

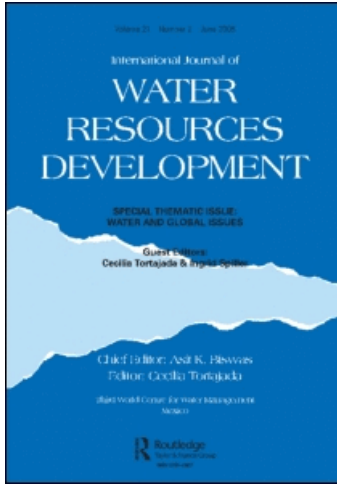
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Water Supply of Phnom Penh: An Example of Good Governance

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ABSTRACT *During the 1980s, after years of centralized management and a culture of inefficiency and corruption, the Phnom Penh Water Supply Authority (PPWSA) was dysfunctional. Unaccounted for water routinely surpassed 70%. During the 15-year timeframe between 1993 and 2008, it experienced a metamorphosis; with enlightened management and dedicated and competent staff, the Authority has been completely turned around. Its annual water production increased by 437%, the distribution network by 557%, pressure of the system by 1260%, and its customer base by 662%. Unaccounted for water was reduced from 72% to 6.19%. Its profit increased consistently as has the amount of taxes paid to the Cambodian Government. This paper is a summary of an independent evaluation that examines how this remarkable transformation has been achieved.*

Introduction

Cambodia is well endowed with available water resources. It has a high annual rainfall (up to about 3000 mm in the highlands), three major rivers (Mekong, Bassac and Tonle Sap) and their many tributaries, and excellent sources of groundwater both in terms of quantity and quality. Until the late 1960s, urban water services in Cambodia were similar to what then existed in many of its neighbouring countries. Many of the residents of Phnom Penh had an uninterrupted 24-hour water supply of reasonable quality water.

The situation, however, changed dramatically after the late 1960s due to considerable political turmoil, and this continued unabated for the next two decades. The situation worsened during the four-year rule of the Khmer Rouge who captured Phnom Penh in 1975. The Khmer Rouge attempted to make Cambodia a classless society by forcing people to work in agricultural communes. Its strong ideology included isolating the country from all types of external influences.

The social, political, economic and institutional turmoil took their toll on all of Cambodia's development sectors during the decades of the 1970s and the 1980s. Urban water management was not an exception. All forms of social services in the country, from education to health, became totally dysfunctional, and all urban infrastructure was grossly neglected during these two lost decades. There were no new investments in water or any

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type of infrastructure, nor was infrastructure maintained and operated at a minimum acceptable level. Skilled personnel were simply not available to properly maintain and operate the existing urban water system, and available records of the urban utilities were destroyed.

By the 1980s, the Phnom Penh Water Supply Authority (PPWSA, the Authority) was in bad shape in institutional, financial and management terms. Years of centralized, top-down management had contributed to a culture of inefficiency, bureaucracy, corruption and conformity. The staff did the least possible work that was needed; it was estimated that 80% of the staff worked less than two hours per day. Salaries were very low, the working environment was poor, and corruption was endemic.

The lack of clean water and poor wastewater management practices took a heavy toll on the people of Cambodia during this period. In the mid-1990s diarrhoeal diseases were endemic in the country, infant mortality rates were some of the highest in the world (115 per 1000 live births), as were the morbidity rates. Water-related diseases accounted for nearly 30% of all hospitalizations. In Phnom Penh, unaccounted for water (UFW) routinely exceeded 80% during the late 1980s, and the pressure of water was so low that most households received no supply of water, even though they were connected to the system.

By the early 1990s, PPWSA as an institution and its overall management were dysfunctional, and as a result consumers received very poor service and a low level of service delivery. In 1992 it had only five engineers, and most of its staff members were incapable even of reading meters accurately. Fortunately, the institution started to change radically from 1993.

Progress since 1994

The United States lifted the trade embargo on Cambodia in 1992, and the Royal Government of Cambodia was established the following year after the successful election supervised by the United Nations. Shortly thereafter, the Cambodia Government requested help from the various multinational and bilateral aid institutions to rehabilitate its battered urban water systems and to formulate a future long term plan.

Immediately after the trade embargo on Cambodia ended, the French provided an aid grant to improve the water distribution network. It was promptly followed with another French grant in 1993 to improve the city's water supply facilities. Also in 1993, the UNDP provided a grant for technical assistance for the rehabilitation of the water utilities of Phnom Penh and Sihanoukville, administered by the World Bank.

Among these early Cambodian requests was one to the Japanese government in early 1993 for technical assistance for the rehabilitation of the existing water supply system of Phnom Penh, as well as to draw up a future water development plan for the city. The Japanese government carried out a study to develop a master plan and feasibility study of the Phnom Penh water supply system. It was conducted by Tokyo Engineering Consultants in association with Nihon Suido Consultants (1993a, 1993b) for the Japan International Cooperation Agency (JICA). The study team arrived in Phnom Penh in February 1993, and within a short period of 10 months completed the final report and delivered it to the PPWSA.

In retrospect, this study turned out to be very important because it served as a road map for the next several years for the PPWSA. The plan was developed in close consultation

and discussion with the Authority, and thus it was acceptable to them. This plan became the blue print for the development of the utility over subsequent years. All of the projects supported by the other donors had to fit within this framework and also comply with its overall philosophy. It provided an excellent basis for donor coordination, albeit indirectly. In 1995, JICA provided a grant of \$25 million to improve the water supply facilities under Phase I and II, and another \$21.326 million grant in 1997 for Phase II. Other major donors who provided financial and technical support to the PPWSA from 1997 included the Asian Development Bank (ADB, 1996) and the World Bank. However, as was the case for the initial financial support, these were loans to the Authority and not grants.

The formulation of this Plan and its subsequent implementation by the PPWSA and foreign donors, as well as the continuing association of JICA on a long-term basis to provide assistance to the PPWSA on different aspects of water supply, including infrastructure development and management and capacity building, have been an important element for the subsequent success of the Authority. However, it was only one of the several other important components which have contributed to the remarkable and steady improvements in the performance of the utility.

Urbanization

In terms of urbanization, Phnom Penh is truly a unique case. Until the late 1960s it was a 'normal' town, coming to grips with decades of French colonial rule and then independence. The population of the city was growing steadily, both due to natural causes and to rural-to-urban migration. In contrast with the other ex-colonial capital cities of Asia and Africa, the growth rate was not spectacular. It was manageable. However, with the Khmer Rouge in power with its strict policy of forcing urban residents to relocate to rural areas for agricultural activities, it became the only city in recent memory, if not in the entire history of mankind, to be massively and immediately depopulated for ideological reasons. Due to Khmer Rouge policies, the population of Phnom Penh in 1979 was estimated to have declined to about 122,800.

With the fall of the Khmer Rouge, the population started to trickle back to Phnom Penh. After a period of time, the rate of return of the former residents increased. When the situation stabilized, the urbanization process, as in other Asia urban centres, gradually accelerated. The population growth of Phnom Penh between 1993 and 2008 is shown in Figure 1. There was an important difference in the population increase of Phnom Penh after the Khmer Rouge era. Many of the original residents of Phnom Penh had been killed. Also, after the traumatic experience, many families decided not to return to Phnom Penh and chose to settle elsewhere in the country. This loss of population was more than made up by the soldiers who were posted in Phnom Penh and who brought their extended families to the city from the interior of the country. These migrants had never lived in an urban setting and were more self-reliant. They managed to live without a regular supply of water as was the case when they were living in rural areas. They neither expected, nor received, water from the PPWSA during the transition period.

In terms of supplying water to the residents and the industrial users of Phnom Penh, the PPWSA faced two critical challenges. First was to restore a reasonable service delivery to a limited geographical area, which was initially considerably smaller than the situation before the Khmer Rouge assumed power. Second was the supply of drinking water to the entire Phnom Penh city. As the PPWSA started to improve, especially from 1994, its

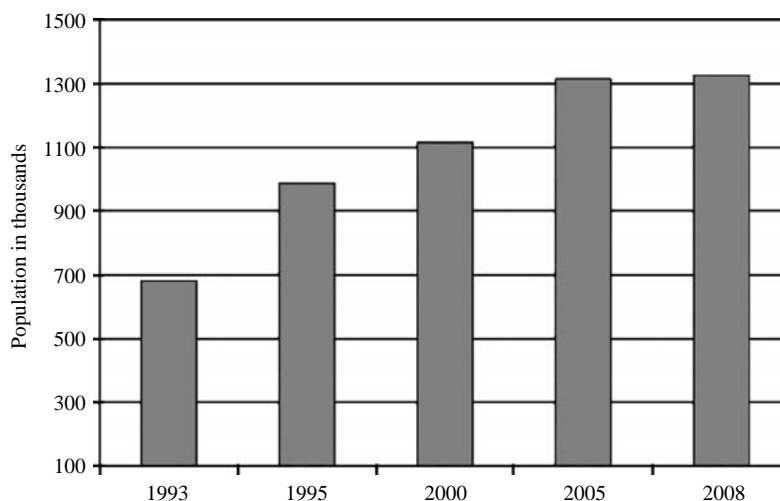


Figure 1. Population of Phnom Penh, 1993–2008

service delivery area constantly expanded and drinkable water delivery increased. Figure 2 indicates the area to which water was provided between 1993 and 2000 primarily because of pipe replacement and the rehabilitation of the overall supply system.

During the 2001–2008 period, and especially after the spectacular success of the PPWSA in providing a clean drinkable water supply on a 24-hour basis, its service area constantly expanded to include new areas, including the suburbs of Phnom Penh. Its service is still expanding.

In 2008, the annual volume of treated water produced was a little over 85.5 million m³, which was more than enough to meet the PPWSA's needs (Table 1). However, with increasing per capita water use from the lower base of earlier years, combined with an increase in its service area, the daily water production has to be increased to 300,000 m³/day to meet anticipated demands by 2013. This increase can be met by increasing the capacity of the Chrouy Changwar plant by 65,000 m³/day by 2013.

Progressive increases in the daily per capita water use in the city of Phnom Penh are shown in Figure 3.

Unaccounted for Water

A major problem in 1993 was substantial losses due to unaccounted for water (UFW) which was well over 70%. Reducing UFW within a short timeframe, a process involving several concurrent tasks, required a strict systems approach. No water supply can be kept at a reasonable and affordable level if the income from the customers does not cover the costs of providing a good service, especially when nearly three-quarters of the water supplied yielded no revenue whatsoever. Thus, a strict regime with several interrelated components had to be planned and implemented. The progressive reduction in UFW is shown in Figure 4.

No significant UFW reduction is possible without the cooperation and support of a dedicated, competent and motivated staff. The quality of staff in the PPWSA left much to

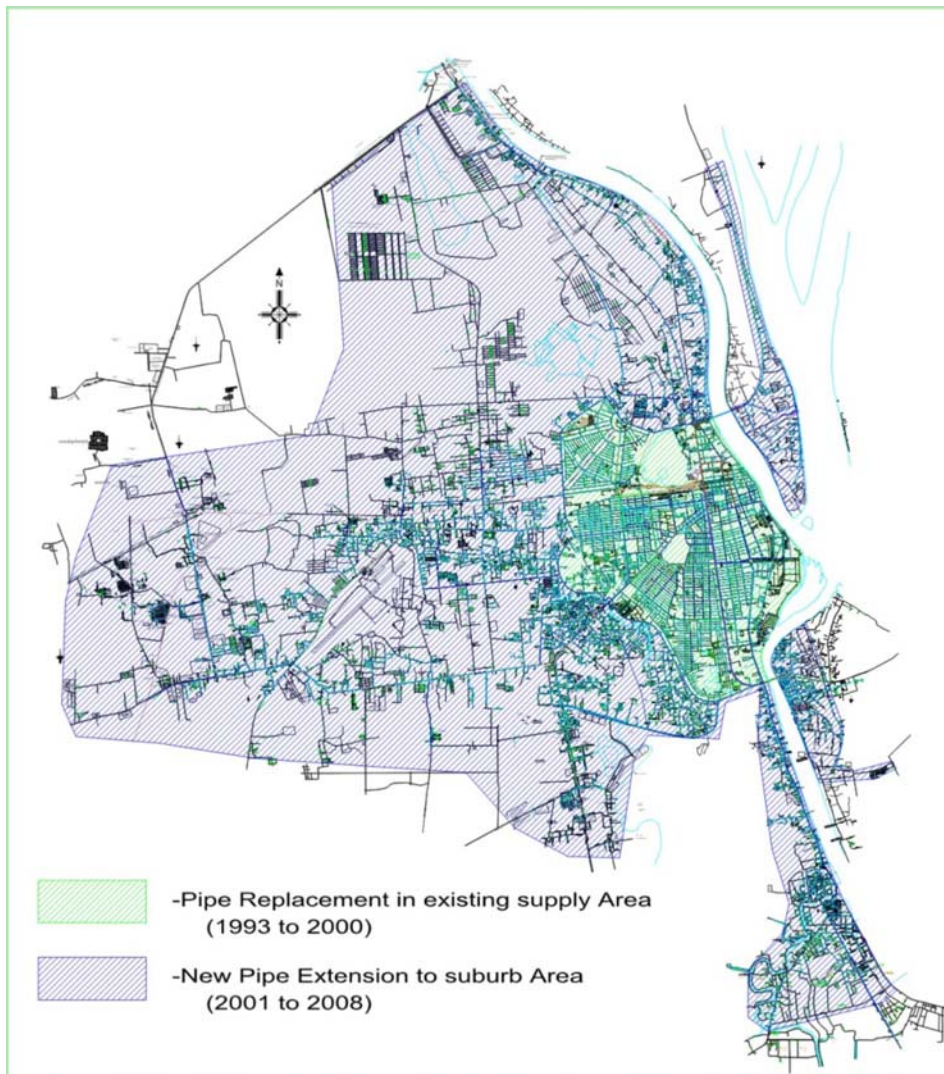


Figure 2. Expansion of area supplied with water, 1993–2008. *Source:* PPWSA records.

be desired during the early 1990s. Not only were the staff demoralized, but they had good reason to be demoralized, being, as they were, faced with poor governance, below subsistence pay, lack of discipline, an absence of any incentives, and pervasive corruption. Lethargy, poor working practices and a ‘could not care less’ attitude to consumers were the norm. Therefore, the work culture had to be radically changed by enforcing strict disciplines in a sensitive, fair and transparent manner. This was a difficult task since the rest of the public sector employees in Cambodia were in a similar situation and behaved in a very similar manner. In fact, most public sector companies still continue to behave in a somewhat similar way at present.

Table 1. Average annual water production in m³/day

Year	Actual production (m ³)	Average daily production (m ³ /day)	Max. daily production (m ³ /day)
1993	19,586,000	53,660	No data
1994	25,483,000	69,816	No data
1995	31,651,000	86,715	No data
1996	34,486,000	94,482	No data
1997	39,184,171	107,354	116,646
1998	39,983,794	109,545	113,116
1999	40,622,401	111,294	117,837
2000	39,801,167	109,044	117,586
2001	37,763,547	103,462	103,978
2002	41,793,679	114,503	115,362
2003	46,871,146	128,414	144,405
2004	56,775,305	155,549	182,124
2005	61,857,961	169,474	190,367
2006	79,623,204	193,488	211,605
2007	79,400,031	217,534	240,349
2008	85,513,649	234,284	258,571

Source: PPWSA records

Changing institutional culture was not an easy task. It had to start with the senior officers who had to become the role models. During the 1980s and early 1990s, one of the perks of the job was that the employees of the PPWSA received a free supply of water. This practice was stopped. Staff members not only had to install meters but also had to pay their water bills in full, like any other citizen, and within the stipulated time period. Otherwise, they were treated the same way as those who were delinquent with their bills.

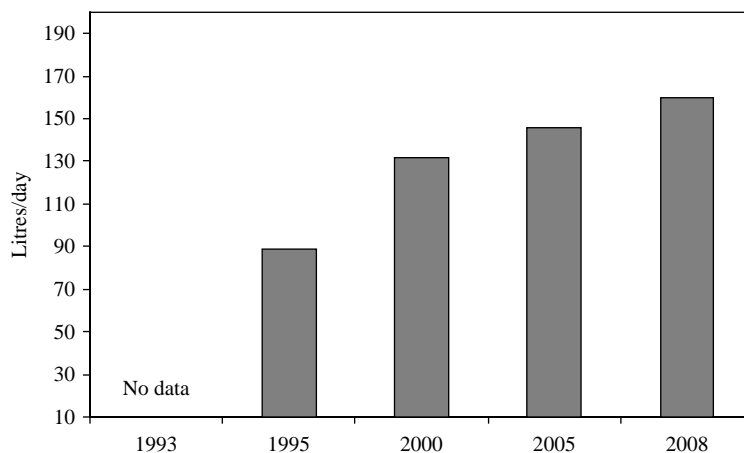


Figure 3. Per capita water use, 1993–2008. Source: PPWSA records.

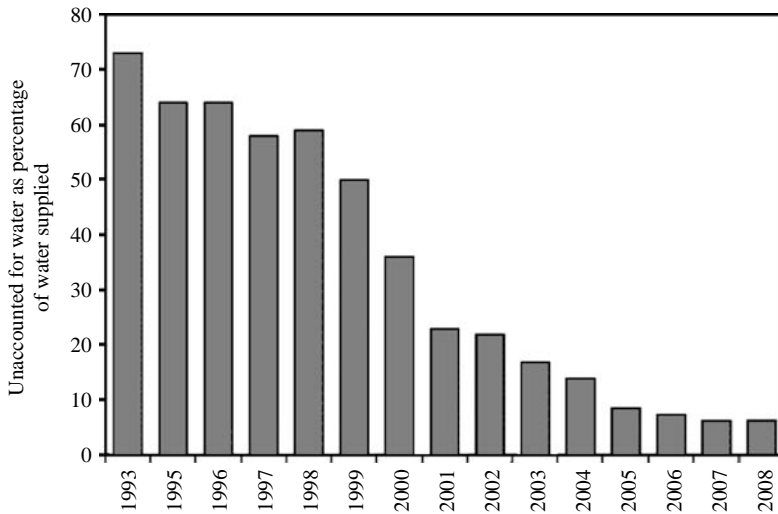


Figure 4. Unaccounted for water, Phnom Penh, 1993–2008. *Source:* PPWSA records.

Water Pricing and Cost Recovery

The uniform global experience is that if consumers have to receive a 24-hour, uninterrupted, and reliable water service, they have to pay for this service either directly or through taxes.

The government of Cambodia decided in the 1990s that water was an economic and social good, and thus a responsible, financially viable and socially sensitive tariff structure should be in place so that the PPWSA could have adequate income to be financially self-sufficient. The result would be that the institution would be run in a business-like way and the population should have good quality and affordable water supply.

To the credit of the Cambodia government, the PPWSA has been allowed to operate as an independent business-like institution without any political interference, with checks and balances as stipulated in the landmark Decree No. 52 of 1996. An English version of this decree can be found in Biswas & Tortajada (2009).

With its autonomous structure and good management, the PPWSA decided to maximize its income by:

- reducing UFW significantly so that much of the water produced can be sold to the consumers;
- fixing a tariff structure and implementing it fully with a social conscience;
- preparing and continually updating a roster of customers on a reliable basis;
- completely restructuring the billing system so that that the bills can be produced and delivered on time;
- improving the bill collection ratio with appropriate incentives, with disincentives of late or no payment; and
- increasing the annual profits of the PPWSA by becoming increasingly efficient on a progressive basis.

In order to achieve higher revenues and thus financial self-sufficiency, the PPWSA embarked upon a concurrent five-prong strategy. One of the most difficult components of this strategy to implement was to increase the tariff of water so that all costs could be recovered without generating any social and political unrest. This was done by ensuring that its customers first witnessed and appreciated a much better quality of reliable service before the tariffs were increased.

The increase in the tariff was very carefully planned. First, a socio-economic survey of the water supply situation was carried out for the city of Phnom Penh. This survey included collecting information on how much consumers were paying for water from private vendors, and what was likely to be their reaction if the supply by these vendors was replaced by the PPWSA. This survey showed the willingness and capability of consumers to pay a higher tariff than what they were being charged by the PPWSA provided they received a significantly improved service.

Table 2. Progressive tariff structure of PPWSA, in riels/m³

Until 1983:	Free water for every household
1984:	166 riels/m ³ (domestic and commercial)
1993–June 1994:	166 riels/m ³ (domestic) 515 riels/m ³ (industrial)
July 1994–May 1997:	250 riels/m ³ (domestic) 700 riels/m ³ (industrial)
June 1997:	Block tariff rates were introduced. All connections were metered. Domestic tariffs (m ³ /month) 0–15: 300 riels 16–30: 620 riels 31–100: 940 riels > 100: 1,260 riels Industrial tariffs (m ³ /month) 0–100: 940 riels 101–200: 1,260 riels 201–500: 1,580 riels > 500: 1,900 riels Governmental institutions (m ³) Flat rate: 940 riels
2001:	Domestic tariffs (m ³ /month) 0–7: 550 riels 8–15: 770 riels 16–50: 1,010 riels > 50: 1,270 riels Commercial tariffs (m ³ /month) 0–100: 950 riels 101–200: 1,150 riels 201–500: 1,350 riels > 500: 1,450 riels Governmental institutions (m ³) Flat rate: 1,030 riels

Source: PPWSA records

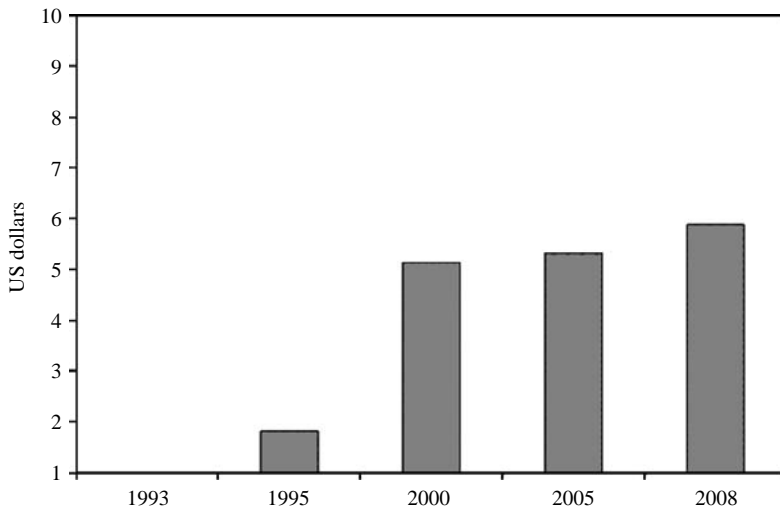


Figure 5. Average household water bill per month, US\$, 1993–2008. *Source:* PPWSA records.

The tariff was calculated after considering the total expenses of the PPWSA, including operation and maintenance costs and the depreciation of all its assets. This process conforms to the National Water Policy which was approved later. Under this Policy, the utility is expected to recover all its operating costs with tariffs, as well as the depreciation of all its assets, except land which generally increase in value over time. The value of its assets has to be revised every five years. The second increase in tariff was introduced in 2001. The changes in the tariff structure from 1983 are shown in Table 2.

Having witnessed significant improvements in water delivery, including quality of water, the consumers paid for the vastly superior service, especially as they considered the increase to be very reasonable, and thus within their capacity to pay. This included the poor whose bills declined by 60–80% of what they had been paying to private water vendors. As a result, for all practical purposes, the private water vendors have disappeared from the PPWSA area.

By 1995, 24-hour uninterrupted service was available in Phnom Penh. This also meant that the average monthly household bills in the city increased significantly between 1995 and 2000, and thereafter have increased only incrementally (Figure 5).

While it was comparatively easy to convince the general public to pay a higher tariff, it was a different situation with respect to army installations, government offices and senior officials of the government and the army. They had not historically paid any water bill and not surprisingly, they wanted this free service to continue indefinitely. The army initially refused to have any meter installed to measure its actual water consumption, and refused to be billed for it. Nevertheless, in 1997, the Prime Minister publicly proclaimed that every person and institution had to pay their water bills promptly so that PPWSA could ensure good service delivery. The transition process was difficult.

Figure 6 shows the billing ratio in terms of quantity of water that was billed as a percentage ratio of total volume of water that was produced between 1993 and 2008. It shows that in 1993, less than 30% of water produced was billed. By 2005, with very

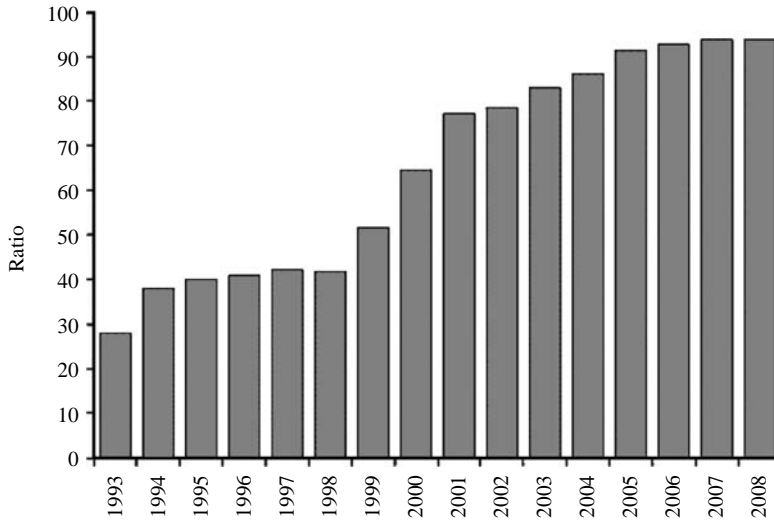


Figure 6. Billing ratio, quantity billed/total production in percentage. *Source:* PPWSA records.

significant reduction in UFW, over 90% of the volume produced was billed. The current situation is even better. At present, over 93% of water produced is billed.

Figure 7 shows bill collection ratios in terms of the amount collected and the amount billed. Both show bill collection is close to 100% from about 1999, more than double the rate in 1993 just six years earlier. This again is a most remarkable achievement.

Accurate Data on Water Consumers

For any functional and efficient water utility it is essential to have an accurate database of its current users. Without such an accurate database of the consumers, it is simply not

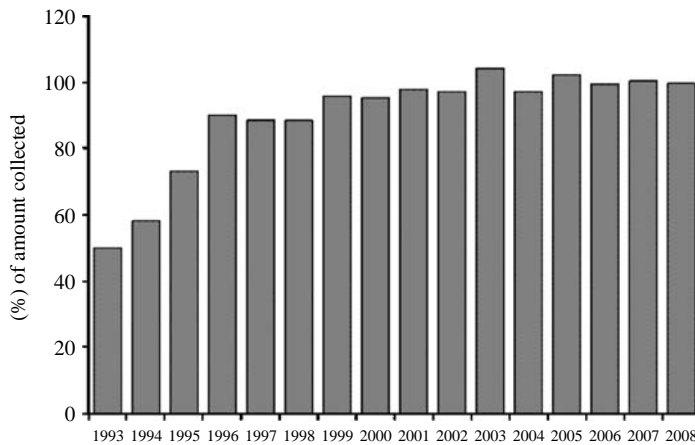


Figure 7. Bill collection ratio, amount collected/amount billed, in percentage, 1993–2008. *Source:* PPWSA.

possible to collect revenue from the water users. In addition, this database needs to be kept continually updated, which means keeping relevant information on the people who move into the city, people who move house but within the city, and also people who leave the city. Such a list is always dynamic, and needs to be continually updated to ensure correct and appropriate billing.

During the Khmer Rouge regime, all of the information on the PPWSA customers and other relevant information was destroyed. After the fall of the Khmer Rouge government, no accurate database was established as to who were the actual consumers of the water supplied by the PPWSA. In order to establish a proper database, in 1994 nearly 100 PPWSA members visited all of the houses in the city to record if they were receiving water or not. The process took one year to complete.

The results were revealing. The survey found that 12,980 households were ostensibly connected to the system, but were not. They were being billed for phantom water, and surprisingly many were paying their bills even though they never received any water. In contrast, there were 13,901 customers who were connected and receiving water, but were not in the list and thus were not being billed. They were receiving free water.

The French government gave a grant which enabled the PPWSA to establish a fully computerized up-to-date database, which became fully operational in 1996 (Chan, 2009). The computerized system was further improved in 2001 to handle all financial transactions and operations at the PPWSA. By 2003, a comprehensive financial management information system was in place which enabled the Authority to have immediate access to the latest, as well as historical financial data, and its revenue collection status in real time. An indirect benefit of this automated system has been that corruption and abuse of power were, for all practical purposes, eliminated. In addition, the Authority has continued to steadily improve its overall financial management practices.

Metering

In order to ensure that a transparent and fair system exists, it is essential that all of the connections should be measured in terms of their water consumption. Only after each connection is metered can the consumers be sent an accurate bill which directly reflects the amount of water they consumed during a specific period.

In 1993, only 3391 connections out of a total of 26,881 were metered. In other words, more than 87% of the connections received an estimated bill, which often had no linkage to the quantity of water that was actually consumed. With a policy decision to move to a system of all metered connections as soon as possible, the number of meters installed increased steadily, and the number of unmetered connection started to decline. By 2001, all the connections were metered. In addition, over time more accurate Class C meters replaced less reliable Class B meters, which further increased the credibility and income of the PPWSA.

Water for the Absolute Poor

The issue of providing clean water to the poor, or even to the rich, could not be considered prior to 1994. There were simply no reliable water services available, either for the rich or for the poor. Thus, the first task of the new management of the PPWSA was to ensure a reasonably reliable water supply system to the people irrespective of whether they are rich,

middle class or absolutely poor. Hence, the primary focus and concern of the PPWSA at this initial stage was the rehabilitation of the water system in order to establish a supply system which could then be distributed to the people.

Once the supply was restored to a reasonable level, the issue arose about how water could be supplied to the poor in a way that the PPWSA could justify economically, and how the poor could afford the services they received. The first approach was to determine specific communities of poor people, who would then elect community representatives to whom the PPWSA would sell water, and who, in turn, were expected to resell water to their respective communities at a recommended tariff which the poor could afford. The installation of the community water pipes was initially funded mostly by certain NGOs. Thus, from 1995–2000, community representatives were supplied with water. By the end of 1998, there were 53 representatives of the poor communities, with an average total consumption of 15,500 m³/month, representing slightly over one per cent of the total volume of water sales of the PPWSA.

The system did not perform as was initially expected for two reasons. First, the community representatives mostly sold water to the poor people at 10 to 20 times the subsidized rate the PPWSA sold water to them. Second, the PPWSA received very little income for the water sold through the community representatives. The main beneficiaries of the system turned out to be the community representatives themselves, who pocketed the difference between the two prices.

During the experimental period, the PPWSA also realized another important fact. Initially, it expected that the poor might steal water as a result of which its net UFW rate would remain high. Accordingly, meters were installed far from the poor households, which increased the installation costs. In 1999, the PPWSA realized that even if the poor stole water, which they did not, their individual consumption rate was so low that the resulting losses were unlikely to be significant.

In March 1998, the PPWSA received a soft loan from the World Bank, a part of which was explicitly earmarked for the provision of clean water for the poor.

A task force was created specifically for the implementation of this pro-poor scheme, which was also charged with the responsibility of processing and approving the applicants, and also implementing installment payments for the connection charges. This arrangement did not work very well, primarily because the necessary information was not properly disseminated to the poor households. Thus, in 1999 only 101 house connections to the poor could be made under this scheme. In contrast, for the city as a whole, 12,059 house connections were installed that year.

At present, thanks to a grant by the International Development Association (IDA), and an annual grant of 50,000 euros from the city of Paris, the PPWSA has a much more generous and affordable programme for the absolute poor. Poor households are entitled to receive subsidies of 30%, 50%, 70% or 100% of the connection fee, depending upon their financial conditions. These conditions are jointly evaluated by a committee of the PPWSA with direct help from the local communities. In addition, those households that consume a maximum of 7 m³/month pay only 60% of the real cost of providing water. This new policy helped the poor households to save 130,000 to 380,000 riels each year (5000 riels = US\$1.20).

As a result of these improvements in pro-poor policies, the number of poor households that has been connected to the system has steadily increased from 101 household connections in 1999 to 17,657 connections at present.

Financial Sustainability

On the basis of current evidence, the financial sustainability of the PPWSA can be summarized by one word: excellent. According to the latest statement from its auditors (Pricewaterhouse Coopers, 2009), its operating revenue for the 2008 financial year was 91,587.65 million riels, on which it made a profit of 30,577.58 million riels. After paying income tax of 6,141.35 million riels (20% of the profit) to the government of Cambodia, it made a net profit of 24,436.24 million riels. To our knowledge, it is the only publicly managed water utility in the developing world which has consistently increased its net profit since 1993, and also has paid consistently higher income taxes every year to the government. In fact, according to the audit report of 2008, the PPWSA actually made a loan of US\$2 million (equivalent to about 8.4 billion riels) in 2005 to the *Electricité du Cambodge*, which was fully repaid in 2007. In 2008, the PPWSA gave another loan to the Pursat Water Supply Authority for 675.44 million riels to finance the construction of the main water supply network in the Kandiang district of Pursat Province. The unsecured loan is subject to 5% interest per year, to be reimbursed to the PPWSA in 120 monthly instalments, after the construction of the network was completed in 2009.

In 2009 the main components of the operating costs of the PPWSA were for electricity (44.97%) and chemicals needed for water treatment (10.73%), over which it has no control (Figure 8). The electricity costs are dictated by the *Electricité du Cambodge*, and the chemical costs are determined by world market prices. Salaries, wages and allowances for the staff account for another 32.16% of annual expenditure. While the Authority is becoming increasingly efficient in terms of its staff performance (for example, the number of accounts served per employee has dramatically improved between 1993 and 2008, as shown in Figure 9), the Authority must pay an attractive financial package to its staff in the future in order to recruit and retain a highly motivated staff.

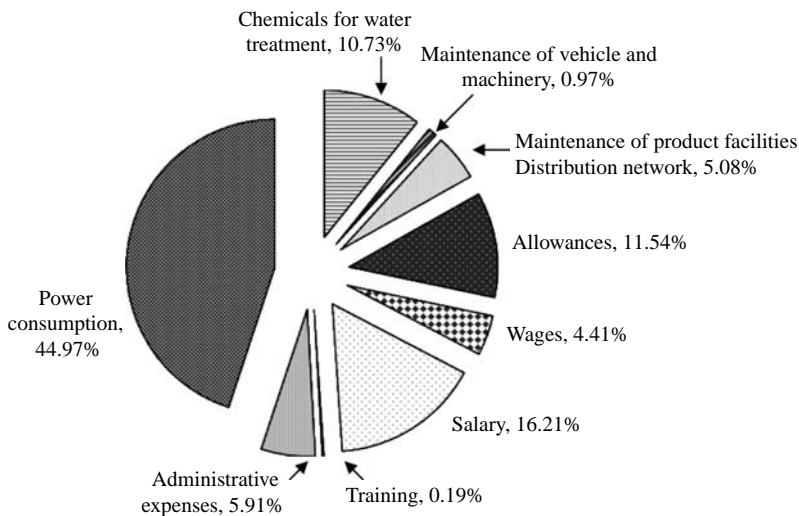


Figure 8. Distribution of annual operating expenses. Source: PPWSA records.

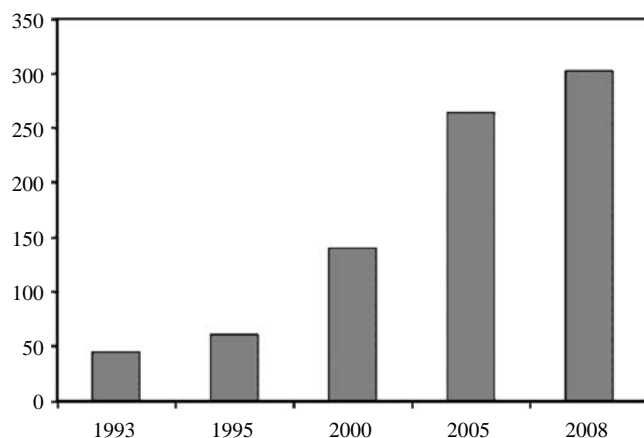


Figure 9. Number of accounts served per employee, 1993–2008. *Source:* PPWSA records.

With good efficiency gains, amounts billed and amounts collected became almost the same after 2000. This means that the net profit of the Authority has progressively increased every year since 1998 (Figure 10).

As the PPWSA increases its geographical area of coverage, more and more consumers join the system. Even with increasing per capita consumption, the Authority has maintained, and even improved upon its current level of performance. There is thus no reason why net profits should not continue to increase steadily, unless political interference reduces performance levels. At the current stage of development, it is highly unlikely that there would be political interference in its management, especially as it is the only public sector utility that has been consistently delivering good service to the population while concurrently increasing profit each year.

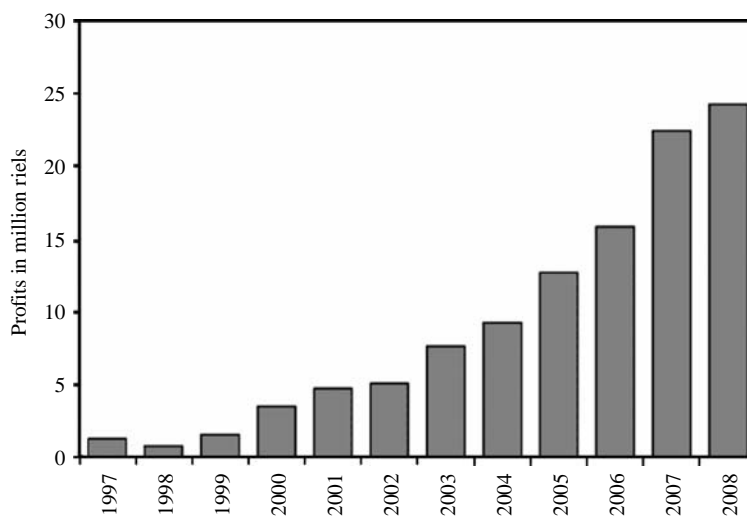


Figure 10. Net profits of PPWSA, 1997–2008. *Source:* PPWSA records.

PPWSA: An Overall Performance Assessment

In retrospect, if any independent and objective observer had been asked to make a realistic forecast on the future prospect of a near bankrupt, demoralized and a corrupt institution like the PPWSA in 1993, the most optimistic individual would probably have said “not very good.” At best, the prognosis would have been that the Authority would be able to improve its performance incrementally, and would manage to provide water of uncertain quality to some of the inhabitants of Phnom Penh for a few hours per day. The most optimistic forecast would have been that by 2003, the PPWSA would become an average water utility in the region with a mediocre, or perhaps even less than mediocre, performance.

Instead, the actual achievements of the PPWSA have confounded everyone, including its most ardent supporters and the donors. In only one decade, the institution has turned around 180 degrees, with a completely different mindset, a team spirit that is seldom observed in a utility (water, gas or electricity) in any developing country, and a ‘can do’ attitude which is very refreshing to observe. From 1994, and every year since that time, the Authority has made significant progress in all of the technical, managerial and financial performance indicators. It has continuously expanded its network, improved its management and operating efficiency, become financially self-sufficient, and progressively increased its net annual profit after paying appropriate income taxes to the Cambodian government—as one would expect from any private sector institution.

Within the 15-year timeframe, 1993–2008, the PPWSA increased its annual water production by 437%, distribution network by 557%, pressure of the system by 1260%, and customer base by 662%. During the same period, it reduced UFW losses from 72% of treated water produced in 1993 to only 6.19% at present. By judicious use of incentives and sanctions for its staff with transparent policies that were consistently implemented, and a strong and determined focus on capacity building for all its staff, the number of accounts served per employee increased by 671% during the same period.

During the same period, the number of metered connections has gone up by nearly 5255%, and the number of accounts handled per employee has increased by 671%. Even though people are now paying for the water they actually consume, per capita daily water consumption has nearly doubled, which must have a positive impact on the health and well-being of Phnom Penh residents.

Concluding Remarks

In terms of good governance, the experience of the PPWSA is a salutary example for the urban centres of the developing world. Many reasons are given by water utility managers, political leaders, and members of the water profession as to why it has not been possible to provide clean, drinkable water to the urban centres of the developing world. Among these has been the physical scarcity of water, lack of availability of investment funds, inability of the poor to pay for water, lack of expertise, and among many other reasons. In our view, all of these are only excuses to hide the real and fundamental reason for this shortcoming—poor leadership and governance of the urban water sector nearly all over the developing world. Phnom Penh has very clearly shown how it can be achieved under the most difficult circumstances, and in less than ten years.

Unless the urban water governance practices are improved significantly, as in the case of Phnom Penh, universal access to clean drinking water will remain an unachievable dream, even if hundreds of billions of dollars with no strings attached are made available to this sector each year.

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