

Country Water Actions

Country water actions are stories that showcase water reforms undertaken by individuals, communities, organizations, and governments in Asia-Pacific countries and elsewhere.



Cambodia: Phnom Penh Water Supply Authority: An Exemplary Water Utility in Asia

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Cambodia's Phnom Penh Water Supply Authority (PPWSA) is unlike a typical water utility in Asia. And it is not because it has service efficiency, greater water productivity, or increasing consumer base—other water utilities in the region have some of these traits at one time or another. PPWSA is different because it has achieved all these by radically transforming a decrepit and war-torn water supply system with missing water and missing customers into a model public sector water utility that provides 24 hour drinking water to Phnom Penh.

PPWSA: Before and After

Indicators	1993	2006
Staff per 1,000/connections	22	4
Production Capacity	65,000 m ³ /day	235,000 m ³ /day
Non Revenue Water	72%	6%
Coverage area	25%	90%
Total connections	26,881	147,000
Metered coverage	13%	100%
Supply Duration	10 hours/day	24 hours/day
Collection Ratio	48%	99.9%
Total revenue	0.7billion riels	34 billion riels
Financial situation	Heavy subsidy	Full cost recovery

YEARS OF DETERIORATION AND NEGLECT

Cambodia's 20-year civil war and the Khmer Rouge rule destroyed much of Phnom Penh's buildings and infrastructure. The water supply system, whose capacity shrank from 155,000 m³/day in the 1960s to 65,000 m³/day by 1993, was deteriorating. With century-old pipes and a poor distribution network, roughly only a quarter of the population received piped water.



PPWSA, the government-owned water supply utility, was having trouble meeting its challenges. Employees were demoralized, underpaid and under-qualified. Only 13% of connections had water meters, leading to inaccurate billing. Only 28% of water production was actually sold, with the collection rate not even reaching 50%. Illegal connections were prolific and unaccounted for water was at a high 72%. What's worse, PPWSA employees themselves were responsible for the water theft; they were installing illegal connections at \$1,000 per connection.

A CULTURE OF CHANGE

The year 1993 marked the beginning of the restoration of Phnom Penh's water infrastructure. With the assistance of external funding agencies, particularly the Asian Development Bank (ADB), and through internal reforms, PPWSA transformed itself into an efficient, self-financed, autonomous organization in a city still recovering from long years of war and civil strife.

Ek Sonn Chan, a young engineer who took PPWSA's helm, initiated a "culture of change" within the organization, starting with the education and motivation of PPWSA's staff. This was followed by a flurry of reforms, including

- **streamlining the organization's workforce**, e.g. giving more responsibility to higher management, promoting promising staff, giving higher salary and incentives to staff, fostering the spirit of teamwork, etc.
- **improving collection levels**, e.g. installing meters for all connections, computerizing the billing system, updating its consumer base, confronting high ranking nonpayers and cutting off their water if they refuse to pay, etc
- **rehabilitating the whole distribution network and treatment plants**, e.g. hiring locals in stead of international consultants for the job, manually looking for the pipes as all blueprints were destroyed during the civil war, mobilizing the communities to report leaks, etc.
- **minimizing illegal connections and unaccounted for water**, e.g. setting up inspection teams to stop illegal connections, penalizing those with illegal connections, giving incentives to the public to report illegal connections, etc
- **increasing water tariffs to cover maintenance and operating costs**, e.g. proposing a 3-step increase in tariffs over 7 years, although the 3rd step did not push through anymore because revenues already covered the costs by then.

Water service now covers 100% of inner city Phnom Penh and is being expanded to surrounding districts, with priority given to urban poor communities. In particular, PPWSA now serves 15,000 families in 123 urban poor communities, giving the poor extra privileges such as subsidized tariffs or connection fees, installment connection fees and more.

Non-revenue water has also decreased from 72% to 6%, while bill collection is now at 99.9%. Its 147,000 connections, up from 26,881 in 1993, bring reliable and safe drinking water to all of Phnom Penh's one million inhabitants 24 hours a day.

LESSONS FROM PPWSA'S EXPERIENCE

Here are some lessons from PPWSA's experience.

Water Doesn't Have To Be Free. The story of Phnom Penn demonstrates that access to water does not mean that it has to be free and that the urban poor will be considerably better-off paying for safe, piped water than they would be buying water of questionable quality from private vendors. For instance, Phnom Penh's unconnected residents used to pay 1,000 riels a day for water bought from private water vendors; today, they only spend about 5,000 riels per month for PPWSA-supplied water.

Cost Recovery is Vital. By developing a tariff structure where the utility fully recovers its cost of water production and transmission, the utility has become financially viable and is now able to invest in the water infrastructure. The PPWSA has reached full cost recovery in 2004 and is now making modest profits.

The Operator Must Be Autonomous. Although the PPWSA is still government-owned, it has enough autonomy to develop its own payment structure and culture with an enthusiastic and motivated staff responsive to consumer demand, and efficient operations where revenues pay for infrastructure development.

Government Support is Crucial. The tariff restructuring, which paved the way for PPWSA's greater revenues, would not be possible without the support of the Government of Cambodia and its development agencies. PPWSA would also not have the freedom to innovate if the government had not declared the utility an autonomous body in 1986.

Civil Society Must Be Involved. The remarkable increase in bill collection and reduction in illegal connections has also highlighted the importance of involving users and civil society in a service that they want and are willing to pay for. The key has been to develop a utility-customer relationship, based on long-term community building rather than short-term contractual relationships. Effective awareness campaigns also enabled PPWSA to increase tariffs with broad public support.

Investing in Staff Yields Radical Results. Today, PPWSA takes pride in its team of people who are hardworking, responsible and self-motivated. PPWSA professionalized its workforce, building its technical capacity (each staff receives an average of 12 days of training each year) and instilling in its employees a work ethic of discipline, competence and teamwork.

Water Champion at the Helm Drives Reforms. When Ek Sonn Chan introduced the "culture of change" to PPWSA, he started the utility on the road to recovery. With each reform that PPWSA has taken, he has been its driving force, leading his staff and the community by example.

PPWSA has shown that through a transparent environment where water utilities have sufficient autonomy, where tariffs can cover costs, where service is equitable to all and where there is the active involvement of staff and civil society, clean water targets can be met. Ek Sonn Chan says, "It doesn't matter whether water distribution is done by the private sector or a public agency, as long as these institutions are transparent, independent from political pressures, and accountable."

AWARDS REAPED AND A NEW CHALLENGE TO FACE

ADB's [Phnom Penh Water Supply and Drainage Project](#) provided the opportunity for PPWSA to partner with ADB and demonstrate its capacity for catalyzing water sector reforms. The project advocated the transfer of more managerial autonomy to PPWSA to enable it to use its own funds on maintenance and rehabilitation programs. The result: PPWSA became financially and operationally autonomous, achieved full cost recovery, and transformed into an outstanding public utility in the region.



In January 2004, PPWSA was awarded ADB's Water Prize—an award conferred to exemplary project agencies that have established sound practice in implementing ADB's "[Water for All](#)" policy—for dramatically overhauling Phnom Penh's water supply system and demonstrating leadership and innovation in project financing and governance. This year, Ek Sonn Chan receives the 2006 Ramon Magsaysay Award for Government Service for his "exemplary rehabilitation of a ruined public utility, bringing safe drinking water to a million people in Cambodia's capital city."

But perhaps what would be more rewarding for the PPWSA is to achieve its next challenge—improving Phnom Penh's sanitation system. Ek Sonn Chan says, "We convinced people to pay for the water they use. Now, we have to convince them to pay for the clean up of the waste they make."

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- [Cambodia Phnom Penh Water Supply Authority—Internal Reforms Fuel Performance Upgrade](#)
- [Water Champion Ek Sonn Chan on Pulling the Plug on Nonrevenue Water](#)
- [Asian Water Supplies case study](#)

*This article was first published online at ADB's [Water for All website](#) in July 2009: <http://www.adb.org/water/actions/CAM/PPWSA.asp>.