contributed in 2001-02. Poor customers who run into debt are referred to these charities for advice and for direct financial support. The Severn Trent Trust Fund, which has been receiving an average grant of \$3.5m per year from Severn Trent Water, but is managed completely independently, has helped over 30,000 families in five years. More than 70% of those receiving help are receiving money as well as money advice with an average grant in 2000/01 of \$590 towards water arrears (STTF, 2001). The charity, with an average of 5,600 new applications per year, has now begun a 'Partnership Payment Scheme' for clients with high water debts. The client agrees to pay an affordable amount each and every week and if they manage to stick to the plan and make all the payments for 13 weeks the first grant is given. Similarly for the next 13 weeks for the second grant and if they complete for a final 13 weeks the final grant for the final third of the debt is given. If payments are missed the scheme is cancelled and no further grants awarded. SSTF report a positive response to this pilot scheme. Eight other water companies formally reported donations to charitable trusts during 2004-05 and a number of others also make donations to organisations such as Money Advice Centres or offer similar schemes such as 'restart' schemes (Ofwat, 2005).

Inability to pay, even in a high-income country remains an important issue. The Public Utilities Access Forum investigation found that around four million

households in England and Wales could be spending more than 3% of their income on water charges, a level above which they describe as constituting 'water poverty.' The average charge for all households in England and Wales is about 1% of household income whereas single [state] pensioner customers of South West Water can pay up to 6.2% of their household income on

Left: Affordability challenges as presented by Philip Fletcher to the Adam Smith Institute, 16 June 2005



Regulating Public & Private Partnerships for the Poor

# Customer Involvement



WaterVoice Central Meeting in Public

As part of the stakeholders partnership, the Government established 10 regional customer service committees (CSCs), under Ofwat control, to give customers a voice. With part-time independent chairs and a dozen volunteer members, each committee had to work out its own role in its own region, according to its members various interests, as well as addressing national issues.

Supported by Ofwat, which always promoted customer involvement, the CSCs (first renamed WaterVoice, most recently relaunched as the independent (of Ofwat) Consumer Council for Water) actively questioned the performance of private companies in serving all their customers, acted as a place of appeal for customer complaints, and audited private companies' customer complaint procedures. By 2002 the customer committees had secured over \$11.4 m in compensation and rebates for customers (WaterVoice, 2002). CSCs pressured the companies to behave like public service organizations, albeit with a profit incentive.

Membership of WaterVoice is typically 'competent middle-class professional early retirees'. Members therefore are not representative (were never intended to be) and tend to have a limited 'feel' for the issues regarding low-income customers.

WaterVoice Central, one of the 10 statutory committees, highlighted the continuing concern that the poorest paying the most common fixed tariff (unmeasured, based on property values) have been paying higher-than-average price rises due to the effects of rebalancing on the "tariff basket." The committee welcomed the 1999 price cut, but although known as regulation by price cap, the England and Wales system is, in effect, a revenue cap: companies can claim within their "cap" to make up for the higher-income customers who can transfer to pay smaller bills through metering of actual volume used.

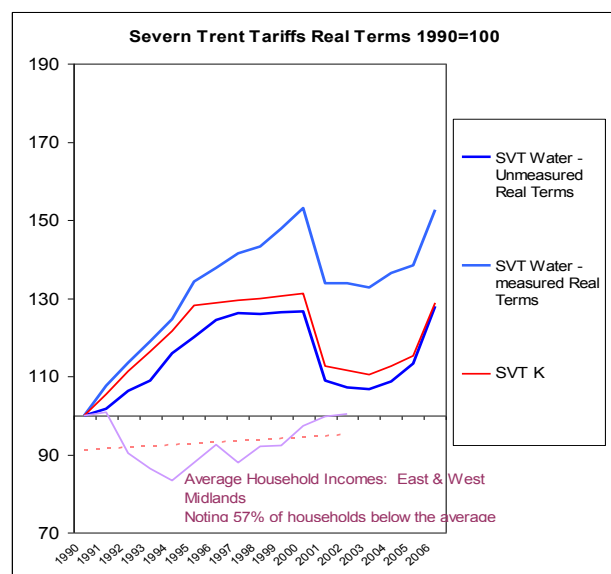
It is impossible to achieve a "perfect system": there will always be winners and losers, and those who win with some adjustments appear to lose with others. However, the poorest in the central region, whose average real incomes were static, have suffered real price increases of over 60% since privatization, very significantly above the headline 'K' factor which is meant to drive price changes

A survey of WaterVoice Central meeting minutes

undertaken by Narracott (2003) found that in a period of 6 years and 2 months, between 20<sup>th</sup> March 1997 - 15<sup>th</sup> May 2003, 48 regional CSC meetings were held on a bi-monthly basis. In that time, there were 32 'counts' of the poor being brought up and documented as a topic of discussion. Of these 32 'counts', 7 were initiated by the Companies. Similarly, from April 1997 to October 2002, 60 regional CSC managers' meetings were held. In that time, 33 'counts' were recorded where the poor are mentioned in the minutes.

Poverty-focused issues being discussed were: the vulnerable customer scheme (tariffs) "Both companies have now received further guidance from the DETR on how to administer schemes to benefit vulnerable customers" (16/3/02); charitable trusts (subsidies): "The CSC suggested that the independent Severn Trent Charitable Trust, in promoting their work, contacts organisations other than Citizens Advice Bureaux (eg. Law Centres/Money Advice centres...." (20/11/97); and dealing with customers in debt (civil rights): Ofwat's debt recovery guidelines now published – the aim was protection of vulnerable customers and consistency of auditing by WaterVoice offices. (28/11/02). Throughout the minutes, the poor were referred to in the following terms: *low-income customers, needy customers, 'can't pay,' customers who struggle to pay their bills, customer declaring hardship, vulnerable customers, poorer customers, the poor, vulnerable household, customers helped by the charitable trust, those in the lower socio-economic group, customers in need, families in financial difficulty.*

The water regulator continues to consider the extent to which "the generality of customers" should have to pay for some environmental benefits. About alleviating low flow in rivers, Philip Fletcher asks: "What about the effects on those with below average income, who will often coincide with those who have least access to the



Above: Increases in Severn Trent tariffs in real terms, 1990 to 2006, relative to changes in average household incomes, East and West Midlands, England

# Conclusions

Divestiture in England and Wales has delivered high-quality services. The private water providers under pressure from the regulatory process have become extremely efficient. However, even with these significant gains, the ever-increasing quality and environmental spend has necessarily led to higher water bills which are creating problems for the poor. The incentive based regulatory system has made divestiture highly transparent, with reams of information available to drive comparative competition. The inclusion of customer committees as partners may have helped individual complainants and public meetings held regularly to question the companies may have helped to make private companies more aware of customers' concerns. However they have not had a significant effect on the needs of the poor, except perhaps as an additional driver for overall price cuts.

The involvement of other, non-governmental stakeholders, whether concerned for the environment or for the poor, in addition to the various interests of the media, has perhaps been a more powerful tool for change. The ability of NGO's to experiment and pilot new approaches such as the charitable trust funds and the lobbying NGOs to promote awareness and transparency have been a crucial element in the process of improving water and sanitation to all.

The example of England and Wales suggests that regulated public-private partnerships can deliver improved services. Agreements or contracts between partners can be adjusted after they have been signed. There is always a price to be paid however in any such adjustments, in reduced regulatory freedom and through a sense of diminishing returns as the companies experience reduced profits and, thus, their freedom to be flexible. However, perhaps crucially, in England and Wales the government, in its new Water Act 2003, has maintained the duty of the regulator to ensure that private water companies can 'secure reasonable returns on their capital to finance the proper carrying out of their functions' as well as enhancing the regulatory duty to further the consumer objective.

This new requirement that the new 'Water Services Regulation Authority' must 'have regard to the interests of—

*Individuals who are disabled or chronically sick;*

*Individuals of pensionable age;*

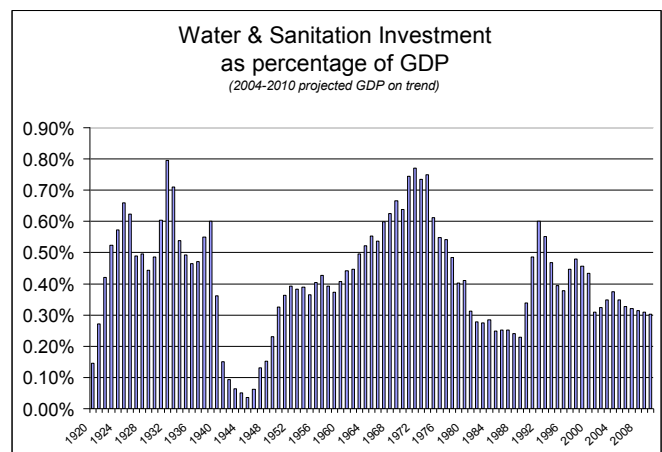
*Individuals with low incomes;*

*Individuals residing in rural areas;*

should lead to significant improvements in the process.

In the meantime the industry and other stakeholders watch the ever-increasing levels of debt with anxiety.

The necessarily imperfect process of regulation appears to be giving customers as well as government far more influence and even control over the supply of water and sanitation than was previously possible. However, to what extent improvement in services and the environment is possible to replicate in an economy where average annual household incomes are \$1,000 rather than \$34,000, is a different issue. Most importantly, can privatisation be fair? The ban on disconnections and the limits on tariffs for vulnerable customers are measures which promote equity. But the overall price the lowest-income groups are expected to pay, partly to fund wider environmental benefits, partly to rebalance the tariff basket as the rich benefit from savings through metering, is unaffordable for some. However, the system has always been willing to evolve under pressure from its various partners, particularly the media. If the next generation of television programs starts showing bailiffs entering poor homes and removing household goods because of unpaid bills for



Above: Water and Sanitation Investment, England & Wales as percentage of GDP Source: author's analysis

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# Chapter 5

Case Study:

## CHILE

### KEY FACTS

**Population**

15.8 million

**Urban population**

86.6 %

**GDP per capita 2002**

9,820 US\$

**HDI rank**

43/177

**Population living < \$2/day**

9.6%

**Exchange rate**

\$1 = 567 Chile Pesos

**Urban household water connections**

99%

**Urban improved sanitation**

96%

**Water Poverty Index**

68.9

**Study city**

Santiago

**Population**

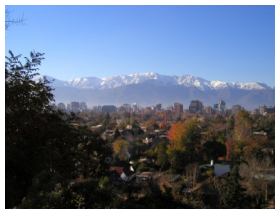
4,655,000

**Regulator**

Superintendencia de Servicios Sanitarios (SISS)

**Service Provider**

Aguas Andinas



### **REGULATING PRIVATE PROVIDERS: Santiago**

During the late 1980s Chile began reforming water and sanitation services. Initially there was a phase of commercialisation, monitored by the new economic regulator and then in the late 1990s most urban services were privatised. A key point about the urban water sector in Chile is that a high level of access to water has long been achieved. In 1990 urban water supply coverage was already at 98%. Prior to the reform process tariffs were considerably below operating costs. The reform process did lead to increased efficiency among the water providers but the need to establish cost-reflective tariffs led to concerns about affordability of services. This issue was addressed by developing a nationwide subsidy for water and sanitation services applicable to both urban and rural residents. The subsidy is only provided to individuals that have been means tested and meet several other criteria. There are currently around 620,000 households receiving the subsidy.

*“regulation applies equally to private and public companies ”*

# The Water Sector and Institutional Framework

Chile began to overhaul its water and sewerage sector in the late 1980s. An important component of this process was a decision to increase tariffs to a level where they reflect the true cost of providing services. It is estimated that before the reform process tariffs covered less than 50% of operating costs. In some regions where operating costs are very high, the tariff was only covering about 20% of costs. Necessarily coinciding with the tariff reform process was the creation of the national water regulator for urban areas, the Superintendencia de Servicios Sanitarios (SISS) to ensure any tariff increases were justified. Laws creating SISS were passed in 1988 and 1989, though SISS was not formally established until 1990. In the first tariff-setting process in 1990-91, the average increase was 75.7% though the range was from 7.3% to 463%. For small companies the rates increased very substantially, particularly in the high-cost operating regions of the country.



Juan Eduardo Saldivia,  
Superintendente de Servicios Sanitarios

In the second tariff-setting process in 1995-96 the tariff rise was more modest, averaging 6.9%. However, in 2000-02 tariff increases were higher, averaging 16%, because of the development of wastewater treatment plants. During the 1990s tariffs doubled for the customers of the service provider in Santiago, Empresa Metropolitana de Obras Sanitarias (EMOS). This state-owned company was privatised in 1999 when Spain's Grupo Agbar joined forces with France's Suez to pay US\$ 1.1 billion for 51% of the shares. There were 50% staff reductions after one year of the concession, though the company states that redundant workers were generously paid-off. Initially the new privatised company continued to be known by its pre-privatisation name of EMOS but changed in 2001 to the presumably more 'brandable' name of Aguas Andinas. This was in part intended as a public image measure to give the company a more local-sounding name. By the time the company was privatised Santiago already had almost universal coverage of water and sewerage services but very little capacity for treatment of wastewater. The new owners have invested \$ 600 million, much of it in wastewater treatment. Waste

water treatment coverage in Santiago was between 5 and 7% in 1999, and it is now 75% in 2004. It is planned that it should be 100% in Santiago by 2009.

Nationally, the regulator SISS has awarded 45 concessions which between them are responsible for a total of 340 water and wastewater systems. The time period for a concession in Chile is unlimited (BOTs are limited to 30 years). There are nine relatively large private companies that provide services to 71.8% of the urban population. Other categories of regulated services providers include state owned companies, municipal companies and cooperatives. Between 1990 and 1997 there was a period of evaluation to determine whether the legislation governing the engagement of SISS in the sector was appropriate. In the late 1990s several laws (and several statutory instruments) were introduced to modify how the regulatory framework functioned. These changes led to a more open and effective framework which also allowed greater participation of the private sector but restricted the accumulation of capital in private hands.

An interesting mechanism used in the tariff-setting process by SISS is known as the *Empresa Modelo* or Model Company. The model company is used to judge efficient costs, and takes into account operations costs (though not bad debts), investment in capital maintenance and new works and a reasonable profit. The initial rounds of tariff-setting simply aimed at establishing average costs and setting tariffs to reflect those costs. Now, however, the real companies must compete against the model company as an incentive to become more efficient. An allowance of 15% is made for unaccounted for water, which is judged to be 'efficient'. Aguas Andinas criticises the use of the model company because it assumes that service providers must be self financing from cash flow. This assumption is not realistic in the commercial world where companies must borrow money from the financial markets.



SISS HQ, top floor multi-storey car park above and



Aguas Andinas HQ, right tower block (pictured right)

# Service to the Poor and USO

With the significant increases in tariffs in the late 1980s and 1990s it was realised that there was a need to provide a mechanism that enabled the urban poor to be able to afford a reasonable level of consumption. This led to the introduction of the subsidy programme in the early 1990s. Essentially the government reimburses the water companies on the basis of the amount of water consumed. The subsidy can cover between 25 and 85% of a household's water and sewerage bill up to a maximum consumption of 15m<sup>3</sup> per month. Above 15m<sup>3</sup> households must pay the full amount.

The subsidy programme is organised by the Ministry of Interior, and the Ministry of Planning (MIDEPLAN), though it is managed at the municipality level. Funding for the programme comes from central government. Each year MIDEPLAN determines how many subsidies are to be granted to each region of the country. This is done through using household survey information and water and sewerage tariffs from each service provider. This enables MIDEPLAN to calculate how many households will need the subsidy and the overall amount

required. The subsidy is intended to cover the shortfall between household ability to pay and actual consumption. The ability to pay is based on the idea that no more than 3% of household income should be spent on water and sewerage. The benchmark figure

used by the Pan-American Health Organization is that the water bill should not exceed 5%. In the subsidy programme it was decided to use the 3% figure because of the aim to support the poorest households.

Households apply for the subsidy at their local municipality or water company and as a first step complete an application form that records general household details. Eligibility for the subsidy is based on several criteria, the most important of which is what is known as the CAS score. The CAS score is determined through an interview with the head of household, undertaken by the municipality, and is carried out at the residence.

The questionnaire contains 50 questions concerning

household size and age, living conditions, occupation and income and other socio-economic indicators. The interview process may be outsourced to private companies but the municipality always calculates the CAS score to reduce the opportunity for collusion between the household and interviewer. The CAS score is valid for two years and can be used as the basis for applying for other subsidised services such as health, family support, and pensions. In addition to the CAS interview, the household must demonstrate that it has no arrears with the water company, and provide documentation to demonstrate socio-economic circumstances. Subsidies are issued according to the CAS scores, prioritising the neediest households, and are normally renewed on an annual basis for up to three years. A household may then reapply for the subsidy. Similarly there are several criteria that will lead to the municipality withdrawing the subsidy from a household. For example, three months arrears means the subsidy to the household is cancelled and they must reapply. Other reasons for withdrawing the subsidy include:



Low-income housing. There is only about 1% 'informal housing' (i.e. no slums) in Santiago. A water tower of SMAPA, a municipally owned water supplier in the south west of the city, is in the background.

## Service to the Poor and USO

- Moving out of the municipality
- Not informing the municipality of change of address (within the same municipality) at least 30 days in advance
- Change in socio-economic circumstances
- Voluntarily giving up the subsidy
- Completion of the three-year subsidy period

The subsidy reduces a customer's bill by a percentage, leaving the customer to pay the balance. The requirement that a customer must not be in arrears encourages the development of good payment habits among customers. The bill provided to the customer is net of the subsidy, and the municipality pays the water company the subsidised amount. Water companies bill the respective municipalities the cumulative total subsidy. Should the municipality fail to pay on time it can be charged interest, and even more critically the water company can bill the household the full amount in the next payment period. However, the water company cannot cancel the subsidy – this can only be done by the municipality.

The level of subsidy is not the same in all parts of the country. This is because it is recognised that costs of production vary greatly, so subsidies can be higher in one region than another. For example, in Valparaiso there are eight tariff bands, all of which are the highest in the country because of the number of small towns and higher cost of producing water.

Both rural and urban poor have equal rights to the subsidy, though it is forecast that by the end of 2005 the subsidy will be mostly directed towards rural populations. By 2005 it is anticipated that there will also be 100% coverage of water in rural areas (still catching up on urban areas) but not sewerage or waste water treatment.

In July each year MIDEPLAN has to propose to the Treasury the regional budget required for subsidy on a cubic metre per



household basis. In December the funds are sent to the region to then distribute to the municipalities in that region. Another responsibility of MIDEPLAN is to develop methodologies for identifying levels of poverty, and discovering ways of trying to avoid favouritism or political parties capturing the subsidy. There have been cases where money has not been well spent and MIDEPLAN has intervened because it is held responsible to ensure that funds are directed to the most needy families and to carry out constant monitoring. Currently there are 340 municipalities receiving subsidies out of a total 345, and there are 620,000 households receiving subsidies.

In 2001 an evaluation of the programme by an independent commission (consultants) made



# USO, Tariffs and Legal Issues

The need to meet the universal service obligation is no longer an issue in urban areas of Chile. There is still a need to provide further coverage in rural communities (defined as having populations of between 150 to 3,000 people, or 15 houses per kilometre), though there is optimism that rural access should reach close to 100% by the end of 2005. An obvious question to ask is whether the subsidy system is sustainable? In 1998 it is reported that the subsidy system cost a total of \$33.6 million, which was considerably less than the previous universal subsidy scheme. In the same year water providers made net profits of \$107 million and presumably corporate taxation is contributing to the overall cost of the subsidy system.

The advisory unit to the Ministry of Economic Affairs is responsible for analysing the impact the proposed new tariffs will have on the population. During the preparation of new tariffs by SISS the advisory unit is involved in the discussion of new levels so is familiar with it when it is formally presented. The advisory unit prepare a commentary on what impact the proposed tariffs would have on the poorest consumers and this information is shared with MIDEPLAN. There is a 30-day period in which the Minister should sign the proposed tariffs and although he may be unhappy with some increases he must sign the approval new tariffs. There have been occasions when the Minister has

In the 1990-9901 price review, the average price rise was 75.7%, with a range between 7.3% and 463%! This latter increase was introduced over five years in stages. In 1995-1996 the average price rise was 6.9% with a range between -1.2% and 24%. 2000- 2002 price rise averaged 16% which represented increased waste water treatment. However Aguas Andinas was only awarded 2% and neighbouring company ESVAL 0%. There are inflation rises under an indexation formula, when inflation reaches 3%.

reportedly been 'too busy' to sign off on the new tariffs which has postponed their introduction.

However, service providers can retrospectively charge the new tariff and collect interest.

The Ministry for Economic Affairs has responsibility and involvement in the law setting the tariffs, and within that actually detailing the process. It can also change what 'articles' say to have influence on how tariffs are calculated. The articles are all about determining or explaining how the law is fulfilled. For example, how should 'capital' be calculated as this might lead to excessive tariffs but these guidelines cannot be changed too often. Two or three years ago, the Ministry and SISS proposed changes to articles in the tariff law but the private companies were not in agreement and the proposal went no further.

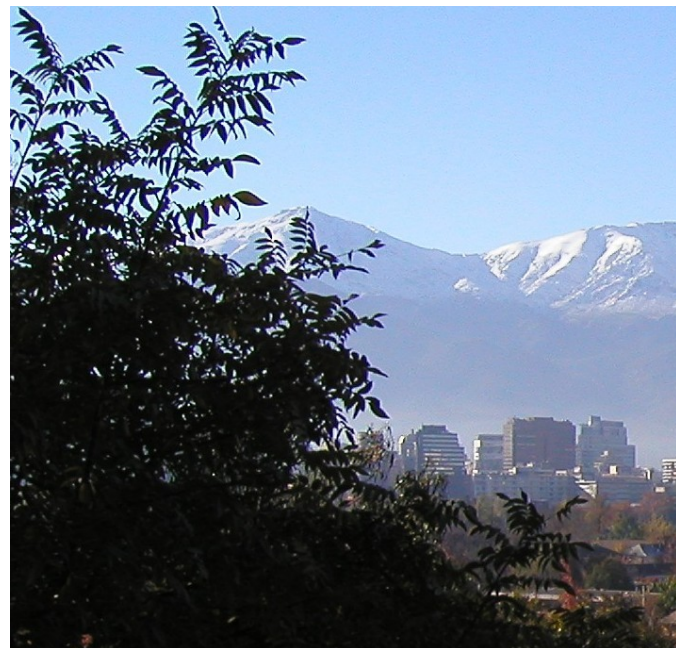
## **Lower house OKs plan for new sanitation commission** - Chile Published : Friday, January 14, 2005 *Business News America*

Chile's lower house has approved the creation of a congressional investigating commission to analyze whether privately operated sanitation companies comply with government regulations, the house reported.

Thirteen representatives will form the commission, which will serve the lower house and not the senate, a congressional source told BNamericas. The commission likely will be formed in seven to 30 days, approximately.

The commission will analyze whether sanitation companies that have private capital comply with investment commitments established in service contracts. The commission also will act as an industry watchdog, keeping an eye on changes in service rates.

Further, the commission will work to ensure that sanitation companies comply with fines or sanctions if they fail to meet contract guidelines. Making sure public entities properly regulate sanitation companies will fall under the commission charter.





## **Customer Involvement**

With respect to tariff setting, SISS makes public the tariffs that it proposes to impose, stating what it will take into consideration. The companies are then allowed to respond and there is an exchange of calculations on the part of SISS and the service provider. If there is no agreement then the case goes to the expert commission. Although the general public is not represented on the commission it is involved in setting the terms of reference.

Unlike in other countries no customer committee was contemplated in the laws creating SISS. Although there was some consideration of establishing a customer service committee during the review of the legislation in 1996-7 in the end it was not incorporated. It is recognised by some that customer rights and representation are generally weak and limited in their scope. SISS does not have authority to establish a customer service committee so it is an issue that will have to be considered in further legislative development.

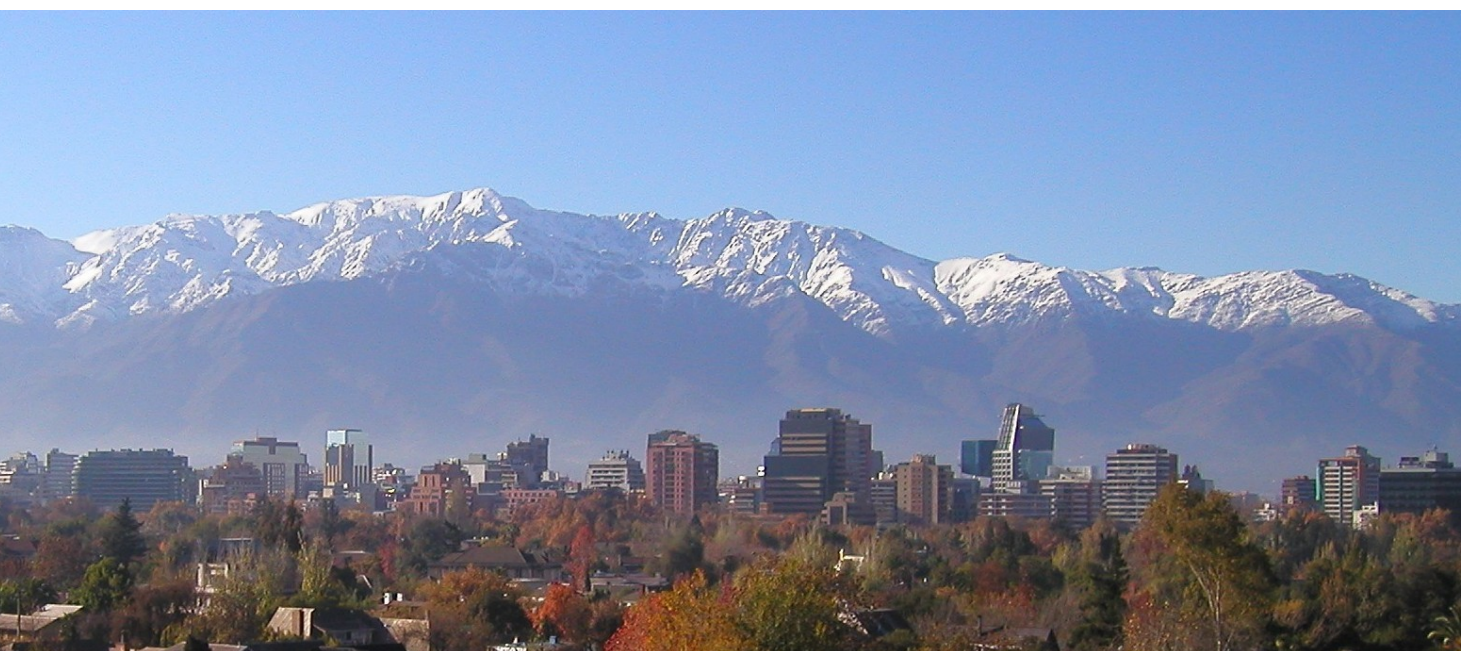
SISS is obliged to deal with customer complaints within 10 days and SISS monitors its own performance in this respect. SISS also uses indicators similar to those used by Ofwat, the water and sewerage regulator for England and Wales. There have been complaints surrounding charges made for wastewater treatment on a catchment basis. Some customers are paying for wastewater treatment even though they are not yet served in their district of the catchment. The regulator is not 'accountable' in law, and there is no formal procedure of reporting to anyone- not to Congress or the Ministry but the President is said to be 'observing' the

regulator. It is the President who appoints the regulator and can also remove him at any time.

There are few other entities to which the public may turn for assistance in consumer rights. SERNAC (Servicio Nacional del Consumidor) is the national consumer service and states its mission as to educate, inform and protect consumers in Chile. SERNAC is linked to the Ministry of Finance and has authority to mediate in disputes between customers and suppliers. There is a view in SERNAC that most people in Chile think consumer protection is a bad thing or doesn't even exist. Nevertheless SERNAC has arrangements with each regulator and consumers are able to seek help, and it has a weekly spot on television to discuss consumer rights. The whole area of consumer rights appears to be a slowly developing feature in Chilean culture.



The customer centre for SISS, on the ground floor of their offices in central Santiago, which receives complaints and provides information to customers



# Conclusions

The water and sewerage sector in Chile has reached very high service standards. The urban population, which represents the vast majority of citizens, has water and sewerage coverage of 99% and 98% respectively. The country is pressing forward to provide wastewater treatment, representing very large investments (see picture below) and it is anticipated that in Santiago all wastewater will be treated by 2009. Other Chilean cities are also pursuing similarly ambitious service level targets. Even smaller municipal companies demonstrate an impressive professionalism in providing water and sewerage services.

In Chile the question of universal service obligation is largely redundant with the exception of the small rural population, and even there it is expected to catch up with urban areas in terms of water supply coverage by 2005. Regulation of public and private partnerships in this particular socio-economic context is delivering. Service providers are making modest profits and continue to invest in further improvement. It is interesting to speculate to what extent the targeted subsidy programme has contributed to the current high levels of service. The poorest, most vulnerable urban residents are provided with a 100% subsidy for the first 15m<sup>3</sup> of water per month under the *Chile Solidario* programme which assists around 100,000 people who are considered to be very poor indeed. Other poor households can be subsidised on their first 15m<sup>3</sup> to a level of between 25% and 85%. However,



Above: New waste water treatment plant, Santiago

## Tariff Setting and Investment

“We are going to have to reconsider some investment that we need to make,” the company’s secretary general Joaquin Villarino told local media. Villarino said Aguas Andinas, Chile’s biggest water company could still meet its obligations with the Water Services Superintendent (SISS) by using cheaper technology to treat wastewater, although he did not expand further. Building the Los Nogales plant is expected to cost Aguas Andinas \$210 million, but SISS officials say it could be built for as little as \$126 million.

The SISS blames Aguas Andinas for overspending on two wastewater treatment plants – El Trebal, at a cost of \$150 million and La Farfana, at \$315 million, more than the regulator had recommended – but the company says that running the two plants is now not profitable because of low tariffs. (Global Water Intelligence, March 2005)

all households consuming more than this quantity are expected to pay the balance of the water and sewerage bill. Given that the subsidy is funded by central government, and is considerably more economic than a previous universal scheme, it is assumed to be an economically sustainable measure. There is some criticism that the mechanism of transferring subsidy funds from central government to municipalities is slow because of bureaucracy but so far this does not appear to have strained the system.

It is noteworthy that one of the adjoining companies (Valparaiso) is not only implementing the *Chile Solidario* programme but is proactively talking to its customers who are in debt and going so far as to invite debtors in to a special programme where they are taught how to change a washer on a dripping tap so as to reduce wasteful consumption in the future.

If there is an issue where it can be seen that further development is warranted, it is to do with the customer representation in the regulatory process. Although in theory the ordinary man or woman can participate, in practice this is not the case. The *Comision Defensoria*, ‘not yet an ombudsman but moving in that direction’, believes it has a role ‘against SISS, on behalf of the public. SISS is not in the middle between the company and the consumer, it is not really taking necessary action, consumers are coming to the commission.’ Protecting consumer rights and raising awareness among the public of their existence is a task that will take time.

# Chapter 6

## Case Study: **ARGENTINA**

### KEY FACTS

**Population**  
38 million

**Urban population**  
89.9%

**GDP per capita 2002**  
US \$10,880  
(\$2,050, 2004)

**HDI rank**  
34/177

**Population living < \$2/day**  
14.3%

**Exchange rate**  
\$1 = 2.9 Argentina Pesos

**Urban household water connections**  
76%

**Urban improved sanitation**  
87%

**Water Poverty Index**

**Study city**  
Buenos Aires

**Population**  
13,800,000

**Regulator**  
ETOSS (Tripartite Entity of  
Sanitation Works and Services)

**Service Provider**  
Aguas Argentinas



Informal housing, Retiro



Aguas Argentinas,



ETOSS



### REGULATING PRIVATE PROVIDERS: Buenos Aires

The Buenos Aires concession started on 1 May 1993 with Aguas Argentinas as contractor, Ondeo Services as operator. The objectives-oriented contract, to be focused on outputs, e.g. coverage, rather than inputs, e.g. investment, called for 100% coverage of water supply in year 30 and 95% sewerage coverage. It was anticipated that this would require investments of approximately US\$4 billion with a requirement of \$1.2 billion in the first five years.

After steady progress, though inevitably a little slower than anticipated and apparently more costly than some felt reasonable, the economic crisis in 2002 led to a massive devaluation of about 75%. This led to an equal fall in the water tariff which, similar to the currency, had been contractually linked to the dollar. After several years of negotiations and a joint partnership to promote service to the poor there has been no agreement on future tariff levels and investment. Aguas Argentinas has announced its withdrawal

*“Regulation is about sharing power.....”*

# The Water Sector and Institutional Framework

With the ending of the concession there may be seen to be limited value in considering Buenos Aires as a case study. However, the pro-poor aspects have remained a parallel theme in the concession since 1997 and deserve consideration from the point of view of the one-time partners, private company and regulator, and particularly from the point of view of poor consumers.

During the concession period Aguas Argentinas has been monitored and regulated by the 'Tripartite Entity of Sanitation Works and Services' (ETOSS), funded by a 2.67% levy on the tariffs which gives independence from users and concessionaires. ETOSS is managed and administered by a Board of Directors formed by six members, all politicians, representing the Federal Executive, the province of Buenos Aires, and the government of Buenos Aires City. It is therefore recognised to be 'highly politicised' if not 'politically captured.' 'The President of ETOSS, with two votes, rotates every year, which is too short to do anything.

Most of the staff of the Regulator come from the former public operating enterprise. During the first few years of the concession, ETOSS was required to focus on building its technical and regulatory capacity, and to level the playing field in its relations with the concession holder. During this period, relations between ETOSS and the concession holder were complex and strained.' Since then 'a more substantive issue is the degree of freedom allowed Aguas Argentinas in order to meet the goals established in the contract. Conversely the availability of accurate, reliable information continues to be a problem for the regulatory agencies. According to ETOSS, the information provided by Aguas Argentinas during the first two years of the concession was 'poor, incomplete and biased' (Mazzucchelli, 1999). ETOSS now has approximately 140 staff (originally designed for 70) to regulate a single city contract. Each new political

appointee brings their own cadre of staff and tends to leave them behind on departure.

The new concessionaire was quickly able to upgrade water production, both in quality and quantity, and to deliver a continuous supply to the centre of Buenos Aires. Notwithstanding this 'success', the challenge of updating services in a city of this size meant that 1.5 million people remained without a formal water service and over 3.5 million people without sewerage service.

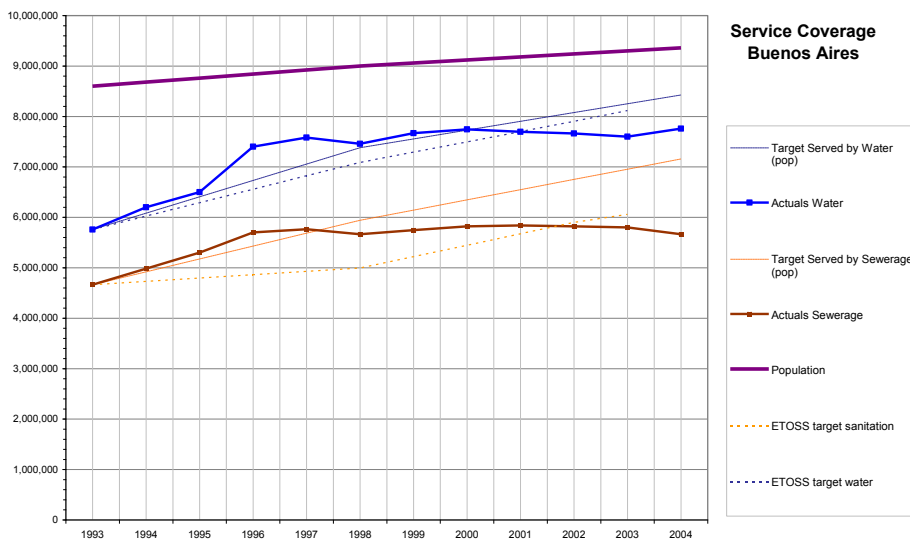
The service targets for water in the new concession appeared to be good news for the poor who had not been receiving water from the public operator. However, for the poorest in informal housing areas, perhaps the hardest to serve, it could mean a wait of nearly thirty years whilst the company extended service to the more commercially lucrative areas.

Although the anticipated investment appeared to start slowly, in the first five years of the concession the company succeeded in transforming the existing assets, staff and facilities, into a modern water and sanitation provider. Water quality now meets international standards (turbidity at 50% conformity in 1993 reaching 98% in 2003 and bacteriological standards from 98% to 100% (Aguas Argentinas, 2003)), water is delivered at an appropriate pressure, customers can contact the company when they wish, problems are solved when reported (client satisfaction at 90% in 2003, *ibid*). Service coverage increased to approximately 85% for water and 63% for sanitation, very much on target. The expectation of \$1.7 billion investment was apparently realised in accounting terms though doubts have been expressed as to the 'value for money' of all that investment.

Then came the financial crisis when in 2001 the Republic of Argentina found it necessary to devalue by 75%, at the same time defaulting on its foreign debts (reportedly \$140 billion). The water tariff, which had

been linked to the dollar, a move which apparently gave protection to the utility against devaluation, was de-linked and therefore reduced, in effect by 75%, relative to the foreign borrowing which had financed much of the increase in fixed assets.

Before this devaluation, the average monthly GDP per household was reported as approximately \$2,500, but 3,100,000 inhabitants had an average monthly household income of under \$500 and 800,000 under \$240. The extent of poverty rose dramatically as a result of the financial crisis. The lower-income groups are located in the informal housing areas,



# Service to the Poor and USO

the public housing projects and the outlying developments where it is most difficult to supply utility services and where the people are least able to pay.

Difficulties of supply include distance from water and sewerage mains, thus raising investments costs, informal housing without structured street patterns, illegal occupation of land therefore no security of tenure and a level of insecurity which made the company's staff unwilling to work in some areas.

It is suggested that the high price the poorer, unconnected groups were paying to water vendors led the concession planners to assume that everybody would automatically want to connect. However, the connection fee to receive this low cost service was about \$500 for water (varying according to property land surface, type of soil and percentages of road and pavement work) and \$1,000 for sewerage, representing several months'



Housing on the outskirts of Buenos Aires

household income for the poorest. This was clearly unaffordable. It was also becoming a factor in determining the rate of connections in the Municipalities comprising the outer ring of Greater Buenos Aires where investments in upgrading mains could not be recouped unless lower middle-income customers connected.

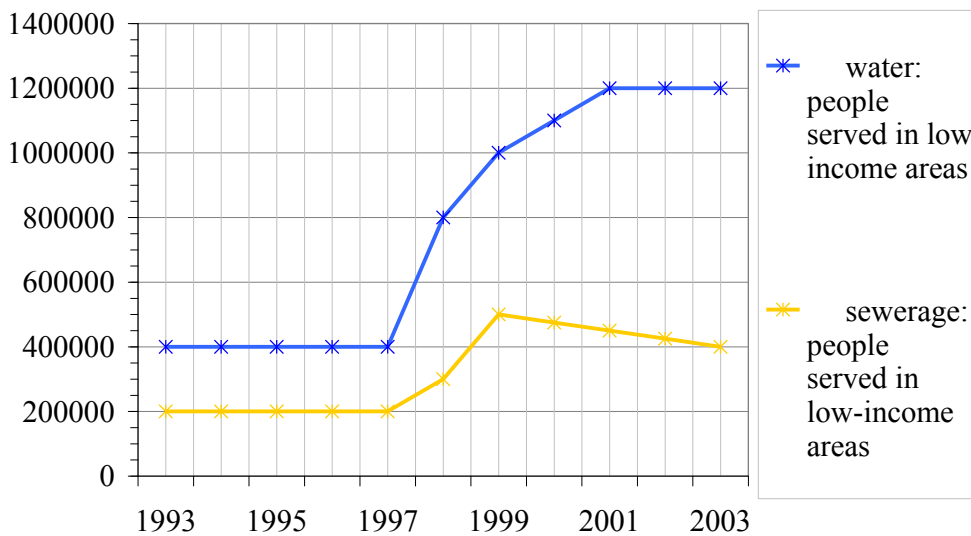
Aguas Argentinas therefore began negotiations with the Regulator, ETOSS, to make the connection fee affordable whilst also demonstrating its commitment to

all customers by beginning pilot projects in different parts of the city aimed at delivering services to the poorest, with the assistance of NGOs. The revised connection fee of \$120 is funded through a cross-subsidy, by a universal charge 'SUMA', since November 1997 at a rate of \$2 bimonthly per lot per service.

ETOSS has to verify annually the compliance with the expansion plans and, if necessary, adjust the value of SUMA (Aguas Argentinas, 1998).

The first pilot project was in the northern part of the city where small slums had developed and where one NGO, IIED-AL, had been trying for some time to improve the quality of life of the residents. Subsequently Aguas Argentinas contracted the skills of that NGO, to the extent of temporarily co-opting some staff into their own business to develop an action plan, to undertake socio-economic mapping of the city and to lead sensitisation programmes for Aguas Argentinas staff. The project also used the resources of the local municipal government, as well as the approval of the Regulator.

Of the one million population of the northern area of Greater Buenos Aires, 822,000 had water connections, 494,000 sewerage. The main objectives of the concession since 1993 had been to achieve an acceptable water supply pressure over the region and to expand the sewerage network with the necessary waste water treatment plant constructed (under test, March 1999). With this work underway, the priority became to help poorer communities to build their own systems. In the low-income neighbourhoods any existing piped services were necessarily illegal, making it difficult to ensure water quality and to receive payment. There were three types of resident, those with ownership of their land, 'non-owners' and by far the majority officially known as 'non urban'.



To serve them, Aguas Argentinas explained, needed a new type of thinking. The recognised service was through water trucks, with often delayed deliveries, for which residents had no means to store the water. Government and the company were aware of the health problems of neighbourhoods that were under-served. They also recognised the wider implications for groups that appeared to have been omitted from formal development programmes. They therefore saw their challenge as

Above left: Reported population served in low-income areas

## USO, Tariffs and Legal Issues

being 'to change the mentality of the people, to show that they were not abandoned, that they are full members of society.'

The 'participative services approach' therefore began in the late nineties based on a partnership with the residents, the Municipalities, the Government and the company.

In this approach, Aguas Argentinas generally designed the projects and supervised implementation, the Municipality funded materials and the residents constructed the system. There were variations to this pattern described below. To promote subsequent payment, a single invoice was given to the community for a year, to see if they were really willing to pay. Meters were installed for the community to limit wastage of water. Typically, one person signed the agreement on behalf of the neighbourhood, often designated by minuted community committee meetings. Aguas Argentinas found that there are leaders in poor neighbourhoods who could help resolve people's problems for them. With the trial year successfully completed, individual billing was introduced, based on an assumption of minimum water usage.

One project, in the Barrio San Jorge (San Fernando County), had 2,300 inhabitants where 71% of households were under the poverty line. 'During the 35 year life of the Barrio there had been eight initiatives to improve water provision, undertaken by different groups, working alone or in some form of partnership. However, the end result was 'a deficient service in relation to socially acceptable standards, low or no community participation in their planning and implementation and lack of awareness for the operation and maintenance of the improvements.'

Under the 1993 Aguas Argentinas Concession



The city expanded outwards along the railway lines leading from the centre

Agreement the barrio was projected to receive services in 20 years time so IIED-AL obtained funds for pilot project from two donors to improve sanitation. Aguas Argentinas decided to give a water service in 1995, just before the elections, 'a period in Argentina where traditionally many things start to work.'

A system of shallow sewers was designed at \$450/ household, that is one quarter of usual contractors' costs, funded 60% by the international donors and 40% from the community (through community labour) with a small contractor to lay the mains to ensure quality. 'The effluent collected was initially discharged directly into a nearby river: as a result Aguas Argentinas did not charge for the service. 'When the company network is extended into this area, the collector will simply need to be connected to the mains: the service will then be charged for' (Lyonnaise des Eaux, 1999).

The NGO involved suggested that San Jorge was 'a watermark' for Aguas Argentinas's concession as it was the first case in which the company agreed with a low-income settlement for water provision with special charges and took over responsibility for its operation and maintenance.

It was also a watermark for IIED-AL representing the start of their work with Aguas Argentinas, which subsequently led on to assisting with institutional capacity building for the company including sensitisation of regional managers on social issues, socio-economic and environmental studies, facilitating links and promoting partnerships with other stakeholders. Some in the NGO subsequently regretted the extent of their involvement with a private company.

### Other Partnership Projects

Aguas Argentinas (Lyonnaise des Eaux, 1999) describe how 'The Participative Water Service' Projects were based on 'direct links' between the residents of the area (via an association or 'leader') and Aguas Argentinas. The 'barter' operating method, with the community providing the construction labour, 'was only conceivable for areas where the idea of community work is accepted. 'Bartering' is more difficult with more than 2,500/3,500 residents. Larger areas may be 'divided up' into zones so that this type of project can be applied.'

The UGE (Employment Generating Unit) applied to large-scale projects where the bartering system was impossible. A contractor financed by the province carried out the network extension work under the supervision of Aguas Argentinas. The contractor employed local staff who received \$200 each for (normal) six hour day per month for this 'community work'. The

# Universal Service—Serving the Poor

Provincial Bank paid for materials (as approved by Aguas Argentinas) and the labour through a soft loan. The residents reimbursed the connection charges to the Province over five years for a total of approximately \$200.

Another approach used was the **Tax Credit Agreement**, 'which was based on a direct agreement between Aguas Argentinas and the Municipality. Usually, Aguas Argentinas had to pay a fee to the municipality each time it dug a hole in a public road. This agreement provided the company with a tax credit equivalent to that amount, which was then used to carry out work in disadvantaged sectors. This system actually meant that the connection costs were subsidised by the Municipal Corporation. (Lyonnaise des Eaux, 1999).

Aguas Argentinas believes the pilot projects worked well and were extendable. 'We can improve efficiency now we know how to do it; we can accelerate progress through the new concept of differentiated tariff and materials supplied by third parties and through the education in paying bills. This is very important as low-

For the unmetered domestic customers, average water consumption is a 500 litres per person per day. The President has been saying 'let's aim for 700 litres per person per day'!

income households were given land free, electricity free, all free.'

However, the company also recognised that efficiency was low and that 'the rate of return on the investment is zero or very long term.' But they benefited from the cross-subsidy funding for those new investments, from a reduction in illegal connections and therefore reduced unaccounted for water and from the long-term benefits of converting consumers of water and sanitation services to customers.

The company reported that Government and the Regulator liked the idea of a special reduced tariff and work generation programmes and also the expansion of service: 'we are advancing coverage goals by 10 years.'

One of the keys to their success was the use of an effective NGO as a social consultant as well as a 'civil society' partner. IIED assisted in the preparation of social mapping and socio-economic surveys which led on to a plan for monitoring and assessment. There was a joint IIED/Aguas Argentinas approach with an IIED project manager until the end of 1998 when Aguas Argentinas created the Department for Low-Income Areas and the IIED Project Manager returned to the NGO.

From this experience the company proposed to

formalise two methods: the cross-subsidy and the community projects, with differential tariffs, with contractual basis to make them more efficient and effective. They saw that it was necessary for Aguas Argentinas to adopt to NGO patterns as well as NGO's adapting to the needs of business. The company had to learn that a rapid, quick-fix approach was not always best in low-income areas and that a partnership with NGOs could well be the best way to serve such clients.

By 2001 Aguas Argentinas had served an additional 260,000 low-income inhabitants (Dehan, 1999) through 50 completed projects (involving different patterns of partnership) and had developed its own 'Low Income Areas Department' with considerable experience of meeting the needs of the poorest through a variety of different approaches. By 2004 the company was claiming an additional 800,000 people served in low-income areas (Global Water Report, 2005a).

Following the 2002 financial crisis and the need to renegotiate the contract, with presumed requirements for give and take on both sides, the company agreed to use a Trust Fund escrow account money (from a 7.8% addition to the tariff agreed as a means to fund expansion in 2001). Along with additional funds the plan was to extend water services to the unserved poor in the light of poverty levels which had reached 48% in the country as a whole.

The *Modelo Participativo de Gestion* (MPG) was an attempt to use a participatory methodology 'to find appropriate solutions that involve all the actors of the concession: residents, municipalities, associations, concession regulator, and the company. This model is based on 'informed demand' from the population on the participation of stakeholders throughout the process and on institutional strengthening. Such participation fosters social empowerment, and provides a clearer definition of roles and responsibilities between the stakeholders. It encourages a transition from passive provision and clientelism towards a practice of negotiation. Seen as a continuous process, participation is the key to the continuity and sustainability of the program' (Barbara Chenot Camus, Citizenship and Governability, New School University and Aguas Argentinas, 2004). The initial aim was for 40 projects, including all of the concession's 18 municipalities with the objective to have served 100,000 inhabitants by the end of 2004.

Serving the poor may have been undertaken for 'image and political reasons' by one view or by real commitment of water providers to do the job properly. The company apparently failed to make all the necessary payments to the fund 'for most of 2001-03' but by early 2005 had ensured payments were up to date, the fund

## Customer Involvement

Aguas Argentinas scored their partnership programmes according to participative sustainability, efficiency, effectiveness and replicability. To the question 'why not therefore forget the participatory ideas and concentrate on cross-subsidies' the head of the Low-Income Areas Department emphatically responded: *'No, no, they are all important, we have to have participation of the population . . . a water project should carry much more than water, involving those who were historically excluded . . . participation has a great impact on collection efficiency in 'bad/conflictual' neighbourhoods . . . even though it costs . . . level of participation are always needed . . . but can be graded according to the type of neighbourhood.'*

The regulator also recognised the necessity for more formal customer involvement, particularly in the 2000 review of AA's five year plan for future investments.

ETOSS Resolution N° 42/00 pointed out the constitutional rights under the Basic Law:

- Public participation in the actions of regulators of public services
- Access to adequate and true information about those services.

The regulator explained that a customer services committees system was copied but with 15 to 18 NGOs forming a Customers Commission to represent customers rather than individual customers being involved.

Subsequently, in a document to ETOSS entitled 'Report of the Users Commission (of ETOSS) in respect of the renegotiation of the water supply and sewerage contract ordered by law 25.561', the Users Commission, amongst other issues offered their views on the Aguas Argentinas contract, including advocating termination of the concession contract, placing blame and responsibility totally at the door of the concessionaire. This might not have been particularly constructive.

This approach to customer involvement is seen by some in the city as 'second-best'. In a revised form, the NGOs are required to send one representative to the customer commission, partly financed by the ETOSS budget, meeting every week, with access to all information. 'They can sit in on the board meeting, with no voice or vote, but whatever representations they want can be made. We are obliged to receive them, answer any questions they want, they call me to their meetings to explain and to help them understand.'

As in the England and Wales system it is recognised that customer representatives have to be educated in the realities of the water sector over time. *'They are very reactive, but they are not stupid, you have to respect them, be patient, step by step they start learning, start understanding -- then their resistance decreases, they enrich the process, they have ideas, they have their own rotation, we don't interfere.'*

### Views of Poor Residents, 1999

'We wanted services, we did not want to be looked down upon.' Barrio Resident 'It was a tough project -- the women worked on house fronts, paid for connections to be made well . . . people thought it would be salty water -- then other families joined.'

'We were concerned about police action against us after appealing to the Senator. We have a reputation as dangerous and lazy but it is the Government who does not provide jobs which leads to our teenagers hanging around . . . people are willing to work. Come and talk to us.'

'We started by developing a petition for street lights. 'You are a ghost neighbourhood, you don't exist' we were told. I was angry. Three meetings then ten files prepared before we could be recognised. It took five months. 'The last thing we did was to open the valve on the highway -- they said it was not correct. I said what they did to us was even more incorrect, treating us like animals, with disease. The tanker drivers made us pay again for water, and if no \$10, then no water. They made us hate each other if one had water and another family didn't. Everybody is now paying for water. Some even have TV cable connections! We now pay regularly for water every six months.'

An Aguas Argentinas Engineer commented: 'There is no mathematical formula for this, something you learn by experience . . . there must be a human flow, a family relationship, . . . but she (referring to community representative) is not easy to do business with (said with a smile in her presence) . . . but now it is a strong relationship.'

Trying to promote nearness and relevance to customers ETOSS tried to put one representative in every one of the 17 municipal offices, one in each, one from municipality and one from ETOSS. However, *'it didn't work' - customers saw them as messengers, not actually those responsible people and they always wanted to talk to the boss. There were no complaints in two years in the district offices, all complaints came to the head office.'*

There is no direct compensation system for customer grievances. Any fines imposed on the water company for service deficiencies are paid to a separate account

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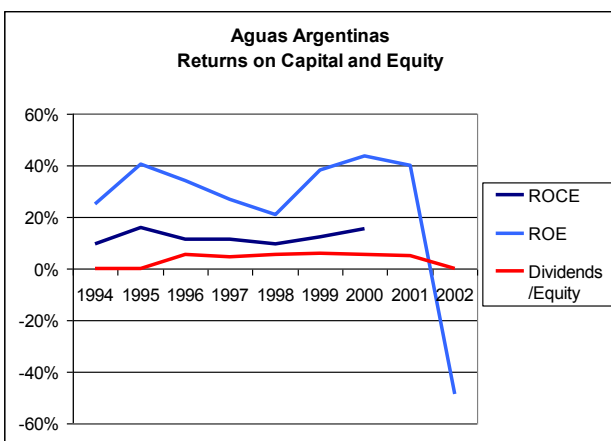


# Conclusions

In the 1999 words of one of the Regulators: ‘the Concession is EXPANSION. If we don’t achieve that, no success, quality is not so important. The only measure of success is the universalisation of service, the first objective is urban access to services.’ In 1999 AA Dir Gen Adj, Michel Trousseau, also described the main goal of the concession as expansion and maintaining the environment. Clearly this was in harmony with the Regulator, about whom he then commented ‘we don’t always agree, but the general spirit is positive, we will succeed together.’

Whatever the good words, the regulator is left with the understanding that transfer pricing mechanisms between the various companies of the water providers may well have led to overpricing of fixed assets and the demise of local contractors. Others argue that transfer pricing costs were less than corruption costs when it was a public utility.

The company had explained that ‘we have thirty years to make a profit – but if we don’t achieve certain financial indicators we will not be able to borrow from banks.’ The graph below illustrates the Return on Capital Employed for the company in the early years though much was reinvested. In 1997, Aguas Argentinas, in addition to its management fee, was able to pay its first dividend to shareholders who had initially contributed \$120 million in equity funding. The \$14 million dividend payment was maintained for the following years until the financial crash. Suez Environnement (the French parent company) has had to write off more than \$700 million, but is left with the challenge of servicing a \$500 million World Bank loan for which Suez has guaranteed 70%, with all debts now totalling more than \$600m.



In 2004 the company explained that ‘The present targets of Aguas Argentinas are: 1. to maintain the service; 2. to keep staff and 3. to serve the poor’. Has the whole experience been worthwhile? Yes, the quality of service is a high standard, though the pressure is poor and sometimes, the system expansion has gone well. Perhaps it is a matter of a glass being half full or half empty? Though we wanted the glass to be full at this time.

Can regulation, let alone regulation for the poor, work in such an extreme situation? The principles of the ‘impartial referee’ must be severely stretched, particularly when the Regulators are political appointees. For a while the system continued to maintain service and to promote and deliver services to the poor, whatever the reason. It is unlikely that such progress would have been made under an unregulated public provider. As Ondeo withdraws from Aguas Argentinas some (politicians?) hope that one of its partner companies, who are also involved in the present concession, Aguas de Barcelona (Agbar), will take over operating responsibilities, with two investment funds negotiating the purchase of a substantial stake. Will the new partners be as willing to



Unless otherwise referenced, the information given and all quotes derive from the Business Partners for Development Study Visit in March 1999 updated by the Regulating PPPs for the Poor research visit in May 2004 and subsequent investigations of customer involvement by Barry Walton during 2005. Other References are listed on page 7.

# Chapter 7

## Case Study: **GHANA**



### **REGULATING PUBLIC PROVIDER: Accra & Kumasi**

Ghana's public provider of urban water services has been the subject of continual public sector reform since early structural adjustment reforms began in Sub-Saharan Africa. The progression towards private-sector involvement continues to be hotly debated. The independent regulator, responsible for economic and service quality regulation, was formed as part of a move to attract international investment and protect the interests of the utility customer. The urban poor of Ghana rely on vendors or tankers who charge from 3 to 15 times the normal utility price. Low-income, multi-occupancy tenement housing, or "compounds" make up 70% of the housing in urban areas. The poor and vulnerable live in slums or illegal / unplanned areas that lack any basic infrastructure.

*"PURC is committed to the development and delivery of the highest quality of utility services to all consumers and potential customers."*

### **KEY FACTS**

#### **Population**

20.5 million

#### **Urban population**

45%

#### **GDP per capita 2002**

US\$ 2,130

#### **HDI rank**

131/177

#### **Population living < \$2 / day**

78.5%

#### **Exchange rate**

\$1 = 9,000 cedis

#### **Urban household water connections**

50%

#### **Urban improved sanitation**

74%

#### **Water Poverty Index**

45.3

### **Study city**

Accra and Kumasi

#### **Population**

1,700,000 and 700,000

#### **Regulator**

Public Utilities Regulatory  
Commission (PURC)

#### **Service Provider**

Ghana Water Company Limited  
(GWCL)

# The Water Sector and Institutional Framework

The state-owned Ghana Water Company Limited (GWCL) is the lead organisation responsible for urban water supply, currently operating 82 urban systems serving a population of about 8.2 million. GWCL is under the oversight of the Ministry of Works and Housing (MWH), which is responsible for water policy formulation and also provides oversight of GWCL's activities (fig. bottom of page). Recent data suggests that GWCL has 60 staff per 1000 connections and 60% non revenue water. Average tariffs have risen from \$0.20 in 1998 to \$0.56 in 2004 with a resulting estimated improvement in the operating ratio from 1.6 in 2000 to 0.9 in 2004 with urban water connections coverage at 50%.

The Water Resources Commission (WRC) is responsible for the regulation and management of all water resources. It is responsible for water allocation and granting of water rights, particularly for GWCL which pays WRC for the raw water it uses.

The Ministry of Finance (MoF) is responsible for negotiation and approval of credit facilities (loans) in the water supply and sanitation sector. The Environmental Protection Agency (EPA), under the Ministry of Science and Environment (MSE) is charged with environmental regulation. The EPA ensures that human activities do not pollute the environment.

The independent regulator since 1997, the Public Utilities Regulatory Commission (PURC), provides the economic and quality of service regulation for the sector. It operates alongside the State Enterprise Commission (SEC) which is responsible for regulating all state-owned enterprises including GWCL with whom SEC signed performance contracts since its establishment in 1989.

The key tasks and responsibilities of PURC, the regulator, are to:

- Provide guidelines for rates to be charged for the provision of utility services
- Protect the interest of consumers and providers of the



utility services

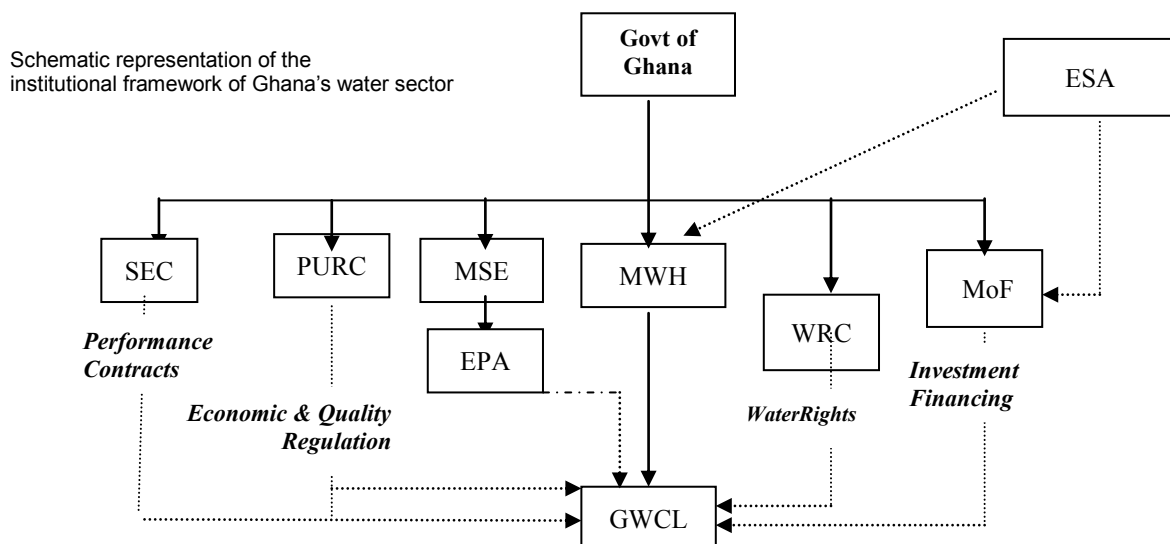
- Examine and approve water rates
- Monitor and enforce standards of performance for provision of utility services
- Promote fair competition among public utilities
- Receive and investigate complaints and settle disputes between consumers and public utilities
- Initiate and conduct investigation into standards of service quality given to consumers

Under Section 4 of the Act 538 1997, PURC is an independent body and is not subjected to direction or control of any authority in the performance of its functions. It operates by setting performance targets linked to incentives/disincentives. and tariff levels are set against achieving a number of agreed targets.

PURC has been funded directly by the Government but there have been attempts to replace that source with a regulatory charge to ensure continuing independence in regulation.

In its 'Social Policy and Strategy for Water Regulation' (February, 2005) PURC states its Vision "To become a model institution which ensures the delivery of the highest quality services to all consumers at fair prices."

Some see GWCL as 'very hostile to PURC—seeing them as a biased referee'. PURC has reportedly not



# Service to the Poor and USO

The Ministry of Works and Housing sees the achievement of USO as its mandate. For the regulator PURC, the achievement of USO as a primary duty is not so easily acknowledged even though it is seen as an important goal. They currently have no working definition for universal service obligation nor explicit strategies with key milestones to ensure its early achievement; there are no incentive mechanisms for the parties, the regulator and the service providers, to drive service delivery to everyone; and there are no guidelines or strategies to ensure its achievement in general and especially for the urban poor.

They do however now have a Social Policy and Strategy for Water Regulation which has a 'working definition of the urban poor as those (i) without direct access to regulated pipe supplies, (ii) who depend on secondary and tertiary suppliers and (iii) who buy by the bucket.' Although not in the legislation PURC sees itself as having 'a primary concern to address the interests of the poor.'

While GWCL is required to submit its investment and asset management plans to PURC, they are not in any way linked to a specific requirement to serve a number of the urban poor. Even though the utility acknowledges this importance, their view is a common one: that the current tariff levels are set too low and are insufficient to increase the network into unprofitable areas.

However, overall pro-poor orientation and consciousness has evolved significantly in recent years. As attempts to implement Public Private Partnerships (PPPs) have been continually stalled, preparations by Government for their arrival have continued, with concerns for the poor and vulnerable leading the agenda. The Ghana Urban Water Project is the most recent urban

## Results: Kumasi Survey

Fifty residents, of whom 34 were women, in the urban poor communities in Kumasi were interviewed on accessibility to water supply services.

The results of the survey indicate that:

- ◆ a significant percentage used to have a house connection, which was eventually disconnected because of non-payment of water bills
- ◆ those without a house connection were paying vendors 1.4 to 3.6 times the lifeline tariff enjoyed by those with a connection
- ◆ when there was no water in the network, 49 out of the 50 respondents relied on hand-dug wells, sometimes paying similar prices
- ◆ only 25 % of the respondents had heard of the PURC
- ◆ over 90% indicated that they had no one to complain to about issues related to water supply services

## Poor targeting of subsidies:

A study on domestic water pricing for households with direct connection to the piped network in Kumasi revealed that the low-income households in multi-occupancy houses with single meters, or "compound houses," were paying 20 % more than the high income users per unit volume<sup>1</sup>. The study also revealed that the low-income households were using 56 litres per person per day whilst the high-income household were using 120.

water improvement project. Promised funding is about US\$ 130 million for the sub-sector with about \$ 10 million earmarked for pro-poor activities.

According to the PURC and the GWCL, pro-poor water supply is recognised by the use of lifeline tariffs and the provision of public standpipes for informal areas and urban poor neighbourhoods where house connections may not be available. The lifeline tariff, the first step of an increasing block tariff, has recently been extended from 10m<sup>3</sup> to 20m<sup>3</sup> for all domestic customers, irrespective of income level or type of neighbourhood. As many of the poor share connections, either living in multi-occupancy compounds or tenement blocks, they end up paying higher prices for their water than the rich households. What's more, cost recovery and economic efficiency objectives are unlikely to be reached because middle to high-income households may never consume beyond the first subsidised consumption block.

A possible source of funding for future infrastructure improvements could come from the Social Investment Fund. Devised as part of the Ghana Poverty Reduction Strategy (GPRS), the fund provides 75% of capital cost, whilst the District Assembly pays 15% and the beneficiary community 10%. Since to date there is little or no collaboration with the relevant urban water supply stakeholders, it seems unlikely that this will provide an efficient and effective means for tackling water-related poverty issues.

	Poverty status			All
	Very poor	Poor	Non poor	
Piped	8.0	15.1	37.8	34.1
Water Vendor	1.0	1.7	7.3	6.4
Neighbour/Private	31.4	28.6	28.9	29.1
Public standpipe	17.2	24.9	13.5	14.4
Well	20.2	15.2	7.8	9.2
Natural sources	22.2	14.4	4.8	6.8
All	100	100	100	100

Table above: Main source of drinking water of households by poverty status in urban areas of Ghana, Ghana Statistical Service

## **USO and Legal Issues**

The Act that established the GWCL, Act 310, instructs GWCL to provide service to all inhabitants in the supply area<sup>2</sup>. The Constitution of Ghana, Article 35 (3) states a legal obligation for the provider to promote “just and reasonable access by all citizens to public facilities and services”<sup>3</sup>. GWCL responds to this legal requirement by pointing to its three levels of service delivery designed to accommodate all housing types; the house connection, yard connection and standpipes.

The PURC Act, 1997, establishing The Public Utilities Regulatory Commission (PURC), Act 538, to regulate the water and electricity services in Ghana, under Section 11, Duty to Provide Adequate Service requires: ‘A public utility licensed or authorised under any law to provide utility service shall (b) make such reasonable effort as may be necessary to provide to the public service that is safe, adequate, efficient, reasonable and non-discriminatory;’ There is no other requirement or explanation with regard to serving the poor, though there interestingly is a requirement to ensure use of up to date technology.

The Constitution (Article 17) permits Parliament to make “different provision for different communities with regard to their special circumstances” though it is unclear if this is an obligation. As with the non-discrimination requirement in the PURC Act it does perhaps pave the way to promote service provision to its un-served areas by collaborating with alternative providers. Assuming PURC protects this entitlement for

all citizens to gain access to services and facilities, as stated above, then they would be legally bound to enforce this legislation if it continues to be breached.

However, the current legislation appears only to authorise the service of the formal provider and does not encompass the role of alternative service providers. Legislation does exist to allow independent operators to function by way of abstraction licences, though it is not known whether they are granted (or even enforced) in a formal operator’s catchment area.

The PURC Act also grants the power to make regulations that are necessary for the implementation of its mandates. The commission has so far issued two regulations. These are: the Public Utilities (Termination of Service) Regulations 1999. LI 1651 which set out the circumstance under which utility service consumers may be terminated (disconnected); and Public Utilities (Complaints Procedure) Regulations 1999. LI 1665, which specifies the procedures by which any person (utility or consumer) may lodge a complaint with the Commission.

Section 31 of the Act allows for the Establishment of Consumer Services Committees, (1) There may be established by the Commission in such areas of the country as it considers necessary consumer services committees. (2) The Commission shall by legislative instrument prescribe the membership and functions of a consumer services committee. As described later CSCs have yet to be established.

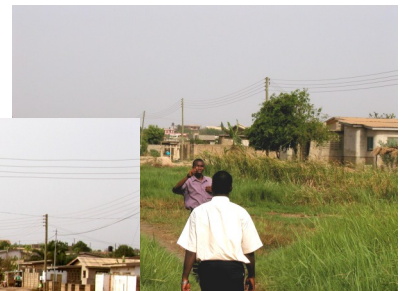
## **Compound and Peri-urban Housing**



70% of the households in urban areas live in rooms in compound houses (Ghana Statistical Service, 2000), one household per room, consumers do not yet desire connection to that room, ‘there no space’, but are paying too much for their water to landlord’s standpipe: c300 per 17 litre bucket (\$2/m<sup>3</sup>) when the official standpost rate is c100 per bucket

There is a need to regulate on-selling prices more effectively or perhaps to promote competition by tertiary ‘flexible’ low-cost distribution lines through the compounds to enable easy connection by tenants.

Extensions of water mains and distribution network to unplanned housing as it advances into cheaper land on the periphery of the city has to be based on a commercial decision of the water provider based on probable growth in housing density and growth in likely market. However, major settlements of low-income residents might necessitate earlier service coverage.



# Alternative Service Providers

For the poor and vulnerable dwellers in the informal and illegal settlements, alternative service providers are the only available option because the number of public standpipes is woefully inadequate.

Ghana has several mechanisms for delivering water that complements the formal water supply network. There are water vendors (including neighbours who on-sell water), tanker operators and small-scale independent operators (who may also supply the vendors and tankers, aside from supplying individual customers). All these alternative providers are not directly regulated by the PURC but instead, are left up to the open market.

Research has found that the majority of the poor rely on these alternative providers, as illustrated in the table on the previous page.

## Drinking Water

Many consumers buy drinking water in 300ml sachets, that is sealed plastic bags, from private businesses for \$0.11, about 1000 times the unit cost of GWCL water. Those who can further afford buy bottled water.

Water vendors are a common part of the low-income communities. Despite being largely unrecognised, they must obtain written permission from the formal provider before vending can commence – causing many to operate illegally. Conversely, tankers, which are usually the property of entrepreneurs, service un-served and underserved areas in collaboration with the formal service provider. An agreement has been made with the tanker associations, which stipulates roles and responsibilities and sets a special tariff, sanctioned by PURC, that recognises the intention of selling to the un-served and under-served areas.



South Odorkor private showers—\$0.06 'for a reasonable time', \$0.07 for each use of nearby private toilets.



Sodom & Gomorrah, 'temporary site', 10,000 people, approx. 50 private wash stations/shower blocks — c400-500 for 18 litre bucket (approx. \$2.5/m<sup>3</sup>) **6.25 times ratio**

Though in the past it has been neglectful of these users, the PURC is taking steps to improve the service offered by water tankers. One initiative includes increasing the number of filling stations used by the tankers, with the eventual aim of passing on the savings in fuel to the end user. This is because the majority of the water cost is due to the high price of fuel for haulage. Plans are also said to be underway by PURC to prepare guidelines for the tanker operators. Some of the considerations are:

- ◆ Price comparisons between areas and regions
- ◆ Handling of complaints against operators either by GWCL or the tanker association
- ◆ Mechanisms to prevent the formation of cartels

## Alternative Regulation

Tankers were for a long while 'stealing' water to sell to the un-served areas of the city. A Memorandum of Understanding between the network provider and tanker associations was formed, which has seen a number of service improvements to the un-served and under-served areas. Despite costing users up to ten times more than water from a formal connection, it benefited the consumers by stipulating that tankers could only be used for transporting water, thus maintaining improved levels of water quality. However, monitoring procedures have yet to be put in place to enforce this requirement.

Table below: Price of water by alternative service providers—field survey

	Price per 18-litre bucket
Vendors (Accra):	400 cedis (US \$ 2.4/m <sup>3</sup> )
Vendors (other urban centres):	150-200 cedis (US \$0.93-\$1.2/m <sup>3</sup> )
Public standpipe:	70-100 cedis (US \$0.6-\$0.44/m <sup>3</sup> )
Tankers:	430-500 cedis (US \$2.58-\$3.0/m <sup>3</sup> )

# Customer Involvement

The draft water supply policy states the Government policy of empowering the general public and civil society through consumer involvement (MWH, 2004). In particular, it aims to make the utility more accountable to its customers by increasing awareness of consumer rights and obligations, and providing mechanisms for consumers to participate in decision-making about the level of service. In response, PURC has taken steps towards the formation of Customer Service Committees (CSCs) similar to those formed in England and Wales, where the CSC would be able to represent the concerns of the customers to the regulator and the utility. The plan has yet to be implemented, reportedly stalled due to a lack of available funds. Other reports point to a concern that such committees might be hijacked for political ends, becoming ‘too powerful on the ground.’

However, a system that seems to show initial success is the use of residents associations that are being used by PURC to collect customer feedback. Communication is also being made with established consumer groups and in public hearings where, for example, new tariff proposals or other related water supply issues are discussed. The media is also used both by the regulator

### Customer Ownership & Management:

In the (rural) community water supply sub-sector, a totally new approach referred to as community ownership and management is used where the customers are involved in the choice of the technology, location of the standpipes, the pace of the network extension and the direction for the network extension. As part of the community ownership and management strategy, there are periodic community meetings where the management board (also community representatives) renders the accounts of their activities to the community. At such gatherings, customers are free to ask any questions related to the water supply

and by customers. The regulator has used a combination of radio, TV and print media to create awareness on certain issues. Customers have also increasingly used local radio to complain about service levels, putting pressure on the provider in new and innovative ways.

However, these mechanisms are failing to reach the majority of the urban poor since it is only existing customers who have clear channels to complain and make their voice heard. A study conducted by the regulator found that nearly all urban poor respondents were unconnected to the network and instead relied heavily on alternative service providers. It was revealed that given a problem with their water supply, they had no appropriate avenues to direct their complaints.

By ignoring the alternative water supply sector, the regulator is failing to meet the needs of the poor. The beginning of good customer involvement is being pursued for those already connected to the network, but it is the unconnected, indirect customers, the urban poor, who remain vulnerable by being allowed to fall through the regulation gap.

### Participation

‘At a recent meeting with all the stakeholders the ministry ((MWH) offered to “open its doors as widely as possible”, even to invite all stakeholders including those currently kicking against the idea of implementation of any form of privatisation whatsoever to even **participate in the contract documentation preparation** so that their respective fears with regards to the performance of the ultimate contract will be addressed.’ (italics original)  
Hon Dr Charles Brempong-Yeboah, Deputy Minister, MWH



### Private Water Tankers Owners Association

313 tankers charging 185,000 cedis for 1500 gallons (6.75m<sup>3</sup>)

‘Published prices’, see photo right, c40,000 per load to GWCL, \$3-\$5 /m<sup>3</sup>



### Independent providers

An independent producer and provider in Kumasi indicated his desire to extend pipes to interested customers to increase coverage (and benefits) to the community, but the enabling framework does not exist. He pointed out his fear of what could happen to his investment in the future, for instance, when the proposed PPP comes. Independent providers, who source from groundwater, operate outside of the regulatory framework. Water quality data can be made easily available and abstraction licences, though required by law, are

# Conclusions

Deputy Minister, MWH, Hon Dr Charles Brempong -Yeboah describes how the government has been trying to involve the private sector since 1992/93: 'the current problems with urban water supply have come about *in large part* due to the inability of the public utility company, GWCL to improve its efficiency.' (italics original in Presentation to Workshop on PSP and the Urban Poor). The Minister is personally very committed to ensuring service to the poor and a body provisionally termed the Urban Low Income Group Water Unit (ULIGWU) is being established within the Ministry to identify the poor so that they can be targeted for assistance.

The conclusions from the field study are that:

- The existing regulatory mechanisms are inadequate to deliver services to the urban poor in a sustainable and equitable manner.
- Achievement of the universal service obligation is not a primary duty for PURC even though it is recognised as very important. Both PURC and MWH do not have a working definition for USO and there are no mechanisms in place to require, monitor and ensure early achievement of USO.
- The MWH sees the achievement of USO as its duty but does not have clear programmes and mechanisms in place to achieve that. Business as usual would therefore result in increased proportion of the poor without an improved water supply.
- The activities of the alternative service providers are serving the majority of the urban poor groups but are not regulated by PURC. The regulatory framework is also not facilitating the activities of the alternative service providers for the benefit of the service recipients.
- The regulatory framework lacks the mechanisms to issue a permit or license to the independent producers.
- The existing level of customer representation and involvement is low and virtually non-existent for the un-served poor.

Since the fieldwork for this study was completed PURC has issued a Social Policy and Strategy for Water Regulation. This states that that PURC will insist that public utilities include pro-poor criteria when undertaking water supply projects and will promote cooperation between utility and secondary providers in safeguarding the quality of service.

Based on the study conclusions and the subsequent release of the Social Policy, the following **recommendations** are made:

- Clear guidelines and mechanisms for reducing the proportion of the poor without access to improved water services should be developed by PURC/MWH, enabling the strategy to be implemented within a reasonable time.
- Government should re-consider whether PURC should have the achievement of USO as a complementary primary duty and therefore prepare a working definition of the USO which will form the basis to require, regulate and monitor the achievement of the USO by service providers.
- MWH should be proactive in sourcing funds to address pro-poor concerns. Pro-poor aspects clearly have a direct link to poverty alleviation. For example some of the Highly Indebted Poor Countries' HIPC relief, could be earmarked solely for pro-poor water supply.
- The services of the alternative services providers should be well acknowledged and their efforts facilitated to ensure more inhabitants have access to improved water supply services. MWH and PURC should develop procedures for registering or licensing alternative service providers, especially the independent producers and let them know of the role and obligations they have to the various relevant agencies as well as the customers.
- PURC and MWH should develop guidelines and modalities for the operations of the Independent Producers (IP) in urban water supply
- There is a need to have explicit mechanisms to empower customers, especially the urban poor, so that their needs will be adequately addressed by the regulatory framework. Customer representation should be mindful of the urban poor and the vulnerable
- It is recommended that PURC uses a focus group methodology or suitable participatory methodology to consult with the urban poor on a regular basis to incorporate their voice and concerns in the delivery of water supply services.

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Note: unreferenced quotes taken direct from fieldwork interviews



# Chapter 8

## Case Study: **PHILIPPINES**



### KEY FACTS

#### Population

78.6 million

#### Urban population

60.2%

#### GDP per capita 2002

US\$ 4,170

#### HDI rank

83/177

#### Population living < \$2 / day

46.4%

#### Exchange rate

\$1 = 55 Philippines Pesos

#### Urban household water connections

60%

#### Urban improved sanitation

81%

#### Water Poverty Index

60.5

#### Metro Manila

#### Population

11,000,000

#### Regulator

MWSS-RO

#### Service Provider

Manila Water

Maynilad

### REGULATING PRIVATE PROVIDERS: Metro Manila

In 1997, Metropolitan Waterworks and Sewerage System entered into concession agreements with Manila Water Company and Maynilad Water Services, who were allocated the East and Western service areas respectively after a selective bidding process. Each company had to have at least 65% national ownership. The winning bidder for the Eastern concession surprised everyone by bidding for a very significant reduction in price. MWSS remained as asset holding authority. By virtue of the contracts, a Regulatory Office (MWSS-RO) was established to monitor the implementation of the concession agreements.

The initial contracts required the concessionaires to undertake phased extension of service areas to ensure service coverage to the poor. Learning from each other, as well as from the electricity providers, Manila Water and Maynilad developed innovative approaches to service delivery in the slums and shanties.

*'We have 70 territorial managers – now they are challenging us to find the money to invest – they know the need to serve the poor; we realise that we have to do something – it is our task as Filipinos'*  
Manila Water

“

# The Water Sector and Institutional Framework

According to the law on urban water services, local government units (LGUs) in the Philippines assume responsibilities for water supply and sanitation systems through water districts (WDs). In the case of the twelve cities and five municipalities comprising Metro Manila, this responsibility was delegated to the Metropolitan Waterworks and Sewerage System (MWSS), which as a public corporation was awarded the jurisdiction, supervision and control of waterworks and sewerage systems within the National Capital Region and peripheral territories (Rizal province and part of Cavite province) in 1971. A nationwide water crisis in the mid-1990s prompted urgent calls for effective measures to tackle the situation, and government policy responses incidentally paved the way for private sector participation in water services provision.

With the start of the concessions (see front page), the contract regulator MWSS-RO sees its role as balancing the interest of stakeholders: protecting consumers from high prices and poor services and providing incentives to concessionaires to invest, be efficient and earn a profit. The monitoring functions of MWSS-RO include: compliance with drinking water and wastewater quality standards; water supply, sewerage and sanitation development, programs repair and maintenance of assets; non-revenue water reduction targets; collection efficiency target; customer service standards; and operational cost efficiency; and, of particular relevance to this study projects vis-à-vis required population coverage and the required year to attain targets. However, other than financial auditing, MWSS-RO does not conduct a regular and structured audit of data submitted by Maynilad and Manila Water. When the concessionaires submit a monthly progress report, MWSS-RO sometimes validates the information through random community visits and interviews with people.

**MWSS-RO Mission and Vision Statements:**

Mission: "To ensure that the quality and level of service provided by the Concessionaires meet global standards; and to balance the interests of the stakeholders."

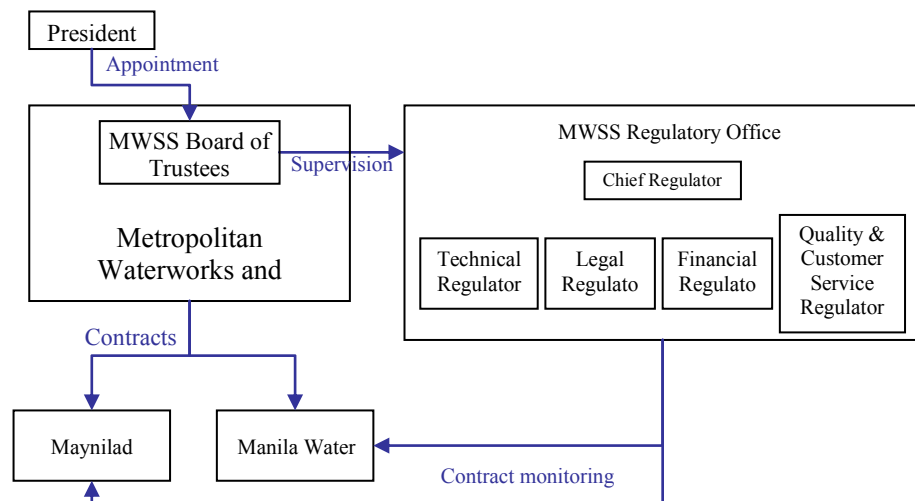
Vision: "Continuous supply of safe, reasonably priced water and environment-friendly sewerage system through effective regulation."

The research confirmed significant overlap between administrative and regulatory functions of the various agencies and public bodies involved in the water sector: National Water Resources Board, Department of Health (DOH), Department of Interior and Local Government, Department of Environment and Natural Resources (DENR), Local Water Utilities Administration, National Economic Development Authority (NEDA), Department of Public Works and Highways, Local Government Units (LGUs), Department of Finance and most importantly Barangay Water and Sanitation Associations/ Rural Water and Sanitation Associations operate and self-regulate community water systems.

Maynilad, the concessionaire for the Western region, has been attempting to renegotiate its concession agreement with MWSS due to foreign exchange devaluation which was a particular burden having had to take on 90% of MWSS's debt. Currency exchange protection had not been a feature of the original contract and government was reluctant to be seen to be relaxing the contracts in any way. Maynilad has also found it extremely difficult to make any significant impact on the approximately 65% non revenue water levels that it inherited. MWSS is in the process of seeking alternatives to manage the western area. Manila Water, the Eastern concessionaire, has volunteered to take over and Ondeo, the minority partner in Maynilad has also expressed an interest in continuing its involvement.



MWSS Offices



# Service to the Poor and USO

Universal water service coverage is not a stated target of the concession agreements, though a very significant increase in coverage over the lifetime of the concession, including a representative cover of different areas in the metropolis, was a requirement. Official coverage statistics claim a connection rate of greater than 80% (2002 figures), but evidence collected for this research suggests that 35% of the population still relies on ground water and alternative small-scale independent providers, including homeowners associations and water vendors. The use of statistics also obscures the real service coverage. For instance, according to Manila Water figures, each connection covers 9.2 users, whereas the average household in Metro Manila counts 5 members. The concession agreement states that one standpost for 475 people in low-income areas counts as full coverage.

An estimated 35% of Metro Manila's residents live in informal slum settlements, with more than 20% surviving close to or under the poverty line. In response to the scale of the need, especially amongst urban poor communities, both concessionaires have implemented targeted programmes to extend services to the urban poor: Bayan Tubig (Maynilad) and Tubig Para sa Barangay (Manila Water). Maynilad's Bayan Tubig programme works with urban poor neighbourhood associations in bill collection and maintenance. Since drinking water is piped straight into urban poor households, water costs have dropped by a third. Water consumption has risen significantly, in some cases to the average domestic consumption levels, but public health has only improved relatively.

Manila Water's Tubig para sa Barangay programme offers three options to urban poor communities:

- scheme 1 – individual household connection;
- scheme 2 – meter/connection per 4-5 households;
- scheme 3 – the community has one mother meter.

Maynilad introduced TEMFACIL (temporary facility), also known as the 3-R: recover, re-allocate and reuse. The pilot project is in Tondo, Manila, where non-revenue



Regulating Public & Private Partnerships for the Poor

Suggestions were gathered from urban poor survey respondents, being offered increasing access to mains water services:

- ⇒ Easy payment schemes for connecting. Water utilities can best help the poor by setting easy instalment payment plans for low-income households to get connected.
- ⇒ Lower tariff rates or slightly reduced tariff structure for the poor.
- ⇒ Recognition of water vendors. When things go wrong with big utilities, water vendors can serve as fallbacks and alternatives.
- ⇒ Local governments must increase investments in sanitation, drainage and solid waste management in urban poor areas.
- ⇒ Water utilities must invest in extending the piped network to squatter areas. In terms of numbers, squatter families are greater than landowners. This is also good business for the utilities.

water is high due to illegal connections. For this project, pipes are laid at ground level, embedded in cement and integrated in curbs and sidewalks. The project aims to minimize illegal connections and recover non-revenue water. People are forced to get new connections as old pipes, where they were connected illegally, are no longer used.

The research placed emphasis on uncovering residents' perceptions regarding the services currently provided to urban poor communities. Data gathered in surveys in focus groups revealed the following:

- *Urban poor communities tend to be neglected in government development priorities.*
- *Unaffordable connection fees as the "passport to water services" act as a deterrent.*
- *Water is not available 24 hours a day. Households also experienced low water pressure. Although there were few complaints regarding water quality, consumers tend to buy purified water for drinking. The prohibitive cost of medical care and hospitalization justifies this extra expenditure.*
- *The disconnection policy of the metropolitan water companies leaves the urban poor with no option but to pay the monthly water bill even if the water service is not efficient.*
- *Utilities do not provide the appropriate pipelines with respect to the number of households, and are perceived as reluctant to share water quality information with consumers.*
- *With respect to water prices, common complaints included abrupt changes in monthly water bills, and water utilities policy of charging the same tariff and other add-on charges to rich and poor households.*
- *Community initiatives to organise and manage self-supply and participate in the regulatory process are discouraged by the proliferation of regulatory functions spread across many agencies and the threat of political interference.*

## USO and Legal Issues

A review of the laws, policies and guidelines pertaining to water supply systems revealed that there is no specific mention of the poor, nor are there any references to pro-poor regulation. Specific documents or guidelines that directly address the needs of the poor seem unavailable. Clear lines of accountability cannot be discerned from the legislation, which may explain why the various agencies charged with regulatory functions are observed to be weak in enforcing existing regulations. Unclear responsibilities and overlapping functions are a cause of confusion and frustration to the public and discourage individual to take action if he/she does not receive his/her entitlement to water supply as a basic human right.

The Local Government Code brings to the fore greater autonomy and the need for enhanced skills and competencies of local government executives and staff. As such, businesses and NGOs may be able to work in partnership with LGUs to enhance water provision to the poorest. This Code could potentially provide an enabling environment for communities and civil society organizations to take part in the regulatory process.

Government policies of prescribing water supply services on the basis of a three-level classification and cost recovery strategies have resulted in many of the poor accessing 'Level I' (point source such as wells and hand pumps) and 'Level II' (communal faucets) systems, which place the burden of improving water quality on the household. 'Level III' (household water connections) systems, which often receive the largest government investments and subsidies (in capital and operational costs), serve mostly the non-poor. Thus, the inequality in low access of the poor to Level III services is compounded by the subsidy going to systems serving non-poor clients. While the sector strategy emphasizes full cost recovery for new systems, it is equally important to initiate measures to remedy inequities in existing systems, especially in terms of providing the poor with access to preferred Level III services.

On the other hand, the water service providers studied for this research have internal policies and guidelines to get the poor connected. Maynilad has resorted to easy instalment payment of connection fees. Both Manila Water and Maynilad have enhanced the outreach activities of their customer relations units. They also try to act on complaints and inquiries as promptly as possible. The reconnection process has been made less tedious and not very expensive.

At the time of the research Maynilad was charging customers P19.92/m<sup>3</sup> (US\$0.36) and Manila Water was charging P13.23/m<sup>3</sup> (\$0.24). Customers' water bills reflect the basic charge, currency adjustment and the environment and sewerage charges which were imposed

five years into the contract, as contractually agreed at the start, in advance of most customers receiving any wastewater facilities from the concessionaires.

### Water Entities

**National Water Resources Board**—empowered by the Water Code of the Philippines to control and regulate the utilization, exploitation, development, conservation and protection of water resources. It is the Philippine Government's coordinating and regulating body for all water resources-related development. NWRB's responsibility for tariff regulation was recently expanded to include water districts, water systems managed by the local governments, and private water utility operators except those covered by special concession and joint venture agreements.

**Department of Health** - water quality regulation and setting standards on testing, treatment and surveillance

**Department of Interior and Local Government** – general administration and institution building support to local government units

**Department of Environment and Natural Resources** – pollution control, protection of waters and the environment

**Local Water Utilities Administration** – approves the tariffs set by the water districts as it is providing the loans to them

**National Economic Development Authority** – overall planning, policy coordination and formulation

**Department of Public Works and Highways** – for setting technical standards for engineering surveys, design, operation and maintenance

**Local Government Units (LGUs)** – serve as both regulator and operator for water service; set and approve increases or decreases in water tariffs of piped water connections.

**Barangay Water and Sanitation Associations/ Rural Water and Sanitation Associations** – operate and self-regulate community

water systems

**Department of Finance** – management financial



of  
of

# Alternative Service Providers

The other sources of water services unclassified by government policies are the *small-scale independent providers (SSIPs)*, which can be grouped into (1) *residential system operators* who consist of real estate developers and homeowners' associations, (2) *mobile water truckers/water haulers* and (3) *local entrepreneurs* who are engaged in constructing and operating independent water supply systems in communities (e.g. water refilling stations); *water cooperatives* and also *bottled water manufacturers*.

Using a variety of water sources and delivery modalities, they provide water to needy communities at varying rates. They are driven though by a common enterprising mission to meet existing and potential demand at rates that reflect market forces, customer needs and varying preferences. To those sidelined by the public utility systems, these SSIPs provide an indispensable service and outreach.

There is no single central government agency regulating all the various types of SSIPs. Rather, there are several regulatory offices overseeing certain types of SSIPs as well as responding to some components of regulation.

For example, Inpart Engineering (see box right), with its own boreholes, storage and distribution network, sells water to *aguadors* (water tenders) for P35.00/m<sup>3</sup> (\$0.64), which is equivalent to five drums. *Aguadors* sell one drum of water for P20.00 (\$0.36). A gallon of water (3.8 litres) is sold for P1.50 (\$0.03). In stores, various brands of bottled water are sold for an average of P30.00 per litre (\$0.55).

The non-recognition of small-scale independent water providers excludes them from the regulatory process and even prevents them from accessing loans to enable them to improve their services. In past instances water companies refused to sell bulk water to SSIPs. Local governments and neighbourhood associations can also make it difficult for SSIPs to operate in their jurisdictions.

To an SSIP like Inpart Engineering, Manila Water's Tubig para sa Barangay programme is one of the biggest threats to its existence as a business enterprise. SSIPs also perpetually lack capital to improve their operations. Instead of one, several regulatory offices oversee certain types, but not all SSIPs. Improved policies and regulations can be created to address both the concerns of the poor and the SSIPs. It is the companies' stated objective to take over the areas served by the SSIPs with no compensation for the investment in piped distribution systems which some have made.

The apparent lack of price sensitivity by consumers of SSIPs - some of the neighbourhood association SSIPs also add on a local environmental improvement charge



## Inpart Engineering

A local entrepreneur has invested a considerable amount of her own money in establishing a local distribution system from the family borewell.

Locally recruited plumbers act as agents for installing new connections and for collecting payments, little and often.

This closeness to the customer brings many benefits in ensuring ongoing payments as well as sorting out complaints. For example, none of those interviewed in the focus groups was ever invited by Manila Water, Maynilad, and MoWaD to attend any meeting or customer forum. However, those being served by Inpart Engineering were 'constantly consulted and informed'.

which is paid by poor households - indicates that the regulator could be more generous in setting tariffs for the two main utilities that would provide financing for a faster roll-out of lower-cost service coverage in poor



## Customer Involvement

To promote customer involvement, MWSS-RO conducts public consultations before finalizing any petition for price adjustments. The involvement of the public, cause-oriented groups and consumers has been difficult but encouraging. The regulator is planning to expand the consultation process further, not only during price adjustments but also on matters involving performance of concessionaires on water service delivery. The effectiveness and independence of MWSS-RO has always been an issue for the concessionaires and consumers, considering that it was established under the jurisdiction of the MWSS Board of Trustees – one of the parties to the Concession Agreement. MWSS-RO has initiated reforms to strengthen its capability in monitoring the concessionaires' compliance with service obligation targets. In addition, it is also pushing for an independent regulatory body through legislation. Its proposed regulatory reforms include: adoption of key performance indicators (KIPs) and business efficiency measures (BEMs), conduct of public assessment of water services, capacity building for MWSS-RO, and creation of a water regulatory commission.

This study used focus groups in low-income areas firstly to find out the actual situation of service to the poor under a regulatory system but also to test a focus group methodology to determine its potential as an ongoing tool of regulation, to enable the regulator to make better decisions regarding the balance of future investments, efficiency demands and pricing. Respondents described themselves as being *'often uneducated, afraid of authorities, lacking time and money to "voice" our opinions.'*

Wanting to know more about the technique of public performance assessment based on service quality indicators from utility and user data, an offshoot of the focus group process was designed to look into the system of feedback between Manila Water, Maynilad, the public and MWSS. The researchers took the participants from a community served by Manila Water and another community served by Maynilad to the respective local offices and head offices of both the water utilities to look into the "performance corners" with a plan to have a focus group after assessing the information available. Both groups also visited the MWSS office to look into how the 'performance café' operates. These 'cafés' had been established with the support of the World Bank, managed by MWSS-RO, as places where customers might find out about the service and its costs. However, it was found that the performance cafés as well as the once promoted performance corners in local utility offices were non-existent or no longer operational.

The researchers showed participants from both communities the MWSS website indicating the comparative

### Bantay Tubig: an independent regulator run by volunteers

There is already an existing citizens' coalition for adequate, accessible and affordable water in the Philippines. Bantay Tubig, organized in April 2002 in response to the worsening water crisis in the country, monitors price increases, regulatory processes and the performance of water companies in Metro Manila. It started as a collaborative effort among civil society organizations. Bantay Tubig has organized public information campaigns on pricing and regulatory issues, mobilized against regulatory anomalies and concessionaire abuse, initiated Congressional inquiries on various aspects of water privatization, and pursued legal action against Maynilad. Bantay Tubig has no full-time secretariat. Members work on a voluntary basis, pursuing specific areas of the water issues according to their expertise.

performance of Manila Water and Maynilad in 1997 and from 2001 to the first quarter of 2003. The figures and the implications were explained to them. Afterwards, a focus group was held to get the reactions of the participants to the information they saw. The majority of the participants expressed that they do not find the web-based approach of communicating the service performance of the water utilities useful. The participants explained that they could not afford computers and internet connections, and they are not even literate in information technology. They suggested that the MWSS and the water concessionaires could work with NGOs, the local press and even parish offices to better reach the poor.

From a total of 40 poor respondents in four separate communities served by four different water utilities, using story telling and pictures as sorts of 'discussion documents' to stimulate communication and to help the respondents articulate their views and recommendations, it was found that overall, the majority of respondents were not aware of any customer forum or water associations existing in their locality. Even if there are, they have no knowledge about them nor will they be able to have access to them, considering the time, cost and social connections required. Reasons cited for the arising issues and concerns are listed overleaf.

### Text message from the poor

*"We cannot afford computers or internet connections... send SMS text messages instead which are cheap, fast, very interactive and popular even among the poor."*

Low-income focus group respondent on better ways for companies to communicate with customers

# Conclusions

[continued from previous page]

- *The economic crisis and the lack of employment opportunities make it difficult for poor families to have water supply.*
- *Political interference.*
- *Illegal connections.*
- *Communities are changing. They are beginning to assert their interests and work on their own issues. That is why there are now a lot of conflicts.*
- *Lack of information.*
- *Government and private sectors do not usually prioritize investments for urban poor communities.*
- *There is a perception that regulators protect water companies, not the consumers.*
- *Absence of a person or group with harmonizing skills to take lead and sustain efforts.*

The householders think that their concerns and problems can be overcome by

- *Working together with everyone and involve each one with regards to community water concerns. Consider the interests of the others.*
- *Developing that spirit of trusting and collaborative relationships with utilities and regulators.*
- *Having several utilities serving urban poor areas, instead of just one or two. It is hoped that private companies and also the government can become keen in investing in urban poor areas.*
- *Penalizing corruption and inefficiency.*
- *Regulators and water utilities disseminating more information, especially those that are useful to the urban poor.*
- *Reducing tariffs for households consuming less water than the prescribed minimum.*
- *Not imposing add-on charges upon poor consumers.*

The research showed that focus group discussions held with experienced facilitators can be a meaningful way of engaging local communities in the regulatory process. The urban poor asserted their interest in participating on a regular basis, provided that representatives from MWSS-RO and water providers take a proactive stance, participants receive adequate briefings and results are made accessible to community members. It was noted that some compensation for loss of earnings may be required to encourage the poorest of the poor who cannot afford the luxury of attending meetings instead of earning their daily living.

## Recommendations

The Philippines has an array of policies and regulations on water supply. However, despite existing regulations, the water sector is beset by issues that revolve around the reliability of the systems, availability and affordability of services, equitable delivery of services, sustainability and acceptable quality of water.

The roles of the many agencies doing regulatory functions remain unclear to the urban poor and are made more confusing by political interference. This discourages them to undertake community initiatives to participate in the regulatory process. Where there are rules and regulations, it is unclear which agencies are accountable, making their enforcement impractical. Most of the urban poor respondents were unaware of the roles and responsibilities of the regulator.

The Local Government Code can potentially create opportunities for businesses and NGOs to work in partnership with local government units to enhance water provision to the poorest. This Code could potentially provide an enabling environment for communities and civil society organizations to take part in the regulatory process.

It is necessary to conduct information campaigns to make people aware that regulators must support consumers and implement public policies on behalf of consumers. In this regard, regulators need access to information on water utilities as well as skills in communicating to the public their policies, plans and programs.

The capacity of both regulators and consumers need support in: legal aspects, public information, participatory monitoring and the collaborative involvement of all parties concerned. Regulators must initiate the process of calling all urban poor community associations in the locality and have a consultation on people's participation in the regulation process. This can then lead to the formation of an accredited consultative body. It would help to provide orientations and skills training on the regulatory process to key members. Urban poor representatives need to develop skills and confidence in communication, public speaking, and writing.

The focus groups indicate that communities are changing. They are beginning to assert their interests and work on their own issues. Regulators and consumers need to work more actively with the media, civil society organizations and lawmakers to promote pro-poor policies and put pressure on water utilities to perform better and extend service to poor communities.

# Chapter 9

## Case Study: **BOLIVIA**



### KEY FACTS

#### Population

8.6 million

#### Urban population

62.9 %

#### GDP per capita 2002

2,460 US\$

#### HDI rank

114/177

#### Population living < \$2/day

34.3 %

#### Exchange rate

\$1 = 7.9 Bolivianos

#### Urban household water connections

92%

#### Urban improved sanitation

58%

#### Water Poverty Index

62.7

#### Study city

La Paz – El Alto

#### Population

1,373,000

#### Regulator

Superintendencia de Saneamiento  
Básico (SISAB)

#### Service Provider

Aguas del Illimani  
(during study period)

### REGULATING PRIVATE PROVIDERS: La Paz - El Alto

Water and sewerage services to the twin cities of La Paz-El Alto were privatised in 1997 with a 30-year concession awarded to the Lyonnaise des Eaux consortium, Aguas del Illimani (AISA). At this time around 93% and 83% of their respective populations had access to some form of piped water. Over the first five years, Aguas del Illimani committed to install 71,752 new household connections, 'equivalent to 100% coverage', in El Alto, the poorer of the cities. The most recent figures indicate that coverage has reached close to 99% in La Paz-El Alto.

In Bolivia the national water regulator, SISAB, has now awarded 29 concession contracts, though only one is to a private company, AISA, with the remainder going to municipal or cooperative companies.

In an environment of political turmoil, SISAB has struggled to convince a sceptical public that regulation is a tool that can facilitate a sustainable and improving water supply service. In spite of equalling or exceeding its contractual obligations (by one interpretation) Aguas del Illimani has recently (February 2005) been informed that its contract would be revoked and planning is underway for some form of municipal water company to be established to take over the management of the La Paz-El Alto water and sewerage services.



# The Water Sector and Institutional Framework

In 1994 a regulatory framework, the System for Sector Regulation (SIRESE), was created to oversee the activities of the transport, telecommunication, electricity, hydrocarbons and water sectors. The creation of SIRESE was a consequence of a reform process to Bolivian infrastructure that included the granting of concession contracts and liberalisation of markets, which became known as “capitalisation”. However, it wasn’t until June 1997 that the Superintendencia de Aguas (water regulator) was established. The following month a concession contract was signed with the Lyonnaise des Eaux (55% stake) consortium, Aguas del Illimani (AISA), to operate water and sewerage services in La Paz – El Alto. Following a bidding process (in which a second anticipated bidder failed to bid at the last moment) the contract was awarded against anticipated service coverage to be achieved within four years rather than the more normal bidding against reduction in tariffs.

The Law of Water and Sewerage Services #2029, passed in October 1999, redefined the terms of reference of the water regulator and led to the creation of the Superintendencia de Saneamiento Básico (regulator for basic [water and] sanitation), generally referred to as SISAB from its Spanish acronym. SISAB is an autonomous state entity that is associated with the Ministry of Services and Public Works from which policy, standards and strategies for the sector are taken. The Vice-Ministry for Basic Sanitation serves as the formal link between SISAB and the Ministry of Services and Public Works. SISAB operates within an institutional framework that includes government ministries, municipalities, service providers, civil society, development agencies and international development banks.

At present there are 29 concession contracts which consist of 19 cooperatives, 7 municipal companies, one public company, one *mancomunidad* (a collective of two or more service providers) and, until final contract recision, one private company. The maximum concession period is 40 years. Currently there are



Aguas del Illimani Head Office



SISAB office on one floor of building

contracts of between two and 40 years’ duration, though mostly contracts of between 15 and 25 years have been awarded.

Concession contracts are only issued to service providers that operate in an urban environment and serve populations above 10,000. As part of the long-term strategy, SISAB will grant Licenses and Registers. Licenses will certify that service providers or municipal governments serving populations less than 10,000 agree to follow requirements for tariffs, and are eligible to access government funding. Registers will confirm that a service provider supplies water and sanitation to a community or association, and is eligible for government funding.

SISAB is entirely funded by the service providers who pay 2% of their income (after taxation) to SISAB. In addition to this core funding SISAB has received support for its own institutional strengthening from the European Union, SIDA, GTZ, World Bank, IDB, and the Andean Development Corporation (CAF).

The mission statement of SISAB states that it is to exercise the regulatory function for the provision of water and sewerage services within the current legal framework, protect the equilibrium of interests between users, service providers and the State, with a view to improve the population’s quality of life. The principal functions of SISAB are to:

- Award or renew concessions, licenses and registers
- Monitor the correct service provision
- Review and approve prices and tariffs
- Record, and act upon the complaints and demands of both users and service providers
- Promote a better relationship with civil society in order to improve customer service
- Comply and ensure compliance with standards and laws
- Promote the management capacity of service providers
- Control the management of quality and coverage of

## Service to the Poor and USO

As demonstrated by the bidding process, the government's key objective in privatising water and sewerage services in La Paz- El Alto was to increase coverage in poor areas. A requirement of the tender was for companies to state how many connections they would provide in El Alto, the poorest of the twin cities, by the end of 2001. The winning company, AISA, committed to providing 71,752 new in-house connections in El Alto. This number was estimated to equate to a 100% service provision in El Alto. The concession requires that AISA must then keep pace with population growth over the 30-year life time of the concession. The most recent figures (2003) show that overall potable water coverage in the contract area has reached nearly 99% in La Paz-El Alto, and the company claims it has reached 100% coverage in El Alto itself. There has also been a big demand for sewerage connections in all income-areas, and coverage has reached around 90% in La Paz and 61% in El Alto – this exceeded the contractual target of 53%. This demand is partly explained by property values which may not rise as quickly without a sewerage connection. This is reported to be an important concern for the population.

The tariff charged to all residential category users is US\$ 0.2214 per cubic metre for the first 30m<sup>3</sup>, then \$0.4428/m<sup>3</sup> from 31 to 150m<sup>3</sup>. The tariff is a combined water and sewerage tariff. It was intended that in the sixth year of the concession the tariff should increase to cover the cost of extending sewerage and developing wastewater treatment but socio-economic pressures prevented this from happening. Thus, customers without a sewerage connection pay the same tariff as those who do. The substantial first block in the residential tariff means there is little cross subsidy from wealthy to poor residential customers. Furthermore, there is also a high subsidy from commerce and industry to residential users. The commercial sector pays \$0.6642/m<sup>3</sup> for the first 20m<sup>3</sup> and \$1.1862/m<sup>3</sup> for 21m<sup>3</sup> and above, while industrial customers pay \$1.1862/m<sup>3</sup> for all water consumption. It is reported that vendor-supplied water in El Alto costs around \$3.50/m<sup>3</sup>.

The number of standpipes has been reduced to 60 from 240 during the AISA concession, and the contractual responsibility is to eliminate them altogether. However, they are still being provided outside of the network area in El Alto as a temporary measure because of social pressure. Consumption from standpipes is low, typically around 25m<sup>3</sup> per month, because of the lack of sanitary facilities. Households using standpipes pay approximately \$1 per month for a consumption of 1.5m<sup>3</sup>.

Since privatisation, the process of connecting to the

*"Within weeks of taking over, Aguas del Illimani had moved all officials who had to sign off on applications into one room. Applicants then knew exactly where to go to apply for a new connection and could watch paperwork move from*

water and sewerage network has become simpler and less bureaucratic. The connection process is less time consuming, less costly and offers flexible payment options. For example, AISA itself requests permission from the municipality to open trenches on behalf of groups of applicants (Komives, K. (2001) Designing pro-poor water and sewer concessions: early lessons from Bolivia. Water Policy, 3, 61-79) as opposed to the common practice in some countries of expecting applicants to apply themselves.

Condominial sewerage connections are available as an alternative to conventional sewerage connections and cost about 25% less.

Condominial sewerage, also known as simplified or backyard or in-block sewerage, achieves reduced costs by constructing shallow sewers, sometimes with rodding eyes rather than manholes, through the rear of plots where there is no likelihood of vehicular damage.



Ondeo Photo

There is also the possibility for households to contribute their labour in order to reduce both water and sewerage the connection costs. The standard charges are \$196 for water and \$249 for sewerage. Through contributing labour and certain materials, households can reduce these costs to \$90 and \$10 respectively. Furthermore, connection charges can be paid over a 30-month period at favourable interest rates.

In addition, the utility used a development approach in the poorest areas, including micro-credit facilities for household sanitary facilities, technical assistance and 'community organisation and training' to allow 'community members to reflect on their reality and how to solve their problems.'

Considering all these elements together, the partnership between society as mediated by government

## USO and Legal Issues

There are clear and unambiguous statements in the legislation that point to the duty of the regulator and service providers to work towards universal access to services. For example, Law #1600 that created SIRESE states under Article #1 that the objective of the regulatory system is to regulate, control and supervise sector activities such that they operate efficiently, contribute to the development of the national economy and enable all citizens to have access to said services. Under Law #2066, modifying Law #2029 governing water and sewerage services, Article #5 declares that the principles governing the provision of services are universal access to services. However, that aim of achieving USO is not reflected in any of the principal functions of SISAB, or in the mission statement.

The 1992 National Regulations for Water and Sewerage Services in Urban Areas recognise only in-house service connections and sewers as acceptable long-term solutions. Thus, standpipes, tanker truck delivery and latrines are by definition unacceptable for service provision in urban areas. However, AISA feels pressured into providing standpipes and tanker truck supplies to un-served areas of the city. The Regulations imply a requirement for water and sewerage service provision to a very high standard and therefore of a high cost. In recognition of this problem SISAB approved a



pilot project to test condominal sewerage, which has since become an accepted technology, a good example of the role of the regulator mediating between the long-term goal of society - highest standards for all - and present affordability.

Probably the most unsatisfactory issue with the concession granted to AISA has been the confusion over the agreed service area. In the contract itself, there is ambiguity over the concession area of the contract. In one clause the contract stipulates that the company provide water and sewerage services to all houses in the municipal areas of La Paz and El Alto. In another clause there is reference to the *area servida* which is the existing served area requiring further provision of connections.

The then Deputy Regulator illustrates this challenge in the photo (above), showing how it is the poorest in the hillside houses surrounding La Paz, areas not accepted by the Municipality as being within their municipal boundaries, who might not be counted within the universal coverage target. This ambiguity has caused difficulties in agreeing expansion targets and is likely to have provided ammunition to the anti-privatisation and anti-regulator lobby to strengthen their case that



La Paz



El Alto

# Alternative Service Providers

Given the already high coverage of water supply in La Paz-El Alto there is limited need for alternative service providers.

In areas of the city where the population density does not meet the criteria of 50 inhabitants or 15 buildings per *manzana* (approx 0.7 hectares), AISA is not obliged to provide connections.

In some areas of El Alto that are not served by the pipe network, the municipality provides a tanker truck service. In 1998 Aguas del Illimani also provided a water tanker service.

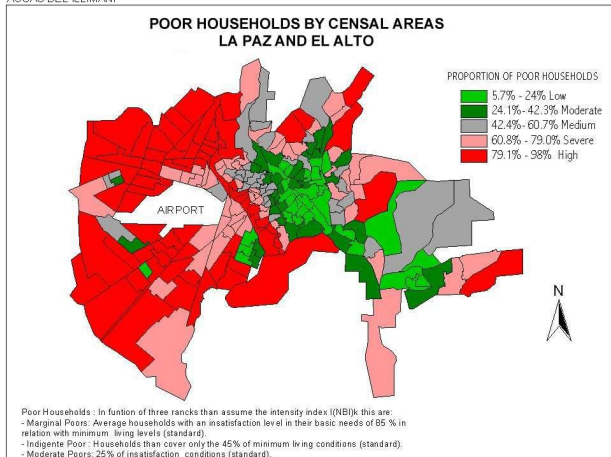
It is reported that vendor-supplied water in El Alto costs around \$3.50/m<sup>3</sup> (as opposed to the \$0.22/m<sup>3</sup> domestic piped).

By law, the 1992 National Regulations for Water and Sanitation Service in Urban Areas, state that individuals or entities that wish to exploit a private water source must obtain permission from the water utility holding the concession. In effect the utility has authority over water rights in the concession area.

Where the criteria do not yet require the utility to provide piped water it is permitted that an individual household or group of households can install a pipeline and connect to the main. In such cases the household(s) retain the right to charge other households a connection fee to access that main. After a period of five years, ownership of the pipeline transfers to AISA who have a responsibility to approve the technical standards and construction quality.



AGUAS DEL ILLIMANI



## Deputy Minister of basic services and public works, José Barragán

(in photo with visiting Gerald Osuagwu, Federal Ministry of Water Resources, Nigeria): "Aguas del Illimani has completed its contract perfectly - that is what the regulator says - but if you accomplish something that is insufficient, it continues to be insufficient" ). "The concession contract focuses on a limited service area, not allowing the company to satisfy the population's needs", according to Barragán. "The contract underestimated the areas of service in El Alto," he said. "There are many problems associated with coverage and access to services in El Alto that depend on the original contract that had terms that were not enough to provide for the needs of the population." (Randy Woods, BNamericas, 31/12/04)

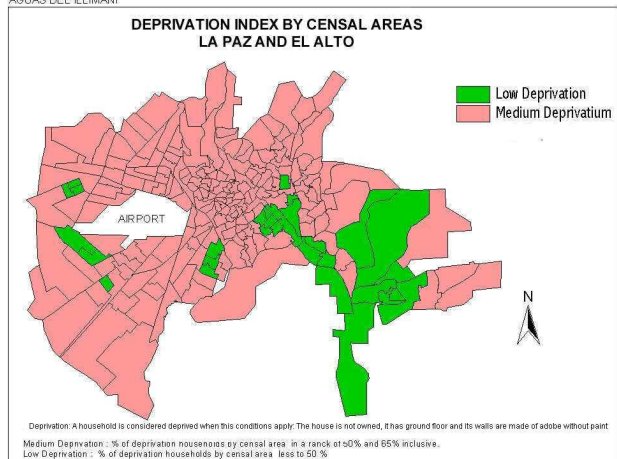


## Social Mapping

In preparation for extending service coverage the incoming utility undertook a social mapping exercise (illustrated below) as well as an anthropological study. This aimed to understand the challenges of serving the fast growing (from 90,060 in 1976 to 405,492 in 1992) largely indigenous population of El Alto whose main language is Aymara in order to understand their perceptions of water and how they might wish to be served (Ramiro, personal communication, 1999). One of the subsequent challenges for the water utility is the remarkably low water consumption of newly connected

Left Peri-urban housing, Le Paz Below Social Mapping, AISA

AGUAS DEL ILLIMANI



## Customer Involvement

Since 1998 SISAB has required that all the regulated service providers must provide a consumer office, known as an ODECO, with the broad aim of improving the customer-utility relationship. The specific functions of the ODECO include:

- To attend and resolve customer complaints concerning water and sewerage service
- Provide information with respect to the regulated services
- Answer queries and be a focal point for emergency calls

There are stipulated time periods within which the service provider must respond to customer complaints. These time periods vary according to service provider. For example, AISA must respond to an emergency situation such as serious leakage within 24 hours. In the case of an unusually high bill, AISA has 15 days to investigate and a further 20 days to take corrective action (if necessary). SISAB undertakes an annual audit of customer attention performance of each of the concessionaires. This visit is announced only one day prior to the audit. Where customers are unhappy with the response to their complaint they may appeal to SISAB to further investigate and there is a freephone number to call SISAB. However, customers must fill out a complaint form which is logged by SISAB who in turn present each case to AISA in a weekly meeting.

SISAB and AISA are also cooperating with the Federation of Neighbourhood Committees (FEJUVE) to promote better customer-utility relationship. There are around 450 individual neighbourhood committees in El Alto and 580 in La Paz. The FEJUVE have legal recognition and are viewed as representatives of civil society. Each week the representatives of the La Paz and



Peri-urban housing

El Alto FEJUVE meet with AISA to discuss problems or explain procedures to individual neighbourhood committees. The FEJUVE representatives, now well versed in service procedures, act as intermediaries between AISA and individual member committees in a manner similar to a trade union.

Some national FEJUVE committee members were interested in the idea of becoming part of a customer committee which might assist in adjudicating customer complaints in addition to lobbying for better services.

The cooperation between SISAB and FEJUVE has focused largely on awareness raising of the FEJUVE members, of which there are 7,200 neighbourhood committees in Bolivia. SISAB has been carrying out training workshops to explain the rights and obligations of customers in the context of water and sewerage services. The training workshops have so far been carried out in several of the main cities and will continue until all regions of the country have been reached.



Ongoing street protests during the study visit to Bolivia, illustrating the longstanding political challenges within which water became enmeshed.

"The relationship between the [concession groups] and the government is going in a very wrong direction as the concessions are not only supposed to be business contracts," Deputy Minister of basic services and public works Barragan said.

"I cannot continue working with the regulatory troubles that we are having that promote situations like Aguas del Illimani. We did not need to have the riot in order to fix some issues in the contract," Barragan said.

"Barragan was an apolitical appointment and worked without political affiliation, but has become increasingly disenchanted with the government's political machinations that he says use the water sector to gain political capital." "If we do not take the correct steps we are going to be sued very hard and are going to lose everything, and I do not want to be a part of that," he said.

# Conclusions

The water and sewerage regulator in Bolivia, SISAB, has since its creation had to function in an extremely volatile political situation. The regulatory system was established in Bolivia at a time of increasing privatisation and structural adjustment policies. The trades unions and indigenous movements ousted President Gonzalo Sanchez de Lozada in 2003 after bloody protests left more than 80 people dead. Since then the country has undergone a period of economic paralysis with more than 700 strikes, road blocks and marches. Amidst this turmoil SISAB has struggled to demonstrate to the wider public that it is working for sustainable, improved water and sewerage services.

SISAB has been trying to establish itself as a credible institution and has found support among international agencies such as the World Bank and European Union to develop its own capacity to be an effective regulator. On examination of its publicly stated aims and objectives there is no indication that SISAB is striving for increased access to water for the urban poor. There is however a clear statement that addressing service quality is one of the principal aims of SISAB.

SISAB must walk something of a tightrope in deciding how hard to push water utilities to improve service coverage and quality. It is recognised that many of the municipal and cooperative companies have very limited resources for investment in their water systems. SISAB does impose fines but is clearly aware that to exert its full authority on the smaller companies would lead them to collapse. Even in La Paz a substantial increase in tariffs is not thought to be socially acceptable.

This means that the situation of a complete lack of wastewater treatment in La Paz (presently discharging to rivers as pictured below), and only minimal capacity in El Alto will remain unchanged.



Wastewater discharge into rivers

AISA has made it clear that such an investment is impossible without a significant increase in tariffs.

According to SISAB, service coverage and quality has improved in La Paz-El Alto.

Representatives of

FEJUVE also accept that certain aspects of service quality had improved under the AISA concession.

However, because of political pressure, in January 2005 the Bolivian Government announced that it would cancel the concession contract. This move was intended to appease the Neighbourhood Committees (Juntas Vecinales) who threatened a city-wide protest over the water privatisation. The claim against the company was that it had not fulfilled the contract obligations to provide water and sewerage services to around '200,000 people' in El Alto. This claim is disputed by the utility who argue they have met their contract obligations, a view that appears to be supported by SISAB's records. The company claims that 'the number of people living outside the service area is closer to 30,000 'and that it is not required to extend service to them.' They were also in the process of obtaining donor funds to extend services to nearby unserved areas, beyond their understanding of the service boundary, as part of corporate social responsibility.

The effectiveness of the protest against the privatisation was strengthened through the Neighbourhood Committees' ability to link it with a series of ongoing national strikes in protest at the increase in prices of oil and the intended privatisation of gas.

The Government's initial announcement to cancel the concession, perhaps a sacrificial pawn, was rejected by the Committees who claimed that it too ambiguous and set no date for the company's departure.

The mounting pressure had already led to the resignation of SISAB's regulator, Johnny Cuéllar, in December 2004 who complained that the protests prevented SISAB carrying out its duty. An interim Regulator, Erico Navarro, was appointed by the Government but he too resigned in March 2005 because of pressure from the FEJUVE. A further interim Regulator, Franz Rojas, lasted just a few days in the post. The most recent Regulator, Alvaro Camacho Garnica, has been tasked with terminating the contract with Aguas del Illimani. While the Government wants to negotiate over a period of months to try and avoid a legal battle (and subsequent costs), the Neighbourhood Committees continue to press for the immediate removal of the company. A government decree has re-established the La Paz-El Alto municipal water company to resume the management of water services.

SISAB has to take some responsibility for this seemingly backward step for failing to convince people of the necessary costs of providing a high quality water and sewerage service.

# Chapter 10

## Case Study: **JORDAN**



### KEY FACTS

**Population**  
5.4 million

**Urban population**  
78.7%

**GDP per capita 2002**  
US\$ 4,130

**HDI rank**  
90/177

**Population living < \$2 / day**  
7.4%

**Exchange rate**  
\$1 = 0.709 Jordan Dinar

**Urban household water connections**  
89%

**Urban improved sanitation**  
94%

**Water Poverty Index**  
46.3

### **CONTRACT MONITORING PRIVATE PROVIDER: Amman**

Jordan has made remarkable progress towards achieving universal service for its urban population, engaging the private sector in a drive towards efficiency and customer-focused service improvements. Notwithstanding exceptionally high connection rates and a tariff policy which was designed to ensure affordability to all citizens, there remains considerable scope to address the link between water and poverty from an institutional perspective.

*'The majority of residents are supplied according to a rotational rationing programme, on average receiving water once or twice per week. LEMA's major contribution to improved service has been to regularise rationing days.'*

*Jordan Case Study Report*

### **Study city**

Greater Amman Municipality

**Population**  
2.1 million

**Regulator**  
Programme Management Unit  
(PMU)

**Service Provider**  
LEMA

(Lyonnaise des Eaux (Ondeo),  
Montgomery Watson, Arabtech  
Jardaneh)

# The Water Sector and Institutional Framework

Conditions of extreme water scarcity, a resource of vital importance for the Kingdom’s socio-economic development, have precipitated the increasing centralisation of the Jordanian water sector.

According to official statistics, Jordan’s population of 5.48 million is growing at an average annual rate of 2.8% (DOS 2004). This growing population is putting high pressure on the country’s limited and vulnerable water resources, but Jordanian authorities have been successful in providing a household water connection to almost 100% of the urban population. Available supplies, however, have steadily declined to a present annual per capita share of approximately 160m<sup>3</sup> (GTZ & MWI 2004). This places the Kingdom in the category of absolute water scarcity (defined as <500m<sup>3</sup>/capita/year, according to the water stress index (Abdalla, Naber, et al. 2004), and have rendered water shortages a permanent feature of domestic water supply.

Growing municipal, industrial and tourism water demand is in strong competition with the traditional stronghold of irrigated agriculture, creating a large deficit. According to latest projections, demand outstrips available supplies by 30%. Freshwater resources are fully committed, and the country is paying the price for the overexploitation of groundwater aquifers with deterioration in water quality (MWI 1997a). Once a number of outstanding augmentation projects have been completed, Jordan will be reliant on non-conventional measures to meet its rising demand. Desalination and wastewater reuse are becoming increasingly attractive options. Currently an estimated 51% of the population are connected to wastewater treatment systems (GTZ & MWI 2004).

The Water Authority of Jordan (WAJ) administers the municipal water supply and wastewater sector under the umbrella of the Ministry of Water and Irrigation (MWI). MWI holds the overall responsibility for the formulation of water strategies and policy, water resource planning, research and development, and coordination with donors. The Ministry of Health (MoH) is vested with the primary responsibility of drinking water quality monitoring to ensure compliance with public health requirements. Water resource protection against pollution is the stated role of the Ministry of Environment (MoE).

In the wake of private sector participation (PSP) in water sector projects, MWI created a Programme Management Unit (PMU) in 1997 to act on behalf of WAJ in facilitating the implementation of the Greater Amman Water Sector Improvement Program. In 1999, municipal water services in Greater Amman were delegated to a joint venture of Lyonnaise des Eaux (now Ondeo, France), Montgomery Watson (US) and Arabtech

## The Jordanian Regulator: Programme Management Unit (PMU):

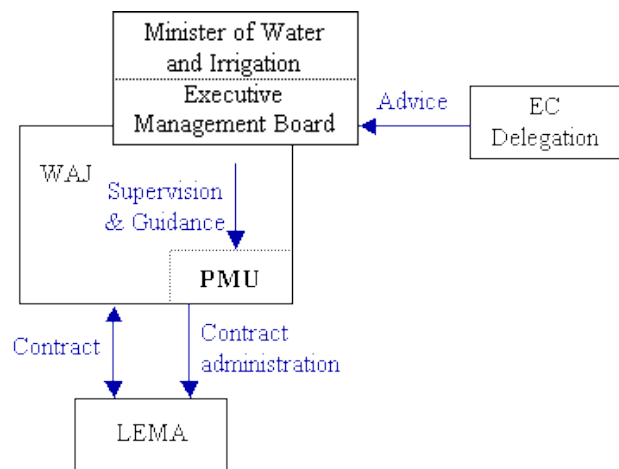
*“Our vision is to be leaders in the transformation of water and sanitation services throughout the Kingdom and to see in place more responsive customer-focused business-oriented utilities that are economically efficient and sustainable.”*

*“Our mission is to obtain efficiencies in investment in infrastructure and improve the management of water and sanitation services. We will achieve this through promoting changes to develop the institutions and resources available for the provision of water and sanitation services, and by creating appropriate mechanisms to ensure the interests of consumers are protected at all times.”*

Jardaneh (Jordan), known as LEMA, under a management contract, which is now set to expire by the end of 2006. Established as a semi-autonomous body, PMU was expected to assist in

- the administration of the Amman Management Contract;
- the restructuring programme of Amman’s water supply system;
- knowledge transfer, especially with regard to PSP in the water sector.

PMU operates under supervisory control of an Executive Management Board, which is headed by the Minister. The Board receives advice from the Delegation of the European Commission in Jordan. PMU is funded through a number grants and loans from US and European development partners. Government



Organisational structure of regulatory unit, PMU



# Service to the Poor and USO

LEMA has made significant progress towards turning Amman water supply and sewerage services into a profitable and customer-focused business. Profitability levels have increased such that current revenues comfortably cover both operational expenses and the management fee and generate modest profits for WAJ/MWI. Diminishing water availability, historic underinvestment and rapid, unnatural population growth following several waves of refugees and migrants have created a challenging operating environment with persistently high non-revenue water (NRW) levels (in the range of 45%).

Until the economic recession in the mid-1980s, Jordan had enjoyed low poverty levels. By 1993, however, the proportion of households living at or below the poverty line had risen to 21%, with 6.6% living under the abject poverty line. The phenomenon of urbanisation of poverty has also been observed: About two-thirds of the poor can be found in urban areas, where citizens benefit from the comparatively very high access to municipal water services. On the downside, 2001/2 figures indicate that 23.8% are lacking access to secure tenure (Ministry of Planning & UN 2004).

With regard to the location of poor households within the city boundaries, very little accurate information could be obtained. Amman's business and commercial centres as well as wealthy residential areas are located in the West, and from informants spanning the range of administration to local residents it is evident that poverty is generally understood to increase eastwards from the city centre. The photo top right serves as an example of the types of "poor areas" referred to by interviewees.

Although connection rates approach 100% within the service area, customers had to learn to live with the inconvenience of water rationing. As a consequence, customers are obliged to invest in storage facilities. These mostly take the form of storage tanks installed on rooftops (99% of low-income households have this facility), and can be backed up with ground and/or underground storage (used by 19 and 4% respectively). LEMA's responsibilities



Above: Low-income housing in Amman

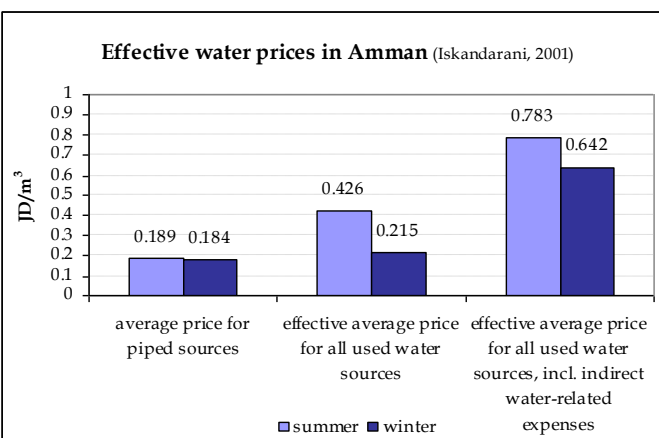
regarding quality and safety of supplies end at the water meter, and in spite of scientific evidence pointing to a potential public health risk arising from microbial contamination through prolonged storage (Evison and Sunna, 2001), household storage remains an entirely unregulated area.

Low tariffs, including a 20m<sup>3</sup>/quarter lifeline, were cited as the single pro-poor measure by key stakeholders. At present consumption levels the price of municipal water is unlikely to generate affordability concerns for even the poorest families. Water rationing largely determines per capita water consumption for low-income customers with a higher than average number of household members and limited storage facilities (0.64 m<sup>3</sup>/person as the low-income household survey revealed). The cost of storage and water treatment and the lack of financial means or *wasta* ("connections") to access alternative water sources in times of scarcity generate access inequalities. Research has demonstrated that effective water prices rise to a level comparable to that paid by the highest users under the progressive tariff structure (cf. fig. left, after Iskandarani, 2001), and surveying revealed that contrary to popular (and official?) belief sharing of water connections is widespread: Only 60% of low-income families report they have their own connection, with up to 5 households sharing in extreme cases - who experience an associated inflation of bills under the increasing block tariff.

The majority of residents in Greater Amman are supplied according to a rotational rationing programme, on average receiving water once or twice per week. LEMA's major contribution to improved service has been to regularise rationing days. Surveys show that customers value this reliability as it allows them to structure their time around the availability of water, but 33% of low-income families questioned wish for an increased duration of their weekly supply.

Water rationing is intimately linked with operational difficulties, as the periodic surging of the network causes a high rate of pipe failures and meter malfunctions. In November 2004, continuous supply was introduced to 26.5% of LEMA's customers, reportedly based on these technical considerations. It is worth noting that the current winter rationing programme did not receive direct

government approval, but was



Effective water prices, based on a 100 household survey in East Amman. Figures after Iskandarani, 2001

## USO and Legal Issues

instead met by silence. The decision was not made public.

Universal service in terms of full network coverage and equal treatment of customers irrespective of social or income status has been accomplished in Greater Amman, even prior to the introduction of PSP. In spite of these achievements, protection of the poor is presently not part of the regulatory process, leaving scope for the evolution of the USO to eliminate present inequalities.

The National Water Strategy setting out long-term strategic goals for the sector recognises the intense population pressure on the country’s vulnerable water resources. Nevertheless, the Government of Jordan expresses its commitment to “securing water services at affordable prices and acceptable standards” (MWI, 1997b) and extending services to unserved areas. The policy target consumption level is set at 100 litres per capita per day (lpcd), with reasonable domestic use awarded priority over competing water demand.

PMU as the quasi-regulatory agency seeks to safeguard consumer interests, but at a practical level is mostly concerned with technical issues surrounding the improvement of service provision. Service to the poor and the protection of vulnerable groups could not be ascertained as stated policy goals, and references to social objectives do not appear in PMU’s Charter of Operations (MWI and WAJ, 2001).

Social considerations, however, have traditionally played an important role in determining water tariffs.

A lifeline of 20m<sup>3</sup>/quarter affords an average-sized household in Amman (5.7 members) a modest allowance of 38.9 lpcd at a mere 3.472 JD/quarter (\$4.90/quarter). When the World Bank pushed for tariff reform, the Government of Jordan defended the heavy subsidies into the water sector, citing the low ability to pay of the Jordanian consumer (World Bank, 1997).

The table below shows that the cautious approach to cost recovery is more likely to hurt the poor by jeopardizing investment into much-needed network upgrades than by generating direct affordability concerns, though

		The “poorest of the poor”		The “coping poor”	
		lifeline	100 lpcd	lifeline	100 lpcd
Consumption level					
Monthly income		70 JD/month		300 JD/month	
% household income devoted to water bills	5.7 persons	1.65	8.08	0.39	1.88
	8 persons	1.65	17.94	0.39	4.19

Share of household income devoted to municipal water services for the “poorest of the poor” and “coping poor” as defined in the 2004 Jordan Human Development Report (Ministry of Planning et al. 2004).



Above: Household rooftop storage for filling by connection or tanker

targeted assistance would be required for the “poorest of the poor”.

The legal situation in Jordan currently leaves the choice of whether to connect to the network to the consumer (though interestingly not in the case of wastewater services), and some large consumers have reportedly made alternative arrangements.

By incorporating minimum storage requirements in the revised Building Code, the Government effectively en-

Below: Storage tank filling; note the high risk of contamination as dust and dead leaves are swept into the tank



## Alternative Service Providers

The persistent insufficiencies in water supplied via the municipal network cause households to augment their supplies from the open private market. This section examines this private water market in Amman, based on a survey of 100 low-income households and a one-day tanker driver survey in June/July 2005.

According to Iskandarani (2001), the proportion of households in Amman choosing to obtain additional water reaches 30%. Amongst the low-income segment, 49% of households surveyed indicated they have used private tankers in the past (three times per summer on average), and 40% have borrowed water from their neighbours during shortages. So-called 'water-stores' selling treated drinking water have also become increasingly popular in recent years; 18% of the sample use them as their main source of drinking water.

According to WAJ figures, 1267 private tankers were registered in Amman Governorate in 2004. 289 of these are owned by industries and hospitals (Darmame 2004). The remainder are owned and operated by individuals rather than companies. Tanker owners explained that water deliveries can be ordered over the phone (mobile) or at well-known tanker meeting points in the city (e.g. 6th Circle, Middle East Circle), where drivers park and wait for customers.

Government (i.e. WAJ) regulations set the selling price for water delivered via private tankers to 2 JD/m<sup>3</sup> (2.82 \$/m<sup>3</sup>) in summer and 1.75 JD/m<sup>3</sup> (2.47 \$/m<sup>3</sup>) in winter. Drivers obtain water from privately owned groundwater wells. Wells licensed for the sale of potable water incur a 250 fils/m<sup>3</sup> (0.35 \$/m<sup>3</sup>) extraction charge (tax). In addition, well owners charge drivers a fee in the range of 50-600 fils/m<sup>3</sup> (0.07-0.85 \$/m<sup>3</sup>), with seasonal variations reflecting water demand.

As far as consumer end prices are concerned, private tanker operations currently exist in a regulatory vacuum. Drivers are likely to exploit customers' ignorance of existing regulations and the lack of enforcement on the

part of WAJ/MWI. There are no defined procedures to monitor prices, and penalties for overcharging do not exist. Water is sold to customers at 2-3.5 JD/m<sup>3</sup> (2.82-4.94 \$/m<sup>3</sup>) (1.5 JD/m<sup>3</sup> (2.12 \$/m<sup>3</sup>) in winter), with low-income customers paying the lower price range, but drivers made it very clear that, especially in summer, water is a market commodity. Selling prices of up to 7.5 JD/m<sup>3</sup> (10.58 \$/m<sup>3</sup>) were noted during field observations in summer 2004.

Drivers quoted 2m<sup>3</sup> as the minimum for purchase, but indicated a preference for selling whole tanker loads. Tanker capacities range from 3 – 20m<sup>3</sup>, with 6m<sup>3</sup> being the most common. Average delivery sizes varied between East (2-3m<sup>3</sup>) and West Amman (6m<sup>3</sup>), with poorer customers indicating an average purchase of 3.1m<sup>3</sup> (within a range of 1 – 6m<sup>3</sup>). Some drivers insisted that the entire load must be paid in full, regardless of the delivery size. Only 27.1% of survey respondents using private tankers were able to purchase entire loads. The majority (64.6%) share a load with neighbours, whilst those negotiating a part load purchase were the exception (8.3%).

Without access to formal complaints procedures and stricter price control, poor customers, who are unlikely to afford extensive household storage or are unable to secure top-up supplies from LEMA's tanker fleet of 26, are left most vulnerable - none of the households surveyed had ever received water from a LEMA-operated tanker.

There are further concerns about private tanker operations undermining LEMA's profitability and consequently reducing the government's revenue. In the absence of a legal obligation to connect to the municipal water supply, large consumers use tankers to increase their reliability of supply and exploit the economic advantages of lower water charges and estimated, as opposed to measured, sewerage charges. There are also unconfirmed suspicions



Left: Water delivery in Abdoun, Amman



Right: Tanker refill at well

## Customer Involvement

Although stakeholder involvement has been included by the Government of Jordan in the Water Strategy as a principle of good practice, participation is at a premature stage. In the case of government agencies it has barely moved beyond information provision, whilst LEMA customers are being consulted to a previously unheard of extent on a wide range of service-related aspects.

In theory, concerned parties from government and the private sector are to be represented on Water Councils within the water department in each governorate. WAJ law (Article 23(2)) states that *“this is to allow citizens and local authorities to participate in deciding priorities regarding water and wastewater projects and plan for their implementation”*. Certainly in the Municipality of Greater Amman this is not the case as the project management for the Greater Amman Development Strategy stated that sole responsibility for water services rests with MWI, and the municipality’s role has been reduced to the provision of other infrastructure services, including rainwater drainage.

PMU have identified the need to promote its role in the wider community and are seeking to increase level of recognition of its activities by stepping up efforts in public relations.

Customer consultation by LEMA in the form of regular surveys, focus group discussions and exit polls at customer service centres, carried out by an independent market research company, are used for routine monitoring of customer expectations and satisfaction. However, as results have been met with disbelief by government officials, these reports largely remain internal. The company prides itself for having built up an image of strength and fairness: In contrast to the ‘normal’ Jordanian official who shuns the media, LEMA has devised a proactive and transparent approach. Communication strategies include newspaper announcements, radio broadcasts and television appearances by the Directors of LEMA’s various departments.

When questioned about poor households, there were no indications that these create any more of a problem or are treated in a different way to wealthier customers. To the contrary, *“we don’t have a problem with the poor, we have a problem with the rich”*. Members of staff unanimously indicate that no special efforts are made to address the needs of low-income households, although social responsibilities are part of the company’s business

philosophy.

In view of gathering customers’ views, LEMA pointed out positive experiences made with focus group discussions (FGDs), which were described as *“generally very useful tools”*. However, less is known about suitable approaches towards the poor (presently consultations are not disaggregated by *“social class”*): *“There is a general view that the lower-income people are more difficult to deal with because their educational standards do tend to be lower. Their knowledge and experience of the issues of water are less”*. In response to this, the Market Research Organisation employed to carry out LEMA’s customer consultations declared this a common misconception, explaining that the toughest respondents are wealthier customers, and educational level bears no relevance. Some adjustments need to be made for lower-income customers, especially in the case of women living in more remote areas, who prefer holding FGDs in their homes.

In what appears to be a low-trust society, people tend to rely on their own experiences rather than believing statements made by government agencies. Interviewees rarely mentioned civil society organisations as pressure groups. Instead, parliament and journalists were cited as ‘groups’ trying to exert pressure. No non-governmental organisations involved in urban poverty alleviation and water supply issues could be identified, but there is a 1,200-member Customer Protection Society of Jordan (CPS), which was also known to both WAJ/PMU and LEMA.

The CPS President described the society’s objectives as *“satisfying consumer basic needs [and] protecting consumers from monopolies and high prices from some products and services”*. Regarding the poor, the society concedes that prices are very low, but adequate quantities are not guaranteed.

Cultural attitudes and the local environment were cited as reasons why formal customer representation is unlikely to be established in the short or medium term future. Customer committees in the form currently used in the England & Wales WaterVoice model might be unsuitable. *“People are unlikely to trust a selected few to represent the general public’s opinion”*. It was noted that committees would be seen as a welcome opportunity for citizens – but most likely as an opportunity for gaining personal advantages. However, PMU did show an appreciation of the benefits of using participation to make different viewpoints, such as women’s rights for instance, heard. PMU affirmed that *“bits and pieces”* could be appropriate but with respect to the WaterVoice model, it would be its spirit rather than the structure that

### Comments on WaterVoice-style customer representation:

*“Who are the characters who could fill these positions here?” “People are unlikely to trust a selected few to represent the general public’s*

# Conclusions

The case study shows that high connection rates cannot be the single measure of the achievement of sustainable access to safe drinking water for the poor. Failure to deliver a continuous supply has been established as a root cause of persisting access inequalities, as the system favours wealthy households who can afford large storage facilities and top-up supplies from the private market.

The present situation highlights two major issues pertinent to the "Regulating for the Poor" research:

- The Universal Service Obligation needs to evolve once the primary target of household connections across the city has been achieved.
- Service improvements must be associated with capital investment requirements, a point strongly emphasized by the operator. An economic regulator is best suited to the task of ensuring the financial sustainability of services and driving continuous service improvements on behalf of all customers.

Key regulatory functions, such as tariff setting, appear out of reach of an independent regulator within the foreseeable future. However, an agency with a certain – perceived – level of independence could be formally introduced as a mediator between all stakeholders to promote openness and fairness in an environment in which political and economic uncertainties prevail.

Efforts should be strengthened to increase the legitimacy of regulation, no matter in which form it is envisaged in the future. PMU is advised to act proactively, increasing the information flow between stakeholders, including the public, and thus developing accountability which transcends the institutional hierarchy. There is evidence to suggest that customer consultations, disaggregated by social group, would give a more accurate picture of willingness and ability to pay for water services and service improvements, allowing to take appropriate decisions regarding tariff design and targeting interventions where needed. A survey of 100 households in 10 low-income areas of Amman has revealed discrepancies between official statistics (and opinion) and the situation faced by poor families.

It is further recommended to consider the risk of increasing the size of the unit in terms of staff numbers, and consequently the cost of regulation, beyond a point

where past inefficiencies are repeated.

In view of the long-term sustainability of services it is advisable to consider strong enforcement of regulations concerning the private market, including competition which may threaten to undermine the level of subsidy available. There may be a case for a reciprocal USO in which customers would be obliged to join a network in much the same way as providers are obliged to provide adequate services to all consumers. Water storage facilities may be a better target for financial assistance



Large-scale irrigation competes with growing municipal demands for Jordan's scarce water resources. The international dimension is said to justify continuing political involvement in the water sector.

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# Chapter 11

Case Study:

## ZAMBIA



LWSC Bill collection point



NWASCO, Lusaka

### REGULATING PUBLIC PROVIDER: Lusaka

Zambia is one of the most urbanised countries in sub-Saharan Africa. High rural-urban migration in the period from 1980 to the early 1990s culminated in about 40% of the population living in urban areas. Coupled with dwindling income levels, this led to a proliferation of informal, unplanned settlements where it is estimated 60% of the urban population live. This summary report provides the results of a case study carried out into the effects of economic regulation of a public water provider, complemented by alternative provision, with a particular focus on the needs of the poor. Four housing sites were selected for the study with varying levels of coverage receiving water from community-managed boreholes, network connections and often a combination of the two.

*'regulatory activities should be extended to independent alternative service providers, who currently serve over 50% of the peri-urban areas in Lusaka.'*

*Zambia Case Study Report*

### KEY FACTS

#### Population

10.7 million

#### Urban population

35.4%

#### GDP per capita 2002

US\$ 840

#### HDI rank

164/177

#### Population living < \$2 / day

87.4%

#### Exchange rate

\$1 = 4,650 kwacha

#### Urban household water connections

47%

#### Urban improved sanitation

68%

#### Water Poverty Index

50.4

### Study city

Lusaka

#### Population

1,120,000

#### Regulator

National Water Supply and Sanitation Council (NWASCO)

#### Service Provider

Lusaka Water and Sewerage Company (LWSC)

# The Water Sector and Institutional Framework

In 1993, the Government of Zambia instituted the water and sanitation sector reform, whose objective was to separate roles and functions of policy-making, service provision and regulation in order to provide cost effective, equitable and sustainable water supply and sanitation services. This reform process culminated in the establishment of the independent economic regulator, the National Water Supply and Sanitation Council (NWASCO), assisted by enactment of the Water Supply and Sanitation Act No. 28 of 1997. The NWASCO Board was appointed thereafter, and management structures put in place in time for the regulator to become operational in the year 2000. The Act clearly spelt out the roles, functions and institutional set up of the regulator, the obligations of local authorities, and the rights and powers of the service provider. However, the rights of the consumer were not mentioned in the Act.

Based on this legal framework the regulatory administration, rules and structures were established. The regulator has issued guidelines for the benefit of service providers on licensing, minimum standard levels, business planning, financial projections, investment planning, tariff development, corporate governance, report writing, services to the urban poor, human resource management strategy and water quality monitoring.

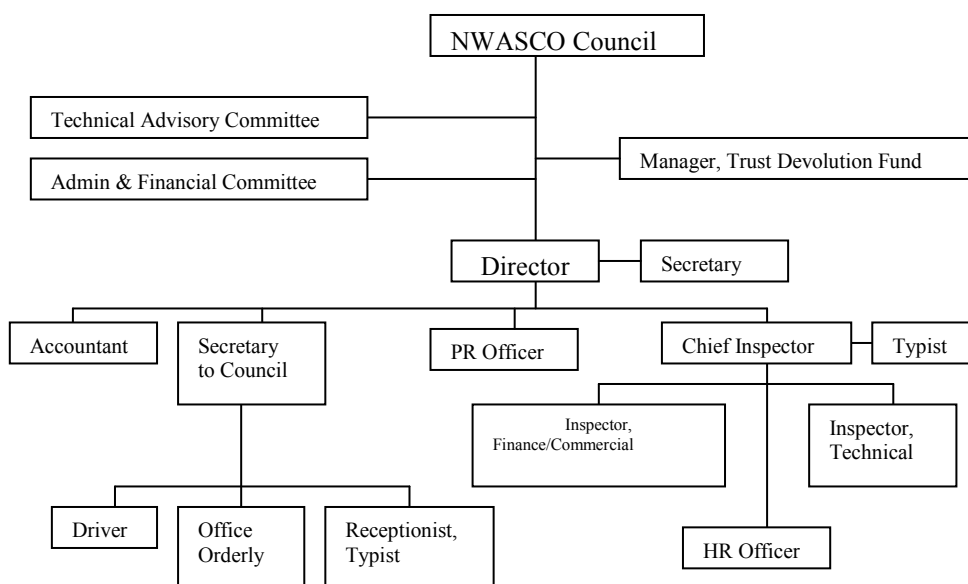
Service providers, public or private, are granted ten-year licenses by the regulator, following agreements on required minimum service levels to be achieved in a specified timeframe. By the end of 2003, twenty-one service providers had been granted ten-year licenses, while 26 providers had been given one-year long provisional licenses, pending the processing of baseline data. The service providers are required to provide data regularly on specified service indicators from which the regulator

compiles quarterly reports to the national Parliament, as well as annual Urban Water Supply and Sanitation Sector Reports. These reports are also used to benchmark performance across utilities. The regulator makes inspections to check the authenticity of the provided data. The service providers pay one-off application fees at the time of registration/renewal, and monthly license fees, at rates prescribed in the Act. The shortfall of the regulator's budget is filled by allocations made by the Parliament.

The Lusaka Water and Sewerage Company (LWSC), wholly owned by Lusaka City Council, is the formal service provider with an estimated service coverage of approximately 34%. It offers a range of service options, differentiated in tariff structure, which include individual house connections, yard connections, communal standpipes, bulk water for household tanks and household sewerage connections.

Following the development of a national policy and action plan for service delivery to peri-urban areas, the LWSC developed a new policy that culminated in a new Peri-Urban Unit with the objective of improving efficiency and effectiveness of services to peri-urban areas. It is a section wholly responsible for provision to an estimated 540,000 people in 78,000 households living in the peri-urban areas served by LWSC.

Regulation, however valuable, faces an additional challenge in regulating public providers. Recent reports suggest that LWSC hasn't produced a business plan for 4 or 5 years and the regulator will not approve tariff increases until LWSC improves its performance on unaccounted for water etc.



Organisational structure of regulator, NWASCO

# Service to the Poor and USO

As part of the sector reforms, the Peri-Urban Water and Sanitation Strategy document specified the overriding goal to achieve improvement of sustainable and effective service provision to all areas of Lusaka City Council. For this purpose, the peri-urban areas, which formed a large portion of the city, were identified by a number of criteria, namely those:

- whose infrastructure had been planned as low-cost or areas which were informal, but now upgraded after their legalisation;
- that do not have essential services;
- whose infrastructure fails to meet urban standards;
- where poverty is more prominent, though not inhabited exclusively by the poor.

Performance of various service providers is monitored against agreed service levels. Incentives for good performance include positive considerations during tariff reviews and allocation of investment funds from the special Devolution Trust Fund, an independently managed fund dedicated for enhancement of services to the urban poor. The government has established the Devolution Trust Fund for the purpose of redressing the imbalances in service levels in the peri-urban areas of the country. This fund was initially managed fully by the Regulator, but changes are now being made to make it an independent entity, with a high input from the Regulator.

Another incentive is the good corporate image portrayed by good benchmarks in the annual Urban Water Supply and Sanitation Sector Reports. Penalties for poor performance range from financial fees, suspension of a service provider, to cancellation of a license (see box).

Service provision to the urban poor in Zambia is highlighted at policy level, as evidenced by the formulation of the National Peri-Urban Water and Sanitation Strategy, and the appointment of senior officials, at deputy director level, to oversee its implementation. This policy was replicated at corporate level in LWSC, and a Peri-Urban Unit, with the right balance of human resources, was formed in the mid-1990s, and has ever since been instrumental in service provision in the peri-urban areas of Lusaka. However, this research has found that with increases in population of the peri-urban areas, the service provider has not matched the increased demand with the required volume of resources. As a result, the service levels in the peri-urban areas have been declining. This information was provided by key informants, and was corroborated through focus group discussions held with consumers in

## Regulator imposed penalties for poor performance

The operating license for Kafue District Council was suspended and Lusaka Water and Sewerage Company was appointed as statutory manager to provide services in the interim period. The suspension was lifted after service provision stabilised under Lusaka Water and Sewerage Company, and the officials of Kafue District Council committed themselves to improvement in service

the peri-urban areas.

## Tariffs

LWSC operates a rising block tariff structure. Estimates in 2003 suggest only 32% metering coverage in the city, hinting at a system that is difficult to operationalise. The situation is worse in the peri-urban areas where it is estimated that less than 1% of the connections have functional and well-serviced meters. It is therefore not surprising that LWSC, with an 'unaccounted-for-water' of 58% in 2003, was ranked by NWASCO as the second worst utility in Zambia in that respect. However, LWSC is not keen at improving the metering coverage for the following reasons

- High level of vandalism of meters and other fittings in peri-urban areas
- High administrative costs in terms of reading/maintaining meters, writing and distributing bills

Billing in peri-urban areas is therefore exclusively based on flat rate charges. Individual yard taps pay K1400.77 (US\$0.30) per month, while households drawing water from public tapstands pay K3000 (\$0.65) per month for an estimated 200 litres per day per household. For those households who are able to pay, the monthly water bill is usually paid as a lump sum in advance. Otherwise, poorer households are allowed to pay in weekly instalments of K750 (\$0.16).

It is estimated that LWSC provides services to about 14,000 individual household connections and 545 communal standpipes. The water supply is derived from the main piped distribution network and on-site boreholes. According to LWSC Peri-Urban Unit's estimate in June 2004, the service coverage in the peri-urban areas was about 25%. Based on the quoted number of connections, it is justifiable to conclude that



## USO and Legal Issues

revenue collection is rather on the low side. According to NWASCO, the overall bill collection efficiency for LWSC during 2002/03 was 61%.

### New connections

There are two major hindrances to extension of distribution mains by LWSC: (1) insufficient water supply in the system, and (2) inadequate funds for carrying out the extensions. However, LWSC continues to fund establishment of new public tapstands in the peri-urban areas. To reduce capital costs associated with extension of services, LWSC runs small diameter pipes to service public tapstands. Furthermore, unlike individual household yard tap connections which incur a deposit of K20,000 (\$4.30), public tapstands do not attract a deposit.

### Disconnections

The disconnection/reconnection procedures for public tapstands are subject to different regulations than those for a private household connection. For public tapstands, assistant community development officers of the LWSC Peri-Urban Unit are fully involved in the process. If it is noticed that there is inadequate revenue from a particular communal tap, the community development officers discuss the situation with the tap attendant, community leaders, and/or communities, if need be. If the trend is not reversed, the tap is disconnected. The assistant community development officers then hold

community sensitisation meetings to explain the importance of wholesome water, reasons for cost recovery, and the consequences of the disconnection. Once there is reassurance that payment will be made, the supply is reconnected with no payment of a reconnection fee.

### Overview

Lusaka Water and Sewerage Company is overstretched by the expansion of the peri-urban areas to the extent that service coverage at the time of the fieldwork was estimated to be 34% of the 1.12 million people resident in Lusaka. In order to bridge the service gap, international

### References for all legislation and Acts

- The National Water Policy (November 1994); The Water Supply and Sanitation Act, Act 28 of 1997
- The Water and Sanitation Act Statutory Instrument 63 of 2000: Licensing of Utilities and Service Providers
- The Water and Sanitation Act Statutory Instrument 92 of 2000: Transfer of Property
- The Water and Sanitation Act Statutory Instrument 65 of 2001: Devolution Trust Fund
- The Water and Sanitation Act Statutory Instrument 18 of 2003: Licensing of Utilities and Service Providers (Amendment)
- The Water and Sanitation Act Statutory Instrument 26 of 2003: Transfer of Property
- The Water and Sanitation Act Statutory Instrument 50 of 2004: Devolution Trust Fund (Amendment)
- Ministry of Local Government and Housing: Peri Urban Water Supply and Sanitation Strategy (undated)
- NWASCO: Guidelines on Required Minimum Service Level, 2000
- NWASCO: Handbook for Provision of Potable Water to Low-income Urban Areas, May 2002

### The Legal Framework

The urban water and sanitation sector is grounded in the following major legal instruments:

- ◆ Local Government Act No. 22 of 1991: Gives local authorities the responsibility and an obligation to provide water and sanitation services to all areas within the local authority. They are also empowered to make by-laws and set standards and guidelines for provision of services.
- ◆ The National Water Policy of November 1994: Oriented to providing adequate, safe and cost-effective water supply and sanitation services with due regard to environmental protection. The policy recognises peri-urban areas as legal settlements, 'to be treated in the same manner as urban areas with regard to provision of water supply and sanitation facilities' (The National Water Policy, 1994:21).
- ◆ Water Supply and Sanitation Act No. 28 of 1997: Specifies how local authorities may provide urban water and sanitation services, and establishes the National Water Supply and Sanitation Council (NWASCO) as the regulator for the urban water and sanitation sector. Local authorities may provide services through their departments, or through commercial utilities licensed and regulated by NWASCO.
- ◆ The Town and Country Planning Act, Cap.283: Regulates physical planning and development throughout the country. Local authorities are delegated to act as planning authorities, and to enforce planning control in their areas of jurisdiction.
- ◆ Housing (Statutory and Improvement Areas) Act: Provides for regularisation of the unplanned settlements that are not covered by the Town and Country Planning Act

Other legal documents of importance to water and sanitation provision to peri-urban areas are:

- ◆ the Water Act, Cap. 312, which controls the development and management of water resources in the country
- ◆ The Environmental Protection and Pollution Control Act of 1990, which deals with environmental protection and pollution control.
- ◆ Public Health Act, Cap. 295 and the National Health Services Act of 1995, which deal with the regulation and management of public health in the country.

# Alternative Service Providers

Even though LWSC does not have the capacity to serve the majority of the city’s residents there is hardly any vending of water in small containers, a common occurrence in low-income areas of cities in many low-income countries. The lack of small-scale service providers in Lusaka could be explained by a high number of agencies that have been involved in water service provision to peri-urban areas. The institutional framework for service provision has been complicated by the scope and number of agencies involved.

In order to bridge the service gap, these international NGOs such as CARE, Irish Aid and JICA have set up alternative water supply systems that use groundwater to meet the required demand. Many of these water systems are managed by local community based organisations, either independently or under a franchise of LWSC, the legally recognised service provider in the whole of Lusaka City area.

However, LWSC does not have the capacity to monitor and ensure that services provided by these alternative providers conform to the required minimum service levels as prescribed in the operator’s license. Neither has NWASCO carried out any inspections to ascertain the level of service received by residents being served by these alternative service providers, resulting in exclusion of those affected from the benefit of the regulatory regime.

## Alternative service provision in Lusaka, Zambia

1. Piped water supply provided by utility but managed in partnership with community and/or private concessionaire and LWSC
2. Borehole initially provided by international aid, and now managed in partnership with community and/or concessionaire
3. A combination of 1 and 2 with same management structure
4. Borehole initially provided by international aid and a completely separate Water Trust formed to manage the system.



Collecting water from a standpost

### Kanyama Water Trust by Care International

Over 60% of Lusaka’s population live in 33 peri-urban areas around the city. With a population of over 100,000 Kanyama is one of four peri-urban areas working under a Water Trust system. CARE International supplied all necessary infrastructure and empowered the community to manage all aspects of service delivery. As residents previously paid nothing to obtain their water, a major objective of the project was sustainability and cost recovery. Education and empowerment exercises followed and ultimately mobilised the community into constructing the system. The management team was appointed through a competitive and transparent process. Legal ownership was transferred to Lusaka City Council, though the community retains a symbolic ownership.

The water is delivered through 101 water vendors who man the metered water points at times throughout the day. K100 (\$0.02) is charged per three 20-litre containers. New household connections are a recent addition to the network and are already meeting operational costs. The project also installed water-borne toilets in central areas which were passed over to LCC for management. *(Interview with Cathyrn Mwanamwambwa, CARE International, July 2004)* See below for charges.

Charges	Domestic Supply	Commercial Supply
Connection fees	K100,000 (\$21.51)	K200,000 (\$43.01)
Security	K30,000 (\$6.45)	K70,000 (\$15.05)
Application form	K1,000 (\$0.22)	K1,000 (\$0.22)

## Customer Involvement



Focus group meeting to assist research

To provide a channel for the customer's voice into the regulatory process, a Water Watch group (WWG) has been formed in Lusaka, and has been operational since 2002. Two other WWGs have since been set up in other cities. Membership is voluntary, but openly competitive, and usually advertised in the national press. The members, who are selected on the basis that they are knowledgeable and motivated by the interest of working in the water sector, are required to serve for a two year term. The WWGs sensitise consumers on their rights and solicit for their complaints and views, acting as intermediaries with the service provider. The WWG is facilitated by the regulator to carry out sensitisation rallies in peri-urban areas.

Lusaka Water Watch Group (LWWG) has a temporary office at NWASCO headquarters where members meet every fortnight and liaise solely with the Public Relation Officer of NWASCO. In addition to basic training to help them carry out their functions, NWASCO provides LWWG members with stationary, transport and other logistical support. LWWG also meets with a representative of LWSC Customer Services to discuss the complaints they have received. A member of LWWG and the LWSC Director of Marketing and Customer Services who were interviewed alluded to the good working relations between the utility and the consumer representative. Member retention was also identified as another challenge facing the sustainability of the watch groups, given that members do not receive an allowance for their contribution. The level of 'limited expenses' was suggested as a reason that members would be more likely to 'move on' if another more beneficial opportunity were to arise. At the time of this study, three members had had to resign with only four remaining out of the seven volunteers. They had initially joined for a 2-

3 year term, being interested in serving the community.

Customer complaints are collected in LWSC collection boxes situated at LWSC headquarters and at general post offices around the city. An earlier review found that the use of complaint boxes has not generated as many complaints as expected. LWWG has now diversified into other channels of communication to include the use of letters, telephone contacts and consumer general meetings (usually organised during market days), which has resulted into an increased number of registered consumer complaints. The LWWG members use civic members in the informal settlements as points of contact into the community and its members. The LWWG members also meet with Resident Development Committee members (elected civic leaders of informal settlements) and/or market management committees prior to holding consumer meetings. Venues for consumer meetings are prioritised according to the number of complaints received from an area.

Water Watch members were investigating a sample of complaints, often oral complaints which they were hearing directly, not on appeal after the utility had initially investigated, as other similar groups prefer. As a result of this combined intervention, initial evaluation shows that consumers are increasingly receiving a better response to their complaints. However, a few challenges remain. The level of funding received from NWASCO is inadequate compared to what the work demands, to the extent that the consumer group was unknown to most people interviewed in the low-income settlements. An increase in funds would increase both their geographical coverage and the intensity of their mobilisation activities.

### Functions carried out by the Water Watch Groups

- ◆ Receive and validate unresolved complaints from consumers, and present them to the service provider
- ◆ Collect information on service levels, which information feeds into the performance measurement of the service provider
- ◆ Inform NWASCO on the effectiveness of the regulations
- ◆ Sensitise consumers on proper use of water, and their obligations towards the service provider
- ◆ Educate the consumers on the role and function of NWASCO

# Conclusions

The **major conclusions from this research** are that:

- ◇ The Executive, through the enactment of the Water Supply and Sanitation Act No 28 of 1997 and its associated statutory instruments provided a good legal framework for establishment of the regulatory regime.
- ◇ The establishment of an independent National Water Supply and Sanitation Council (NWASCO) Board and management structures paved way for creation of valid regulatory administration, rules and structures
- ◇ From the findings of this research, initial evaluation of the regulator with respect to some attributes of ‘good regulation’ may be summarised as follows:
  - The operating environment is conducive for the regulator to make independent decisions, without interference from the Executive—in the short time he has operated, he has managed to establish some considerable level of legitimacy among many stakeholders, managing to be fairly consistent and transparent in the period
  - Structures and systems have been put in place to make him accountable to the executive. However, there is room for accountability to the consumers to be improved
  - Good progress has been made in targeting of interventions
  - The creation of the Lusaka Water Watch Group, though still on a learning curve, has already paved way for the customer voice to feed into the regulatory process, and created benefits for the consumer through the reduction of the service provider’s response time to consumer complaints
- ◇ The focus group discussion methodology we tested could be refined and utilised by the Water Watch Groups to make cost effective rapid assessment of the consumer perceptions
- ◇ Service provision to the urban poor is a priority of the government of Zambia as evidenced by the policies and structures put in place. This position is replicated at the service provider level, although not with the same enthusiasm and priority of purpose.
- ◇ The setting up of the Devolution Trust Fund, a fund that is meant to redress the imbalances of service levels in the peri-urban area, was a step in the right direction. It is important that its management is carefully worked out to ensure that the subsidies are not high-jacked, but are well targeted to benefit the most vulnerable members of society.
- ◇ The service provider in Lusaka is grossly overstretched by the increasing population in the peri-urban areas, which service gap has been filled alternative service providers largely funded by international NGOs. However, the consumers serviced by these alternative service providers are excluded from the benefits of the regulatory regime.

The major **recommendations of this study** are that:

- ◇ The rights and obligations of the consumers, the major stakeholders in the water sector, and the major beneficiaries of the regulatory regime should be made explicit in the Water Act.
- ◇ Adequate information about the regulatory systems should be disseminated to the low-income consumers, to empower them and make them active partners in the regulation process. This information should be in a form that is simple, understandable and accessible to the target audience.
- ◇ Collaboration between Water Watch Groups and the elected community leaders should be explored, as a way of scaling up the activities of the Water Watch Groups in the peri-urban areas in a cost effective manner. Similarly, the Focus Group Discussion methodology tested in Lusaka could be refined further, and piloted by the Water Watch Groups as a tool for ‘finding out fast’ from consumers in peri-urban areas
- ◇ Guidelines for Required Minimum Service Levels should be precise about what is considered as ‘secure alternative resources’, with particular reference to water quality parameters.
- ◇ The guidelines should also harmonise the targets on minimum service levels between small and large towns, and make explicit what Universal Service Obligation is, in order to focus the service providers on planning towards achievement of USO.
- ◇ The regulator’s guidelines and annual reports should include targets on, and progress towards, enhancement of services to the peri-urban areas; and criteria for allocation of the Devolution Trust Fund should be informed by these statistics.
- ◇ Direct regulatory activities should be extended to independent alternative service providers, who currently serve over 50% of the peri-urban areas in Lusaka.



Waiting for water

# Chapter 12

## Case Study: **INDONESIA**

### KEY FACTS

**Population**

217 million

**Urban population**

44.5%

**GDP per capita 2002**

US\$ 3,230

**HDI rank**

111/177

**Population living < \$2 / day**

52.4%

**Exchange rate**

\$1 = 9,230 Rupiah

**Urban household water connections**

31%

**Urban improved sanitation**

71%

**Water Poverty Index**

64.9

**Study city**

Jakarta

**Population**

10,000,000

**Regulator**Jakarta Water Supply Regulatory  
Body (JWSRB)**Service Provider**

Palyja and TPJ



### REGULATING PRIVATE PROVIDERS: Jakarta

About half of Jakarta's residents do not have access to municipal water, supplied by private operators Playja and TPJ. This figure drops further when public standpipe customers are discounted. The overwhelming majority of the urban poor are relying on an unregulated private water market. Constrained to a minimal level of discretionary powers initially, the Jakarta Water Supply Regulatory Body made early progress towards establishing good relations with the public and sees the improvement of the situation of non-connected households as a priority. The regulator also shows an interest in exploring alternative options in view of the generally accepted fact that service extension to all residents of Jakarta under existing arrangements is unlikely to be achieved even by the end of the concession contracts in 2022.

### *“Regulating means not only approving”*

*Achmad Lanti, Chief Regulator, JWSRB*

## The Water Sector and Institutional Framework

In 1997, PAM Jaya, the provincial water provider with responsibility for the city's water supply, entered into contract with two companies to provide water to the city of Jakarta. With increasing demands on existing infrastructure from rampant urbanisation, the Government invited private funding to maintain, improve and expand the already stressed infrastructure, whilst making monetary gains in efficiency that only the private sector would offer.

The special capital region of Jakarta (DKI Jakarta) was divided into two parts with the initial intention of generating competition and creating yardstick information between the two. The eastern half was contracted to a joint venture between indigenous PT Kekarpolo Airindo and Thames Water International (UK) (now PT Thames Pam Jaya, or TPJ), and the western part to a joint venture between Indonesia's biggest conglomerate, the Salim Group, and Lyonnaise des Eaux-Dumez (France) (now PT Pam Lyonnaise Jaya, or Palyja).

Since Indonesian law lacked provision for private sector participation in basic services, the regulatory framework existed only in the regulation-by-contract approach. PAM Jaya was thus reduced to an asset holding authority with monitoring and coordination duties to oversee the agreements. Central government's role existed only in guidance on tariff-setting and water quality, and controls national water resources and policy setting.

Amid an economic crisis afflicting the region, the contracts were later renegotiated to address imbalances

in their division and address failing investor confidence. The Restated Cooperation Agreements (RCAs) initiated a new period whereby an independent regulator was established alongside PAM Jaya.

The Jakarta Water Supply Regulatory Body (JWSRB) commenced operations in November 2001 with limited powers. For a provisional period of 3 years, the JWSRB would:

- monitor and enforce compliance of contractual performance levels,
- develop mechanisms to resolve outstanding customer complaints,
- propose tariff adjustments to Government on behalf of the operators and
- arrange coordination between relevant government agencies to aid in implementation of the contract agreements.

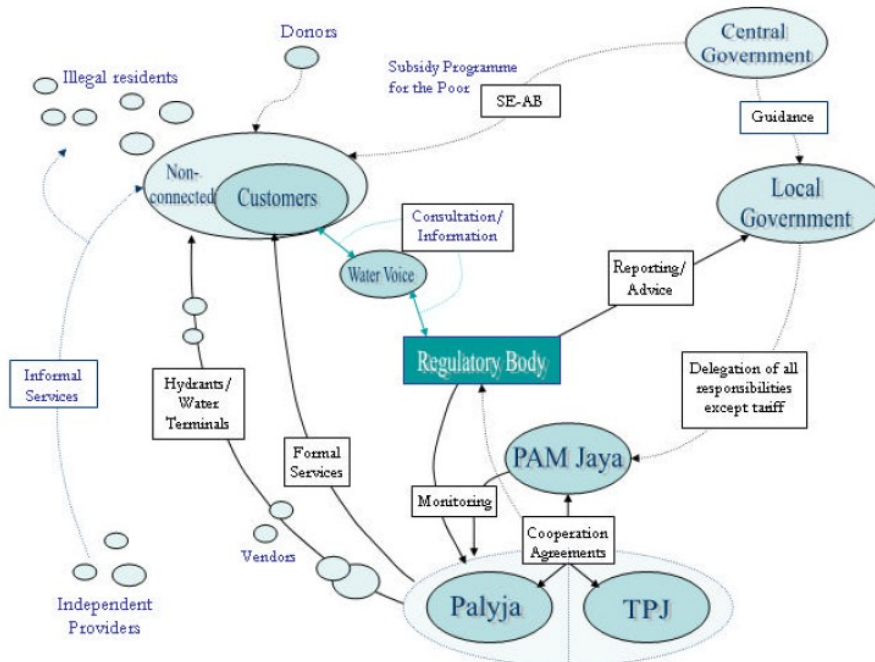
Currently the legal framework is undergoing reform, with local parliament set to empower the regulator by law with the ability to make jurisdictionally independent decisions to meet specified objectives in public health, economic sustainability, transparency, fairness, reliability, quality and affordability.

Legitimacy is to be derived from this legal mandate, which will render JWSRB directly accountable to the public, instead of being answerable to the Governor.

However, the 2005 Governor of DKI Jakarta Regulation No. 54 appears only to adjust the existing situation rather than transfer legitimacy.

Article 3 'Status, duties and authorities' describes how 'The Regulatory Body shall have the status as an independent and professional body that is free from the influences and power of other parties including the First Party and the Second Party in the Cooperation Agreement. In its capacity the Regulatory Body shall be able to issue decisions in term of regulation, mediation, and arbitration with regard to the drinking water management and service in the DKI Jakarta Province based on transparency.'

However, Article 5 states that 'In implementing its functions, the Regulatory Body shall .....submit the proposed water tariff complete with basis of calculation and supporting reasons for each category of customer including those subsidized consumers to the Governor for tariff determination.' The vital regulatory



Above: Organisational framework for provision and regulation of Jakarta water supply.

# Service to the Poor and USO

Tariff setting is carried out in accordance with Ministry of Home Affairs guidance dating from 1992. The guideline explains that the structure of the water tariff should adopt a progressive tariff system, with the water companies being able to finance their operations, making reasonable gains from their investments, and that cross subsidies should be implemented to achieve social objectives. A pro-poor pricing policy has ensued. The charging scheme allows for significant reductions for occupants of low-income housing with a simple flat rate charge for those obtaining water from public hydrants (see table, next page).

Service coverage ratios for Palyja and TPJ were 52.9% and 62% respectively (self-reported figures, July 2004), assuming 7.6 persons per connection and water supplied to public hydrants (from where water is sold on by vendors). At an assumed 380 persons per hydrant these contribute a large fraction of 'coverage'. Operator or central government-owned 'water terminals', represent the 'standpipe equivalent' in the remaining un-served areas, to which city water is supplied via water tankers.

There are various barriers which prevent presently un-served low-income households to access networked services and associated subsidies:

- Operators will not connect to illegal housing areas: without a licence; local regulation prohibits connection to the network.
- Connection fees remain elusively high, currently at about Rp 500,000; payment in instalment is only an option in the western part of Jakarta.
- Networks frequently do not reach low-income housing areas, particularly in the North.
- Some households prefer not to connect as municipal services are perceived as unreliable and of low



Above: privately-owned public bath

Left: water terminal funded by the SE-AB program

## Gender aspects

Women in a number of communities complained of bearing the brunt of water shortages when their husbands, as head of the household, were responsible for supplying water. One respondent said "In times of drought, only one or two wells are available to use. The community has to split themselves into two groups; one group can queue for water in a two-hour period in the morning and the other in the afternoon. Each family had to pay Rp 15,000 (\$1.63) per month to the well owner to cover electricity costs."

quality.

Central government is taking steps to alleviate water poverty amongst the urban poor via the "Energy Subsidy for the Poor" (SE-AB) assistance program. Following hard-hitting increases in the price of fuel, the scheme aims to assist water-supply projects in low-income areas (pictured bottom left). Project funding is supplied to construct small-scale water systems, make household connections or help finance an increase in water tankers.

Groundwater pumping schemes from deep wells have been initiated in the past, often with donor assistance. In North Jakarta, where shallow wells are saline, communities of up to 50-60 households participate in the scheme, paying a tariff to meet both operational (electrical) and maintenance costs.

Public baths are prevalent in the city, making up the shortfall for those without bathing facilities at their house (pictured left). Using groundwater from a private well or an existing network connection, their private operators complained of making little money.

The poorest rely on steadily deteriorating "traditional" water sources. Residents in illegal settlements, who could be more accurately described as illegal residents occupying government-owned land near landfills, underneath flyover bridges, along railway tracks or riverbanks, rely almost exclusively on alternative sources, such as shallow wells, except where city water is obtained illegally or through intermediaries (vendors).

Right: Informal housing in North Jakarta



## USO, Tariff and Legal Issues

A comprehensive Indonesian national policy framework for the water sector is under construction. The forthcoming Water Resources Act contains provisions to guarantee minimum access rights for every citizen, giving regard to the protection of economically weak sections of society. Institutional management guidelines for local water providers are expected to form part of a three-tier approach for urban, rural and fringe areas. Pro-poor development was cited as one of the basic principles of the forthcoming National Policy, but none of the laws contain any explicit statements regarding service provision to the poor.

The Governor’s Regulation 54 states that ‘The objective of establishing the Regulatory Body shall be able to ensure the provision and distribution of drinking water that meets quality standard, quantity, and continuity economy and affordability of the people.’ There is no other mention of pro-poor aspects.

The concession contracts are arguably pro-poor in that the companies are shielded from the commercial risks involved in serving low-income customers as revenues are divorced from water tariffs. Operators receive remuneration dependent on volume delivered, which is multiplied by a fixed ‘water charge’. At the same time there are no contractual requirements to serve the poor, and the financial imbalances that have arisen force the introduction of connection quota, which favour the better-off: PAM Jaya as the First Party to the concession

agreements is now pressuring the private operators to seek a “balanced composition of connections”, limiting water sold to the poor at below-cost prices and seeking an increase in new connections of high-income and commercial customers.

A steady increase in subsidies since the concessions were issued has culminated in consistently low tariffs for the low-income customers. This is in contrast to other wealthier income groups who have seen a marked increase in their water tariffs. The increase in tariffs to the poor were 16% at the beginning of the concessions, no increase in March 2001, and 17% increase consecutively in April and December 2003. This is in contrast to average water prices, which rose 18% in July 1998, 35% in March 2001, 40% in April 2003, and 30% in December 2003.

It was asserted that all registered residents of Jakarta are entitled to government assistance with basic services; the key to eligibility, however, lies in holding a valid municipality identity card. This automatically excludes immigrants, and Winayanti and Lang (2004) reported complications arising from the fact that the card cannot be obtained without a formal address. As an introductory letter from a registered neighbourhood association is required to apply for an ID card in the first place, this prevents illegal settlers from obtaining full resident status and denies them citizen rights.

Tariff Code	Description (see pictures below)	Tariff in Rp/m <sup>3</sup> (\$/m <sup>3</sup> )			No. of TPJ connections	No. of Palyja connections
		0-10m <sup>3</sup>	11-20m <sup>3</sup>	>20m <sup>3</sup>		
K1	Social and worship facilities, public hydrants	500 (0.05)	500 (0.05)	500 (0.05)	4183	3117
K2	Very simple housing, water tanks/kiosks	500 (0.05)	500 (0.05)	900 (0.10)	38693	51949
K3A	Very basic housing	2250 (0.24)	3000 (0.33)	3500 (0.38)	222690	106286
K3B	Medium housing and small business	3250 (0.35)	4000 (0.43)	5000 (0.54)	66103	75971
K4A	Luxury housing, medium business, government offices etc	4750 (0.51)	5750 (0.62)	6750 (0.73)	26455	74042
K4B	Commercial and industry	9100 (0.99)	9100 (0.99)	9100 (0.99)	9813	25033
K5	Special (port/shipping)	11000 (1.19)	11000 (1.19)	11000 (1.19)	2	0



Above: Sample housing associated with customer categories and tariff codes K1—K4B (from left)



# Alternative Service Providers

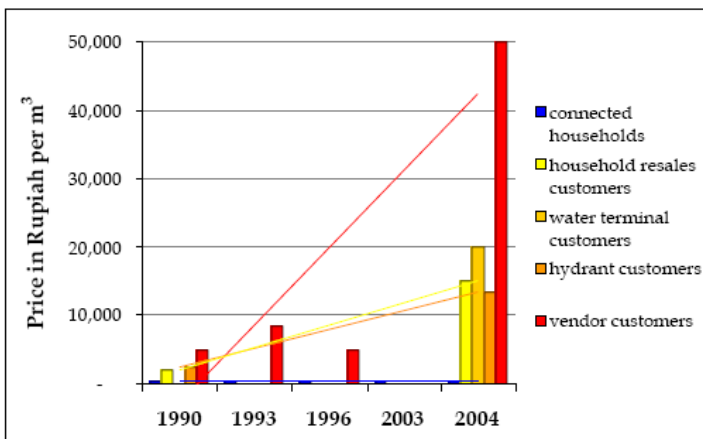
Water vending remains a thriving business in Jakarta. With a lack of available alternatives, whether because of the large distance to a water connection or the poor quality of groundwater, the water vendor has been allowed to flourish.



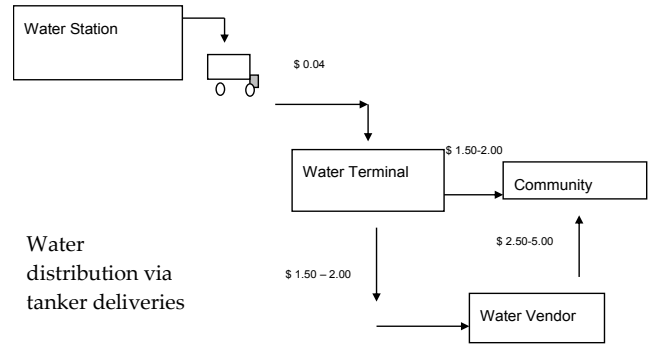
Above: "Tangki Air Bersih" – the trucks only supply "clean" water, not drinking water

The majority of mains-connected public hydrants are managed by private individuals, who are often reselling the subsidised water at market prices via a number of water carters. Where distance to the network is great, private water-tankers deliver municipal water to a number of terminals, where it is distributed in the same way.

These vendors operate without regulatory control and with no significant enforcement of price and quality controls. Price developments of formal and informal water supply options over the past 15 years have been traced in the diagram below. The figures reveal steeply

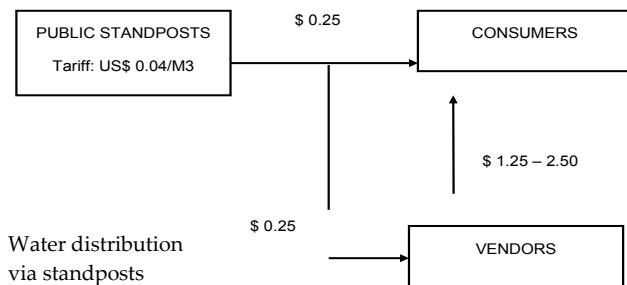


Above: Price developments of water supply typically accessed by low-income households. Trend lines were fitted to demonstrate steep increases in prices of "poor people's solutions" (yellow/orange/red) compared with household connections (blue).



rising water costs from sources available for the poor.

Various measures have been introduced at different times in an attempt to curb excessive vendor prices. In 1990, to initiate self-regulation through increased competition, the resale of city water was legalised so long as it was distributed through an approved water meter. Early evaluations of this deregulation measure indicated positive and significant effects both in terms of prices paid and quantities consumed by low-income households (Crane 1994) – but the scheme was soon abandoned. It is speculated that this was due to pressure from standpipe operators who saw on-selling



Water distribution via standposts

Note: The price is in US \$ per m3



Above: Vendor having just delivered water to the doorstep in Kamal Muara, NW Jakarta

# Customer Involvement

Chief Regulator Achmad Lanti initiated a mechanism for customer involvement only three months after coming into office. Customer involvement, he argues, is essential to comply with the customer protection mandate given to him in the Governor’s decree. The Customer and Community Communication Forum (CCCF) was established as a formal communication platform, consisting of water professionals from Government, the Operators and the research community, as well as NGOs and community representatives.

The CCCF was later strengthened with the addition of water customer committees (WCCs). Set up to act as independent NGOs in the five municipalities of the city, the WCCs carry out public information campaigns via a quarterly newsletter and a website. Approximately 14% of the JWSRB budget (about Rp 200 million (\$22,000)) is allocated to the WCCs, reflecting the high priority given to customer involvement.

Meeting every quarter, the CCCF handles macro-scale issues on behalf of customers, tackling demands from communities for network expansion or taking steps to help educate customers and providers alike.

The WCCs liaise with communities, companies and local government on customer complaints, lobbying for service improvements on behalf of underserved communities, but also assisting the operators in reducing illegal connections.

The WCC membership is open to all customers, but presently members are mostly politicians. Despite attracting some criticism, this benefits the WCC of being

## Water Voice System

To aid in collecting information regarding perceived performance levels of the operator, a system was devised utilising key stakeholders. Monthly meetings are held by the five municipal WCCs to address levels of service using key performance indicators: (1) continuity of supply, (2) quality of water at house taps, (3) water pressure at house taps, (4) response to complaints, (5) meter reading, and (6) billing (such as accuracy, prompt, and easy access to payment points).

able to take advantage of existing links within the administrative system.

The current arrangements, however, do not effectively target the poor. Most of those surveyed had never heard about the WCC, hardly surprising when the urban poor are the wrong target audience for a JWSRB newsletter and website. If, as the survey showed, in times of water scarcity women are suffering most, their representation is not being effectively made when only 2 of 52 WCC members are women.



Diagram above: Jakarta’s five municipalities and the number of WCC members in each district.



Above: liaising with communities



Left: Customer excursion to water reservoir Jatiluhur, as part of the ongoing customer education and involvement strategy

# Conclusions

Strong leadership and political commitment are crucial to achieving the universal service objective in DKI Jakarta. At present, water suppliers are caught in the middle of contradictory policies from government, requiring cost recovery on the one hand, but heavy subsidies to the poor on the other. An overhaul of the policy framework, clearly stating objectives for operators with respect to their social and economic functions and responsibilities, is long overdue, but unlikely to be achieved under the current water sector reform.

Loopholes created by framing legislation in general terms without detailed objectives, the means by which they are to be achieved and penalties for failing to achieve them, benefit, if anyone at all, only politicians seeking to retain control over sensitive aspects of infrastructure services.

The regulatory framework needs a clear separation of policy-making, implementation/operator and regulatory functions and an allocation of an appropriate balance of powers and responsibilities to each actor. Further integration of regulatory controls regarding raw water provision for formal operators as well as price and quality of alternative sources and suppliers would be desirable. The Jakarta Water Supply Regulatory Board would benefit from establishing clear regulatory procedures, whilst PAM Jaya's involvement (and hence scope for interference) should be minimised.

The private operators Palyja and TPJ could be directed by a mission or strategy prepared by DKI Jakarta, detailing the envisaged developments in the urban water sector, and particularly with respect to service provision for the poor.

Priorities need to be re-examined in the light of the aspirations of customers and those presently un-served: Is it reasonable to require drinking water quality by year 10 of the contract, if similar investments could drive network expansion into new areas, retaining the 'clean' water standards Jakarta residents have become accustomed to?

Research findings have shown how creative and innovative even the poorest households can be in overcoming water quality problems, using simple and effective techniques, perhaps making a case for differentiating service standards?

The link between investment requirements and convenient, but affordable services must be made - it was suggested that Indonesian water suppliers should be able to access direct government subsidies intended for the poor as central government assistance experiences targeting problems and fails to reach the neediest recipients.

The complex and complicated tariff policy of cross-subsidies is failing to fulfil its intended social objectives. The problem is mainly attributed to the very large price differentiation between customer groups, encouraging commercial users to find cheaper alternatives with negative impacts on the environment (groundwater over-abstraction) and operators' revenue bases. There are also ingenious ways for middle-class customers to find their way into lower tariff categories. Customers with shared connections are penalised by the progressive tariff structure.

High connection fees and illegal resident status are preventing the poor from accessing formal water supplies.

Community-managed systems in areas beyond the reach of the network prove the workability of alternative solutions. JWSRB is exploring ways of encouraging such systems in order to shut out "water mafias", but again political support is needed.



Low-income housing, close to the sea, Jakarta

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- Crane, R. (1994) Water markets, market reform and the urban poor. Results from Jakarta, Indonesia. *World Development* 22, 71-83
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# Chapter 13

Case Study:

## INDIA



### KEY FACTS

#### Population

1,049.5 million

#### Urban population

28.1%

#### GDP per capita 2002

US\$ 2,670

#### HDI rank

127/177

#### Population living < \$2 / day

79.9%

#### Exchange rate

\$1 = 43.8 Indian Rupees

#### Urban household water connections

51%

#### Urban improved sanitation

58%

#### Water Poverty Index

53.2

### Study city

Jaipur, Rajasthan

#### Population

2.75 million

#### Regulator

none

#### Service Provider

Public Health Engineering  
Department & Jaipur Municipal  
Corporation

### PRE-REGULATION OF PUBLIC PROVIDER: Jaipur

The Government of Rajasthan has adopted a State Water Policy, which outlines a framework for sustainable development and efficient management of the water resources of the state. With respect to drinking water it requires: the gradual increase of water rates to support the urban and rural water supply piped schemes, increase of the budget allocation for upgrading the domestic water supply, ensuring water quality and encouraging private sector participation. State ownership of all the water resources within the State and introduction of abstraction licensing are also foreseen in the State Water Policy as well as introduction of necessary legislation for catering for the weaker sections of the population.

Even though the State Water Policy articulates the need for reforms and states the policy objectives, a major concern is that these have not been translated into action.

*This study therefore represents a 'pre-regulation' study and is understood to be fairly representative of unregulated public providers. It is compared with the electricity sector which has recently started the process of regulation and which also demonstrates the extent of the challenge.*

Case study author: Marion Gessler with Urmila Brighu

Photo credits: Gessler & Franceys

# The Water Sector and Institutional Framework

## Urban water management in Rajasthan

Under the Constitution of India responsibility for water is vested with the States. According to the 74<sup>th</sup> Constitutional Amendment (Municipal Act) the particular responsibility of urban water supply and sewerage should be transferred to urban local bodies. However, in Rajasthan the Public Health and Engineering Department (PHED), a department of the State government, continues to hold full responsibility for providing water supply and sanitation services.

The role of policy planning and formulation rests with the Government of Rajasthan. The body responsible for urban water supply in the Central Government, the Ministry of Urban Development and Poverty Alleviation, plays an advisory role by providing guidelines for developing policies and programs to facilitate the efforts of the state and municipal governments.

PHED is overseen by the Rajasthan Water Supply and Sewerage Management Board (RWSSMB), which controls, supervises and guides PHED on behalf of the Government of Rajasthan in policy, financial and technical issues. RWSSMB is not an independent body; it is an extended arm of the government.

PHED has the full responsibility for the water sector, for planning, implementation (design and construction), service provision and O&M of water supply projects in Rajasthan. However, PHED, being a department of the state government does not have autonomy and self-management authority and does not have a legislative framework for setting water tariffs.



Above: Borewell maintenance

In contrast to water supply, operation and maintenance of the sewerage systems are done by the local bodies such as Jaipur Municipal Corporation (JMC), but sewerage charges are levied and collected by the PHED and given to the local bodies in order to operate and maintain these systems. Responsibilities in sewerage and sewage treatment for Jaipur City are as follows:

PHED designs some sewerage systems and all sewage treatment installations, owns the assets created for the existing sewage treatment work and is responsible for O&M. PHED has to ensure the proper design and execution of all sewerage works carried out by other agencies.

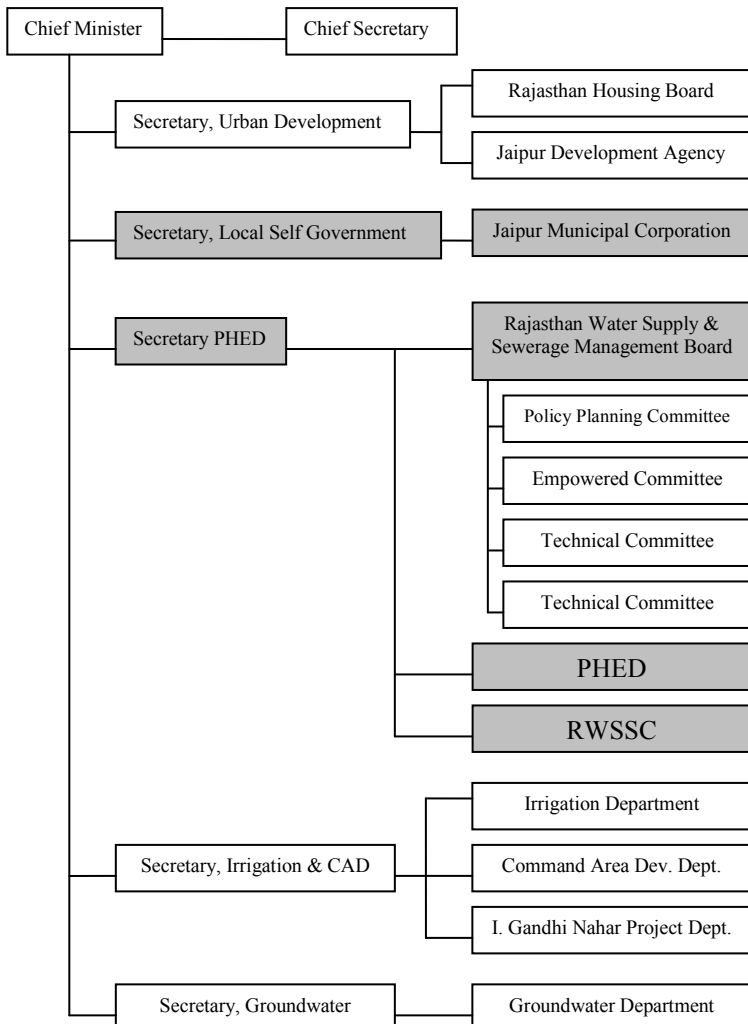
JMC designs and constructs sewerage systems falling within their area and carries out all the sewerage O&M in Jaipur City.

The Jaipur Development Authority (JDA) designs and constructs the sewerage systems for new areas of Jaipur City falling under JDA area.

The Rajasthan Housing Board (RHB) designs and constructs sewerage systems for new housing estates.

JDA and RHB also execute water supply projects in new housing areas. After completion the assets are turned over to PHED for operation and maintenance works.

Overall, it is clear how many agencies are involved in planning, developing and operating the water supply and sanitation system in Jaipur. This multiplicity and overlap of responsibilities is a major bottleneck and partly responsible for ineffective and



# Economic Regulation

## Tariff setting and Financing

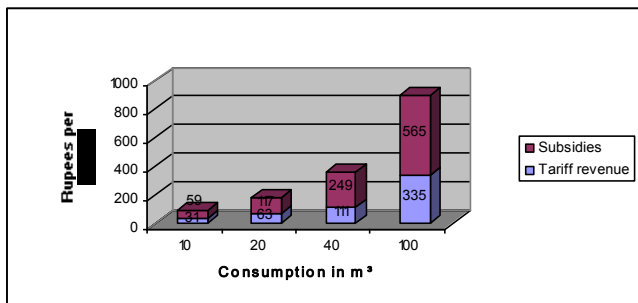
Tariffs are set by PHED. The initial proposal is put forward by the department to the RWSSMB. Upon approval by the Board, the tariff proposal is put forward for approval by the cabinet, the final decision-making authority for tariff setting. This means 'tariff decisions are not based on financial data analysis and reasonable planning, but purely on politicians tactics making popular decisions to win the next elections'. Consequently tariffs and revenues from water charges are too low and PHED is a bottomless pit for government's subsidies, a clear driver for a move towards more independent economic regulation.

Local governments and state governments provide funds for investment in new schemes and O&M through their annual budget. Monetary help in the form of loans is provided by institutions like World Bank (WB), Asian Development Bank and JBIC. The latter ones include conditions for reforming the water sector in Rajasthan. Any change other than technical upgrading yet has still to be proven.

The Rajasthan Water Supply and Sewerage Corporation (RWSSC) is involved in raising funds from financial institutions which are then handed over to PHED divisions. Originally RWSSC was formed in line with an agreement with WB while negotiating for a water supply and sewerage project. RWSSC was envisaged having wide-ranging powers and receiving assets, liabilities, obligation for service provision and staff from PHED. None of this has happened yet.

## Operational performance

The National Water Policy 2002 (GoI 2002a) has accorded topmost water allocation priority to drinking water. The Tenth Five Year Plan (2002-2007) of the



Government of India envisages 100% coverage for drinking water supply and 75% for sewerage and sanitation in Class I cities (>1 million). Jaipur City is far from meeting these goals.

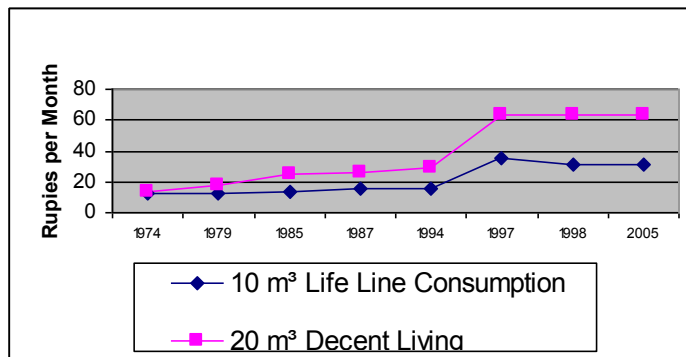
At present 84% of the population of Jaipur is supplied by the PHED - 76% through individual connections, 5%

The supply driven 'norms' adopted for urban domestic water supply are: 40 lpcd where only spot supply are available, 70 lpcd where piped water supply is available but no sewerage system, 125 lpcd where piped water supply and sewerage system are both available, 150 lpcd for metro cities.

through hand pumps and 3% through public taps.. The total number of PHED Jaipur employees is around 3000, which gives an average of about 11.5 employees per 1000 connections (SAPI 2004).

2005 data provided by PHED Jaipur City states a consumption rate of 147 lpcd. This number, calculated by dividing water production by population connected, includes 37% losses. The adjusted value would be 92 lpcd.

Statistics of coverage and figures of quantity of water supplied tend to hide several realities regarding both the operations of the system and the experience of consumers. Alternative statistics suggest upwards of 20,000 boreholes in the city, the majority of them private



and the majority delivering water quality well outside the prescribed limits.

There can be wide variations within the city in quantity and quality of water supplied. The coverage figures do not indicate the actual functioning of the system. Breakdowns may deprive the consumers of water for several days. Coverage figures also do not reveal the regularity or duration of supply, the year-round performance, like water availability in summer and the number of hours of supply in the case of household connections, and for public stand-posts, the distance, time taken to collect water, number of users of each stand-post, etc. Most importantly, the coverage figures say nothing about the equity of distribution. It is likely that poorer areas are provided with less water whereas the influential rich will get a more satisfactory service. The poor households which are not connected end up paying high costs in terms of collection time and

# Tariffs and Service Standards

increasingly health-related costs from drinking contaminated water. Wealthier households have better possibilities to cope with this situation. Installing roof tanks and (additional) supply from privately owned boreholes improve their situation.

### Service standards

There are no service standard set with respect to duration or quantity of water supply. A set of guidelines exists with specific time limits for operations such as redress of consumer complaints and application procedures for new connection. But even these procedures are not subject to any form of monitoring and there is no way to enforce compliance.

Estimates speak about at the best 60% (in terms of area) of Jaipur being connected to the sewerage system. Not all the sewage is treated before discharged into natural watercourses. 20% of the wastewater generated in 2000 was reportedly not collected at all (SAFEGE 2000).

The residential zones where there is no sewerage have on-site sanitation installations. Many dwellings, including almost half of the slums, have no sanitary facilities and so open-air excretion is common.

Sewerage tariffs are 20% of the water tariff, where a household is connected to the PHED network. Otherwise the rate is Rs. 1365 (US\$ 31.16) as a one-off payment or in monthly rates.

### Financial performance

The price for urban water supply is constant throughout Rajasthan. The current tariff has not been revised since 1998. Generally tariffs are very low. Over a period of 30 years the tariff for minimum consumption did increase by 300% but from a very low base.

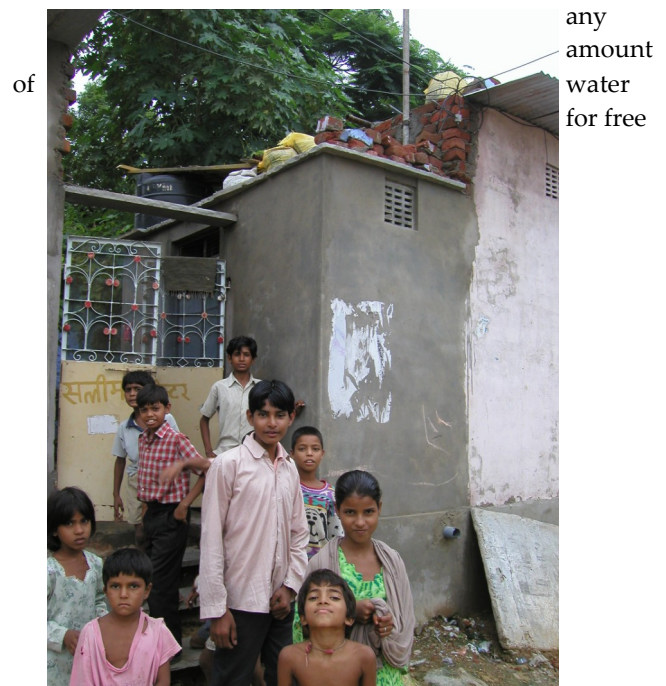
The increasing block tariff is structured into three consumption blocks. 31% of the domestic consumers fall within the lowest block, the one that should be subsidised. Lowering the first block to the level of lifeline consumption (6m<sup>3</sup>) would help to target subsidies more effectively. Industrial tariffs are substantially higher than domestic rates, but with only a marginal share of the revenue collected from industrial consumers, cross subsidisation becomes irrelevant. Charging the industry more than the actual costs tends to drive them to self-provision. The system performance has to improve significantly before to "re-" attract industrial customers and households which are now privately served.

Only 3% of consumers pay flat rate

tariffs. Since 1990 all new connections have been metered, such that 92 % of customers now have metered supply, but around 50% of the meters do not work.

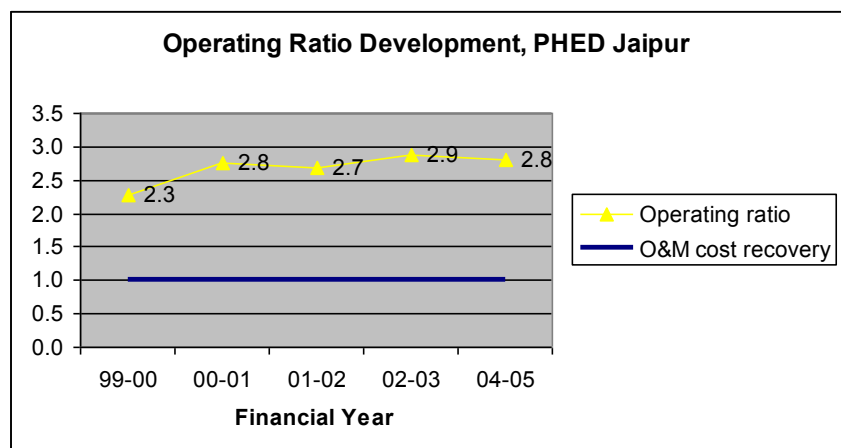
The connection charge of Rs. 200 (\$ 4.57) does not seem to be a big hurdle. For selected economically weaker sections of the population in Jaipur, e.g. people living below the poverty line (BPL), this charge could be partially paid by the government in form of a direct subsidy. The process of identifying BPL households is very slow; the women in focus groups conducted for this study reported: " They have been here, we filled in some forms and we have never seen them again".

The very low tariffs do not send the right signal, i.e. that water is scarce and must be treated as a valuable commodity. As there is no existing licensing practice to regulate abstraction, whoever can afford to can abstract



New household latrine in low-income housing area., Jaipur

any amount of water for free



# Service to the Poor and USO

Without a recent data produced by the Rajasthan Urban Integrated Development Programme (RUIDP) in 2000 shows that illegal unplanned poor settlements - so called Katchi Basties - have settled on a large scale along the foot of the hills towards the North and the East, few are spread in other parts of town. Any additional information other than location of the slums was not available. Visiting these areas, the author found out that there is no "standard" slum area and that different categories concerning legal status, water, sanitation and infrastructure services can be defined. Selecting only one area was found not

## Customer Involvement

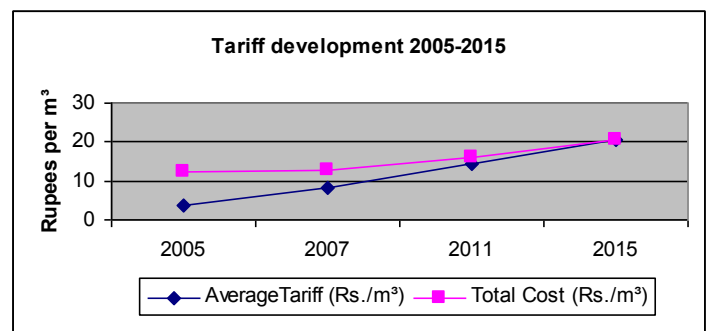
Within the existing framework, customers of PHED Jaipur are not at all involved in any process of price-setting. There is no mechanism for any planned consultation with consumers and no formal hearing procedure yet in place. Customers cannot express their needs and priorities to the decision making parties other than through political votes. Non-response to complaints is common procedure.

Name of <i>Katchi Bastie</i>	Legal status	Water supply system	Sanitation	Roads
Balmiki Nagar	regularized	public	latrines, open drainage	good
Kunda Bastie	not regularized	public	no latrines, no drainage	none
Nirmar Nagar	not regularized	mainly private plus public	latrines, no drainage	none
Lunka Puri Bastie	not regularized	mainly public plus private	latrines, no drainage	none

to be sufficient to represent the whole spectrum of water services. To cover the variety, four different slums, introduced in the table below, were chosen to represent poor areas in Jaipur.

Clearly the situation in the regularized slum is best. A good, reputedly 24-hour standpost water supply (taken from a borehole to overhead tank main), proper roads and a functioning drainage system improve living conditions. Piped water supply is generally unreliable and insufficient; an additional source always is needed. Public standpost supply is stated as minimum requirement. People are used to get water for free and would prefer to keep it like that. For improved water services the stated willingness to pay ranges around the affordable 3% of the household incomes. The percentage of income spent on water services is generally below 1%. This figure shows also that low income groups pay twice as much in relative terms as high income groups, a clear sign that subsidies are not targeted well.

Clear signs of increasing water scarcity and decreasing quality will make the situation, so far only caused by bad management, even worse. Connection procedures seem to be mostly unclear. The technical reasons stated by PHED for not connecting the areas are not plausible. The approach for developing the supply network could perhaps be better described as



Tariff development required under Bisalpur scheme

chaos management or 'fire fighting'.

In contrast, the electricity services are satisfactory in all survey areas. Connection rates are high, billing procedures clear and efficient. The Kunda Bastie area was recently connected to the grid, which is a clear sign for improvements in the sector. The reduction of illegal connections is a sign of good management, the same as price increases which have to be paid for better services. Faced with the choice between water and electricity at the same costs (Rs. 200 (\$ 4.57)), people in Kunda Basti would chose electricity, believing they would still be able to organise water somehow without paying. The reported prices from private water suppliers were much higher than the existing PHED tariff.



# Electricity Regulation, Rajasthan

The power sector in Rajasthan has also been facing problems. The power system was characterised by frequent service interruptions, high system losses, unexpected voltage and frequency swings, restrictions on demand, poor cost recovery and heavy commercial losses. Although power generation and sales grew over the years, demand always exceeded supply.

With the Policy Reform Statement in May 1999 the Government of Rajasthan initiated a reform process. The reform programme included the following policy measures:

- Tariff reforms and rationalisation in November 1999
- Restructuring of Rajasthan State Electricity Board (RSEB) in July 2000 into five companies - one Generation, one Transmission and three Distribution Companies (Discoms) - Jaipur, Jodhpur and Ajmer
- Setting up of Rajasthan Electricity Regulatory Commission (RERC) in January 2000

The broader objective of this unbundling was to improve operational efficiencies, maintain judicious balance among interests of various stakeholders, ensuring commercial viability of the sector and improving the service delivery in terms of quality and quantity.

In 2003, the central government issued the Electricity Act 2003, which makes it mandatory for every state to have a regulatory body for electricity. The Act contains also provisions for safeguarding the interests of consumers. It demands “Uninterrupted and reliable supply of electricity for 24 hours a day and good quality electricity at reasonable rates”, and forced the RERC to take several measures for redress of consumer grievances. RERC set up several forums: complaint centres, district level forums, corporate level forums and finally an Ombudsman to settle disputes which could not be resolved in the earlier stages.

The required separation of ownership, management and regulation has taken place. The government is still influencing the Discoms, but all government orders have to comply with RERC regulations. At the first glance the framework indicates that restructuring has taken place, but the internal structure of the Discoms has not changed at all. It is still a purely administrative organisation

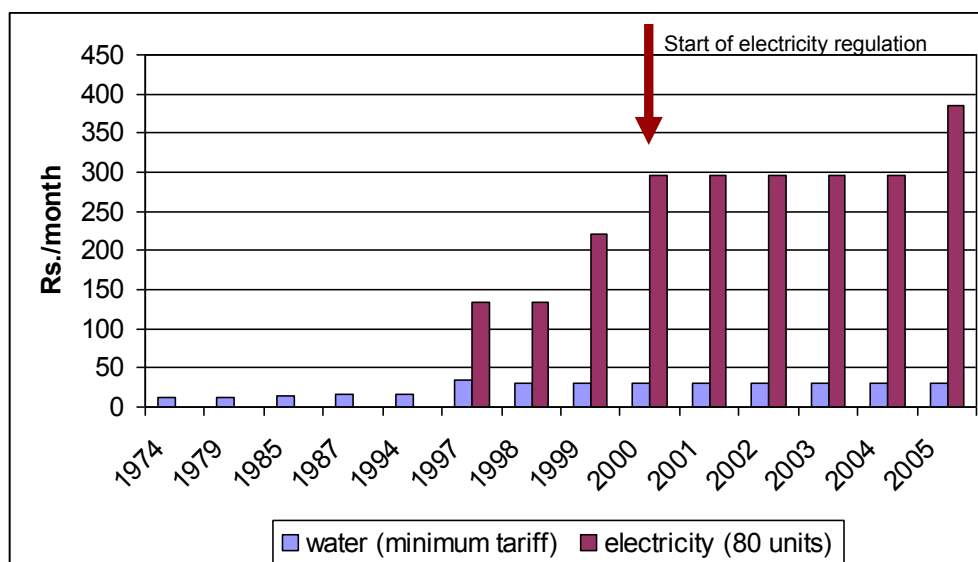
and the “replacement of procedures and paper work with a cost-benefit analysis” has not happened (Ruet 2005).

RERC was established under the Electricity Regulatory Commission Act 1998 as an autonomous regulatory authority. RERC regulates power purchase and procurement process of the transmission and distribution utilities and determines tariffs for electricity transmission and supply. RERC also promotes transparency, efficiency and economy in the operation and management of the power utilities, encourages competition, sets standards relating to quality, continuity and reliability of service and helps the power sector in Rajasthan to attract private capital for development while ensuring a fair deal to the customers. It has the power to issue licenses to transmission and distribution companies.

RERC consists of three members, each having a fixed tenure. They are appointed by the State Government on recommendation of an independent Selection Committee.

In 2001, RERC instituted the Commission Advisory Committee. Its 21 members are representing the interests of commerce, industry, transport, agriculture, labour, consumers, non-governmental organizations and academic and research bodies in the energy sector. The Consumer Unity & Trust Society (CUTS) was nominated to this Committee. It represents the interests of domestic and agricultural consumers.

At policy level CUTS advocates consumers’ concerns and at grass root level it tries to establish a network for consultation. The networking process serves two purposes, (1) to improve interaction between all stakeholders and (2) to collect information about the issues to be addressed in the Advisory Committee. In six



selected districts CUTS is running consumer awareness and capacity building programmes and is setting up customer committees, but so far only in rural areas. With increasing urban population numbers there will be a need for a greater focus on urban customers in order to advocate their needs and to report about Discoms' compliance with performance standards. The regulatory system has to include all stretches of society to prevent inequity. With CUTS acting as customer representative, agricultural customers are better represented than urban domestic consumers.

With setting up the first customer committees a beginning has been made. A larger number of groups meeting on a regular basis could improve the interaction between stakeholders.

For the ordinary consumer the regulatory process is still not transparent enough. A charter of consumers' rights in respect of supply of safe, reliable and efficient electric energy to the consumers has been published by the Discoms, but not many people were aware of their rights. Following a CUTS initiative the charter of rights was displayed in public.

### **Financial and operational performance: Jaipur Discom**

RERC issued Distribution Licensee's Standards of Performance – Regulations in 2003 (RERC 2003). The utility submits its performance report to RERC, but it is not made available to consumers. In case of non-performance RERC does not take any action, as the Commission is of the view that it is too early in the reform process. This means the Discoms have no incentive and pressure to perform. The enforceability is weak. Furthermore the data basis is still not reliable and RERC draws conclusions only from Jaipur Discoms reports. No other source of information is considered.

Jaipur Discom has been publishing an Annual Report & Accounts since 2001. The author experienced great difficulties to obtain the reports as Jaipur Discom personnel was convinced that these reports are only given to government officials and the commission. The operating ratio of Jaipur Discom has been stable since 2001, but it is still far from the sustainable level of 0.6.

In the period from 2000-2004 the distribution losses of Jaipur Discom remained at the very high level of 40%. This level of losses is totally unsustainable and RERC forebodes financial collapse of the companies (RERC Annual Report 2003-2004) if no substantial improvements can be achieved.

The expected improvements of the reform process cannot yet be seen after 4 years: The process is very

slow. The increase in sales of domestic power is the only indicator that improved, but it is not clear what proportion relates to new connections.

### **Conclusion**

The picture drawn from Jaipur's water utility portrays extreme inefficiencies, lack of customer involvement and representation, lack of effective pro-poor water policy and consequently the strong need for reforms. In the midst of this there has been some good pro-poor work of above ground pipelines in some slums along with household sanitation from an NGO. The Government of India and the foreign lending institutions are exerting pressure on the State of Rajasthan to bring about change. The framework for reforming the water sector is set, but there is nobody to carry out the necessary steps. It seems that the restraining forces still defeat the driving forces for change. The highly influential political parties and the administration are not willing to give up control over the decision on regulation and competition, they benefit from the arrangements as they are right now.

Independent economic regulation without political interference on tariff decisions remains a distant goal. At least one can hope that consumers will learn how to use their client's power and voice and start pushing for improvement from the bottom as the pressure from above is not sufficient. The experience from the electricity sector shows that introduction of the regulatory process strengthened customer's voice due to enhanced consultation and engagement.

Today in India the state exerts too much control in too many areas. Being owner, policy maker and manager of the water sector at the same time, the state is involved in too many tasks and is not able to concentrate on the essentials. An enabling state which allows others to do what they can do best would be for the benefit of the whole country. To bring about real change Shourie (2004) proposes institutional revolution rather than reform. Society has yet to agree with this prescription.

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# Chapter 14

## Case Study: **UGANDA**



### KEY FACTS

**Population**  
25 million

**Urban population**  
8.3%

**GDP per capita 2002**  
US\$ 1,390

**HDI rank**  
146/177

**Population living under the national poverty line**  
44%

**Exchange rate**  
\$1 = 1870 UShs.

**Urban household water connections**  
8%

**Urban improved sanitation**  
53%

**Water Poverty Index**  
44

### **MONITORING PUBLIC PROVIDER: Kampala**

Uganda in East Africa has only about 15% of its population living in towns. Although Uganda is a low-income country, in recent years the Government and its providers of infrastructure services have proactively pursued new public management approaches such as public private partnerships, improved accountability, and transparency.

In the urban water sector the National Water and Sewerage Corporation (NWSC) manages 15 of the largest towns and has achieved recent successes in its commercial performance. These include an increase in the number of active pipe connections in urban Uganda from 43,000 in 2000 to 70,000 in 2003. However, only 19% of households (8% by WHO survey) have their own pipe connections, and 6% of the poorest 40% of the urban population have their own connection (Uganda household survey, 2000). Much remains to be done and the Government of Uganda (GoU) are keen to continue with reforms such as more independent regulation.

*“there have been only limited initiatives to serve the poor.....probably due to a perception that a big commitment to serve the poor could threaten achieving commercial targets “*

*Uganda Case Study Report*

### **Study city**

Kampala

### **Regulator**

Ministry by  
Performance Agreement

### **Service Provider**

National Water and Sewerage  
Corporation (NWSC)

*Case study author: Kevin Sansom;*

*Photo credits: Sam Kayaga;*

# The Water Sector and Institutional Framework

As part of the reform of the urban water sector in Uganda it was envisaged that a substantial Public Private Partnership, some form of lease contract, would be introduced, following the initial two successive management contracts in Kampala. This would be accompanied by the creation of an independent regulator and an asset holding authority. Though these reforms have been delayed, perhaps due to changes in the international water market, the government is intent on progressing change within the sector, with the aim of supporting either public or private sector management.

In recent years the National Water and Sewerage Corporation (NWSC) has improved its commercial viability. For example, it has reduced the number of staff per thousand connections from 35 in 1998 to around 11 in 2003. Similarly, its operating ratio (revenues/operating costs) has decreased from 0.90 to 0.75 in the period 2000 to 2003. This has occurred due to NWSC improving the performance of its own staff, but also through engaging with the private sector. A three- year management contract for operational services in Kampala with Ondeo Services Uganda Ltd (OSUL) had been in operation for two years but was terminated in early 2004 when the revised contract terms were deemed to be too expensive. However, a key benefit has been the contract management experience gained by NWSC staff, which they have found useful in managing internal area performance contracts with each of the area offices.

Management of water services for the remaining smaller towns in Uganda is the responsibility of the town councils as part of the government’s decentralisation programme. The municipal councils receive support from the Directorate of Water Development (DWD) which is part of the Ministry of Water Lands and Environment (MoWLE). DWD have co-ordinated the letting of management contracts by local municipal councils to local operators in 40 towns. The initial outcomes of these contracts are encouraging, but it is acknowledged that there is scope for improvements in investment planning and regulation of services.

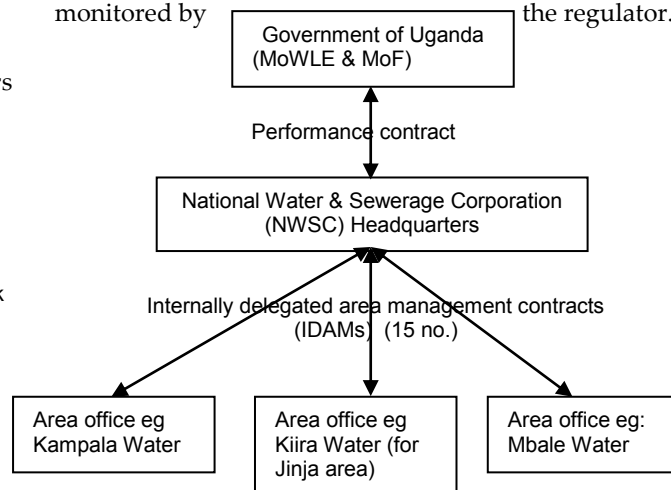
The MoWLE in Uganda has wide discretionary powers for economic regulation under the Water Statute (1995), and these are subject to fairly flexible interpretation.

DWD is responsible for technical standards. These agencies are to some extent limited by capacity.

The Ministry of Finance (MoF) through their privatisation unit have substantial informal powers on matters such as reform and tariff policy. Some level of economic regulation has evolved through performance contracts between the Government of Uganda and the National Water and Sewerage Corporation (NWSC). This is a form of ‘regulation by contract’ that is commonly used as the ‘French model’ of regulation, but in this case the contract is between government and a public utility. The diagram below shows the accountability framework for the regulation of large towns in the urban water sector, using performance contracts in 2004. Performance is meant to be monitored by a quarterly committee comprising senior civil servants from MoWLE and MoF and the Chair and Managing Director of NWSC, without any external involvement.

A Multi-Sector Regulator (MSR) has been proposed for the water, power and possibly communications sectors. This would reduce the financial burden on the water sector, and allow for the most effective allocation of scarce resources. Given the establishment of a regulator for the power sector and the uncertainty about the structure and time for establishment of a MSR, it will be advisable to maintain the regulatory functions of the DWD until such an independent regulator is in place.

An Asset Holding Authority (AHA) is envisaged to hold the water and wastewater assets of the large towns grouping on behalf of government. The AHA will be 100% government owned, set up as a limited liability company governed by a board of directors. DWD, acting on behalf of government, will enter into a concession contract with the AHA, which will be fully responsible for all infrastructure investment planning and execution. The AHA will also monitor the performance of the Private Operator. The performance of the AHA will be monitored by the regulator.



Right: regulation by performance contracts - current Ugandan urban water framework

Left: NWSC HQ



# Service to the Poor and USO

While there is no definitive Universal Service Obligation (USO) for urban water services in Uganda, it is worthwhile examining both the ministry's water sector targets and the service level assumptions made for future investment calculations.

The target that most resembles a USO is: *'the percentage of people within 0.2 km of an improved source'*. The problem with such an indicator is that people may be within 0.2 km of an improved water source, but may still not use the source for a variety of reasons such as cost or functionality. Also, the 'improved sources' referred to by the indicator include non-utility sources such as protected springs. None of the present indicators relate specifically to serving the poor, but the new 2004-2006 performance contract with NWSC includes some pro-poor provisions: the introduction of a new social connection policy, a new connection fund, new measures for social inclusion, and new proposals for a government subsidy programme. Indicators or targets have yet to be set.

The sector goal as defined in the MoWLE's Urban Water and Sanitation Strategy Report (2003) is:

*"Sustainable, adequate and safe water supply and sanitation facilities within easy reach of 80% of the urban population by 2005 and 100% by 2015."*

While this may sound like a USO, terms like 'adequate', 'safe' and 'within easy reach' are too vague for this to be an appropriate USO.

The water service level assumptions for the future investment requirements in the same MoWLE urban water strategy report are:

*"A basic service to provide piped water to 80% of the urban population with the remaining 20% being served by point sources (40% private connections and 40% standposts)"*

It is useful that the precise service levels are stated in this assumption statement which could correlate with a



Above: Waiting for water, Kampala

## Service options in Uganda

- Individual in-house pipe connections: currently only 7% of urban population and 1.2% of the poorest 20%
- Public Standposts or water kiosks: high charges to consumers to cover wage of water attendant. Many disconnected for payment failure.
- Yard connections: only 9.5% of urban population and 3.0% of the poorest 20%. This is a promising option for improved services in informal settlements because it allows on-selling of water to neighbours at a cheaper rate than water kiosks.
- Springs and wells: A popular source of water in Kampala, but they are prone to contamination.
- Pre-paid meters: expensive to install, piloted in Uganda on a number of occasions with mixed results. Managing and paying for the O&M is a key constraint.

potential USO. However, the reliance on standposts or water kiosks is surprising when, for example, many are disconnected in Kampala, essentially because the water vendors cannot earn sufficient income because of the easy availability of alternative sources. When the government considers agreeing a USO, it will need to assess current service levels in specific areas and how to overcome the common barriers to serving informal settlements (refer to box below). Investment plans to achieve an agreed USO should also be based on assessments of consumer demand.

The vast majority of households in informal settlements who do not have access to the piped network pay high unit costs for depending on public stand posts and on vended water. The subsidies inherent in the tariff mechanisms as shown in the table (opposite page), do not reach users who are not direct NWSC customers. Hence the NWSC water tariff subsidies do not really

## Barriers to serving the Poor

- Land tenure issues and the related social and legal issues
- Long distance to water mains
- High connection costs & difficult procedures
- Water connections are too expensive for some of the poor
- Restricted space in some informal settlements
- Water kiosks or standpipes are often not viable where there are alternative sources such as springs.

# USO and Tariff Issues

benefit the residents in informal settlements.

The prices paid by standpost or water kiosk customers are often ten times the amount paid by the consumers with private connections for a given volume. By way of coping, so therefore water quantities consumed by kiosk users are much lower than in the case of consumers with direct access to piped services. The current tariffs shown in the table below have a rising block tariff structure with the first 500m<sup>3</sup> being subsidised and customers paying more for water when they consume more than 500m<sup>3</sup> per month. This disadvantages the poor in cases where residents in low income areas sell water to their neighbours and exceed the 500m<sup>3</sup> per month limit and

Category	CHARGES UShs (US\$)	
	Per m <sup>3</sup>	Per 20 Litres
Public Standpipe	400 (0.21)	8 (0.004)
Residential	693 (0.37)	14 (0.007)
Government/Institutional	805 (0.43)	15 (0.008)
Commercial/Industrial 1-500 m <sup>3</sup>	1056 (0.56)	21 (0.011)
All consumers 500-1,500 m <sup>3</sup>	1264 (0.68)	25 (0.013)
All consumers >1,500 m <sup>3</sup>	1424 (0.76)	28 (0.015)

incur the higher rate.

Rather than seeking to subsidise the consumption of water, it would be better to subsidise access to the piped network by reducing connection costs and to subsidise less convenient service options. This could be done by having a flat domestic tariff and providing a lower tariff rate to registered customers with yard connections or water kiosks in low income areas. This should encourage more on-selling of water to neighbours.

Connection charges have been lowered recently by NWSC to encourage more connections. But all the costs need to be considered (see box top right). Although

### Costs for connecting

- Cost before approval of application
- On-site surveying expenses
- Official connection fee
- Extra payment before approval
- Road cutting costs
- Costs of all materials
- Transport costs
- Trenching and plumbing
- Costs on facilitation
- Opportunity cost of participation
- Charge for a meter
- Costs at time of connection

Average cost for connection: 626,400 Shs (US\$334), equivalent to 150.6 months of average billing for a household ('Charging to Enter the Shop', 2004).

NWSC has been working on a new policy of providing up to 50 metres of service pipelines to new applicants, this is not particularly pro-poor because the poor are often much further from the water mains.

*The following information is derived from focus groups undertaken in a number of Ugandan towns for this study.*

The key problems and coping strategies of the urban poor related to water service provision include:

- Low service levels
- Long average distance to safe water (ca. 0.5 km) (Greater than 0.1km means high health risk)
- High cost of water from standposts or kiosks (5+ times more than houses with their own tap)
- High average time to collect water
- Alternative sources may be contaminated

All of these problems can be addressed through appropriate sector reform and utility improvements. A regulator has a key role to play in setting up appropriate incentives for this to happen.

Quintile/ Water source	1	2	3	4	5	Average
Piped in Dwelling	1.15	2.94	5.59	9.34	22.15	6.81
Public Tap	21.74	29.62	30.53	34.34	28.41	28.03
Piped outside Dwelling	3.04	8.19	12.25	15.10	13.92	9.42
Bore-hole	33.18	22.05	18.06	14.01	11.93	21.77
Protected Well/ Spring	23.47	20.58	18.06	12.63	8.52	17.89
Vendor/ Tanker Truck	2.02	5.04	7.95	9.34	10.79	6.26
Other sources	15.30	11.55	7.52	5.21	4.26	9.79
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

### Urban households: Sources of Drinking Water by Quintile, 1999/2000 (%) Uganda National Household Survey, 1999/2000

- 1: Consumption expenditures are used for ranking households into welfare quintiles. The quintiles are based on the urban sample of 2374 households. Ranking of the welfare quintiles is restricted to the urban sample only (n=2374)
- 2: Other sources of drinking water include unprotected springs/wells, rain, rivers or lakes.
- 3: Legend; Quintiles 1 represents the poorest 20 % and quintile 5 represents the richest 20%.

# Alternative Service Providers

In urban areas alternative providers have a substantial share of the water market. In Kampala the most commonly used alternative modes of water supply include water kiosks, water carriers and springs.

With regard to the regulation of the use of springs, a water quality study of this type of source in Kampala found that only 46% of samples complied with standards, the remainder were contaminated with E-Coli (GoU, Water & Sanitation Sector Performance Report, 2004). While it may be tempting to close the contaminated springs, many poor people in urban areas often use a combination of sources, such as spring water for cleaning and kiosk water for drinking. If alternative supplies to springs are very expensive or not available nearby, closures would not be acceptable. Public health campaigns could, however, be organised to raise awareness about the use of water from contaminated springs and the need to find other sources for drinking purposes.

Proposals have been developed to regulate the high price of water sold at kiosks. This is difficult to enforce because a water market will operate either formally or informally and water prices will vary with changing water availability and demand. A better solution is to encourage more competition as a means of reducing water prices. There is increasing use of yard connections with on-selling of water to neighbours in many urban areas. This service option offers a promising way of improving services in informal settlements, because it is a more affordable and viable means for supplying water closer to peoples' homes compared with water kiosks.

In the future it would be beneficial to explore options for utility support to alternative providers in order to

improve services to consumers in areas where the utility cannot provide adequate service at present.

## Addressing alternative service providers through regulation

- The first step in effective support and regulation of non-formal service providers (NSPs) is through some form of government recognition of the legitimacy of their activities.
- Water quality is a valid aspect for regulation, either in terms of regulating ground water extraction, or water quality checks at water collection points, although enforcement of non-use of sources where contamination is found can be very difficult if good alternative supplies are not available.
- Water vendors often charge high water prices, so it is tempting to try and regulate their prices. However it would be impractical for a regulator to study and take into account all the varying costs of a wide range of water vendors in a city and then regulate them on a fair basis. A more promising option is for a utility/regulator to publicise the price of water that the vendors pay at the location where they collect their water, so that their customers know the vendors' price mark up.
- The best long-term solution to high water vendor prices is to encourage competition. The utility can either compete with the vendors themselves by improving services to those areas, or encouraging other NSPs to operate. The utility has a clear comparative advantage over most NSPs because of the economies of scale associated with having large piped networks. Encouraging fair competition, such as ensuring that NSPs and potential NSPs are not unfairly excluded from the market is an important role for those responsible for regulation.
- Regulators and utilities should have 'serving the poor' as part of their remit. But it is not feasible to



Informal water vending from standpost



Selling storage tanks for household coping strategies



Small scale enterprise, Kampala

## Customer Involvement

NWSC have implemented a number of measures to improve services for customers in recent years, including reducing the average time to deal with complaints, using GIS-based customer records and introducing and publicizing a Customer Charter. In terms of initiatives to capture the voice of the poor, NWSC have appointed a community development officer in their commercial and customer services department. There are currently no other staff or committees for capturing the voice of the poor.

### A regulatory focus group discussion (FGD)

**methodology** was piloted by the research team (K.Sansom, A. Nuwagaba and J.Kiguli) in 2004 in low income areas of Kampala. Emerging key findings include:

- It is best to have separate focus groups for direct utility customers (such as kiosk operators) and for those people who are indirect customers, because their experiences are quite different.
- If demand assessment is not to be part of the process, the FGDs can be relatively brief and straightforward.

**Key steps** in the regulatory FGD methodology include:

- Thorough preparations in inviting participants and selecting a suitable location for the discussions,
- Explaining the purpose of the focus groups,
- Asking all participants to mention their main water services problems/concerns, listing those on flip charts,
- Facilitating discussions to enable participants to prioritise their problems - this can be done by a simple show of hands.
- For the top 4 or 5 five priority problems, undertake further probing to find out why the problems are priorities, how and when they emerge and who is involved. A good facilitator and a knowledgeable engineer can facilitate this process.
- The next steps concerning how the focus group discussion information will be used need to be clearly explained to the participants.

Some of the results of regulatory focus group discussions conducted in a number of areas in Kampala with direct and indirect customers are captured below. Note that the problem ranking varies significantly between direct and indirect customers.

### Where are the poor people located?

"Our whole zone is comprised of poor people. Our expenditure is high but with low incomes leading to poverty. We suffer a full brunt of social problems in this community."

*Women FGD in Lufula zone LCI, Bwaise II Parish Kampala*

"The poor normally prefer living in wetlands e.g. Kasanvu in Wabigalo. This is a wetland in which plots of land are



cheap as 30,000/= (\$16) for 1/20 acre. People have put up housing units in these plots and the area is very crowded that one wonders how life goes on".

*Consumer, Wabigalo makindye*

### What are the current issues/problems of poor consumers in the selected informal settlement?

"Sometimes big boys or men harass girls or ask for sexual favours and in return making sure they filled their jerrycans for them". *Kasubi focus group about the Kiwunya well*

"The cost of water is so high and varies from vendor to vendor but usually ranges between UShs 25-33/= (\$0.013-0.018) which limits the amount of water the poor can purchase".

*Wabigalo Focus group discussion*

"Meter readers connive with some customers and we do not know how but they end up paying low prices to them. Consequently they charge very low prices to the customers at our expensive hence we lose customers."

*Men focus group discussion, Nakulabye Rubaga Parish*

### What are the barriers and constraints to improving water services to the poor?

"The main water pipe is far from reach. It is across the road yet KCC is hesitant to allow digging up the road when one wants to access water (be connected)"

*Women focus group discussion, Bwaise II Parish*

"Most of these people in this area are tenants and they find it hard to install water in the premises. There is a case where Jane Sembatya's landlord refused her to have water in the premises of Mr. Kaye Stephen".

*Women FGD in Nakulabye, Rubaga division*

### How could utilities support local small-scale providers

Suggestion: introduce pre-paid water services

"They can give us cards. You pay for the water amount, which is equivalent to the money you have. Just like air time cards when your air credit is over, you pay again. This will minimise corruption in the water sector, promote fairness and ease".

*Men focus group discussion, Wabigalo Parish*

### What are the common coping mechanisms

"It is easier to store water in tanks such that when it is scarce, then people can buy and I make profit to be able to afford the NWSC bill",

*Vendor in Bwaise II*



# Conclusions

NWSC, the national water utility, have achieved significant improvements in their commercial performance, but there have been only limited initiatives to serve the poor. This is probably due to a perception that a big commitment to serve the poor could threaten achieving the commercial targets and staff incentive payments that are specified in the performance contracts. If the government is to substantially improve services to the poor, future reforms will need to clearly set out targets, funding and incentive payments for improving services in specified low income areas.

To agree and achieve a Universal Service Obligation (USO), clear allocation of roles between sector institutions will be necessary, as well as holding those institutions accountable for services to poor areas. The Ugandan government are considering regulatory options for public and private service providers in the urban water sector in 2004/05.

Conclusions from the research on the suitability of a range of **regulatory options in the context of serving the poor in Uganda** are:

**1. Regulation by performance contracts with public utilities.** Such contracts have been in operation between the GoU and NWSC since 2000. More recently the NWSC headquarters have agreed and operated performance contracts between themselves and each of their town offices. These contracts with their incentive payments for staff have improved the utility finances with better accountability and transparency in the sector. But using such contracts as the sole regulatory mechanism does not provide sufficient flexibility and attention to detail in order to target interventions in defined low income areas.

**2. Regulation with split roles between an asset holding authority (AHA) and a regulator.** This form of regulation has been in operation in the Ugandan electricity sector. It has led to a duplication and diffusion of roles for investment and tariff matters, which is not conducive to tackling the difficult issues associated with improving water services in informal settlements.

**3. An independent economic regulator with no AHA.** This arrangement empowers the regulator to set tariffs independently of government (similar to the UK where the private utilities own the water assets). In Uganda the Government intends to establish an AHA that will own the assets and plan future investments, so the UK

model has not been considered.

**4. An independent regulator who delegates responsibilities to an AHA.** By making the AHA accountable to the independent regulator, and the utility accountable to the AHA, the duplication of responsibilities that is inherent in option 2 above can be reduced. This option is considered to be the most favourable for regulating water services in large towns in Uganda. The utility and AHA can produce investment and tariff proposals, that would be approved by a regulator. All parties would need clearly defined responsibilities and targets for serving the poor.

**5. A regulator with only an advisory role.** This approach has been used in Scotland and Jakarta. It can enable a more transparent exchange of key information, but there is a clear risk of the regulator's advice being ignored. However, in the case of the management of water services in small towns in Uganda, if the Government wants to continue with the decentralised management of water services in these towns, then it would be better for an independent regulator to have an advisory role so as not to have a duplication of responsibilities with the municipal councils.

**6. A multi-sector regulator.** While having a single regulator for electricity, telecom and water services can reduce the cost of regulation, staff regulating non water utilities are unlikely to deliver the required flexibility, expertise and attention to detail that is needed to deal with the many constraints to improving water services in informal settlements.

Potential **priorities for a new independent water regulator in Uganda** would include:

- agreeing a USO based on differentiated service levels,
- a performance monitoring system that captures service levels, coping strategies and consumer preferences in specified low income areas,
- establishing a consumer consultative committee, and
- ensuring agreed targets are adequately funded.

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# Chapter 15

# GLOBAL eCONFERENCE



**What is the opinion of  
water professionals  
around the world  
regarding regulating for  
the poor?**

Economic regulation of water and sanitation services has proven to be a powerful tool for improving water services in high-income countries. Regulators determine water prices relative to a required level of outputs or service standards. Total revenue requirement (from which the price cap is derived) is determined by adding anticipated operating expenditure to planned capital expenditure (for capital maintenance as well as for improvements in quality, security of supply, service standards and service extensions) plus an allowed cost of capital.

To investigate the extent to which water sector professionals believe these ideas can be replicated by regulators in lower-income countries with an explicit mandate to serve the poorest in society, this research has undertaken a global eConference over a four week period in September 2004.

***“Do we actually need regulators?”***

*Dennis Mwanza, Water Utilities Partnership, Africa*

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# Pro-Poor Regulation and the Universal Service Obligation

## Defining “poor”

When talking about the poor, people frequently referred to “the poorest of the poor”. [Haile Hailemichael](#) from [Development Workshop, Angola](#), provided the following common characteristics of the “poorest of the poor in the South”: live in squatter areas in the margins of the big urban centres; don’t “officially” own the land where they live; no water infrastructure exists in those areas; water supply service is carried out by the “informal” sector; water supplied is of dubious quality; price is extremely high compared to piped water systems in the more sophisticated parts of the urban area; price control does not exist and if existing is difficult to enforce; morbidity and mortality rates due to water-related diseases are quite high.

With reference to Plummer’s classification of “very poor”, “middle poor” and “better off poor”, similar classifications were reported from India, where the Planning Commission is introducing the distinction between “core poor”, “intermediate poor” and “transitional poor”. The latter would not fall under the official income poverty line, “but are deemed to be vulnerable to economic shocks and easily pushed into poverty.” It was suggested that “any service obligation responsibility must therefore keep in mind the fluidness of being in poverty based on economic conditions in the city”. [Shveta Mathur, Centre for Urban and Regional Excellence, Delhi](#), further offered another definition, where “water vulnerable communities [are described] as a household’s lack of access to permanent shelter on land with permanent security of tenure, accessing less than the required quantity /quality of water supply through community sources at far distances unconnected to waste water disposal systems, or who have to make alternate personal arrangements for accessing water of unreliable quality. Water vulnerable people are also those who are supplied free of cost water that maintains their low client power, who lack information about their rights and are unable to organize and raise demand for their rights.” This concept links with the ideal of “household water security”, which is receiving attention as a central issue in water scarce countries like Jordan.

## Good regulation

In response to comments about what regulation might achieve where the necessary infrastructure is not in place the Cranfield University researchers suggested that: “good economic regulation can require water suppliers to produce asset management plans which include provision for the universal service obligation, even to the ‘illegal’ slums (almost certainly requiring phasing over, say, ten years for universality) which are part of a wider business plan for which the regulator can objectively (minimal government/political interference) set tariffs at an appropriate level for an efficient provider. Good regulation can ensure that any subsidies are targeted where they are needed, not where they have traditionally been captured. Good regulation can report transparently on performance and use comparative competition to encourage/demand greater efficiency in operating expenditures as well as capital maintenance and new capital works. Good regulation can provide other incentives to facilitate performance improvement. Good regulation can give voice to customers, even poor customers, to have an influence on price setting and service standards. Good regulation can promote adequate capital maintenance - the poor always suffer/pay most for failing

infrastructure.”

## Asserting the need for regulation

[Dennis Mwanza, Water Utility Partnership](#), outlined the failure of many utilities to serve the poor: “This ownership structure [publicly owned companies or commercialised municipal or Government Departments] is unfortunately associated with a low level of operational efficiencies. There is usually weak accountability in public utilities [...] Tariffs are usually set for the purposes of political exigencies rather than on economic consideration hence it is very common to find that people that are connected to the network pay a fraction of the real cost of producing the water. Poverty eradication, universal access to water for all, job creation and community empowerment are some of the principles that they tend to work on. Well meaning programmes but rarely achieved. [...] Unfortunately the poor suffer the most in an environment where the utility is not performing efficiently.” Improving efficiency was viewed as top priority in order to extend services to the urban poor. Lowering prices and increasing the quantity of water supplied were cited as the main required service improvements. Private operators, it was argued, often need to be pushed by the regulator to address these issues, as [Alejo Molinari, ETOSS, Buenos Aires](#), demonstrated: “the preference of the private operator has been towards the more wealthy areas, with an accent on the revenue. There has also been a minor proportion of self-constructed expansion by the unserved people in the borders. ... More recently, the regulation has changed orientation and, instead of the previous laissez faire approach, in which the Concessionaire decided where and when to expand, today the expansion works are decided by the Regulator” From Delhi it was reported that officials used ‘legal tenure’ to justify not providing household water services in illegal settlements. Although many countries are attempting to restructure their water sector (i.e. utilities), it was noted that service to the urban poor too often was not the focus of the reforms. In response to this, the motivations for undertaking reforms were questioned: “Are the reforms being undertaken in order to fulfil certain conditionality in order to access resources?”

## Contra regulation?!

The discussion was invigorated by [Dennis Mwanza](#) asking the question “Do we actually need regulators?” Would it not be sufficient to restructure existing utilities in such a way that they attain the (financial) capacity to achieve agreed performance targets to serve the poor? This prompted an immediate response from many participants, who asserted that independent regulation has much to offer. [Felix Twinomucunguzi, Ministry of Water, Lands and Environment, Uganda](#), plainly stated that “[R]egulation is a basic institution of modern public services management, whether people like it or not.” Even a successful and efficient utility such as NWSC in Uganda, an example frequently cited, can benefit from regulation as it would help to institutionalise and consolidate the current achievements, induce further improvements and inspire replication elsewhere. The question, it was argued, should rather be what form a future regulator should take.

The additional expense incurred in establishing a regulator was also mentioned as a potential deterrent. [Oswald Chanda, water regulator of Zambia](#), pointed out that these costs must be weighed against the benefits regulation as a driver of efficiency brings to consumers and the country as a whole. The “necessity”

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# Balancing public and private interests

of regulation is currently high on the international agenda, as [Nancy Alexander, Citizens' Network on Essential Services, USA](#), reminded everybody: "At present, the WTO's Working Party on Domestic Regulations is devising a "necessity test" that, if applied to water (classified as an environmental service), would require that in most cases regulation should be no more burdensome than necessary to ensure the quality of the service. "Necessary" and "quality" can be defined in a variety of ways. Trade rules are creating "regulatory chill," even where countries have no tradition of public interest law." The general consensus amongst the majority of the (active) membership of the list was that regulation is indeed of importance for future developments in water services for the urban poor and will have a decisive influence on whether or not the Millennium Development Goals for water and sanitation can be achieved.

## Incentives to serve the poor

There was then much debate on how regulation could "help" utilities and what incentives could or should be given for them to serve the poor. At this point it is interesting to note that the idea of a "benevolent" regulator rewarding good performance was frequently brought up, whereas the balancing notions of "penalties" and "sanctions" were not mentioned once during the three weeks of the conference. [Oswald Chanda](#) warned that incentives can have inherent limitations and provided a strong argument for introducing regulation: "[...] in the event of failure to perform effectively and efficiently the utility can easily hide the inefficiencies. Secondly we can not leave the utility to determine the incentives and the evaluation of the same. For transparency and accountability an independent and professional regulatory body is needed." It was noted that there are incentives and disincentives for underserved communities to become part of formalised water systems as well as incentives and disincentives for utilities to work with these communities. Reform strategies in Delhi, aiming at 24/7, safe and equitable water supply, involved holding discussions and carrying out surveys to identify said (dis-)incentives.

## Performance targets

Performance targets were frequently mentioned as requiring regulatory oversight. Many contracts, it was argued, only fail because inadequate performance targets were set, or existing targets are not adequately monitored. Monitoring requires a level of expertise which cannot be expected from the agencies normally entrusted with overseeing contracts. In order to significantly improve services for the poor, performance must be measured against specified targets, such as "the number (or percentage increase) of active water connections in defined low income areas" ([Kevin Sansom, WEDC, Loughborough University](#)).

## Balancing public and private interests

[Achmad Lanti, chairman of the Jakarta Water Supply Regulatory Board](#), explained the important regulatory task of having to strike a balance between the public (consumer) interest and the (private) service provider interest. The challenge for regulators, he stresses, lies in understanding the varied and varying interests of the multiple stakeholders which together form the so-called "public interest". Whilst it is the mandate of the regulator to protect low-income households with "reasonable subsidies, affordable tariffs, sound house connections and same level of service/standard", reasonable profit should be viewed as a driver of efficiency and

innovation rather than just an exploitation of a vulnerable customer base. In order to achieve the balance between social and commercial objectives, certain attributes of good regulation must be met. Regulators must be "independent, impartial, transparent and knowledgeable", and should aim at countering monopolistic tendencies resulting in inappropriate pricing structures, facilitating access to accurate information, ensuring that all communities receive water services, advocate rational pricing mechanisms, coordinating externalities, and countering unequal powers between key stakeholders. In response to this it was noted that "this public interest cannot be defended unless it is rooted in policy frameworks (with clear definitions, and equally clear roles for all actors, including the regulator) and ideally there is both political and financial commitment (where needed) behind it." ([Esther Gerlach, IWE, Cranfield University](#)). [Mr Lanti](#) concurred to the idea "...to place the regulator as a facilitator among all stake holders, to reach the aim of the universal service, such as efficient operational and capital costs but on the same time to deliver the promised technical target and service standards, with the same treatment for the poor", referring to the current mediator/facilitator role of the Jakarta regulatory body.

## Universal service and the universal service obligation

"Having a common understanding of what "universal service" actually means will be essential to give regulators the necessary balance of responsibilities and power. As long as there are no clear definitions in the law, and there is no agenda as to what a city would like to achieve with regards to supplying clean water to its population (and who exactly counts as "resident"/"legally resident" and is therefore entitled to services), we are a long way away from anything resembling universal service. Then once there is a commitment to serving everyone in a certain area, we can turn our thoughts to how this could be best achieved." ([Esther Gerlach](#)) Although participants were encouraged to think about what the concept of universal water service actually entails, and the implications for the responsibilities and powers to be allocated to the various actors in the water sector, the conference moved little forward on this issue. Coordination between all stakeholders was deemed essential to achieve equity and ensure affordability, and close examination of existing coping strategies of the poor was suggested to "draw out those elements that can be refined and scaled up" ([John Dada, Fantsuam Foundation, Nigeria](#)).

## What form of regulation?

It was generally agreed that although there are principles of "good" regulation, the actual regulatory setup is always context-specific. Thus, there is no "best form of regulation", but regulators agreed that there are lessons to be learnt from each other, and experiences can be adapted to a particular setting, taking into account environmental factors and the level of development, for example. Opinions differed, however, on which particular arrangements would be preferable on different settings, as illustrated by the following comments made by regulators from three different continents: [Alejo Molinari \(ETOSS, Buenos Aires\)](#) argued that "Small systems are better regulated and controlled by local authorities, but large systems will better perform having an independent regulator, technically staffed." [Oswald Chanda \(NWASCO, Lusaka\)](#) disagreed: "You need a professional and effective regulator for both the large and small, private and public providers. The regulator is a referee as some people would put it for all the players involved sometimes it's the local or central

## Tariff and subsidies

government which may be in the wrong and the regulator needs the courage and stamina to blow.” [Achmad Lanti \(JWSRB, Jakarta\)](#) suggested a compromise: “Concerning drawing the line with regards to regulation among large cities, secondary towns and urban fringe areas, I think that may be true if we look into the underlying possible different institutional set up. In large /metro cities, where large utility operators are in existence the universal service and the regulatory frame work (whether thru government or IRB) for the urban poor are seemingly easier to undertake. Whilst, for the secondary towns, majority in Indonesia the utility operators are dual-functioning as regulator for specified details and of course as an operator. In future, under the financial back up from central government and the lending agencies (IBRD, ADB, JBIC), the restructuring of those local operators will include the separation of roles and the set up of consumers representation.” He outlined the proposed 2-tier strategy to be implemented in Indonesia, which includes a national independent regulatory body, which would ensure a consistent approach across the country with respect to universal service and the general “rules of the game”, and local government departments taking on regulatory functions at a local level.

Regulatory independence, they all agreed with the other participants, is of advantage in the long term. Independent regulation can provide some continuity in times of political change, which would invariably affect the civil service and in turn the level of services if these are regulated by “conventional” public authorities. However, it was equally noted that political conditions may prevent an effective regulatory system to become established and work effectively.

### Alternative regulatory arrangements

It was also suggested that formal regulatory bodies are only “one of the very many means of reducing abuse of monopoly power by agency utilities; [we should] try to get optimum choices that will demonstrate reciprocity in terms of beneficial efficiency gains to customers and not just creating efficiency gains and use them to finance the so-called “increased institutions”. Other initiatives which produced immediate improvements for poor communities were discussed: In Uganda, “universal free access” (a yard tap for each customer) has eliminated the role of middle men and effectively reduced prices paid by the poor without a “costly independent regulatory commission” ([Silver Mugisha, Uganda](#)). Self-constructed expansion is promoted by local authorities in Buenos Aires, who organise unemployed labourers into cooperatives. Consultancy and engineering support are expected to be provided by the private operator. The proposed role of regulation is then “to accommodate technology and materials to the lower economic capacity of poor people in shanty quarters” ([Alejo Molinari](#)) and to counter resistance from the operator, who is concerned about likely financial losses.

With reference to the partnership aspects, possible roles of NGOs were also discussed. [Ken Caplan, BPD](#), outlined some of the constraints for NGOs to get involved in a meaningful way: “NGOs often are not versed enough (for a number of reasons, including confidentiality) in the detail of the contract between the public and private sectors to understand where to push the parameters. They may not be familiar enough with standards and norms to know on which points they should be lobbying the regulatory agencies to allow for pro-poor adjustments. Partnerships thereby remain less ambitious than they should be in trying to change policy and thereby have an impact on far more households.” In the case

where NGOs are taking on a service delivery function, the question was asked who would then regulate these NGOs.

### Tariff issues and subsidies

Tariffs were mentioned by [Jakarta regulator Lanti](#), who asserted that existing tariffs are too low to support expansion into poor areas and local utilities are reluctant to connect the poor for fear of a drastic fall in revenues. The heavily subsidised tariffs intended for low-income households are proving counterproductive, and may foster corruption: “.. in addition some of the corrupt utility operators may misuse this situation to resell the water through water mafia at unbelievable high prices.” Illegal connections also increase as a result. Although “social tariffs” were occasionally mentioned in the discussions, precise pricing structures did not emerge as a result. Flexibility in the tariff system to adapt to household economic conditions (e.g. changing payback plans etc.) was called for, and at times it appeared that the “lowest possible tariff” would be a prerequisite for achieving affordability.

Many reasons were cited to justify subsidising water for the poor, such as the small projected revenues from poor households and the higher per-unit connection and maintenance costs incurred in sparsely populated fringe areas and secondary towns. It was suggested that current subsidy systems did not address the core problem, i.e. providing household connections for the unconnected poor. Subsidising access instead of consumption was proposed to improve the situation. It was further noted that parallel expectations of full cost recovery and water supply as a social service (i.e. at low tariffs) might exceed the capacity of utilities and require a financial commitment from government.

Appropriate selection mechanisms to effectively target subsidies to the urban poor were discussed. [Anja, Koenig, GTZ, Kenya](#), reported on the challenge of identifying the poor when administrative capacities may be low. Working with communities can be used as an option worth exploring, as in the case of Kenya, even if such alternatives may incur errors of inclusion. [Paul van Beers, Rural Water Systems, The Netherlands](#), suggested another solution, which avoids complicated price setting mechanisms, tough regulation, or the provision of cheap or free water, and which reportedly has worked well in the past: Water coins, which can be obtained cheaply (or sometimes free), enable “the poor [to] officially buy 20 litres of water at the indicated public water selling points. The water vendor can later cash these water coins for money at the official point of distribution of the water coins, whatever that may be; it can be an NGO, a water company or the local government. To have access to the water coins, the real poor need to subscribe themselves and re-register for this service from time to time. Additional advantages are that the informal water sellers are left out of this system and that it offers a rather precise monitoring of the specific target group, numbers, water consumption, etc.” The advantage of the system, he argues, lies in the transparent targeting of the poor.

### Banning disconnection of water services

A general ban on disconnection of domestic customers for non-payment found disagreement. Participants however conceded they could sympathise with governments seeking to implement a policy that prevents poor households from sinking into debt. The citizen’s right to access clean water at an affordable tariff was seen as fundamental. However, it was felt that such a policy

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# Customer involvement

would be implemented at the expense of the responsible (paying) customer, as debts were likely to accrue due to some people taking undue advantage of the situation. [Richard Franceys](#) made it clear that the ban in England and Wales was a political decision, overriding concerns of the regulator and customer service committees, who feared that the system would be open to abuse by the so-called 'won't pays'. "We now have the situation of government, having ignored the customer committees as well as the water companies, also trying to ignore the growing level of debt amongst poor domestic customers."

## CUSTOMER INVOLVEMENT

All participants of the eConference supported some level of customer involvement in water services delivery and its regulation. According to [Shagun Mehrotra, WSP Kenya](#), stakeholder dialogue is important to "negotiate contractual arrangements that would address mutual issues leading to the benefit to the poor consumer". [Richard Franceys](#), a member of WaterVoice Central, one of the customer committees in England and Wales, outlined a vision for consumer involvement in developing countries: "There is the initial role for low-income households to be involved in the decision-making about the type of service they are willing to pay for and any possible involvement in assisting to implement installation through possible pipe-carrying or trench-digging etc. This is the well-understood pattern of community participation. However, situations change and when connected to a city-wide water supply network, customers need to continue being involved in decision-making regarding further improvements in service as well as tariff increases." Proactive involvement should be promoted, he emphasised, but this could be challenging due to the transitional or unstructured nature of some communities, where special efforts are needed to create a sustained interest in participation. The long-term benefits are high, as customer involvement also represents a form of community empowerment.

### Experiences to date

Various attempts to recreate customer involvement in developing country settings were discussed. A commission consisting of 14 representatives from existing consumers' organizations was appointed by ETOSS, the Buenos Aires regulator. Although the commission are permitted access to all documentation, it was found that insufficient technical training hindered real progress, and the commissioners focused on quality improvements in existing service areas rather than promoting access for the poor. In Jakarta, the regulatory body perceives its role as that of the facilitator of customer involvement, which was initiated soon after the regulator was established. Customer representation closely follows the England and Wales model, although most of the customer representatives are local politicians: "Good politicians will protect their communities; that is good for KPAM [the water customer committees in each of Jakarta's five municipalities] to serve its mission," argues [Alizar Anwar, JWSRB](#). In contrast, WaterVoice in England and Wales aims to add the value of lay and local knowledge into regulatory decisions by choosing lay members, and perhaps reinstating some of the citizen control lost during privatisation, which removed the (earlier) link to local authorities.

"[...] Education, information, communicating complaints, and political pressure are necessary ingredients for effective customer (or rather consumer) involvement, [Anwar](#) states, stressing the

importance of consumer education: JWSRB aims to generate appreciation of the process of water treatment and delivery and educate people about their rights as water customers. By educating customer representatives the regulators hope to "spread the knowledge". The [Zambian Water Watch](#) groups were described as highly motivated people, who are appointed after a competitive and transparent selection process. In spite of the limited resources available to them, their success has been remarkable: Consumers (and service providers!) now know they have a group of people capable of intervening on their behalf, reports [Sam Kayaga \(WEDC\)](#), who is researching pro-poor regulation in Zambia. Initial steps in customer involvement were also reported from Ghana, where formal customer service committees are yet to be implemented, but some voluntary customer associations take on similar roles and are recognised by the regulator.

In the case of Jordan, [Ziad Al-Ghazawi, JUST, Irbid](#), suggested that "customer committees (Water Voice model) may be too much too early due to concerns of politicization and sensitization." Similarly, [Chetan Vaidya, FIRE India](#), commented that "In India, elected municipal councillors do not like empowerment of poor communities as it works against their influence." [Richard Franceys](#) drew attention to the fact that "the debt issue is becoming a very important issue for us here [in England and Wales], even in a rich country, where low income households find all the many and every-increasing utility bills and taxes a real challenge to manage". A comparative analysis of the original WaterVoice model and the current changes about to be undertaken in England and Wales (separation from the regulator) may still provide useful insights to be shared around the world. Some participants remained hesitant: "WaterVoice as presently constituted in the English regulatory system may be difficult to implement in the developing countries because of their level of socio-economic and political development." [Gerald Osuagwu, Federal Ministry of Water Resources, Nigeria](#), pointed out. However, [Richard Franceys](#) equally pointed out that there are certainly differences that would need to be addressed to reach out to poor consumers: "The point is made that in cultures other than the 'individualised' rich north customers are better represented by associations rather than individuals."

The potential for NGO involvement

As it became apparent that without a specific mandate self-selected customer committees do not necessarily give due attention to the interests of the poor, this last comment initiated a debate over the potential role NGOs could play in representing poor communities which may or may not yet have become regular utility customers. [Lyn Capistrano, PCWS, Manila](#), asserted that NGOs definitely have a role in the regulatory process, particularly in representing marginalized groups and communities: "Participatory monitoring of water utility performance, identification of low-income areas in the metropolis that are still without water connections, information campaigns, exerting pressure for the improvement of service delivery, facilitating dialogues and knowledge sharing are just some of the tasks that NGOs can do towards the promotion of pro-poor regulation." The idea of using NGOs as intermediators on behalf of the poor was mentioned and [John Dada](#), who insisted that water provision has to be entirely a community-led effort, suggested that NGOs can perform "strategic and complementary roles" and act as a catalyst for improvements. [Regulator Lanti](#) welcomed NGO involvement, acknowledging the "very meaningful" inputs for operators it provides and the resulting reduction in negative publicity.

## Alternative providers

“However, one must choose the right NGOs which have adequate background on the utility industry and in addition, it is also recommendable to include the professional associations, related academics and universities, to make a good blending on consumers voice/representation.”

Others did not believe that NGOs were the right channels through which to address customer representation. A lack of experience and competence in regulatory issues was cited as an obstacle to successful NGO involvement. Although clearly stating that his concerns do not necessarily apply to all countries, [Ziad Al-Ghazawi](#) argued that “... a group of respected professional/academic individuals working close to/with Regulator office would better represent customers than NGOs.” His other concern of unnecessary politicisation was reflected in the following comment from Buenos Aires: “...customer representatives NGOs tend to adopt a political profile and, by doing that, they shall prioritize the improvement of already served areas, rather than the expansion to poor areas, which are often more difficult to solve” ([Alejo Molinari ETOSS](#)).

### Funding and independence

Concerns have also been raised over the cost of customer involvement. In the UK, recent changes to the structure of customer committees mean that customer representation is to be separated from the regulator in spite of years of successful co-existence. Members are also to be paid a small allowance, which traditionally they were not. [Achmad Lanti](#) supports the separation of WaterVoice from the regulator on the grounds that regulators control tariffs, and customer representatives would consequently need to balance regulatory decisions. However, customer representation and related customer involvement activities in Jakarta are funded from the regulatory body’s budget. Similarly, ETOSS in Buenos Aires finances customer representation by contributing a minimum monthly fee to each organization and, under request, pays for consultancy ordered by the customer commission.

### Challenges for effective customer involvement

The following questions illustrate some of the challenges for effective customer involvement, which were highlighted during the discussions: What roles should customer representation perform? How could the interest of members be sustained, particularly if they are required to perform a wide range of roles? How can customer representation and other elements of the “water voice system” be adequately funded and where should funding originate from? Should members be paid? What should be the relationship between customer committees and any existing consumers associations? How can different societies use the ideas developed under the England and Wales WaterVoice model without undue politicisation, capture or irrelevance? How can the voice of the poorest be heard? How independent/separate from the regulator should customer representation be? Should customers be represented by (self-selected?) individuals or NGOs or community associations?

It appears that in the opinion of many participants some or all of these issues may depend on the structure of society, level of democratisation, standard of living and definition of poverty in each particular country.

#### SMALL-SCALE ALTERNATIVE PROVIDERS

Participants confirmed that alternative providers represent a gap in present regulatory frameworks, whilst appearing as a regular

feature of water supply in many developing countries, and here closing the gap left by utilities failing to serve the poor. Competitive behaviour and rising animosity between utilities and alternative providers were cited as potential barriers to regulatory intervention. [Dennis Mwanza](#) sparked a heated debate as he rejected the idea of encouraging alternative providers, stating that increasing the efficiency of utilities should be the prime concern of regulators. He described entrusting alternative providers with services delivery as too risky, and besides their large number would create regulatory problems. “Shouldn’t the regulator just ensure that the utility does what it is supposed to be doing including extending services to the urban poor?”, he asked. Although the overriding profit motive of alternative providers seemed to constitute a major issue of concern, water quality aspects were also raised as issues in need of attention, especially with reference to water sold by tanker drivers.

[Kevin Sansom](#), [WEDC](#), [Loughborough University](#), drew attention to the distinction between independent and intermediate alternative service providers. The excerpt of a literature review on “non-state providers of basic services” provided quotes a 2003 report by the Water Utilities Partnership: “Independent service providers are not connected to the utility pipe network and may even compete with it. They generally obtain their water from alternative sources such as their own borewells, then distribute through a pipe network, or through carriers or a single supply point. [...] Intermediate service providers include private providers or community based organisations, delivering water in unserved areas. Intermediate providers generally obtain water from the utility piped network and either (i) install and manage network extensions or water points in unserved areas, or (ii) buy, carry and deliver water direct to customers willing to pay them.” The distinction between independent and intermediate providers, it is argued, has implications for the regulation of alternative providers. Regulation of independent providers, currently unregulated and unauthorised, could potentially be similar to the mechanisms applied to utilities. Intermediate providers, who are described as usually “diverse, small in size, many in number and informal” are less easy to regulate. “Regulation of their water prices is [...] often impractical and is often best done by encouraging more competition and preventing exclusion of new alternative providers from the market. Regulation of the quality of the water they sell is worth exploring, although there is no point in preventing water vendors from operating if consumers do not have reasonable alternatives.”

There was some recognition of the benefits alternative providers have to offer in terms of flexibility to serve poor customers. Cooperation between alternative providers and formal operators are now being explored in Jakarta and Kenya. In Jakarta, schemes involving CBOs, supplying water similar to a cooperative are actively promoted by the regulator. Other regulatory aspects, however, need to be reformed concurrently. In Kenya, the Water and Sanitation Program is assisting an association of alternative providers to become “a credible partner to formal service providers” in Nairobi’s largest informal settlement. Once again, dialogue was proposed as a worthwhile strategy to convince alternative providers that consumer protection can lead to a “win-win” situation.

### Regulating alternative providers

Little practical advice was offered on how to regulate alternative

# Regulation ‘prerequisites’?

providers in general. Some participants favoured a light handed approach, but even then it was felt that “provisions have to be made to ensure a minimum of quality standards and prevent overcharging where there is a lack of competition between several SSSPs” (Anja Koenig, GTZ, Kenya). Self-regulation, although beneficial through self-enforced tariffs controls and assured water quality, has a disadvantageous tendency to create exclusivity and what in the worst cases was described as “water mafias”. Increasing competition was one suggestion as increased market pressures would automatically produce regulatory effects as private vendors “may be willing to improve performance to stay in the market” (Shagun Mehrotra, WSP, reporting on experiences made in Tanzania). The question then was asked whether regulators should permit the mushrooming of alternative providers instead of concentrate on the main service providers. Slightly higher prices charged by alternative providers, it was argued, would be justified in the light of the flexibility offered to customers, but the right to appeal against monopoly abuse must be guaranteed.

On water tankers, Bernard Collignon, Hydroconseil, noted that “Truck transportation is generally a business better managed by private enterprises, whose regulation by administration is barely effective”. He cites a string of aspects illustrating the difficulties associated with attempting to regulate water tankers (through price control, limiting the number of trucks or service hours, water quality control, etc.). However, he stresses, public health considerations demand government involvement, with the state having the responsibility to at least try and regulate tankers. As competition can be the first and most effective regulatory instrument, encouraging service improvements in order for providers to gain competitive advantage and increasing their market share, the state retains a significant role in guaranteeing the development of fair competition, and preventing unfair market positions (monopolies or oligopolies). His specific recommendations with regards to achieving these objectives are: “To guarantee an equal access to the public water sources for all trucks

To encourage the entry of new operators in the market (to stimulate competition) by giving official recognition to their activity and ensuring tankers a good social status (as providers of a basic public service in low income or remote areas).

To multiply the filling stations (in order to reduce the distance to customers) and to sell water in these stations at a relatively low tariff (for example the social rate, which exists in so many countries).”

The discussion eventually took another turn with the question being asked whether there is “a role for international players in order to improve services offered by alternative providers?” Instead of only focussing the debate on water TNCs Dominique Drouet, RDI, Paris argued we might “think about possibilities to build partnerships involving local engineering companies and engineering companies from industrialized countries in order to assist in the development of higher standard small scale water systems”. Interesting implications also arise from the legal framework, as Ken Caplan illustrated in this passing comment: “...Argentina’s new decree that any formal body can deliver water but must be accountable and South Africa’s approach that “no person may operate as a water services provider without the approval of the water services authority” might also be interesting.”

## THE LEGAL FRAMEWORK

Although “underlying policies” were occasionally mentioned, only experts in the field of legal frameworks commented on the very limited attention this subject area seemed to be given in the discussions. “Clearly the legislative framework and its implementation (justice system, political culture) are at the heart of regulation”, Sarah Hendry, a water lawyer from Scotland, asserted. Clearly setting out powers and responsibilities would resolve at least some of the difficulties encountered.

Peter Howsam, Director of the Cranfield University Policy and Legislation Unit, sketched out some of the essential components of a functioning legal framework: “The legal framework includes not only the core component of the legislation itself, but also the institutional, administrative, political, social and economic conditions/arrangements, which make the legislation available, accessible, enforceable and therefore effective. [...]A legal framework is ‘good’ only if it helps to achieve a particular objective. It will fail for a whole number of reasons; e.g. where sound legislation exists on paper but the regulator is weak and ineffective, and/or poorly resourced; where the judicial system is not strong and independent. The legal framework must also embrace inter-related sectors - i.e. not only the regulation of water supply providers but also pollution control, resource management, public & environmental health, etc.”

He provided certain key questions regarding the nature of service recipients and service providers, which will need to be addressed in order for the legal framework to support effective regulation. He also noted that an available legal framework can consist of a number of uncoordinated pieces of legislation.

### Service Providers

Who are they? Are they a legal entity? What are their legal obligations? Is universal service delivery defined as an objective and if so, how is it defined? What can they do - i.e. what if any powers do they have, e.g. with respect to disconnections, charges? What do they do in practice? Who regulates them? What mechanisms exist if they fail to meet their obligations? What happens if they are unable to meet their obligations because of circumstances beyond their direct control? What relationship do they have with those they serve?

### Service Recipients

Who are they? Are they defined (and if so, by whom)? What are they entitled to? What if any obligations do they have (e.g. with respect to payment, use and waste)? Who protects those entitlements? What mechanisms exist if rights are breached? What is their relationship with service providers (e.g. is there any requirement/mechanism for involving/requiring stakeholder/consumer involvement in the process of service delivery)?

Ms Hendry in turn suggested that devising “optimal legislative and regulatory systems, with particular social goals to be attained, [could] only be done by some central direction to set the policy, amend the rules and oversee the implementation.”

*The researchers would like to thank all those who took the time to become involved in the conference and to contribute their experience and understanding.*



# Chapter 16

# ALTERNATIVE PROVIDERS AND THE REGULATORY PROCESS



**Who are the alternative providers?**

**To what extent do they need to be included in the regulatory process**

*With up to half of the population of some cities accessing water from alternative providers this channel of delivery must be recognised in the regulatory process*

# Alternative Providers

Regulators or agencies in charge of overseeing the delivery of water and sanitation services must have a good understanding of the water and sanitation market if they are to counterbalance its imperfections. In lower-income countries, this market is not limited to a monopoly provider supplying a largely homogeneous customer base with a fairly standard package of services. Inadequate infrastructure, underinvestment and the continuous pressures of rapid population growth and rising poverty levels far exceed the capabilities of conventional public service provision. The result is an irregular, fragmented market with a variety of agents, including a vibrant informal sector composed of dynamic private entrepreneurs. This “other” private sector (Solo, 1999) occupies the many gaps left vacant by the utilities, and in particular (but not exclusively) caters for lower and lowest-income households. This summary paper introduces these alternative providers and their customers, investigates their operations, the many problems and constraints they are facing along with their survival mechanisms. Having identified arguments for and against small-scale independent provision or utility cooperation with private intermediaries, it then seeks to explore the potential for incorporating alternative providers into the regulatory framework. The term “alternative providers” will be used throughout this section, encompassing all varieties of small-scale private provider, for which there are many terminologies, often used inconsistently by different authors.

Alternative providers are as diverse as their clientele, offering a wide range of services suited to the requirements of the type of customer that a utility, restricted by high technical standards, inflexible pricing and management structures and legal provisions finds difficult to serve. In the water supply sector, the African Water Utilities Partnership (2003) classifies alternative providers into intermediate and independent service providers. Intermediate providers effectively act as utility extensions by purchasing bulk quantities of water and distributing it, whereas independent providers develop their own sources and supply systems, sometimes in competition with the utility. A small number of “pioneers” operate independent distribution networks with individual household connections; but vendors and resellers are usually the most commonly found type of alternative provider (Conan, 2003). These may either be working in partnership with the utility (e.g. stand post operators), or be classified as independent providers. The long list of types of alternative providers ranges

from water tankers supplying un-served areas, water carriers providing a door-to-door delivery service, water points or kiosks owned or managed by communities or NGOs, privately managed utility stand posts to water being sold by neighbours or landlords with a household connection.

There is also an emerging niche market for bottled water, for low-income consumers sometimes distributed in plastic bags rather than bottles, with sales on the rise reported from many countries, such as Guatemala, India and Shanghai (Foster and Araujo, 2004); (Conan, 2003); (Raghupathi, 2003); (Llorente and Zérah, 2003). While many of the alternative providers’ businesses are not officially registered, cases of illegal distribution of utility water have also been reported (WPEP, 2000). The definition of an alternative provider hence becomes somewhat ambiguous: it is difficult to draw boundaries between those simply operating within the informal economy, a common occurrence in developing country cities, and those engaging in outright theft and fraud.



New ideas: drinking water sold in plastic bags

## Market Share

Alternative providers’ market share varies widely. The lowest figures are reported from South Asia, where only about 5 – 5% of the total population buy water from vendors. This proportion increases to 20 – 45% in South East Asia (Conan, 2003) and can be expected to rise. In India, the stronghold of public service provision, about fifty private water businesses have emerged over the last twenty years in the capital city alone (Zérah, 1997). In Latin America, independent providers serve some 25% of urban households (Solo, 1999). In some cities more than half the population may depend on alternative providers, as for example in Guatemala City, where around 200 private providers



Left: Water delivered to the doorstep  
Above: Community-managed small-scale network (both Jakarta, Indonesia)

# Markets and Pricing

operate alongside the municipal water utility Empagua (Solo, 1998). The most recent assessment of independent providers in African cities quotes market shares ranging between 30% and 80% (Collignon and Vézina, 2000). It was found that the significance of alternative providers increases outside of major urban centres (Collignon, 1998); (Solo, 1999). It should be noted that merely examining volumes of water supplied may be misleading, as low-income consumers tend to purchase the minimum quantities necessary for survival: In Port-au-Prince, Haiti, alternative providers “produce about 10 percent of the urban water supplied, distribute about 20 percent of the city’s water, and reach some 70 percent of the households” (Solo, 1998). It remains unclear whether all studies included bottled water sales, so that the numbers quoted might still be an underestimate: According to an estimate of the Water Quality Association of the Philippines, for drinking purposes, nearly 45% of households in Metro Manila already choose bottled water over tap water (WPEP, 2000).

## Strengths and Weaknesses

Given that some form of alternative provision can be expected to remain a common and essential feature of urban water (and sanitation) markets within the foreseeable future, the quality of service delivered by independent operators or private utility partners needs to be evaluated – from the point of view of their customers. The overriding concern of all opponents and sceptics are the rates charged by alternative providers: “Exorbitant prices” and “overcharging” are frequently mentioned in the literature as arguments against small-scale private operators (Zaroff and Okun, 1984); (Espinosa and López Rivera, 1994); (Vézina, 2002). An overriding profit motive, anti-competitive monopolist behaviour, sometimes with the illegal involvement of corrupt utility staff, and the threat of



Water tanker delivery in high income area in Amman, Jordan

capture by local elites or mafias are feared to exclude vulnerable groups and reinforce existing inequalities. The safety of alternative and mostly unmonitored drinking water supplies has also been questioned. There are minor, secondary concerns about the possible irregularity and unreliability of supplies (Zaroff and Okun, 1984), the lack of qualifications of staff employed by small-scale independent enterprises, and the long-term sustainability of independent providers’ activities, for instance where they are contributing to the over-abstraction of local groundwater resources. As most alternative providers operate unregistered, informal businesses without paying tax, theoretically there are significant losses to the local tax base.

In contrast to these criticisms stands the unanimous agreement on the alternative providers’ good understanding of the market, their customer responsiveness, and remarkable resourcefulness in finding simple, but effective solutions under the most adverse operating conditions. Collignon & Vézina (2000) describe the typical African independent water provider as “a versatile man, risk and publicity averse; capable of raising important sums of money when necessary, but



“Tangki Air Bersih” – the trucks only supply “clean” water, not drinking water (air minum). Jakarta, Indonesia



Compound landlord on selling to compound tenants at significant mark-up through metered standpost.

## Strengths and Weaknesses

without a logo or a front office..." The ability of alternative providers to recognise needs, their flexibility in adapting to low-income customers' circumstances and the operational efficiencies they achieve in their businesses put many utilities to shame. Authors positively note the generally good and often personal relationships between suppliers and customers (Raghupathi, 2003): small-scale providers make "contracts with customers, not with governments" (Solo, 1999). They know customer habits and preferences, and the financial situation of households served. When families are experiencing payment difficulties, many independent providers offer unbureaucratic solutions, adjusting payment plans to customers' income schedules or even delaying payments (Troyano, 1999).

The sometimes considerably higher prices than those charged by the official suppliers are ascribed to basic economics: without access to public subsidies and conventional financing, independent small-scale businesses invest family savings and are consequently forced to achieve full recovery of all costs (Solo, 1999). They simply operate in a competitive market where consumer demand and willingness to pay, existence of competitors, operating costs and seasonal variation of supplies dictate prices. Recent study results indicate that profit margins are in fact low, and operators are surviving on modest incomes (Vézina, 2002); (Collignon and Vézina, 2000); (Conan and Paniagua, 2003). A comparison with official utility tariffs also touches on the subject of often misguided subsidies, which have been exposed as benefiting middle- and higher-income groups rather than supporting the those in need (Foster, 1998). Whilst Llorente and Zérah (2003) criticise alternative suppliers for only providing peripheral solutions, Solo (1999) cites their readiness to see beyond the official city limits and experiment with innovative, unconventional technologies as admirable strengths. Probably the most important difference between water utilities and small-scale alternative providers is that utilities are established within political and administrative boundaries, rather than developing naturally along geographic or cultural lines (Troyano, 1999), and alternative private providers cut across geographical, income or even class boundaries.

Irrespective of the various studies' economic assessments and moral judgments on the value of alternative water services, the fact is that small-scale private operators are providing a vital service, and much of their success can be attributed to a thorough understanding and constant observation of a continuously evolving market. Officially their contribution is rarely recognised (Conan, 2003), and where informal business verges upon illegality, the

operators face a major obstacle which takes more than technical ingenuity to overcome. Communication with public authorities is likely to be non-existent, and the attitude of formal (private) monopoly providers, protected by exclusivity clauses in their concession agreements, may range from tolerance to outright



Water vendors keeping count of delivery rounds at the filling station. Jakarta, Indonesia

hostility (Collignon and Vézina, 2000). Obel-Lawson and Njoroge (1999) report that even where official policies have been reformed they are unlikely to accommodate independent providers.

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# Alternative Providers and Regulation

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## Research Findings

The country case studies show that alternative providers are indeed a regular feature of water supply (and sanitation) services to the urban poor in the developing world, where they 'provide an indispensable service to those sidelined by the public utility systems' [8] *Note: Numbers like this one refer to the relevant summary paper, so 8 here stands for the Manila case study.* There are precious few exceptions, though it must be noted that the sample for the *Regulating Public and Private Partnerships for the Poor* project is biased in favour of capital and metropolitan cities where economic regulation of various forms of 'partnership' is most developed. Observations may not necessarily hold true for secondary towns, and recommendations based on conclusions drawn from the case studies would have to be treated with caution in this situation.

Even in cities with exceptionally high connection rates alternative providers were found as vital players in the urban water market, cutting across income boundaries. The case of Amman, where customers resort to tanker truck deliveries to supplement heavily rationed piped water supply, demonstrates that alternative providers are not solely a low-income phenomenon [10]. None of the common water vending in small containers was encountered in the Zambian capital, but Lusaka still relies on alternative models of provision to serve its urban poor. A high level of involvement of international development partners in the city's peri-urban areas explains the absence of the 'conventional' water vending systems [11]. With the exception of Chile, from where no alternative modes of supply were reported in Santiago [5], even the comparatively well-managed systems in Latin America leave service gaps, which are in turn filled by alternative providers, albeit to a much lesser extent than in African or Asian countries.

In none of the cases examined does the present regulatory framework provide for economic regulation of alternative providers' operations. This would of course be expected for a (largely) competitive market, where the main justification for regulatory intervention (*c.f. Literature Review*, [3]) is absent. In the context of a well-functioning (and thus self-regulating) private provider market the application of fair trading law and water quality regulation would be an adequate level of regulation. However, the case studies present compelling evidence that anti-competitive behaviour and disregard

for other regulations can be widespread. This paper discusses various combinations of regulatory risks and inadequate oversight mechanisms, as well as regulatory attempts to deal with alternative providers. Based on the regulatory challenges identified from the case studies, recommendations are made for incorporating alternative providers into the regulatory framework to minimise potential negative impacts on poor urban consumers. In view of the long-term objectives for the structure and organisation of the urban water market, a distinction must be made between independent and intermediate providers in terms of the type and level of regulatory intervention required. [This research is based on the presumption that all household should be able to enjoy the convenience of piped water supply within the home. This long-term objective for urban water services would lead to a gradual phasing out of intermediate providers, as even the poorest households will be given access to the economies of scale derived from a piped distribution system.]

## Inadequate oversight mechanisms

The case studies show that current oversight systems, where existent, frequently fail to deliver the desired levels of service and consumer protection. Existing rules and regulations need to be re-examined in view of their implications for alternative providers, their conventional (utility) counterparts and, ultimately, service delivery to poor urban households. Economic 'regulation' of the alternative provider market rarely extends beyond abstraction licensing and tanker truck registration. Any further regulations impinging on economic activity of alternative providers frequently result in them operating on the verge of illegality. In Ghana, for instance, customers are required to obtain approval from the water utility in order to on-sell water. Vendors, however, were found to be operating without the utility's consent [7], and Amman's water tanker drivers admit to exploiting customers' ignorance and the lack of enforcement on the part of the water authorities when exceeding maximum price limits set by the government for their resale activities [10].

However, legal transgressions may not always occur through malicious behaviour on the part of the alternative providers. Rules may simply go ignored due to the opaqueness and complexity of the regulatory system, where regulations are either unknown or clear lines of responsibility cannot be discerned [8]. Whether disrespect of regulations is

## Regulatory Risks

blatant and widespread as in the case of some Jordanian tanker drivers or it is rather a matter of lack of information or interest (both on the part of alternative providers and governments as regulators), the cases highlight the importance of monitoring and enforcement by regulatory agencies, as well as the need to strengthen customer protection through readily accessible information, complaints handling and redress mechanisms. Registration, as seen in some case studies,



Above: Central tanker filling point

may be a first attempt to provide some level of oversight for alternative providers, with the registration data providing a first point of reference for establishing an information data base on alternative providers.

It is not uncommon for existing regulations to give an (unfair?) competitive advantage to formal, utility water providers, in spite of their inability to deliver services to large proportions of the population. Examples for this are exclusivity rights granted to large water utilities, which span the entire service area, even if contractual coverage targets may not envisage the entire population receiving piped water services until the end of the service agreement (or, worse still, have been revised to reflect the inability of the utility to reach 100% of a city's residents within the lifetime of the contract– *Manila, Jakarta* [8,12]). Bulk water may also be supplied by the main provider at less than favourable rates. In Manila independent providers distributing utility water were found to be paying high commercial water prices rather than the cheaper domestic rate [8]. From Uganda the practice of charging VAT on water sold to alternative providers was reported [14]. Regulation is called upon to balance the trade-off between avoiding inflated bulk water rates, which hurt end users as on-sellers pass on their costs, and allowing utilities to pursue a commercial pricing policy. Supplying water to intermediate providers at the subsidised domestic rate is likely to threaten the utility's ability to achieve cost-reflectivity in

order to finance necessary investments.

In defence of any 'utility bias' the large revenue shares currently being diverted into the informal sector (see price comparisons in the next section) must be considered. The size of the alternative market effectively limits the revenue available to the conventional provider and reduces the opportunity to become commercially viable. Of course, before market shares can be adjusted in favour of utilities, the regulatory system must ensure that the main provider is in a position to provide adequate and affordable services to the poorest households in those areas that are traditionally viewed as 'difficult to serve'. Likewise, 'top up' services such as tanker deliveries cannot be eliminated unless the utility can meet the needs of its entire customer base.

Other inadequacies in current regulatory (and legal) frameworks threaten the continuity of service to urban low-income areas. Successful pro-poor water service programmes implemented by formal providers out-compete small-scale independent providers. Faced with the risk of takeover by a larger and financially better equipped competitor, small entrepreneurs can be reluctant to continue to invest in much-needed water services for the poor [7,8]. The lack of an enabling legal framework that would protect independent providers' investments and allow cooperative arrangements between alternative providers and utilities to harness the 'pro-poor service skills' acquired by the former can only be regarded as a serious shortcoming. This is particularly damaging to the underserved poor who continue to settle outside of the utilities' service areas as city boundaries expand to accommodate population growth and in-migration.

### Regulatory risks

The case studies confirmed the regulatory risks



# Regulatory Risks: Economic Risks

inherent in informal and largely unregulated water markets, where prices fluctuate in response to availability of supply and consumer demands. In addition, water quality as well as environmental impact of alternative providers' operations is a major concern. Alternative providers may be knowingly or unwittingly infringing on existing legislation or exploiting loopholes in the law, such as abstraction, planning and business regulations. In doing so, there is a risk that their activities are contributing to looming environmental crises, such as groundwater over-abstraction and seawater intrusion into aquifers [10,12,13]. Likewise, in the absence of strict water quality controls, the diffuse small-scale provider market can represent a significant public health risk. For regulation of small-scale private water markets to be effective, there may be a strong case for economic, water quality and environmental aspects to be considered jointly.

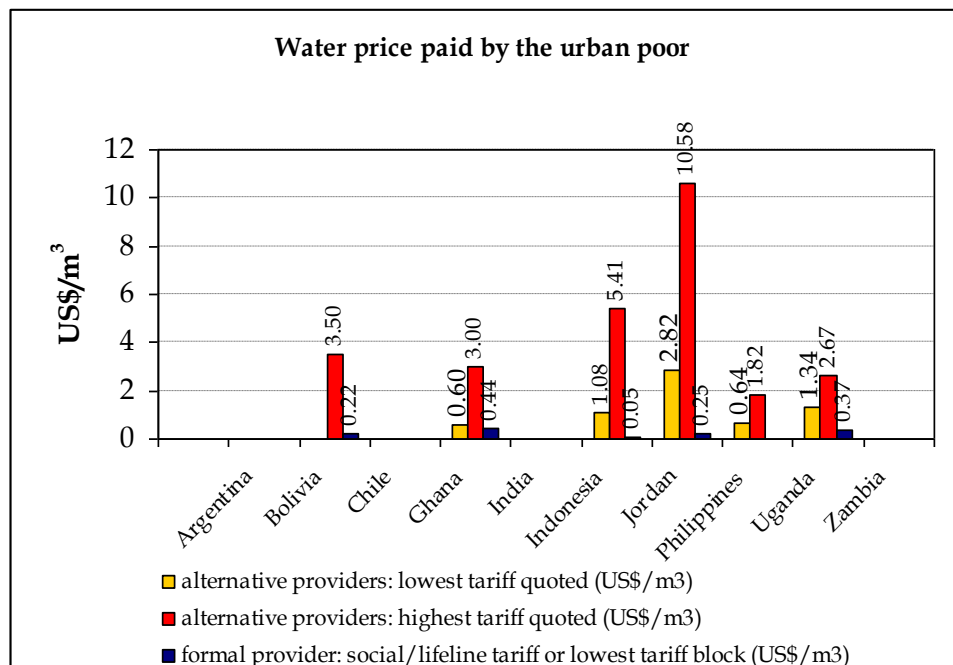
Given a healthy amount of competition, prices will reflect the cost of provision and respond to consumer demand. However, the case studies demonstrate that due to cartel formation and mafia-like tendencies an oligopolistic market structure has developed in some locations, which warrants regulatory intervention in order to control profit-seeking behaviour of some private providers. Compared to the subsidised – usually higher-income – groups able to access piped water from municipal networks, poor households pay significantly more per unit of water (as shown in the graph below right).

Relative to the cheapest domestic rate available from the main provider (sometimes designed as a social or 'lifeline' tariff), the poor may be paying as much as 108 times for water delivered to their home [12], though ten to twenty times the lowest tariff seems to be the going rate for alternative supplies. Worst case scenario figures from Jordan are distorted (43.2 times) as the rich frequently resort to tankers during water shortages, but even here the poor end up paying on

average 11.5 times more when forced to buy tanker deliveries. The Amman case study demonstrates how effective prices paid by low-income households having to invest in coping strategies and accessing alternative providers reach levels comparable to and higher than those paid by high users and high-income customers [10]. Although not pictured in the graph, notable is also the relative stability of formal water tariffs compared with considerable price hikes for alternative suppliers that were observed in some case study locations [12].

The disproportionately high prices paid for vended water by a large fraction of the urban poor raise questions about equitability within the tariff setting framework for conventional providers. The research findings point to a huge revenue potential which could be unlocked. The challenge is for formal providers to penetrate the low-income water market and capture revenue flows being 'lost' to the informal market, which could be used to finance network improvements and extensions allowing the underserved poor to access the economies of scale derived from a piped distribution system.

Conversely, some cases have highlighted the threat alternative providers can pose to the main providers. Where customers are not legally obliged to remain connected to formal networked services, vendors - mainly tankers - are siphoning off lucrative customers



Minimum and maximum prices quoted for water supplied by alternative providers in the ten case study countries (England and Wales omitted). No significant alternative provider activities were observed in Argentina, Chile and Zambia.

## Regulatory Challenges

### Experiences in regulating alternative providers

Attempts have been made to regulate the alternative, small-scale, private market to support low-income urban customers who are most at risk from predatory pricing and water quality lapses. The only example of price regulation for alternative providers has been reported from Ghana, where the regulator PURC sets resale prices for standposts as well as water tankers. Although a Memorandum of Understanding between the tanker operators association and Ghana Water Company Ltd adds a further layer of regulation and encourages self-regulation of members, in practice the system fails with respect to the quality of water delivered to poor customers as effective monitoring systems are not in place. Further regulatory gaps identified by the regulator include complaints handling, mechanisms to reduce prices and counter the development of cartels [7]. The latter is a major concern of the regulator in Jakarta, who is seeking to disentangle the web of water mafias and vested interests in the status quo by promoting transparent community management practices [12]. The Zambian example cited earlier on demonstrates how partnerships arrangements can be very effective in reducing opportunistic exploitation of poor communities by some alternative providers or, worse still, corrupt utility staff colluding with private resellers [11]. However, regulators sometimes struggle to find the necessary support. The Jakarta regulator has been encountering legal and political obstacles when seeking to establish community-based partnership arrangements as interim solutions to help the underserved poor [12]. Deregulation measures, intended to ease access for new market entrants and to relieve the financial burden to customers through lower prices associated with greater competition, may be opposed by incumbent small-scale providers. The legalisation of household resale in Jakarta allegedly had to be discontinued to prevent perceived profit losses of standpipe operators [12].

### Remaining challenges

A number of regulatory challenges remain. One major obstacle to any form of regulation of alternative providers is the major information gap and the limited resources regulators have at their disposal in the face of a large and diffuse market. However, regulators contend that it is the availability of information that determines the quality of regulatory decision-making, and therefore efforts should be made to improve the quality of available data (comments received at the project's *Review Workshop*). This need and should not go as far as

collecting information on each and every alternative provider. The case studies show, however, that it would be beneficial for regulators to have an overview of water sources used by alternative providers, quantities distributed, areas of operation, and end user prices – for customer protection reasons as well as to obtain an estimate of the return on investment achieved by the providers. It was also noted that the required surveying work may exceed capacities of regulators as well as putting additional strains on the regulatory budget. In response to this, it was suggested to seek partnership arrangements with collaborators on the ground (e.g. NGOs, community and residents associations; [8].

Other open questions include how to

- determine an optimum level of regulation and practicable regulatory arrangements that regularise the informal market but do not undermine its flexibility;
- maintain a light-handed approach to regulation in order to avoid the increase in overheads leading to end user prices and/or service deterioration associated with an over-emphasis on high technical standards and formal procedures;
- offer accessible and responsive customer complaints procedures;
- set up effective monitoring and enforcement mechanisms;
- provide legal/regulatory protection for small-scale private investors;
- increase transparency where price regulation is deemed impractical or unenforceable.



Pay per use public showers above, meeting needs at a fair price



# Regulating Alternative Providers?

## Conclusions and Recommendations

Research suggests that in many locations full service coverage through conventional providers (utilities) is unlikely to be achieved in the short or medium term under present arrangements. It is therefore suggested to recognise the vital contribution of alternative providers to urban water service provisions, building upon their strengths and – at some level – incorporating them into the regulatory framework to minimise potential negative impacts on poor households.

The published literature offers very few recommendations on the subject. Most authors put their faith in a loosely regulated market, maintaining that regulation within an adequate legal framework (Conan, 2003) that supports a healthy level of competition will promote expansions whilst ensuring affordability for poor households. Components of regulation that receive particular mention are customer protection (Collignon and Vézina, 2000); (Raghupathi, 2003), transparency and information-sharing, and performance-based regulation is favoured over technical (input) specifications (Solo, 1999).

The aspects of regulation (price, water quality, market entry and market share) relating to alternative providers have been identified in the literature (e.g. Plummer, 2002), but very few tentative suggestions have been made as to what these future regulatory arrangements would have to be. Plummer (2002) recommends relaxing performance standards and exclusivity rights given to utilities, supporting alternative providers in securing legal contracts, revising tariff regimes, addressing land tenure issues and disseminating a “spirit of inclusion” amongst the incumbent large-scale service providers. Trémolet and Browning (2002) propose replacing costly ‘traditional’ regulation through price and quality standards with making performance data publicly available, thus relying on the regulating effects of reputation. “In any event”, they conclude, “the choice of regulatory instruments should be based on a comparative assessment of the trade-offs between effectiveness, ease of implementation and costs and benefits” (p.6).

There seems to be universal agreement amongst the sector professionals questioned during the course of this research that some form of official recognition of alternative providers would be beneficial. Independent small-scale providers could potentially be treated as ‘micro-utilities’ and issued with an operating licence, which would regulate service provision to end users

under similar, though perhaps simplified, terms to those specified for utilities. There is less support for licensing of intermediate providers (vendors and resellers who effectively act as an extended arm of the utility), who may be captured more effectively and efficiently through third-party agreements between utilities and individual alternative providers without direct involvement of the regulator. Some experts argue that the potential for successful regulation is severely limited in the case of certain forms of alternative provision, and only public health considerations warrant continued government involvement:

‘Truck transportation is generally a business better managed by private enterprises, whose regulation by administration is barely effective.’

Collignon, *eConference* [15]

In light of the occasionally expressed opinion that regulators should concentrate on the (explicitly mandated or perceived) key task of promoting efficiency gains from the main, formal providers and making small-scale competitors redundant in the long-term, the question remains to what extent economic regulation should integrate alternative providers into the regulatory framework.

Few practical and immediately executable solutions could be derived from case study findings or were proposed by water professionals involved in this

research. Consumer education is seen as a key factor in addressing the price regulation problem.



Left: Published prices, a good approach which does not preclude tanker drivers selling part loads at full load rates.

One recommendation was to publicise cost and pricing information and thus to exploit the self-regulating effects of making vendors’ price mark ups clearly visible to end users [7,14].

However, whilst some level of price regulation may well be achievable for independent providers (producers), encouraging fair competition could be the best regulatory option for vendors’ resale prices at present. A major consideration here should be the cost-benefit ratio of regulatory intervention, as the associated monitoring and enforcement costs appear prohibitive, especially as overheads would have to be passed on to an already

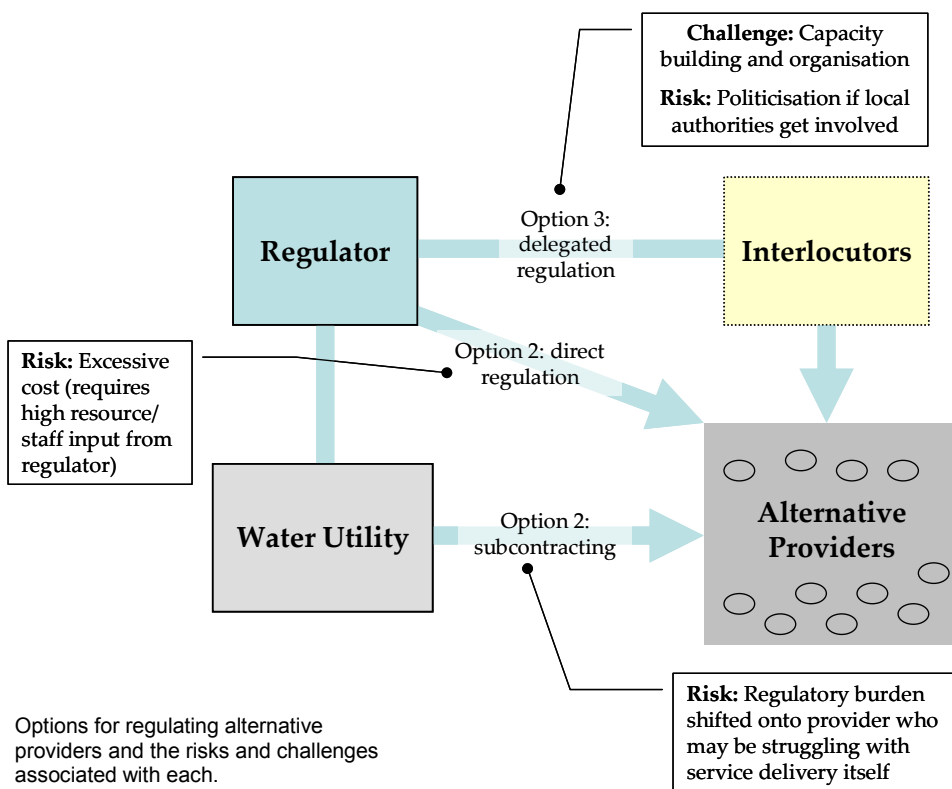
# Regulating Alternative Providers?

overburdened customer base – unless these could be carried out less bureaucratically and efficiently by lower level administration and/or the main provider (e.g. through the above-mentioned third party agreements) – and may simply not be practicable from the regulator’s as well as the alternative providers’ (and consequently the customers’) perspective.

Specific recommendations for preventing monopoly pricing were given with reference to tanker operations. Collignon [15] sees the role of the regulator in guaranteeing equal access to public water sources, encouraging market entry by enhancing tanker drivers’ social status through official recognition of their activities, and reducing overheads by lowering delivery distances and selling bulk water at social rates. Formal bulk water agreements, guaranteeing fixed quantities of treated water to be supplied by the utility at a competitive price, could be overseen by a regulator. In order to achieve maximum impacts in terms of public health, economic regulation of alternative providers cannot be separated from water quality regulation. As with prices, minimum water quality standards are potentially easier to monitor and enforce for independent providers than for vendors and resellers, and the same principles apply. In view of the immediate health hazard, easily accessible complaints procedures need to be in place to report service failures. In line with

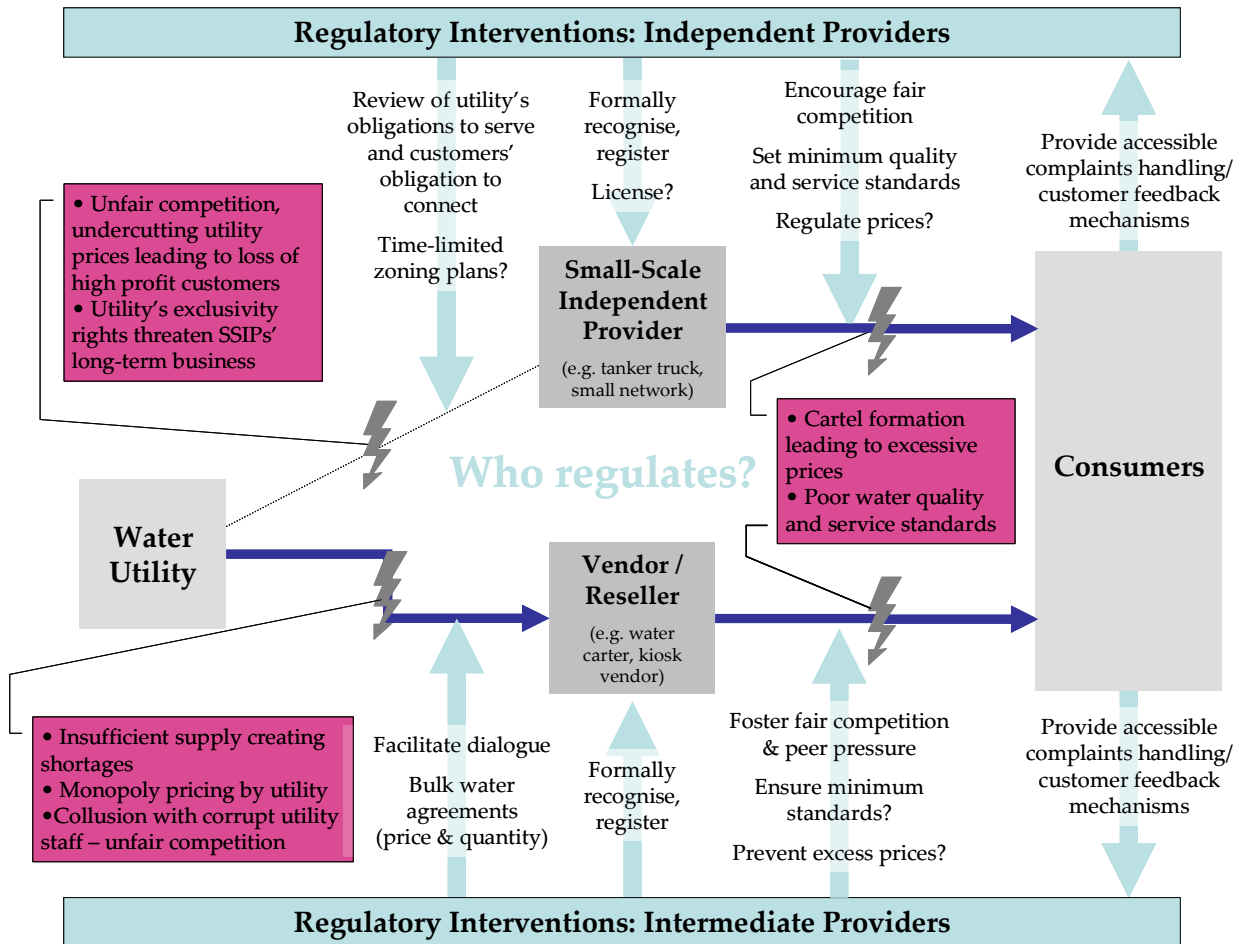
As indicated above, a general framework for regulating alternative providers may have to be set out in legislative terms. The typology of alternative providers in terms of scale of operations, ownership structures and mobility is the determining factor in framing this legislation. Regulators may have to act as facilitators and advisors to policy-makers and demand clarification of the government’s position with regard to alternative providers, as strictly speaking some decisions are outside of regulators’ remit. A regulator, however, could present a compelling case for refining the regulations with respect to service obligations, both with respect to the obligation of a utility provider to connect new customers and the obligation of residents to subscribe of networked water services, as and when these become available. Geographical zoning or time-limited operating licences may be one approach to solving the problem of competition for high profit customers and the undermining of cross-subsidy systems. Here it is important to recognise any vested interests in the status quo, as the examples of illegal ‘collaborations’ between utility staff and alternative providers [12] or large profit margins for government from abstraction charges, where alternative providers access groundwater resources [10] show.

In delineating alternative providers’ spheres of operation, due regard should be given to the regularity of supply, which is often not guaranteed by the main provider, but which this research has shown to be a major determinant of customer confidence on a par with water quality issues. Regulators should formally acknowledge the role of alternative providers in providing a vital public service, and facilitate dialogue between utilities and small-scale partners in order to identify opportunities for win-win solutions which ultimately benefit poor urban consumers. There may also be a role for the regulator to lobby for political (and hence regulatory) endorsement of alternative, community-based partnership arrangements. The diagram (left) summarises the main options for regulating alternative providers and risks/challenges for each - however, it must be stressed that in most cases



# Chapter 16

The diagram below summarises major regulatory risks associated with service provision by alternative providers that have been identified during the analysis of case study data (pink boxes). In response to these conflicts it also suggests potential regulatory interventions (light blue arrows) applicable to independent and intermediate providers respectively. These proposals draw on the recommendations formulated for the different case studies as well as discussions with and between regulators, researchers and various water professionals held during the project Review Workshop and eConference.



Above: Regulatory risks and possible interventions in the alternative provider market

The best approach to 'regulating' alternative providers (including whether and to what extent to regulate them at all) will always be highly case specific. This research may not offer definite answers, but it highlights the regulatory risks that justify some level of regulation of alternative providers. Recognising their role, especially in delivering water services to disadvantaged households, is a first step towards more equitable and sustainable service provision. Furthermore, the case studies give an overview of the kinds of questions that need to be considered in order to extend the benefits of regulation, such as enhanced consumer protection, to the often poor urban customers of alternative water service

providers, whilst building on the flexible service approach the best of the alternative providers can offer. Regulators face many challenges and may have to temporarily embrace less conventional arrangements in the pursuit of the ultimate goal of an affordable water connection for all households, irrespective of their incomes. Efforts need to be made to give incentives to utilities to take over their small-scale counterparts' customer base, hence enabling the urban poor to benefit financially from large-scale service provision without losing the convenience and flexibility of a small, local provider.

# Chapter 17

## REGULATORY TOOLS: CUSTOMER INVOLVEMENT



Consumers and the media, Yorkshire, England



Consumers Forum, Jakarta, Indonesia



Water Watch Group, Lusaka, Zambia

The goals for economic regulation of monopoly service providers from a customer perspective are to ensure:

*Effective, resilient service delivery at a fair price, taking into account well targeted subsidies when necessary, to ensure service which is equitable and sustainable with adequate incentives for efficiency.*

*Protection of consumers against monopoly abuse through transparency in price setting, complaints adjudication and fair compensation for service failure where appropriate as incentives for effectiveness.*

Both of these goals require some level of customer involvement in decision-making if they are to be successful over the long-term.

***'I intend that the Customer Service Committees will play a major role in ensuring that the interests of customers get high priority'***

Ian Byatt, 1989, first E&W water regulator in *'the first public statement I made as water regulator'*

**Why Customer Involvement ?**

**What is Customer Involvement?**

**To what extent should Customers be involved?**

**To what extent do Customers want to be involved?**

**Which Customers should be involved?**

**What should Customers be involved in?**

**How to involve Customers?**

**What style of Customer Involvement is best?**

**How effective is Customer Involvement?**

***Focus on LMICs: Involving low-income Customers in the regulatory process - A practical guide to focus group discussions***

# Customer Involvement in Economic Regulation

## Why Customer Involvement ?

**Feedback:** Customers normally give service providers feedback through their purchasing choices, positive and negative, which is used to adjust service levels and options to match user needs and preferences. For a monopoly provider of a product which everybody has to have every day this 'natural' feedback is missing. Customer involvement acts as a substitute for the missing feedback link between consumers and direct service providers. Regulators similarly need this feedback to inform their pricing and

Customers: To ensure better services  
Providers: To ensure demand-responsiveness  
Regulators: To inform decision-making

**Failure to meet customers' expectations leads to loss of legitimacy and ultimately to service failure.**

service standards decisions.

**Empowerment:** Formalised customer involvement enables and promotes the central principles for effective and sustainable social development as identified by major development institutions (World Bank Social Development Department, 2004):

The *inclusion* principle, by promoting equal access to opportunities and participation in development activities for all citizens, secures public support and increases the chance of sustainable outcomes.

Building *cohesive societies*, in which formal and informal groups are encouraged to join hands to address common needs and resolve differences, use dialogue and information to open new channels of conflict prevention and resolution.

Customer involvement makes institutions directly accountable to the public. *Accountability* is the obligation of all of those who can exercise political, economic, or other forms of power. Accountable institutions carry out their assigned functions in a transparent and responsible manner, and respond effectively, efficiently and fairly to people's needs.

## Which Customers should be involved?

•All customers - which in the urban context includes domestic, institutional, commercial and industrial users, as well as urban agriculturalists;

•Disadvantaged and vulnerable groups, critically including *potential* customers;

•Key consumers - women.

In lower and lower-middle income countries, where a

significant proportion (if not the majority) of the population is currently unserved or underserved by formal water service providers, there is a need to engage with these marginalised groups. In the context of this research programme, ensuring that the views of the peri-urban poor, the slum and shanty dwellers, are recognised and acted upon is a priority concern. Giving a voice to the customers of the variety of informal/independent/alternative service providers (see Summary Paper No.16 in this series)— to the extent to which they might wish to become customers of the formal provider — helps regulators and utilities to design appropriate formal services and in the meantime provides a mechanism for monitoring prices and quality of this semi-competitive vendor market.

## What should Customers be involved in?

•'Everything' - Water experts need to recognise that whilst customers will not always be 'correct' their opinions deserve to be heard.

Present customers:

•*Can anything be 'off-limits'?*

No, not even 'commercial confidence' for a monopoly supplier of a 'merit good'.

•*What are customers' particular areas of interest?*

Failure of service in customers' home/street, levels of service; tariffs; utility's technical competence, financial performance and efficiency.

Potential/future customers:

•Service planning, demand and needs assessment, service monitoring, awareness raising (e.g. on the necessity of user contributions, links between water services, health and hygiene).

## How to involve Customers? Theory and practice

There is a whole spectrum of public participation with varying degrees of involvement on the part of the "participants". Likewise, a range of methods has been experimented with. The remainder of this Summary Paper is dedicated to the findings of the Regulating Public and Private Partnerships for the (Urban) Poor research programme, which are discussed in light of the theory and international best practice on public participation. It aims to answer questions such as

•*How formal, sophisticated or expensive does customer representation have to be?*

•*What are appropriate ways of engaging the 'hard-to-*

# Worldwide Experience with Customer Involvement

reach' present and potential customers?

Although customer involvement is generally supported – at least at the policy level – in the case study countries, even the most established 'Customer Committee' systems have difficulty reaching the poorest members of society. Quite often the various regulatory agencies still have a long way to go in communicating their functions to the general public, let alone poor communities whose daily lives so far have been little affected by the activities of regulators.

## Customer involvement around the world – research findings

In the majority of case study countries the existing level of active customer involvement is low, and UK-style formal customer representation remains the exception. Where regulators are attempting to replicate the **England and Wales (E&W)** 'customer committee' model (now formally renamed Consumer Council for Water), there is a tendency to start by establishing links with existing residents', neighbourhood or consumer associations [6,7,9 (see Note below)] or local customer committees are formed to act as grassroots NGO-type organisations [12]. In **Ghana**, the regulator's plans to set up formal customer committees have reportedly stalled due to funding shortages and the fear of undue politicisation [7]. The **Bolivian** regulator meets with representatives of the Federation of Neighbourhood Associations on a weekly basis [9]. ETOSS, the regulator of the **Buenos Aires** concession, formed a commission from local consumer organisations, who were given full access to all information [6].

**Zambia** has developed a unique system, where Water Watch Groups (WWGs) serve as a formal link between the regulator and customers and provide valuable feedback on services delivered by the regulated companies. The WWGs have similar complaints handling functions to the E&W Consumer Council for Water Regional Committees but their powers and responsibilities extend beyond a mediator/facilitator role, as the rationale for establishing the WWGs was to directly involve communities in service quality monitoring. Members of the WWGs also play an active role in customer sensitisation and education, particularly in peri-urban and low-income areas [11]. In recognition of the WWGs' effectiveness the Zambian energy and telecommunication regulators are seeking an alliance with the water regulator to expand the scope of WWGs to encompass the three infrastructure areas by adding representatives from the energy and

telecommunication regulators. The water regulator, Oswald Chanda, welcomes this as a positive step: 'It a first in terms of regulators working together in this manner and we hope further cooperations could be



These members of the community in Lusaka have volunteered their services to ensure water consumer rights are protected.

developed' (Chanda, personal communication, 2005).

Following the successful launch of a quarterly Customer and Community Communication Forum by the **Jakarta** Water Supply Regulatory Body as a formal communication platform between water sector stakeholders, Water Customer Committees (WCCs) were introduced to facilitate more effective two-way communication between communities and service providers. Besides complaints handling and lobbying for service improvements on behalf of underserved communities, the regulator values the WCCs' role in facilitating acceptance of tariff increases and promoting understanding amongst customers [12].



Consumer Forum, Jakarta, Indonesia

Research from **Chile**, which features one of the stronger regulatory systems in the developing world, reports the view of the official consumer bodies that consumer protection is rather weak. It is said that 'SSIS [the economic regulator for water services in the country] is not in the middle between the company and the consumers' [5]. Presumably the intended

*Note: Numbers like this one refer to the relevant summary paper, so 12 here stands for the Jakarta case study.*

# Research Findings

Table 1: Arrangements for formal customer representation in the case study countries

Case study findings	Formal Customer Representation		
	Structure	Membership	Level of independence
Argentina	Customer Committee	NGO representatives	Independent Committee
Bolivia	Advisory Meetings	NGO representatives	Independent NGOs
Chile	-	-	-
Ghana	Customer Committees (planned)	-	-
India (electric)	Advisory Committee	NGO representatives	Independent NGO
Indonesia	Customer Committees & Forums	Open (largely local politicians at present)	Part of regulator
Jordan	-	-	-
Philippines	-	-	-
Uganda	-	-	-
Zambia	Water Watch Groups	Open	Part of regulator
England & Wales	Consumer Council	Open	Independent QUANGO, previously part of regulator

regulatory’ case study remains silent on customer involvement issues [14], the **Jordanian** research revealed that to date there is no customer consultation culture in the country, and formal customer representation may not be appropriate at this point in time [10]. **India**, another ‘pre-regulatory’ case study describes the newly developed pattern for electricity regulation with an Advisory Committee which includes a customer focused NGO to advocate consumers’ concerns at policy level and which runs customer

criticism refers to the lack of a framework for customer involvement, which is required to validate and inform the regulatory process. [Customer representatives are better placed as intermediaries between customers and providers and can inform the regulator, who should remain independent in order to retain his credibility.]

So-called ‘performance cafés’ or ‘performance corners’, designed to provide information for customers on the concessionaires in Metro **Manila** where there are no formal customer involvement mechanisms, had been developed through external support, but in this research were found to be no longer operational [8]. Whilst the **Ugandan** ‘pre-

awareness and capacity-building programmes as precursors to establishing customer committees [13].

Table 1 (above left) summarises formal customer representation mechanisms in the case study countries, including aspects that will be discussed in more detail in the following section.

Figure 1 (below left) compares the current level and extent of customer involvement in the case study countries relative to Arnstein’s *Ladder of Citizen Participation* (Arnstein, 1969) and a more recent variant of the spectrum of public participation published by Robinson (2003).

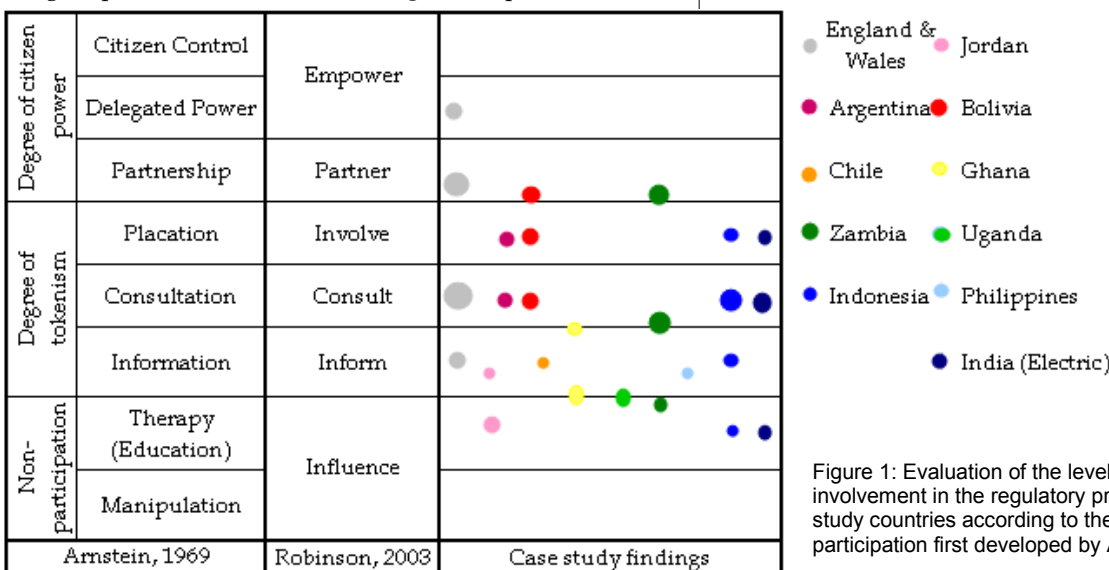


Figure 1: Evaluation of the level of consumer involvement in the regulatory process in the case study countries according to the spectrum of public participation first developed by Arnstein (1969).

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# Risks and Constraints to Customer Involvement

As indicated, the majority of regulatory systems support some measure of customer information and consultation, though more often than not information verges on consumer education, which is considered a more limited stage of participation. As long as information and/or education are treated as 'necessary but not sufficient' stages for higher level involvement, this could be justified by the relative youth of many systems. So far very few allow involvement beyond consultation, and the leap into the top ranges of empowerment or partnership appears to elude all but an enlightened minority and may even represent a 'step too far'.

It is interesting to note that the ratings for customer involvement seem to bear little relationship with the countries' 'voice and accountability' score awarded to the national governance system by the World Bank governance indicator survey (Kaufmann et al. 2005). The regulatory system in Zambia clearly has transcended the barrier that reportedly exists for citizen participation in government matters according to this data. Progress observed in Indonesia, a country which scores equally poorly on 'voice', is remarkable. [The voice and accountability indicator measures political, civil and human rights.]

## **Risks and constraints of customer involvement**

The combined experience from the case studies shows that customer groups or committees face a number of constraints, which can severely limit the effectiveness of customer involvement. Questions that need to be addressed include membership, resources and remit, capacity and organisation, objectives for involvement and how to maintain focus and avoid politicisation. The following analysis is biased towards formal customer representation arrangements, but lessons can be learnt for other consumer involvement mechanisms, which are discussed subsequently.

### *Independence and interdependence of customer involvement*

The level of independence of (formal) customer representatives from the 'parent' regulator seems to be regarded as a prerequisite for effective customer involvement, as implied by the recent changes in the E&W regulatory system. After 16 years of successful cooperation the close relationship between Ofwat and the customer committees was deemed by a new national government to be no longer appropriate and

discontinued. The Consumer Council for Water now operates as an independent statutory body [4]. An analysis of the case studies can give no definite answer as to which arrangements are most effective and hence would be preferable. If anything, the findings suggest that the non-independent groups and committees enjoy high levels of support from the respective regulators, which contribute to their successful operation rather than diminish their value in the public eye.

### *Membership, representativeness and sustainability*

In three of the four countries where formal customer representation exists, membership is open to all interested individuals. While customer committees in the UK and water watch groups in Zambia are formed following an open recruitment process [4,11], Jakarta's customer committees comprise mostly local politicians from the lowest administrative level [12]. The intended benefit for this arrangement is to exploit existing links between administration, customers and providers. In contrast, vacancies are advertised and posts awarded competitively on the basis of experience and motivation in the case of Zambian WWGs [11]. The E&W system stresses the importance to bring lay and particularly local knowledge to the discussions and seeks to appoint a range of members to represent a balance of interests, gender and ethnic background [4].

The voluntary nature of customer representation, which is presently the norm, is affecting membership. The average committee member in England and Wales could be described as 'middle-class professional early retiree looking to make a public service contribution'. Small payments have been introduced under the recent reform, and are envisaged to encourage a wider membership in order to achieve a more accurate reflection of society and the various customer groups but initial indications show little change [4]. The absence of allowances for members of WWGs has led to a number of vacancies in Lusaka [11]. The findings seem to suggest that incentives are required to ensure true representativeness and sustain customer involvement at the partnership level, though the nature of incentives (financial, social status, etc.) may depend on the economic conditions and cultural attitudes. Daily wage earners, for instance, cannot afford to commit time to non-essential activities, so that a lack of financial recompense may automatically exclude some of the poorest.



## Involving Low-income Customers

The considerably large proportion of the regulatory budget (14%) allocated to customer involvement reflects the Jakarta Water Supply Regulatory Body's commitment to engaging with consumers [12]. Reports from Zambia suggest that the current level of funding for WWGs is inadequate compared with the workload, and the scope of activities is limited by time and financial resources [11]. Recent reforms in E&W have made the customer committees, previously part of and funded by the regulator Ofwat, financially independent by imposing a separate levy on water companies [4]. Worldwide experience to date does not suggest that either mechanism is preferable in terms of allowing customers to inform and influence the regulatory process.

### *Capacity, focus and the dangers of politicisation*

As the selection process in Zambia partly indicated, capacity of representatives both in terms of technical

'[Water companies in England and Wales] treat the opinions of committee members as comic illustrations of their lack of understanding of the realities of running a business.'

Page (2003) , [4]

'The commission has ample access to all the documentation, but it has been proved the commissioners are not sufficiently trained to deal with such amount of technical information. In some cases their misinterpretations require clarifications from regulator's staff.'

Interviewee, ETOSS, Argentina, [15]

and social understanding is essential for successful inputs into the regulatory process. High turnover of members or short tenures can be a significant factor, as new members often require training to perform their assigned tasks. Without strong support, capacity constraints can undermine confidence in the value of customers' contributions, as the following comments illustrate:

These observations illustrate the need to develop 'strong knowledge' (see table 2, next page) for customer representatives to become competent and respected partners in the regulatory process. Care must be taken not to create an 'enlightened elite', however: In order to be effective, customer representatives need to retain to the capacity to access 'weak knowledge' of the average customer, who will not have a detailed understanding of the water industry and the policy

making process.

The England & Wales experience demonstrates how customer pressure can stimulate the evolution of the regulatory and policy framework, which has led to significant improvements for disadvantaged households (e.g. ban on domestic disconnections and the new primary duty for the regulator to 'further the consumer objective', giving regard to low-income and vulnerable customers; Water Act 2003). However, it is most likely that these changes resulted from political and civil society involvement separate from the 'official' customer representatives [4]. Civil society pressure in Bolivia has proven similarly powerful, though the eventual retraction of the La Paz-El Alto contract from the private company and the high turnover of water regulators in times of political turmoil arguably will not have the desired effect of enhancing service delivery for the unconnected poor [9]. Both, in different ways, highlight the political nature of economic water regulation. There is a danger of politicisation of customer committees, whose close affiliation with local, or indeed national, politics may prevent them from acting as (or being perceived as) independent representatives of consumer interests (e.g. Indonesia [12]). Research findings suggest a tendency of consumer organisations to adopt either a political profile or alternatively being used as political pawns. There is a risk that in doing so, customer representatives veer from their original objectives or prioritise areas of their own interest. In a low-trust society this may pre-empt the successful introduction of customer representation as the public views its 'representatives' with some suspicion [10]. On the other hand, politicians may prefer to suppress customer involvement to protect their own interest from the 'threats' of community empowerment [13].

### *Involving poor consumers*

Whatever the format of customer involvement, where in operation, surveys found that low-income customers and unserved households rarely have any grasp of the existence or functions of regulatory bodies and their customer representatives [7,8,11,12]. Low-income focus group respondents in Manila pointed out that even if they were aware of customer forums or water associations operating in their area, the time, cost and social connections required prevent them from accessing their services [8]. Outreach activities of regulators often fail to target the poor effectively. Internet-based information services are inaccessible to

# Customer Involvement in Practice

the poor, who also do not appear to be the target audience for newsletters and other published information. The local media is successfully used to reach wide audiences, with radio programmes proving popular even with the poor. Furthermore, it appears that without dedicated staff for pro-poor service development and a clear pro-poor mandate, regulators and customer organisations alike rarely tend to make the poor a priority. The customer commission established by ETOSS in Buenos Aires, for example, was reported to concentrate on quality of service in areas already served by the utility, rather than trying to improve access for poor households in unserved areas [15].

There are a number of reasons why involvement of poor households would be beneficial, and why involvement should not be seen as an 'add-on activity'. Early engagement helps to match user preferences with available service options, or perhaps to innovate such that services offered match consumers' ability and willingness to pay. Involvement thereafter can be of a very practical nature, as the Latin American cases have shown (and indeed the many self-help schemes that can be found in most countries), with communities making in-kind contributions – mostly labour – towards formal services [6,9]. From a regulatory perspective this is highly beneficial as it reduces the frequently cited 'barrier to access', connection charges. Consumer involvement should, however, not end at the project implementation stage.

Continuous involvement should be the aim as customers may have valuable inputs with respect to further service improvements and need to be informed and consulted in the tariff adjustment process. It may also assist in the process of supporting equitable revenue collection which ultimately benefits all customers as bad debts are necessarily transferred to paying customers, rich or poor alike, through increased tariffs and/or reduced quality of service.

Regulators and service providers may have some reservations regarding involving the urban poor, who end up being labelled as 'hard to reach' (e.g. Jordan [10]). Often, however, these are simply due to a lack of capacity to deal with consumers who do not fit standard (imported?) models and a lack of training in participative consultation. Household interviews and focus group discussions undertaken for the research project have indicated considerable interest amongst poor consumers in regular involvement, provided regulators (and/or service providers) are proactive, giving adequate briefings and feedback on results of any consumer engagement activities. The availability of specifically trained staff would be advantageous for soliciting the views of the urban poor who describe themselves as 'often uneducated, afraid of authorities, lacking time and money to "voice" our opinions' [8].

### *Types of consumer involvement*

There are varying degrees of formality and sophistication – and cost – for different models of

Table 2: Customer involvement mechanisms appropriate for different scenarios, highlighting some positive and negative aspects of each major example (Franceys, 2006)

	Appropriate Customer Involvement Mechanisms			
	Involving large numbers of customers ('non-deliberative')		Involving small samples of customers ('deliberative')	
	Questionnaire surveys Quantitative tool		Focus Groups Qualitative tool	
'Weak' knowledge issues relating to everyday experience	standardised information; time series and targeting (location, income groups) possible	sampling may conceal issues pertaining to certain groups only	facilitates detailed understanding of customer perceptions with immediate feedback/moderation	Costly & time-consuming; limited reliability ('snapshot' overview)
'Strong' knowledge requires exposure to regulatory process, detailed understanding of water issues	Consumer Forum Large, open meetings to air major issues		Customer Committees Direct challengers to providers?	
	can be (moderately) interactive; good publicity?	agenda likely to be determined by influential/ confident speakers; can be superficial?	direct involvement in complaints adjudication/ auditing; educator role	members need adequate resources & training; representativeness difficult to ensure; danger of capture

## **Involving the Poor: Focus Group Discussions**

customer involvement. The appropriate degree of participation in terms of influence and decision-making power awarded to customer representatives (c.f. figure 1, p.5) depends on the complexity of information and the consequences of decisions to be made (as discussed in the contemporary public participation literature, e.g. Robinson, 2003). Table 2 (below left, p8) summarises some customer involvement techniques that, based on the findings of this research, could be recommended as appropriate for the regulatory context. Techniques should be selected according to the target group (in terms of their understanding of the issues at hand and the number of customers to be involved) and the aims of the involvement exercise.

Regulators have successfully used non-deliberative methods to gather information on the entire customer base and/or specific segments [4], and have also been able to use large public forums for education and stakeholder interaction purposes [12]. Advantages and risks of deliberative methods, which actively engage the lay public in discussion, have been discussed above (in the case of formal customer representation).

In the context of involving poor and disadvantaged customers, there are arguments for and against representation by interested individuals or some form of associations. Proponents view NGOs as facilitators of constructive dialogue and participatory performance monitoring, who can also play a strategic role in identifying communities in need of assistance and educating consumers [15]. However, NGOs are not immune to political influence and may represent a regulatory risk if too influential with regulators. [Regulators may succumb to NGO pressure for fear of negative publicity, which is only another form of regulatory capture. ]

If 'intermediaries' – whatever their background and affiliation – are chosen to represent customer interests on behalf of poor households or entire communities, they must be chosen carefully, taking into account experience in working with the urban poor and technical competence. More direct interactions between regulators and poor consumers, which were only occasionally observed in the case studies (as for example when one regulator travelled with some participants of a consumer forum directly to a slum area for discussions [12]), could be an opportunity for regulators to gain first-hand information on their most disadvantaged protégés. It was one objective of this research

programme to find out if and how such exchanges could be facilitated.

### **Focus group discussions (FGDs)**

Focus group discussions and FGD methodologies were piloted in selected low-income areas in Uganda, Zambia and the Philippines. [Pilot countries were chosen primarily on the basis of available qualified field staff.] The discussions were found to be a useful method for exchanging ideas and crystallising of key concerns of poor consumers, which could form the basis of on-going two-way communication between regulators and the urban poor. (Details in the tools section on page 10/11.)

Participants responded positively, expressing an interest in regular FGDs provided they would prove to be mutually beneficial [8]. The fairly informal atmosphere in the small groups and the presence of a skilled facilitator allowed all participants to express their views, and were preferred to the public meetings which double as 'customer involvement' in some places (e.g. Zambia [11]). From a research perspective the FGDs were a useful tool to gather facts and opinions and prioritise the key problems affecting a household's level of service, information which would be equally useful for feeding into the regulatory process. The relative simplicity of FGDs was noted as positive [14]. Respondents would welcome the direct participation of regulators and service providers [8,11], such that the FGD methodology could also serve to increase the 'visibility of regulation' within low-income communities. All three pilot studies stressed the importance of making information available in good time to allow participants to prepare for the meeting and make informed contributions, and subsequently to

Below: Focus group trials, Lusaka



# Regulatory Tools: Focus Group Discussions in Low-

disseminate information about outcomes of the discussions and next steps to the community [8,11,14]. Where the target group includes daily wage earners, a small allowance may need to be paid to compensate for loss of income as an encouragement for the poorest to participate [8,11].

## Rationale

There are a number of participatory methodologies and approaches that have been developed for interacting with low income groups when new service improvements are proposed, such as willingness to pay surveys and *Participation, Ranking, Experience, Perceptions & Partnership* (developed by WEDC, 2004). These methods include demand assessment exercises with a view to implementation.

The proposed regulatory focus groups, however, are primarily intended to be used as a monitoring tool once services have been provided, rather than being a tool for planning new services. Rather than simply monitoring opinions on key issues, the proposed 'low-income consultation focus groups' are intended to reinforce or mimic the regulatory customer forums, where key issues or problems are explored in more depth. The outputs from such focus groups when triangulated with other research methods (customer forum, consumer surveys etc.) should enable the regulator and any existing customer forum to have adequately consulted the low income people in a particular city. FGDs are intended as part of the ongoing customer involvement process, such that repeat FGDs should be planned (yearly intervals).

## FGD methodology

### Phase 1: Planning focus groups

- Facilitators (it is advisable to have a trained facilitator and a co-facilitator) familiarise themselves with the proposed methodology, the topic guides and jointly with regulator/consumer representative/service provider participants explore possible 'probes' (i.e. potential regulatory issues of concern) to use for each of the topic areas.

- Team decides and agrees criteria for selecting participants. Existing geographical/administrative unit should form a first level sampling frame. The key is to ensure that most of the groups in the target area(s) are represented in the focus groups. (e.g. utility customers

- water vendors, those with yard connections, house connections – and indirect customers, i.e. those people who buy from on-sellers or vendors etc.). Determine number of focus groups required: It is advisable to avoid mixed groups of connected and unconnected consumers. Separate groups for men and women should be considered.

- Each focus group should not exceed 10 people and not be less than 6 people (especially where recorded), though it sends a positive signal to welcome the uninvited and listen to their opinions.

- Optional*: Prepare invitation letters prior to recruiting participants (depending on culture).

- Using the participant profile developed, design a short recruitment questionnaire (15 mins maximum). Visit target area for recruitment of suitable participants close to proposed date of FGD, and distribute invitations, where applicable (possibly use intermediators, who may act as contact person for regular FGDs). Arrangements regarding timing, venue, transport and incentives (e.g. refreshments on the day, complimentary water vouchers) need to be discussed with participants and firmly agreed. Compensation for loss of income may need to be negotiated to allow the poorest of the poor to participate.

- Inform participants of the FGD agenda, allowing enough time for them to make the necessary preparations for the discussions. Provide background information, in an appropriate format.

- Prepare materials required for the focus group (co-facilitator, at least a day before): tape recorder, tapes, batteries (where used), refreshments, incentives, flip charts, pens and papers, tables, chairs, name tags (if used, first names only), etc.

- Venue: ideally seats 6-10 people in a u-shaped or circular position around tables, with as little distraction as possible so that the participants can concentrate fully on the discussion. If it is not possible to get a convenient venue inside the target area, transport fares should be provided to a nearby alternative.

### Phase 2: Facilitating focus group discussions

Depending on context, and subject to skilled facilitation, FGDs of about 1.5 hours in length can give useful results. In some contexts, a less prescriptive schedule and longer (open-ended) FGDs may be preferable. It may help to conduct the FGD in local languages, where these differ from the official language.

## **Income Areas as Customer Involvement Mechanism**

- Arrive at the venue well in advance of the agreed time to set up the seating arrangements, test the recording equipment and welcome the participants as they arrive.

- Introduce the FGD team and ask participants to introduce themselves, hand out name tags (neither of the latter two may be necessary where people know each other). Outline the purpose of the discussion.

- Formal FGD:* Ask the participants' permission to use tape recording and mention that they should feel free to stop the tape if they do not want a particular discussion to be recorded.

- Informal FGD:* Begin with an 'energiser' (prayer, song, etc.) or story-telling.

- Start with more general questions and then get down to the specific questions by introducing typical key topics areas for probing (use pictures if appropriate):

Examples: Current levels of water service (including adequacy of: water quantity, quality, taste, timing, reliability, pressure etc), water leakage, water security (e.g. water storage for improving reliability of supply), obtaining a water connection, buying water from neighbours, on-selling of water, buying water from standposts/kiosks, utility responses to complaints and requests, water bill payment arrangements, fairness of tariffs, etc.

- Ask if there are any *other* areas of concern and discuss. Then proceed with participatory ranking of the key issues or areas of concern in order of the most concern.

- Explore the most important priority issues (e.g. top 3, depending on time available), probing each priority topic area considering questions such as 'why', 'how', 'who' and 'what if'-type questions. Continue listening, transcribing and further probing until a clear picture emerges of the groups' concerns. Consider with the group how best to overcome the problem, consider the next priority area. Consider the groups' views on any new utility initiatives (e.g. new bill payment arrangements). Ask how the utility performs relative to other utility service providers such as electricity and telecoms.

- Ask if there are any other burning issues and discuss.

- The facilitator should concentrate solely on moderating and probing while the co-facilitator should focus on taking notes. At the end of the focus, the facilitator may invite his/her assistant to summarise the key points from the discussion. This creates an

opportunity for the participants to make comments on the notes and clarify various issues. Where the more formal tape-recording and note-taking is not used, co-facilitators may note down important points on flip chart paper on the wall for everybody to see.

Participants thus work out the important issues as a group (FGD as a consensus-building exercise).

- Discuss any feedback/follow-ups/updates on the outcomes of the FGD: Discuss how information and the results of FGDs will be used and by whom, and how they will be made available to the participants. Also discuss what actions can be expected from regulators/service providers, and how feedback on outcomes will be reported to the community.

### *Phase 3: Evaluating discussions*

- Transcribe recordings – this is best done on the day of the FGD, but in any case before commencing another FGD: The facilitator and his/her assistant should go through the notes and try to prepare the transcript based on the topic guide used. Try to combine the notes and the tape records in order to fill in gaps. If possible, transcribe the tape in full, although this can be very time consuming.

- When transcripts for the various focus groups have been completed, exchange transcripts with the other teams if there is more than one facilitating team. Provide the team with some index cards or 'post-its' to enable them to write down each of the key quotes emerging from the FGD. Ensure that the index cards are clearly identified with the group for which the transcript is being analysed.

- Each facilitator and their respective co-facilitators should work on the transcripts that they have been allocated, to extract/highlight the quotes that express issues related to the different topic areas: Place 3 –5 flip charts together on a wall. Write each of the broad topic area on the flip charts, at the end you should have something that looks like a big table or spreadsheet. Go through each point on the index cards in detail and then write them down under the correct heading on the flip charts. Look for similarities or quotes that point to similar issues, even though they may not have been

*Particular acknowledgements are due to Amaka Obika, Astrid Banda, Kevin Sansom and Sam Kayaga, WEDC, Loughborough for their work on the focus group guidelines*

# Customer Involvement and the Poor

recorded under the relevant topic area during the discussion. The aim is to carefully categorise each comment or quote, rather than just sticking 'post its' up on the wall.

•After compiling the key points on flip charts, go through the lists to identify the trends of 'key issues' and summarise in the FGD report including some of the quotes from the transcripts.

In conclusion the case studies demonstrate recent trends in water services delivery and regulation which necessitate more formalised customer involvement arrangements.

Where water service provision is a function of municipal departments, local councillors (as part of the same entity and democratically elected, direct customer representatives) might reasonably have been assumed to have adequate inputs into decision-making on behalf of customers. The shift towards commercial operation of water utilities has removed this 'involvement by default' as it separates operator and regulatory functions. In order to balance the institutional arrangements, where there may be no explicit role for customers except as service recipients, formal customer involvement mechanisms are required to give customers a voice in the regulatory process and hence a means to influence service delivery. To the extent that there is *customer power* over the formal provider and a *citizen voice* involvement in policy-making (World Bank, 2004) there has to be similar, with perhaps more immediate effect, citizen and customer involvement in the regulatory process.

Formal customer involvement as part of the regulatory process is a way of institutionalising this right to be heard (fig. 2), for conventional customers of the formal provider, for present customers of informal providers and for future customers of an effective service provider.

The research findings suggest that there is scope for developing this more inclusive framework for consumer involvement, which specifically targets disadvantaged households. The 'how-to' section (p.10&11) gives confirmation that poor, presently unserved, customers are very interested in and willing to be involved in improving their access to good enough water supply.

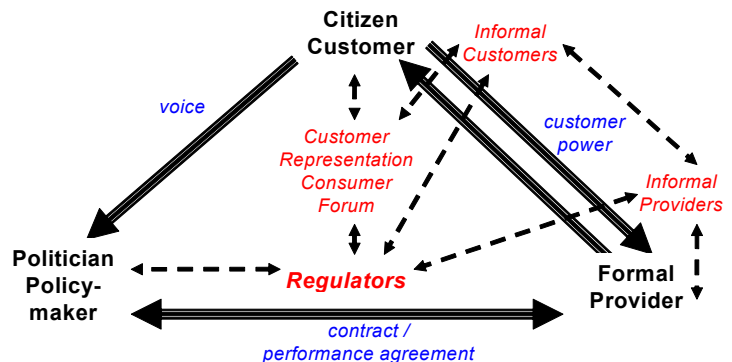


Figure 2: Customer involvement in water regulation

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“...if regulation is the impartial referee in the football match between the government/policy-makers and the utility direct providers (agreeing fair prices in return for societal desired standards), with the customers in the stands expecting a good performance, then the customer forum/customer committee is the biased linesman shouting off-side whenever the game seems to be going against customer interests . . .” (from *Regulating Summary Paper 1 p7*)

# Chapter 18

# REGULATORY TOOLS: TECHNICAL



Meters replacing hand-pump, Manila, Philippines



Making pit latrine slabs, Juba, Sudan



Compound housing, Accra, Ghana

## PERI-URBAN WATER SUPPLY AND SANITATION

In lower-income countries, and particularly amongst lower-income communities, the regulatory process needs to recognize alternative means of delivering clean water and sanitation in order to achieve the Universal Service Obligation. Achieving USO should not default to the level of a standpost serving a hundred families. This summary sheet illustrates some of the many variations of service and pricing differentiation to serve the poor which can be considered by economic regulators in agreeing asset management plans for peri-urban areas. Although apparently requiring a 'lowering' in technical standards all these methods have been used and have enabled the delivery of effective water and sanitation services to the poor at a level which householders report is much more satisfactory than queuing at 3.00 am for water from a standpost.

### *Service and pricing differentiation to serve the urban poor*

## WATER

Individual connections:

*In-house*

*Pre-paid metered*

*flexible pipes to meter/  
valve clusters*

*Daily filled overhead tank*

*Daily filled ground tank*

*Yard connections/taps*

Communal or shared yard connections/  
taps

Communal connections with tank

Staffed Public Standposts

*/with storage*

Pre-paid standposts

Public Standposts

Drinking fountains

Private vendors

*Tankers, carters, neighbours on-selling*

Bottled water & Sachet water

## SANITATION

On-plot sanitation

On-site sanitation

*San-plats*

*Sealed lid*

*Ventilated Improved*

*Pour Flush*

*Single Pit*

*Twin Pit*

*Sealed pit*

Community Toilets

Pay & Use Communal

Toilets

Sewerage

*Condominial*

*Reduced cost*

*Conventional*

Author: Richard Franceys and photo credits unless noted.

Diagrams from: "Serving All Urban Consumers: Sansom, K., Franceys R, Njiru C., Kayaga S., Coates,

# Regulatory Tools: Technical

This summary brings together the numerous ways in which service to the poor can be differentiated to meet the various levels or segments of poverty identified earlier: the Destitute, Very Poor, Coping Poor, Developing Poor and vulnerable Lower-middle Income Households.

The premise of economic regulation is that services provided should be, to the greatest extent possible, cost reflective. The goal therefore is to match a level of service provision to the affordability of the majority of consumers. This is the demand responsive approach which has been long recommended in the water sector.

DRA effectively combines technical, social and financial goals into one tool. The reason for this pictorial approach is to provide a tool to future customers, as well as regulators, to assist in the process of choosing what is required. Matching the affordability and willingness to pay of peri-urban households to the appropriate delivery mechanisms with reduced cost tariffs for simpler, 'differentiated' technology is described in more detail in "Serving All Urban Consumers: a marketing approach to water services in low- and middle-income countries" (WEDC & IWE, 2004).

**Table 3.2. Water service options for selected variables in urban areas**

Location of water delivery point	Max 100m	Max 25m	Yard	House
Pressure	As in conventional network	Roof (1st storey)	Ground	Trickle feed
Hours of supply	24, 12, 9, 6, 2 hours (do those hours only apply to column 1?)			
Type of dwellings	Bungalows and maisonettes (with internal plumbing)	Flats (with internal plumbing)	1, 2 or 3-roomed (without internal plumbing)	Dwellings in informal settlements
	Commercial premises	Single or two-storey	Multiple storey	Tenement rooms/flats
Water point Delivery	Multiple taps	Single tap	Water kiosks	Valve clusters with hosepipe offtakes
	Standposts	Standpost vendors	Locked shared standposts	Machine dispensers
	Standposts or kiosks with storage tanks	Smart card or pre-payment meters	Neighbourhood on-selling	Handcart vendors
	Flow restrictors / trickle flow	Storage containers	Shared connections	Water flow regulator
	Site storage	Area storage		Tanker vendors



**Figure 3.11. Public standpost**

Public Standposts: 1/475 ?  
1/250 ?  
How to ensure supply?  
How to charge?  
How to maintain?



**Figure 3.6. Communal or shared yard connections/taps**



Left: Standpost waiting 3am supply ?

Right and far right: Public drinking water fountains to ensure water for survival—drinking water for the destitute?



Left: compound houses & landlord metered Standpost

Far right: public standpost with storage



**Figure 3.7. Communal yard connections with raised or ground tank**





# Paid Standposts

## Remote access to water Standposts

- Water for carrying to household
- Water for bathing, laundry and sanitary services direct
- Single/dual/multi-tap standposts
- Storage standposts
- Handpump access storage standposts

Households can access water remotely from the house and either use that water where it is accessed or transport it (or arrange for it to be transported) to the house. Transportation methodologies are described below. Using the water at the point of access refers to bathing, laundry and other sanitary functions being undertaken at the

standpost, formally where appropriate facilities have been made available or informally which is rarely satisfactory.

Standposts benefit from self-closing taps (though communities often find the designs too awkward and find ways to disable them) and require appropriate drainage facilities to ensure that there is no ponding of surplus/spilled water which would become a health-hazard. Designs of standposts can include having multiple taps to facilitate access by more users at once to reduce queuing times, washing areas, 'lifting steps' to facilitate head carriage of water jars, storage tanks so as to guarantee availability even when the supply is intermittent, and in some examples access to those tanks through handpumps, thereby limiting wastage and overuse whilst capturing any

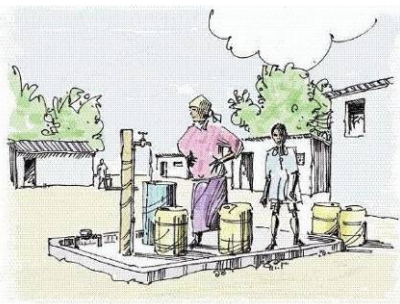


Figure 3.8. Public standpost - staffed (kiosk)



Above: Dhaka: DSK WaterAid water points - handpumps on utility pipe filled tanks—community sharing out metered

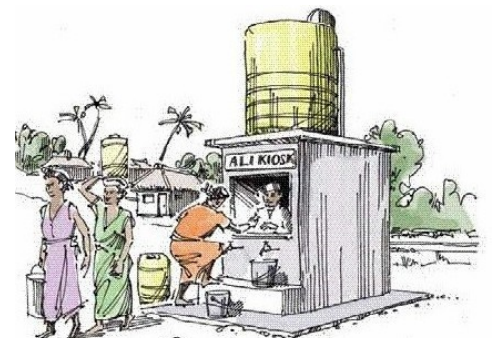


Figure 3.9. Public standpost with water storage - staffed



Above: **Tire Lire** Cote d'Ivoire for daily household savings to pay for water at end of the month (Fonseca)



Left: & below: Philippines, 'Hidden Paradise' A customer is buying water tokens from local shop to access standpost water at the close-by tap - a means for the community to share out metered costs (ADB, WaterVoices)

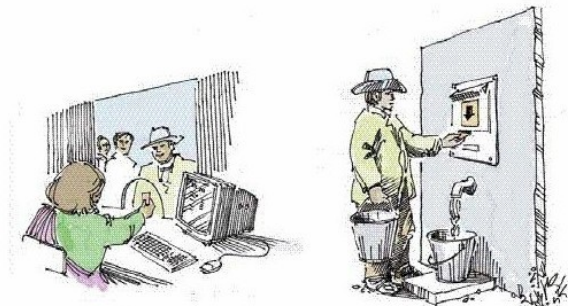


Figure 3.10. Public standpost - pre-paid with tokens



Left: Cote d'Ivoire Pay for Use Tapstand (WSP, 2003)

# Regulatory Tools: Technical

available low-pressure piped water in the below ground tank.

There are special cases of standposts serving compound housing whereby the standpost could also be described as a communal yardtap, that is a tap within a very few meters of the house door which is accessed by perhaps upto a dozen households in the compound.

## Bulk water points

*Water point for filling vendor carts and tanks*

Transporting large quantities of water to households requires special filling points with closer/larger diameter access to water mains to facilitate speed of filling. Adequate drainage of surplus/spilled water is even more critical for a bulk water filling point than for standposts.

## Transported water distribution

### Self-filled & carried

- Bottle (eg 0.75-1 litre)
- Pot/bucket/container (eg 8-10 litre)
- Plastic jerrycan (20 litre)

Children are often involved in water carriage and smaller children, particularly girls, may well start by learning to balance a bottle of water on their heads in order to carry it home before growth leads to the ability to carry larger amounts. Head carrying of larger amounts of water is less common in urban areas where older boys tend to use some form of mechanism to transport larger amounts in exchange for payment.

All carried water, or vended water as below, is considerably more expensive to deliver to the home than piped water, in either cash or resource (carrying time) terms. Householders who have no choice of supply mode can only cope by drastically limiting their use of water with the subsequent health and convenience disbenefits.

### Vendor-filled & transported

- Hand cart (6-12 x 20 litres)
- Animal cart (10-12 x 20 litres)
- Animal cart tank (eg 1000 litres)
- Tractor-towed tanker (3,000 to 9,000 litres)

- Tanker (7,500 to 12,000 litres)

There is a wide range in capacities available of vendor-filled and transported household water, ranging from handcarts based on bicycle wheel technology carrying a number of plastic jerry-cans through to small tanks on carts pulled by animals (donkeys, camels etc) to the much larger, and therefore potentially cheaper, tankers, either integral to the vehicle or towed by tractor.

Transporting with smaller containers allows householders to use the same containers for storage until the subsequent delivery, swapping full for empty, without having to invest themselves in storage. Tankers necessarily require household storage to discharge into which can be relatively expensive and which allows vendors to require payment for full loads only, irrespective of the amount of storage available, and therefore to be able to charge more for the water delivered by selling non-delivered water again.

All carrying approaches introduce the possibility of further contamination of the water by the additional steps of handling and the likelihood that the containers/tanks may not be clean and regularly disinfected.

### Producer remote-filled

- Water Bag (0.6 litre)
- Water Bottle (eg 1 litre)
- Large Water Bottle (eg 19 litre)

Low-income consumers can choose to pay for small quantities of potable water, carried to their homes where the quality has been 'assured' by some external provider, that is a provider other than the conventional water utility. This should avoid the dangers of contaminated containers described earlier. Although very high cost in volumetric terms because of the small quantities needed these systems can be affordable, the choice between bagged water and large water bottles delivered to the door being very much one of household income. Note that not all countries have standards for bottled water and those that do may well not be able to enforce them. Customers may well be paying for the illusion of good quality water where those payments would be more useful facilitating a differentiated household supply.

## Point of Use Treatment



[www.astro.su.se/~magnusg/photogallery.html](http://www.astro.su.se/~magnusg/photogallery.html)



Katadyn Filter



Unilever Pureit

# Differentiated Household Connections

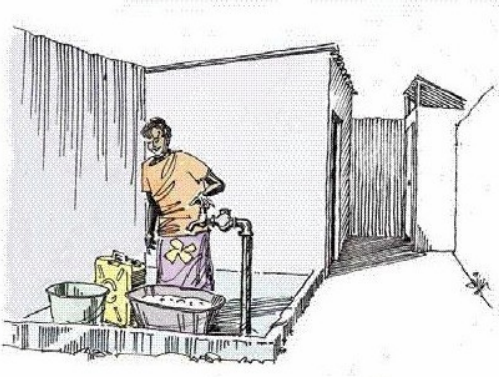


Figure 3.4. Individual yard connections/taps



Figure 3.3. Individual house connections - daily filled overhead tank



'Durban Tank': Manifold for daily household tank filling  
IMO Working Group, WSSCC, Kayaga Photos ↕



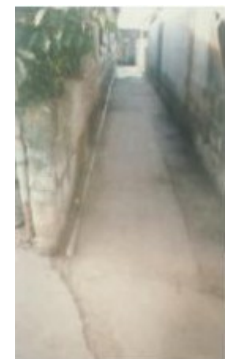
Figure 3.5. Individual yard connection with ground tank



## Differentiated Pipework



PCWS/Capistrano Photos: ↕ ↗ ↘ ↙



# Regulatory Tools: Technical

## Piped water distribution 'household supply pipe'

- Below ground pipes
- Surface pipes
- Suspended pipes
- Conventional pipes (GI, AC, MDPE, PEX etc)
- Flexible household managed 'hosepipes' (or as for conventional)
- Yard tap
- Surface yard tanks
- Mains pumps
- Below ground tanks
- Elevated tanks

Originally pipes were buried beneath the ground so as to avoid the effects of frost in those, usually northern, countries where piped systems developed (in the modern era that is, recognising Roman successes in a previous era). Burying pipes also gives protection against accidental damage and particularly nowadays against damage or loading from road vehicles. In many very low-income urban communities frost is not often a threat to the pipes and the access widths may preclude vehicles and therefore vehicular damage. Running pipes along the surface of the ground can facilitate leakage detection with leaks being immediately visible. Similarly illegal connections are also visible but in both situations this is only valuable if the community of consumers have a sense of responsibility and a mechanism to arrange for mending of leaks and restricting of illegal connections.

In an informal housing area installing water supply pipes on the surface means that existing drainage paths, whether surface water or grey water, are not disrupted which reduces costs. Burying pipes in narrow access-ways can require complete reconstruction of drains and pavement to a higher standard than was previously there – a benefit to slum dwellers but an expensive one which could restrict the installation of piped supplies.

There are examples of above ground pipes where distribution pipes are hung at the level of the eaves of (single storey) houses (alongside electricity cables) so as to be above the level of doorways and to be well clear of any road damage. Although this technique is rare there is again the advantage of controlling leaks but the dwellings and fastenings have to be strong enough to take a much higher load than the more usual power cables.

Pipe material can vary according to country practice and likely loading. Asbestos cement pipes, although seen as dangerous to health when asbestos fibres are released through inappropriate cutting techniques, are cheap and very long-lasting but have to be buried for protection and require adequate cover, that is depth of ground, to protect them. Galvanised iron is also very commonly available and has the inherent strength to be laid on the ground surface in low-income slums, strong enough to withstand two or three-

wheeler vehicle loading. However GI is much more liable to internal corrosion and therefore has a shorter lifespan – which may well be irrelevant if the aim is to upgrade slums step by step over time. The various types of plastic pipe, particularly the polyethylenes (HDPE, MDPE, PEX etc) are ideal for flexible, above ground connections between distribution main and homes, easily made by householders themselves, as demonstrated by the many illegal connections made from such materials. The advantage of self-connection, perhaps from a delivery point on the edge of a (smaller) slum, is that it reduces costs to the utility by transferring the responsibility for negotiating rights-of-way and easements to the householder. The reduction in bureaucracy can lead to significant savings, making such systems affordable. Similarly, where it is appropriate to bury connection pipes, householders (groups of householders) can excavate and reinstate more cheaply than utility employees.

At the extreme, the connection to the home can be a flexible 'hose-pipe', very cheap plastic pipe, but these are more suitable to be hung above ground where they cannot be stepped on, let alone ridden over, too often.

Supply pipes can terminate in a yard tap, that is a form of standpost on the housing plot or an internal tap. The idea of the yard tap is that it limits consumption, in that there is no internal plumbing and facilities where water is used, as water required still has to be carried into the house in buckets or used directly for washing pots etc by the external tap. Yard taps therefore require physical or communal security against over-use by neighbours and presume fairly regular hours of supply at acceptable pressure. Alternative systems use surface tanks connected directly to the supply pipe to store water for easy availability but these need protection against pollution.

'Developing poor' and 'vulnerable non-poor' households in middle-income countries may, like their richer neighbours, invest in underground tanks to capture as much water as possible when the mains are charged or may have small pumps to suck water out of the mains. These pumps, illegal in many countries, have the disadvantage of changing flow patterns in pipes leading to the delivery of high levels of silt and grit along with the water. They also significantly disadvantage neighbours beyond them in the distribution system, capturing too much water for some rather than allowing delivery of a little for all. A more normal use of small pumps is to lift water collected in underground delivery tanks to elevated tanks so as to ensure a conventional head of water at taps inside the dwelling.

Surface pipes with flexible household managed connecting pipes to yard taps and/or surface yard tanks are highlighted as being the cheapest means of achieving the convenience and low cost of piped water supply in low-income high-density housing areas – far better than standposts but cheaper (and therefore more affordable if the utility recognises those savings) than conventional distribution systems.

# Differentiating Household Connections

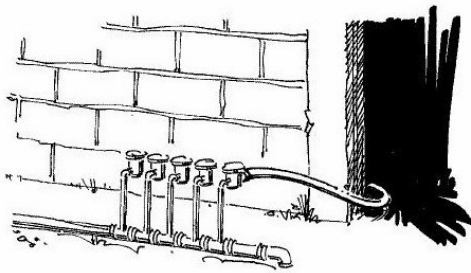
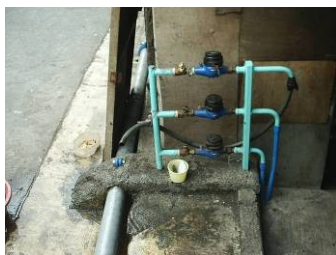


Figure 3.2. Individual house connections - flexible pipes to meter/valve clusters



Weitz Photo ↑



PCWS/  
Capistrano  
←Photos→



Innocencio Photos ↑  
←



Three Cities, ADB Video

## Metering options

- Unmetered
- Flow restrictors
- Volumetric controllers/allowances
- Conventional meters
- Group/Street meters
- Pre-paid meters
- Smart meters

Many pipe systems incorporate elements of the charging mechanism by which the utility direct provider ensures sufficient revenues not only to operate the system but also to ensure sufficient maintenance so that it continues to operate long-term and to extend the services as demand grows.

The most common form of charging is by volume consumed as measured by a water meter. Frustratingly the larger part of the costs of water supply is not variable according to volume consumed but is fixed, that is related to the investment in and maintenance of the fixed assets which treat and deliver the water. Water meters, of which the installation, maintenance, repairing, replacing, reading, billing and resulting

complaints resolution, can add one quarter to one third to the water bill are an expensive solution. Some societies, having achieved almost universal coverage and community acceptance, have ensured reduced costs for consumers by not having meters. Instead they charge for water through a fixed payment for access, which might vary according to perceived housing value as a proxy for wealth and presumed use. This solution is definitely unfashionable but is widely practised, as an unacknowledged default, by utilities which only supply water for one or two hours per day (thereby limiting all in that area to a similar consumption) and by utilities which fail to maintain their meters (remarkably common) and then charge a fixed amount.

Meter costs, particularly where installed meters cannot be used in any acceptable way for the reasons described above, can therefore be removed by design through the use of flow restrictors and volumetric controllers. Flow restrictors,

sometimes know as trickle devices, allow a limited flow and therefore avoid excess use by some consumers making it possible to charge fairly a fixed tariff to all. However, flow restrictors come with the need for household storage which adds to the cost and in areas where supplies are intermittent and/or pressures are low the inability to access sufficient water usually leads to householders arranging to bypass the flow restrictor.

Alternative devices include the use of ground tanks with float valves and limited supply hours during each day so that customers receive a fixed amount for which they can pay an adequate tariff but without the expense of a meter. An intermediate approach is a volumetric controller, in effect a meter but one which does not need to be read and billed separately. Both these systems can be used where water is paid for cash in advance, very appropriate in slums where there are no addresses to send bills to and little means of enforcing payment. Which makes the point that none of these technologies works in isolation from the acceptance of the community of customers – these cannot be technical solutions to social problems, only aids to enabling fair customer involvement and responsibility.

Some low-income households actually value having their own personal water meter and even more surprisingly their own personal bill. As in richer countries, where utility bills are seen as proof of identity and/or residence, slum dwellers also value that recognition. To reduce costs of metering one technique is to install rows of household water meters at the edge of, or in a convenient location in, the low-income housing area. Householders make their own flexible pipe connections to their own distant meter (or on occasion collect water from their meter by bucket) whilst the utility reduces costs by not having to provide individual house connections in difficult areas and reduces the costs of meter reading.

A variation on remote metering is group or street metering where a group of householders share out the bill from a single meter, taking responsibility for equitable payments by whatever mechanisms they chose, thereby reducing costs. This approach depends upon the utility allowing for reduced tariffs as a result of reduced costs and not using the incremental block tariff approach which would quickly disadvantage groups of households. There is a similar challenge when standposts are metered with tariffs collected through 'kiosk vendors' or community appointed on-sellers. If no allowance is made within the incremental block system the poor end up paying commercial/industrial rates for water. As ever, the technology is only effective in conjunction with suitable approaches. One variation on this idea for standposts is for householders to agree to buy tokens from a local shop-keeper adjacent to the metered standpost, contributing a token per container filled. This ensures that cash is received in advance and removes the expensive (time-consuming) task of trying to get poor households to contribute towards a monthly group water bill long after that water has been consumed.

Utilities in higher-income countries are beginning to seek to reduce their costs through the use of various types of smart meters, most being variations on the theme of digitising the volumetric analogue information so that it can be accessed remotely (touch pad/radio to street van/mobile phone technology) but in particular measures time of day (daily peaks) and time of year (seasonal peaks) such that very focused tariffs can be applied to minimise demand and hence fixed asset costs. These technologies are unlikely to be of particular value in low-income areas in the immediate future.

The metering development which must be noted is the use of pre-paid meters. Originally using some form of coin-in-the-slot mechanical device, electronic versions are now available and have been well-received by customers (if not by NGOs) in, for example, South Africa. Householders value the opportunity to manage their spending on water, buying top-ups as they can afford it and, just as for their similar popularity in mobile phones, being able to prevent excess use (and unaffordable bills) by accident or theft.

The development of pre-paid meter and volumetric controller technology, along with adaptation of tariffs to

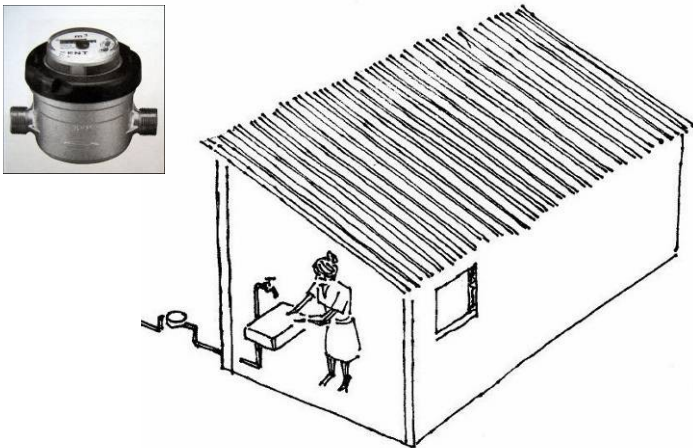


Figure 3.1. Individual, in-house co



Above: household storage & pumps—low-income housing, Jakarta  
18 - 8



YARD METER ABOVE GROUND



PrePaid Meters  
Conlog Photos :< ⌂



Volumetric Controllers  
RWE Thames Photos < ⬆



# Differentiating Sanitation for USO in peri-urban areas

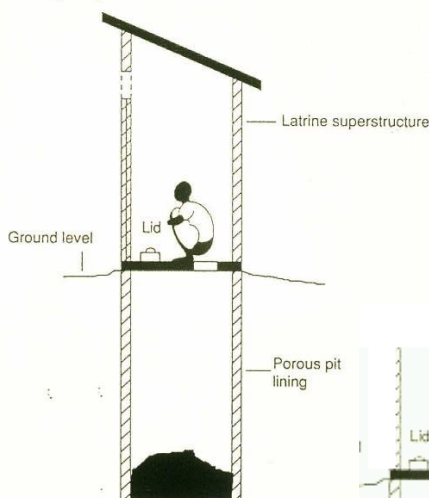
There is an overwhelming imperative to get excreta off the streets in densely populated urban areas to protect inhabitants against any resulting pathogens and disease. Defecating directly into open drains or into bags and newspaper for 'wrap and throw' may meet the first criteria of removing faeces from the street but are not an acceptable alternative. There are various forms of 'pit latrine' which serve the purpose well, giving, where well designed and constructed, convenience and privacy which are often the drivers for households to invest in their own sanitation as well as health protection.

There is a key difference between types of latrines based upon the method used for anal cleansing (see A guide to the Development of On-Site Sanitation, WHO, 1992 for further information). Where paper or agricultural waste is used for anal cleansing there has to be a clear hole which will not block. However, that easy access also means that smell and flies can come back up again. There is then a need for a lid or plug to seal the hole when not in use, something often forgotten or disregarded, particularly when it becomes fouled, or an alternative approach such as the **ventilated improved pit latrine** which utilises air flow over the top of the pipe to create a suction effect, drawing gases out of the pit and up the vent pipe (rather than back into the cubicle) and where designed properly give a light source which light sensitive flies respond to (rather than the deliberately darkened (but not dark) cubicle) where they are trapped by the gentle upflow of air through the vent pipe against a non-corroding mesh or screen where they die and fall back into the pit. The bottom right picture illustrates an offset vent pipe with a small glass window at ground level to 'start the flies on their journey' whilst minimising the expense of a latrine slab strong enough to support an additional opening and the vent pipe itself.

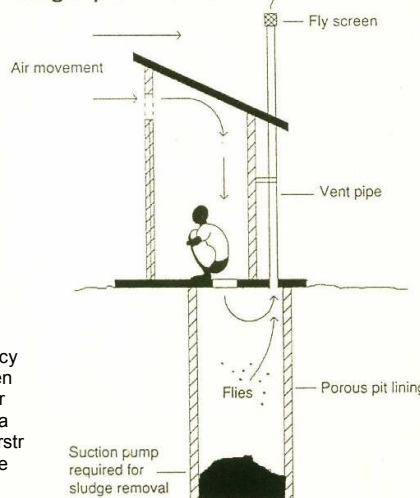
## Key points for peri-urban sanitation:

- Recognise the need for community involvement in achieving total sanitation where sanitation primarily to be undertaken by households
- Accept possible short-term groundwater pollution to ensure immediate sanitation for health within a phased approach (recognising that it is more economic in short term to pipe in clean water than pipe out waste water)
- Recommend sanitation approaches which minimise grey water; storm water and solid waste challenges in the short term
- Assess environmentally-sensitive means of excreta disposal (eco-sanitation, composting, reed beds)
- Avoid 'Rolls-Royce' sanitation solutions that demand unaffordable standards and require almost total slum and shanty upgrading

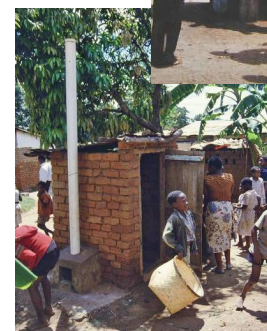
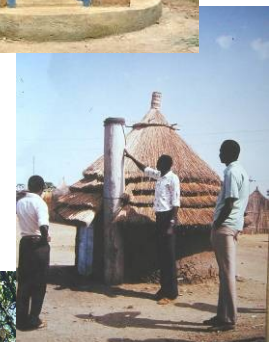
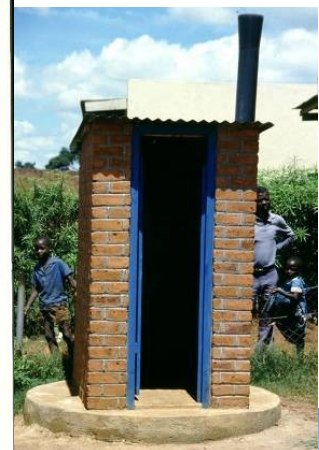
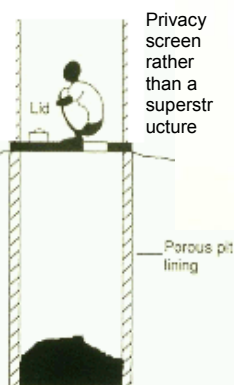
Single pit sealed lid



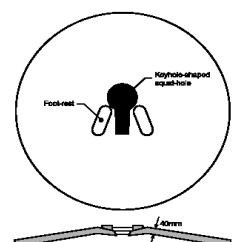
Single pit ventilated



Privacy screen rather than a superstructure



Domed, unreinforced 'Mozambique' slabs with lid



San Plats: - 'Why should a latrine look like a house?' Brandberg

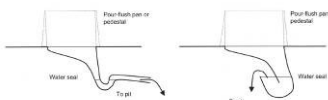
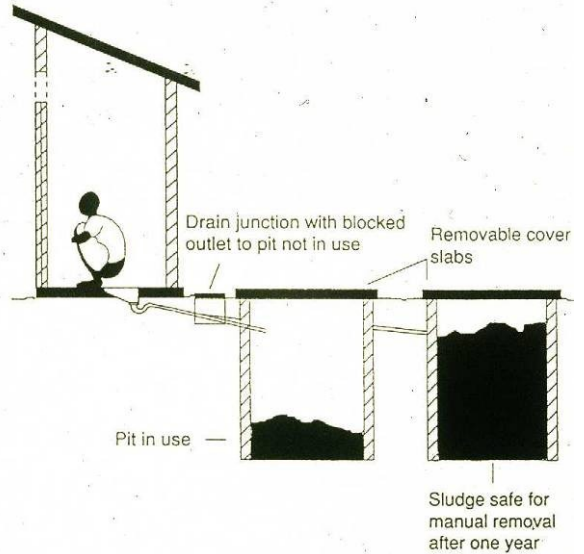
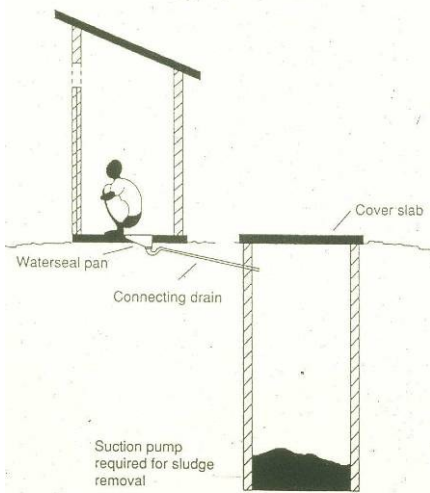


Drawings source: 'A Guide to Sanitation Selection', Technical Brief 23, Franceys & Shaw, Waterlines,

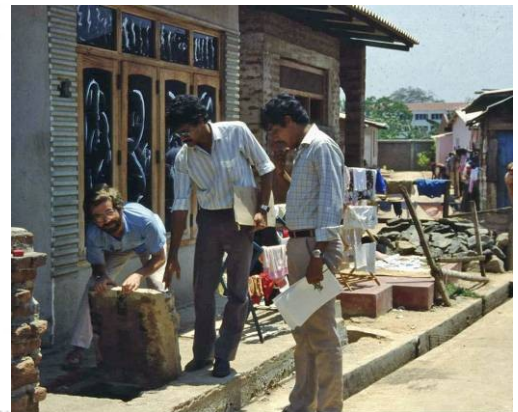
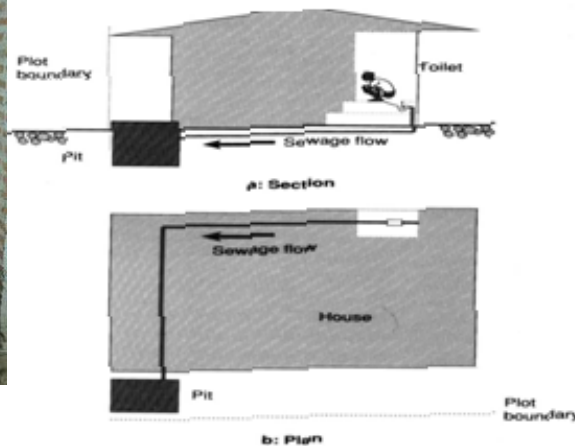
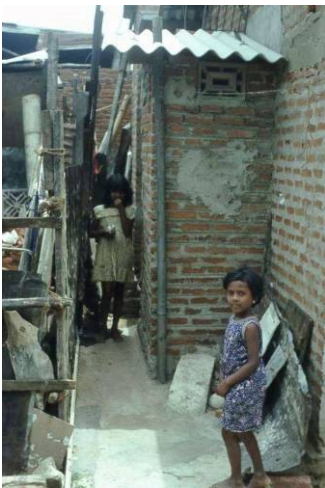
# Regulatory Tools: Technical

## Pour flush twin pit

Pour flush single pit offset



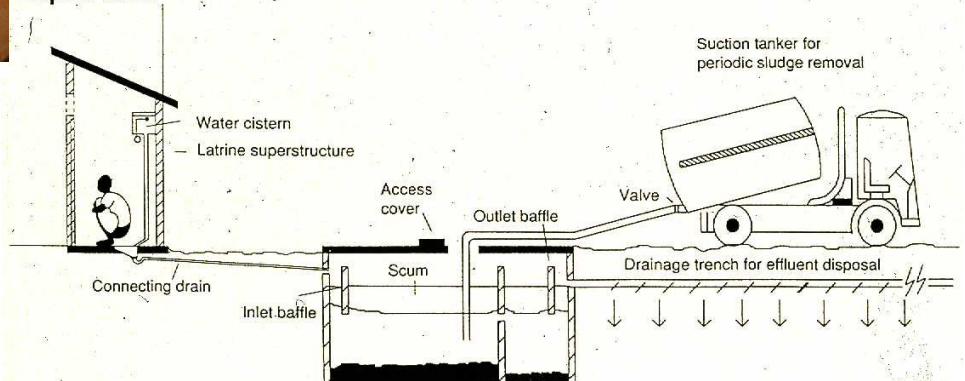
**Pour flush latrines** for those using water for anal cleansing provide a water seal to limit odour, taking away any need for a lid. Small amounts of water are then used for flushing the waste into either a single-pit or a twin pit which allows for safe sludge removal after approximately one year. The diagrams and pictures below illustrate an offset pour flush latrine in a very confined area, a system very similar to a septic tank.



**Eco sanitation** generally describes toilets where the urine and faeces are captured separately so that the faeces can begin to decompose and dry safely to be used as a soil conditioner and the urine, after one month's storage, as a fertiliser. In the toilet pictured men have to urinate sitting down. Where water is used for anal cleansing it must be collected and

**Septic tanks** are widely used where there are no sewers but where households want the convenience of 'flush and forget'. However, septic tanks can't quite be forgotten as, depending upon household size, the accumulated sludge will need to be removed regularly (annually?) and disposed of safely (to an approved sewer disposal point of waste water treatment works) and the drainage field cared for such that the effluent can safely drain into the ground. Alternating drainage fields are ideal but unlikely to be possible in low-income settings.

Septic tank





# Regulatory Tools: Technical

## Pay for use Communal toilets

Experience of communal toilets is that they are extremely difficult to manage communally with no one wanting to take responsibility for cleaning and users gradually fouling the toilet area and approach areas until it becomes unusable.

The approach which has worked most effectively is through 'Pay and Use' whereby an NGO or community group obtain funds (sometimes from local government) to construct a facility and then employ a full-time caretaker to ensure it remains clean and in good

condition—the caretaker's salary being paid through small amounts given by users, either monthly as a household or daily as it is used.

Soap is provided as part of the service and some of the Sulabh toilets in India also provide bathing and locker facilities.

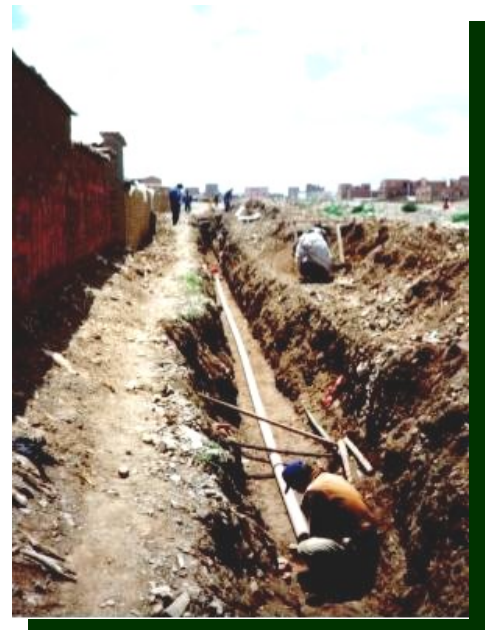
Left: communal toilets Ghana—pay for use or abuse?



A Sulabh complex in Jaipur, India

## Condominial sewerage—Reduced cost sewerage

Conventional sewerage is very often too expensive in low income communities. An intermediate level (though now also being used in some high-income areas) is to design the pipe network more carefully to minimise the pipe lengths and by often running the pipes through the backs of properties to minimise the depths of sewer pipe where no cover under roads is required for protection and to use shallower gradients, particularly where small interceptor tanks are used for settling out solids outside each house. Minimising pipe lengths. Additional approaches use 'rodding eyes' rather than more expensive 'manholes' to provide access for when the sewer becomes blocked. It is necessary to ensure the involvement of the community in deciding pipe routes, perhaps in trench-digging to reduce costs but also to agree or rather accept a temporary discharge

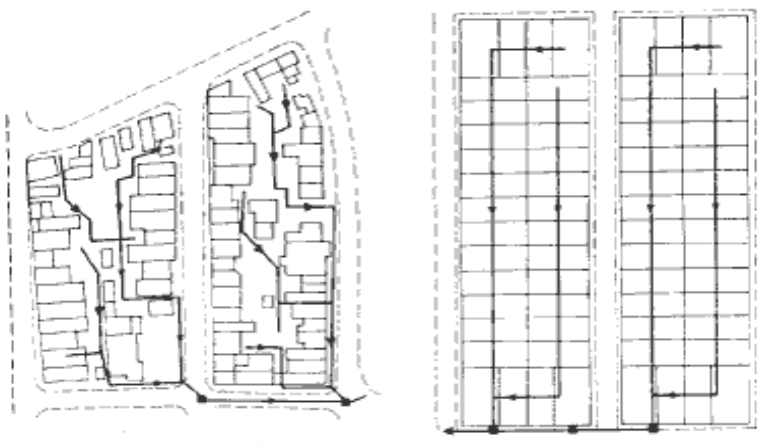


Above: condominial sewerage, El Alto, Ondeo

A typical cleanout (right) and simple junction without a cleanout (below)



Diagrams & photo from Sanitation Connection (sanicom.net) and Mara, D



# Chapter 19

# REGULATORY TOOLS: LEGAL & POLICY FRAMEWORK



How can the legal framework  
for economic regulation  
enable and promote the  
Universal Service Obligation

## LEGAL TOOLS

This note aims to address regulatory issues relating to all components of the legal framework. Within this framework the specific issues of universal service provision, customer involvement, and alternative (small scale) service providers will be addressed.

The key legal issue is to ensure that the economic regulator is given a primary duty and obligation to ensure financeability of service provision and that service levels, within the understanding of what has to be financeable, include meeting a Universal Service Obligation within a reasonable time frame—a universal service ‘beyond standposts’ for the poorest in the slums, probably some form of differentiated service which remains affordable through cost reflective tariffs.

*The regulator ‘shall have regard to the  
interests of individuals...with low-incomes...  
or who are disabled or chronically sick..*

*Water Act 2003 , England and Wales*

*Case study authors: Dr Peter Howsam & Esther Gerlach*

*Photo credits: Franceys, Gerlach, NWASCO, Walton*

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# The Legal Framework for Regulation

The legal framework includes not only the core component of the legislation itself, but also the institutional, administrative, political, social and economic conditions or arrangements, which make the legislation available, accessible, enforceable and therefore effective.

A national legal framework is composed of:

- the international obligations
- the legislation
- the legislature
- the judicial system
- the regulators
- the regulated
- the beneficiaries (public)
- the social support mechanisms
- the political commitment to implement the law
- the resources to apply and enforce the law

A legal framework is 'good' only if it helps to achieve a particular objective; it will fail for a whole number of different reasons, e.g. (a) where sound legislation exists on paper but the regulator is weak and ineffective and/or poorly resourced; (b) where the judicial system is not strong and independent; (c) where legislation exists but few if any of the key stakeholders are aware of its existence or understand what it means.

The legal framework must also embrace inter-related sectors - i.e. not only the regulation of water supply and sanitation providers but also pollution control, resource management, public & environmental health, land-use planning and development control, social services, education, etc. This involves a wider range of people and institutions. However for this project the primary focus has been on the Service Providers and the Service Recipients.

## SERVICE PROVIDERS

Regardless of whether providers are public sector, private sector or a public-private partnership provider the key questions to be addressed are:

- Who are they?
- Are they a legal entity? (What status do small scale service providers have?)
- What are their legal obligations?
- Is universal service delivery defined as an objective and if so, how is it defined?
- What can they do? (i.e. what, if any, powers do they have with respect to charging and disconnecting customers, for example?)
- What do they do in practice?
- Who regulates them?
- What mechanisms exist if they fail to meet their obligations?

- What relationship do they have with those they serve?

With respect to the legislation, there may be a number of different and not necessarily co-ordinated pieces of legislation which contribute to the legal framework in which Service Providers operate; i.e. legislation which:

- governs how they operate – sets out their duties, obligations and rights;
- provides them with authorisation to operate (e.g. with respect to water supply infrastructure, water abstraction, wastewater disposal);
- governs the authority(ies) which has the power to grant, attach conditions to, refuse, revoke or modify any such authorisations.

## SERVICE RECIPIENTS

Again there are a number of key questions to be addressed:

- Who are they? (all citizens? all of the registered population?)
- Are they defined, and if so, how and by whom?
- What are they entitled to?
- What if any obligations do they have (e.g. with respect to payment, use and conservation)?
- Who protects those entitlements?
- What, if any, redress mechanisms exist if rights are breached / entitlements not received?
- What is their relationship with service providers (e.g. is there any requirement or mechanism for stakeholder/consumer involvement in the process of service delivery)?

With respect to the legislation, there may be a number of different and not necessarily co-ordinated pieces of legislation which contribute to the legal framework in which service recipients exist. Legislation which defines:

- who is a legitimate service recipient
- what are their rights and obligations
- how they may gain redress if a right is breached
- the rights of those who do not have entitlement to services

## The legal framework – common issues

Various case studies have been undertaken to assess the status of water supply and sanitation provision as part of the *Regulating Public and Private Partnerships for the Poor* research. Generally speaking these studies reveal that there are many people who are not receiving an adequate or any provision. The poor typically form a high proportion of this number. In order to rectify this unacceptable situation it is necessary to understand the elements and processes involved so that appropriate

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# Legal Issues

interventions can be made. In this context it is useful perhaps to regard the legal framework as the glue required to hold together these elements and processes to form an effective system. Thus we can look at any existing element or process and ask questions such as: what legislation has introduced this element? what legislation controls this process?; does the legislation and/or its implementation enable or constrain provision?

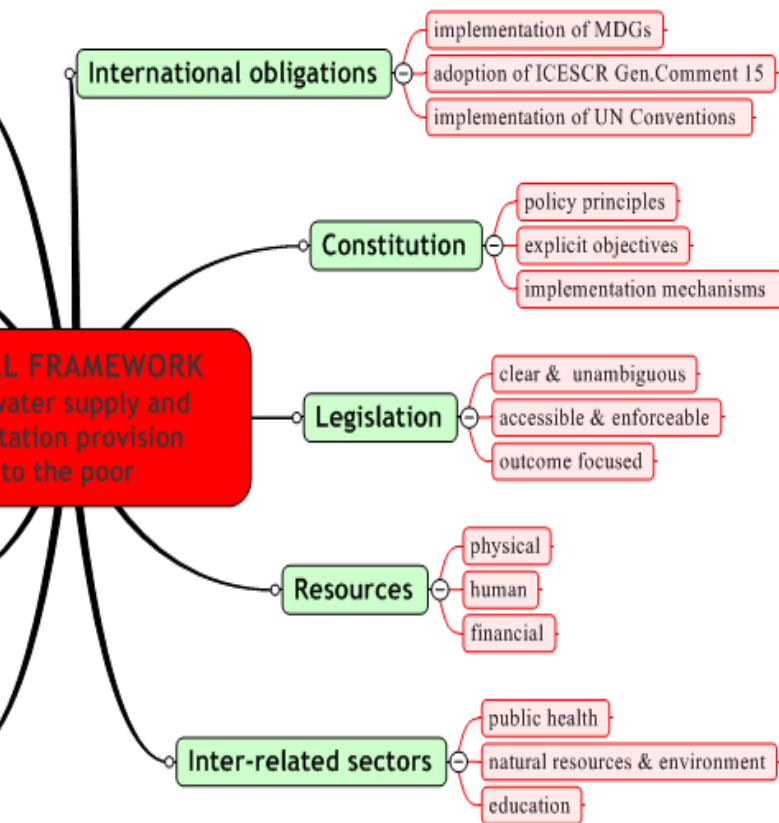
There is much debate over the pros and cons of whether public bodies, private companies, or public-private partnerships should be the providers of water supply and sanitation facilities. From a legal point of view, in many ways, it does not matter who is the provider – the basic elements of the legal framework will be very similar. Government will, or should, always have control (though this control should not be exercised by interfering in day-to-day management decisions).

The starting point therefore, and it seems to be a critical element, is the national constitution. Where water supply and sanitation are explicitly declared as the right of every citizen then this enables incorporation of the objective in the primary and secondary legislation; e.g. in South Africa. In India where the right to life is enshrined in the constitution, this has been taken in the Courts as incorporating essential needs of life, such as a water supply and sanitation. This process of Public Interest Litigation has been used to reinforce the obligations of local authorities (commonly the primary service provider) to provide an adequate and safe water supply.

The latter model, i.e. where central Government has a decentralising policy and delegates via legislation, responsibility for water supply and sanitation provision to local authorities, is quite common. The same or other legislation may then permit the authority to delegate the actual provision to other, often commercial/private, entities. While in these latter cases the legislation provides for often quite robust overseeing and regulation of the service provider, it does not provide for the equivalent overseeing of public authority provision. Or where it does it is often ineffective.

Some other observations on legal frameworks, based on both general and case study materials, are listed below.

- There does exist some substance to the legal frameworks for water supply and sanitation provision; much of this has emerged in the last decade.
- It can be difficult to (a) identify and obtain all the relevant legislation; and (b) identify which piece(s) of legislation provide the answers to the questions being asked.
- There can be discrepancies between non-binding policy statements which advocate or imply universal service and specific duties as defined in the operating legislation and/or service contracts. Governments seem to be reluctant to enshrine universal service obligations (e.g. those advocated in UNCESCR's General Comment No.15, 2002) in legislation.
- While Governments have generally been reluctant to impose specific public service obligations on themselves they seem less reluctant to impose statutory requirements, when water supply and sanitation services are provided via the private sector. As such the legislation, and the regulatory framework established under it, would appear generally to be more robust with respect to private sector service provision than it is for public sector service provision. Although in reality Governments and public authorities still retain legal obligations (responsibilities & duties).
- Service to the poor is being addressed in some cases, but it seems to be dependent on good will and socially aware practice, rather than on explicit legal obligations.
- Generally the legislation does not appear to provide for, or facilitate, provision by community groups or the small scale independent service providers who currently operate informally.
- The role, independence and effectiveness, of the



Courts, as the vehicle of last resort, to enforce protection of entitlements and/or meeting of obligations, are often difficult to ascertain.

**Country case studies**

The case study countries are listed by the order in which economic regulation of water providers became operational: England and Wales (Ofwat, 1989), Chile (SISS, 1990), Argentina (ETOSS, 1993), Bolivia (SISAB, 1999), Philippines (MWSS-RO, 1997), Ghana (PURC, 1997), Jordan (PMU, 1997/99), Zambia (NWASCO, 2000), Indonesia (JWSRB, 2001), India and Uganda (both having no dedicated water sector regulator at present). A reason for the chronological approach is to investigate whether there has been any cross-country learning with regard to service to the poor. Please note that different levels of analysis of case study countries have been undertaken, depending on the information provided and materials available.

**England & Wales**

The current regime in England & Wales (E&W) stems from the privatisation of the water supply sector which occurred under the Water Act 1989, superseded by the Water Industry Act 1991 and as amended by the Water Industry Act 1999 and the Water Act 2003.

The 1989/91 legislation established the primary regulator of the privatised water industry as the Director of Water Services in the Office of Water

Services (OFWAT), with a remit to operate to a large extent independent of Government. The legislation does however provide the Government (via the Secretary of State) with powers to intervene and give directions to the regulator on matters of social and political importance and which require a democratic mandate. In practice the independence of the regulator relies on minimal corruptibility in the political and administrative systems, and full access to the courts by all parties.

Under the Water Act 2003, the authority of the Director General, OFWAT will in 2006 be replaced with a "Water Services Regulation Authority". The principles of accountability and transparency are very much enshrined in the new Water Act 2003, which requires both the new Authority and the Council to prepare and make available, for review by stakeholders, all their plans and proposals.

OFWAT oversees most aspects of the provision of water supply and sewerage services. Drinking water quality is monitored and enforced by a Drinking Water Inspectorate and water abstraction licences and waste water discharge consents are administered by the Environment Agency.

OFWAT has the primary duty to ensure that the statutory water (and sewerage) companies, licensed to operate under "Instruments of Appointment", properly carry out the assigned and authorised functions in their respective service areas and are able finance these activities.

The licensed companies have a statutory duty to develop and maintain efficient and economical water supply systems and make the necessary investments to improve and extend the water network to meet their obligations to provide water fit for human consumption and sufficient for domestic purposes. They are required, subject to payment of connection fees and charges, to provide a connection upon request from or any owner or occupier. It is the duty of the Secretary of State to ensure that service coverage is available for all areas in England and Wales at all times. Apart from a relatively small number of private water supplies, regulated under different legislation by Local Authorities, the water



Peri-urban housing, England

# Legal Issues

companies do essentially provide a universal service. While there is no explicit universal service obligation in any part of the legal framework, this combination of duties could be construed as a universal service obligation.

The statutory water companies have the right of appeal to the Competition Commission and access to the courts to contest enforcement orders and other decisions of the regulator.

The regulator has secondary duties to consider the interests of vulnerable customers; i.e. the “disabled or [those] of pensionable age, and those of low-income” and to some extent those of ill-health and those living in rural areas. The early legislation further provided for the general protection of the interests of service recipients, through the establishment of regionally based customer service committees, known as “WaterVoice, which reported to the regulator. This provision largely precluded the right of redress by an individual customer. The Water Act 2003 will establish a new “Consumer Council for Water”, independent of the regulator, to replace WaterVoice. The new Council will, like the regulator, have to give due regard to the same groups of vulnerable service recipients.



Old and new: Santiago, Chile

With the aim of protecting vulnerable people the 1999 Act introduced a ban on disconnection of service to consumers’ principal places of residence following non-payment of charges. The difficult issue for companies now is how to differentiate the ‘can’t pay’ from the ‘won’t pay.’

*Chile* - in preparation

*Bolivia* - in preparation

*Argentina* - in preparation

## Philippines

WITH RESPECT TO SERVICE PROVIDERS

In the Philippines, the Public Works Department is



Peri-urban housing, La Paz, Bolivia

Government body with national level responsibility for water supply and sanitation. However the Government has a strong decentralisation policy and in practice local government authorities (units - LGUs) have the lead responsibility for the provision of water supply and sanitation services (Local Government Code - Republic Act 7160, 1991). The code allows LGUs to delegate service provision to third parties, including both communities and private entities.

In Manila the primary service providers are the Manila Water & the Maynilad corporations. These private sector corporations operate under Concession Agreements (1997) regulated by the Metropolitan Waterworks and Sewerage System Regulatory Office (MWSS-RO). MWSS is a government body established under a Charter (Republic Act No.6234, as amended), with powers provided for under the National Water Crisis Act, 1995 (Republic Act No. 8041). Its Regulatory Office was created by virtue of the Concession Agreements.

The Concession Agreements do not impose a universal obligation on the concessionaires. They are required to “offer” water supply services to all existing customers in the Service Area and to make at least sufficient connections (net of any disconnections) to meet the coverage targets. They are also required to meet reliability (continuity & pressure), and drinking water quality, standards. The latter are specified by the Department of Health Administrative Order No. 26-A, 1994; i.e. the Philippine National Standards for Drinking Water 1993, under 2.9 of Presidential Decree 856.

A failure by the Concessionaire to meet any Service Obligation which continues for more than 60 days (or 15 days in cases where the failure could adversely affect public health or welfare) could lead to financial penalties (Art.10.4).

In the case of dispute, Art.12 obliges both sides to abide by arbitration proceedings (using an Appeals Panel) in accordance with the arbitration rules under international law (UN Commission on International Trade Law). (NB Art 12 has been invoked with respect to Maynilad’s concession). The provisions of Art.12 are meant to preclude recourse to the courts. However s.3(d) of the Charter does provide for MWSS to sue and be sued.

Under Art.6.8 concessionaires must comply with all

## Country Case Studies

Philippine laws, statutes, rules regulations, orders and directives of any governmental authority. For instance because all waters belong to the state, a permit is required to abstract water for supply from any natural water source (Water Code – Presidential Decree No.1067, 1976).

The two concessionaires do not serve all the people in Manila and a range of small scale independent service providers (SSISPs) exist. While water service providers should operate under licence from the National Water Resources Board (NWRB) many do not, but they are tolerated because they provide a useful service. They have no formal legal status, whether they obtain their water for supply legally or illegally, and are largely unregulated, which means that they have no legal obligations but neither do they have any legal rights. In the latter case they are ultimately vulnerable to the exclusive operating rights of the large concessionaires in whose service areas they operate.

The Concession Agreement (Art.5.3) did allow for any service provider operating legally (i.e. under licence from the NWRB) at the time the Concession was granted, to continue operating with the consent of MWSS. The Agreement (Art.5.3) also allows for new “third party” service providers to gain licences to operate from NWRB, but only if approval by both MWSS and the Concessionaire is given. However these apply only to new developments, for a limited period (<10 years) and are subject to revocation (upon 60 days’ notice) whenever the Concessionaire is ready and wishes to take over provision of services in those areas.

### WITH RESPECT TO SERVICE RECIPIENTS

The rights of service recipients are not explicit but may be implied from the responsibilities for water



Children playing in a slum recently served by piped water in Manila, Philippines.

supply and sanitation assigned to the various Government departments, public authorities or private entities. Such responsibilities as expressed in law do not explicitly establish a universal service obligation. With MWSS for example the legislation sets out its “attributes, powers and functions” but no duties as such. The Philippines Bill of Rights (constitution) makes no explicit reference to rights to water supply and sanitation, but it does provide for access to information (s.7); access to the courts (s.11) together with speedy processing of cases (s.16).

The spread of responsibility for water related issues (from the Presidents office, various Government Departments and authorities or agencies, NGOs, private companies, to individual citizens) presents a confusing picture to the average domestic water user. Lack of confidence arises when bodies such as the NRWB, with many powers and responsibilities, operate without the resources to exercise them.

Manila Water is required to meet customer services standards but nevertheless seems to have made significant efforts to improve communications and relations with its customers (with special consideration of the poor), and offers a customer hotline when problems with service provision arise.

Those receiving water from one of the Concessionaires must pay the required charges and are liable to disconnection if unpaid for longer than 60 days (Art.6.6).

### Ghana

#### WITH RESPECT TO SERVICE PROVIDERS

The main service provider is Ghana Water Company Ltd (GWCL). Previously a public utility (Ghana Water & Sewerage Corporation), GWCL has, since 1999, operated as a limited liability company (under the Statutory Corporations (Conversion to Companies) Act No.461, 1993). However its key objectives did not change. The Ghana Water and Sewerage Corporation Act No.310, 1965 requires GWCL to supply water to all inhabitants in its supply areas.

The Ministry of Works and Housing (MWH), responsible for water policy formulation, is also the part of Government with primary responsibility for water and sanitation. However more day to day control is exercised through PURC (Public Utilities Regulatory Commission – established by the Public Utilities Regulatory Commission Act No.538, 1997) which provides the economic and quality of service regulation; and SEC (the State Enterprise Commission) which is responsible for regulating state owned enterprises, such as GWCL, which operate under a performance contract. There is provision in both cases for financial penalties if targets are not met.

PURC for administrative purposes falls under the

# Legal Issues

Office of the President, but is essentially an independent body which has the responsibility of approving tariffs (previously set by GWSC), promoting fair competition, and monitoring quality of service standards. Ultimately, under The Public Utilities Regulations (Termination of Service), Legislative Instrument 1651, 1999, PURC has the power to determine termination of service.

GWCL has various powers, including the right to enter any land for water supply and sanitation provision purposes (under Legislative Instrument No.1233, 1979) and the right to disconnect (14 days notice is required before disconnecting a customer)

Other service providers do exist but these largely operate informally (i.e. they are not legal entities), serving the un-served and under-served. They include domestic vendors (i.e. neighbour on-sellers); street vendors (i.e. supplying using carts) and tanker operators. The latter have formed associations in Accra and operate more formally under a Memorandum of Understanding with GWCL. Typically all of these providers obtain their water for supply from GWCL. Those who do not (i.e. independent service providers) are required, as is GWCL, to have a permit (from the Water Resources Commission, WRC; under Act 522: Water Resources Commission Act, 1996) to abstract

nor are their rights, although some duties, such as the obligation to pay for services received, are defined.

There appears to be no explicit reference to a universal service obligation. However under the No.538 Act, 1997, GWCL is required to make reasonable effort to provide a safe, adequate, efficient and non-discriminatory service. Furthermore the Public Utilities Regulations (Termination of Service), Legislative Instrument 1651, does include some measures for the protection of residential consumers. The Public Utilities Regulations (Complaints Procedure), Legislative Instrument 1665 does provide a mechanism for recipients to complain and gain redress and the new Customer Charter should help make GWCL customers aware of their rights. Note that those served by alternative service providers do not, and will not, benefit from such provisions.

## Jordan

### WITH RESPECT TO SERVICE PROVIDERS

In Jordan the Ministry of Water and Irrigation (MWI), created in 1992, holds the overall responsibility for the formulation of water strategies and policy, water resource planning, research and development, and coordination with donors.

A single body is responsible for providing municipal water supply and wastewater services in Jordan and that is the Water Authority of Jordan (WAJ). It is an autonomous corporate body and carries out its functions in accordance with the Water Authority Law (No. 18 of 1988, as amended). The law provides for the establishment of water departments within each of the Kingdom's twelve Governorates.

It is reported that the establishing legislation has resulted in overlaps between the roles of WAJ and MWI and that clarification is needed. Despite this it is considered that existing laws "are strong enough", but the application of the law has been unsatisfactory.

Primary responsibility of drinking water quality & monitoring rests with the Ministry of Health (MoH) which is authorised to prevent the distribution of water declared "unsafe".

A Universal Service Obligation is not explicit. The policy in Jordan is to achieve reasonable domestic use (100 litres per capita per day is recommended). The policy is that this is achieved by expanding the role of private sector service providers. With respect to wastewater services the policy is to prioritise expansion of wastewater services in urban areas already served and where users are willing to pay for services.

In the Amman Governorate municipal water supply to Greater Amman was delegated to a joint venture of Lyonnaise des Eaux (now Odeo, France), Montgomery Watson (US) and Arabtech Jardaneh (Jordan) (LEMA) in 1999. LEMA operates under a management contract lasting up to 2006. The contract, which has no coverage



Offices of Ghana Water Company Ltd.

water from a source for supply. Regulations also exist to prevent pollution of water sources, including controls on waste water and effluent discharges. In this case the regulator is the Environmental Protection Agency (EPA), under the Ministry of Science and Environment (MSE).

GWCL has until now operated without any binding duties with respect to its customers. However a Customer Charter is being now produced which will spell out the rights and obligations of both GWCL and its customers. For the alternative service providers there is no formal relationship.

### WITH RESPECT TO SERVICE RECIPIENTS

Service recipients do not appear to be clearly defined



# Country Case Studies

targets, is overseen for WAJ by PMU, a Programme Management Unit set up in 1997, under a Charter of Operations which set out its mandate, objectives, powers and duties and specific functions.

Small scale private service providers operate where LEMA fail to provide a service. Tanker operators usually source water from privately owned wells which are required to be licensed to sell potable water. They must register their trucks and obtain a licence in order to operate as a service provider. WAJ, under Law No.18 are supposed set the price of water they sell, but in practice this only used as a guideline and there are no penalties for exceeding price limits. However, as for other service providers public health aspects are well regulated and enforced by the Ministry of Health.

### WITH RESPECT TO SERVICE RECIPIENTS

The rights of service recipients are not clear. People in informal settlements are supposed to be entitled to “normal municipal services”, but often squatter status means that individuals are unable to provide the documentation required to obtain a connection. The Constitution while asserting that all Jordanians are to



Low-income area in Amman, Jordan

be treated equally before the law makes no explicit reference to water rights or the ‘right to life’.

Law No.18 (Art.23(2)) provides for Water Councils within the water department in each Governorate. The purpose is “ to allow citizens and local authorities to participate in deciding priorities regarding water and wastewater projects and plan for their implementation”. In theory there is a mechanism for citizens to report problems to WAJ but it is reported that in practice this does not operate in Greater Amman. It is reported that LEMA has however made progress with the use of focus groups.

The duty of recipients to pay for services is much clearer. LEMA has the responsibility and powers to deal with illegal use from the system they operate.

Persistent offenders and those who don’t pay the required charges face legal action in the courts.

### Zambia

#### WITH RESPECT TO SERVICE PROVIDERS

Under the Water Supply & Sanitation Act (WSSA) No.28, 1997 a “Service Provider” means any person who provides water supply or sanitation services;

Responsibility for water supply and sanitation provision rests, through the Ministry of Local Government and Housing, with Local Authorities.

s.10, Part III of the Act:

10(1) Notwithstanding any other law to the contrary and subject to the other provisions of this Act, a local authority shall provide water supply and sanitation services to the area falling under its jurisdiction, except in any area where a person provides such services solely for that person’s own benefit or a utility or a service provider is providing such services.

(2) Notwithstanding sub-section (1) and any other law to the contrary, and subject to the other provisions of this Act, where a local authority is unable, for whatever reason, to supply water and sanitation services to a locality within its jurisdiction, and no such services are being provided by any service provider, the local authority may contract any person or other service provider to do so.

(3) A utility or service provider contracted to provide services under subsection (2), shall have power to enforce by-laws relating to the provision of water supply and sanitation services as may be issued by the local authority.

s.9 Part III of the Act provides for the establishment of a utility:

9(1) A local authority may resolve to establish a water supply and sanitation utility as a company under the Companies Act (1994) as follows:-

(a) as a public or private company;

(b) as a joint venture with an individual or with any private or public company;

(c) as a joint venture with another local authority or several other local authorities.

Note: The requirements of the Companies Act 1994 and Water Supply & Sanitation Act 1997 are apparently such as to preclude many small scale service providers from gaining licences to operate. They currently therefore operate informally which means they have no legal status and are not regulated – i.e. no formal statutory duties or any protected rights.

Water supply and sanitation provision and therefore all service providers, including commercial utilities, are regulated by the National Water and Sanitation Council (NWASCO), established under s.3 of the 1997 Act.

The legal obligations of a utility are set out in:

- a Service Level Agreement (between the utility and the regulator), to which the mandatory Guidelines on

# Legal Issues

- Required Minimum Service Level 2000 apply.
- a Service Contract (between the utility and a customer).

There is no explicit Universal Service Obligation in the legislation, or in the operating guidelines, agreements or contracts, but it is considered that with some modification the Required Minimum Service levels could in effect constitute a USO. This is supported by the National Water Policy (1994) which in s.2.6 states: *“However tariffs must be based on principles of fairness and equity which entail: (amongst other things) c) providing a minimum level of service to persons who are unable to afford the full costs”*

In the event of non-compliance with legal obligations: the regulator can serve an enforcement notice; impose financial penalties; suspend the operating licence and ultimately cancel a licence.

The 1997 Act not only imposes duties on, but also provides powers (Part VII) to, a utility or service provider; i.e. in relation to access to, or acquisition of, land for water supply or sanitation provision purposes; reduced service levels in the event of drought or other disasters; disconnection; etc. In the case of disconnections this is only allowed where someone has not paid the bill for the services provided or where



Treatment works, Zambia (NWASCO photo)

someone has damaged / interfered with the installations belonging to the service provider.

## WITH RESPECT TO SERVICE RECIPIENTS

Although the Zambia Constitution (Art.112, 1996) requires that the State shall endeavour to provide clean and safe water, neither service recipients nor their entitlements and rights are clearly defined in the legislation (Act 27 1997). In the absence of a formal USO this is important. The National Water Policy 1994 issued by the Ministry of Energy and Water Development, does in s.2.4 state that *“ The overall national goal shall be: universal access to safe, adequate and reliable Water Supply and Sanitation Services”;*

but this applies only to the rural population. With regard to the urban population, s.2.5, while referring to the problem of the *“proliferation illegal settlements”* it only goes on to state: *“ However, peri-urban areas considered to be legal settlements by Government shall be treated in the same manner as urban areas with regard to the provision of water supply and sanitation facilities.”*

The Act 28/1997 requires providers to ensure efficient affordable and sustainable water supply and sanitation services within service areas. These requirements are clarified to some degree by the Regulator in their Guidelines on Required Minimum Service Levels. The service provider is tied, under its licence to operate, to achieve minimum standards. However achievement is a phased process with the Guidelines specifying working towards 75-90% coverage in the licensed service area.

In practice individual customers sign a contract with the service provider and this defines the rights and obligations of both parties. This service contract (between utility and a service recipient) sets out the duties, powers and entitlements of the two parties. The primary duty of the consumer is to pay the appropriate fees for the services provided.

Penalties can be imposed by the utility and/or by the Courts as provided by ss.37-38, Part VII of the 1997 Act:

*37(1) Subject to the approval of the Council, a utility or service provider may impose monetary penalties for late payment or non-payment of any tariffs, charges or fees.*

*(2) Where one or more users of a common water service connection are in default, the utility shall separate the common connections, and add the cost of separating such connections to the defaulting party or where two or more defaulting parties are involved, in proportion to the amounts due to the utility or service provider.*

*38. Any person who contravenes any provision for which a penalty has not been provided for under this Act, shall be liable, upon conviction, to a fine not exceeding six thousand penalty units or to imprisonment for a period of three years, or to both.*

The rights of an individual are protected via the regulator by checking that a utility meets its licence obligations and by a Water Watch Group, where they have been set up. A water watch group is comprised *“of volunteers from the community whose main objective is to represent consumer interests in the sector and provide information to consumers on service delivery. They have delegated powers from NWASCO to follow up outstanding consumer complaints by bringing them to the attention of the service providers and ensuring they are resolved. Should the Water Watch Group’s intervention fail, NWASCO is then called upon to take it up with the utility. At this stage, the utility risks being penalised and the matter publicised by the regulator.”* (Source: NWASCO web-site)

## Indonesia

## Country Case Studies

### WITH RESPECT TO SERVICE PROVIDERS

The Indonesian Constitution provides for state control of water resources and usage with the objective of providing for the well-being of the people. This provision is incorporated in the new Water Act No.7, 2004. While this could imply universal service delivery is a goal – it is not translated into an explicit legal obligation on either the primary authority or the secondary service providers (Palyja – an Ondeo partnership and TPJ – a Thames water partnership, in Jakarta). The latter however are required to meet service standards in their defined service area.

The legal framework for water supply and sanitation provision is being reformed to permit both private sector and community service providers.

At present there is no single national regulatory body, independent of Government. The model up till now, as exemplified by the establishment of the Jakarta Water Supply Regulatory Body (JWSRB), is one of regulation-by-contract (Cooperation Agreements). It is understood that the new Water Act No.7, 2004 will address this issue via the introduction of new bye-laws.

In addition aspects of water service provision are regulated under different pieces of legislation by four different institutions: i.e.

- the Ministry of Health regulates drinking water quality (Decision Letter No.907, 2002);
- the Ministry of Environment regulates water quality of drinking water sources (Regulation No.82, 2001);
- the Ministry of Public Works, regulates raw water availability and water and sanitation development (Water Act No.7, 2004);
- the Ministry of Home Affairs regulates the relationships between the local authority (public) which has the primary responsibility for water supply provision, and any private service provider (Instruction Letter No.21, 996).

### WITH RESPECT TO SERVICE RECIPIENTS

Article 33 (3) of the Constitution of the Republic of Indonesia, while giving the state the power to control over water resources, also gives it the responsibility to ensure that such control of water usage provides for the well-being of the people. This could be interpreted as providing a legitimate expectation by each citizen to be provided with, or have access to, water to satisfy their needs.

Under Local Act No.11, 1993 the people of Jakarta could again have a legitimate expectation to receive drinking water because the Governor has the responsibility exercised through Pam Jaya (now delegated to Palyja and TPJ) to distribute drinking water for the people of Jakarta.

But the same Act by describing service recipients as



Stark contrasts between poor and wealthier parts of Jakarta.

individuals or institutions that fulfil conditions as water customers in accordance with prevailing rules and regulations, means that some people are excluded.

Service recipients are obliged to pay for the service they receive and the service provider has the right to disconnect in the case of prolonged non-payment. On the other hand they have the right to receive a continuous water service that complies with water quality standards in sufficient quantity and a sanitation service to ensure community and environmental health (new Water Act No.7, 2004).

It is reported that in practice in such an event some customers have taken informal (and technically illegal) action and not paid their bills, and that this action did not result in disconnection.

In Jakarta the service providers Palyja and TPJ have no explicit universal service obligation. Service recipients do have some recourse under the responsibilities accorded to the JWSRB which is required to monitor implementation of the cooperation agreements, particularly in regard of water service delivery to water customers, and to develop, determine, and decide concerning dispute resolutions with water customers. The service provider has set up a complaints hotline and a water customer advisory committee has been set up but this in effect is an NGO with no statutory basis/authority. Law No.8, 1999 was intended to provide a legal framework for consumer protection, but a National Body for Consumer Protection has yet to be established.

The Government has provided some water terminals/public hydrants to service poor communities in slum areas but without proper controls on use so that in practice some of them are operated by "water mafias". Another significant means of gaining a supply of water is from illegal connections, which the police are meant to control.

# Country Case Studies

## Uganda

### WITH RESPECT TO SERVICE PROVIDERS

The Ministry of Water, Lands and Environment (MWLE) is the main ministry with responsibilities for water supply and sanitation provision in Uganda. Within the ministry these responsibilities lie with the Directorate for Water Development (DWD). To support these responsibilities the Water Statute 1995 (and the National Water & Sanitation Corporation (NW&SC) Statute 1995) provides MWLE & DWD with wide discretionary regulatory powers (economic and technical respectively). This situation supports the call for an independent regulator.

Set up under the Public Enterprise Reform & Divestiture Statute 1993 and the NW&SC Statute 1995, the National Water and Sewerage Corporation (NWSC) is responsible for water supply and sanitation provision in the large towns (15 in number). The regulatory process operates via performance contracts, both between NWSC and the Government (known as IDAMCs – Internally Delegated Area Management Contracts) and between NWSC and the actual utility or service provider, whether private or public. In smaller towns (51) a number of private operators, overseen by Town Council based, Local Water Authorities, provide the services – as established under the Local Government Act 1977 and the Water Statute 1995.

The activities of service providers are also governed by secondary legislation arising from the Water Statute 1995 and relating to standards, permits and procedures; e.g. The Water (waste discharge) Regulations, 1998; The Water Supply Regulations, 1999; The Sewerage Regulations, 1999; The National Environment (standards for discharge of effluent into water or on land) Regulations, 1999;

A perception of this situation is that an adequate regulatory framework is in place but its application is poor and the organisational set up contains some duplication and contradictions; furthermore the political will to enforce compliance is not good. To some extent these problems have been recognised by the Ugandan Government in the revised Performance Contract between themselves and NWSC. They accept that amendment of the 1995 Water and NWSC Statutes, involving separation of the asset management, operations and regulation functions, may be necessary.

### WITH RESPECT TO SERVICE RECIPIENTS

Service recipients are not clearly defined in the legislation. *“The urban water sector in Uganda is broadly defined to cover all towns with populations exceeding 5,000*

*people, together with all gazetted town councils.”*

There is no explicit Universal Service Obligation in Uganda although there are various references to 100% coverage:

- (a) the *“ government acknowledges its obligation to provide social services including water to the entire population”*
- (b) the government has stated that *“it intends to ensure universal access to safe water supplies (100% coverage) in urban areas by the year 2010”*.
- (c) the government has stated that their overarching objective under the National Water Policy is *“to extend the use of safe water supplies and appropriate sanitation services to 100% of the urban population.”* but that this objective is not expected to be achieved until 2015.
- (d) the MWLE’s 2003 Urban Water and Sanitation Strategy Report gives as one of its goals – *“ sustainable, adequate and safe water supply and sanitation facilities within easy reach of 80% of the urban population by 2005 and 100% by 2015”*
- (e) the Water Statute 1995, s.4(b) provides that one of the objectives of the legislation is *“ to promote the provision of a clean, safe and sufficient supply of water for domestic purposes to all persons”*
- (d) the 1995 Constitution states - *“14 The State shall endeavour to fulfil the fundamental rights of all Ugandans to social justice and economic development and shall, in particular , ensure that..... all Ugandans enjoy.....access..... to clean and safe water...”*

There are in the Constitution a number of other provisions which are relevant

- “21.(1) All persons are equal before and under the law in all spheres of political, economic, social and cultural life and in every other respect and shall enjoy equal protection of the law.”*
- “39. Every Ugandan has a right to a clean and healthy environment.”*
- “45. The rights, duties, declarations and guarantees relating to the fundamental and Human other human rights and freedoms specifically mentioned in this Chapter shall not be regarded as excluding others not specifically mentioned.”*
- “50.(1) Any person who claims that a fundamental or freedom guaranteed under this Constitution has been infringed or threatened, is entitled to apply to a rights and competent court for redress which may include compensation.*
- (2) Any person or organisation may bring an action against the violation of another person’s or group’s human rights.*
- (3) Any person aggrieved by any decision of the court may appeal to the appropriate court.*
- (4) Parliament shall make laws for the enforcement of the*

## Recommendations

*rights and freedoms under this Chapter”.*

As in most countries many of those not provided with adequate water supply and sanitation are the poor living in informal settlements. These are regarded by authorities as illegal and are typically unplanned and unserved.

### Practical recommendations for a pro-poor regulatory framework

The legal framework should be regarded as providing the underpinnings of the regulatory framework, which defines, explicitly or implicitly, the formal and informal rules for water service provision and the allocation of regulatory functions amongst the various actors and stakeholders. Whilst the term ‘legal framework’ suggests an emphasis on formal constraints (applicable legislation, contracts and specific regulations), these have important informal counterparts (such as norms and conventions, commitments, incentives and expectations), all of which influence ‘regulation’ as a process. We make this distinction in recognition of the fact that all water service providers are more or less formally regulated, irrespective of ownership and the institutional model of regulation in place.

A good legal framework for will be one which has essential components and which is developed to suit local circumstances (political, social, cultural, physical, environmental and economic). In other words, an effective regulatory framework will consider the ‘institutional endowment’ of any country, and respect the constitutional context as well as existing administrative capacities. It does not need to be complex and comprehensive and will be more effective if simple, workable and accessible. Of course even if a properly structured system of essential components is

created, it will not be effective without the necessary political will and without common social values.

It should also be recognised that a legal framework cannot be got right in one go – all examples reviewed exhibit varying degrees of evolution, responding to lessons learned and changing circumstances. The legislation has to create the right balance between creating a sense of certainty and allowing a degree of flexibility. The latter is often provided via discretionary powers, which is acceptable providing there is transparency and accountability over any decision taken and corruption is constrained. The legal framework should make room for feedback mechanisms that allow governments as the ‘guardian’ of the regulatory framework to identify and respond to conflicts and inconsistencies.

The core of the legal framework is that governing the status, rights and responsibilities (duties/obligations/liabilities) of the service providers and the service recipients. However, the relationship between these two parties does not exist in a vacuum. It is governed by relationships between each party and a range of other key parties: i.e. the Regulator, Government, and the Courts. These relationships and the rights and responsibilities need to be clearly defined in law, as do the powers and procedures required.

It should always be the case that the establishment, operation, and maintenance of water supply and sanitation systems must be supervised and controlled by the state. However some roles and responsibilities need to be devolved to autonomous or semi-autonomous authorities. Economic regulators should therefore be regarded as part of the institutional machinery which is set up to implement the law and help the government achieve its policy objectives with regard to water and sanitation services provision.

As this research has demonstrated, access, equity and distributional aspects, as well as the public health and environmental externalities of water services introduce a significant social dimension to economic regulation, such that economic regulators are no longer simply technocratic agencies, faced with the challenge of having to balance politically sensitive and frequently conflicting efficiency and welfare objectives. Ideally, social and water policies should be well-integrated, and the law provide a clear rationale for regulatory interventions. For instance, it is widely argued that it is the responsibility of democratically elected governments to develop effective mechanisms to protect vulnerable groups in society. If this responsibility is partly



A city built on many hills, Kampala, Uganda

# Legal Issues

delegated to an (economic) regulator, it would then remain a government responsibility to clearly define the regulatory mandate (providing the regulator with authority to legitimately make decisions that extend beyond its original technical remit) and to formulate laws such that the constellation of regulatory duties is such that different tasks and objectives do not contradict each other, and that regulators are awarded sufficient powers to achieve both social and economic objectives. In some instances it was found that governments failed to recognise or act upon the problems arising from commercial operation of services (based on the full cost recovery principle), increasing access to services (through capital-intensive service extensions) and a desire to protect affordability (through low tariffs for an overwhelmingly large customer base on low incomes).

Principle	Application (to pro-poor context)
Proportionality	- regulation appropriate to size/scale of provider; i.e. from large public sector departments or private sector international corporations to very small scale local service providers
Accountability	- clear standards and lines of accountability between parties (Government – Regulator – Regulated – Citizens), including accessible, fair and effective complaints procedures
Consistency	- the regulations should provide a stable & predictable environment in which all service providers can operate; and which supports the legitimate expectations of customers
Transparency	- open & effective communication and consultation with all parties
Targeting	- clear un-ambiguous targets, with approaches adapted to the needs of different groups and enforcement focussed on provision to the most vulnerable groups.

## *Reviewing the existing status of the water sector and a creating a vision/strategy:*

Who are the providers? What regulations/legal provisions/contractual rules apply to them at the moment? What gaps in the existing legislation are evident?

What is the existing customer base of the various types of providers? Which ones are currently operating on the fringes or outside of the law?

What are the gaps in current networked service provision? Who does not have access to networked services? Who cannot get access and why? What specific challenges and/or constraints is the industry facing?

What is the national policy with respect to water services?

Which principles shall apply to basic services for citizens? Will consumer rights/protection be enshrined in national law or utility licences?

What is the nature of citizens' recourse against service providers? (Political? Legal? ...?)

## *Functions of the regulator:*

What is the rationale for introducing regulation?

What is to be the purpose/role of the regulator?

What objectives is the regulatory agency expected to achieve?

What will be the primary and secondary duties of the regulator?

What is the remit of the regulator with respect to (a) geographical/administrative boundaries, and (b) the types of service providers it will regulate?

What powers will the regulator need to fulfil these duties?

## *Setting up a regulator:*

Who will act as the competent regulatory authority?

Where will it be placed within the existing institutional structure? What administrative conflicts can be anticipated and how can these be avoided or minimised? Which agencies will regulators need to liaise with?

What will be the internal structure of the regulatory authority? What types of personnel/ expertise will be required?

How will consistency and continuity in the regulatory process be ensured?

What are the funding requirements for the regulatory authority and how shall they be met?

From where will the regulatory agency derive its legitimacy?

What level of operational flexibility and discretion in decision-making shall be granted to the regulator?

Who will the regulator be accountable to? Who has ultimate decision-making responsibility?

What regulatory procedure shall be followed?

What will be the main regulatory instruments?

To what extent/in what areas are providers capable of self-regulation?

Who will have the power to intervene in regulatory decisions and on what basis?

Who shall disputes be referable to?

## Considerations for serving the Poor

In simple terms, what is recommended is that those involved in developing a new framework, or improving an existing one, should, work through a series of questions, as this study has tried to do. The five principles of good regulation (table, bottom right) adopted by the UK Government (Better Regulation Task Force, 2005) provide some useful guidance as to what the legal framework needs to establish or facilitate. A set of basic considerations for governments wishing to create or adapt regulatory frameworks is set out below.

### LEGAL CONSIDERATIONS FOR SERVING THE POOR

A regulatory framework will not become ‘pro-poor’ unless it succeeds in delivering improved access to water and sanitation services for the underserved poor, many of whom may be found in urban slums or informal settlements or on the peri-urban fringe. Having clarified the institutional setup of regulation and its combination of social and economic functions, it then becomes necessary to clearly define the regulator’s responsibilities vis-à-vis poor consumers, who may or may not be served by the formal, main provider. The following recommendations assume that the resources and mechanisms to enable duties to be carried out, liabilities to be met, and rights to be protected, are in place. It must be stressed that it is not appropriate for the legislation to impose duties and responsibilities that cannot be met under the prevailing circumstances. It is however recognised that new legislation can induce beneficial social change in difficult circumstances.

#### *Universal service*

The legislation should contain an explicit **universal service obligation** or a number of requirements which together result in universal service provision. Where necessary delivery of universal service can be delegated and imposed, in appropriate forms, as a primary duty on both the regulator and the regulated (service provider). The legislation should clarify who is entitled to the service – it should not be at the discretion of the service provider. This USO must consider all people, regardless of legal status (e.g. citizenship, residency, land or property rights), i.e. it should include visitors, migrants, refugees, people living in illegal settlements, for example. However, it should be realistic, taking into account existing service gaps and the time and finance required to close them. Likewise, it should not impose unnecessary burdens onto the regulator and service provider (and ultimately, the customers). There is a risk of failure to acknowledge the persistent inability to pay

of some groups of society, which require a level of support that necessitate interventions beyond what the regulatory model can realistically be expected to deliver. The USO should be consistent and explicit throughout the legal framework, e.g. from the constitution, through primary and secondary implementing legislation, to specific service contracts/ agreements.

The definition of ‘universal service’ and any accompanying service obligations must be worded such that its interpretation can evolve in a positive sense, i.e. a USO should not be seen as a static target, but on that can become increasingly ambitious in line with social expectations and technical/financial feasibility. However, the legislation should give sufficient guidance for regulators to arrive at this socially efficient interpretation without giving the impression of consistently ‘moving the goal posts’, which could be seen as discriminating against an increasingly efficient provider.

Any USO must give regard to the financial implications of making such a target a legal obligation. Where affordability is a primary concern, this should not be prioritised at the expense of the financial health of the main provider. In the first instance, the regulator must be enabled to secure funding by setting cost-reflective tariffs. Where the investment requirements exceed the potential funding that can be generated without undue negative impact on all or poor/ vulnerable consumers (and this is likely to be the case in many of the case study countries), the law must consider placing financial obligations on government and the social security system.



Door-to-door water vendor in Jakarta

#### *Utilities and small-scale providers*

The legislation should acknowledge the various models of service provision in a particular setting, and enable the regulation of any type and scale of provider. It should specifically include provisions for a level of formalisation of **small-scale alternative providers**,

## Legal Issues

which frequently operate in the informal sector and/or in a more or less unregulated (and, where regulations do exist, unenforced) market. Rules should clearly set out the powers, duties and rights of any service provider, whether it be public, private or some form of partnership, irrespective of its size – with respect to its service recipients and potential competitors.

As far as relationships between the various providers (especially between the main utility provider and comparatively small private or community-managed providers) are concerned, **exclusivity rights** emerge as a major bottleneck to universal service provision. Especially in the case of large-scale concession contracts, utilities are protected from competition by exclusivity clauses in their contracts, ignoring the reality that they are unable or unwilling to offer services in some parts of their service area or to adapt their service portfolio to meet the needs of a certain type of consumer. Legislation should carefully balance the needs of *all* providers to protect their investments against the need of all residents to be served and define the conditions for market access and share.

Confining alternative providers' activities to the fringes of the law or declaring them illegal in primary legislation or contracts is an overly simplistic approach that fails to account for the reality that alternative providers – independently or in co-operation with the main provider – will remain a part of the service solution at least in the medium term. The legislation should be inclusive, but not apply uniform rules to all types of provider. A measure of **flexibility** is required to balance the necessary control of smaller scale activities against the operators' capacities, otherwise

Slum housing, Buenos Aires, Argentina (Walton photo)



workable (though by no means 'perfect') solutions may be excluded by default. In the case of utility providers, inflexible contract clauses, and high service standards and performance targets could have a similar effect. Minimum service levels should be defined such as to allow acceptable trade-offs in price and service standards, enabling affordable solutions for the 'difficult-to-serve' which may differ from conventional technological choices. The legislation should also consider the various possible models for delegation of responsibilities, providing this is done in a transparent and accountable manner; e.g. sub-contracting to alternative/local service providers; use of local NGOs to engage on behalf of vulnerable people/communities who are not in a position to help themselves.

Conversely, there is a risk of not **protecting a utility** against willing and highly adaptable competition, especially where customers in low-cost parts of a service area have an incentive to switch to cheaper alternatives. In such a case the legislation must consider the immediate implications of allowing competition, including self-supply. Pricing policy objectives, such as the cross-subsidisation of domestic and/or lower-income users, may be undermined if the customers providing the subsidy are allowed to opt out of the utility services. Other considerations, in many locations, are the environmental and public health risks associated with cheaper and/or unregulated alternatives, such as the possible over-exploitation of fragile groundwater resources and a potential lack of water quality monitoring.

The legislation must also consider the legal impediments that need to be lifted in order to enable providers to realise the service objectives. Some of these relate to routine functions, such as access rights for the provision (installation & maintenance) of services. Similarly, the legislation must also provide a mechanism for dealing with (i.e. authorising) access to, use of, purchase of, land for the purpose of carrying out statutory duties (e.g. required infrastructure installation/maintenance). Another set of considerations, such as land tenure issues in slums and peri-urban areas or presently informal resale activities, may require **amendments to existing legal provisions** which are not directly related to water law, such as planning, property and business law.

As far as regulation is concerned, the legislation must provide **effective penalties** for, and **enforcement**



## Checklist



Standpost queuing, Lusaka, Zambia (Kayaga photo)

of, any failures to meet obligations or carry out duties, which are the fault of the service provider. At the same time it should clearly set out the **rights and responsibilities of service recipients**; e.g. the right to receive services and the responsibility to pay for them. NB the ability to pay issue will need to be dealt with outside this regime alongside other social/economic measures to deal with poverty and low income recipients, unless any specific measures can be absorbed within the regulatory system).

### *Institutional roles*

The legislation should clearly set out the powers and duties of any regulator and its relationship with Government and where necessary with other regulators and agencies, where their responsibilities relate to water and sanitation services provision. In view of the frequently observed fragmentation of responsibilities between a variety of national, regional and local level organisations, the **clear allocation** and, where appropriate, separation of **institutional roles and delineation of functions** is essential. Especially where economic regulators are expected to take on social responsibilities, the legitimacy of regulatory decision-making must be anchored in the law and translated into the regulatory mandate. The law should also shield the regulator(s) from undue political influence, and any subsequently introduced legislation that affects the financial balance (as some social protection measures, such as a ban on disconnections for reason of non-payment, do) should be accompanied by provisions to restore that balance, without placing an unreasonable burden on any party (e.g. paying customers effectively having to subsidise non-payers).

The legislation should require the actions of the Government, the regulator and the service provider, to be **transparent and accountable**. This will include establishing the necessary procedures, standards and administration. It should establish a transparent and accountable body which serves (by clearly defined powers and duties) to protect the interests of all service recipients. Various models exist – ombudsman, citizen advisory bureau. Particular provisions may be necessary to facilitate accessibility for vulnerable (poor, inarticulate, disabled, etc) people. Similar **appeals mechanisms** should be accessible for all other parties, mainly the service providers.

The legislation should provide for **access to the courts for all parties**, as a mechanism of last resort, where any part of the system fails to deliver. The judicial system can only apply the law as is. There are arguments for and against involving the courts in regulation and dispute resolution. In the UK experience, negotiation between the regulator combining adjudicative and investigative functions and the regulated companies, subject to scrutiny by the Competition Commission (formerly Monopolies and Mergers Commission) has limited the use of the courts, saving public expense and time in reaching final decisions (McEldowney, 1995). Likewise, the House of Lords ruled that the regulator is best placed to deal with disputes between individual customers and water companies, especially where expert consideration of technical/financial issues is required to strike a fair balance between the rights of an individual and the community as a whole (Marcic-v-Thames Water, 2003). Minimal use of the courts will prevail where the legislation provides clarity over powers, duties and rights. The law must therefore be qualified to suit

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# Legal Framework for Serving the Poor

## CHECKLIST: LEGAL PROVISIONS FOR SERVING THE POOR

prevailing conditions/circumstances – i.e. they must generate reasonable expectations on behalf of service recipients and reasonable performance on behalf of service providers.

In order to achieve the required flexibility, and in consideration of the likely need to make some adjustments to rules and regulations once more experience has been gained with the implementation of new water laws and new policy objectives, it would be recommended to ensure that the legislation is clear on these objectives and the broad regulatory framework that is intended to achieve them, but at the same time untested rules should not be fixed in primary legislation, which is difficult to change. The legal framework should therefore consist of an appropriate mixture of laws, secondary legislation or statutory guidance, which is implementation-oriented and more flexible and detailed contracts, which can be amended in response to new insights with the consent of the parties to the contract. *To achieve universal service the regulatory framework must include:*

- Sufficient independence and length of tenure of Regulator and/or Regulatory Board to promote cost reflective tariffs for higher-income consumers, particularly for sewerage
  - Transparent and fair appointment/selection process of Regulators
  - Sufficient resources: personnel with the capacity to deal with poverty-related consumer issues, independent budget
  - Primary Duty for the Regulator to achieve Universal Service as well as the equally critical Financeability
  - Inclusive definition of regulatory remit (in terms of regulated entities, area of jurisdiction, social/economic aspects of decision-making)
  - Legitimacy for the Regulator to make decisions that are not strictly of an economic nature
  - Regulatory powers to
    - access and request information (from providers and other organisations)
    - license suppliers and develop appropriate tools for the regulation of alternative providers
    - monitor and audit (require monitoring and auditing)
    - define and adapt performance indicators to current circumstances (e.g. minimum service levels, coverage targets)
- set tariffs
  - make regulations (e.g. setting flexible technical/service standards, accountability of service providers, anti-corruption measures, allowing on-selling, if only temporarily)
  - abolish exclusivity clauses of service provision by monopoly direct provider – the ‘legal concept is non-exclusivity of service provision’
  - enforce decisions, incl. powers to fine utility providers for failing to provide distribution mains to high density urban slums
  - involve consumers/stakeholders in the regulatory process, possibly empowering existing consumers organisations to participate
- Regulatory duties to
    - give regard to the needs and special circumstances of the poor and vulnerable
    - ensure providers have sufficient finance to meet their obligations
    - review implications of subsidies built into the current tariff structure
    - recognise an ‘acceptable process’ towards USO without penalising direct provider inappropriately as long as ‘reasonable steps’ are taken towards meeting obligations, recognising that ‘targets are not absolutes’ and legal restrictions may be in place to prevent their achievement (e.g. land tenure issues)
    - recognise the competition implications for main utility and alternative (independent) providers
    - make decisions in a transparent manner
    - consult with consumers and stakeholders



Solid waste tip squatters, Nairobi, Kenya

# Chapter 20

## Pro-Poor Economic Regulation



### ***What do we mean by 'the poor'?***

The income poor: 'material lack (<\$1 per day), with physical weakness'

The 'health and education poor'

The 'quality of life poor'

The 'housing poor': slums/informal/illegal areas poor

The 'powerless poor': '*insecurity and vulnerability, bad social relations, low self-confidence and powerlessness*'

Remembering the particular characteristics of poverty:

unemployed, underemployed, randomly employed, daily income employed, over-borrowed; disabled, single parent, chronically sick, pensioners/aged; children/street kids

What can pro-poor regulation achieve?

How can the regulatory process be enabled to incorporate a bias towards the poor ?

How can 'bureaucratic' regulation maintain the necessary flexibility in service delivery to the disadvantaged?

Developing an evolving  
Universal Service  
Obligation

## Enabling effective pro-poor regulation

There are a number of obstacles to effective pro-poor regulation as identified by the case study research. Part 1 of this Guidelines paper proposes potential solutions. Part 2 outlines the vision for pro-poor regulation and universal service, and Part 3 offers an interpretation of the vision and summarises practical suggestions for implementation in lower-income economies. Further information can be found in the relevant 'tool box' summary papers.

### PREREQUISITES

#### Information

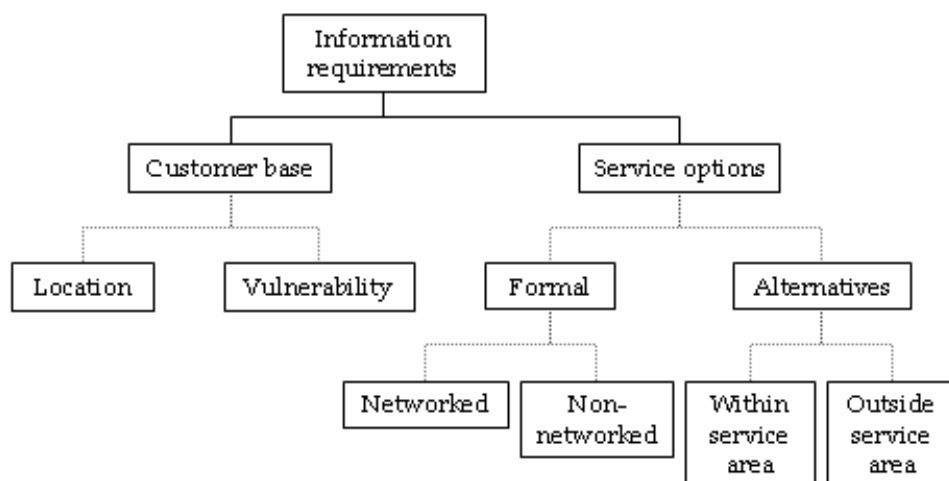
Reliable information is at the heart of effective economic regulation. It is not possible for a regulator to determine appropriate tariffs relative to desired service levels without the detailed information necessary to populate the financial model. Considerable effort is spent on balancing the effects of information asymmetries between providers and regulators in mature regulatory systems. In addition to information requirements mandated by licence or contract, incentive systems are used to induce firms to reveal their efficiency potential over time, thus adding to the quality as well as the quantity of available information with the added value of leading to cost reductions for the benefit of customers and society as a whole. Water regulators in developing economies, faced with the challenge of facilitating service provision to a large and overwhelmingly poor proportion of consumers, who are currently excluded from the convenience of networked water services, are frequently constrained by the lack of basic information about who is actually being served, over and above the technical and financial information advantages held by service providers.

#### *Obstacle 1: Lack of reliable information on existing and potential customers*

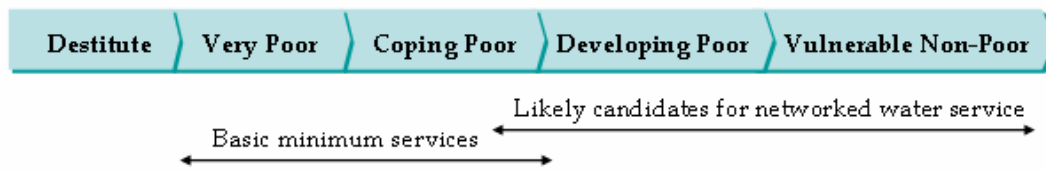
Whilst modern information management is revolutionising administration in many water companies, the customer data held by formal service providers falls short of meeting the requirements of 'regulating for the poor'. Census data and independent (e.g. government) poverty assessments, which might complement available customer data, may contain significant statistical errors. Nevertheless, in order to develop an approach to pro-poor regulation appropriate to a particular country (or even city) context, regulators need comprehensive information on existing and potential customers within their area of authority. Background information on social and cultural attitudes, which influence customer expectations and preparedness to take responsibility for certain aspects of the service, are as important as accurate data on poverty incidence and segmentation amongst consumers.

#### *Obstacle 2: Lack of reliable information on water service options for existing and potential customers*

Authoritative access data for different water service options can be equally scarce, and inconsistencies between different data sets are not uncommon. While information on formal networked services is most readily available (figures for non-networked services less so), coverage data for formal providers must be viewed with caution. Generous assumptions for the number of persons using a household connection or public standpipes may exaggerate success. The picture is much less clear for alternative service options. Comprehensive databases on alternative providers, for instance, are virtually non-existent.



# Addressing Information Gaps



Likewise, access statistics have rarely been linked with socio-economic data.

## Proposal:

### Customer differentiation and social mapping

Target groups for special consideration must be assessed based on their vulnerability and location with respect to existing service areas. The different aspects of poverty other than low income must be taken into account. Vulnerable groups frequently include single parent families, female-headed households, pensioners, the sick and disabled, pensioners, the unemployed or underemployed, larger than average households, slum settlement tenants or groups excluded from welfare assistance on the grounds of residential status. Social mapping can be a useful tool to combine water service and consumer data, which when overlaid can help select priority areas for service improvement, or indeed service extension into new areas.

At the same time it is essential to recognise the limitations of water regulation, as certain groups of society may require a level of assistance that is beyond the capabilities of regulated water service providers. It is therefore recommended to establish the likely candidates for formal, networked water services, whose demands will need to be taken into account in the preparation of future investment programmes. Basic minimum services, closely matched to households' willingness and ability to pay, should be offered to poor customer groups at the lower end of the poverty spectrum. Due to the delicate financial situation in most cases, those with no means to make contributions to ongoing service provision in cash must be taken care of under welfare programmes so as to not jeopardise service for all. Detailed indicators describing the categories shown in the diagram above are highly context-specific. Care should be taken to avoid demeaning terminologies, which the public may be very sensitive to.

It is not the role of a regulator to collect and continuously update the information required for

regulatory decision-making. Accurate water service information, explicitly linked with socio-economic data, should be the responsibility of formal providers as part of good demand management practice and system development projections. Experience in higher-income countries has demonstrated that all utilities need to know who their customers are, present and potential, with information technology available to overcome the challenges faced by larger utilities whose customers otherwise should benefit from economies of scale. As a starting point coverage statistics should be disaggregated by customer categories and/or location. Likewise, monitoring of *active* connections would shed light on the operator's efficiency in maintaining customer satisfaction and hence actual success rates in improving access and encouraging water service uptake.

Alternative means of data collection and maintenance must be sought in areas where the utility fails to provide acceptable services, i.e. certain "pockets" within the service area (slums, illegal settlements, etc.) or the peri-urban fringe outside of the contracted service area. Data collection in those areas – likely to comprise the target groups for pro-poor regulation – can be subcontracted, e.g. to NGOs, community associations or other social intermediaries, but could nonetheless remain the responsibility of the main provider: underserved pockets within the service area unquestionably are within its remit, irrespective of the 'legality' of settlements, whilst a proactive approach to service area definition (i.e. reclassification once certain conditions are met, such as automatic review in line with municipal growth and adjustment of administrative boundaries, or inclusion of peripheral areas that have reached critical size and/or housing density) would capture fringe areas. Understanding areas of potential demand sooner rather than later must always be beneficial to utilities' long-term planning process. The costs of undertaking

## A Pro-Poor Regulatory Framework

this work in advance of service provision (and therefore allied revenue generation) can be funded through the regulatory process by adjusting tariffs to suit.

### Regulatory framework

A second important set of constraints arises from the fact that economic regulators, though often expected to deliver socially desirable outcomes, are *not* policy-makers. Regulators may stretch to imaginative interpretation of existing rules and regulations, but ultimately the ground rules are set by political decision-makers. Unfortunately, this may lead to the regulator being required to perform a delicate balancing act as contradictory demands are placed on service providers and the regulatory system alike.

*Obstacle 3: Ambiguous or contradictory strategic sector targets*

Unreliable access statistics, especially in informal areas and regarding services catering for low-income customers, represent a first and serious impediment to the formulation of realistic (achievable) and pro-poor sector targets. As lack of knowledge, compounded by misconceptions about 'the poor', prevails amongst many planners and decision-makers, targets may exceed what even the most efficient system could be reasonably expected to deliver in the given time frames. Moreover, policy-makers often fail to associate the financial implications of any requested connection targets and below-cost tariffs for low-income customers deemed essential to safeguard affordability. Cost recovery is increasingly recognised as essential for the sustainability of the water industry and thus declared a primary policy objective. However, in few cases are cost recovery objectives synchronised with social protection objectives with the two left to co-exist in spite of mutual exclusivity in their existing form.

*Obstacle 4: Conflicting objectives and high risk of interference*

An incomplete separation of operator, regulator and policy-making function has been a common observation in the case studies undertaken for this

research. Regulators often find themselves in the midst of a power struggle between influential vested interests, which can seriously impede the regulator's effectiveness in securing support for and compliance with regulatory decisions. Problems are most likely to arise where there is an imbalance between responsibilities given to regulatory authorities (and high expectations are to be met) and the powers available to regulators to carry out their functions. Tariff setting, one of the critical tools of economic regulation, is a prime example. In some locations tariff decisions remain firmly vested in political hands. The consequences of governments' 'unwillingness to charge' for political reasons – service failure and desperate need amongst the low-income population – are the very reasons for water sector reform and the introduction of regulation.

### Proposal: Embrace a mediator/facilitator role

As water regulators are facilitating governments' duty to serve the public, a guiding concept and a supporting set of regulations – not to be confused with the process of regulation itself – need to be provided by the legislature. A *mandate* providing legal clarity and a *mission* in the form of a set of clear and achievable objectives allow the regulatory authorities to carry out their work effectively and purposefully. The third supporting 'm' on the wish list of regulators, it emerged during the course of this research, was *money* made available by governments in the form of grants and subsidies where cost recovery and social objectives conflict. As this research has shown, imprecise legal mandates can (to a certain extent) be compensated for by increased accountability on the part of the regulator, and legitimacy gained through special regard to consumer involvement in order to secure public support.

There is a vital role for the expert regulator to facilitate understanding amongst leading decision-makers, especially where governments have failed to recognise links between sector targets and funding required to meet these targets, or where expectations exceed what public or private utilities – even under a demanding regulatory system – can reasonably deliver without the government accepting a share of the financial commitments. Besides, even where they are denied ultimate tariff-setting powers, there can be a meaningful role for regulators. Their expertise enables them to evaluate different technical options

**Project Aim:** To give water regulators the tools, that is the technical, social, financial, economic and legal understanding or framework to enable them to require, facilitate and monitor the early achievement of the universal service obligation as a primary duty.

# The Vision: Universal Water Service

vis-à-vis financial and social implications, making impartial recommendations to (political) decision-makers, who are likely to lack the required level of insight and neutrality.

## A VISION OF UNIVERSAL SERVICE UNDER PRO-POOR REGULATION

The vision for water services regulation in lower-income economies includes a pro-poor bias in support of national and international development goals and the achievement of universal service – adequate and sustainable water services for all. A special regard to poor and vulnerable people is deemed justified in terms of the potential public health benefits to society as a whole in addition to the goal of poverty alleviation. That regard is also necessary in view of the high capital intensity of the water business and generally weak governance systems in many target countries, which have led to the failure to meet the most basic requirements of the poor. The proposal is to give regulatory authorities a primary duty to oversee and facilitate a Universal Service Obligation (USO) on water service providers in addition to their primary duty of ensuring the financeability of operations, capital maintenance and capital enhancement.

### *The concept of universal water service*

As the Literature Review has shown [3], the use of the term ‘universal service’ frequently confuses its economic and social meanings, ignoring its historical development with reference to competitive markets rather than through regulatory intervention and deliberate social policy. Within the water sector the notion of ‘universal access’ is underpinned by an ambition to promote socially desirable consumption levels based on strong public health and social welfare imperatives. However, a clear definition of ‘universal water service’, crucial for pro-poor regulation, is needed – though precise indicators may differ depending for individual regulatory systems.

The concept of ‘universal water service’ underpins household water security, which refers to a reliable and safe water supply of sufficient quantity accessible for use *within the home*. It encompasses notions of access, adequacy, sustainability as well as equity and fairness in the guise of affordability. There continues to be a widespread overemphasis on technical aspects

of ‘adequate access’, mis-interpreting service levels (i.e. available water source, such as springs, public taps, household connections etc) as ‘access to water services’. The sustainability criterion of universal water service links with the financeability requirement in that finance must be secured to make services available and ensure their continuing availability, and stresses the fact that any universal

### **Considerations for ‘adequate access’:**

- Facilities must be convenient and responsive to actual needs to as to encourage optimum water service uptake/use
- Ideally, the need for consumers to adopt coping strategies would be eliminated - benefits will accrue predominantly to the poor and vulnerable
- Equivalent, not identical, services should be available to customers within the same category
- Service levels should be matched to customer

service obligation must not destroy the financial sustainability of the service provider. It also touches upon the need to consider natural resource availability and protection and wider governance issues. Sustainable, universally accessible and affordable water services cannot be achieved simply by stipulating a USO for providers and instating a regulator to oversee its implementation. By demanding universal water service, society – government and individual consumers – must accept responsibility and strive to meet the complementary obligations arising from the USO on the provider. This is why USO should be harmonised with other sector targets, or else it will descend into bureaucratic irrelevance as ‘just another sector target’. To some extent this reiterates an earlier point; the regulatory framework, including legal provisions to this effect, is critical to the success of pro-poor regulation and the achievement of universal water service.

### *Defining universal water service and USO*

A definition of universal water service must recognise the corollary of the ‘adequacy’ requirement: If the aim is to encourage an acceptable *consumption* level, the emphasis must be on water use, not simply access. It is worth noting that equity considerations do not necessarily require ‘same services for everyone’. Case study research has shown that under certain

## Universal Service Obligation: A ‘Moving Target’

### Dimensions of the ‘moving target’ USO for the *main* provider

#### Space – service area

Initially, this will account for failures to provide adequate (or any) service in certain parts of the service area – alternative arrangements (e.g. partnership with NGOs/community associations, sub-contracting to other operators/alternative providers) will need to be sought. The space dimension would also capture natural growth/expansion of the service area relative to housing density as well as need.

#### Time – deadlines

The precise definition of the USO will necessarily change with time: (1) in recognition of the fact that the goal of 24/7 potable household service and high-specification sanitation facilities take time to achieve. (2) Further changes will occur in response to spatial adaptation (changes to the contracted service area) and the evolution of service options in line with the gradual improvement of network capacity and customer preferences as well as, eventually, technological innovation and ecological demands. For the USO to have tangible and long-term benefits for low-income households it is critical to recognise standpipes, for instance, as only temporary solutions.

#### Service types and levels – targets

With respect to service levels it is important to recognise the wide spectrum of service options that can be provided by a network, ranging from public standpipes to yard/shared connections to private direct household connections. It should also take into account quality of service aspects, not simply the physical availability of service options.

conditions *equivalent* services would be the rational choice. For instance, in remote corners of a provider’s service area, a regular tanker service in combination with sound household storage facilities could provide a more economical service in that technical problems associated with long pipelines (e.g. physical losses, low pressure, high chlorination levels) can be avoided, ultimately to the benefit of the customer.

Nevertheless, the ultimate aim should be to provide household-level services, which equates to a private household water connection with a 24/7 supply of potable water. *[While a ‘first world standard’ is entire reasonable, i.e. both desirable and achievable in developing economies, as far as water supply services are concerned, the sanitation equivalent, water-borne sewerage, is arguably not the right solution in many locations.]* No doubt this appears to be a distant goal for many urban low-income communities in the developing world. For this reason, the definition of a universal service obligation should reflect the evolutionary nature of its constituent targets: space, time, and service types and levels (see text box).

If universal service is thus to be regarded as a dynamic concept, policy-makers are called upon to set the direction of evolution, whilst regulators drive the pace, relative to costs and potential revenue. The USO on the service provider therefore does not exclusively

refer to any specific point within the spectrum. It will at first have to be set to an initial set of parameters, but will subsequently be continually adjusted in pursuit of the next incarnation of ‘universal service’.

Such a definition acknowledges the fact that ‘100% coverage’ – a common assumption – cannot constitute the single criterion for achievement of a USO, as it does not account for service quality aspects, such as reliability of supply, which this research has confirmed to be equally important to existing and potential customers. Equating ‘universal service’ with ‘100% coverage’ also creates difficulties with small minorities that simply cannot be served under conventional service models (as discussed above).

### GUIDELINES FOR PRO-POOR REGULATION: IMPLEMENTING AN EVOLVING USO

In highly simplified terms, the process of pro-poor regulation entails driving the continuous evolution of a universal service obligation towards higher - but realistic – goals, so as to accrue progressively the benefits of improved water services to disadvantaged households and communities. The regulatory problem, implementation of the ‘moving target’ USO, can be divided into three main aspects: (1) defining and redefining/adjusting the USO, (2) allocating USOs, and (3) sustaining/ funding universal service.



# Implementing an Evolving USO

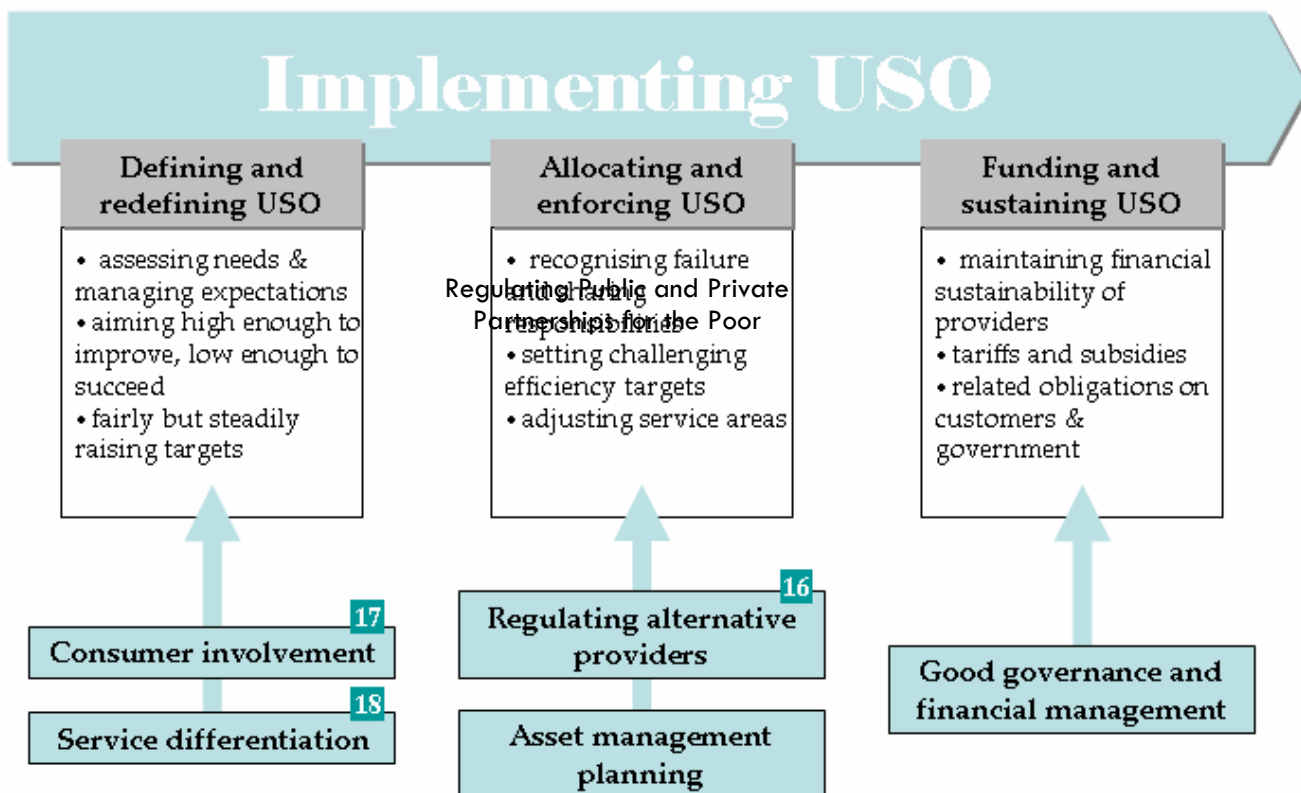
## 1a) Defining USO

With tariffs very rarely approaching cost reflectivity, creating universal access, not affordability, will be the priority concern in the majority of situations. *[Though, of course, improving access can create affordability problems if cost allocations do not account for potential customers' ability to pay.]* Choosing the right initial set of parameters for a USO is closely related to the information problems discussed earlier.

**Consumer involvement** at a level appropriate to the various consumer groups identified is an appropriate regulatory response. Identifying and involving *all* existing and potential customers, especially the low-income communities labelled 'hard-to-reach' and unserved by conventional water service providers, requires a level of skill that may not be readily available amongst technically oriented regulatory staff (and indeed amongst many operators). 'Tool box' summary paper [17] and [18] outline lessons from worldwide experience and suggest strategies to develop effective two-way communication and direct links between regulators and protégées. In defining

and developing the USO, regulation must recognise the vital role of civil society as well as the explicit and implicit contributions it can make to empowering the poor by formalising arrangements at an appropriate level. Consumer involvement can also help with assessing real demand for services and match the right service with specific customer groups and/or areas. The idea behind **service differentiation**, as outlined in 'tool box' paper [18], is to allow some flexibility in meeting minimum service targets (that is, bypassing the tight bounds of conventional, 'first world' technical service standards) and reflecting the savings in lower prices for the poor whilst achieving the desired convenience of service.

The challenge lies in aiming high enough to make significant improvements, but low enough to make the USO achievable – the latter primarily to avoid disappointing unreasonable expectations, be they held by customers or governments. Whilst exact definitions will necessarily have to be context-dependent, so that no generic standard can be



## Chapter 20

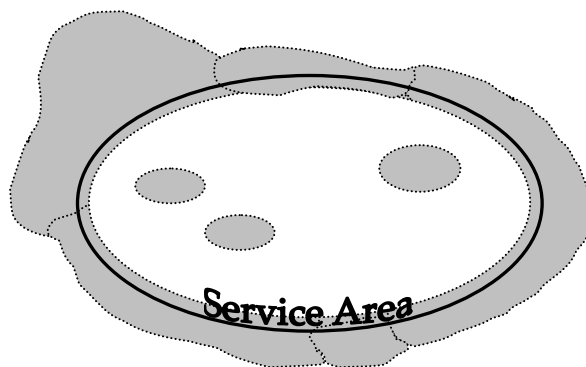
suggested at this point, a USO should be specific and indicators measurable. Of course, close cooperation will also be required with service providers and other (government) agencies. Targets are not simply 'good' if they are socially responsive, they must also recognise external constraints, such as situational water resources.

### 1b) Adjusting USO

If continuous improvement is the aim, the question then becomes how and when to adjust USOs. For example, a challenge in capturing the 'space' dimension is the problem of fluid and ill-defined administrative or municipal boundaries, which may rapidly outgrow contractually agreed service areas. Likewise, the USO should encourage transitions from 'good enough' to 'better' services, i.e. differentiated service standards are not to be understood as permanent solutions. [However, in some cases they certainly could be; an example would be condominal sewerage as piloted in Latin America. Certainly within the water supply sector, the goal of individual access to safe and reliable water within the home should not be compromised.]

While this may not be a problem, at least initially, in low-income communities, customers' expectations can be generally expected to rise with increasing economic wealth. Again, customer involvement will remain a crucial tool for distinguishing between (individuals' and society's) needs and expectations and managing demand and expectations. [In the initial stages of pro-poor regulation, objective needs may actually exceed subjective expectations, and issue that regulators need to handle with sensitivity, negotiating affordable minimum service standards in support of public health.]

Transparency in the evolution and redefinition of USO is paramount, or the regulator could be justifiably exposed to the criticism of continuously 'moving the goalposts'. Adjustment could be conveniently incorporated in a process similar to the 'rolling incentive mechanism' used by regulators such as OFWAT (England & Wales) to promote the early achievement of greater efficiency. In terms of timing of adjustments, the process might be similar to tariff adjustments, for which there are basically three options: periodic reviews, partial or 'extraordinary' reviews and automatic adjustment. Contrary to preferred tariff setting procedures as observed in the case studies, a 'periodic USO review' based on wide consultation with consumers and providers might be the better choice.



- Unserved areas: slums 'pockets' and urban fringe
- Contracted service area

### 2a) Allocating USOs

As outlined above, USOs will necessarily have a spatial component. Under conventional contract arrangements, performance indicators usually refer to a specified service area. However, as the prevalence of various types of alternative provider indicates, utilities or main providers often fail to provide the required service in all parts of the service area (notwithstanding the fact that there might be a mismatch between service areas and actual settled areas), as illustrated in the diagram above.

This failure must be recognised in allocating USOs to providers – by acknowledging the role of **alternative providers** and the various possible partnerships (e.g. between the utility and community associations, NGOs and/or small-scale providers) and incorporating them into the regulatory framework – practical considerations can be found in summary paper 17. Depending on the situation (level of organisation of the alternative water services sector, monitoring capacity of the regulator, management capacity of the main provider, etc.), two basic options can be envisaged (see illustrations on page 10):

(1) A USO is imposed on the main provider. The responsibility for achieving the set targets rests this with the main provider, who is encouraged to subcontract service delivery in 'difficult-to-serve' areas, taking advantage of alternative providers' (including NGOs' and communities' own skills in working with the poor).

# Implementing an Evolving USO

(2): The service area is divided into sub-areas and different operators assigned to achieve a USO in their respective service areas. This practice would be consistent with contractual clauses allowing operating licences to be revoked in case of default. However, in order to fully exploit the economies of scale achievable by one major service provider, licences for sub-areas may be time-limited.

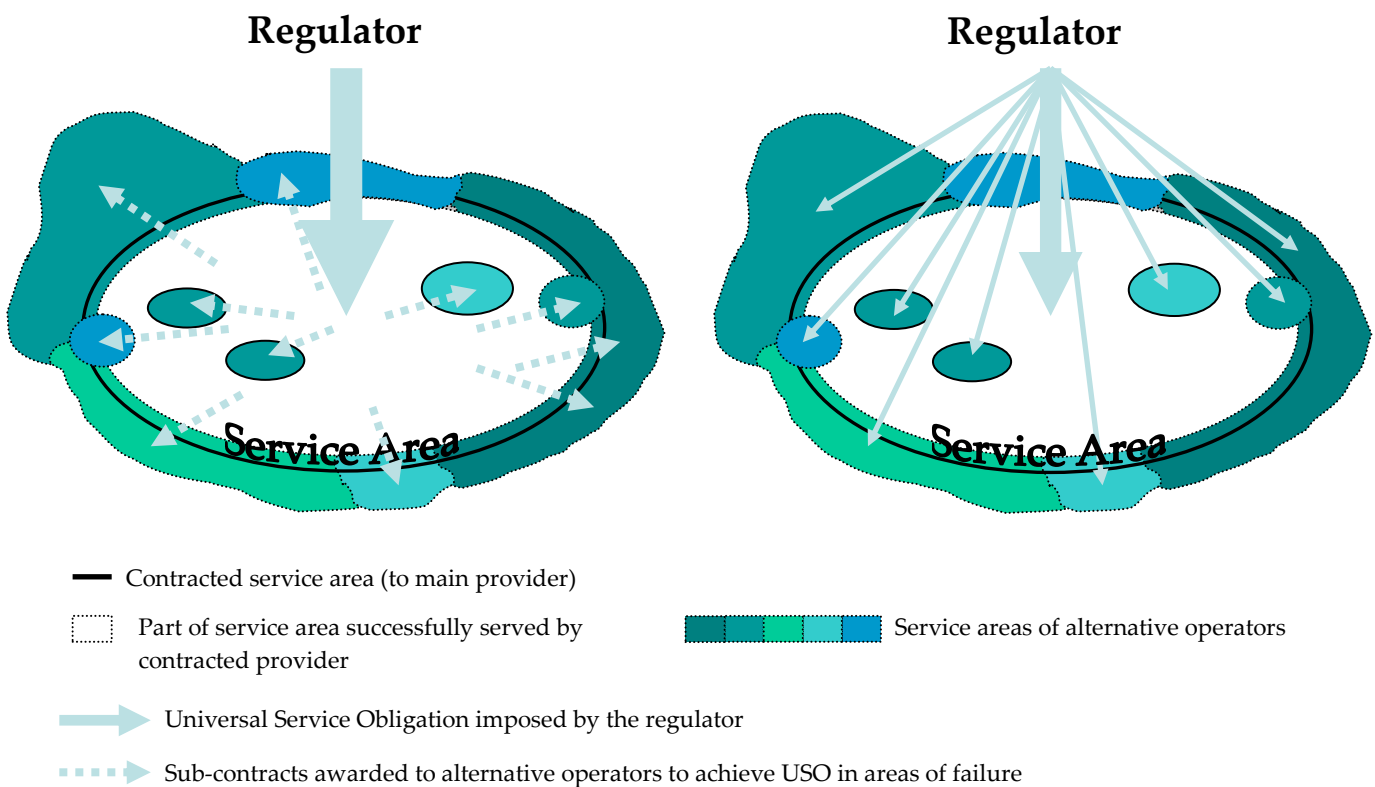
It is proposed that periodic price reviews should automatically consider and re-define the service areas appropriate to each utility, in addition to negotiating prices and investments.

## 2b) Facilitating, monitoring and enforcing USO

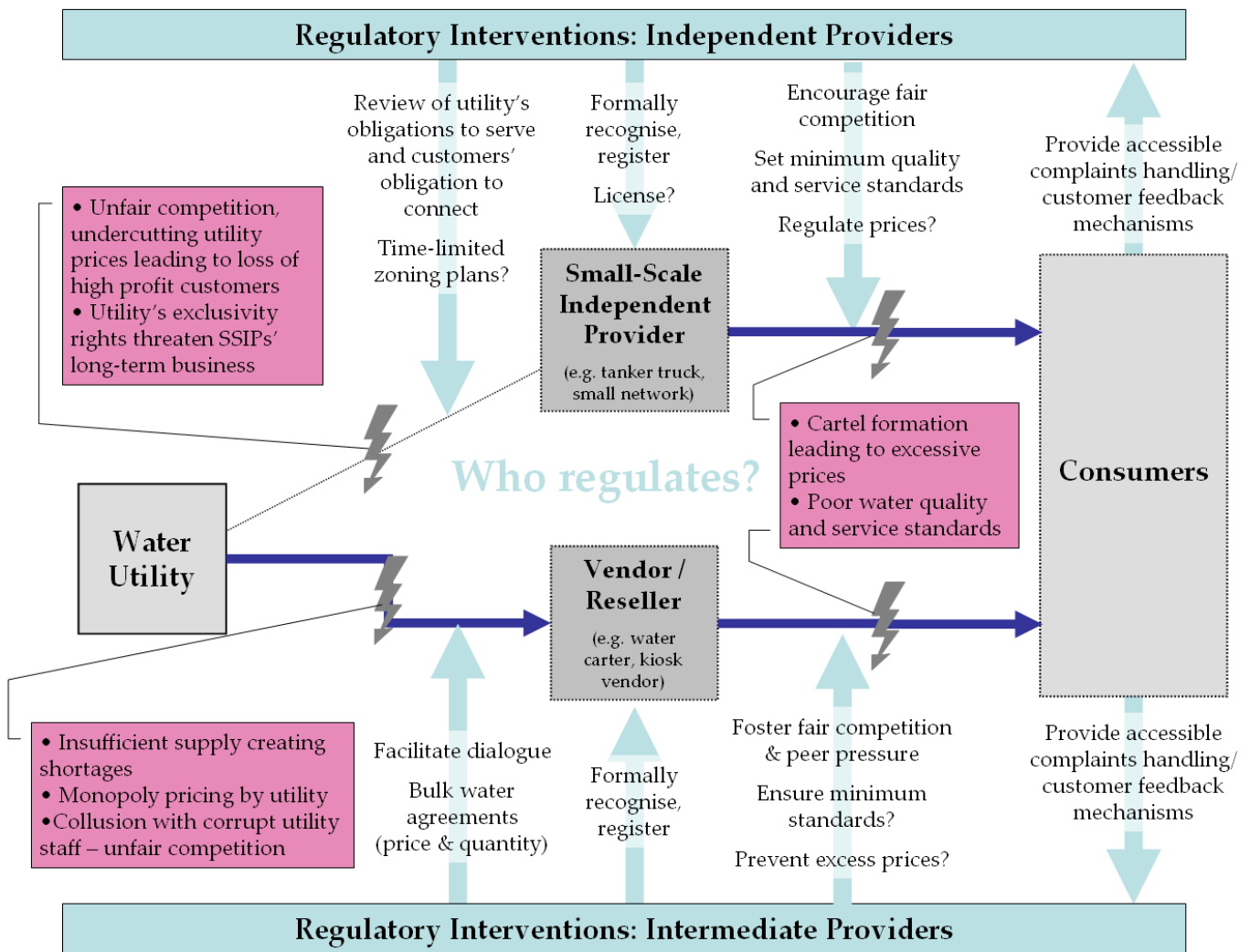
Meeting the universal service obligation is going to be a tremendous challenge for providers and will require skilful facilitation on the part of the regulator. As intimated in the 'prerequisites' section, facilitation may need to extend beyond direct interactions with service providers and their customers. Expert regulators may need to press policy-makers to supply the policy instruments that will enable the acceleration of service to marginal areas. A tangible tool would be a set of service obligations and

connection targets specifically designed to prioritise formal service provision to poor households. Where the poor and vulnerable are most likely to be found in informal housing areas where land title cannot necessarily be proven, or slums where settlement has occurred illegally, regulators need to be empowered to negotiate – and eventually require – utility service coverage. The affordability imperative almost invariably requires some form of subsidy mechanism to be employed. Special care must be taken to refine targeting mechanisms and maintaining efficiency incentives on the provider. Particular challenges arise when regulating the public sector, where incentive mechanisms are less well defined.

Asset management planning assumes new dimensions in the context of the pro-poor, universal service goal. The economic regulator needs to demand viable Asset Management Plans (AMPs) within Strategic Business Plans that include early achievement of USO. Whilst AMPs must emphasise and even prioritise service coverage to the poor, regulators must seek to retain a suitable balance of those pro-poor objectives with maintaining (or improving, where appropriate) quality of



## Chapter 20

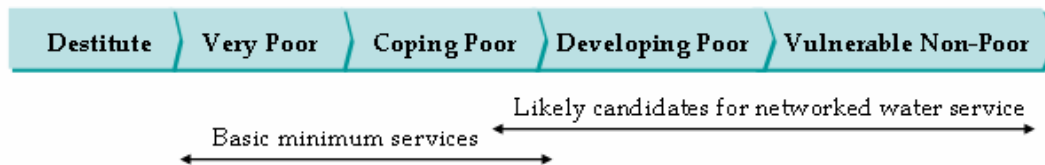


conventional services to all, such that a sustainable revenue flow can be maintained. Reasonableness vis-à-vis demand and sustainable outcomes must be a guiding consideration in evaluating providers' technical and financial proposals. The definition of 'reasonable expenditure' much depends on local circumstances, but incentive mechanisms need to ensure that 'reasonableness' is constantly challenged in line with the evolving universal service paradigm. Any required utility efficiency improvements must uphold the affordability principle, i.e. regulators must ensure that tariffs, though necessarily cost-reflective for sustainability reasons, are least cost. Research findings indicate that appropriate low-income customer payment facilities and differentiated connection charges are readily implementable solutions to facilitate universal service.

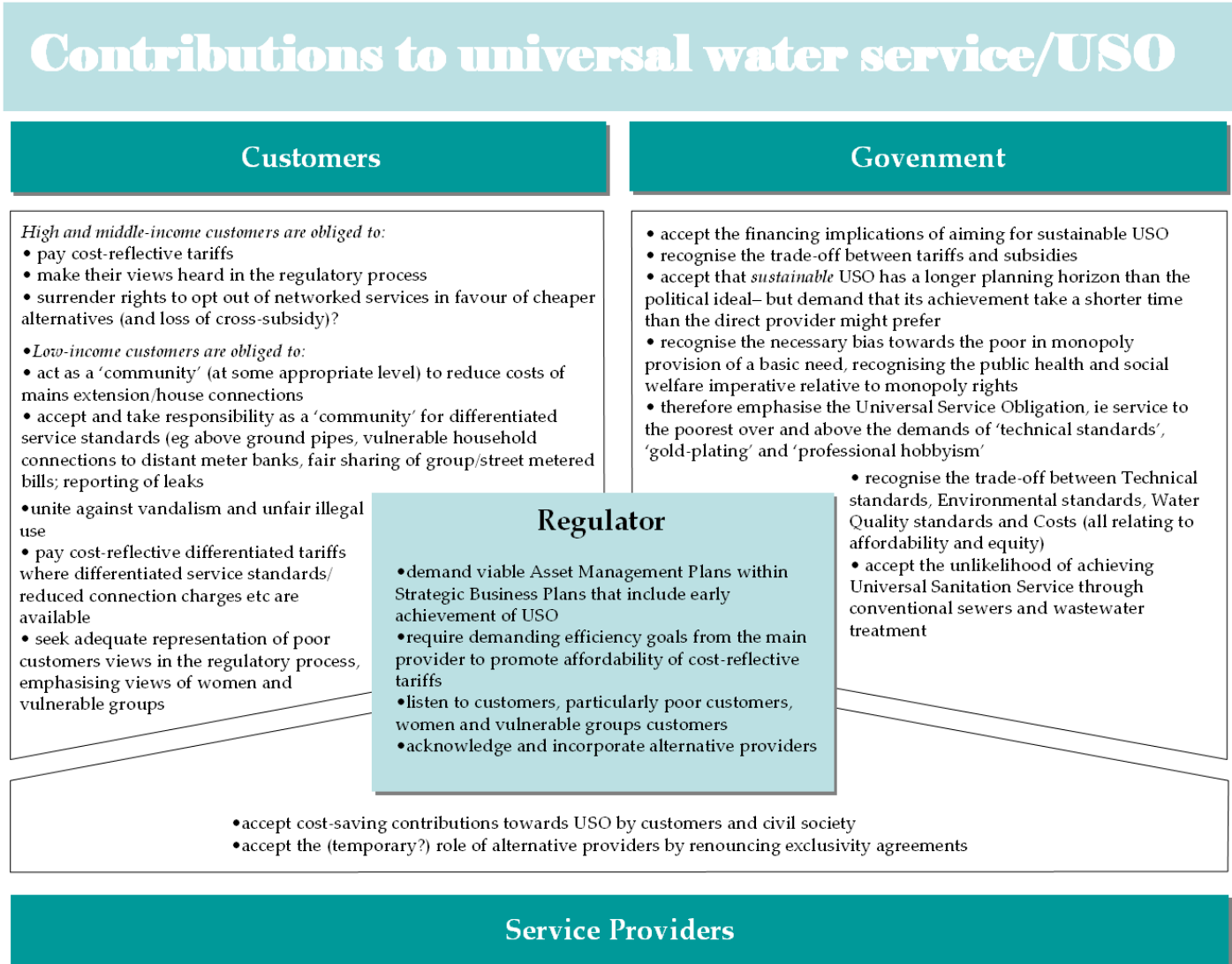
### 3: Sustaining/funding universal water service

Without going into the details of the financing problem, a subject on which a substantial literature exists, there are a few points worth mentioning in view of funding universal water service. As it is imperative that any USO must not destroy the financial sustainability of providers, regulators will be using a mixture of *tariffs and subsidies* to fund service extension to the poor. Subsidy allocation must be optimised to ensure benefits are indeed delivered to the poor and vulnerable, minimising errors of inclusion and/or exclusion. International best practice shows this is possible. At the same time, the public needs to be sensitised to appreciate the cost of the water service, that is home delivery of what may otherwise be perceived as a 'free good'. *Consumer*

# Achieving and Sustaining the Vision



The sustainability of universal water service, however, does not solely depend on financial matters. Although good financial management (under an efficient and effective regulatory regime) is a significant initial driver towards serving the disadvantaged groups, the case study evidence shows that good governance is key to its long-term sustainability. Good governance entails every party accepting responsibilities that arise from society's goal of adequate water services for all. As such, there is not only a universal service obligation on providers to adequately serve all customers imposed by the regulator. There is a whole range of corresponding and complementary obligations on the remaining key actors, customers and policy-makers, as summarised in the diagram below.



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