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Enabling Water Utilities to Serve the Urban Poor

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Foreword

WATER AND THE POOR – SOLVING THE CONUNDRUM

Why do 8 million of Indonesia's 9.6 million poor urban households still not have access to piped water?

Is it because they can't afford it? No, they are already paying several times more than the official rate for piped water through their purchases from vendors.

Is it that Indonesia doesn't have the money to invest in the expanded piped networks required to reach poor households? No, many PDAMs, because of mismanagement, are failing to realize their current and potential revenues. Besides, social and economic rates of return to water supply schemes are very large, so investments can be made to pay for themselves.

Is it that the poor stand little to gain from being connected to house water supplies, and thus care little about the situation? No, there is overwhelming evidence that incomes of the poor rise sharply when they get access to water – and that they care very deeply about this situation.

So what is the reason? At root it is because many local authorities who own the water companies are focused on what is politically and financially expedient in the short run, rather than what is good for citizens and good for the economy in the long term. In addition, many of them do not seem to be aware that it is possible to become financially stronger and rapidly expand services to the poor. As a result, while Indonesia will successfully reach many of its "Millennium Development Goals", access to water is likely to be an area of failure.

The good news is that such failure is not a foregone conclusion. Indeed all around Indonesia a growing number of local PDAMs are introducing programs and investments that make good economic sense and bring water to the poor. So far, however, the numbers are not yet sufficient to turn the tide.

This report was written, to highlight the current situation, and lay out practical actions that can be taken. Examples are drawn from within Indonesia and from other countries. Most of the actions need to be taken at the local level, but there are many actions that the central government can also take to help educate the owners and managers of PDAMs , and to change their incentives so that new investments are made that benefit the poor.

Done right, the situation can be turned around fairly quickly. Indeed, there is no reason why access to water in urban areas should not be largely universal in the next decade. Under present trends this will clearly not happen. It will require leadership at both the central and local levels, and support from Indonesia's development partners. The World Bank is committed to do whatever we can to help make this happen.

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Abbreviations and Acronyms

ADB	Asian Development Bank
APBD	Annual Regional Development Budget
Badan Pengawas	Supervisory Board to represent the Mayor to the PDAM
Bappenas	National Development Planning Agency
Bappeda	Provincial/District Planning Agency
BKKBN	National Family Planning Board
BKM	Community Council (Badan Keswayadan Masyarakat) in UPP
BPAM	Regional Water Bodies managed by the central government
BPP SPAM	Control Board for Development of SPAM formed under PP 16/2005
BUMD	Local government-owned enterprise
BUMN	State-owned enterprise
Bupati	District head
DAK	Grants from the central to local governments
Dinas	Local government technical agency
Dirut	CEO of the PDAM
DPRD	Local Parliament
GOI	Government of Indonesia
KDP	Kecamatan Development Project
Kecamatan	Subdistrict
Kelurahan	Sub-kecamatan, the equivalent of a village, but in an urban area
Kabupaten	District
KSM	Small community group in UPP
LKMD	Village/kelurahan management group
KPKN	Local office of National Treasury
MoF	Ministry of Finance
MoHA	Ministry of Home Affairs
NGO	Non-Governmental Organization
PP	Government regulation
PAD	Locally Generated Revenue
PDAM	Local Government-Owned Water Company
Pemda	A city or kabupaten government
PERDA	A regulation passed by a local government
PERPAMSI	Association of Indonesian Water Companies
Pimpro	Project Administrative Manager
PLN	National Electricity Company (Perusahaan Listrik Negara)
PMU	Project Management Unit
SMALLGAP	Survey of Municipal Administrators and Leaders of Local Government and Parliament
SPAM	System for provision of Drinking Water (Sistem Penyediaan Air Minum)
SUSENAS	National Household Expenditure Survey
UPP	Urban Poverty Project
WILLOWS	Women's Institutions for Local Leveraging of Water Supply (nationwide project forming and registering local women's water groups)

Table of Contents

FOREWORD v

ACKNOWLEDGMENT vi

ABBREVIATIONS AND ACRONYMS vii

EXECUTIVE SUMMARY x

1. INTRODUCTION 1

2. BENEFITS OF EXPANDED SERVICE TO THE POOR 5
   - The Urban Poor Are Not Well Served 6
   - Studies of the Unserved Poor: Unit Costs of Water 6
   - Studies of the Unserved Poor: Connections Charges 7
   - Income and Welfare Benefits 8

3. USER CHARGES AND THE URBAN POOR 11
   - The Poor Can Afford Cost Recovering Tariffs 12
   - Not All Poor Can Pay Access Charges 13

4. BARRIERS TO EXPANSION OF SERVICES TO THE URBAN POOR 17
   - Utilities Prefer to Serve Higher Income Groups 18
   - Other Barriers to Access by the Urban Poor 21
     - Connections charges. 21
     - Vulnerability to shocks. 21
     - Poor PDAM service 21
     - Legal issues. 21
     - Lack of understanding by PDAM of the poor and their communities 21
     - Confusion between affordable service and inferior service 22
     - Lack of informed choice. 23
     - Collusion between PDAM officers and customers 23
     - Lack of Clear Mission to Serve the Poor 23

5. PROPOSALS TO OVERCOME BARRIERS 25
   - Central Government and Donor Actions 29
     - Revise Guidance 29
     - Establish a Water Business Advisory Board 33
   - Local Government Actions 33
     - Revise Water Business Practices 34
     - Revise PDAM Incentives 34
   - Local Water Utilities' (PDAMs) Actions 35
     - Create Pro-Poor Corporate Plan 35
     - Revise Tariff Structure 36
   - Sanitation Benefits of Proposals 39
   - Further Studies 40

BIBLIOGRAPHY 65

FIGURES
- Figure 1: The State-Owned Corporation – Too Much or Not Enough 28
- Figure 2: Institutional Set-up to Sustain Commercialization 30

TABLES
- Table 1: Cost of Water Piped Near the House as a Multiple of the Cost of Water Piped to the House 2
- Table 2: Expressed Desire for PDAM Connection 7
- Table 3: Comparison of respondents who want to connect, their willingness to pay a one-time connection fee, and the tariff they are willing to pay versus the social tariff 8
- Table 4: Household Savings Resulting from Urban Poor Consumption of 10 Cubic Meters/Month of Piped Water at the 2003 Household Tariff 12
- Table 5: Improving PDAM performance without capital investment – 1999-2003 27

TEXT BOXES

Box 1: Different Kinds of Benefits from a House Water Connection 9

Box 2: Water from Standpipes or "Kiosks" in Kenya 9

Box 3: Jakarta DKI Water Tariffs 2005 14

Box 4: Asian Water Supplies 19

Box 5: Excerpts from Regulation 16 of 2005 22

Box 6: The Accomplishments of 24 PDAMs between 1999-2003 26

Box 7: Better Management and Accountability: Case Study of PDAM Pontianak 32

Box 8: Output-based Aid 33

Box 9: Water Subsidies and the Poor 36

Box 10: Making Water Connections to the Poor in Manila 37

Box 11: Increasing Services for the Poor 37

Box 12: Latin American Social Policy in the Water Sector 38

ANNEXES

Annex 1: PDAM Data for 24 PDAMs – LGWS 42

Annex 2: Suggestions from Dirut Kumala Siregar 44

Annex 3: Suggestions from the Late Tarsius Isbandhi 46

Annex 4: Full Cost Recovery as a Key to Water Sector Reform 50

Annex 5: Case Study of PDAM Jember 54

Annex 6: History of Water Sector Development in Indonesia 58

Annex 7: Implementation of 1997 Water Strategy 60

Annex 8: Barriers to Implementation of Recommendations and Sustainability 61

Annex 9: Financial Recovery Action Plan (FRAP) 63

Ringkasan Eksekutif
Pemberdayaan PDAM untuk Melayani Kaum Miskin di Kota

Diperkirakan 50 juta penduduk miskin perkotaan tidak memiliki sambungan air bersih. Dari jumlah tersebut, 6 juta orang membayar tarif yang amat tinggi kepada penjual air swasta, di atas tarif Perusahaan Daerah Air Minum (PDAM). Dengan menyediakan sambungan air yang memadai bagi penduduk miskin kota, PDAM dan pemerintah daerah selaku pemilik PDAM, dapat meningkatkan secara signifikan uang belanja rumah tangga dan memperbaiki kesejahteraan penduduk miskin perkotaan.

Keluarga miskin yang tidak memiliki sambungan air bersih tidak mampu mengkonsumsi jumlah minimum air bersih sebanyak 10 meter kubik per bulan, seperti tercantum di dalam Instruksi Menteri Dalam Negeri No. 8/1998. Selain itu, berbagai survei menunjukkan bahwa sebagian besar orang miskin di perkotaan masuk ke dalam kelompok masyarakat yang tidak memiliki sambungan air bersih, dimana mereka memperoleh air dari sumur, sumur dalam, air hujan, danau, sungai, tetangga, atau dari penjual air. Survei yang dilakukan dalam kurun waktu lima tahun terakhir mengungkapkan bahwa keluarga yang beranggotakan 5 orang dan tidak memiliki akses sambungan air hanya mengkonsumsi 2 meter kubik air bersih per rumah tangga per bulannya. Bahkan banyak keluarga miskin di Indonesia harus membayar paling tidak 10% sampai 20% dari pendapatannya untuk membeli air bersih dari penjual air keliling. Hal ini terutama dialami oleh keluarga yang berpenghasilan di bawah Upah Minimum Regional (UMR).

POTENSI PDAM UNTUK MELAYANI KEBUTUHAN KAUM MISKIN

Beberapa PDAM sudah membuktikan kemampuannya mengatasi berbagai hambatan. Meskipun secara umum PDAM dikenal sarat KKN, kurang efisien, dan selalu terbelit hutang, banyak pula PDAM yang berhasil mencapai kepuasan pelanggan, beroperasi secara efisien, dan mampu menutup seluruh biayanya (pemulihan biaya penuh). PDAM di Surakarta dan Magelang, misalnya, telah bekerjasama dengan forum peduli air wanita, untuk mengidentifikasi lokasi yang paling layak untuk hydran umum dan memulai program pendidikan pelindungan daerah aliran sungai. Selama periode tahun 1999-2003 terdapat 24 PDAM yang berhasil meningkatkan rasio operasi[1] mereka hingga mencapai 41%, dan separuhnya berhasil berbalik arah dari merugi menjadi untung. Seperti diuraikan di dalam laporan ini, kasus PDAM Jember menunjukkan bahwa tanpa melakukan ekspansi layanan khusus bagi penduduk miskin, PDAM dapat meningkatkan efisiensi dan cakupan pelayanan mereka, dua hal yang penting untuk pelayanan yang berkelanjutan kepada kaum miskin.

Kaum miskin rela dan mampu membayar tarif air bersih. Permintaan akan air bersih terus meningkat seiring pertumbuhan jumlah penduduk perkotaan. Saat ini kaum miskin yang belum memiliki sambungan air harus membelanjakan sebagian besar pendapatannya untuk membayar air bersih dari sumber lainnya. PDAM berpotensi melayani kaum miskin karena kedekatan jarak dengan konsumen, tarif yang relatif rendah dan tanggung jawab sosial mereka. Namun banyak keluarga miskin yang membutuhkan informasi mengenai perbandingan biaya dan manfaat yang akan diperoleh agar dapat memilih dengan bijaksana, agar kemudian melobi untuk mendapatkan sambungan rumah.

KENDALA MEMBERIKAN SAMBUNGAN BAGI KAUM MISKIN

Tidak ada undang-undang maupun peraturan pemerintah yang memberikan mandat kepada PDAM untuk secara spesifik menyediakan layanan secara seimbang kepada kaum miskin, dan oleh karena itulah kaum miskin tidak menjadi sasaran PDAM. Arahan perundangan yang berlaku saat ini mempersulit PDAM untuk menahan laba untuk diinvestaskian kembali guna memperluas jaringan dan sambungan air bersih kepada kaum miskin.

Tarif air bersih yang berlaku saat ini merugikan kaum miskin. Tarif air bersih saat ini tidak efisien secara ekonomis dalam mengelola permintaan dan sumber daya, tidak

1 Biaya operasi di bagi pedapatan operasi. Biaya operasi mencakup seluruh biaya, termasuk biaya penyusutan dan pembayaran bunga

memberikan pendapatan yang cukup bagi kemandirian keuangan PDAM, dan cenderung menguntungkan keluarga berpenghasilan tinggi (kaya) daripada berpenghasilan rendah (miskin); dan tarifnya rumit dan sulit untuk dikelola secara efektif, sehingga membuka peluang untuk penipuan dan KKN. Pada kebanyakan kota di Indonesia tarif sosial sangat rendah (US$0.03/m³), sedangkan tarif komersial dan industri sangat tinggi (US$1/m³) sehingga meskipun ada subsidi silang, PDAM tetap harus menjual air bersih kepada kaum miskin dengan harga yang merugikan PDAM. Oleh karena itu PDAM menghindari penjualan air kepada kaum miskin.

Banyak PDAM dan pemiliknya tidak mempunyai insentif untuk memperbaiki orientasi bisnis mereka. Pemerintah daerah enggan untuk menaikkan tarif; cenderung menempatkan personil yang tidak tepat di masing-masing eselon PDAM, tidak menetapkan sasaran kinerja, mengambil dana di luar anggaran, segan memutuskan sambungan air liar; ikut campur di dalam urusan manajemen PDAM sehari-hari; dan lebih memfokuskan pada pembayaran dividen tahunan PDAM (55% dari keuntungan setelah pajak) kepada bendahara daerah. Sebuah survei yang dilakukan kepada pejabat pemerintah daerah dan DPRD menunjukkan bahwa pemilik PDAM tidak sadar atas konsekuensi tidak menyesuaikan tarif, jumlah keluarga yang belum memiliki sambungan air, maupun biaya yang harus dikeluarkan oleh kaum miskin yang tidak memiliki sambungan untuk mendapatkan air dari sumber lain.

Hanya ada beberapa lembaga perantara yang dapat memadukan kaum miskin dengan pejabat PDAM/ pemerintah daerah. Kaum miskin umumnya tidak mengetahui manfaat sambungan air. Mereka menaruh curiga kepada karyawan PDAM karena banyak dari mereka yang mendengar cerita dimana ada masyarakat yang membayar tagihan air bulanan meskipun sambungan tidak mengeluarkan air. Di sisi lain, karyawan PDAM enggan berhadapan dengan penduduk miskin perkotaan karena dianggap kampungan, tidak tahu cara mengisi formulir, tidak memahami kendala PDAM, mudah melakukan protes dan ada kemungkinan tidak mampu membayar saat dalam kesulitan.

USULAN UNTUK MERANGSANG PASAR KAUM MISKIN PERKOTAAN/PDAM

Pemerintah pusat dapat merevisi kerangka undang-undang dan peraturan agar dapat memberdayakan PDAM untuk menyediakan sambungan air bagi penduduk miskin perkotaan. Undang-undang No. 5/1962 mengenai BUMD harus diperbaharui agar pemerintah daerah tidak lagi menjadikan PDAM sebagai sumber pendapatan asli daerah, dan mulai memandang PDAM sebagai penyedia layanan air bersih yang terjangkau bagi masyarakat. Pemisahan kepemilikan asset PDAM dan manajemen melalui korporatisasi PDAM akan membatasi pengaruh politis dalam pengelolaan sehari-hari. Peraturan pemerintah No. 16/2005 telah mendorong didirikannya BPP SPAM, Badan Pendukung Pembangunan Sistem Penyediaan Air Minum, yang diharapkan dapat menjadi pusat bagi sumber informasi dan keahlian di bidang penanaman modal dan peraturan mengenai air bersih dan sanitasi.

Pemerintah pusat dapat memberikan insentif kepada pemerintah daerah dan PDAM untuk mempercepat reformasi sektor air bersih. Insentif ini bisa dalam bentuk challenge fund/matching grant, penjadwalan ulang/restrukturisasi hutang bagi PDAM yang melakukan reformasi, bantuan berbasis kinerja yang bertujuan memperbaiki operasi PDAM dan bantuan teknis bagi PDAM yang kurang sehat, meningkatkan transfer antar pemerintah daerah agar reformasi menjadi lebih menarik bagi pemerintah daerah, berpartisipasi dalam memilih peraturan agar pemerintah daerah dapat memilih untuk terlibat dalam proses perudangan demi mendapatkan dukungan keuangan, dan mobilisasi opini publik melalui laporan kinerja PDAM secara transparan. Selain itu, program-program yang inovatif seperti Output-Based Aid yang khususnya menekankan pada penyedian air bersih untuk kaum miskin, harus dikembangkan dan didukung oleh lembaga donor melalui dana subsidi BBM.

Pemerintah daerah dapat menolong kaum miskin melalui peraturan daerah yang merinci tugas pemerintah daerah maupun PDAM dalam menargetkan pelayanan kepada kaum miskin. Pemerintah daerah harus menegakkan peraturan daerah ini, sambil

memastikan bahwa pelayanan bagi penduduk benar-benar tersedia, dan adanya dukungan bagi otonomi pengelolaan dan keuangan PDAM.

PDAM dapat mengaitkan kenaikan tarif dengan kenaikan mutu pelayanan. Musyawarah dapat dilakukan di setiap permintaan kenaikan tarif. Mengaitkan tarif dengan perbaikan layanan dapat meningkatkan pemahaman PDAM dan pemerintah daerah serta menunjukkan transparansi jalannya operasi. Peningkatkan tarif akan dimaklumi dan lebih mudah diterima bila dijelaskan dalam musyawarah kota yang dihadiri perwakilan dari Yayasan Lembaga Konsumen, media massa, LSM, mahasiswa, kelompok masyarakat, pemerintah daerah dan pihak swasta. Yang lebih penting lagi adalah partisipasi dan masukan dari penduduk miskin perkotaan yang belum memiliki sambungan.

PDAM bisa membantu dan mendukung forum peduli air. Forum peduli air yang sudah di daftar dengan notaris dan sudah berdiri di beberapa kota dapat menjembatani PDAM, konsumen dan calon konsumen mengenai isu-isu seputar pelayanan air bersih. Forum tersebut dan survei kepuasan pelanggan dapat memberitahu PDAM mengenai keinginan membayar tarif dan prioritas perbaikan pelayanan yang harus dilakukan. PDAM harus memantau manfaat sambungan rumah bagi penduduk miskin perkotaan agar pemerintah daraeh dan konsumen dapat memahami bagaimana mereka dapat diuntungkan oleh adanya sambungan rumah. Forum peduli air yang ada dan yang akan berdiri pada akhirnya akan menjadi lembaga konsumen kolaboratif yang memantau operasi PDAM, yang antara lain memberikan akuntabilitas dan penilaian yang jelas bagi persepsi pemerintah daerah dan DPRD.

Executive Summary
Enabling Water Utilities to Serve the Urban Poor

An estimated 50 million urban poor in Indonesia are unconnected to piped water. Of that number, approximately 6 million pay extraordinarily high rates, in excess of water utility tariffs, to private vendors for their water. By providing adequate water connections to the urban poor, the public water utilities (PDAMs) and their owners, local governments, can significantly increase disposable income and improve welfare for those most in need.

Those poor Indonesian households lacking a connection to piped water cannot afford to consume the 10 cubic meter minimum monthly amount of clean water set by Instruction 8/1998 of the Ministry of Home Affairs. Moreover, many surveys indicate that the urban poor are disproportionately represented in the group that does not have house connections, with those families receiving their water from shallow wells, deep wells, rainwater, lakes, rivers, neighbors, or private vendors. As a result, surveys conducted over the last five years have revealed that households without access to a piped water supply consume only about 2 cubic meters of clean water per 5-person household per month in some areas. Even so, many of these poor Indonesian households are paying at least 10% and sometimes more than 20% of their income for vendor-distributed water. The effect is most dramatic in those households whose head is earning less than the minimum wage.

POTENTIAL FOR WATER UTILITIES TO SERVE THE POOR

Utilities have already demonstrated their ability to overcome obstacles. Despite a reputation for corruption, inefficiency, and chronic indebtedness, many water utilities have demonstrated a capacity to achieve good customer orientation, efficient operation, and cost recovery. For example, utilities in Surakarta and Magelang have worked with volunteer women's water forums to identify public hydrant areas and to establish watershed protection education programs. During the period between 1999-2003, 24 PDAMs improved their operating ratio[2] by as much as 41%, with half moving from an operating loss to profitability. As discussed in the main paper, the case of PDAM Jember, while not involving an extension of service specifically to the poor, is presented as a case study on how utilities can and do increase both efficiency and coverage, the conditions necessary for sustainable service to the poor.

The poor can afford and are willing to pay for piped water services. Demand for running water is increasing among the growing urban population. In fact, the unconnected poor are already spending a substantial amount of their income to pay for alternative water supplies. PDAMs have great potential to serve the poor because of their proximity, competitive price and civil duty of social responsibility. However, many low-income households need more information about comparative costs and other advantages in order to make informed choices, and thence to lobby for a piped supply.

CONSTRAINTS TO CONNECTING THE POOR

There is neither a law nor a regulation that mandates utilities to specifically target equal service to the poor, and thus they do not. Present legal guidance makes it difficult for PDAMs to retain earnings to reinvest in network expansion and connections to the poor.

Current water tariffs disadvantage the poor. The current PDAM water tariffs are not economically efficient in managing demand and resources, do not raise enough revenues for the PDAMs to become financially independent, tend to benefit high-income rather than low-income households, and are complex and difficult to administer effectively, creating opportunities for fraud and corruption. In most Indonesian cities, tariffs for the poor ("social tariffs") are so low (US$0.03/m^3) and

2 Operating costs divided by operating revenues; operating costs include all expenses together with depreciation and interest payments

commercial and industrial tariffs are so high (US$1/m³) that, even with cross-subsidies, PDAMs are forced to sell water to the poor at a loss and thus avoid serving predominantly poor areas.

Most PDAMs and their owners lack incentives for better business orientation. Local governments are reluctant to raise tariffs, tend to make inappropriate personnel appointments at all levels, do not set performance targets, take out off-budget funds, are reluctant to disconnect illegal connections, interfere in everyday PDAM management affairs, and focus unduly on the PDAM's payment of annual dividends (55% of net profit) to the local treasury. A survey of members of local governments and parliaments has shown that owners are unaware of many facts, including the consequences of not adjusting water tariffs, the overall number of unconnected households, or the cost to the unconnected poor of obtaining water from alternative sources.

There are few, if any, intermediary institutions bringing together the poor and PDAM/government officers. The poor are generally ill informed about the advantages of house connections. Moreover, they are often distrustful of PDAM officers as many have heard stories of others paying fixed monthly water charges even when no water flows through the pipes. For their part, PDAM officers are often reluctant to deal with the urban poor because of that group's lack of sophistication in filling out forms, failure to understand PDAM constraints, quickness to protest and potential inability to pay during times of crisis.

PROPOSALS TO STIMULATE THE URBAN POOR/PDAM MARKET

Government can revise the legal and regulatory framework in numerous ways to encourage PDAMs to provide piped water to the urban poor. First, the Local Government Enterprise Law 5/1962 should be updated to help local governments stop emphasizing utilities as sources of local government income and start seeing them more as providers of affordable water to the people. Furthermore, separating ownership of water supply assets through corporatization of the PDAMs could help limit political influence in the day-to-day management of water supply operations. Government Regulation 16/2005 called for the establishment of the newly formed Control Board for Development of SPAM (water supply system), which is expected to become a competent resource center for water investment and regulations.

Government can provide incentives to local governments and PDAMs to accelerate reform of the water sector. These could include challenge funds/matching grants and debt rescheduling/restructuring for PDAMs that are reforming; performance-based assistance aimed at the better-run companies, together with technical assistance to poorer performers; enhancements to intergovernmental transfers designed to make reform more attractive to local governments; "opt in" regulation where local governments could decide whether to enter the regulatory process in return for financial support; and mobilization of public opinion through transparent reporting of utility performance. Moreover, innovative programs, such as Output-Based Aid (OBA), that specifically target the delivery of piped water to low-income groups, should be developed and supported by donors and through the existing fuel subsidy fund.

Local governments can assist the poor through local regulations spelling out the duties of both the local government and the utility in targeting the poor. Local governments should enforce these regulations while ensuring that services are delivered, and support is provided for the financial and managerial autonomy of PDAMs.

PDAMs can tie improvement in service to tariff increases. Public hearings can be held on all requests for tariff adjustments. Tying tariffs to improvements in service can increase the knowledge of both utilities and local governments and demonstrate transparency of operations. Tariff increases are understood and more readily accepted when clear presentations have been made to a town meeting of the representatives of the Consumers Association, the press, NGOs, students, community groups, local governments and the private sector. It is especially important that members of the unconnected urban poor participate in these meetings and provide input.

PDAMs can assist and encourage standing local community water forums. Legally registered community water forums, which already exist in some cities, can provide community links that inform consumers and potential consumers about water supply issues. The forums and customer service surveys can, in turn, help inform water utilities of the consumers' willingness to pay and their preferences and priorities for better service. Water utilities should monitor the benefits for the urban poor of increased access to piped water so that local governments and consumers will understand how they share in the wealth created for the poor by house connections. Existing and new community water forums may eventually become the basis for collaborative institutional consumer oversight of local utility operations, providing, among other things, accountability and a clear assessment of parliamentary and local government perceptions.

Chapter 1

Introduction

The scope of this paper is limited to how donors and governments can stimulate owners to realize the potential of water utilities in serving the urban poor. As survey data indicates that reliable water utility service is a key aspect of serving the poor, this paper focuses on how Indonesian water utilities (PDAMs) can increase access to the poor. It also touches on tariff reform because the reluctance of PDAMs to connect the poor at an artificially low tariff creates a hindrance to overall reform. However, this discussion does not offer a comprehensive analysis or solutions to PDAM or tariff reforms, topics that have already been covered by several excellent studies.

This study draws heavily on recent Indonesian survey data, while offering insights and first-hand accounts from those who have successfully managed water utilities in serving Indonesia's poor. Several water utility Diruts (Direktur Utama or a utility's Managing Director) have been able to serve the people by turning around weak utilities and guiding them to profitability. Their solutions on PDAM management appear in the Annexes and apply mainly to PDAM reform, which is needed for sustainable service to the poor. This paper is more concerned with what can be done in the short term to move toward a system based on more reformed utilities that are led by motivated owners serving the poor.

It has been demonstrated that as water quality deteriorates, greater quantities of water must be treated and costs become higher. Therefore, the new Water Resources Law No. 7 of 2004, whose implementing regulations are still being written, acknowledges that sustainability in the water sector requires a fully integrated watershed management program. Although utilities depend on quality water from bulk water providers and several utilities do take part in watershed management activities, integrated water resources management is not part of the scope of this paper.

Several newspapers and studies have shown that there are great benefits to those with a house connection as compared to those who must pay a vendor to bring water from a standpipe or have to fetch it themselves.

Table 1: Cost of Water Piped Near the House as a Multiple of the Cost of Water Piped to the House

Study/source	Type of Water Provision		
	Piped to House	Hydrant	Vendor
Randall Crane 1991	1	7	14
Angke riverbank 2000 (EME 2004)	1		20
Kamal Muara 2000	1		16
Kali Anyar 2003 (EME 2004)	1	4	6
Marunda 2003 (EME 2004)	1	13	21
GATRA 24 Mar 03	1		10
Kompas 14 Nov 03	1	2	10

Sources: as above

In general, while rural settlements are built up and maintained around water sources such as shallow wells, the quick spread of urban pollution due to crowding quickly eliminates clean water sources in those areas. Therefore, it is generally cheaper to find water in settled rural areas than in cities. Furthermore, the significant difference in Indonesia between the sometimes artificially low price of piped water and the high price people are willing to pay for it often results in serious social inequalities, including economic rents, illegal connections, water strongmen, water smuggling from social tariff to commercial tariff areas, and water theft.

This paper follows up on the 2004 infrastructure study, "Averting an Infrastructure Crisis: A Framework for Policy and Acton" and the 2002 Governance and Decentralization Survey designed to shed light on decentralization and governance. It will later contribute to the larger, multi-sectoral analysis entitled "Making Services Work," which is being conducted by the World Bank of Jakarta.

This analysis is organized according to the following chapter headings:

Chapter 2: Benefits of Expanded Service to the Poor. This chapter describes recent surveys and studies showing the high cost of water paid by the unserved poor. It assesses the adequacy of water service to the urban poor, with a special focus on the urban very poor. It examines the very high benefit of clean piped water to the urban poor, including how the income effect is only one part of the overall increase in welfare resulting from a house water connection. It shows that the urban poor--especially those buying from water vendors--pay so much for water that they could afford to pay cost-recovering tariffs for piped water, consume even more water, and still save money.

Chapter 3: User Charges and the Urban Poor. This chapter examines how the shortage of house connections for the urban poor is often caused by a local requirement that PDAMs sell water at a price less than "cost-recovering" tariffs to the newly-connected urban poor, who are currently paying vendors up to 20 times those tariffs. The chapter also discusses surveys on the willingness and ability of the poor to pay the connections charges.

Chapter 4: Barriers to Expansion of Services to the Urban Poor. This chapter describes barriers to the expansion of services to the urban poor given the previously described paradox of low user charges discouraging provision of house connections to the urban poor. It is based on the proposition that the utility wants to sell more water to lower its costs and that the urban poor and utilities can be brought together if obstacles are confronted and overcome.

Chapter 5: Proposals to Overcome Barriers. This chapter describes a general set of steps to be taken in overcoming barriers to the operation of a natural market where water utilities provide adequate piped water services to the urban poor on a sustainable basis. It also looks at this in a project context.

Wherever the term "cost recovery" is put in quotation marks, this means that the costs of operations, maintenance, depreciation, and interest on loans are recovered in the tariff but the capital costs of existing infrastructure are not recovered. In most cases in Indonesia, these costs have not been recovered.

The term, "social tariff" is loosely used to describe lower than cost-recovering tariffs usually provided to lower income classes. According to central government guidance, the lowest tariff usually applies to standpipe operators, houses of worship, and charitable institutions. The poor may be either in the lowest category or the second-lowest category, which contains the lowest-income households. The amount of tariff that is found in the second-lowest category is usually, but not always, less than the "cost-recovering" tariff. In some cities, the poor may pay "cost-recovering" tariffs, while in others everyone may pay the lowest category of tariff. However, in most cities, the poor pay a tariff that is less than the "cost-recovering" tariff needed for house connections.

For several years, writers such as McIntosh have been suggesting that tariffs should be increased so that local governments are encouraged to connect those amongst Asia's urban poor who are willing and able to pay for house connections. Until now, there has been little survey data to turn this insight into policy action. However, recent surveys in Indonesia can provide the basis for concrete steps to serve the poor and help them out of poverty through provision of piped—rather than standpipe--water connections.

Chapter 2

Benefits of Expanded Services to the Poor

For the purpose of this analysis, a poor urban household is considered one with a total household income of a dollar a day or less (about 16% of the population). This definition of poverty may not be the best for all purposes, but it fits most existing monetized survey data. Using the SUSENAS definition of poverty, their 1999 survey defined a poor household as one earning about Rp 800,000 per month for a 5-member household. Moreover, the Ministry of Home Affairs Instruction 8/1998 regarding water tariffs provides that "Household income that is used as the criterion for affordability can be either the minimum wage declared by the government or the average income of all PDAM customers."

Minimum wage is the most suitable indicator of local poverty because it approximates more closely the income of the unserved. Minimum wage varies by locality, yet is currently about Rp 800,000 per month (about $80) in Jakarta. Therefore, the focus of this analysis is the 9.5 million (2003 SUSENAS survey) urban poor households with an income of Rp 800,000 per month or less; in particular, the focus shifts to the subset of 1.1 million urban households whose primary source of water comes from vendors who offer the most expensive water.

THE URBAN POOR ARE NOT WELL SERVED

The urban poor who are connected to subsidized piped water benefit in the sense that they pay a "social tariff" that is below the cost of production. By contrast, the unconnected poor are not well served by PDAMs and have to either fetch water from other sources or pay haulage fees to small-scale providers who fill in wherever PDAMs do not provide adequate services.[1]

Even with poverty mapping, there is not enough information to clearly identify the poor down to the kelurahan level. However, the aggregate evidence indicates that most of those who are unconnected but want to be connected are urban poor, with a large proportion of them being the very poor. SUSENAS 2003 data indicates that only 16% of the urban very poor (monthly household income Rp. 800,000 and below) are connected versus 36 percent of the overall urban population.

STUDIES OF THE UNSERVED POOR: UNIT COSTS OF WATER

Table 1 shows the great differences in cost between a house connection and other alternatives. Many surveys have examined these differences. However, only two sizeable studies have looked at the coping costs of having no water connection: the Crane study in 1991 and the UPDATE (Urban Poor Data Acquisition and Technical Evaluation) studies in 2002 and 2003. A third study, the Small-scale Water Providers in Indonesia study is expected to yield new survey data on the household expenses for water and other expenses amongst 1,000 households at several locations (Hydroconseil).

The main reference study on actual expenditures by the poor is the two-stage UPDATE study conducted in 2002 and 2003 by FORKAMI (the water quality forum) and RTI (Research Triangle Institute), whose results were reviewed in stakeholder seminars. The UPDATE-1 survey resulted in post-data cleaning interviews with 1,173 households in 30 different kelurahan. Most of the respondents were informal workers, small merchants, fishermen, and employees of companies and had an average monthly household income of between Rp 430,000 and Rp 460,000. The majority lived in their rented homes for more than five years and paid monthly electricity bills. The UPDATE-1 survey was designed to calculate

1 "The better the service coverage and the water availability from the public utility, the lower is the niche market for SSWPs. Cultural notions also play a role and where we find a strong tradition of public subsidies or free water to the poor, such as in the case of Delhi, Kathmandu and Dhaka, the niche market for SSWPs is very limited despite the low levels of service provided by the utility." Conan and Paniagua.

the amount actually paid for water by the urban poor in targeted areas and their willingness and ability to pay for piped water connections. The UPDATE-2 study focused more narrowly on the three poor kelurahan of Tangerang, Semarang, and Indramayu, where consumers rely mainly on vendors for their drinking and cooking water. With 656 post-data cleaning interviews, it analyzed whether or not the urban poor would buy enough water to repay the local government's cost of extending pipes to their neighborhoods in a reasonable time.

The results from these three cities are representative of those poorest neighborhoods whose main source of water is vendors. Due to their low income, respondents reported little or no savings with monthly household income and monthly household expenditures being almost identical. In some areas, it was determined that the poorest households could enjoy better health and save at least fifteen percent of their household budget if they were connected to piped water at the current tariffs. Furthermore, piped clean water connections benefit the poor, and especially the very poor—with consumption not only for washing, drinking, and bathing, but also for sanitation.

Probably, most of the urban middle and upper classes have already made their own arrangements for a reliable water supply, leaving the urban poor as the majority of those who are inconvenienced by being unconnected. There is evidence, though, that not all the unconnected are poor. For instance, in Jakarta, small-scale water providers are said to be providing service to middle and higher income customers who are also not well served by the utility (Hydroconseil).

STUDIES OF THE UNSERVED POOR: CONNECTION CHARGES

The LGWS (Local Government Water Services) customer satisfaction survey, conducted for 12 PDAMs across the country, showed that 42% of the unconnected poor would like to become a PDAM customer if they could, while 50% preferred not to be connected; this is shown in Table 2.

Table 2: Expressed Desire for PDAM Connection

	Number	Percent
Unconnected that want to become a PDAM customer	224	42.3
Unconnected that don't want to become a PDAM customer	269	50.8
Unconnected that don't know if they want to become customer	37	7.0

Source: Urban Institute 2003

The customer satisfaction surveys covered all unconnected income groups, from the very poor to the very rich, so the UPDATE surveys of predominately poor areas would be more likely to show the attitudes of the urban poor. Table 3 summarizes the results of the UPDATE survey on customer willingness to pay. The UPDATE-1 survey shows results similar to those of the customer satisfaction surveys; 36, 35, and 75% of the respondents in Semarang, Tangerang and Indramayu, respectively, said they would like to become customers, but most of the remainder did not. The UPDATE-2 survey showed that 66% of those in the two kelurahan in Tangerang and 76% of those in kelurahan Patrol in Indramayu wanted to connect. Other studies have shown similar results (Porter, Locussol).

Perception may also be playing a role in hindering extension of water services to the poor. Amongst local government officers, donors, and PDAM personnel, it may at first be hard to visualize the very poor with a house water connection. Instinctively, people in such positions have to think twice before concluding that a poor family can stay within its social station and still have the status and convenience of a house connection.

Table 3: Comparison of respondents who want to connect, their willingness to pay a one-time connection fee, and the tariff they are willing to pay versus the social tariff

Survey/Location	% want to connect	% willing to pay one-time fee	% willing to pay installments	Max Tariff they are willing to pay (Rp/m^3)	Social Tariff (Rp/m^3)
UPDATE-1					
Semarang	36	30	94	9,908	350
Tangerang	35	29	80	19,859	300
Indramayu	76	40	95	15,401	780
UPDATE-2					
Kel. Tangerang	66	44	79	21,311	300
Kel. Indramayu	76	27	96	10,860	780

Source: UPDATE

The UPDATE team also found that, despite a high rate of willingness to pay double the household tariff for water, the willingness to pay the connections fee was below the actual connections cost. There are several possible reasons for this disparity. The most common reason given by respondents is that many feel they cannot afford to pay the lump sum for new connections charges (typically about $50, but sometimes as high as $400). However, this response can only be applied to a portion of the respondents in the UPDATE-1 survey because about half of those in each city responded that PDAM connections were not available in their area. Therefore, another stated reason was the fear of poor service, with many simply not wanting to pay for a new connection and then discover that there is no water pressure. Yet a third suggested reason was that many are renters and may not want to purchase a connection that would basically benefit their landlords.

Some NGOs with experience helping poor communities have suggested that the poor cannot save enough money to pay a water bill at the end of the month. As a result, they must often pay vendors for smaller purchases whenever they get any money. However, in the case of the UPDATE survey areas, a significant proportion of the respondents (from 68% to 82%) were already paying monthly bills to PLN, the Indonesia State Electricity Company, indicating that they are used to paying monthly bills.

INCOME AND WELFARE BENEFITS

It is difficult to quantify all the savings derived from a house connection in simple monetary terms, and it is important to acknowledge that an increase in disposable income due to unit cost savings is just one of many benefits.

The sum of all benefits can create such a large change in real community income. Therefore, these benefits should be adequately measured in order to demonstrate how it is in the best interests of the community to provide house connections to the poor. Yet while the community clearly benefits from the poor getting richer[2], there has not yet been a study quantifying this value for Indonesia. Such a study would help motivate local governments to increase house connections for the urban poor.

The enormous welfare benefits of a house connection may be strong enough to lift the disposable income of many poor families out of poverty. In 2003, Strand and Walker

2 Does inequality matter? "If the rich get poorer thanks to high taxation, some people may feel pleased but few are better off. If the poor get richer, however, the whole country will benefit." The Economist 14 June 2001

implemented a revealed preference analysis to study the effects of house water connections on the poor, including those on capitalized home value and consumer surplus (the difference between what a person is willing to pay for water and what he actually pays). They concluded that, "the welfare effects of water connections at current water prices are large, and typically add 20-50% to households' current real income in cities in Honduras, Guatemala, and El Salvador." (Strand and Walker, 2003) These results will be discussed later in regard to the benefits of proposals to overcome barriers to connecting the urban poor.

Box 1: Different Kinds of Benefits from a House Water Connection

1. Family/environmental health effect: higher water consumption connected with better hygiene, better health, longer life, and a cleaner community environment;
2. Rising tide effect: poor families provide new services and spend more money in the community;
3. Small enterprise effect: opportunity to open small businesses, such as catering services, drink packaging, seed farms, soybean cake production, etc.;
4. Wealth effect: increase in property value due to availability of piped water (if the beneficiary owns the property);
5. Prestige effect: increase in sense of self-worth through better and more convenient facilities; and
6. Income effect: savings in unit price of water along with savings in storage, purchasing and pouring out of vended water (this is the only effect that can be studied in depth in Indonesia)

Box 2: Water from Standpipes, or "Kiosks" in Kenya

The current water supply situation in Nairobi, Mombasa, and Kakamega is dismal. Although about half of the households have access to individual piped water connections, only 5 percent of those connected are poor. The poor households are thus overwhelmingly dependent on alternative water sources and end up spending an average of 42 minutes in collecting water (compared with 15 minutes spent by non-poor households).

According to the study, kiosks are the least preferred "improvement" option among the unconnected urban households. Current users of kiosks continue to use them only because they have no choice or no ability to pay for a better alternative. Households report that kiosks do not offer adequate convenience (for example, long travel distance and queuing times); and more expensive than other options – an average of Ksk4.1 per 20-liter jerrican or US$2.7/m^3 for water from kiosks, and Ksh 12.6 per 20-liter jerrican or US$8.4/m^3 for water from vendors who deliver at home, even though the utility "social" tariff is US$0.15/m^3. Thus, the subsidies intended for the customers of these kiosks – 77 percent of whom are poor – are not actually reaching them.

The average daily per capita expenditure on water by non-poor households is US$0.14, in contrast to US$0.11 per capita per day by poor households. Although the per capita expenditure by the poor is lower in absolute terms compared with that of the non-poor, it represents a significantly higher proportion of their income.

Source: Gulyani, Talikdar, and Kariuki.

Chapter 3

User Charges and the Urban Poor

THE URBAN POOR CAN AFFORD "COST RECOVERING" TARIFFS

Good and reliable utility management is a necessary condition for serving the poor and cost recovery, as specified in Ministry of Home Affairs Regulation No. 2/1998, is the most visible way to determine whether or not a utility is well managed. Over time, as local governments have calculated and declared successive tariff increases, social tariffs have crept downwards and become applied to larger consumption blocks. Meanwhile, commercial tariffs have generally gone up until reaching the point where businesses start developing their own water sources or find illegal ways to obtain water.

The Ministry of Home Affairs Regulation No. 2/1998 and its subsequent regulations have defined cost recovery as the average tariff income necessary to cover the costs of operations, maintenance, depreciation, and interest. The regulations do not deal with the marginal costs of production.

Most PDAM tariff schedules follow central government guidance for consumer groups and tariff blocks. However, there is some variation in tariff schedules, with PDAMs, for instance, not providing social tariffs for households.

As social tariff rates usually do not recover costs, PDAMs generally prefer to connect other classes of society at higher tariff rates. However, as the unconnected urban poor are currently paying so much for vendor-supplied water, it is reasonable to suggest that they may actually be able to pay fully cost-recovering tariffs for piped water. If so, they would become attractive customers for the PDAMs.

Table 4 shows the savings that would be enjoyed by various groups in Semarang, Tangerang, and Indramayu if they were to pay the standard household (more than "cost-recovering") tariff rate. While the Rp 400,000 to Rp 600,000 income bracket would save about 5% more of their income on water, the lowest income group would save at least 11.57% of their income. Column (3) shows the average monthly household water cost paid to vendors. Consumption of PDAM water in column (4) is held constant at 10 cubic meters per household per month for all income bands, even though higher income groups generally consume more water. The water bill in column (4) is based on household tariffs in Tangerang in 2002.

Column (2) presents the average household water bill for households buying mainly from vendors and is based on observations in three cities. Of these, 150 observations were of those in the <Rp 200,000 group, 378 observations were of the Rp 200,001-400,000

Table 4: Household Savings Resulting from Urban Poor Consumption of 10 Cubic Meters/Month of Piped Water at the 2003 "Cost Recovering" Tariff

Income Bracket (Rupiah/month /household)	Avg HH Bill Rp/ mo	PDAM Bill Rp/ mo	Savings Rp/ mo (3)-(4)	Max % Saving 100 x (5)/(1)	Min % Saving 100 x (5)/(1)
(1) - (2)	(3)	(4)	(5)	(6)	(7)
< Rp 200,000	38,896	15,750	23,146	-	11.57
Rp 200,001-400,000	30,836	15,750	15,086	7.54	3.77
Rp 400,001-600,000	41,627	15,750	25,877	6.47	4.31
Rp 600,001-800,000	30,658	15,750	14,908	2.48	1.86
Rp 800,001-1,000,000	37,705	15,750	21,955	2.74	2.20

Source: UPDATE-1 2002

group and 299, 140, and 44 observations represented the respective subsequent groups.

"Cost recovery" benefits the poor because it requires a low differential between the cost of water for the poor versus that for the rich, thus discouraging water smuggling. In fact, in many cases, lower industrial tariffs result in more income as businesses are less inclined to turn to alternative sources of water. Therefore, the most likely sustainable source of funds for expansion of area coverage is a full-cost recovering PDAM.

Despite evidence to the contrary, many are still concerned that the urban poor cannot afford to pay cost-recovering tariffs. In South Africa, for instance, when tariffs were raised toward full cost-recovery levels during the 2000 economic crisis, cholera outbreaks in rural areas forced local governments to take action. However, it is significant to note that those outbreaks occurred in rural areas rather than urban ones. In Indonesia, the urban poor usually move to rural areas when they can no longer survive; this often occurs during economic crises such as that in 1997/98.

The question remains as to whether the willingness of the urban poor to pay cost-recovering tariffs is high enough to enable local governments to recover all the costs of building new facilities serving the poor. Between 2003 and 2004, the UPDATE-2 project studied the financial feasibility of local governments borrowing money to extend piped water to poor households in one kelurahan in Indramayu and two kelurahans in Tangerang. These simulation models provide useful rapid appraisal tools for estimating the feasibility of extending piped coverage to other poor areas.

Three assumption-based scenarios were used for the analysis. First, under the "conservative/restrictive" scenario, including a 75% bill collection rate, it was determined that investment could not be recovered in less than 30 years for any area. Under the less conservative "reasonable" and "optimistic" scenarios, however, the local governments of all three kelurahan would recover their investment and interest in full within 15 years. The financial feasibility of all scenarios was sensitive to the tariff and the amount of water consumed.

The "reasonable" scenario assumed an initial 30% unaccounted rate for water, 75% bill collection rate, community input on construction, a fixed population size and consumption amounting to half or three-quarters of the average existing consumption of all households in the kabupaten. It also assumed a steadily increasing tariff reaching 15-33% of the reported willingness to pay and a tariff collection rate increasing from 75% to 90% of billing. Total household expenditures would thus become 20% to 25% lower than those in the household survey.

To recover all costs, the tariffs would be reasonable (for instance, Rp 3,620/m3 in Indramayu, where a new treatment plant would have to be built) and within the willingness to pay (Rp 15,401), but they would have to be higher than tariffs being charged to middle class households (Rp 1,050). This relationship suggests that current household tariffs in Indramayu may not recover capital costs that have been paid either through central government grants or through unpaid loans. In most cases, outstanding PDAM debt owed to the Ministry of Finance has not been repaid because the PDAMs have insufficient income to repay it.

NOT ALL POOR CAN PAY ACCESS CHARGES

Connections charges (the cost of the meter and installing the pipe to the household system) were probably originally not intended to be barriers to water service. Rather, they were meant to provide a welcome cash advance to the PDAMs, which could book them as revenue to increase their PAD performance.[3] However, they have become a significant barrier to entry for the poor. In the UPDATE-1 study, for example, between 83% and 96% of respondents rented their dwellings. While most cited high connections charges as a principle reason for not having piped water, surveys have not sorted out those who can

3 "The connection fees are entered on the revenue side in the income statement while the costs of connections are entered in the balance sheet as investments. The effect of this practice is to increase the PDAMs revenue and profits during the expansion period." Locussol, 82.

Box 3: Jakarta DKI Water Tariffs January 2005

No	Consumer group	Block of water use and water tariff per m³					
		0-10 m³		11-20 m³		> 20 m³	
		Rp	US$	Rp	US$	Rp	US$
1	Group I	550	0.06	550	0.06	550	0.06
2	Group II	550	0.06	550	0.06	1,000	0.11
3	Group III A	2,450	0.27	3,350	0.36	4,000	0.43
4	Group III B	3,500	0.38	4,400	0.48	5,600	0.61
5	Group IV A	5,100	0.55	6,200	0.67	7,500	0.82
6	Group IV B	9,750	1.06	9,750	1.06	9,750	1.06
7	Group V (Special)	11,500	1.25	11,500	1.25	11,500	1.25

Group I Religious place Standpipe and public tap Social boarding house Other similar	**Group II** Government hospital Simple hospital Water terminal and water truck Very simple multi-storey housing Other similar
Group III A Simple household Simple multi-storey housing Other similar	**Group III B** Medium household Medium multi-storey house Stall, stand, small shop Small household enterprise Non-commercial private institutions
Group IV A Luxury household Embassy/consulate Government office Office of foreign representatives Commercial private institution Tailor Military institution Middle workshop/service station Bed and Breakfast Barber Restaurant Private hospital/polyclinic/laboratory Law office Small industry Luxury apartment Physician practice Small/non-star hotel Shop/house Other similar	**Group IV B** 1-5 star hotel/motel Steambath/beauty salon Nightclub/cafe Bank Large service station Trading company 4 or 5 star hotel High rise building/condominium Ice factory Beverage factory Chemical/cosmetic factory Textile factory Storage/other industries Boat PT. Jaya Ancol (amusement park) Other similar
Group V (Special): BPP Tanjung Priok (harbor), Other similar	

afford a connection but can't agree with the landlord on sharing the cost versus those who simply cannot afford the charges. Even so, the water company should try to remove this barrier by advancing the cost of a household connection and retiring it over 3 to 5 years through a charge on the monthly water bill. After all, the water company theoretically recovers all of the other capital expenses, such as the treatment plant and the rest of the distribution system, over 20 to 30 years of tariffs.

In projects such as WSSLIC (Water Supply and Sanitation for Low Income Communities), the rural poor are able to pay 4% of project costs in cash and 16% in kind. Many observers hold that most poor families can find the connections charge from relatives or somewhere else if they are convinced that a house connection will benefit them.

For decades, donors have been pushing local governments to include the connections fee in the tariff, but few have done so. Some observers argue that the connections charge is fixed by a *perda*, or local government regulation, preventing PDAMs from connecting the poor even at a loss whenever actual costs are higher than the charge stated in the *perda*. Others state that the poor are often charged more than the cost fixed in the *perda*. Either way, the new connections cost becomes a barrier to access when the poor cannot pay the full amount at once or even over a year's time.

Chapter 4

Barriers to Expansion of Services to the Urban Poor

Many analyses ascribe poor municipal water service in the developing world to a problem of "political economy" (Mitlin) or a "crisis of governance."[4] Poverty in general is seen by many as stemming from the "structures of governance."[5] For example, the provision of municipal water involves a business whose owners are not business-oriented, while PDAMs deal with the same problems faced by private sector participants, including the reluctance of owners to relinquish power or the politicization of tariffs. The "crisis of governance" definition recognizes that, in the long run, a government-owned water business is no better than its owner allows it to be.

For background information, the development of the water sector in Indonesia is described in Annex 6. It highlights the emergence of many of the current policies and practices that have become barriers to the expansion of services to the urban poor.

UTILITIES PREFER TO SERVE HIGHER INCOME GROUPS

In accordance with the Association of Indonesian Water Companies (PERPAMSI) goal of building closer understanding between PDAMs and local governments, a two-person team conducted a survey of 15 PDAM/local governments in 6 provinces in mid-2003. The only survey of its kind in Indonesia, SMALLGAP (Survey of Municipal Administrators and Leaders of Local Government and Parliament) studied the reasons for the gap between PDAMs and local governments, particularly in relation to tariff increases. It analyzed the perceptions of local governments and local parliaments about their PDAMs, while helping those PDAMs improve their performance and presentation (Suryodipuro).

The survey found that members of local governments and parliaments were unaware of the statistical performance of their PDAMs, including figures such as percent of the population not connected, water losses, and profitability. Moreover, they had no plan to reach the unconnected poor, but were quick to mention cross-subsidies designed to alleviate poverty. They were also unaware of the effect of very low "social tariffs" on the unserved. Overall, they expressed little urgency on increasing the number of connections, choosing to focus primarily on the role of the PDAMs as providers of PAD, or the dividend offered to local government as owners of the PDAMs.

The dividend payable by a local government-owned company was originally fixed at 55% of the profit in 1962's Law 5. This law further required that the other 45% of the profit should go to pensions, social obligations, and other uses. Thus, the application of this law by many local governments ensures that the PDAM cannot save enough to reinvest in expansion. Moreover, some local governments assess a dividend payment on their PDAMs even when they are not making a profit.

The Ministry of Home Affairs eventually realized the paradox of this situation, especially when local governments would not agree to tariff increases. In July 1985, the Ministry of Home Affairs sent a circular letter (690/7027/SJ) to governors, mayors, regents, and PDAMs asking (but not ordering) local governments to consider its request that, in order to reach targets for 1981-1990 (service to 75% of the urban and 60% of the rural population), local governments temporarily release PDAMs from their dividend obligations.

Today, only a few enlightened local governments observe this request, while most donor-assisted projects include a condition that local governments do so during the period of the development project. An example of such a provision from the World Bank is described in Annex 9.

4 "This crisis is one of water governance, essentially caused by the ways in which we mismanage water," conclude the authors of the UN's World Water Development Report issued in March 2003

5 "Much of the poverty appears due to deepseated political and institutional factors that shut certain groups out from the opportunities and protections that others can expect from either markets or from government." World Bank, EASUR 2003

While water utilities are meant to be headed by businessmen free to focus on achieving specific targets, many local governments bypass the Supervisory Boards (badan pengawas), and interfere in the day-to-day running of the business. With so little control over their destiny, PDAM employees often look to outside work or corruption to increase their income. Some examples of common counter-productive practices are:

- The owner chooses employees to work at the PDAM.
  This traditional practice is called "titipan." It has been replaced somewhat by test-based hiring at some levels in some PDAMs. Even so, up to 50% of employees at many PDAMs come "recommended" but prove ineffective, and PDAMs can't afford to pay them early retirement.
- The owner makes day-to-day management decisions.
  Many PDAMs must ask permission of the owner before they implement layoffs and must inform the owner before filling a position. Often, the owner does not agree to incentive plans aimed at rewarding outstanding employee performance.
- The owner makes off-budget withdrawals.
  Official city budgets are rigid, so it is convenient for the owner to take funds for unforeseen emergency expenses from the utility's separate budget, with these expenses usually being charged as unaccounted-for water.
- The owner takes an annual arbitrary "contribution" as a kind of dividend.
  At the beginning of the fiscal year, the PDAM is often assessed a "contribution" to the city's budget without reference to the PDAM's profitability, targets, coverage, or central government regulations.

Although they state that tariffs must recover costs, the Ministry of Home Affairs Regulation 2/1998, Instruction 8/1998 and the Ministry of Home Affairs Decree No. 690 069/1992 regarding tariff setting are both used by local governments to allow the lowest categories of tariffs to drift downward, requiring the PDAM to sell to lower income groups at a tariff that is too low to be recovered by cross-subsidies. The regulations (and many local government officers) assume that household and commercial customers are always willing to be charged enough to cross-subsidize the "social tariff" customers.

However, the reality is that everyone wants to buy water cheaply, resulting in illegal connections that local police are often reluctant to help disconnect. As non-deserving customers illegally join the "social tariff" group and residential/commercial customers reject cross-subsidizing tariff increases, the PDAM's logical recourse is to limit the number of customers in the "social tariff" category.

Box 4: Asian Water Supplies

McIntosh sees poor governance and low tariffs as the core cause of inadequate provision of water to the poor, mainly through standpipes and water vendors. The poor are willing to pay for piped water, but governments are unwilling to charge. "It is the reluctance of elected officials to increase tariffs that has, more than any other single factor, constrained water supply development in terms of quality of service and coverage." Poor governance and low tariffs result in negative incentives and low salaries for utility workers, poor operations and maintenance, low consumer awareness and expectations, mismanagement of natural resources, intermittent water supply, and low service coverage. These problems must be solved as a whole rather than as discrete projects.

The solution involves transparency, regulatory bodies, and civil society involvement. Tariff improvement will give the consumer "dollar votes" and lead to demand management and development of alternative sources such as rainwater harvesting and wastewater recycling. It will remove the need for subsidies and the money trail running through local governments. It will lead to expansion of connections, disappearance of standpipes, more pressure for efficiency on users of irrigation water, less risk for private sector participation, better maintenance, and incentives for better professional managers who may move from city to city.

He feels that the best measure of a good water supply business is 24-hour supply, which relieves consumers of high coping costs. Intermittent supply generally is caused by low tariffs, lack of metering, illegal connections, waste, and officials ordering that distribution systems be extended beyond the limits of supply. Intermittent supply is the constant threat of having no water at all. Higher tariffs should be charged for 24-hour supply.

Source: McIntosh

Compounding the problem, local governments and local parliaments are reluctant to approve requests for tariff increases, forcing PDAMs to reduce their level of service. This often leads to a chicken-and-egg stalemate where parliaments demand an increase in service before they approve a tariff adjustment and PDAMs demand an adjustment in the tariff so that they can invest in improvements.

One reason for the government's reluctance to approve tariff adjustments is a general lack of understanding of the economics of the water business. Another may be the government's willingness to sacrifice long-term benefits in favor of short-term advantages such as getting re-elected. Furthermore, the government officials often suspect tariff increases will be lost to corruption because of the lack of transparency in PDAMs and their own lack of understanding the business. Finally, PDAMs may simply not be making strong cases for increases. Regardless of the reason, however, McIntosh suggests that, rather than allowing PDAMs to finance development through tariff income, local governments want to subsidize it so they can control the money trail.[6]

Politicized, unreasonably low tariffs are a worldwide problem. In Indonesia in the late 1990s there was the momentum of a recipient mentality, with some centrally driven urban development projects still winding down. During the 1980s and 90s, borrowing for increased capacity was based on the assumption that tariffs would be raised to keep up with inflation. Gradually, however, governments became afraid of agreeing to tariff increases, often because of re-election pressures or because the people were suffering from economic shock. For example, governments were afraid to raise tariffs during the 1998 monetary crisis, when PDAMs saw the cost of inputs go up by 200%. Eventually, governments did raise tariffs, but not enough. The average tariff has gone up from about Rp 400 in 1998 to about Rp 1,000 in 2005. According to benchmarking data from 79 PDAMs between 2001 and 2002, the average water charges (water income divided by water volume) increased from Rp 1,061 to Rp 1,255.

When tariffs for drinking water are comparatively low, it is difficult to argue with a water apex body for a greater share of raw water. However, when drinking water tariffs go up, they can be expected to put pressure on the current inefficient use of water for irrigation. Locussol estimated in 1997 that the total loss of low water tariffs, including that of the poor being unconnected, amounted to about 40% of PDAM revenues (Locussol 77).

The SMALLGAP survey found that in general local governments were not aware of depreciation and reserves for future expenses, so that money in the PDAM cash register often was taken as a sign of profitability. Most Supervisory Boards (the representatives of local government monitoring day-to-day operations) did not function properly, and did not sufficiently understand the water business. In cities, the relationship between the PDAMs and local government and parliament officers, who usually had business backgrounds, was strained at best. This condition can be addressed by a Water Business Advisory Board, as described later in this report.

During expansion, the PDAMs generally prefer to connect new housing estates, where they deal with only one real estate company representative, who is literate, efficient, and familiar with PDAM rules and procedures. Some housing estates even cover some of the costs of connection for homebuyers. By contrast, it is often difficult and time-consuming to explain procedures to hundreds of individual urban poor who may not even purchase as much water as those in new housing estates.

6 "One reason some elected officials do not want to increase tariffs is that the money trail runs through governments, and eliminating subsidies through higher tariffs means that it would not." McIntosh, 81.

OTHER BARRIERS TO ACCESS BY THE URBAN POOR

Connections Charges

As mentioned in section 4.2, there is evidence that some groups cannot pay the connections charge unless it is spread over 3-5 years. Some PDAMs have instituted programs to spread out payment of the connections charge, but this is usually no more than 9-12 months. Moreover, those respondents who indicated that they would pay a one-time connection fee were generally thinking of one that would be about 50% of the current connection fee rate. The majority, however, were willing to pay in installments.

Vulnerability to Shocks

The poor are particularly vulnerable to shocks, such as inflation, job layoffs, a new Dirut who reduces service, or sudden illness. The risk often makes them reluctant to commit funds for a water connection, especially if they rent their house. Their vulnerability also makes PDAMs reluctant to connect them. Whereas other income groups could pay the fixed charge even if there were a period when little or no water flowed through the pipes, the urban poor could not and would be likely to protest. This is particularly the problem where many meters are broken and PDAMs tend to charge every house connection a 10 cubic meter per month minimum consumption rate.

Poor PDAM Service

Service is often intermittent or unreliable, with 2002 benchmarking data from 19 reporting PDAMs, indicating that the median PDAM supplies water for only 22 hours a day and the average is 19.4 hours a day. This can bring about disputes. However, some NGOs have stated that the poor living on the margins of society may have heard of cases where the PDAM has overcharged and demanded payment of the disputed amount even before the case has been settled. If payment cannot be made in such a case, local government regulations demand that the house be disconnected without delay. This policy enables corrupt PDAM officials or meter readers to use pretenses to extract extra funds from the poor. With the fear of strong arm tactics, the poor become further discouraged from setting up a new connection.

Legal Issues

Most poor residents who rent living space would be reluctant to pay for a house connection that is held in the name of the landlord. In this sense, a house connection is a capital improvement that is partly enjoyed by the landlord because he could be able to charge a higher rent after the connection is made.

Illegal residents present an entirely different problem because local governments tend to ignore them. McCarthy quotes an Urban Poor Consortium estimate that 4-5% of Jakarta's population may be illegal squatters (McCarthy 6), giving it the highest proportion of illegal squatters in the country. Many squatters live in marginal areas, where it would be difficult to extend pipes. Under present circumstances, PDAMs are not rewarded for providing water to illegal residents, and it is unlikely that city governments will legalize these settlements. The most common solution, therefore, is to provide a hydrant near the illegal settlement and let small scale providers distribute the water. However, in reaching these populations, it is suggested that local community groups in each location make informed decisions on how best to deal with the provision of water.

Lack of Understanding by PDAM of the Poor and Their Communities

The PDAM and local governments are not used to working with the urban poor, so they are reluctant to enter into transactions with them. Doing so would require special attention in helping them fill out forms or solving simple problems caused by ignorance or lack of experience. In the UPDATE survey areas, the only organizations available to help lower income families with formal procedures were local government-created organizations such as the kelurahan councils, government-sponsored local

resiliency groups (LKMD) and RT/RW officers. While some individual officers may be sympathetic, such government organizations are generally not as efficient in reaching the poor as NGOs.

While it is difficult for many PDAM managers to begin an open dialog with the community, successful PDAMs have done so by transparently opening their accounts to consumers, local governments, students and NGOs in the community. Some have devoted a part of their annual budget to the expenses of a citizens' water forum. This has proven to be a successful strategy. However, many PDAMs aren't willing to take the risk of a public demonstration against water tariffs, causing them to shrink away from transparency. Therefore, the majority of PDAMs need help during the transition while they form closer links with the community.

Confusion Between Affordable Service and Inferior Service.

The facilities often used to provide water service may be too costly to operate in low-income areas. For instance, trucks that supply water terminals require operations and maintenance costs that make the service too expensive to maintain for the benefit of the poor. Therefore, it is helpful to provide low cost facilities to consumers who cannot afford to pay large water bills. However, inadequate low-cost facilities conversely increase the cost to the PDAM and/or the consumer over the long run. For example, the IKK (Ibukota Kecamatan) program, including traditional low cost delivery systems such as standpipes, was designed to provide hundreds of affordable water supply systems to consumers in all income groups in smaller towns. Most of the systems, however, were not financially viable, and were eventually turned over to PDAMs, who viewed them as burdens. As a result, water flow inhibitors that were installed to limit each customer's consumption and provide everyone equal access, were mostly removed or damaged. During the 1997/1998 Asian monetary crisis, many IKK units had to be closed down because of lack of operational funds.

Box 5: Excerpts from Regulation 16 of 2005

GOVERNMENT REGULATION NUMBER 16 OF 2005
REGARDING DEVELOPMENT OF SYSTEM OF PROVISION OF DRINKING WATER (SPAM)

Signed by the President

System of development of drinking water (SPAM) can be a system with pipes or a shallow well, hand pump well, rainwater storage tank, water terminal, tanker truck, packaged water installation, or an edifice to protect a spring.

The central and local governments guarantee the availability of raw water. The continuity of flow must be 24 hours per day. Treatment and handling of water can involve the role of the community

Development of a system of development of drinking water is the responsibility of the Central Government and Local Governments to guarantee the right of every citizen to a minimum amount of water per day to maintain a clean, healthy, and productive life in accordance with existing regulations.

Arrangement for development of system of development of drinking water is done by a national or locally owned company that is established especially for this purpose. Whenever the company cannot fill the needs of the people for drinking water, the Central or Local Government can build a part or whole system of development of drinking water which will be operated by the company.

Whenever the local government cannot develop system of development of drinking water, the Central Government can provide financial assistance until minimum service standards are reached in measured phases. The Central Government assistance in this case is mainly for the lower income groups and poor in areas outside the reach of BUMD. For areas that are already within reach of the BUMD, Central Government financial assistance will be provided only to reach minimum service standards.

Past efforts to provide a lower standard of service to the poor have emphasized programs such as handpumps and rainwater collection, which failed in Repelita V. Evaluations of standpipes as "low cost" solutions to serve the masses have shown that they have not served the targeted 100 people per standpipe, many have fallen into disuse, and as a result they have cost a great deal more than was intended. Standpipes have also been used in Jakarta and other cities as sources of illegally sold water, and in some cases, pumps installed at the standpipes have lowered water pressure throughout the system. Other countries, such as Kenya, have had similar experiences with standpipes, or kiosks. In fact, the greatest beneficiary of installing standpipes seems to be the one selling the water.[7]

Lack of Informed Choice.

UPDATE-1 found a correlation between those who did not want to be connected and those who thought vended water was of a better quality. Yet, as most vended water actually comes from PDAMs (directly or through standpipes) in these areas, consumers are really paying a premium for the same product. This is an area for further study, but it suggests that consumers are not aware of the true differential in quality between vended and piped water.

Another reason given for not wanting to be connected was that other sources (mainly shallow wells) were available at a lower cost. Yet, even if they used vended water only for drinking and cooking, the surveyed households on average would still pay less for a piped water connection than to continue using their present sources of water.

Some respondents replied that they could not afford to be connected because the water tariff is so high. Considering that they are now paying more for water than connected households, one single explanation for this and similar contradictory responses is that the urban poor are not well informed of their actual current costs and their options for reducing those costs.

Collusion between PDAM officers and customers/distributors

In some locations, PDAM officers work with distributors to protect against competition. In other cases, PDAM officers decide which groups receive piped water and may favor one group over another.

Lack of Clear Mission to Serve the Poor

Since Repelita V, poverty alleviation has been part of the Indonesian national development strategy. In fact, it is a basic principle of the 2003 interdepartmental Community Managed Water and Sanitation Strategy (Bappenas). In May 2004, the Government completed a Poverty Reduction Strategy Paper detailing some approaches to poverty alleviation. However, there remains no central government law, regulation, or ministerial decree requiring PDAMs or local governments to target the poor, ensuring that this lack of access continues.

When they formulate their mission statements, PDAMs regularly copy language directly from the Regional Companies Law (5/1962), with the main source being the local regulation that established it. In most cases, this local regulation also takes the language of the Regional Companies Law 5 of 1962.

7 "It has been estimated, however, that this method costs more per user than shared household connections, in both economic and financial costs. This is due to the fact that the fixed cost of water from a standpipe is some 2.5 up to 17 times the cost of a metered house connection, depending on whether the standpipe is supervised or not; and moreover, the actual prices charged by the supervising attendants for standpipe water are much higher than the costs." Locussol, 27.

Chapter 5

Proposals to Overcome Barriers

Data has suggested that the main obstacles remain the lack of pipes in their area and poor PDAM service due to corruption, mismanagement and lack of funds for expansion and improvement. As well, other obstacles must be addressed at the same time to ensure sustainability. Some of the poor need help with payment or coordinating a co-payment of connection fees with landlords. The cultural gap between PDAMs and poor communities must be bridged in many areas by local institutions that can assist in mobilizing community groups for targeting subsidies, organizing support groups for poor families who temporarily cannot pay monthly bills, and for orienting PDAM officers to serve the poor. Sustainable institutions linking communities and PDAMs can help in consumer orientation and oversight. These changes in attitudes, systems, and procedures can be effected as a central component in the future water supply infrastructure and service expansion projects.

The PDAM is the logical focus point for serving the poor because it possesses a record of past accomplishments showing its ability to improve performance given the proper incentives.

The performance of the most visible PDAMs has improved in response to better central government guidance, local government criticism, the pressures of decentralization, reduced flow of central government grants, a sense of political reformation, more frequent use of fit and proper tests, corporate plans, customer satisfaction surveys, establishment of citizens' water forums, and involvement of stakeholders in requests for tariff increases. Despite financial troubles, improvement should eventually gain further momentum with the direct election of mayors and Bupatis and greater stakeholder involvement in watershed planning and management.

Despite frequent occurrences of mismanagement and poor service, a few outstanding PDAMs have demonstrated over the last few years their ability to improve management and earn tariff increases sufficient enough to increase connections and improve service. They have all followed the steps described by successful Diruts in Annexes 2 and 3, such as depoliticizing and professionalizing the Dirut office as well as providing staff incentives, consumer orientation, transparent record-keeping, businesslike planning, community involvement, and tariff increases tied to improvements in service.

Box 6: The Accomplishments of 24 PDAMs between 1999-2003

The WET team began making visits to the weakest and poorest performing PDAMs in October 1998. In 1999 they worked with 11 PDAMs, providing advice for conducting customer satisfaction surveys, vision/mission retreats, compiling work-out (later called FRAP) and corporate plans, consumer orientation, and justifying requests for tariff increases tied to increases in performance.

Local governments undertook to forego the annual payment from the PDAM to the local government treasury and to maintain an arm's length relationship with the PDAM. PDAMs committed to providing staff, writing and keeping to a corporate plan, and publishing accounts.

Two PDAMs were dropped from the program because they or their local governments were unable to fulfill the terms of the memorandum of understanding. The performance of most of the participating 24 PDAMs (or about 8% of all 300+ PDAMs) improved dramatically, as shown in Annex I.

During about the same time, the World Bank-assisted PDAM Rescue and Recovery Program, funded by the Asia-Europe Management Fund (ASEM), assisted a smaller number of PDAMs, some of which have become creditworthy.

Source: Chemonics and Urban Institute

A good example of the accomplishments of many PDAMs and their potential for serving the poor is the experience of the 24 PDAMs receiving targets and advice from the WET (Water Efficiency Team) and LGWS teams. Table 5 shows the increases in operating ratio (operating costs divided by operating revenues; when operating costs include all expenses together with depreciation and interest payments) and combined average profit for these groups. The LGWS team set out to show that even the weakest PDAMs can recover, so Group I consisted of 11 of the smallest and weakest PDAMs that were given advice over the longest period of time. Group III consisted of stronger and larger PDAMs that received advice for only one year, but the increases in their average FCR ratio and

combined average profit were more than credible. The methodology of the LGWS project is replicable for other PDAMs.

Table 5: Improving PDAM performance without capital investment

	1999 – 2003 11 PDAMs		2000-2003 6 PDAMs		2002-2003 7 PDAMs	
	Before	After	Before	After	Before	After
Average Operating Ratio	1.67	1.18	1.47	1.15	1.25	1.15
Combined Average Profit (Rupiah millions)	-5,349	-973	- 644	678	5,295	24,041

Source: Urban Institute 2003

Detailed individual PDAM statistics are shown in Annex 1. There were only one or two PDAMs that had internal difficulties preventing them from improving their performance without the addition of external resources. The experience of these 24 PDAMs demonstrates that even within current constraints, virtually any PDAM and its owner can reach full "cost recovery" and better management if there are modest incentives (in this case, working with other professionals and on a donor-assisted project). The LGWS experience confirmed that the water service business involves unique technical and commercial details that are best evaluated and advised by professionals.

Although PDAM Jember (Annex 5) did not extend its service specifically to the poor, their case study is offered to show how utilities can and have increased efficiency and coverage using tariff income for the investment. It is a good example of how a small PDAM's improved performance started with popular protests during the monetary crisis and shows that any local government and PDAM can achieve full cost recovery and improved performance while reaching social objectives.

Water utilities are strengthened by an association that represents their interests to the central government. Although it is still growing and subject to outside shocks, the Association of Indonesian Water Companies, PERPAMSI, became fully independent from the Ministry of Home Affairs in 2001. As the representative of all PDAMs, PERPAMSI brought the issue of debt rescheduling to the President of the Republic of Indonesia after years of inaction. It has also represented all PDAMs to PLN, asking that electricity tariffs for PDAMs be fixed below industrial rates. In addition, PERPAMSI provides demand-based training through a decentralized system, offering the first training to new PDAM Diruts so that they can learn the basics of the water business. It has also conducted a program helping three PDAMs install drinking water zones that are still in operation in three cities today.

PDAMs have equipment and pipes in place and an organization that has been part of the community for a long time. Under several determined Diruts, many have found ways to increase performance and service to consumers. PDAMs and their association, PERPAMSI, have a policy and a handbook for strengthening PDAMs through better relations with stakeholders. As well, this handbook provides guidance for preparing documented tariff increase requests by presenting negative scenarios that could occur if the increase is not granted. (PERPAMSI)

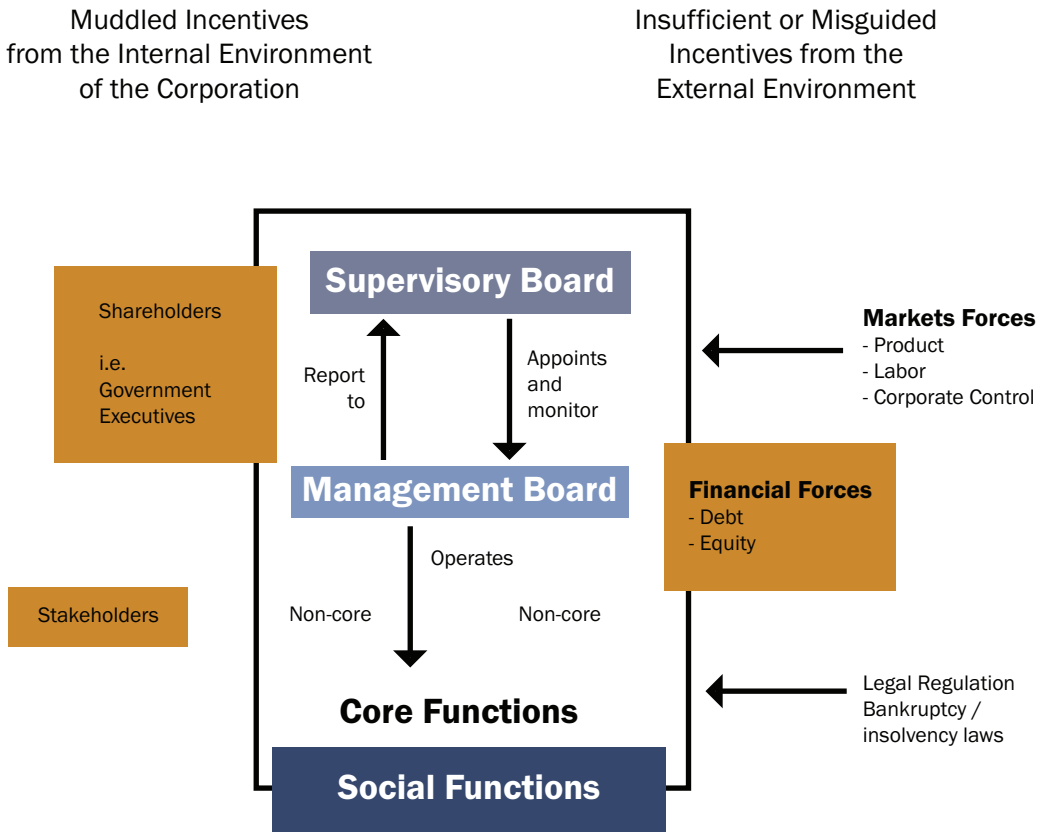
"Full cost recovery" is a simple indicator of efficiency and customer satisfaction over time, with its advantages described in Annex 4. However, while official tariff policy is theoretically based on "full cost recovery," it must be acknowledged that until now the cost of most urban water infrastructure has been subsidized. Calculating the value of current infrastructure by using the Department of Public Works' rule of thumb for the current rate of installing water supply capacity throughout Indonesia (about 95 liters/second), this can be roughly estimated at US$2.5 billion. Thus, whether this infrastructure has been subsidized by central government grants or un-repaid loans (about US$ 450 million including interest), the capital cost is not being recovered through the current level of tariffs and most PDAMs are not setting aside funds for its expansion.

As an example of the slow pace of reform, Annex 7 examines the objectives set forth in 1997 for a national water strategy, showing that although major problems were identified, most of the objectives have not been achieved. The 1997 strategy listed 6 major points for the "graduation" of Indonesia's water supply sector to qualify for commercial bank loans based on the insight that the government could not bear the burden of the investment needed to achieve infrastructure targets. (Locussol 1998). Those major points are still valid over the long term.

The proposals in the following section include more immediate steps that need to be taken for serving the poor more efficiently, principally achievable through an extension of house connections to the poor. These short-term actions are expected to take place within the government's reform program for PDAMs.

One of the best and most graphic depictions of the present and optimum institutional arrangements for PDAMs has been put forward by McLernon. Figure 1 shows the institutional set-up of the PDAM as it exists today, with

Figure 1: The State-Owned Enterprise - Too Much or Not Enough



Source: McLernon 2004.

overlapping functions and responsibilities. Principally, the shareholders (the owner) regulate and become involved in daily operations, often accompanying or even circumventing the Supervisory Board (Badan Pengawas) that is meant to keep the owner away from the day-to-day PDAM operations and the management board. The PDAM's core functions (e.g. making a profit) are mixed in with social functions (e.g. subsidies), with debt and equity influencing daily operations. The optimum case, as shown in Figure 2, involves an independent regulator and separation of the owner from the Supervisory Board/ PDAM, which has now become a Perumda (Regional Public Company). Instead, the owner becomes responsible for subsidies, and commercial customers pay cost-recovering tariffs.

The following description of steps needed to enable water utilities to serve the urban poor focuses on the institutional level required to take action. To ensure sustainability of the expanded transactions between the urban poor and the PDAM, many changes must take place at the local level, while being supported by guidance at the central level. The ideal vehicles to effect changes at the local government level are pro-poor components within water supply expansion projects. Possible barriers to implementation are described in Annex 9.

CENTRAL GOVERNMENT AND DONOR ACTIONS

The central government can provide revised guidance to local governments and PDAMs that reflects changes in the central government strategy for poverty alleviation over the last five years. Central government guidance can become a criterion for the allocation of benefits to local governments as well as a roadmap for better services to the urban poor. The main thrust in the water sector aims to increase the number of sustainable house connections for the urban poor. In addition to having an immediate and dramatic poverty alleviation effect, this would increase PDAM sales and reduce the number of illegal connections.

Revise Guidance

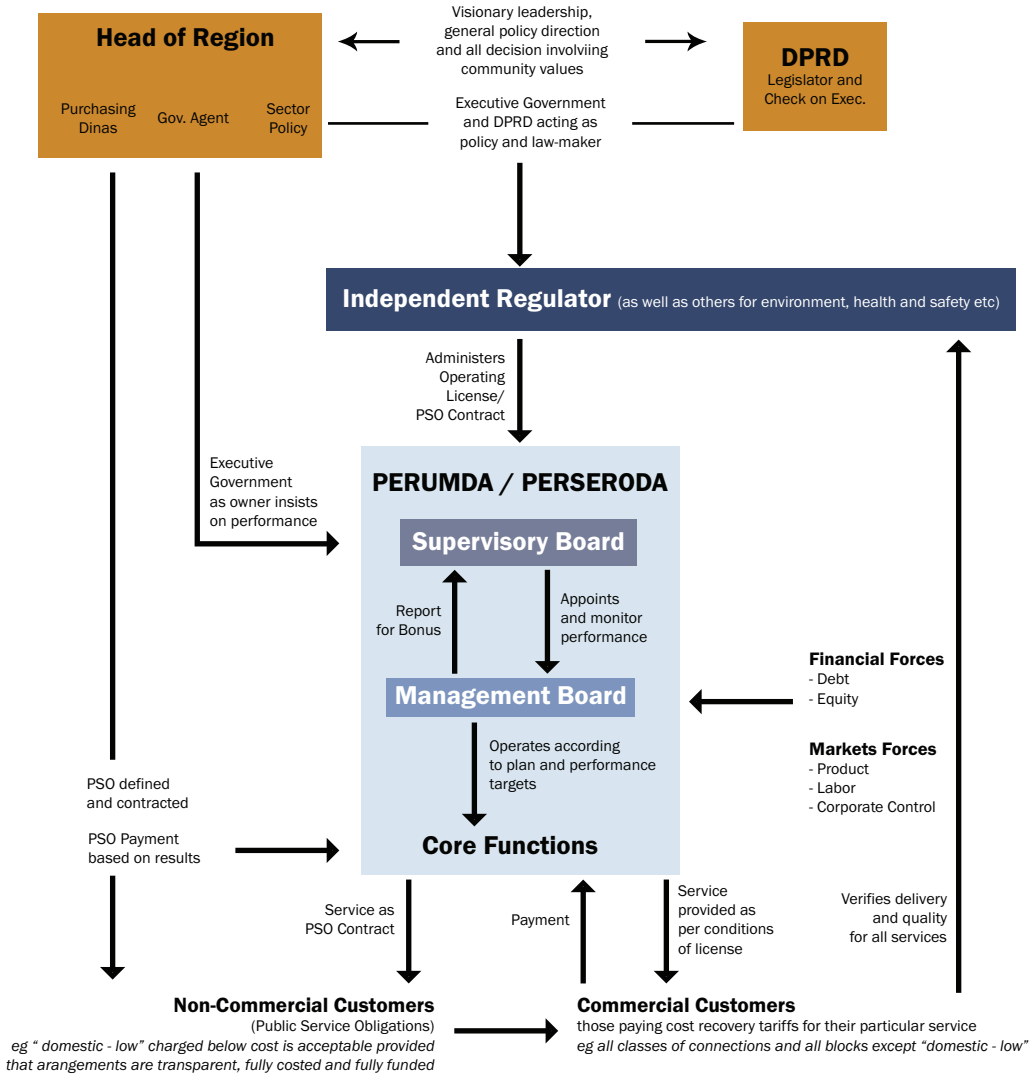
Revise Law 5/1962. In reforming, the central government should take into consideration the negative effects of entitling local governments to derive dividends from service organizations such as PDAMs. In their focus on PAD, local government officers, and especially DPRD members, lose sight of the primary mission of the PDAM to serve the needs of the connected and expand coverage among the unconnected.

For many years, the Ministry of Home Affairs has been drafting a new law regarding state-owned enterprises (BUMD). One way to turn the attention of the local government from seeing the PDAM as a source of dividend income to that of a provider of water is to declare by government regulation that the primary purpose of a PDAM is to provide water to all citizens who need it. Doing so, local governments may exempt PDAMs from paying dividends to their owners until coverage has reached a high percentage (such as 90%) of the population.

If PDAMs are reliant on grants from local governments for a large part of their operation, it should be apparent that local governments are receiving no net benefit from PAD on PDAM income and local governments would be better served by reinvesting any profits. It would be more efficient for both the local government and the population in general to have a utility that is transparent and reinvesting its earnings to improve service than being caught in a continual cycle of grants and dividends. Moreover, despite the fact that current guidance regarding the composition of the Supervisory Board is still largely ignored by local governments, this guidance can be more explicit about the negative effects of owner involvement in the day-to-day operations of local government-owned enterprises.

Some lawmakers may object to the idea of extending PDAMs a temporary exemption from the obligations of local government-owned enterprises, but PDAMs are in the special situation of being tasked with making a profit that can be used for the benefit of an unserved population.

Figure 2: Institutional Set-up to Sustain Commercialization



Source: McLernon 2004.

Update Ministry of Home Affairs Decree No. 690 069/1992 and other tariff guidance. New guidance can allow more local government flexibility in determining user blocks and encourage the raising of the lowest tariff rates. Such guidance can point out that extremely low tariff rates are actually harmful to the unconnected poor, and that a large differential between the lowest and the highest tariff rates encourages businesses to find alternative water sources and conduct illegal behavior such as water smuggling.

Provide for greater transparency. PDAMs are required to publish their accounts, but few of them do so. Incentives, such as easier loan terms, may therefore be provided to pioneering PDAMs that arrange for annual independent audits of their accounts or for town meetings to explain past accomplishments and requests for tariff increases.

Provide Performance Incentives to Local Governments. Needs-based grant funding can be allocated based on performance, thus promoting efficiency. Some examples include special transfer funds (DAK), and energy subsidy funds for the water sector (SEAB). In addition, the central government can provide recognition to outstanding utilities and their local governments, perhaps offering national and provincial poverty alleviation or full cost recovery awards. There is an opportunity for central government departments such as the Department of Public Works, BAPPENAS, and the Department of Home Affairs to establish these annual awards.

Donors and the central government (and sometimes the provincial government) can provide further incentives through expanded loan and grant assistance programs, which generally require the suspension of PAD during their lifetime. Eventually, development projects would include inexpensive pre-project sampling surveys to establish household expenditure profiles for various levels of income and determine the demographic distribution of the poor. These may also provide targets and indicators, such as the number of new house connections for the poor, for PDAMs and their representatives. Other targets or indicators could include customer satisfaction surveys, the time required to pay a water bill, continuity and pressure of water service and the ratio of unaccounted-for water.

There are strong indications that a significant proportion of the poor are willing to pay the new connections fee and that others would be willing to pay it in installments if they had a properly informed choice. For this reason, future investment activities will need funds for extending information to the urban poor and starting a natural process of customers asking for water services.

Infrastructure improvement projects may include provisions for the extension of house connections to poor communities with baseline surveys to measure the wealth and income impacts on the poor. They may include components of facilitation or information campaigns, special counseling or revolving funds for poor families that cannot pay water bills, strengthening of water-related community organizations, and technical assistance for tariff meetings, 24-hour service, metered connections, target setting, and monitoring of progress toward full cost recovery.

There are currently few NGOs that help the urban poor make informed choices for provision of drinking water. Therefore, there will be a need to strengthen NGOs and help the urban poor understand their options. Output-based aid, channeled through private organizations and especially NGOs that are based in an area, can be used to start the process of matching poor consumers with water service through PDAM programs of installment payments and partial subsidies for new connections.

The same NGOs can assist with targeting the poor by establishing community groups in connection with community-driven development projects such as the Urban Poverty Project or the Kecamatan Development Project. They can determine whether or not geographical targeting can be efficient for assisting in the establishment of new connections for the urban poor. Through targeting and establishment of mechanisms to help protect poor communities from sudden shocks, they can help PDAMs learn to work with poor communities, and vice versa.

If incentives to PDAMs are strong enough to increase connections to poor areas, there will be a need for central government to increase the supply of raw water to meet the increased demand in cities such as Jakarta and Surabaya.

Box 7: Better Management and Accountability: Case Study of PDAM Pontianak

In late 2004, the mayor of Pontianak, West Kalimantan, determined that the people of Pontianak should have the best municipal water service possible. The city invited individuals to apply for the position of Dirut, or managing director, of the city's water utility (PDAM). By use of a fit-and-proper test, a non-local businessman was selected and assigned the task of reforming the PDAM within a four-year term.

When the new managing director took office in November 2004, water that was consumed by customers or otherwise lost but not reflected by meter readings was as high as 51%. By September 2005, this non-revenue water had been reduced to 35% and was still declining.

Upon initial review of the operation, the new managing director found that tariff collections from Pontianak's primary commercial activities were surprisingly low. To investigate this shortfall, he contracted with a private company to read meters in the commercial areas for a trial month. The private company's findings indicated extensive under-reporting of consumption as well as the existence of numerous unauthorized connections. In response, a special task force, composed of dedicated PDAM staff, was formed to combat these issues.

The special 10-person task force visited the largest commercial customers first and confirmed that unauthorized connections were common. After inspecting customers in the largest commercial area and installing new meters where needed, the task force began to analyze the consumption patterns of businesses in other commercial areas. If their consumption patterns appeared to be unreasonably low, the task force visited the business and checked the connection and the meter. In most cases the task force found unauthorized connections.

To further combat low readings, new meter readers were hired from outside the company. They were engaged, not as employees, but as contractors on a fixed assignment. Great lengths, including psychological screening tests, were taken to ensure that the contractors hired would be competent for the job. Currently, the managing director is looking to increase efficiency in meter reading and reporting by exploring the use of hand-held computers to digitally read meter codes.

During the period of November 2004 to September 2005, 17% of Pontianak's water meters had been replaced or repaired, and PDAM Pontianak reported that the cumulative extra income from reduction of unaccounted-for water amounted to approximately US$1 million. In August 2005, the PDAM reported that its operating income was 120% of its operating expenses.

In order to ensure sustainability of management reforms, the Dirut focused on the PDAM's greatest asset, its people. The list of staff development and upgrading initiatives is long and impressive. Roughly three-quarters of the staff received two weeks of training in discipline and leadership in an Indonesian Army training camp. Additionally, the staff received competency tests and evaluations from the local university. The corporate plan was revised and upgraded, and the vision was changed to show just one goal: to be the best PDAM in Indonesia through better service.

Every week, each staff member was, and is still, required to state his dedication to do his best to serve the public and not to engage in inefficient practices. Morale grew as the new working culture came into effect, and staff members have shown stronger dedication, working late through the night on certain projects.

PDAM Pontianak promotes its activities by publishing its annual accounts and engaging in dialogue with the community. Largely because of its open and transparent approach, the PDAM has gained the support of the DPRD. It is still too early to conclude that PDAM Pontianak is a success story, but its first year of reform has brought significant results. PDAM Pontianak provides an excellent example of the several promising PDAMs in Indonesia that have grown with the active support of the owner.

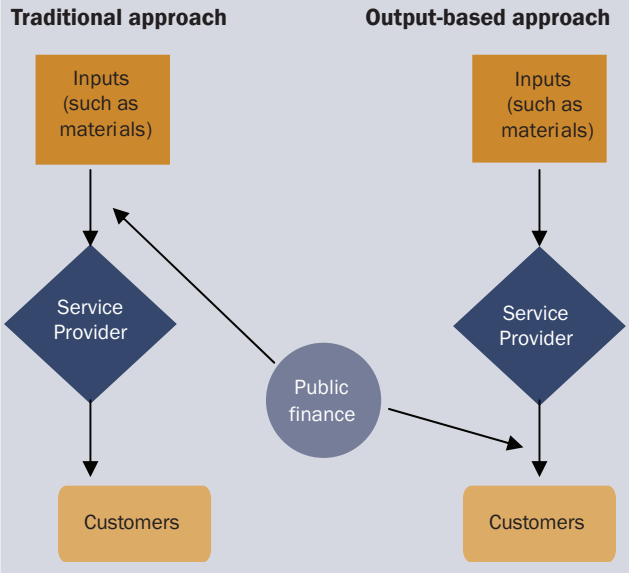
Source: Interview with managing director and PDAM Pontianak financial reports

Box 8: Output-based aid

Traditional water sector projects aimed at expanding and improving services have often had disappointing results; investments in capital works fail to produce a sustained flow of reliable services, and subsidized financing of service providers fails to translate into improved access by the poorest.

Output-based aid aims to address these weaknesses by shifting public funding inputs to services actually delivered to poor households (e.g. household connections to a water system).

The objective of this approach is to provide a sharper focus on intended objectives, to improve incentives for efficiency and innovation, to enhance accountability in the use of public resources, and to create opportunities for mobilizing private financing.



Establish a Water Business Board

Local governments and local parliaments need water business advice in order to make informed financial and technical inputs into political decisions. Particularly during tariff deliberations, there is a need for non-biased professional recommendation. An apolitical and professional Water Business Board, consisting of only business-oriented professionals or former professional utility directors (not civil servants or representatives of the community) that have turned utilities from loss-making bureaucracies into profit-making businesses, can advise local governments on the technical and business aspects of the water business. This is particularly the case in aspects of reaching the poor within the general guidelines of full cost recovery. This Board may be accepted at first as an advisory board by local government, but as its advice becomes more trusted and its impartiality established, it can become the nucleus of an apolitical regulatory body. As mentioned earlier, where local governments and parliaments usually made good decisions, officers had business backgrounds.

In PDAMs as well, business experience is a common factor among those Diruts who are successful. This board may be a special business unit, for instance, in the BPP SPAM (Control Board for Development of Drinking Water Systems) that was mandated under PP 16/2005 to assist in all aspects of the provision of drinking water.

LOCAL GOVERNMENT ACTIONS

There is an indication that by 2002, the aggregate stock of funds being held by local governments had grown to 16% of annual expenditures, and is probably higher now (Lewis and Chakeri, 2004). Therefore, donor and central government strategies should be aimed at drawing out part of this aggregate stock of local government funds for use in connecting the poor, perhaps by matching output-based aid (OBA) grants on a 50-50 basis.

Revise Water Business Practices

There are many tools available to local governments for quick study of the basics of the water business. For instance, the SMALLGAP project has created an outline checklist of the key points to consider when requesting a tariff increase. They can also learn from the experience of successful Diruts as described in the Annexes of this study. Local governments that respond to central government incentives can follow central government guidance and refrain from involvement in the daily affairs of their PDAMs, thus placing responsibility for outcomes squarely on the shoulders of the PDAM management. They can also insist on the use of fit and proper tests in the appointment of Diruts and use the advisory services of Water Business Advisory Board.

Revise PDAM Incentives

Analysis has suggested that PDAMs try to discharge the roles assigned to them by their owners and that owners aim to keep control of PDAMs as long as they can. However, the current objective of PDAMs is to contribute PAD to their owners. There is no written assignment, in national laws and regulations or in local government *perda*, giving PDAMs an objective to target the poor. Local governments can change this by instructing PDAMs in writing to target the urban poor, particularly by increasing coverage and efficiency.

In most locations, the local government's assignments to its PDAM would be best written into a *perda*, giving them a stronger feeling of ownership through the *perda* than would passing on a central government regulation. The assignment would become a part of the PDAM's vision and mission statement and eventually a part of its corporate plan. The *perda* would state clearly the responsibilities of the local government (e.g. provide any subsidies that are necessary and help PDAM remove illegal connections) and the PDAM (e.g. meeting performance and community participation targets). The basis for such a *perda* seeking to achieve service with greater social justice may be the Water Resources Law 7/2004:

Article 26(7) "Utilization of water resources is carried out by enhancing the social function to realize justice by observing the principle: beneficiary pays for water resources management services, and involving the role of the community" and

Article 40 "(5) arrangement of development of drinking water supply system is intended to: c: increase efficiency and coverage of drinking water services"

Furthermore, the implementing regulation of the Ministry of Public Works 16/2005 states:

Chapter V, Article 1: "(1) Development of drinking water systems is part of the responsibility of the central government and local governments to guarantee the right of every person to the minimal daily amount of drinking water to fulfill the need for a healthy, clean, and productive life according to the laws in force."

The explanation accompanying PP 16/2005 states that its article 3 refers to

"the principle of balance between social, environmental, and economic functions, particularly for providing easier access to lower income groups (the poor)."

Through the Supervisory Board, their PDAM representatives, local governments can treat the PDAM corporate plan or FRAP (financial recovery action plan) as a performance contract and hold it to achieving its targets before local governments are willing support tariff increase requests. If the PDAMs improve, they may be rewarded with a cancellation of all claims to dividend payments.

As a stimulus to their PDAMs, local governments can grant funds for the construction of new water treatment facilities and extension of distribution facilities to low income areas in exchange for the establishment of PDAM pro-poor procedures. While the actual work can be done either through or outside the PDAM, such an expansion project would enhance a PDAM's revenue earning capacity, allowing it to reinvest cash flow into a stronger and more financially healthy business.

Local governments can assist PDAMs in cleaning up illegal connections, which is often dangerous work. Such connections can either be simple taps on unguarded pipe mains (called "spaghetti") or unregistered connections that are often constructed by colluding water company employees. As in other countries, there are more illegal connections than the data indicates because they are not acknowledged. One provider of services in Jakarta states that illegal water, along with well water, is one of the two main alternative sources to water sold by the utility. Joint local government/PDAM efforts to clean up illegal or unregistered connections may also uncover illegal arrangements of some PDAM employees with customers.

Combined with the difficulty of monitoring miles of pipelines and houses throughout the city, the high consumer water surplus currently makes the provision of water especially vulnerable to petty and not-so-petty rent-seeking by local strongmen. Such rent-seeking activity may be based on artificial shortages or price differentials that often result from a misplaced desire to help the poor. This brings into focus the critical role of local governments in bringing about the reduction of unaccounted-for water.

LOCAL WATER UTILITIES' (PDAMS) ACTIONS

Create Pro-poor Corporate Plan

In line with their new mission, PDAMs will have to create corporate plans that include extension of distribution systems to poor areas. They will have to create a new vision and a new mission and arrange for staff development, organization, fit and proper tests, and better customer service. In their corporate plans, utilities may have to provide targeted services to keep some of the poor within a full cost recovery system. There are several tools available to them, such as counseling for households that have been unable to pay their water bills due to unforeseen circumstances.

If the performance of PDAMs is measured by the extension of good quality coverage and service—whether by the PDAMs themselves or through third parties such as community groups and small-scale providers--they can be expected to fully support an increased number of third parties in areas not yet served by piped water, such as small-scale water providers, in the provision of water service. Utilities may be able to establish a counseling service on a pilot basis or to provide for debt rescheduling if recommended by a forum connected with the PDAM.

Eventually as PDAMs increase efficiency to reach their necessary targets before increasing tariffs, they are expected to recover both their current costs and the costs of extending service for new connections. To satisfy this requirement in the present, subsidies may be necessary.

To provide incentives to local governments, the energy subsidy, SEAB (subsidi energi air bersih), could be provided for the full or partial cost of new connections to the poor. When targeting is uncomplicated, this use of energy subsidy funds can help reduce poverty not just in the year it is provided, but in future years as well as helping the poor enjoy the savings and better health, prestige, and financial well-being from their house connections. Subsidies for new connections have the further advantage of aiding and maintaining a previously failed market. It is also advantageous that such subsidies constitute only one-time payments and do not need to be perpetually funded.

The benefits of a pro-poor connections component would be impressive. According to SUSENAS 2003 data, about 8,000,000 poor urban households with an income of Rp. 800,000 or less are unconnected to the PDAM system. Of this 8 million, 1.1 million pay a large amount for water from vendors and thus would benefit most from house connections. The greatest likely number of poor households that could be targeted and connected in a single water supply expansion project would be about 100,000. The average official cost of new connections among the 79 PDAMs participating in the 2002 benchmarking programs was less than Rp 550,000. Thus, the full cost of 100,000 new connections at Rp

550,000 would be about US$ 5.8 million. Using the data in Table 4, the income effect of 100,000 poor households saving only 3% of their household budget over five years would be US$ 15 million, while the calculated welfare effect over five years would be US$ 100 million. Moreover, these benefits would continue well beyond five years. With cost sharing, an OBA grant of about US$ 5 million could lead to these results. By contrast, the water sector component of DAK grants in 2004 was $ 250 million. In another program, the energy subsidy for the water sector in 2005 may be as large as US$ 315 million.

Revise Tariff Structure

PDAMs have no incentive to serve the poor unless they receive subsidies for "social tariffs" or they can charge cost-recovering tariffs. According to 2002 benchmarking data, the average income from social connections was only about 2.5% of revenue.

"Social tariffs" should rise over time because, as shown in earlier sections and in Table 4, even families earning less than Rp 200,000 can afford to pay "cost-recovering" tariffs even though they may not be able to pay the connections charge in a lump sum. Customer satisfaction surveys have shown that consumers will pay higher tariffs for better service, but they do not want to pay higher tariffs for the same poor service.

Box 9: Water Subsidies and the Poor

A 2005, World Bank study has concluded that when water service coverage is low, connection (cost of water meter plus connection pipe), rather than consumption (cost of water consumed) subsidies are most likely to benefit the urban poor. For this to work, the poor have to be willing and able to take advantage of the connection subsidies, and as yet there are no definitive studies showing the relationship between consumption subsidies and the distribution of their benefits.

The authors of the study gathered empirical evidence on the performance of various forms of subsidy in many countries throughout the world in order to draw conclusions as to what types of water and electricity subsidies work and why. The evidence concluded that consumption subsidies such as lifeline block subsidies or increasing block tariffs that are common in both the water and electricity sectors in practice tend to favor the non-poor. There are many reasons, in the water sector, for this result, but the dominant reason is that so many of the poor are unconnected to piped water. Quantity targeting of consumption subsidies often provides little relief to the connected poor if fixed charges are set too high. Low tariffs also tend to subsidize the non-poor at the expense of the poor. Additionally, little difference was found between the consumption patterns of the poor and the non-poor connected consumers.

Under pricing of tariffs is a prevalent form of regressive subsidy that is not restricted to developing countries. About 69% of water utilities in both developed and developing countries were found to be unable to recover the costs of operations, maintenance, and depreciation through tariff income. Under pricing is a tempting policy for local governments because of the long life of water supply assets. The true cost of under pricing of tariffs is not evident until assets have to be replaced. Water supply in infrastructure, as an asset, can take upwards of 2 to 3 decades to deplete and be required to replace.

A review of worldwide cross-subsidy schemes in the water sector found that cross-subsidies work only when there is a balance between the subsidizers and the beneficiaries. Generally, industrial consumers contribute between 10 and 15% of a utility's revenues. Both parties react quickly to price distortions caused by the subsidy, often resulting in a downward spiral where the tariff is so high that subsidizers begin to seek alternative sources of water, leaving an even bigger load for the remaining subsidizers. When utilities can't cover their costs, they reduce the level of service and increase costs to customers.

Source: Komives, Foster, Halpern, and Wodon.

In order to increase access to all, PDAMs can charge different tariffs in different areas by agreeing on new tariffs with communities before extending the service. In addition to raising tariffs, they can revise the tariff structure to reduce the minimum consumption block by gradual increments. Under such a system, they could break up the lowest tariff block of 0-10 m^3/month, creating a smaller one of 0-4 m^3/month, then charge a higher tariff for the next block. The 1997 water sector strategy suggested that tariffs in Indonesia consist of fixed and consumption costs measured in two blocks: one for less than 10 m^3/month and another for more than 10 m^3/month. The ten cubic meters per month standard was a Repelita V target based on a lifeline rate of 4-5% of a poor household's budget rather than on a minimum consumption amount (Locussol). The WHO-recommended minimum consumption amount, however, is 3 m^3/month/household, while another source cites the minimum recommended amount for a refugee camp as 3.6 m^3/month/household.

Box 10: Making Water Connections to the Poor in Manila

In Manila, a dweller in a poorer neighborhood may pay as much as 900 pesos (US$ 16.5) for 6 m^3 of water in a month from a vendor while a well-off citizen living in a piped neighborhood pays just 160 pesos (US$ 3) for 30 m^3.

Maynilad Water, which operates the water supply for the western part of metro Manila has implemented the "Bayan Tubig" ("Water for the People") Program aimed at providing water connections to the poor. After selecting poor communities and getting their feedback, Maynilad Water decided to grant the residents individual water connections. A one-time installation fee of US$ 95 was charged, which was payable within one year. For a consumption of 6 m^3 per month, residents were required to pay US$ 1.20 – thirteen times less than they were paying to vendors for the same quantity.

The Bayan Tubig Program has resulted in a reduced incident rate of illegal connections. It has also infused a better quality of life to the people served, since the time spent in queuing at public standpipes can be better utilized. Until December 2004, Manilad Water has extended 83,220 connections to the poor and hopes to install 71,000 more in the next five years.

Manila Water Company, which serves the eastern part of metro Manila has implemented a similar program called "Tubig para sa Barangay" ("Water for Depressed Communities").

Source: Asian Water

Box 11: Increasing Services for the Poor

In other countries, various mechanisms have been developed to respond to the special needs of the poor customers of water utilities. Some of these mechanisms are described below:

Counseling. As a part of special customer service, utilities can counsel poor households that can't understand the payment system or that simply can't pay. They can work out a repayment schedule and suggest alternatives that fit the household's budget.

Flow Inhibitors. To provide the minimum amount of water for daily needs, utilities often install flow inhibitors in the line leading to the house connection.

Emergency Standpipes. If a household is disconnected, utilities may install a public standpipe nearby. It may or may not have a flow inhibitor. It is intended to provide the disconnected household with a minimal amount of water.

Prepaid Water Vending. Meters that accept payment by cash or prepayment card provide water on demand.

Disconnection Procedure. In some countries, there is a waiting period of one or several months before a household is disconnected for not paying water bills. In some countries, utilities are not allowed to disconnect households. In other countries, households can be disconnected after a social worker makes an official visit and determines the reason for non-payment of water bills. Sometimes, a judge must make the final decision to disconnect.

Frequent Billing. Sometimes, the very poor are unable to save funds for quarterly payments. Because transactions costs are high, it would be reasonable to recover all or part of them if, for instance, monthly water billings were reduced to fortnightly billings.

Funds for Debt Forgiveness. Sometimes the utility has a fund for payment of all or part of a water bill that is owed by families in difficult circumstances.

Source: OECD 2003.

PDAMs need to tie tariff increases to improvements in service as measured by customer satisfaction surveys and town meetings. The most obvious nexus of local government-consumer-PDAM interest occurs during the consideration of tariff increases. This moment provides the best incentive for local governments and consumers to understand the water business and for PDAMs to practice transparency and point to improvements in service. At that time, it would be most productive if Article 60 (6) of PP 16/2005 were followed strictly, such that PDAM directors would propose the tariff, the Supervisory Board would approve it, and the mayor/Bupati would promulgate it.

The Water Resources Law 7 of 2004 recognizes that consumer participation is important for sustainability and continued pressure on local government is necessary for obtaining improvements. Thus, it is essential that poor consumers make informed choices and consumer oversight of local services remains strong. The case for tariff increases is strengthened with transparent public hearings, the use of consumer satisfaction surveys and the achievement of targets. PDAM Banjar used transparency to good advantage during town meetings involving students, the press, universities, NGOs, DPRD, local government officers, members of the private sector, the Consumers Association, and others. In one town meeting in Makassar, members of unconnected communities were also specifically invited to provide input. Connected customers were informed that keeping their own rates low would make it impossible for PDAMs to have enough money to extend connections to other neighborhoods. For sustainability and replicability in other cities or kabupaten, the town meeting may also be attended by a representative of APEKSI (Asosiasi Pemerintah Kota Seluruh Indonesia) or BKKSI (Badan Koordinasi Kabupaten Seluruh Indonesia), the national association of cities or the national association of kabupaten.

Many observers believe that PDAMs are far more likely to get a satisfactory tariff increase from a meeting of

Box 12: Latin American Social Policy in the Water Sector

The central concern of Latin American social policy in the water sector has been to ensure the affordability of the service to low-income households. This issue has typically been addressed through a complex array of cross-subsidies that include a rising block tariff structure and the application of substantial surcharges to industrial tariffs. More recently, in the context of sector reform, attention has been turning to the inadequacy of service coverage among poor households. The standard approach to this problem has been to incorporate legally binding connection targets into concession contracts. In return for expanding the service into commercially unattractive areas, the operator receives the right to oblige local residents to connect to the network and to levy a substantial connection charge. The Buenos Aires (Argentina) and La Paz (Bolivia) concessions provide examples of this approach.

However, the accumulating evidence suggests that this standard blueprint for social policy carriers a number of significant flaws. On the one hand, the existing cross-subsidies often do more to benefit the middle classes than the poor. For one thing, the poorest families tend to be those that remain unconnected to the network and are hence unable to benefit from cross-subsidies. For another, the criteria used for allocating the cross-subsidies do not always correspond with the economic condition of the recipient. In the case of rising block tariffs, “subsistence consumption” thresholds are often set so high that they wind up benefiting the vast majority of domestic customers.

On the other hand, the charged levied for mandatory network connections have sometimes been set so high as to be well beyond the means of the poor households they were intended of benefit.

Chile and Columbia provide interesting exceptions to this broad pattern in that both countries have developed more scientific approaches for identifying poor households to improve the targeting performance of their subsidy schemes. In Chile, targeting is based on a socioeconomic score derived from a wide-ranging household interview, while in Colombia, targeting follows a nationwide socioeconomic classification of neighborhoods, based on the physical quality of local housing and amenities.

Source: Foster

stakeholders than from the decisions of a politically-oriented regulatory board. Consumers want to know what the PDAM will do to earn its increased tariff, and PDAMs need to present a transparent plan for improvements in services linked to tariff increases. More than any other group, the poor have shown they are in favor of increasing the provision of service to the poor. The "tariff compact" between a PDAM and its stakeholders is a viable method to setting tariffs on a rolling basis and gradually bringing tariffs upward to cost recovery levels. Eventually, the process can move towards an impartial regulatory body with the Water Business Advisory Body forming its basis.

Unfortunately, the SMALLGAP team found that many PDAMs didn't prepare convincing requests for tariff increases. In order to do so, they need to clearly show the results of not being granted such an increase. They also need to make sure that they understand the quality of their services and the satisfaction of the customers. It is significant that only 9 out of 79 PDAMs in the benchmarking program had conducted employee satisfaction or customer satisfaction surveys.

Eventually, when PDAMs prove financially solvent, the entire capital cost of projects adding to the stock of infrastructure, including water treatment plants, distribution pipes, and house connections can be recovered through the tariff. As Locussol points out, when connections fees are included in tariffs, existing customers bear the cost of connecting new customers, which is fair considering that existing customers have received the benefit of government subsidies. (Locussol)

PDAMs can follow the lead of several forward-looking utilities by providing a part of their budget to meetings with standing local community water forums. These legally registered forums, which already exist in some cities, can inform existing consumers and potential consumers about water supply issues. In addition to current members, the forums should include representatives of poor communities, such as community council (BKM) representatives. The forums and customer satisfaction surveys (SKP) can inform water utilities of the consumers' willingness to pay and their preferences and priorities for better service. Together with the forums, water utilities should monitor the benefits to the community of increased access to piped water for the poor so that local governments and consumers understand how they would share in the wealth created by new house connections.

When they are tasked with serving the poor and their duties and responsibilities are clearly decided, utilities can become strong partners in poverty alleviation. The current trend toward consumer orientation has been accelerated by direct election of mayors and Bupatis and efforts toward more government transparency. Despite various obstacles to serving the poor, utilities have the advantages of paying competitive non-civil service salaries, years of semi-autonomous experience in the commercial aspects of service provision, and a more intensive orientation toward consumers, who provide almost 100% of their income.

SANITATION BENEFITS OF PROPOSALS

Water supply and wastewater disposal must be grouped together. While some community-based sanitation facilities may depend on groundwater, successful community-based sanitation generally works in areas that have clean piped water. While water utilities operate sewerage services in only six cities (Bandung, Medan, Surakarta, Cirebon, Banjarmasin, and Bengkulu), and few are directly responsible for community-based sanitation projects, studies indicate that increasing the quantity of clean water for use by the poor reduces diarrhea more than increasing the quality of water.[8] These findings appear reasonable considering that convenient personal hygiene, including water closets, food preparation and body and hand washing needs clean water. Furthermore, as the ISSDP (the Indonesia Sanitation Sector Development Program) and other projects help create

8 For instance, in one review of 67 studies, Esrey et al. (1985) found that improvements in water availability reduced instances of diarrhea by 25% while improvements in water quality reduced them by 16%.

city-wide sanitation strategies, most of the proposals designed to overcome barriers to the provision of water to the urban poor apply to sanitation as well. For instance, those intermediary institutions bridging the gap between the people and the PDAM can facilitate informed choices on sanitation, connections, billing and complaints, while linking community organizations with valuable information. As with water, the poor benefit the most from city-wide sanitation programs because they already live in the least desirable locations.

FURTHER STUDIES

Further studies will be useful to establishing what households in various income bands are paying for water in other urban areas-- especially those in very low income areas. If the cost for water is very high as compared to the household tariff, there should be a more in-depth investigation into why the poor may not want to be connected a piped water system. Household budgets need to be prepared showing the actual social and economic costs of various water systems.

There is a need for a comprehensive comparison of the actual cost per beneficiary of house connections versus standpipe programs in Indonesia. The results will be important to other countries where the predominant form of water provision to the poor is through standpipes. Such a comparison should span the last 15 years and include information on the number of continuously flowing, unmetered, or damaged standpipes, and the cost to the PDAM and society of the illegal use of standpipes. The UPDATE templates can be used for studying the rough feasibility of local governments building facilities to reach the unserved poor at various tariffs within specific areas.

In addition, it would be useful to have a study on the effects of price differentials on illegal connections and water smuggling as informal reports describe a considerable amount of illegal activity in some cities with people taking advantage of price differentials. Many local governments need to know when rising commercial water tariffs approach the point where companies turn to other legal or illegal sources and stamp out the latter, which can be very expensive to the society as a whole.

A study of the financial and other benefits of house connections for the poor is likely to reveal dramatic results. When benefits are aggregated and quantified, they may prove larger than the modestly rough estimates in this paper and may provide further support for further expansion of house connections.

As well, it would be helpful for a study to calculate the actual infrastructure subsidies provided by central, provincial, and local government grants and loans that have not been repaid. In other words, how much of the current $2.5 billion water sector infrastructure in Indonesia has been subsidized? When one sees the size of the subsidy provided to those who are already connected to the piped water system, it may be easier to understand why decreasing subsidies for the construction of more expensive sources of water together with expanding connections for the poor would constitute a valid transitional strategy until PDAMs can earn an adequate amount of tariff income.

The implementation of these recommendations to increase service to the poor will support, rather than detract from, the ongoing process of utility reform and improvement. In fact, by placing emphasis on service to the poor within the context of full cost recovery, implementation would prepare PDAMs for closer participation with the private sector. Furthermore, as more urban poor receive house connections, the need for subsidies and continuing information campaigns can be reviewed in light of the strength of demand for clean piped water.

Annexes

Annex 1
Data for 24 PDAMs – LGWS

Baseline Data for LGWS Assisted PDAM - Final Results

Financial Indicators

LGWS Project Assisted PDAMS		1999				2000			
		Operating Ratio	Net Profit	Average Tariff	Tariff Increase	Operating Ratio	Net Profit	Average Tariff	Tariff Increase
		(%)	(Rp million)	(Rp/M3)	(%)	(%)	(Rp million)	(Rp/M3)	(%)
Year 1 Assisted PDAMs		***Base Year***							
1.	Kab. Asahan	58	(1,138)	567	0	60	(1,285)	570	0
2.	Kab. Belitung	52	(331)	567	0	54	(432)	642	0
3.	Kab. Jember	78	(393)	504	0	88	75	577	48
4.	Kab. Banjar Baru	51	(1,297)	816	0	64	(767)	808	0
5.	Kab. Karang Asem	62	(1310	504	0	69	(516)	593	0
6.	Kota Kendari	88	199	992	67	80	(529)	1.250	0
7.	Kab. Pacitan	54	(197)	590	0	61	(118)	601	0
8.	Kota Sawah Lunto	59	(282)	631	33	58	(189)	736	0
9.	Kab. Batang	67	(120)	511	66	67	173	569	0
10.	Kab. Jombang	41	(1,074)	400	0	51	(1,071)	400	0
11.	Kab. Hulu S Tengah	45	(585)	640	0	56	(478)	802	20
	Sub-total / Average	**60**	**(5,349)**	**611**	**15**	**64**	**(5,137)**	**686**	**6**
Year 2 Assisted PDAMs						***Base Year***			
12.	Kota Banjarmasin					53	(10,426)	1,025	60
13.	Kota Pangkal Pinang					48	622	951	0
14.	Kab. Kapuas					71	(527)	874	0
15.	Kota Samarinda					83	(853)	1,086	0
16.	Kota Pontianak					81	1,391)	1,571	30
17.	Kota Sukabumi					74	149	842	47
	Sub-total / Average					**68**	**(9,644)**	**1,058**	**23**
Year 3 Assisted PDAMs									
18.	Kota Surabaya								
19.	Kota Madiun								
20.	Kab. Tuban								
21.	Kota Semarang								
22.	Kab. Tasikmalaya								
23.	Kab. Cirebon								
24.	Kab. Sukabumi								
	Sub-total / Average								

Note: * As of june 30, 2003

2001				2002				2003*			
Operating Ratio	Net Profit	Average Tariff	Tariff Increase	Operating Ratio	Net Profit	Average Tariff	Tariff Increase	Operating Ratio	Net Profit	Average Tariff	Tariff Increase
(%)	(Rp million)	(Rp/M3)	(%)	(%)	(Rp million)	(Rp/M3)	(%)	(%)	(Rp million)	(Rp/M3)	(%)
78	(633)	893	62	84	(636)	1,108	0	97	(274)	1,166	0
77	(285)	1,279	70	76	(281)	1,477	60	86	(106)	1,842	0
102	225	764	30	97	56	951	67	95	188	1,096	13
76	(700)	922	46	109	1,207	1,735	0	103	157	1,274	0
63	(631)	580	0	71	(1,018)	941	114	79	(428)	1,291	108
81	(555)	1,329	0	92	(144)	1,936	65	108	298	2,047	0
49	(502)	672	0	47	(568)	765	0	76	(88)	1,259	47
71	(119)	986	50	72	(765)	1,547	50	51	(168)	990	0
83	358	568	0	108	320	681	75	116	362	952	0
48	(1,039)	435	50	67	(440)	553	50	81	(64)	664	0
67	(324)	912	15	70	(326)	1,209	15	46	(850)	1,286	0
72	**(4,205)**	**849**	**29**	**81**	**(2,595)**	**1,173**	**45**	**85**	**(973)**	**1,261**	**15**
70	(3,596)	1,934	0	86	720	2,044	10	88	1,167	2,328	5
50	(984)	1,294	153	82	(253)	1,849	0	80	(100)	1,798	0
69	(892)	1,055	40	93	(57)	1,499	52	88	(425)	1,494	0
56	(9,519)	1,115	0	84	(2,252)	1,474	20	84	(399)	1,509	0
81	(3,075)	1,463	0	92	(494)	1,945	50	102	707	2,222	0
85	208	1,240	0	88	211	1,282	9	79	(272)	1,253	0
69	**(17,858)**	**1,350**	**32**	**88**	**(2,125)**	**1,682**	**24**	**87**	**678**	**1,767**	**1**
Base Year											
97	13,377	1,644	0	99	13,467	1,614	0	103	15,690	1,417	0
90	78	684	42	115	1,120	1,004	0	127	673	918	0
93	103	795	0	107	362	984	42	108	337	1,255	0
71	(4,264)	922	0	67	(17,305)	1,246	187	113	6,423	2,445	34
89	110	657	0	107	960	1,109	42	116	708	1,100	0
64	(1,816)	1,140	20	63	(2,037)	1,334	0	82	928	1,511	48
53	(2,293)	1,093	0	73	(1,305)	1,646	63	73	(717)	1,619	0
80	**5,295**	**991**	**9**	**90**	**(4,738)**	**1,277**	**48**	**103**	**24,041**	**1,466**	**12**

Annex 2
Suggestions from Dirut Kumala Siregar

HEALTH OF PDAMS IN INDONESIA

By Kumala Siregar

Foreword

The Republic of Indonesia made a commitment at the 2002 Johannesburg Summit that 80% of the urban population and 40% of the rural population would receive clean water coverage by the year 2015.

Because the government has to fulfill this commitment, it must address questions of (1) funding, (2) water resources, and (3) the structures of the institutions involved in these activities.

Fortunately, the Water Resources Law was passed and signed in 2004, and we are waiting for implementing regulations to be drafted and agreed upon.

During this preparation, provincial and kabupaten/ city governments must be prepared to empower the institutions under their authority, such as the PDAM or local government departments, so that local governments are not surprised when the implementing regulations are passed, but rather are prepared to meet the 2015 targets.

Condition of PDAMs now:

1. Coverage is still low: about 20% of the population has clean water
2. High water losses: about 35% nationally
3. Debt of Rp 4.5 trillion
4. Beginning of quality and quantity problems with water resources
5. Shortage of PDAM professionals
6. Of 306 PDAMs, 90% are not healthy and only 10% are in healthy financial condition

Strategy For The Next Steps In Strengthening Pdams:

1. Redefine the institutions for water treatment
   - Make the PDAM an independent operator, rather than serving the dual role of operator and regulator.
   - Determine whether PDAMs exist to contribute PAD or to provide service and increase coverage.
   - Determine if water service should be a local government department, a service oriented only regional company or a profit oriented limited company and set the criteria for its formation.

2. Provide water in accordance with commercial principles
   We need regulations for the following:
   - Professional service requires a regulation regarding the basics of treatment, incentives and disincentives, including benchmarking.
   - Fulfilling necessary criteria, such as capability and commercial experience (if PDAM is to take a profit-making form) and professional management.

3. Upgrade the quality of water provision using the full cost recovery principle
   - Regulating a minimum standard for the quality of clean water service.
   - Compacting with local governments to provide clean water that, amongst other things, achieves the minimum standard of quality (in the case of a PDAM, the compact would be achieved by a local regulation, or PERDA).
   - A firm regulation regarding adherence to the principle of full cost recovery in tariff setting (this can be accompanied by exceptions, penalties, incentives, and disincentives).

4. Accelerated settlement of PDAM debt
   - Full support from the government for settlement of debt.
   - It is hoped that the Ministry of Finance can devise a strategy for the earliest settlement of debts.

5. Establishment and increase of clean water coverage for the people
   - Regulation regarding necessary service coverage standards for the people (including incentives, disincentives, penalties or exceptions whenever needed).
   - Mechanism for filling out and monitoring service coverage
   - Clear regulation regarding the allocation of raw water (with support to areas that have little or no water).

6. Increased government support for technical aspects, technology, and funding
   - Planning and assessment of projects must be oriented toward real needs and coordinated with the local PDAM.
   - Subsidies may be needed for specific projects, such as water terminals, tanker trucks, etc.

These six proposals for the national recovery of PDAMs are offered in view of their present condition. Next, strategic steps need to be monitored for reaching the Millennium Development Goals by 2015. These steps are:

1. Accelerate preparation of regulations for drinking water.
2. During this time of transition, a professional body should monitor the management and operation of PDAMs. This independent body can operate under the aegis of the Department of Public Works or Department of Home Affairs.
3. After the PDAMs have recovered and targets are almost achieved, this body can be dispersed and the function of the PDAM returned to the owner (local government)

This is a glimpse of my vision for the recovery of Indonesian PDAMs. I hope that it can be useful to us all.

Annex 3
Suggestions from the Late Tarsius Isbandhi

THE TOTAL SOLUTION APPROACH TO EMPOWERMENT OF THE PDAM AS A PUBLIC SERVICE INSTITUTION PROVIDING CLEAN WATER 1999

By T. Isbandhi, former Dirut, PDAM Jambi

Foreword

I feel compelled to put forward some ideas for the development of PDAMs, based on my work experience and educational background that has encouraged my thinking about the progress of PDAMs. I am aware that much has been written about the subject, but perhaps this contribution is unique in that it reflects 18 years of theoretical and practical work in PDAMs.

Before February 1987, when I was appointed Technical Director of PDAM Jambi, I tried to improve the performance of directors in the Technical, Administration, and Finance Departments by having them focus on the following principles:

1. Tightening physical security by working with the police.
2. Taking responsibility, especially financial, for the performance of the PDAM.
3. Valuing the general good over private good.
4. Realizing that new connections established by moonlighting PDAM employees and illegal connections are a great loss to the PDAM
5. Improving the corporate image through billing efficiency.
6. Improving the image of the company by erasing the impression that associates and contractors have close personal associations with directors.
7. Purchasing office equipment and production materials at realistic prices, thus increasing the efficiency and improving the performance of the company.
8. Enforcing discipline for supervisors and employees to help build the image of the company.
9. Establishing friendly ties with the owner, local government officers, DPRD, the customers in particular and the people in general.
10. Improving weaknesses in human resources by training and developing the basic knowledge of water treatment

The main activities in my first six months as Technical Director included:

1. Increasing the performance of the water treatment plant at Jl. Slamet Riyadi, including improvement of the buildings.
2. Redrawing the maps of the piped distribution system with a recalculation of the optimization of the distribution system so that new connections no longer presented a problem.
3. Establishing standards for new house connections so that tapping into the main lines was done properly by using ISO standards without causing other problems.
4. Implementing block renovation to divide the distribution system into blocks and inserting properly calibrated meters.
5. Instituting exchanges between employees of the Technical Department and other PDAMs
6. Enforcing and upholding regulations in all aspects related to illegal connections.

I am writing this so that those who are interested in improving the performance of a PDAM using the total solutions method can learn from my experience and mistakes. I am sure that the PDAM can better its performance as a public service arm because it already has three advantages:

- It is an enterprise that can fulfill the needs of a large number of people
- It is an enterprise with a monopoly franchise
- It has no competitor

The PDAM can employ the basic tools of management such as:

- Networking
- Benchmarking
- Outsourcing
- Value-adding activities

I very much hope that the prospective Dirut will be chosen from among those who know the PDAM business before offering it to interested outsiders. If this principle is

observed from the beginning with a fit and proper test or a psychotest, the performance of the Dirut will be good not because he is liked by the owner but because of his enthusiasm and objectivity.

All stakeholders should understand that a PDAM Dirut is not a political appointment, but a professional appointment that must be supported by good management.
PDAM DKI Jaya is a barometer of national and international performance and a window into the face of service of PDAMs throughout Indonesia.

Moreover, a PDAM in a provincial capital has the strategic role of being a reservoir of talent for the PERPAMSI regional secretariat. Improving the PDAM's service to the public depends greatly on the quality of the Dirut.

Maintaining and improving the quality of PDAMs involves numerous factors: SYSTEM, ORGANIZATION, HUMAN RESOURCES, FINANCE, TECHNICAL ASPECTS, COMMUNITY PARTICIPATION and COMMUNITY RELATIONS. This method of solving various problems is called the total solutions approach.

The line of thinking is that improving the PDAM cannot be done merely through partial programs. Rather, one must employ a complete concept while emphasizing some sectors. The total solution concept is best explained in the following way:

System

Improvement of the PDAM system includes focusing on the administrative, personnel, and technical aspects. However, I submit that the sub-system for reading meters and billing should receive primary attention because it holds the keys to stability and increased income. Therefore, I hope that PDAMs will adopt the motto that "every day is a day for good administration."

I hope that with this system arrangement, water service will remain of high quality even when the Dirut is replaced and will allow for the rotation of supervisors and staff for the development of human resources.

In my experience, department directors are not prepared to replace Diruts either before or after their terms of service. Also, I feel that the head of a section could just as well become a department head depending on his performance.

Those employees demonstrating good performance and skills should achieve accreditation in order to receive greater acknowledgement and better career opportunities rising beyond mere structural channels.

These are only a few thoughts on improving the system and sub-systems.

Organization

The question arises as to whether it is possible to force a commercial company such as a PDAM to act as a public company as provided for in public law no. 5/1962 or cause it to be a profit-making company as provided for in public law 1/1995. The choice of one or the other is very important because it will determine the ground rules for the operation of the enterprise.

Human Resources

Development of human resources in the provincial capital spreads out across a region just as developments at the center lead to emerging national and international concepts. Therefore, training should begin at the provincial level in a provincial training centre before moving onto the national level.

Psychology is important in the management and treatment of human resources. Improving human resource management involves numerous aspects from selecting and training employees to obtaining permissions and coordinating pensions as well as measuring productivity and establishing rewards and punishments. In fact, in any PDAM, there are two kinds of effective employees: those who can because they have done it so often and those who can because they are supported by an academic education.

At one time, I had the experience of working with a team that administered psychological tests to determine the basic potential of supervisors at PDAM Bengkulu and PDAM Palembang. In PDAM Kota Bengkulu, only 5 of 25 managers were shown to have the basic potential to work in a PDAM. In PDAM Kota Palembang, the numbers were lower with only 2 out of 52 managers passing the test. Finally, another test was conducted on all managers and employees at PDAM Kota Jambi and only 30% showed basic potential.

At PDAM Jambi, most of those who had come from the local government apparatus were returned little by little to that environment. Those who were not from local government institutions were given further guidance through achievement motivation training designed to increase their performance and productivity. After 6 years of training, 70% of the managers had the basic potential to work in a PDAM. This means that 30% of the employees still did not have the basic potential and could not be upgraded. Moreover, those who had upgraded their skills still lacked knowledge, demonstrating the necessity of increasing the performance of directors, section heads, department heads and employees. Ultimately, the development of human resources uses the philosophy, "Don't throw out but invite; don't hit but embrace."

There is great hope for an association such as PERPAMSI to develop their human resources by working together with national faculties, private faculties, and educational institutions oriented towards business and management.

In order to ensure quality training sessions, attention should be paid not to the length of the training time but to the topic that is chosen and should involve teachers who understand the vision and mission of the clean water service business.

A human resources problem arises when the selection of employees is not in line with the decisions or needs, such that people get the impression that PDAM stands for "Perusahaan Dulur Anak dan Menantu" (An in-law and family company).

Financial Aspects

In order to discuss financial aspects, Directors have to understand three kinds of financial reports:

1. Cash Flow
2. Income Statement
3. Balance Sheet

Additionally, leaders and decision makers need to really understand the principles of financial management and accounting management, while embracing the concept of "return on investment" in decision-making.

The PDAM accounting manual should be consulted often, with leaders holding to the five accounting principles: going concern, comparability, consistency, accountability, and continuity.

It is important that both the PDAM and the provincial capital are ready to become centers of learning for other PDAMs across the province and in other provinces.

Technical Aspects

There are technical aspects that must be understood by leaders in all fields.

This includes everything from water sources to house connections. Water sources include water resources management and water quality management. The quality of raw water greatly determines the quality of water produced by the PDAM. Every change in the quality of raw water creates a consequence so the PDAM must be ready to take pro-active steps.

The two seasons (dry and rainy) strongly influence the quality of raw water and that produced and sent to consumers.

There is no reason why consumers should accept excuses for poor quantity, quality, and continuity of water. It is the responsibility of the PDAM to provide these services. The condition of the old piping system should be studied and zoned so that repairs can be done in stages and one can

determine which region is responsible for any reduction of quality or continuity. An information system should be used to help monitor the condition of old pipes.

Technical specifications of materials must follow existing standards that are tested in the field.

Standard operating procedures should ensure that each employee knows what he is doing and is not simply following habits. Each employee should be productive.

We should be open to working with the best of the private sector to help maintain our equipment so that PDAM personnel can learn and graduate from tradesmen to supervisors.

PDAM staff must change their status from implementer to conceiver of vision and mission. They can become facilitators and function as idea-people.

Community Participation

Government programs will not succeed without the support of the people.

The PDAM is obliged to working with environmental groups, students, and the environmental protection office to prepare information and develop agreements to care for Mother Nature, thus ensuring the health and life of human beings and wildlife.

The PDAM's approach should include not only urban dwellers but also those in the rural areas--especially those who are near water sources or farmers who have a stake in using the same water resources. Just before the dry season, there will generally be critical conditions where communications will be important to avoid misunderstandings.

Other activities that are important include appearing on talk shows and maintaining an interactive dialogue in the media so that the public can receive explanations about available services from those most competent to give answers. In fact, there are many examples of popular participation, but the key is how the PDAM can establish coordination with the media to encourage popular participation in the provision of clean water services.

Public Relations

Public relations include not only the personnel departments. Rather, all employees form the backbone of the human relations web and are ambassadors of the PDAM to the people.

The products of the information handled by a skilled communications specialist are the customer activities that support the concept of clean water services provided by the PDAM. In building this aspect, the PDAM can learn from and work with other public services that have established good public relations.

The public relations experience of PDAM Bogor serves as a good national example that can be modified within various conditions across different provinces. The Customers Communication Forum is a vehicle for the development of public relations and increases the value of both the PDAM and its customers. The PDAM must fulfill the responsibility of maintaining the transparency of information that is desired by its consumers, providing information that gets better and more reliable over time.

It is time for every PDAM activity to be oriented towards service performance. Those programs that are not oriented toward consumers should be phased out. As such, it is hoped that efficiency will increase in billing procedures so that the PDAM can provide service within the concept of full cost recovery.

Annex 4
Full Cost Recovery as a Key to Water Sector Reform

FULL COST RECOVERY: A KEY TO WATER SECTOR REFORM

(From a paper by Jim Woodcock presented at the Vietnam Water Supply and Sewerage Association Conference 2002)

Background

In many Asian countries, the municipal water systems are going through a period of reform to adjust to declining central government participation in the provision of municipal water. Focus on full cost recovery has been shown to be the fastest, most efficient and direct way to effect reform in Indonesia's water sector. Its approach may be useful for speeding water sector reforms in other countries, as well.

For purposes of this discussion, full cost recovery is defined as the average annual revenues being equal to or greater than the average annual cost of operations, maintenance, depreciation, and interest.

In Indonesia after decentralization, many practices need to be re-formed or changed all at once, causing confusion in prioritization. Full cost recovery solves the problem of where to start first. It makes it easy to measure progress and success because the simple and final measure is the bottom line. Full cost recovery also makes it easy to prioritize implementation of improvements in water enterprises because the common sense steps to achieving full cost recovery are the steps most appropriate to improving the local situation in each water enterprise such as transparency, tariff increases tied to improvements in service, community involvement, and incentives and training to water enterprise staff.

The logical steps

There are easy ways and hard ways to go through all of these steps. All water enterprises may not undertake these steps in the same sequence but the following are the logical steps toward achievement of full cost recovery:

1. Commitments. The first step is a commitment to achieving full cost recovery by the water enterprise and the owner. In Indonesia, the owner is the local government together with the local parliament. Usually the formal commitment is a memorandum of understanding in which the water enterprise undertakes to keep proper financial accounts, publish them annually, and make a plan for achievement of full cost recovery. The local government undertakes to support the commitment to full cost recovery, mainly by not taking funds out of the water enterprise for on-budget or off-budget purposes.

2. Common goals. Second, everyone in the water enterprise thinks about and agrees on why he is doing what he is. Everyone agrees to a common vision and the mission of the water enterprise. This agreement is best achieved in a one- or two-day retreat led by professional facilitators. Everyone from top to bottom must understand his role in the common effort and why it is important. When everyone agrees on common and shared goals, those who emphasize their own priorities instead of the common goal will be seen to be destroying the group's efforts.

3. Accounting System. Third, in order to generate a reliable bottom line, there must be an accurate accounting system. The present (usually manual) accounting system has to be transcribed to a computerized accounting system that provides for rapid billing, follow-up, trouble-shooting, transparent accounts, and most important of all, cost accounting to enable managers to really manage. Managers mainly manage resources such as human resources and money. They have little to manage if they don't know where their money is going and where their costs are.

4. Customer satisfaction survey. The fourth step usually is the preparation and implementation of a customer satisfaction survey. While municipal water managers feel they know what their current and prospective customers want, they usually are surprised by the results of statistically significant customer satisfaction surveys. A survey is the only way to find out important information with scientific accuracy. The customer satisfaction survey, developed by the Ministry of Home Affairs in Indonesia in

1999 through the US-AEP-assisted WISE (Water Indicators for Satisfaction Evaluation) project, is a simple, fast and inexpensive tool to arrive at accurate information. It tells exactly what current and prospective consumers feel about service, what they are willing to pay, and for what improvements in service.

To date customer satisfaction surveys have been conducted by about 30 of Indonesia's 300 water enterprises. With every repetition, the survey instrument has become cheaper and more efficient. The most recent average total cost is between 50 cents and US$1 for each questionnaire. According to statistical sampling techniques, no matter what the size of the survey population, the maximum number of questionnaires is about 350. Surveys for long range planning purposes would be conducted about once every 5 years. Each water enterprise can modify the standard customer satisfaction survey, adding and deleting questions. College students usually fill in the questionnaires, spending about 20-30 minutes with each interviewee. The results are coded, entered into a computer, and processed using a statistical package. These results tell us a lot about the surveyed areas, and they form a baseline for measurement of progress.

5. Corporate plan. The fifth step usually is preparation of a corporate plan. The corporate plan uses the results of the customer satisfaction survey, vision and mission agreements, and goals for expansion and improvement of services. All of these elements combine to result in achievement of the goals within full cost recovery. The planners may include customer relations, incentives, training, and promotion policies with the financial plan in the final draft of the corporate plan.

Good corporate plans are neither thick nor complicated, but they are well thought-out. Preparation of a corporate plan by a water enterprise with the guidance of the Local Government Water Services team typically takes about 8 months. As the plan is being put together, the team usually arranges for training for all managers at all levels. In fact, the team found that the greatest leverage for increasing efficiency came from training managers in the lower and middle levels. Training typically is given in the areas of financial management for non-financial managers, customer service, water processing operations, and facilities maintenance.

The most enthusiastic response to training in Indonesia was to customer service training. Probably because of Indonesia's long period of central government control, most employees in the provinces were unaware of customer service principles or techniques. Implementation of customer service principles has brought increased community support and increased income to participating water enterprises.

The corporate plan contains targets or benchmarks along the path to full cost recovery. The benchmarks may include unaccounted-for water, speed of billing, and reduction of staff required per thousand connections. As they reach and then go beyond these intermediate targets, the members of the water enterprise will work as a team, feeling pride in the effectiveness of their joint efforts.

6. Tariff increase tied to improvements. Because tariffs usually are comparatively low (and the standard of service, too, is comparatively low), the sixth step usually is to request a tariff increase from the local government or regulatory body. Local governments are willing to listen to a water enterprise whose vision is backed up by a carefully thought-out corporate plan that is based on hard data such as the results of customer satisfaction surveys. After they consider the proposal, local governments usually are attracted to the idea that they will not have to subsidize the water enterprise if it recovers costs. Ideally they will realize that ultimate responsibility for provision of piped water rests with the owner—in most cases the local government.

In Indonesia, local governments want to avoid public demonstrations against increased tariffs, so their first inclination is to refuse requests for enhanced tariffs. It is important for water enterprises to have ongoing contact with local groups who can lend their support to tariff increases tied to improvements in service. A community relations program should allocate some budgetary funds to building up relations and two-way communications with consumers. The results of the customer satisfaction surveys inform the water enterprises what improvements the customers are most willing to pay for.

7. Maintenance. Once the tariff increase is granted and the corporate plan benchmarks are presented to the local government, the water enterprise must fulfill its commitments on the road to full cost recovery. Staff development, staff dedication, and incentives are key to fulfilling commitments. If local governments, the people, or their local parliament feel disappointed by the water enterprise's inability to fulfill promises, everything will go back to square one.

In these successful water enterprises, workers have become proficient, and managers are providing more training and thinking of incentives to keep their best people. They are discovering that development of human resources is the fastest way to increase productivity. As star-performing managers get results, it is expected that a nationwide market will develop for their outstanding management talent. In short, professionalism is growing logically and naturally out of full cost recovery, and PERPAMSI is nurturing and enhancing professionalism.

Professionalism and full cost recovery in turn enhance the chances for successful sustainable privatization that provides not just investment capital, but also lowest-cost services to consumers. Too often in the past, privatization has been used as a quick-fix for failing policies in ailing water enterprises. Privatization companies needed a risk premium in order to protect against surprises coming from opaque bookkeeping practices, poor labour relations, and unseen costs. Sustainable privatization is a healthy enhancement of healthy water supply businesses with clear and transparent finances and operating procedures.

The full cost recovery experiment in Indonesia has shown that any water enterprise having a water source, enough customers, and support of the owner can achieve full cost recovery if only it wants to. In most cases, water enterprises can achieve full cost recovery using their own resources without the addition of cash.

Reform of municipal water enterprises is complicated because many interlocking changes must be effected all at once. There must be new targets, accounting systems, management systems, career paths, incentives, training, monitoring, community relations, and accountability mechanisms. They must go forward together, rather than one at a time. Full cost recovery is a convenient discipline for the ordering of these changes with a minimum of administrative headaches. It provides a simple measure of performance, and the steps to achievement and maintenance of the target are naturally ordered, requiring less monitoring by the owner.

If accounts are accurate and the water enterprise is both businesslike and transparent, there are fewer risks, so privatization requires a lower risk premium, resulting in a lower unit price to the consumer. The owner benefits from full cost recovery because he doesn't have to subsidize the water enterprise, and the community is satisfied with the provision of this urban service. Productive members of water enterprises benefit because they receive recognition and incentives. Most important of all, the members of the community benefit because they are receiving good value in exchange for tariff payments for the most essential urban service.

Annex 5
Case Study : PDAM Jember

PDAM Jember draws most of its water from deep wells and has only 50% coverage of its total service area because there is a shortage of water. There is no significant poverty in the city center, and the poor, who are mainly on the fringes of the city, do not receive the benefits of a "social tariff," which is extended mainly to community bath/washing facilities (MCK) and foundations. This case study deals with the potential of well-managed PDAMs to generate sufficient revenues to expand coverage.

In 1999, PDAM Jember's financial deterioration was about to end in bankruptcy. Its capital and reserves had almost disappeared. Its debt, incurred during the IUIDP program, was very high. There was an insufficient supply of water to meet the demand, and the average tariff did not even recover the cost of production. Most plants and equipment had reached the end of their useful lives. The payroll was swollen with 140 employees, many of whom were "recommended" by powerful figures. The employees finally revolted and, in a public demonstration, demanded the appointment of a new managing director.

Because of this internal revolt, the PDAM's General Director was promoted to Managing Director in late 1999. He set about putting the PDAM's house in order by installing businesslike practices, including projecting a more positive public image, ensuring respect for employees as productive teammates, and making concern for consumers the central reason for the PDAM's existence.

Together with senior managers, he drew up a list of the main problems. During an open meeting discussion with all workers, everyone agreed on the PDAM's vision and mission, based on current regulations. Once this had been accomplished, any employee who used his position for personal gain was seen as a traitor to the common mission. With the help of the Water Efficiency Team, they conducted a customer satisfaction survey that provided input into a corporate plan designed to achieve the financial and technical goals necessary to fulfill their mission. The corporate plan contained the essentials of what later became known as the Financial Recovery Action Plan.

The PDAM divided its functions into the social function (to provide water services to all layers of society regardless of social standing) and the economic function (to make a profit through emphasis on increased service area coverage).

The customer satisfaction survey showed that customers were most concerned about the quality of water. Puzzled officers responded by conducting tests at random sites and found that indeed there was insufficient residual chlorine at the ends of piping systems. The deficiency was corrected promptly, and enhanced customer satisfaction was achieved at a reasonable cost.

The new managing director set out to instill pride in the staff and enhance their productivity. The civil service-type uniforms were replaced with businesslike blue and white uniforms with long sleeves and neckties. A new performance evaluation system based on merit was instituted, with everyone expected to do their jobs at a minimum standard, and rewards given only for outstanding performance. A fit-and-proper test was required for all new employees and all promotions, no matter how powerful the employee's sponsor might be.

Employees were assured that their wages would not be cut and that there would be no layoffs, but their workloads increased to boost productivity. Each employee had a card with a bar code that was scanned by a time clock when he arrived and left work. At promotion time, employees that were frequently "sick" were considered less productive than others who had more reliable attendance records.

Personnel management was based on the principle of mutual dependence: the employee needs the management for approval, and the management needs the employee for good ideas and good performance. Employee arguments and critiques were invited, and questions were answered as openly as possible. If employees made suggestions that improved efficiency, they received cash awards. Similarly, if they delivered quality outputs at less than the budgeted amount, they received a portion of the money saved.

An annual system was instituted for selection of the "Excellent Employee," recognizing the most outstanding employee of the year. The screening criteria affords a clue as to how employee performance was before the change: Department heads would each nominate one candidate from among those who (1) arrived and left work on time and (2) were not absent--except on official duty--during a continuous period of 2 months. The selection team, appointed by the Director, consisted of 3-5 employees who established more detailed selection criteria and made a selection that was subject to the approval of the Managing Director. The person received a plaque of appreciation and an award, and his photo was displayed in the front office during the next year.

The corporate plan included improvements linked to a tariff increase each year for two years with a review leading to another two years of scheduled tariff increases. At first, rather than inviting protests by raising the tariff, management increased the fixed charge for maintenance of meter and equipment. Because improvements in customer service were so visible, tariffs were able to increase from Rp 250 to Rp 900 per cubic meter over four years without any public demonstrations. When NGO's demanded justifications for tariff increases, they were received by the management, given explanations, and granted modest transportation funds to return home.

PDAM Jember established credibility with the community by fulfilling customer service promises, including an immediate response to complaints. The PDAM logo was put on all vehicles so the public could see that the vehicles were on official business and responding to calls. Moreover, a service team was put on call until 9 p.m. to make light repairs, while heavy repairs were handled the next day. Handi-talkis were purchased so that repair crews could communicate with the office. When the repair service first became available, there was no complaint at all during the first week. But as word spread that complaints were handled immediately, calls mounted steadily, reaching their peak at the beginning of 2000.

The management team upgraded the customer service counter, making it the first thing a visitor saw upon entering the PDAM building. Thus, customer service became a main pillar of the new PDAM, whose vision was, "Self-supporting and economically viable PDAM." The motto was the first line of a popular song that was composed especially for the PDAM.

The Managing Director and the Finance Manager looked at the invoicing and payment system from the customer's point of view. Customers had to stand in line at the PDAM to learn the amount of their monthly bill. If they had enough money to pay the bill, they took a number and stood in another line to pay their bill in cash when their number was called. The PDAM reduced the bill payment time by forming a partnership with the state electricity and telephone authority to establish TELISA (telephone, electricity, water) with a recorded billing information system that could be accessed by phone. Payment could be made at multiple payment points. Later, arrangements were made for bills to be paid through banks.

Inexpensive mass-based programs showed that PDAM Jember was a concerned member of the community. For the 2000 national athletics week, PDAM Jember sponsored a marching band and later it sponsored a soccer team.

Public relations announcements were aimed at showing that piped water is inexpensive. Instead of expressing the tariff in rupiah per cubic meter (Rp 400/cubic meter), the PDAM expressed the tariff as Rp 0.40, or less than the cost of one sixth of one cigarette (at 1999 prices), per liter.

Closer relationships were formed with women's volunteer groups that cared about water service. With the help of PERPAMSI's WILLOWS women's volunteer project, the PDAM helped a Jember women's water forum register itself and begin activities such as school education programs for water conservation.

The new managing director established closer partnerships with the local parliament (DPRD), explaining the PDAM's intention to recover costs so that it would not be a burden on the local government budget. There was even closer cooperation with the Badan Pengawas (the 5-person supervisory body designed to act as the Bupati's representative for day-to-day monitoring of the state-owned enterprise). The partnership with the Jember state

electricity (PLN) and telephone (Telkom) authorities led to a regular public service radio broadcast. In all meetings with Telkom and PLN, PDAM Jember employees were treated as equals.

The corporate plan envisioned a step-wise replacement of wells with surface water and gravity fed systems, reduction of unaccounted-for water to a rate below 20%, and reduction of illegal connections.

The management team implemented ideas to increase revenues. For example, ultraviolet-treated water was packaged and sold as "PDAM Jember" brand drinking water. Increased revenues came from reduced costs. Accounting methods were recast to reflect more accurately the utility's actual financial condition. The PDAM proposed a win-win plan for the local government to pay the PDAM's extensive debt to the Ministry of Finance and accept repayment from the PDAM, but the local government did not agree.

Most Indonesian PDAMs were waiting for debt restructuring (which had already been granted to PLN) before making repayments. In the absence of indications that the Ministry of Finance agreed to consider debt restructuring, PDAM Jember banked its profits at a time when bank interest rates for fixed deposits were very high.

Simple solutions were found to complex problems. Even though workers often shut off valves on either side of a leak before fixing it, the leaks would continue unabated because they couldn't identify the source of the water. Eventually, through trial and error, however, workers would find the source of the water feeding the leak. In order to avoid disturbing neighboring households with unnecessary shutdowns, management divided the distribution system into zones according to the source of water in the pipe. So when a leak occurred, it could be found on a water zone map and repaired quickly.

Most of the water came from pumps that had to be turned on and off during the day by employees who spent the entire day at the pump switches. Automatic switches were installed so that employees could be freed up to work in areas such as customer service, where the PDAM quickly established credibility with consumers.

Large amounts of water were unbilled because some kinds of meters would not record when either very fast- or very slow-moving water went through them. In solving this, several different types of meters were put on a single line to see which was the most accurate and eventually replacing other meters on a regular basis, beginning with those that had broken.

The standard procurement practice was to purchase goods at a constant price so that when the government auditor checked, he would not claim that two different prices at two different times were signs of kickbacks. The Managing Director, however, authorized purchases of materials whenever the prices went down, and he defended the policy to government auditors, explaining that he was running a business and had to buy at the lowest price. Items that purchasers chose to buy at an unnecessarily high price (such as imported items) were avoided in favor of better cost-effectiveness. Furthermore, the policy of cash on delivery was changed to a credit system, saving the PDAM great sums of money.

In 1999, PDAM Jember lost about $44,000. In 2000, PDAM Jember established a profit of $10,000. In 2001, that profit rose to $25,000, making PDAM Jember the first participating Local Government Water Services PDAM to achieve full cost recovery.

In 2000, PDAM Jember received recognition from the Governor of East Java for outstanding service to the community. On September 29, 2001, PDAM Jember received the Ministry of Administrative Reform's annual Citra Pelayanan Prima "Excellence in Public Service Award" from President Megawati. PDAM Jember was chosen as the best public service in Indonesia from amongst a large number of public service agencies, including water enterprises and many hospitals.

The Local Government Water Services team helped management look for more funding sources, such as suppliers' credit. The search did not bring in any good prospects, but during the search, PDAM Jember was saving enough from its efficient operations and interest on deposits to pay cash for its own water treatment facilities. In the end, the personnel at PDAM Jember designed and contracted the construction of a $140,000,

20 liters/second water treatment plant using appropriate technology with an option to expand it 20 more liters in a second phase. The cost included 1 kilometer of main line. In order that water could leave the treatment plant under pressure, the staff placed the treatment plant on a hill and pumped river water up to the plant. Costs for a similar plant using the government budget would have been about $550,000.

By 2003, PDAM was still making great profits. The rate of unaccounted-for water had gone from 52% to 45%. Employee productivity went from 7 employees per thousand connections to 5, while total connections went from 19,000 to more than 22,000. Above all, PDAM Jember was asked to provide training courses for neighboring PDAMs and its customer complaints system was replicated in other PDAMs in East Java. The corporate plan called for extending water to 70% of Jember's population by 2007.

In September 2003, the Supervisory Board recommended that the Managing Director's employment contract be extended until 2008. The head of the Supervisory Board told the press that he was surprised to learn the Bupati had instead appointed a recently-retired member of the local government without a PDAM track record to be the new Managing Director. On 24 September 2003, the press asked the Bupati for details, but none were given. Instead, they were referred to another officer.

Annex 6
The History of Water Sector Development in Indonesia

During early colonial times, all of Indonesia was a cost recovery-oriented, state-owned enterprise. Some writers observed that public services were intended solely for the Europeans.[1] In fact, the Netherlands' 1870 Liberal Policy put forward a concern for the health and welfare of the colonial people as instruments of national production. Beyond that, however, the tension between concern for the poor and cost recovery was resolved in favor of cost recovery. Generally, the government reverted to a focus on cost recovery after abuses due to price differentials and over-consumption resulted in financial losses.

Piped artesian well water was provided first to Jakarta's tariff-paying upper class areas while the poor had to collect water the freely provided available at public hydrants. At the time, the rationale for the provision of hydrant water was that shallow well water was available to the poor for bathing and laundry. After more plentiful spring water became available in Jakarta in 1922, however, it became too expensive to continue providing free hydrant water. In 1926, metered hydrants were established and put under the control of a supervisor who charged residents in the area. Trials to connect households in village areas were generally successful, but coverage with piped water was not expanded appreciably. Municipal water enterprises were established with separate offices and separate budgets. (Kooy 2004)

After independence in 1945, the early five-year national development plans called for providing clean water to cities through central government grants with limited foreign borrowing. These grants were to be seed capital to help cities become self-sufficient. Little by little, however, grants were reduced and loans became more predominant. Even so, utilities continued to look towards the central government for various forms of subsidies and the central government continued to maintain some control over all of the PDAMs.

The PDAMs were incorporated through local government regulations (perda) and guided by 1962's Law 5 regarding regional companies. The law stated that they would be production units whose objectives were to help develop the region in particular and the national economy in general within the framework of a guided economy. They were to fulfill the people's needs mainly through industrialization, creating a peaceful and happy workplace and leading to a just and prosperous society. In addition, if the company consisted of assets paid for by the local government, it was determined that 55% of the profits would be returned to the local government and 30% distributed among the workers. Most of the perda that established regional drinking water companies took their language from Law 5.

In 1962, development of PDAMs was conducted mainly by external financing. Thus, full cost recovery was not emphasized and 85% of their profit was to be distributed rather than re-invested in expansion and upgrading service.

As constituted by Law 5/1962, PDAMs were government-owned businesses with their own budget and a profit and loss statement. In practice, however, they were treated like Dinas, or government departments. They were assigned responsibility to serve all levels of society through cross subsidies without being allowed to draw on local government funds. Generally, civil servants with no business experience were chosen as Diruts and charged with managing million-dollar water businesses on a civil servant's pay, while owners interfered in the day-to-day management.

In the early 1970s, the central government established Badan Pengelola Air Minum (BPAM), or Regional Water Boards, across less affluent areas. BPAMs received central government subsidies while gaining management and other skills to recover their operations and maintenance costs, fund self-expansion, and become a PDAM. The BPAM was under the control of the central government through the Department of Public Works. In 1988, there were 148 BPAMs and 137 PDAMs. By 1995, however, these numbers dwindled to only 18 BPAMs and 276 PDAMs.

1 ". . . every budget was weighted in favor of European interests in the city. Most of the biggest items, such as road-building and maintenance, street-lighting, drinking-water provision, and payment of municipal personnel were items of expenditure largely on behalf of Europeans, since they were the ones who lived along and used roads most; street-lighting and drinking-water were largely restricted to their areas. . . (Abeyasekere, 1987, p. 119 quoted in Porter, The Economics of Water and Waste: A Case Study of Jakarta, Indonesia)

When local governments received the BPAMs from the central government, they were booked as local government PDAM assets. Local governments expected PDAMs to contribute a "return on investment" even though the cost of the investment to the local government in many cases was almost nil. The virtually costless investments led to unrealistically low tariffs.

The Dirut was so powerful that he set the tone for the PDAM, with dynamic PDAMs usually having dynamic Diruts and vice versa. At the time, like perda or local regulations, the Diruts of all PDAMs had to be recommended by the Bupati or Mayor, and approved by the Ministry of Home Affairs. Thus, Diruts were less oriented toward their consumers and more oriented toward the source of subsidies and appointments/approvals.

In 1978, the central government agreed to help local governments fund water projects. In principle, local governments were supposed to be able to fund these on their own, but if they could not, they could ask the central government for help. The Minister of Finance's decree 540/KMK.011/1979 provided for local governments to appoint the project manager (pimpro) and project treasurer (bendaharawan) with the prior approval of the Ministry of Public Works.

In the late 1970s, Pelita IV set targets of 60 liters/day/person and service to 60% of urban dwellers. In the 1970s and 1980s, utilities were allowed to borrow central government funds for water supply works. Because the utilities were not skilled in the technical aspects of the business, however, central government agencies planned, designed, and contracted for the construction of the facilities. The utilities took over management of the facilities and set out to repay the debt.

As the poor were being largely bypassed by development in the 1980s, Pelita V emphasized the benefits of national development reaching the poor. This development plan prompted many local governments and PDAMs to promise to ensure equal access to water without really working out how they would do so. As a result, central poverty reduction strategy in Pelita V focused on the construction of more standpipes, many of which went unused within a few years. Other low-cost measures, such as rainwater collection and hand-pumps, were also tried without success. Many loans were extended to PDAMs based on criteria other than financial soundness and an ability to repay.

In 1987, because of its "limited presence and capabilities in the regions," the central government turned over to the provinces and/or the kabupaten/cities the functions of building, maintaining, and handling all facilities and infrastructure for the production of clean water. Unfortunately, city and kabupaten officers were not well practiced in the basics of the water business or the duties of the owner, and they had no funds available for an unforeseen crisis. With hindsight, many observe that there was an insufficient assessment of the capability of the regions to take on business operations. About 30% of water utility income had been coming from government grants or loans that were not repaid, and tariffs were already too low to recover the cost of production.

In 1997/1998, the Asian Economic Crisis came to Indonesia and local governments dared not raise tariffs even though the cost of electricity and chemicals almost doubled in local currency terms. Most of them stopped payment on debts to the central government, which did not consider debt rescheduling even as PLN and other debts were rescheduled. By 2005, the debt of all PDAMs to the Ministry of Finance reached US$450 million. However, in a sign of growing local control, the central government was no longer needed to approve of the appointment of PDAM Diruts, so the Bupati or Mayor had sole authority to hire Diruts.

Article 40 of The Water Resources Law of 2004 states that provision of drinking water is the responsibility of the central and local governments, with a view to increasing efficiency and coverage. The most recent implementing regulation of the Water Resources Law, Ministry of Public Works Regulation 16 of 2005, states that central and local governments must guarantee the right of every citizen to a minimum amount of water per day to maintain a clean, healthy, and productive life. The local government's distribution unit (PDAM) is tasked with guaranteeing continuous, 24 hour-a-day water service.

Annex 7
Implementation Progress in Indonesia Urban Water Supply Sector Policy Framework

Implementation Progress in Indonesia Urban Water Supply Sector Policy Framework

(As defined in Locussol 1997)

Point 1. Establish an arm's length relationship between the owner of water supply assets and their manager
This goal has not been achieved in any city. The first step toward reaching this goal is the revision of law 5/1962 to convert a water utility from a source of local government income to a sustainable institution fulfilling the local government's responsibility to provide convenient and affordable clean water to all who want it. Much remains to be done before sovereign local governments will give up authority over PDAMs.

Point 2. Establish a regulatory framework for private sector participation
Although there is a contractually-required regulatory board for DKI Jakarta's water concession, there is not now an official regulatory framework for private sector participation. Much remains to be done before sovereign local governments will give up authority to regulate tariff increases.

Point 3. Streamline water sector financial management
The PDAM Rescue and Recovery Program and the Local Government Water Services project have helped water utilities generate cash through efficiency gains and tariff adjustments, but there does not appear to be a framework for the best utilities being the first to receive government benefits such as grants. For instance, DAK, or the central government's specific activity grant mechanism for local governments, is assigned based on need.

Point 4. Simplify pricing policy
Although there have been Ministry of Home Affairs instructions regarding tariffs and some PDAMs have reduced the number of categories for tariffs, the basic problems such as high lump-sum connections fees, too-low social tariffs, numerous categories, and high commercial rates, have not been changed. Since decentralization in 2001, many local governments consider the central government's regulations guidance rather than instructions.

Point 5. Improve planning, design and implementation of water supply projects
Because of the drying up of infrastructure investment funds, there was no significant change involving group procurement of inputs and increasing competition in procurement.

Point 6. Emphasize the identity of the Indonesian water supply sector
Since its complete separation from the Ministry of Home Affairs in 2001, PERPAMSI has made progress in establishing a "quality" database and providing human resource development facilities for the municipal water and wastewater sectors. But due to distance and a small budget it still does not represent effectively all 300 water enterprises.

Annex 8
Barriers to Implementation of Recommendations and Sustainability

The main barriers to implementation and success of a stimulus program are targeting, poor exit strategy, relaxation of cost recovery discipline, and the tendency of governments to allow tariffs to drift downward. Several provisions are planned to anticipate these threats.

Targeting. The main effect of the subsidy incentive is to correct the service imbalance by ensuring the target population is served first. Targeting by PDAMs or local governments can be problematic unless they are working from recommendations of NGO-assisted community groups such as those formed in community-driven development projects like the Urban Poverty Program. As a second check on the achievement of targets, output-based aid and incentive-linked subsidies can ensure that funds are not reimbursed unless they are used for the purposes intended and have short-term sustainable benefits. The economic status of houses and existence of meters and connections can be verified quickly and economically.

Poor Exit Strategy. A component of both the stimulus program and loan preparation will be identification of government institutions or revolving funds that can provide subsidies for new connections in the short term. Central and local government subsidies such as DAK or SEAB can be tied to institutional links between utilities and consumers and promote more accountable practices. Governments are frequently brought down by removal of subsidies, but new connections are needed only once and the target group consists of only 1.1 million urban very poor households. Therefore, as cities either implement the recovery of connections charges in tariffs or approach universal coverage, there will be no further need for new connections subsidies. Subtracting squatters (about 4% Jakarta and less for other big cities) and those in remote areas, the feasible target group may be served through about 8 large expansion projects serving 100,000 connections each. Utilities will be free to use new water mains linking poor areas to distribute water to other nearby income groups. Experience in the Philippines suggests that such a program will reduce water losses by converting many illegal connections to official revenue-producing connections.

If cities will allow a part of their contribution to be put into a revolving fund, financing of new connections can be self-sustaining. Inclusion of new connections charges in the tariff is an ideal solution to affordability problems, but there must be incentives such as awards or increased DAK allocations to ensure that new connections continue to be assigned proportionally to the poor.

Relaxation of Cost Recovery Discipline. Institutions tend to relax discipline when projects are completed. There is little extra room for cross subsidies, especially when bans on groundwater withdrawals are not enforced, so cost recovery discipline through improved utility efficiency must continue. Both the technical assistance team and the NGO will work with local governments to continue assignment of targets to PDAMs with periodic reviews. Local governments may require their utilities to receive the advice of the Water Business Advisory Body once every two years. In addition, procedures will be in place for subsequent town meetings held with all stakeholders during periodic tariff reviews. When combined with the need of PDAMs to receive periodic tariff increases should their goals be achieved, the monitoring of local government and citizens groups should provide sufficient public transparency for continued full cost recovery discipline.

Allowing tariffs to drift downward. A new market between utilities and poor consumers will fail if business discipline flags and tariffs drift downward. It is a given that politicians are reluctant to raise tariffs before an election, especially when transparency is weak or when there are recent revelations of mismanagement by utilities or their owners. The success of a stimulus initiative largely depends on institutions that balance the interests of utilities, government, and consumers. Town meetings and creation or strengthening of water forums will be a part of the stimulus program. Town meetings strengthen accountability of utilities and their owners, and stronger water forums can take over NGO functions while providing consumers with informed choices and strategies designed to help the poor pay monthly water bills.

These efforts to provide sustainability contribute to reform and private sector participation because this staunches the tendency of tariffs to drift downward which has

been a main constraint to private sector participation. More accountability (town hall tariff presentations and publishing of accounts) helps consumers understand what they have been receiving and governments set the following year's targets, making it possible to enact tariff increases. Furthermore, greater accountability and the higher probability of adequate tariff income would make it easier for utilities to attract private bank and other private sector financing.

Annex 9
Financial Recovery Action Plan (FRAP)

FEATURES OF THE FRAP

The financial recovery action plan (FRAP) is prepared by a water utility (PDAM), which has a desire to improve its performance to enable it to expand its services to consumers. The FRAP consists of an analysis of all the existing problems of the PDAM, whether they are technical, financial, commercial or managerial. Their causes are determined so that appropriate actions can be implemented. The required actions are contained in the FRAP details, and supported by financial projections that show the results of these combined actions on the PDAM operations. The FRAP may recommend management, commercial and /or technical improvements requiring only minor investments. However, it may also involve major investments, depending on the technical problems that need to be addressed. If the PDAM has delinquent loans with the Ministry of Finance, a proposed loan rescheduling scheme is included.

The FRAP is developed by the PDAM, and is then discussed and agreed upon with its Mayor/Bupati and DPRD. The FRAP becomes a commitment between these three parties, with implementation falling to the PDAM and supervision resting with the Mayor/Bupati and DPRD. The PDAM's accountability is thereby improved as the latter's regulatory and oversight responsibility is strengthened. As the PDAM Rescue Program has so far shown, simply by streamlining operations and receiving a boost from loan rescheduling with the MOF, a PDAM can be brought back to operate profitably.

The FRAP was piloted in 17 PDAMs under the PDAM Rescue Program between 2000-2002. It was funded by a grant from the ASEM Trust Fund to finance technical assistance to those PDAMs willing to be reformed. During that time, PDAMs were almost on the verge of bankruptcy as the financial crisis that hit Indonesia starting in the middle of 1997 exacerbated weak management, poor financial discipline, and deteriorated network systems. Inflation reached 78% at the end of 1998 and the rupiah was devalued from a pre-crisis level of Rp 2000 to a US dollar to as high as Rp15000 at one point. Thus, PDAMs could not borrow to properly maintain their network systems, much less expand them, because they could not promptly repay their outstanding obligations.

The Program was intended to help PDAMs survive the crisis, not only in the short-run, but also in a more sustainable manner that would enable them to be self-sufficient in the long run. The Program was expected to improve the operational and financial efficiency of the PDAM consistent with the overall direction of water sector reform. Since there was no financial assistance involved, additional cash had to either be (1) earned by the PDAM out of improved management and tariff increases; (2) provided by its local government in the form of additional equity, (3) obtained by the deferment of loan repayment as part of loan rescheduling; or (4) a combination of all of these.

PARTIES TO THE FRAP

The FRAP is a commitment from these parties:

1. The PDAM commits to:
   a. Raise tariffs to required levels;
   b. Add new connections, depending on available capacity;
   c. Shorten the collection period to improve its cash position;
   d. Reduce the unaccounted-for water rate and turn these into revenues;
   e. Improve the staffing ratio by suspending the hiring of new employees and not filling up vacated positions;
   f. Reschedule delinquent loan accounts based on its financial capability after considering the positive effects from the above; and
   g. Implement the required investment based on an agreed program to deal with the technical problems existing in the PDAM.

2. The PEMDA and DPRD independently commit to:
   a. Suspend the collection of dividends from the PDAM until its required service coverage has been attained;

b. Support the implementation of the required tariff increases;
c. Allow the PDAM to reschedule its delinquent loans; and
d. Monitor the PDAM performance based on the FRAP and take action, if required.

3. The MOF commits to:
   a. Reschedule the PDAM's delinquent loan accounts based on the PDAM's financial capability after considering the results of the FRAP actions before loan rescheduling.

FRAP TARGETS AND DESIRED RESULTS

In the FRAP, targets are made for reduction of unaccounted-for water, additional connections that can be generated, a shorter collection period, a lower staffing ratio, tariff increases, and debt service that is affordable in relation to the rescheduling of delinquent loans. It also includes investments that need to be made to improve the system and the PDAM's equity in the project.

Based on these targets, the expected results are an increased population served, sufficient water supply where once there may have been a shortage, a net profit after tax, an operating ratio of at most 70% that affords the PDAM to earn a decent profit, a debt service coverage ratio higher than 1.3 times to ensure repayment of debts as they fall due, and an average tariff that enables the PDAM to fully recover its O&M costs and depreciation.

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