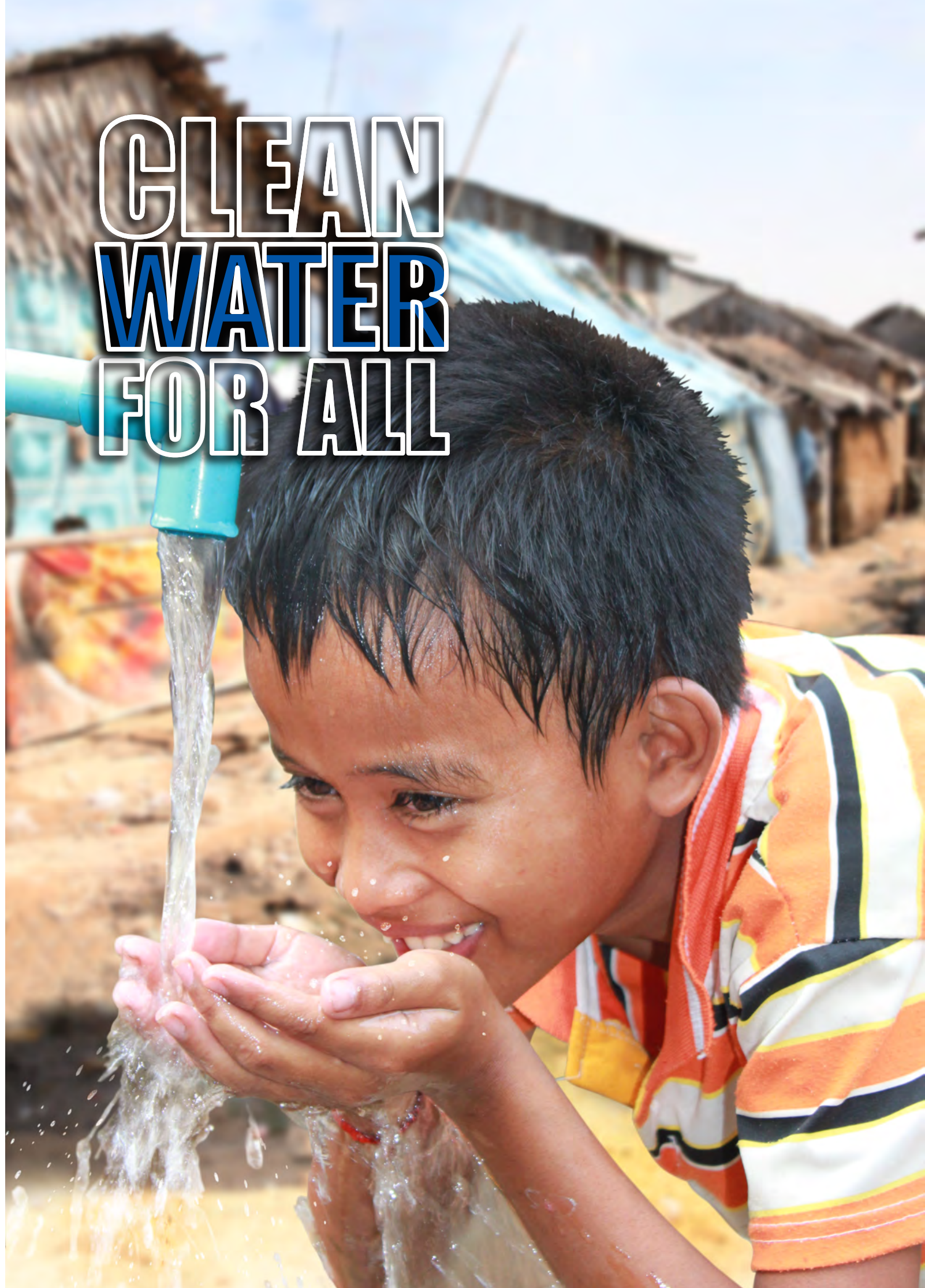


CLEAN WATER FOR ALL



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បុព្វកថា

**របស់សម្តេចអគ្គមហាសេនាបតីតេជោ ហ៊ុន សែន
នាយករដ្ឋមន្ត្រី នៃព្រះរាជាណាចក្រកម្ពុជា**

ជីវិតមនុស្ស សត្វ និងធម្មជាតិទាំងមូលពឹងផ្អែកលើទឹក ។ ក្នុងន័យនេះបានបង្ហាញថា ទឹកជាគុណជាតិវិសេសមួយសម្រាប់ភពនិងជីវិត ។ ឈរលើទស្សនវិស័យនេះ បណ្តារដ្ឋនីមួយៗតែងប្រឹងប្រែងកសាងប្រព័ន្ធហេដ្ឋារចនាសម្ព័ន្ធដើម្បីគ្រប់គ្រង និងផ្គត់ផ្គង់ធនធានទឹកសម្រាប់បំពេញដល់ជីវភាពរស់នៅប្រចាំថ្ងៃរបស់ប្រជាជន និងការអភិវឌ្ឍន៍កសិកម្ម និងផលិតកម្ម ។

ជាក់ស្តែង ចក្រភពអង្គរខ្មែរបានប្រឹងប្រែងបង្កើតប្រព័ន្ធហេដ្ឋារចនាសម្ព័ន្ធធនធានទឹកនេះយ៉ាងខ្លាំងក្លាសម្រាប់ការអភិវឌ្ឍន៍កសិកម្ម ហើយបានធ្វើឲ្យសង្គមខ្មែរសម័យកាលនោះជួបប្រទះនូវភាពរុងរឿងខ្ពស់ត្រដែត ។ ពិតណាស់ ប្រព័ន្ធធារាសាស្ត្រដូចជាបាយក្រវែល និងព្រែកជីកមិនត្រឹមតែបានបង្កើនភាពធនធានទឹកសម័យអង្គរអាចផលិតស្រូវបានច្រើន ដើម្បីផ្គត់ផ្គង់ដល់ប្រជាជនដែលរស់នៅចក្រភពអង្គរដ៏ធំធេងនាសម័យនោះប៉ុណ្ណោះទេ ប៉ុន្តែថែមទាំងបង្កើតបាននូវមូលដ្ឋានលើការគ្រប់គ្រងធនធានទឹកប្រកបដោយស្រសិទ្ធភាពទៀតផង ។

បច្ចុប្បន្នកម្ពុជាមានធនធានទឹកច្រើនអនេក ពីព្រោះភូមិសាស្ត្ររបស់កម្ពុជាស្ថិតក្នុងអាងទន្លេមេគង្គផ្នែកខាងក្រោម ហើយត្រូវបានគេចាត់ទុកជាប្រទេសមួយសម្បូរណ៍ធនធានទឹក ។ ទឹកនៅកម្ពុជា គឺជា **មាសរៀវ** ដែលកំពុងត្រូវបានកែច្នៃជាបណ្តើរៗសម្រាប់បន្តការវិវត្តលទ្ធផលនៃជីវភាពរស់នៅប្រជាជន និងសង្គមជាតិទាំងមូល ។ ប៉ុន្តែកិច្ចការនេះទាមទារនូវកិច្ចខិតខំប្រឹងប្រែងយ៉ាងច្រើនបន្ថែមទៀត ជាពិសេស គឺត្រូវការមនុស្សពិតដែលយកអស់កម្លាំងស្មារតីក្នុងបុព្វហេតុបំពេញនូវបេសកកម្មនេះ ។

ខ្ញុំនៅចាំបានថា ក្នុងជីវិតជាក្មេងរៀនរបស់ខ្ញុំនៅវត្តនាគវន្ត រាជធានីភ្នំពេញ ការងារដោះស្រាយទឹកប្រគេនព្រះសង្ឃ គឺជាការងារប្រចាំថ្ងៃរបស់ខ្ញុំមួយដ៏លំបាក ពីព្រោះខ្ញុំត្រូវចំណាយកម្លាំងកាយ និងពេលវេលាដ៏ច្រើនជាប្រចាំថ្ងៃដើម្បីរឹតទឹកដាក់ពង ។ ដោយឡែកក្រោយថ្ងៃដោះ **៧ មករា ១៩៧៩** គ្រួសារខ្ញុំ និងប្រជាជនភ្នំពេញជាច្រើនទៀតបានរីកចម្រើននូវប្រើប្រាស់អស់ពេលជាច្រើនខែ ទំកំតែប្រព័ន្ធផ្គត់ផ្គង់ទឹកដ៏ចាស់ទ្រុឌទ្រោមត្រូវបានស្តារឡើងវិញជាជំហានៗនោះ ។ ចំណុចនេះបញ្ជាក់ថា មិនមែនយើងមានប្រភពទឹកច្រើនហើយ ក៏អាចធ្វើឲ្យជីវភាពរស់នៅរបស់

ប្រជាជនមានភាពងាយស្រួល និងរីកចម្រើននោះឡើយក្នុងនោះចាំបាច់យើងត្រូវបន្តរៀបចំប្រព័ន្ធផ្គត់ផ្គង់និងចែកចាយទឹកឲ្យបានគ្រប់គ្រាន់ និងពេញលេញមួយ ។

បច្ចុប្បន្ននេះ ពពកខ្មៅទាំងនេះបានរលាយទៅហើយ ។ ការផ្គត់ផ្គង់ទឹកនៅរាជធានីភ្នំពេញមានការរីកចម្រើន និងមានសេវាលំដាប់ពិភពលោក តាមរយៈការអភិវឌ្ឍន៍ក្នុងថេរវិទ្យាដែលបានចាប់ផ្តើមពីចំណុចក្រោមសូន្យ បន្ទាប់ពីបានទទួលឯកសារប័ណ្ណបញ្ជាក់ដល់ប្រជាជនពីសំណាក់របបវាលពិឃាតប៉ុលពត ។

ក្នុងខែកញ្ញា ឆ្នាំ ២០១០ នេះ ខ្ញុំមានមោទនភាពណាស់បន្ទាប់ពីបានដឹងថា ពានរង្វាន់ឧស្សាហកម្មទឹកស្អាតក្រុងស្តុកហូម ឆ្នាំ ២០១០ ដែលជាពានរង្វាន់ថ្នាក់ពិភពលោកបានធ្លាក់ក្នុងដៃរដ្ឋាករទឹកស្វយ័តរាជធានីភ្នំពេញ ។ ពានរង្វាន់នេះ គឺជាសក្ខីភាពថ្មីមួយទៀតនៃការខិតខំប្រឹងប្រែងធ្វើឲ្យមានការផ្លាស់ប្តូរយ៉ាងធំធេង នៃអង្គការរដ្ឋាករទឹកស្វយ័តរាជធានីភ្នំពេញដែលកំពុងឈានទៅមុខប្រកបដោយភាពរីកចម្រើន ។ ពានរង្វាន់នេះក៏ជាមោទនភាពថ្មីមួយទៀតរបស់មន្ត្រី - និយោជិត ជាពិសេសឯកឧត្តមប្រតិភូរាជរដ្ឋាភិបាលទទួលបន្ទុកជាអគ្គនាយករដ្ឋាករទឹកស្វយ័តរាជធានីភ្នំពេញបន្ថែមលើកិត្តិយសដែលខ្ញុំបានផ្តល់ជាវិៈបុរសធនធានទឹក នាថ្ងៃទី ១៨ ខែ តុលា ឆ្នាំ ២០០៦ កន្លងទៅនោះ ។

ក្នុងនាមខ្លួនខ្ញុំផ្ទាល់ និងក្នុងនាមរាជរដ្ឋាភិបាល ខ្ញុំសូមគ្រាំទ្រ និងកោតសរសើរដល់ឯកឧត្តមប្រតិភូ និងមន្ត្រីនិយោជិតទាំងអស់នៃអង្គការរដ្ឋាករទឹកស្វយ័តរាជធានីភ្នំពេញដែលបានខិតខំប្រឹងប្រែងផ្តល់សេវាប្រកបដោយគុណភាព និងស្រសិទ្ធភាពពេលកន្លងមក ។ ខ្ញុំសង្ឃឹម និងជឿជាក់យ៉ាងមុតមាំថា វិធីសាស្ត្រ និងបទពិសោធន៍ការងាររបស់រដ្ឋាករទឹកស្វយ័តរាជធានីភ្នំពេញ ក្រោមការដឹកនាំរបស់ឯកឧត្តមប្រតិភូ ពិតជាកំរូមួយដ៏សមស្របបំផុតដែលអាចយកទៅប្រើប្រាស់តាមបណ្តាអង្គការទឹកស្អាតខេត្ត - ក្រុងទាំងអស់នូវទូទាំងព្រះរាជាណាចក្រកម្ពុជា ហើយក៏ជាកម្លាំងចលកម្មមួយជួយធ្វើឲ្យសម្រេច **បានគោលដៅទី ៧ នៃគោលដៅអភិវឌ្ឍន៍សហប្រយុទ្ធសាស្ត្រ** ដែលសំដៅជំរុញឲ្យប្រជាជនទូទាំងប្រទេសមានទឹកស្អាតប្រើប្រាស់ និងមានសេវា អនាម័យត្រឹមត្រូវដើម្បីការរស់នៅប្រកបដោយសុខុមាលភាព មានជីវភាពល្អស្រស់ និងមានបរិស្ថានល្អ ។

ខ្ញុំសូមឧទ្ទិសកិច្ចខិតខំប្រឹងប្រែងទាំងអស់របស់ឯកឧត្តមប្រតិភូ និងមន្ត្រី - និយោជិតរដ្ឋាករទឹកស្វយ័តរាជធានីភ្នំពេញ ជាគំរូវិភាគចារលើសីលធម៌មតៈគង្គីកូនចៅជំនាន់ក្រោយៗទៀតជានិច្ចនិរន្តរ៍ ។

រាជធានីភ្នំពេញ, ថ្ងៃទី ២២ ខែ កុម្ភៈ ឆ្នាំ ២០១១


ហ៊ុន សែន

PREAMBLE
By Samdech Akka Moha Sena Padei Techo HUN SEN,
Prime Minister of the Kingdom of Cambodia

Human beings, animals and the whole of nature truly need water. In this regard, water is clearly a special part of the planet and our lives. Based on this understanding, each and every state is constantly trying to build an infrastructure system in order to control and supply water resources to meet its people's needs in their everyday lives and for the development of agriculture and productivity.

The Khmer Angkor Empire actually tried very hard to build a water resource infrastructure system for the development of agriculture, leading to Khmer society in that period experiencing prosperity and glory. Of course, the irrigation system, including reservoirs and canals, not only enabled the Khmer in the Angkor Period to produce enormous rice yields to supply the people living in the vast Angkor Empire at that time, but also created a basis for the effective control of water resources.

Cambodia currently has considerable water resources because of its geographical location in the lower part of the Mekong River basin. It is considered to be a country that is rich in water resources. Water in Cambodia is **Blue Gold**, which is gradually processed to assist in the ongoing growth of people's livelihoods and the nation as a whole. However, this task requires greater effort, in particular it requires persons to expend both physical and spiritual effort for the sake of this mission.

I still remember in my life as a pagoda boy at Wat Neakvovan in Phnom Penh, that addressing the water issue for monks was a difficult daily task of mine because I had to spend a great deal of both physical strength and time on a daily basis to carry water to fill the jars. Anyway, following the liberation day on **January 7, 1979** my family and many other people in Phnom Penh had to carry water from the four-face river for consumption [purposes] for many months until the dilapidated water supply system was gradually restored. This point

emphasizes that even though we have many sources of water we cannot improve and upgrade people's living [conditions]. Indeed, it is necessary for us to continue to organize an adequate and complete water supply and distribution system.

Now those black clouds have vanished. Water supply in Phnom Penh has been improved and ranks as world class through development within the period of time starting from point zero following the destruction to the roots by the Pol Pot killing field regime.

This September 2010, I am very proud to learn that the Clean Water Industry Award of Stockholm 2010, which is a world-class award, has been awarded to the Phnom Penh Water Supply Authority. This award is a new evidence of effort towards great change of the Phnom Penh Water Supply Authority which has been progressing and growing. This award also serves as a source of new pride for officials and employees, especially His Excellency the Delegate of the Royal Government, Director-General of the Phnom Penh Water Supply Authority, in addition to the honorary title I already granted to him as a water resources hero on October 18, 2006.

On my own part and in the name of the Royal Government, I hereby express my support and commendation to His Excellency the Delegate and all officials and employees of the Phnom Penh Water Supply Authority for putting their efforts into providing a quality and effective service so far. I firmly hope and believe that the Phnom Penh Water Supply Authority's methods and work experience under the leadership of His Excellency the Delegate truly serve as the most appropriate models to be used in all provincial-municipal clean water entities throughout the Kingdom of Cambodia and will also serve as a driving force to help achieve **the seventh goal of the Cambodian Millennium Development Goals** which aims to help provide all people throughout the country with access to clean water for consumption and a hygienic service so people can live with comfort, a good standard of living and in a good environment.

I hereby dedicate all the efforts of His Excellency the Delegate as well as officials and employees of the Phnom Penh Water Supply Authority as models of patriotism permanently carved on everlasting stone for the people of future generations.



Stockholm Industry Water Award 2010

Phnom Penh Water Supply Authority Wins Stockholm Industry Water Award 2010

In recognition of its world class performance in water supply and self-sufficiency, the Cambodian Phnom Penh Water Supply Authority (PPWSA) under the leadership of General Director Ek Sonn Chan has been named the winner of the Stockholm Industry Water Award 2010.

Decades of conflict left the Phnom Penh water supply system running low until 1993, when Mr. Ek Sonn Chan was appointed as General Director of the PPWSA. Together with his team, he managed to refurbish the whole supply system, introduce cost-effective billing and payment collection methods, as well as world class management to provide water to almost all of the city's residents.

“The PPWSA has successfully fought corruption and shown this can be achieved in a developing country on a large-scale basis using simple but effective management techniques that are based on well-accepted business principles and strategies. As a self-sufficient company, operating without subsidies from the state, PPWSA today provides 24-hour service and 90 per cent coverage to a city of 1.3 million and fully recovers its costs as it continues to develop both its infrastructure and management” said the International Award Jury in its citation.

The PPWSA will receive the award during the World Water Week in Stockholm 2010, September 5-11.

Accepting the award on behalf of PPWSA, Mr. Ek Sonn Chan said the award puts his organisation in the same league as other world class water industry organisations, reinforcing their drive towards achieving future objectives. "My team is encouraged by this prestigious award to carry on our mission to increase our collection efficiency, improve water regulation, and provide water continuously for a price affordable by our society through good management and cost-recovery practices and despite increases in electricity and other costs," he said.

About the Stockholm Industry Water Award

The Stockholm Industry Water Award recognises the business sector's contribution to sustainable water management, by minimising water consumption and environmental impact. It is given to any sector of business and industry. The Award was established in 2000 by the Stockholm Water Foundation in collaboration with the Royal Swedish Academy of Engineering Sciences and the World Business Council for Sustainable Development. It is administered by Stockholm International Water Institute (SIWI).

SIWI - Independent, Leading-Edge Water Competence for Future-Oriented Action

The Stockholm International Water Institute (SIWI) is a policy institute that contributes to international efforts to combat the world's escalating water crisis. SIWI develops and promotes future-oriented and knowledge-integrated policies, towards sustainable use of the world's water resources leading to sustainable development and poverty eradication.

Past Laureates

- 2009 Trojan Technologies, Canada
- 2008 Orange County Water and Sanitation District, USA
- 2007 Public Utilities Board (PUB), Singapore
- 2006 Sydney Water Corporation, Australia
- 2005 Procter & Gamble, USA
- 2004 Staple Fibre Division of Grasim Industries Ltd, India
- 2003 ZENON Environmental Inc, Canada
- 2002 Kaldnes Miljøteknologi AS, Norway
- 2001 The General Motors de Mexico Ramos
- 2000 Northumbrian Water Limited, United Kingdom, Arizpe Complex, Mexico



The management & staff of Synergistic Innovations Sdn Bhd are proud to be associated with PPWSA and would like to send our



Award by:



*Heartiest Congratulations
to
PPWSA
as
the winner of the Prestigious
Stockholm Industry Water Award
for the year 2010*

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The provider of enterprise resource planning system SUMS WATER are proud to be the vendor and ERP consultant to PPWSA, to create a perfectly tailored management system for water organisations.



Synergistic Utilities Management System





**បុព្វកថា
ឯកឧត្តម ស៊ុយ សែម
រដ្ឋមន្ត្រីក្រសួងឧស្សាហកម្ម រ៉ែ និងថាមពល**

ក្នុងឆ្នាំ ២០០៣ កន្លងទៅ **សម្តេចអគ្គមហាសេនាបតីតេជោ ហ៊ុន សែន** នាយករដ្ឋមន្ត្រីនៃ ព្រះរាជាណាចក្រកម្ពុជា បានអះអាងអំពីការប្តេជ្ញាចិត្តយ៉ាងម៉ឺងម៉ាត់ក្នុងការដឹកនាំ សំរេចសុខ និងជំរុញ ដើម្បីសម្រេចឲ្យបាននូវ **គោលដៅទី ៧ នៃគោលដៅអភិវឌ្ឍន៍សហស្សវត្សកម្ពុជា** ដែលសំដៅជំរុញឲ្យប្រជាពលរដ្ឋនៅទូទាំងប្រទេសមានទឹកស្អាតប្រើប្រាស់ និងមានសេវាកម្មអនាម័យត្រឹមត្រូវ ដើម្បីការរស់នៅប្រកបដោយសុខុមាលភាពមានជីវភាពល្អប្រសើរ និង មានបរិស្ថានល្អ ។

ជាកូនកសិករម្នាក់ រស់តាមដងស្ទឹងពោធិសាត់ ខ្ញុំនៅចាំថា ក្រៅពីម៉ោងរៀនសូត្រ ខ្ញុំត្រូវរែកទឹកស្រោចបន្លែជា រៀងរាល់ល្ងាច ។ កិច្ចការនេះ បានធ្វើឲ្យខ្ញុំយល់អំពីតម្លៃនៃទឹក ។ ទឹកជាមូលដ្ឋាននៃជីវិត ។

ក្នុងតួនាទីជា រដ្ឋមន្ត្រីក្រសួងមួយដែលមាន ភារកិច្ចដឹកនាំការគ្រប់គ្រង និង អភិវឌ្ឍន៍វិស័យទឹកស្អាតនៅកម្ពុជា ខ្ញុំនៅមានបំណងធ្វើឲ្យទឹកស្អាតមានគ្រប់គ្រាន់ នៅគ្រប់ទីកន្លែងក្នុងតម្លៃមួយដ៏សមស្របនឹងហោប៉ៅ ប្រជាជនគ្រប់រូប ។ ដើម្បីសម្រេចបំណងនេះ នាខែ ឧសភា ឆ្នាំ ២០០៤ ខ្ញុំបានទទួលការងារកាតព្វកិច្ចជា ក្នុងការរដ្ឋាករទឹកស្អាតក្រុងភ្នំពេញស្ថិតនៅ ក្រោមការគ្រប់គ្រងរបស់ក្រសួងឧស្សាហកម្ម រ៉ែ និងថាមពល

ក្នុងគោលបំណងពង្រីក បេសកកម្មបំបែកសេវាកម្មទឹកស្អាត ដ៏មានប្រសិទ្ធភាពរបស់អង្គការនេះ ចេញក្រៅពីរបង រាជធានីភ្នំពេញតាមតែអាចធ្វើបាន ។

ក្នុងរយៈពេលមួយដំបូងបំផុតនៅឆ្នាំ ២០០៥ ប្រជាពលរដ្ឋរស់នៅទីប្រជុំជនគ្រប់ខេត្តកណ្តាល មានទឹកស្អាតប្រើប្រាស់ផ្ទាល់ពីបណ្តាញរដ្ឋ ២៤ ម៉ោង លើ ២៤ ម៉ោងក្នុងតម្លៃដ៏សមស្របបំផុតពីរដ្ឋាករទឹកស្អាតក្រុងភ្នំពេញដែលធានាបានទាំងបរិមាណ និង គុណភាព ជំនួសឲ្យប្រព័ន្ធគ្រប់គ្រង និង ចែកចាយចាស់ដែលជាប់នឹងរាជធានីភ្នំពេញ ទទួលបានសេវាទឹកស្អាតមានគុណភាព ដូចប្រជាពលរដ្ឋដែលរស់នៅក្នុងរាជធានីភ្នំពេញដែរ ។ លើសពីនេះទៅទៀត អង្គការទឹកស្អាតនៅទូទាំងប្រទេស បានមករៀនសូត្រដកពីសោធន៍ពីគំរូដឹកនាំ និងប្រសិទ្ធភាពដ៏លើសពីអង្គការទឹកស្អាតក្រុងភ្នំពេញដែលនេះជាការផ្តល់ជំនួយ និងចំណេះដឹងមួយមានលក្ខណៈសាមញ្ញជាក់ស្តែង និងមានប្រសិទ្ធភាព ។

បំណងរបស់ខ្ញុំបានក្លាយជាការពិតជាជំហានៗ នៅតាមទីប្រជុំជនជាច្រើនមានទឹកស្អាត ប្រើប្រាស់គ្រប់គ្រាន់ ។ វិស័យទឹកស្អាតនៅកម្ពុជាមានការរីកចំរើនយ៉ាងឆាប់រហ័ស ។ រដ្ឋាករទឹកស្អាតភ្នំពេញ បានសំរេចជោគជ័យយ៉ាងជំរេញក្នុងការកាត់បន្ថយទឹក បាត់បង់មកក្នុងកំរិតលេខ១

ខ្ពង់លប់បំបាត់បានអំពើពុករលួយ ផ្តល់សេវាទឹកស្អាតអាចដឹកបានពីក្បាលរ៉ូប៊ីណេដល់រាប់ម៉ឺនគ្រួសារ រួមទាំងគ្រួសារក្រីក្របំផុតផងដែរក្នុងតម្លៃមួយដ៏សមស្រប រួមចំណែកក្នុងគោលនយោបាយកាត់បន្ថយភាពក្រីក្ររបស់រាជរដ្ឋាភិបាលដែលមាន **សម្តេចអគ្គមហាសេនាបតីតេជោ ហ៊ុន សែន** ជាប្រមុខ ។

ខ្ញុំយល់ថាពេលនេះ សហគមន៍អន្តរជាតិ បានសំរេចផ្តល់ពានរង្វាន់ឧស្សាហកម្មទឹកស្អាតក្រុងភ្នំពេញឆ្នាំ ២០១០ ដល់រដ្ឋាករទឹកស្អាតក្រុងភ្នំពេញ គឺពិតជាសក្តិសមឥតខ្ចោះ ។ នេះជាសច្ចភាពមួយពុំអាចប្រកែកបាន អំពីការរីកចំរើនរបស់វិស័យទឹកស្អាតនៅកម្ពុជា ។ ខ្ញុំជឿជាក់ថា ក្រោយពីបានទទួលពានរង្វាន់នេះ រដ្ឋាករទឹកស្អាតក្រុងភ្នំពេញ និងកាន់តែខិតខំបន្ថែមទៀត ដើម្បីខ្លួនឯងផង និងដើម្បីទឹកស្អាតនៅកម្ពុជាទាំងមូលផង ។

ក្នុងនាមខ្លួនខ្ញុំផ្ទាល់ ក៏ដូចជាក្នុងនាមក្រសួងអាណាព្យាបាលខ្ញុំសូមជូនពរដល់ឯកឧត្តមប្រតិភូ និងមន្ត្រី - និយោជិតរដ្ឋាករទឹកស្អាតក្រុងភ្នំពេញទាំងអស់ប្រកបដោយពុទ្ធពរទាំង ៤ ប្រការគឺ៖ អាយុ វណ្ណ សុខៈ និង ពលៈ ជានិច្ចនិរន្តរ៍ ជារៀងរហូត ដើម្បីបន្តបេសកកម្មផ្តល់សេវាទឹកស្អាតប្រកបដោយគុណភាពជូនប្រជាពលរដ្ឋទៅទៀត ។



Message from His Excellency Suy Sem Minister of Industry, Mines and Energy

In 2003 **Samdech Akka Moha Sena Padei Techo HUN SEN**, Prime Minister of the Kingdom of Cambodia, made a firm commitment to lead, facilitate and promote the achievement of **the seventh goal of the Cambodian Millennium Development Goals** through promoting access to clean water and proper hygiene services for the citizens in the whole country to improve their welfare and livelihood and ensure a good environment.

As a son of a farmer's family living on Pursat River, I remember that I had to carry water to water the vegetables every evening after my study time. This work made me understand the value of water. Water is the basis of life.

In my capacity as a minister with a duty to lead, manage and develop clean water systems in Cambodia, my intention remains to provide sufficient clean water at a reasonable price for people everywhere. In order to achieve this intention, in May 2004, I was granted authorization from the Royal Government to put the Phnom Penh Water Supply Authority under the supervision of the Ministry of Industry, Mines and Energy with the aim of expanding the mission to

effectively provide clean water services by this unit outside Phnom Penh where possible.

After a very short period of time, in 2005, the people living in the downtown of Takhmao, Kandal province, were able to directly access the same clean and quality water from the state network 24 hours a day at a reasonable price fixed by the Phnom Penh Water Supply Authority ensuring both quantity and quality of the water and replacing the former management and distribution system connected to Phnom Penh as those who live in Phnom Penh. Moreover, the clean water units in the country came to learn and acquire experience about leading model and effective business operations from the Phnom Penh Water Supply Authority, and this ensured the simple, practical and effective transfer of knowledge and know-how.

I have achieved my aim gradually; many downtowns can now access sufficient clean water. Clean water in Cambodia has rapidly developed. The Phnom Penh Water Supply Authority has significantly succeeded in reducing the water loss to the extent [that] corruption has been eliminated, providing clean water available

directly from faucets for tens of thousands of families, including the poorest families, at a reasonable price which contributes to the poverty reduction policy of the Royal Government led by **Samdech Akka Moha Sena Padei Techo HUN SEN**.

I am of the opinion that the Phnom Penh Water Supply Authority deserves to be awarded the Stockholm Industry Water Award 2010 by the international community. It is the undisputable truth to everyone that [the provision of] clean water in Cambodia has developed. It is my belief that after winning this award, the Phnom Penh Water Supply Authority will further try its best for the sake of its own reputation and clean water in Cambodia alike.

On behalf of the supervisory ministry and on my own part, may His Excellency the delegate, and officials and employees of the Phnom Penh Water Supply Authority be blessed with four benedictions of Buddha: longevity, unfading beauty, peace and power forever to further fulfill the mission of providing a clean and quality water service for the people.





បុព្វកថា
ឯកឧត្តម ឯក សុនចាន់
ប្រតិភូរាជរដ្ឋាភិបាលកម្ពុជាទទួលបន្ទុក
ជាអគ្គនាយករដ្ឋាករទឹកស្វយ័តក្រុងភ្នំពេញ

ចាស់បូកណាបានប្រដៅថា៖ **បានមានកុំរួចគ្រាប្រា បានល្អកុំរួចគ្រាលំបាក** ។ ពានរង្វាន់ឧស្សាហមក្សទឹកស្អាតក្រុងស្តុកហូម បាននាំមកនូវសេចក្តីរីករាយយ៉ាងធំធេងលាយឡំជាមួយការនឹកឃើញនូវការលំបាកលំបិននាអតីតកាលដែលហាក់ដូចជានៅថ្មីៗសោះ ។

ខ្ញុំបានទទួលការតែងតាំងពីអតីតឯកឧត្តមអភិបាលរាជធានីភ្នំពេញឲ្យមកដឹកនាំរដ្ឋាករទឹកក្រុងភ្នំពេញ នៅថ្ងៃទី ១១ ខែ កញ្ញា ឆ្នាំ ១៩៩៣ ។ ស្ថានភាពរបស់អង្គការនាពេលនោះលំបាកខ្លាំងណាស់, ភាពទ្រុឌទ្រោមនៃប្រព័ន្ធផលិតកម្ម និងកង្វះថាមពលអគ្គិសនី ញ៉ាំងឲ្យផលិតបានតែប្រមាណ ៣០% នៃសមត្ថភាពដំឡើង ១៥០.០០០ ម៉ែត្រគូបក្នុងមួយថ្ងៃ ។ ប្រព័ន្ធចែកចាយចាស់ទ្រុឌទ្រោម និង ភាពកំសោយនៃការគ្រប់គ្រង បានបណ្តាលឲ្យទឹកដែលបានផលិតជាង ២/៣ បាត់បង់តាមផ្លូវ ។ ការផ្គត់ផ្គង់មាន តែប្រមាណ ១០ម៉ោង/ថ្ងៃ ជាមួយនឹងសម្ពាធទឹកតែត្រឹម ២ម៉ែត្រប៉ុណ្ណោះ ។ និយោជិករដ្ឋាករទឹកដែលមានចំណូលផ្លូវការតិចជាង ១ដុល្លារអាមេរិក/ថ្ងៃ នឹង

នៅសែនឆ្ងាយពី ប្រជាជន ។ ដោយលំបាកពេក ពេលខ្លះអ្នកភ្នំពេញត្រូវទៅទន្លេបួនមុខដើម្បីរងទឹក និងបោកគក់ខោអាវ ។ គ្រួសារខ្លះត្រូវរឹងផ្នែកលើទឹកអណ្តូងដែលសម្បូរដោយជាតិដែក និងជួនកាលមានអារសេនិកទៀតផង ។ រដ្ឋាករទឹកអាចដំណើរការទៅបាន ដោយប្រើប្រាស់អគ្គិសនីមិនសងប្រាក់ និងដោយការឧបត្ថម្ភធនពីរាជរដ្ឋាភិបាល ។ នេះជាកេរមត៌កនៃរបបប៉ុលពត គូបផ្សំនឹងការហ៊ុមព័ទ្ធសេដ្ឋកិច្ច ពីសហគមន៍អន្តរជាតិនៅក្រោយថ្ងៃរំដោះ ៧ មករា ១៩៧៩ ។

ក្នុងស្ថានភាពបែបនេះ អង្គការទាំងមូលពោរពេញដោយវប្បធម៌ធ្វើការបំរើផលប្រយោជន៍បុគ្គល និងបក្សពួក ពុំបានយកការបម្រើសុខុមាលភាពប្រជាជន ជាបេសកកម្មគ្មានទស្សនៈវិស័យច្បាស់លាស់ ។ ផ្តើមចេញពីនេះយើង បានរៀបចំរចនាសម្ព័ន្ធចាត់តាំងថ្មីបំពាក់ទៅដោយនិយោជិតដែលមានឆន្ទៈមោះមុតក្នុងការងារ មានសមត្ថភាពនិងគុណធម៌ជាជាង ជាបក្សពួក និងគ្រួសារខ្លួន ។ ទន្ទឹមនឹងការបណ្តុះបណ្តាលជំនាញដ៏បូងដ៏សាមញ្ញៗដល់

ក្បាលម៉ាស៊ីនថ្មីនេះ យើងបានចាប់ផ្តើមពីការធ្វើអង្កេតអតិថិជន, ការបំពាក់នាឡិកាលើបណ្តាញចូលផ្ទះ, ការខិតខំព្រះពារទារប្រាក់រឹកយប់ត្រទឹក, ការជួសជុលទឹកឆ្ងាយ, ការកាត់បន្ថយទឹកបាត់បង់ ។ ជាជំហានៗយើងបានពង្រឹងវិន័យ, កសាងលក្ខន្តិកៈ, កសាងបណ្តាឯកសារគតិយុត្តិធម៌ ។ នៅថ្ងៃទី ១៩ ខែ ធ្នូ ឆ្នាំ ១៩៩៦ រាជរដ្ឋាភិបាលបានសម្រេចឲ្យយើងក្លាយជាសហគ្រាសសារធារណៈ មានលក្ខណៈសេដ្ឋកិច្ច និងបានសម្រួលថ្លៃទឹកឲ្យមានថ្លៃ ដែលអាចធានាចំណាយបាន ។ ស្ថានភាពថ្មីនេះ បានជួយបន្ថែមល្បឿននៃកំណែទម្រង់ផ្ទៃក្នុងរបស់យើង រួមផ្សំដោយជំនួយរបស់ប្រទេសបារាំង, ជប៉ុន, ធនាគារពិភពលោក, ធនាគារអភិវឌ្ឍន៍អាស៊ី ។ល។ អត្រាទឹក បាត់បង់បានកាត់បន្ថយបង្គុលក្នុងរយៈពេលមានទឹកសម្រាប់ផ្គត់ផ្គង់ ។ បច្ចុប្បន្នក្នុងបរិមាណទឹក ១០០ម៉ែត្រគូប ផលិតមានតែ ៦ម៉ែត្រគូបប៉ុណ្ណោះ ដែលមិនបានប្រើប្រាស់ ។ ប្រជាជន ៩០% រួមទាំងអ្នកក្របីផុត បានទទួលសេវាទឹកស្អាត ២៤ម៉ោង ជាមួយគុណភាពដែលអាចផឹកបានផ្ទាល់ពី



ក្បាលរ៉ូប៊ីណេ ។ យើងបានខិតខំរក្សាថ្លៃទឹកឲ្យនៅដដែល តាំងតែពីឆ្នាំ ២០០១ មកក្នុងស្ថានភាពដែលអ្វីៗបានឡើង ថ្លៃជាពីរ ឬ ជាបីដង ក្នុងអំឡុងពេលនេះ ។ រាល់ការ តវ៉ា ឬ សំណួររបស់អតិថិជនដែលទាក់ទងនឹងសេវាទឹក ស្អាតរបស់យើង តែងតែទទួលបាននូវការឆ្លើយតបយ៉ាង ទាន់ពេល និង ដោយសច្ចៈទៀងត្រង់ ។ ដោយពេញ ចិត្តនឹងសេវារបស់យើងពាក្យគំរោះគំរើយបានក្លាយជាទង់ ភ្លឺរំលឹករបស់យើងអ្នកអរគុណ ។ ជា ពិសេសខ្ញុំបានទទួលកិត្តិយសធំធេងបំផុតនៅថ្ងៃទី ១៨ ខែ តុលា ឆ្នាំ ២០១៦ នៅក្រុមប្រឹក្សាអភិវឌ្ឍន៍កម្ពុជា សម្តេចអគ្គមហាសេនាបតីតេជោ ហ៊ុន សែន បាន ប្រសិទ្ធភាពខ្ញុំជា **វិជនជនជនទឹក** ជំនួសឲ្យការ **អាស្រ័យ** ដែលគេបានដាក់ឲ្យខ្ញុំ នៅពេលដំបូងនៃដំណាក់កាល កំណែទម្រង់នេះ ។ ជាបន្តបន្ទាប់ រដ្ឋាករទឹកក្រុងភ្នំពេញ ត្រូវបានទទួលស្គាល់នៅលើឆាកអន្តរជាតិ ។ ថ្មីៗនេះ នៅថ្ងៃទី ៨ ខែ កញ្ញា ឆ្នាំ ២០១០ យើងបានឈ្នះពានរង្វាន់ ដ៏ខ្ពង់ខ្ពស់គឺ **ពានរង្វាន់ឧស្សាហកម្មទឹកស្អាតក្រុងស្អាតបូម** ។

គណៈមេប្រយោគនៃពានរង្វាន់នេះបានប្រកាសថា៖ **ក្នុងការទទួលស្គាល់ស្នាដៃដែលមានកម្រិតថ្នាក់ពិភពលោក ក្នុងក្របខ័ណ្ឌសេវាទឹកស្អាត និង មានចីរភាពរដ្ឋាករទឹក ស្វយ័តក្រុងភ្នំពេញ ក្រោយការដឹកនាំរបស់អគ្គនាយក លោក ឯក សុនចាន់ ត្រូវបានជាប់ជាអង្គការទទួលបាន ពានរង្វាន់ឧស្សាហកម្មទឹកស្អាតក្រុងស្អាតបូមឆ្នាំ ២០១០ ។**

ជោគជ័យរបស់រដ្ឋាករទឹកស្វយ័តក្រុងភ្នំពេញអាចបញ្ជាក់ ប្រាប់ពិភពលោកបានថា គោលដៅទី៧ នៃគោលដៅ អភិវឌ្ឍន៍សហប្រតិបត្តិការ របស់រាជរដ្ឋាភិបាលដែល មាន **សម្តេចអគ្គមហាសេនាបតីតេជោ ហ៊ុន សែន** ជាប្រមុខ ពិតជានឹងសម្រេចបាន ។ ក្នុងដំណាក់កាល ថ្មីនេះ រដ្ឋាករទឹកស្វយ័តក្រុងភ្នំពេញបានដាក់ចេញនូវ ទស្សនៈវិស័យថ្មីមួយគឺ៖ **ប្រជាគោរពតាមការដឹកនាំ ណែនាំរបស់ ឯកឧត្តមរដ្ឋមន្ត្រី ជាម៉ែឌី គ្រប់ជំហាន ដើម្បី ធ្វើឲ្យកាន់តែប្រសើរឡើងវិថមទៀតនូវការផ្គត់ផ្គង់ទឹក ស្អាត អាចដឹកបានផ្ទាល់ពីក្បាលរ៉ូប៊ីណេក្នុងតម្លៃដ៏សម**

ស្របដល់ប្រជាជន នៅទូទាំងរាជធានីភ្នំពេញ រួមទាំង អ្នកដែលក្រីក្របំផុតផងដែរ ។

ការតស៊ូអត់ធ្មត់ទីបំផុតត្រូវបានទទួលស្គាល់ទាំងក្នុង និង ក្រៅប្រទេស។ ខ្ញុំពិតជាមិនអាចបំភ្លេចនូវគុណបុការរបស់ រាជរដ្ឋាភិបាលដែលមាន **សម្តេចអគ្គមហាសេនាបតី តេជោ ហ៊ុន សែន** ជាប្រមុខដែលបានផ្តល់នូវឱកាស និងការទូន្មានរបស់ **ឯកឧត្តមអភិបាលរាជធានីភ្នំពេញ** និង **ឯកឧត្តមរដ្ឋមន្ត្រី** ជាម៉ែឌីដែលបានផ្តល់ការទុកចិត្ត និងការឧបត្ថម្ភគាំទ្រគ្រប់បែបយ៉ាងដល់រូបខ្ញុំបាទ។

ក្នុងនាមខ្ញុំបាទផ្ទាល់ និង ក្នុងនាមនិយោជិតទាំងអស់ របស់រដ្ឋាករទឹកស្វយ័តក្រុងភ្នំពេញ ខ្ញុំបាទសូមគោរពជូនពរ ដ៏ល្អបររបំផុត និងសូមឲ្យអ្នកមានគុណទាំងអស់មាន អាយុយើងយូរវាយស្បែក ដើម្បីជាផលប្រយោជន៍របស់ ប្រជាជនកម្ពុជាគ្រប់ៗរូប ។

Message from His Excellency Ek Sonn Chan Delegate of the Royal Government of Cambodia, General Director of the Phnom Penh Water Supply Authority

The old adage says: *be rich, [you must] never forget the time you were poor; improve, never forget your times of trouble.* The Stockholm Industry Water Award brings us great joy and reminds us of difficulties in the past as if they have just occurred.

I was appointed by His Excellency the former governor of Phnom Penh to lead the Phnom Penh Water Supply Authority on September 11, 1993. In organization's situation at the time was very difficult, the dilapidated production system and lacking electrical power enabling us to produce only 30% of our installation capacity of 150,000 cubic meters per day. The dilapidated system and lack of management caused the loss of 2/3 of the water produced along the roads and 10 hours per day for supporting with water of pressure at only 2 meters. The employees of the Water Supply Authority earned less than \$1 per day which was less than their basic necessity. As a result of this problem those who lived in Phnom Penh sometimes went to the confluence of the four rivers to bathe and do washing. Some families relied on the wells rich in iron and sometimes these

contain arsenic acid. The Water Supply Authority can be operated by using the electricity that is free of charge and subsidy provided by the Royal Government. This was the legacy of the Pol Pot Regime and also the economic embargo from the international community after Victory Day on January 7, 1979.

In that situation, the whole organization is full of the culture of serving the individual interests and no provision of welfare for the people with not certain mission. From this, we organized a new organizational chart to employ employees with a strong work ethic, qualifications and virtue, not employing on the basis of nepotism. Simple basic vocational training with this leading mechanism, we started to observe the clients, equipped meters in the houses and did all we could to collect a water fee, fix the leakages of water system and reduce lost water. Step-by-step, we strengthened discipline, and established statutes and legal documents. On December 19, 1996, the Royal Government decided to name us as a public enterprise with economic status and modified the

water fee that could cover the expense. The new situation helped accelerate the reform of our internal affairs. With donors from France, Japan, the World Bank, the Asia Development Bank etc. The rate of water lost was reduced, allowing us a water supply. Nowadays 100 cubic meters of water produced with only 6 cubic meters not consumed (NRW). Ninety percent of people, including the poorest families can access a clean and quality water service available directly from the faucets 24 hours per day. We have tried to keep the same water consumption fee since 2001 to date despite the fact that the cost of the goods has increased one, two and three times. All protests or questions by the clients relevant to our clean water service are always promptly and faithfully resolved. Impolite words have become modest manner. The bad environment has become positive. On October 18, 2006, it was our great honor that at the Council for the Development of Cambodia, **Samdech Akka Moha Sena Padei Techo HUN SEN**, named me **Hero of Water Resources** instead of the title as **Water Spirit**, at the first stage of this reform. Recently on September 8, 2010,



we won a great award, *the Stockholm Industry Water Award*. The jury announced that *the Phnom Penh Water Supply Authority, under the leadership of the General Director Mr. EK Sonn Chan, is acknowledged as the world class achievement in the provision of a clean and sustainable water service and awarded the Stockholm Industry Water Award 2010.*

The success of the Phnom Penh Water Supply Authority shows the world that the seventh goal of the Cambodia Millennium Development Goals of the Royal Government, led by **Samdech Akka**

Moha Sena Padei Techo HUN SEN, will be achieved. Recently, the Phnom Penh Water Supply Authority established a new vision: *"a commitment to abide by the leadership and all instructions of His Excellency the Minister who is our parent to provide a better clean water service available directly from the faucets at a reasonable price for people in Phnom Penh and the poorest families".*

Our efforts are at last acknowledged both locally and internationally. I will never forget the support of the Royal Government, led by **Samdech Akka**

Moha Sena Padei Techo HUN SEN, who provides us with opportunities and words of advice, and *His Excellency the Phnom Penh Governor* and *His Excellency the Minister*, our parent, who have confidence in us and have provided complete support for me.

On behalf of the employees of the Phnom Penh Water Supply Authority and on my own behalf, I wish you best wishes and may you be blessed with good health and longevity to serve the interests of all Cambodian people.

A new drive towards a better future

Accepting the award on behalf of PPWSA, Mr. Ek Sonn Chan said the Stockholm Industry Water Award puts his organisation in the same league as other world class water industry organisations, reinforcing their drive towards achieving future objectives. "My team is encouraged by this prestigious award to carry on our mission to increase our collection efficiency, improve water regulation, and deliver affordable water to the poor. We will continue to work to provide water continuously for a price affordable by our society through good management and cost-recovery practices and despite increases in electricity and other costs," he said.

In 1998, the PPWSA provided clean drinking water to all households in the city area. Water losses due to leakages in pipes and pumps declined from 72 per cent in 1993 to 6 per cent by 2008, which is very low in an international comparison. Meanwhile, the bill collection ratio reached over 98 percent - which improved the PPWSA's costs-recovery. Today, the authority meets international standards as it provides leading edge services to its customers.

According to Mr. Ek Sonn Chan, the road ahead is full of ambition. "Our future goals pave a challenging road ahead, as we aim to expand water provision at the same rates and standards to Phnom Penh's suburban areas and surrounding regions. We're working on reducing water loss from current 5.9 percent to 4 percent by 2020, which would place us in the same league as Singapore and Tokyo. We will continue to improve the efficiency of our staff and revision practices as we work towards providing water at a cheaper price."

Developing nations can achieve more

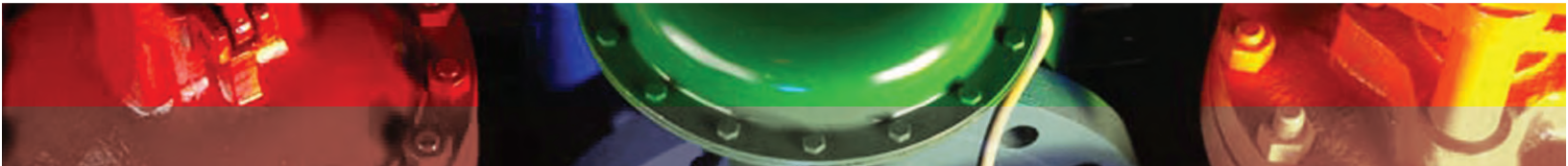
The PPWSA was supported by international donors in its efforts to reach where it is today. However, it managed to become entirely self-sustainable as it benchmarked itself against the best operators in both developing and developed nations. PPWSA's work has contributed to visible improvements in public health and a reduction of constraints to industrial, social and economic developments in Cambodia's capital. "The PPWSA has a strong commitment to social and environmental responsibility. It has shown the developing world as a whole that large cities can expect continuous access to clean water. It stands as a role model for those committed to improving their business practices and increasing their level of service to customers. The PPWSA has now taken on the challenge to improve Phnom Penh's sanitation system, and is also scheduled for an initial public offering on Cambodia's new stock exchange later this year," said the Jury in its citation.

Mr. Ek Sonn Chan is proud of the PPWSA's achievement. "We provided an important role model for the development of our nation, Cambodia, which helped improve the country's image internationally after decades of strife and conflict. Developing nations must believe in their own people's capabilities to achieve their own goals," he said.

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COMIN KHMERE & AVK would like to jointly congratulate the Cambodian Phnom Penh Water Supply Authority (PPWSA) for being named Winner of the Stockholm Industry Water Award 2010

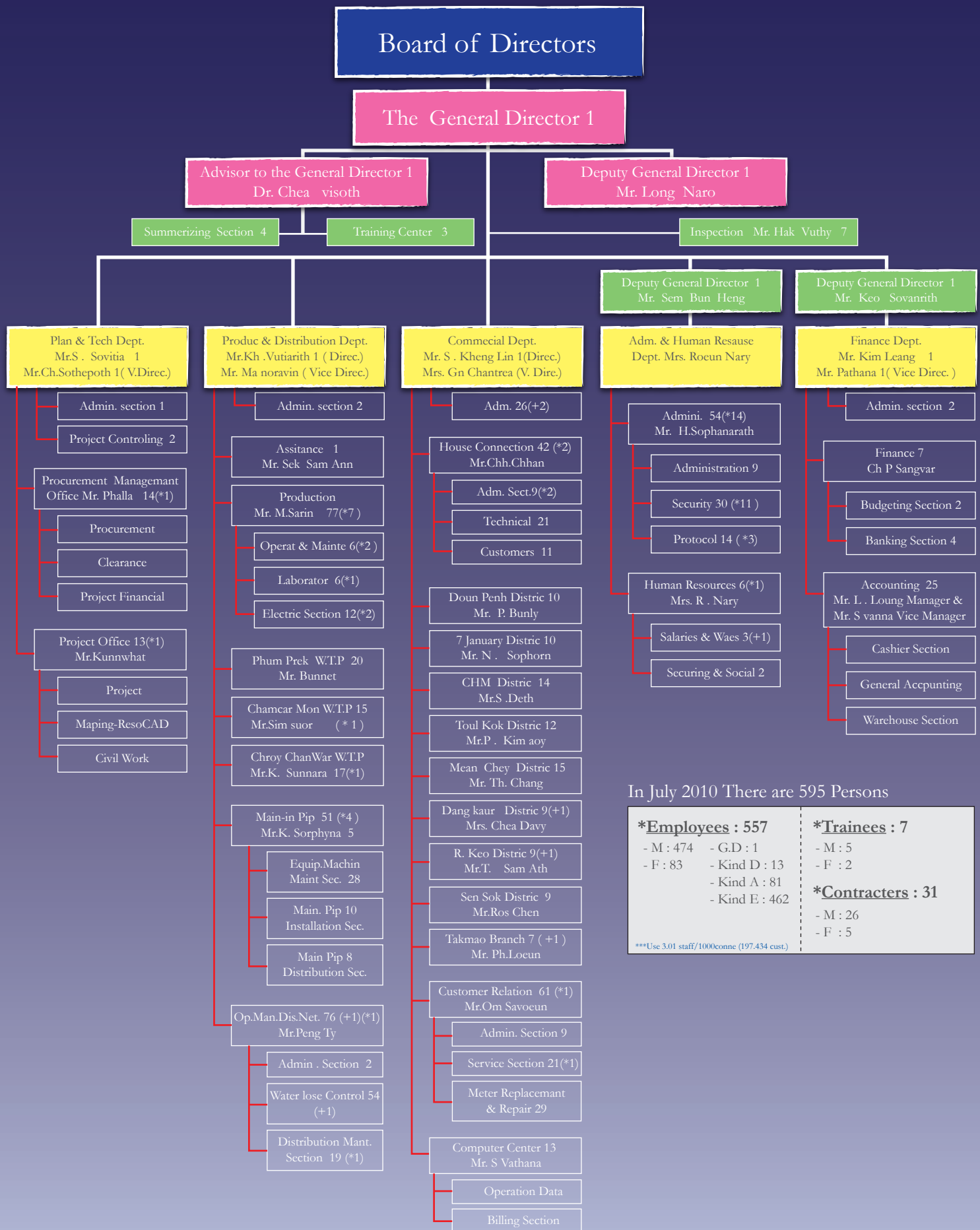


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Organization chart of Phnom Penh Water Supply Authority



In July 2010 There are 595 Persons

<p>*Employees : 557</p> <ul style="list-style-type: none"> - M : 474 - F : 83 - G.D : 1 - Kind D : 13 - Kind A : 81 - Kind E : 462 	<p>*Trainees : 7</p> <ul style="list-style-type: none"> - M : 5 - F : 2
<p>*Contracters : 31</p> <ul style="list-style-type: none"> - M : 26 - F : 5 	

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COMIN KHMERE & GRUNDFOS are pleased to present their congratulations to Phnom Penh Supply Water Authority (PPWSA) for being announced as the **Winner of the Stockholm Industry Water Award 2010**



PHNOM PENH'S SUCCESS STORY

From an empty city to almost 1 million-person city took only around three months. When Cambodians returned to their capital after the defeat of the Khmer Rouge regime in 1979, they repopulated a city whose basic infrastructure, including the blueprints to Phnom Penh's former water system, had been destroyed.

After four years of devastation between 1975 and 1979, attempts at recovery within Cambodia were stalled by international trade sanctions that were not lifted until 1993. To restore the city's water supply, PPWSA faced one of the most extreme situations in modern history.

Over a 17-year period, we at the Phnom Penh Water Supply Authority (PWSA) have undertaken major reforms that have transformed us into an exemplary international model of an urban water utility. In 2010, our results include achieving 100% metered connection, 91% coverage, a 99.9% billing collection ratio, and 6% NRW. We take pride in our accomplishments, but we are not resting. Instead, we are continuously expanding our coverage area, especially to the urban and suburban poor; building new water treatment plants; providing subsidized water to poor communities; and working to reduce our non-revenue water (NRW) to less than 5% by 2020—a rate comparable to ultra-modern Tokyo and Singapore.

Our process of transformation began with three major reforms: 1) Restructuring management, 2) Creating a "culture of change," and 3) Becoming self-reliant. With these reforms, new processes were introduced in each of our five departments to bring about dramatic change. We were granted autonomous status with independent management in 1996. Political support for the reform process came with MIME minister and Prime Minister Hun Sen, and available funds in the form of grants and loans from various multilateral agencies, creating an enabling environment. Over a decade of peace and stability within Cambodia has undoubtedly helped us execute our mission. A

When I was appointed General Director (GD) of the Phnom Penh Water Supply Authority in 1993, the city's water service was plagued with the maladies of inefficiency, high NRW, poor coverage, and staggering financial losses. In 1993, unaccounted water loss in Phnom Penh ran as high as 72%. At that time, only 13% out of 26,881 connections had water meters, making it difficult to collect payments for water use. The lucky few who were connected to the city's 70-year-old water system—representing just 25% of the coverage area—had running water for only 10 hours each day.

skilled set of enthusiastic employees, combined with a leader with vision and a focused commitment have transformed our organization, leading to improved service provisions for all consumers across every social spectrum in Cambodia.

Some of the factors that allowed us to spearhead this remarkable turnaround include investing in staff and providing incentives, promoting transparency, involving civil society, and investing in modern management procedures and technology. Our top management was restructured, and dynamic younger personnel with more advanced qualifications were promoted to senior positions with greater responsibilities. Senior management was given more direct responsibilities, while inefficient senior staff were moved into less essential roles. Incentives such as higher salaries and bonuses for good performance were introduced; penalties were also imposed for bad performance.

Our remarkable transformation was also made possible by the dedicated support of the Royal Government of Cambodia, as well as countless donors, consultants, contractors, suppliers, and the cooperative citizens of Phnom Penh.

This book is our way of telling the story of our transformation, as well as saying *thank you* to all the individuals and institutions that have helped us each step of the way.



Figure 1 - Chrouy Changwar Water Treatment Plant before 1993



Figure 2 - Chrouy Changwar Water Treatment Plant Expansion Stage I



Figure 3 - Cham Kar Morn Water Treatment Plant



Figure 4 - Leak Detection (NRW Program)



Figure 5 - Leakage Situation in 1994

Figure 6 - Leakage Situation in 1994

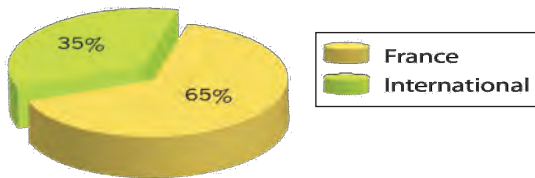




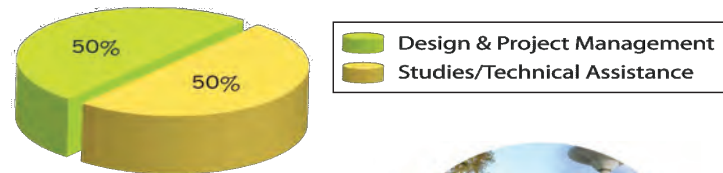
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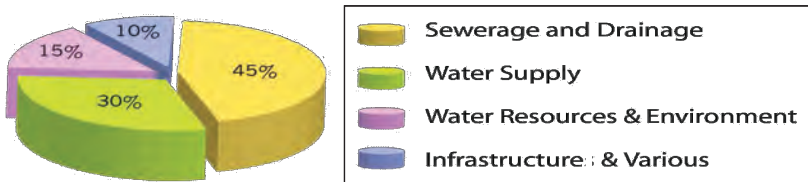
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Congratulation for receiving the
**Stockholm Industry
 Water Award**

**PHNOM PENH
 WATER SUPPLY AUTHORITY**



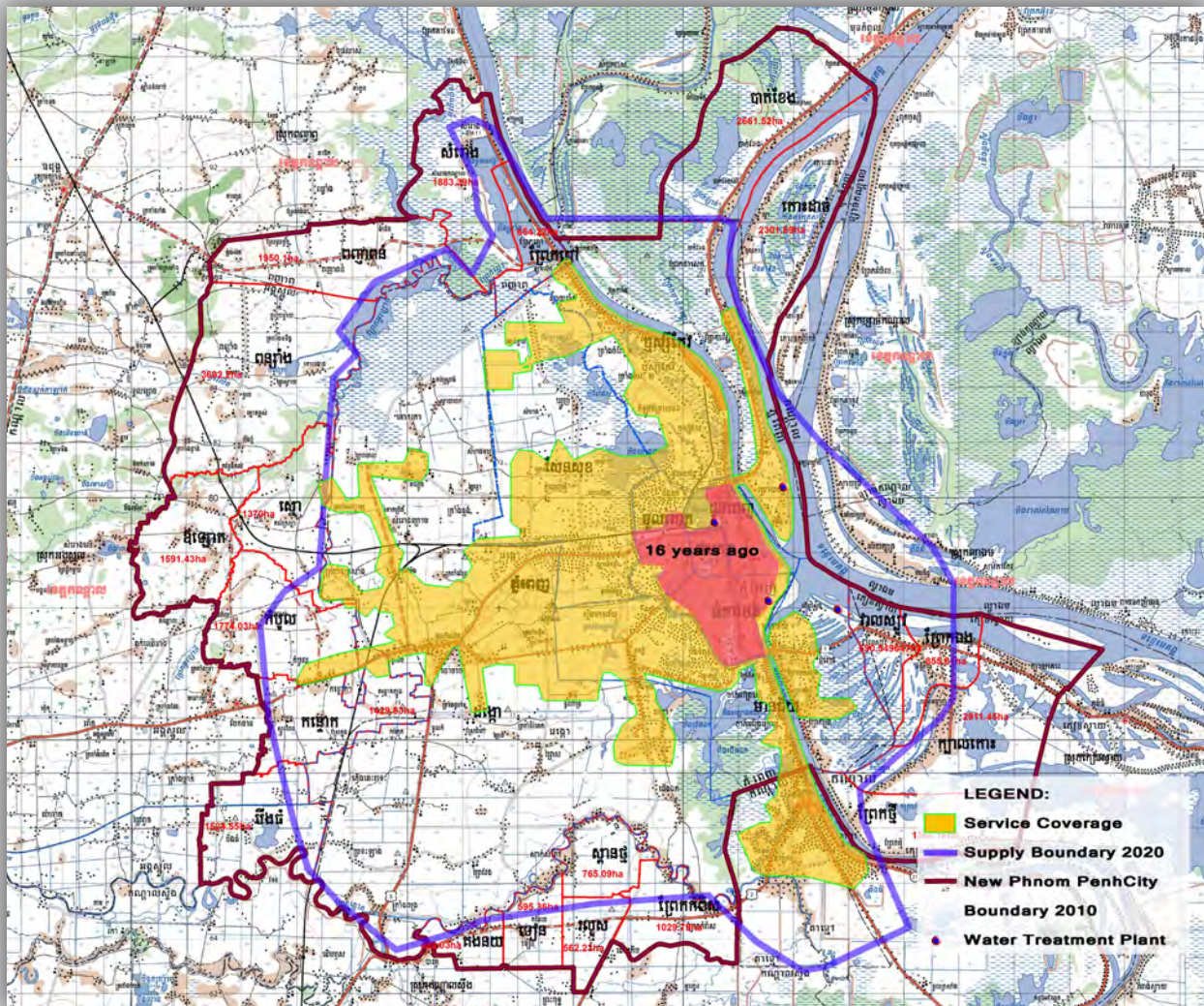
PHNOM PENH: OVERVIEW

Phnom Penh, the capital of the Kingdom of Cambodia, has a population of approximately 1.5 million. The city is uniquely situated at the confluence of what the French called the “Quatre Bras” (four arms) of the Mekong, Tonle Sap, and Bassac rivers.

Each of Phnom Penh’s water treatment plants draws its water from a different river:

The oldest of the water treatment plants, Chruoy Changwar, was built in 1895 by the French and takes its water from the Mekong.

Phum Prek plant draws its water from the Tonle Sap, and Chamkamon water treatment plant gets its water from the Bassac River.



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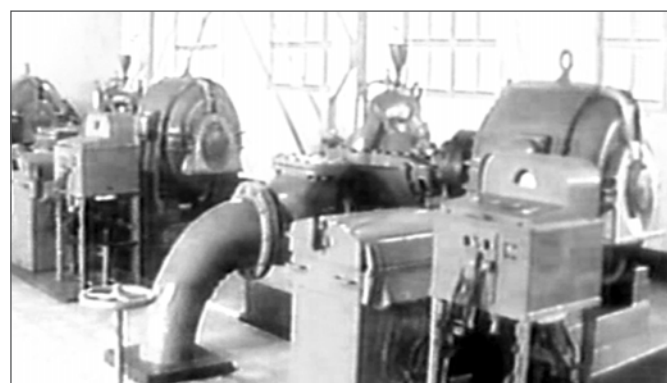
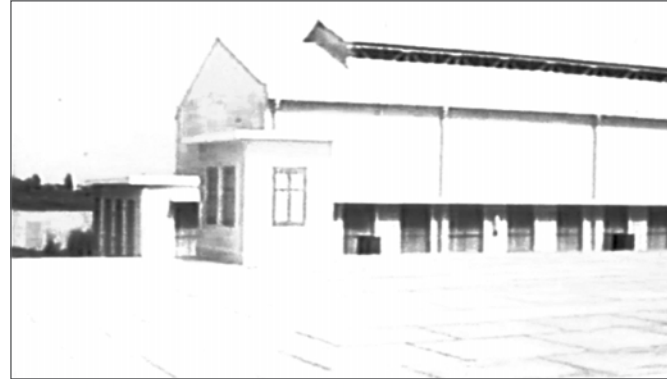
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PHNOM PENH'S WATER SUPPLY: HISTORY

- **1895:** The **Compagnie des Eaux et Electricité de l'Indochine (CEEI)** has been created. Chruoy Changwar Water Treatment Plant (WTP) with a capacity of 15,000 cubic meters per day has been constructed on the west bank of the Mekong River with a distribution network of 40 kilometers, but only within Daun Penh district.
- **1957:** 36-kilometer distribution network expansion by **Degremont**, a French company.
- **1958:** Supply Capacity expands with the creation of Chamkamon Water Treatment Plant; the plant, constructed by **Degremont**, has a 10,000 cubic meter per day capacity.
- **1959:** Capacity of Chruoy Changwar upgraded to 40,000 cubic meters per day. Distribution expands by 32 kilometers with the assistance of **Kubota**, a Japanese company.
- **1960:** The Royal Government of Cambodia transforms the **CEEI**-owned utility to the **Regie des eaux de Phnom Penh (RDE)** and **Electricite Du Cambodge (EDC)**, by Royal decree of King Norodom Sihanouk, #164NS, 24 March 1960. The city's water supply is now under the jurisdiction of the Municipality of Phnom Penh. Distribution expands by 165 kilometers.
- **1966:** The last of Phnom Penh's current Water Treatment Plants —Phum Prek—is constructed. Contracted by **PICCHABAL** and financed by the Royal Government of Cambodia, Phum Prek has a capacity of 100,000 cubic meters per day. Distribution to Phnom Penh city is expanded by 233 kilometers. Total capacity is increased to 155,000 cubic meters per day.
- **1970 – 1979:** With multiple changes to Cambodia's political regime, the water supply is unstable and operations are scaled back drastically.
- **1975 – 1979:** Under Khmer Rouge occupation more than 3 million Cambodians are killed. Water distribution is abandoned.

Chruoy Changwar Water Treatment Plant in 1895



RENAISSANCE

- **1979 – 1993:** Civil war continues for 14 years. Municipal water supply resumes operations on 25 January 1979. Water supply is free of charge during this period.
- **1984:** After nearly a century, Chruoy Changwar can no longer operate due to disrepair and no electrical supply to the other side of the Tonle Sap.
- **1988:** The water authority, which had been called **Regie Des Eaux De Phnom Penh (RDE)** and was under the management of the Transportation Department of the Municipality, becomes an autonomous public enterprise by letter of the Phnom Penh People Committee No. 286, issued 1 August 1987.
- **1989:** Chamkamon can no longer operate. Operations are resumed, however, after a grant for technical assistance from the **Soviet Government** allows for maintenance and repair. Phum Prek Water Treatment Plant resumes operating at 15% of its former capacity.
- **1990 – 1993:** Water charges start to be implemented. Bills are based on an estimated average consumption of 80 liters per day; only 3,391 of connections are metered. The water tariff is 166 riel per cubic meter and the yearly revenue only covers 50% of the total operating expenses.
- **1991:** The water authority loses money continuously until 1994.

Changes to the Water Tariff from 1981 - 2001:

- o 1981 2 riels/m³
- o 1988 3 riels/m³
- o 1989 Jan. 8 riels/m³
- o 1991 Jan. 32riels/m³
- o 1992 Jan. 166riel/m³
- o 1993 – 1994 June (166 riels/m³ for domestic, 515 riels/m³ for industrial)
- o 1997 24 July Block tariff
- o 2001 1 Jan. until now revised block tariff



TRANSFORMATION

- **1993:** Still called **RDE**. Phum Prek receives grants from **Oxfam** and **EDC**, allowing for the plant to be repaired and expanded by **Kubota**, and capacity increased to 65% of original capacity.
- **1993 (27 July):** A general election assisted by the **United Nations Transitional Authority in Cambodia (UNTAC)** helps to form the new Cambodian government. Country becomes eligible for external assistance; water/sanitation is considered a priority sector.
- **1993 (1 November):** the **Royal Government of Cambodia** is established.
- **1993 (11 September):** Ek Sonn Chan appointed General Director of RDE.
- **1993 -1994:** With support of a grant from the **Government of France** and assisted by **SAFEGE** and the **Municipality of Phnom Penh**, the Commercial Department of PPWSA forms a Community Commission to carry out a critical yearlong customer survey.
- **1994:** With the establishment of a Customer Data Management Center, PPWSA begins computerized billing.
- **1994 – 1999:** 268-kilometers out of 282-kilometers of old pipes are replaced.
- **1995:** Implementation of metered connections on existing and new house connections.
- **1996:** Full autonomy granted by government sub-decree #52, 19 Dec. 1996. Name **Phnom Penh Water Supply Authority (PPWSA)** was introduced for RDE in English.
- **1997:** First block in water tariff since autonomy.
- **1998:** “Regaining the Public’s Trust” program begins. “Clean Water for the Poor” program is launched, allowing installment payments for water connection fees to the city’s poorest residents.
- **1999:** National reconciliation begins through “Win-Win” policy of Prime Minister Samdech Hun Sen. “Water for All” program commences. Through Clean Water for the Poor program, the poor are allowed overall discounts of 20% and up to 20 months installment payment of water connection cost.
- **2001 (1 January):** First adjustment in water tariff and kept unchanged until now.
- **2004 (27 January):** PPWSA wins **ADB Water Prize “Water for All”** in 27 January.
- **2005:** Commencement of Subsidies to the poor 30%, 50% and 70% on connection cost.
- **2006:** Ek Sonn Chan received many award:
 - **Hero of Water Resource** from Prime Minister Samdech Hun Sen in 08 October.
 - **ADB Water Champion**. “Pulling the Plug on Nonrevenue Water” in October.
 - **Ramon Magsaysay Award** from Ramon Magsaysay Award Foundation in 31st August.
- **2006:** The city’s poorest families now receive subsidies of up to 100% of their water connection fee.
- **2008:** PPWSA Social Fund was established to assist the community in the construction of Infrastructure, to provide scholarships for poor students, to provide health care for the vulnerable family, and other charitable activities.
- **2010:**
 - **Ek Sonn Chan** received the great medal “**Chevalier dans l’ordre de la légion d’honneur**” from the President of France in 1st February.
 - PPWSA wins **Stockholm Industry Water Award** and the ceremony was held in Stockholm along the World Water Week in 08 September 2010.



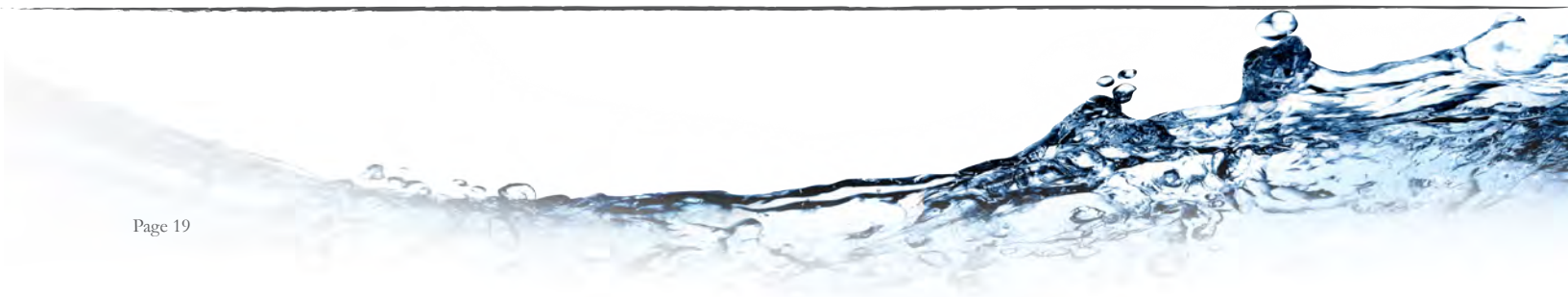
**Chrouy Changwar
Water Treatment Plant**



**Chamkar Mon
Water Treatment Plant**



**Phum Prek
Water Treatment Plant**





ខ្មែរ គណនាល់ចេត អ៊ីនជីនរីង គបភើមេសិត (ខេស៊ីអ៊ីស៊ី)

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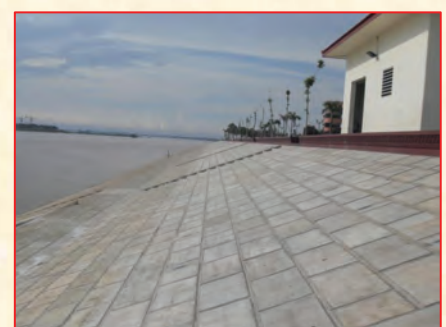


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**From 1979 to 1993 PPWSA (Regie Des Eaux De Phnom Penh) under management of Provincial of Public Work & Transport of Phnom Penh City Hall .
PPWSA GENERAL DIRECTORS (Current and Predecessors):**



In September 1993 to present: **H.E EK SONN CHAN**, born on 10 March 1950 in Phnom Penh City, earned a Degree in Electrical Engineering.
Family: Married to Mrs. Than Tibpiry, born on 02 December 1955 in Phnom Penh City, with four Children



In 1993 to September 1993: **Mr. NOB SADUM**, born on 10 September 1949 in Kampot Province, earned a Degree in Electronic Engineering; died in 2001.
Family: Married to Mrs. Neabg Vanna, born in 1957 in Kampong Cham Province, with six children.



In 1991 to early 1993: **Mr. KAO SAVIN**, born on 22 March 1952, in Svay Reang Province, earned a Degree in High School; died in 2009.
Family: Married to Mrs. Keav Sokha, born in 1956, with five children.



In 1991: **Mr. MOM MORA**, born on 10 May 1945 in Phnom Penh city, earned a Degree in High School; died in 1992.
Family: Married to Mrs. Im Sophy, born on 16 February 1952, with two children.



In 1979 to 1991: **Mr. SEMBUN HENG**, born on 26 October 1951, in Kampong Cham Province, earned a Degree in Economic Science Engineering.
Position: Deputy Provincial of Public Work & Transport, and current Deputy General Director of PPWSA .
Family: Married to Mrs. Sar Sontheary, born in 1960 in Phnom Penh City, with three children.



PPWSA'S TRANSFORMATION IN THREE STEPS

I. RESTRUCTURING MANAGEMENT

PPWSA's transformation began with the strategic marshalling of human resources. From 1993 to 1994, we reshuffled our basic management structure to install the most active and dynamic managers while recruiting and promoting talented younger staff. Tenured staff members who were ineffectual were moved to positions of decreased influence and responsibility. Promotion was now made by collective decision and strictly based on work quality.

Mr. Ros Kim Leang, Director of Finance, graduated in 1991 with a bachelor's degree in economics. After his graduation, he was working at PPWSA as an accounting staff. During this period, very few Cambodians had a degree in economics; Mr. Leang was the only staff member at PPWSA to hold such a degree, but he was still working as basic staff.

"One story I'll never forget," tells Mr. Leang, "is that three months after Ek Sonn Chan was appointed GD, he gathered all the young staff with university degrees to have a meeting in his room. He asked each staff for their job description and duties within PPWSA, and then he and we committed together—at that meeting—to transforming the quality of service at PPWSA for the common benefit of all employees."

"Due to these changes," Mr. Leang continues, "in 1994 I was appointed as vice-chief of the accounting office and then chief of accounting. Then in 1997, after PPWSA was given autonomy, I was appointed Director of Finance—a position I hold to this day."

Mr. Khut Vuthiarith, Director of the Production and Distribution Department, echoes the

sentiment of his colleagues: "I graduated as an engineer in 1993 and found a job at the Battambang province water authority. In 1994, I was transferred to work for PPWSA. Here, I found a new environment, a new leadership model. I think that only at PPWSA, a young engineer like me could have had the chance to be recognized and promoted in a very fair manner."

In addition to empowering young, dynamic staff with greater opportunities for advancement, the management restructuring of 1993 - 1994 also equipped staff with a new mission before sending them to the frontlines: *Assuring the provision of clean water at an affordable price to everyone in Phnom Penh, and a new vision of becoming the reference company for the region.*

II. CREATING A "CULTURE OF CHANGE"

Like the Three Musketeers, PPWSA's informal motto is "One for All and All for One." Integral to creating a "culture of change" was fostering a spirit of teamwork through: 1) Spearheading socially responsible programs such as "Clean Water for All" and the "Water for the Poor" program; 2) Our staff-care program; 3) Establishing a social fund.

Smart teambuilding, fair salaries, and highly effective incentive programs have allowed us to get the best from our employees. Like a heart with many chambers, each of our five departments pumps talent and expertise toward the good of the whole: a pure, life-sustaining water supply for all of Phnom Penh.

"Here in PPWSA we work as a family," says Ros Kim Leang, Director of Finance. "I'm taking part in the setup of all regulations and rules at PPWSA. I remember an ADB project in 2002 to lay a transmissions pipe along Monivong Boulevard that had to be completed before schedule. All our technical managers and staff, as well as our GD, worked together day and night for two months to complete the project at a very critical stage. Me, acting as accounting and finance manager, I also worked with them during the nighttime to support them through team building. And finally, we succeeded."

With the aforementioned changes to our management structure, our managers not only had to be

knowledgeable, but needed to serve as models and mentors for their subordinates. At PPWSA, we make decisions collectively, but the individual is responsible for their actions. For example, procurement is held accountable for the choices they make in buying pipeline materials. If an individual in procurement buys a lower-quality pipe that is prone to leakage, then that staff member is personally responsible for the NRW created by his/her purchasing decisions.

Although roles and responsibilities are clearly defined at PPWSA, the planning activity is decentralized," explains Samreth Sovithia, Director of the Planning and Project Department. "For example, each department makes their own yearly plan but we give them the indicators, such as water production capacity, house connection projection, NRW projection, etc. To have the right number of projected house connections, I have to work with Mr. Sim Kheng Lin, the head of the Commercial Department, and Mr. Khut Vuthiarith, the head of Production and Distribution, to identify the project area, type of customer, and the demand for water compared to the total water production capacity. And the performance indicators need to have prior review by the GD. Whether the teamwork is effective or not is based on how the team leader, the GD, instructs us in the right rhythm and right direction."

In 1994, realizing that we needed to improve the quality of our human resources, we instituted Urgent Training—an immediate training for all

managers and frontline staff. In 1996, we set up an in-house training center and in 1997, began a program of Regular Training, where we started a tailored training program to closely fit into our staff's daily work routine. In 2000, we implemented a quality assessment program. In 2005, we began a year-end examination program for the purpose of annual staff evaluations.

Beginning in 1998, our GD increased the salaries of PPWSA employees to make them equal to or better than private sector remunerations. He also implemented a strict incentive and penalty program for all departments, whereby an employee's salary level depends upon his/her yearly performance.

An ADB comparison of median monthly salaries of PPWSA employees versus employees at other Cambodian government agencies tells more of the story: a chief officer at PPWSA makes over \$600 a month; a government worker in the same position makes \$50. A normal worker at the water authority makes around \$180 monthly while a government worker at another Cambodian agency makes only \$23.

"Pay the people correctly for them to work hard. The people who don't have enough money are not far from corruption," says GD Ek Sonn Chan. "I don't want to have a boss who is unfair, so I must be fair."



III. BECOMING SELF-RELIANT

“We knew from the beginning that we could not depend on the national budget to run our waterworks,” says the GD. “I remember our first job very clearly—it was to run around looking for US\$50,000 dollars to buy our aluminum sulfates. We finally got the money from the Japanese Embassy. Even US\$50,000—the authority does not have the budget at the time to pay. We learned early on that we have to rely on ourselves.”

We have become self-reliant through three crucial programs: **IMPROVING COLLECTION EFFICIENCY**, **REDUCING NRW**, and **AGGRESSIVELY EXPANDING SERVICES**. This is how we did it.

1. IMPROVING COLLECTION EFFICIENCY THROUGH:

1.1. Updating the Customer Base to Increase Water Bill Collection

“The first thing we needed to know is who are our real customers,” says Sim Kheng Lin, Director of the Commercial Department. “We survey from house to house—who has a connection with supply and who has a connection without supply.”

- Diagnostic survey by 100 staff from Phnom Penh Municipality’s line departments carried out a comprehensive customer survey for one year.
- The data collected by Sim Kheng Lin and his team was astounding: of the 26,881 customers counted in 1993, only 40% were paying their water bill. Of those “customers,” over half—or 13,722—had a connection but didn’t receive a water bill from the authority.
- New customer file of 26,881 customers was set up in 1994.

1.2. Setting a Strong Example

When the reform project was inaugurated, the Prime Minister made a public statement asking everyone, including government employees, to pay their water bill. With a public habituated to using illegal, underground tanks and, since 1979, getting municipal water for free, the Prime Minister’s public show of support went a long way toward allowing PPWSA to initiate the process of billing the public. The GD reiterated the PM’s directive and made bill payment mandatory for all PPWSA employees. “Now,” says Ek Sonn Chan, “100% of our staff pay their water bill on the first day.”

- Within PPWSA.
- Within society and government.
- Formulate the SOP for water bill collection by doing.

There is French saying “**L’exemple vient d’en haut**” that can be translated to “**The model comes from the top**”. This means that bill pay was encouraged through model and example: “We get the strong man to pay his water bill first,” explains the GD, “the top man pays first; the general pays first. If we show the strong man was forced to pay his water bill on time, then the people will follow.”

1.3. Installing Water Meters

- A new Water Meter Management policy allowed the department to start replacing mixed-class water meters in 1998. All of Phnom Penh is now on Class C water meters, and yearly calibration of each of the city’s water meters requires a reading accuracy of within $\pm 3\%$ accuracy for house connection, and $\pm 2\%$ for the manufacturer’s quality test.



1.4. Applying Incentive and Penalty System

A new incentive program also increased the effectiveness of the department. Bill collectors were responsible for collecting a minimum of 1,400 payments each month. If they doubled their collection ratio by collecting 2,800, they received an incentive of 1,000 riel, or \$0.25, for each of the 1,400 additional bills. “This incentive program has pushed our collection ratio to nearly 100%,” says Sim Kheng Lin.

- Incentive for good results.
- Penalty for bad intentions.

1.5. Computerized Billing

The Finance Department at PPWSA has come a long way from the days when 100% of its accounting rules were copied from French accounting systems: “We have been autonomous since 1997,” says Director of Finance, Ros Kim Leang. “That year, we started to run like a business. Our donors were **UNDP** and **World Bank**, and we began implementing commercial accounting standards with the help of a financial consultant from UNDP. Also since 1997, **Price Waterhouse Coopers** independently audits us each year. Since 2001, we have had fully integrated accounting systems with computerized billing that feeds into our general ledger.”

- Much easier, faster, and accurate billing.
- Providing more information for deeper analysis.
- Increasing customer confidence.

1.6. “Regain the Public’s Trust” Program

“Before this program, it was a hard time where PPWSA had a bad image. At that time, no one wanted the public to know they were PPWSA staff. With the change of service policy, good care and fair service for every customer—accompanied by staff discipline—we have regained the public’s trust. This trust makes us prouder to be part of PPWSA.” – Visoth Chea, Assistant to the General Director

- Convenient payment: Cashiers check, bank check, ATM.
- Village-to-village dissemination of information.
- Information desk to deal with customer complaints.
- Water quality and water meter control at the customers’ request.
- Response to customer calls classified into four categories: one hour, one day, three days, and one week.

“When I have a house leak, immediately I call and the water people come. Everyone who comes to the cashier to pay their water bill waits less than 5 minutes—it takes less time than a cigarette break.” –PPWSA customer



Convenience Cashier for Water Bill Payment



Customer Information Desk



2. REDUCING NRW THROUGH:

2.1. Replacing old pipes

In 1993, the **United Nations Development Program (UNDP)**, the **Government of France**, and **Safege**, a private French company, sent consultants to PPWSA to assist with the laying of new pipes.

“To lay a small pipe like this we needed a consultant,” says Khut Vuthiarith, Director of the Production and Distribution Department, making a circle with his hands the size of can of Coca-Cola. “Now big pipes—up to 1.6 meters—we lay by ourselves.”

In 1996, when PPWSA's NRW rate was 57%, a British consultant began helping department employees build their capacity. By 2000, the consultant had worked with PPWSA to help reduce NRW to 33%.

Khut Vuthiarith tells the story: “In 2000, the consultant said to us, ‘You still need me—you cannot do it yourself.’ I went to our GD, and he asks, ‘Are you ready to do it yourself?’ I say yes, we will try.”

- Old cast iron pipes totally replaced by 1999.
- Procurement ensures state-of-the-art but cost-effective materials are purchased to prevent leakage.
- Zero outsourcing—all work carried out by PPWSA staff for economic and technical reasons.

“In 1993 we made a commitment to the GD that we will be building pipes ourselves. We now have made the commitment that in 2011 NRW will be 5.8%,” says Khut Vuthiarith.

Big Dimension Pipe Laying by PPWSA



2.2. Metering all connections

- Target to the stronger, harder head first.
- 1993: Only 3,391 out of 26,881 connections were metered.
- 2001: 74,945 connections were 100% metered.
- Now, 192,514 connections are 100% metered with Class C water meters calibrated yearly for accuracy. Meters are also tested if water consumption is unusually high.
- SOP developed for water meter management.



The Water Meter Installation

2.3. 24/7 standby teams to repair leaks

- 1993: One team with four unskilled staff.
- 1996: On-the-job training provided for staff by expatriate expert.
- 1996: standby service increased to four teams with 48 skilled staff.
- 2010: 24/7 standby teams ready to respond to any reported leak within one hour.
- IT system provides information on water flow so that staff can analyze where anomalies occur; technician is then sent to suspected area to listen for leaks.



Leakage detection



Underground leakage

2.4. Eliminating illegal connections

In 1993, it was reported that some PPWSA employees were making illegal connections for the rich and powerful at US\$1,000 per connection. To combat corruption and nepotism within PPWSA, salaries were increased. Citizens who reported incidences of illegal connections began receiving concessions in their billing statements.

- Creation of an inspection bureau.
- Strictly disciplining internal staff.
- Customers receive incentive for reporting irregularities/illegal connections.
- Penalty applied strictly and without favor.

2.5. Discouraging wholesalers in coverage area

- Through keeping a low cost to the consumer. In the early 1990s, the city's unconnected residents paid 1,000 riel (\$0.25) a day for water purchased from private vendors. Today they spend about 5,000 riel per month, or a little over \$1, for safe and reliable PPWSA-supplied water.

2.6. District Metering Area (DMA) program

- Started with a pilot zone,
- Created one team with 5 staffs, OJT with an expert,
- Introduce modern technology (data monitoring system),
 - Regular step test
 - Consumption balance every bill period
 - Analyze Daily Data
 - Detection if any suspect
- The experiences from the pilot zone have been recorded and applied to other areas
- Rapidly expand control to the whole network with 66 zones, System of reward base on result have been provided fairly.
 - Started with 5 staffs with an expatriate exp,
 - Now, PPWSA have 66 staffs in this field, which all of them are local expert level.
 - Apply internal service contract



3. AGGRESIVELY EXPANDING SERVICES THROUGH:

In planning its water supply routes, the Commercial Department assesses the capacity of production, as well as the potential construction of new water treatment plants and pipelines: “We consider areas with high potential for economic growth,” says Sim Kheng Lin, “but we never forget the poor communities.”

3.1. Aggressive expansion of surface coverage area

- 1994 -1999: Replaced old pipes.
- From 2000 onward: Distribution network expansion.
- Service coverage outreach to areas of high potential for economic growth—without overlooking the poor.

3.2. Increasing production to cover demand

- 1993: 65,000 m3/d, and now: 300,000 m3/d.
- PPWSA staff sent to new coverage areas for customer outreach and welfare: educate customers in how to apply for connections; prohibitions; water quality and tariff; how to disclose information if they witness any irregularities/illegal connections.

3.3. Revising tariff to cover costs

The inherited water tariff by the utility was far too low to generate the necessary revenue. PPWSA had to increase tariff to cover operational costs. To avoid registering a big hike in the water tariff, PPWSA proposed to have a three-step increase in the water tariff over a period of seven years, along with service improvement. With strong support from the donors and commitment from the Government of Cambodia, particularly the prime Minister and the Governor of Phnom Penh, the first step increase was achieved in 1997 and the second step in 2001. After that, PPWSA did not need to push for the third step, as its revenue had already fully covered all its costs. This was basically due to the higher collection ratio and the drop in the NRW that preceded tariff increases. (*International Union for Conservation of Nature and Natural Resources (IUCN), 2010*).

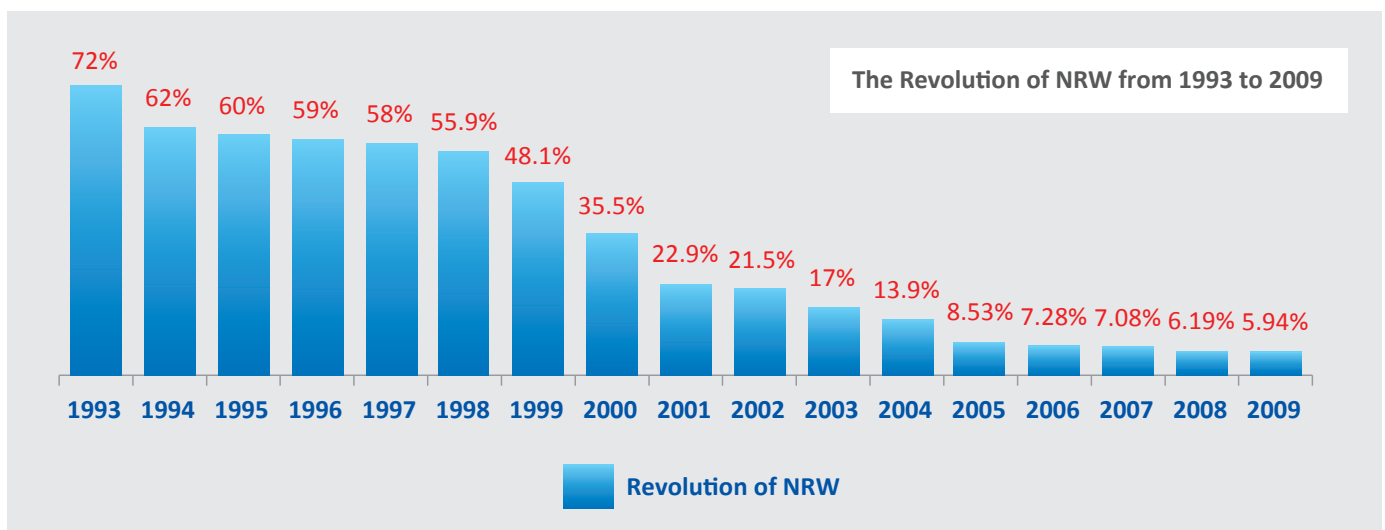
A water loss rate of only 6% allows PPWSA to vend water at a low cost of \$0.25 per cubic metre with a reasonable margin of profit. According to estimates by the WB, the average global water tariff is \$ 0.53 per cubic meter. Only 30% of utilities globally, and only 50% of utilities in developed countries, generate sufficient revenue to cover operation, maintenance, and partial capital costs. In contrast, PPWSA fully recovers all of its costs, and the utility is now making a modest profit and investing in more water infrastructure.

Even though the cost of electricity has doubled (electricity accounts for 56% of total production cost) and the costs of chemicals necessary for water treatment (such as alum and chlorine) have increased 300%, the water tariff has not been changed since 2001.

“Our solution for keeping the tariff low is to reduce water loss,” says the Director of Production and Distribution. “Reducing our water loss by just 1%—or 1 million cubic meters—equals a US\$250,000 revenue increase for PPWSA. Our GD pushes us very much—every two weeks we have an NRW meeting, and ‘no result’ is considered very bad.”

“In my heart I believe and I trust in my people. We should do everything for our people. Our people are so poor—if we sleep, nothing is coming. Yourself—you should do first, you should try first. Our GD, he does not work for himself, for his family—he works for his country.”

“This,” says Khut Vuthairith, settling back into his chair, “is better than sleep.”





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RESULT OF REFORMS

The reform process initiated in 1993 and carried out over the past 17 years has dramatically improved our performance. Phnom Penh residents on average consume 108 liters/capita/day of water with a 24/7 ensured supply and metered connections. Industrial use is 6,976,346 cubic meters in 2009 out of the total use of 84, 754,045 cubic meters.

PPWSA fully recovers its operations costs and is now making a profit while continuously increasing coverage to outer Phnom Penh. Even though people are now paying for the water they actually consume, per capita daily water consumption has nearly doubled.

Now, at PPWSA, the word “impunity” does not exist; everyone is responsible for their work, and

staff efficiency has increased accordingly.

“In 1993,” says Roen Nary, Director of Human Resources, “an 18 person staff per 1,000 connections was considered an efficient ratio. In 2010, we have 2.97 staff per 1,000—we are much more efficient.”

From 1993 until 1999, **JICA** provided capacity building for the Human Resources department and **UNDP, World Bank**, and **ADB** provided short-term technical assistance. Since 1999, each department makes a one-year plan, which they now implement through teamwork—not outsourcing. As part of the reforms, managers were given clear job descriptions and direct responsibility and a new organization chart was drawn up to reflect more defined roles within the

authority.

For 2020, our GD has made an ambitious plan—he wants to have 2.5 staff per 1,000 connections. He wants to help the provincial waterworks to achieve what we have achieved in Phnom Penh.

Our operations were also made more efficient by overhauling the old infrastructure and streamlining the billing process, among a slew of new measures. Because of these reforms, we have widened our distribution network from serving 40% of Phnom Penh with clean and affordable water in 1993 to over 90% in 2010. Other improvements include establishing a complete consumer database, a long-term plan to reduce NRW to 5% by 2020, improving collections, metering all of the utility’s water supply coverage, and introducing a 24/7 water supply.

1993	INDICATORS	2009
20	Staff / 1,000 connections	2.97
65,000	Production capacity, m ³ /day	300,000
N/A	Water quality	WHO
20%	Coverage area	90%
10 hr/d	Supply duration	24 hr/d
0.2 bar	Supply pressure	2.5 bar
26,881	Number of connections	200,664
72%	NRW	5.94
48%	Collection efficiency	99.9%
150%	Operation ratio = (Total Operating Expense/Total Revenue)*100	39.41%
N/A	Return on revenue = Net Income / Total Revenue	26.62%
N/A	Return on net fixed asset = (Net Income – Tax on Profit) / (Net Fixed Asset)*100	4.71%
N/A	Current ratio = Current Asset / Current Liability	2.55 times
N/A	Debt service coverage = (Net Income + Interest Expense + Depreciation) / (Interest Expenses & Principle pay in year)	3.25 times
N/A	Accounts receivable = (Total Water Receivable / Total Water Sale)*365	24 days



SPOTLIGHT ON SOCIAL RESPONSIBILITY: CLEAN WATER FOR ALL

In 2005, a grant from the **World Bank** further aided our “Clean Water for the Poor” program—a social policy that has been at the heart of our mission since 1998.

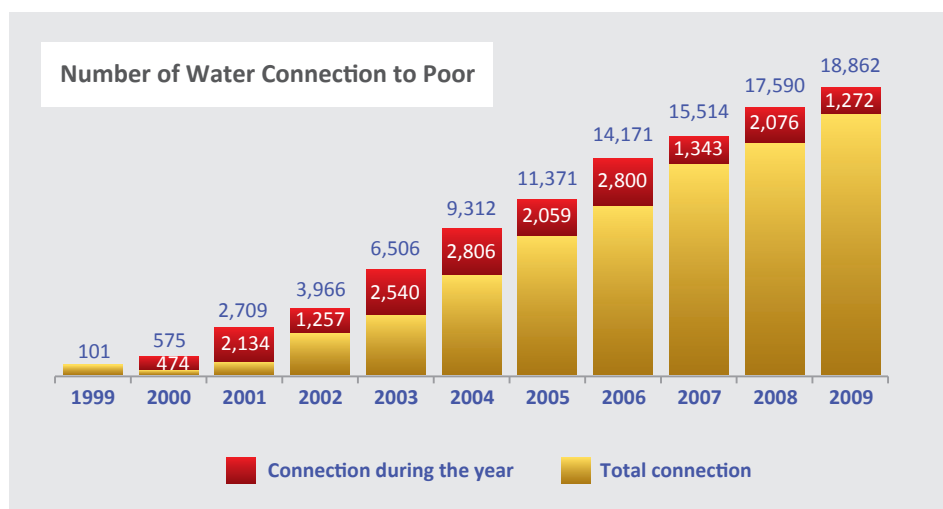
The **World Bank**, the **City of Paris**, and the **Association Internationale des Maires Francophones (AIMF)** have all donated generously to this program, with the **AIMF** paying for pipeline for poor urban communities.

“From 2005 until now we have subsidized over than 100,000 connections for the poor,” says Sim Kheng Lin, Director of the Commercial Department.

Since 2005 and with help from the **World Bank**, PPWSA has applied the subsidy: 30%, 50% and 70% of the total connection fee for Phnom Penh’s urban poor. The combined worth of these subsidies is approximately half a million US dollars.

In 2006, PPWSA introduced an additional category of 100% subsidy for the city’s poorest families—families who could not afford to make installment payments even after a water subsidy of 70%.

Through this program, we have helped the poor save a total of about \$5 million, through putting an additional \$5 dollars each month into the pockets of Cambodian families who receive a water subsidy. Subsidized water has also contributed to lasting health improvements and freeing up time for women and children to pursue education and employment opportunities.



CLEAN WATER IS GOOD FOR BUSINESS



A listing of past years' Stockholm Award winners reads like a who's who of extremely developed, hygienic countries: Canada, Norway, the United States and Singapore. Singapore is the only other ASEAN country to have also been recognised by Stockholm.

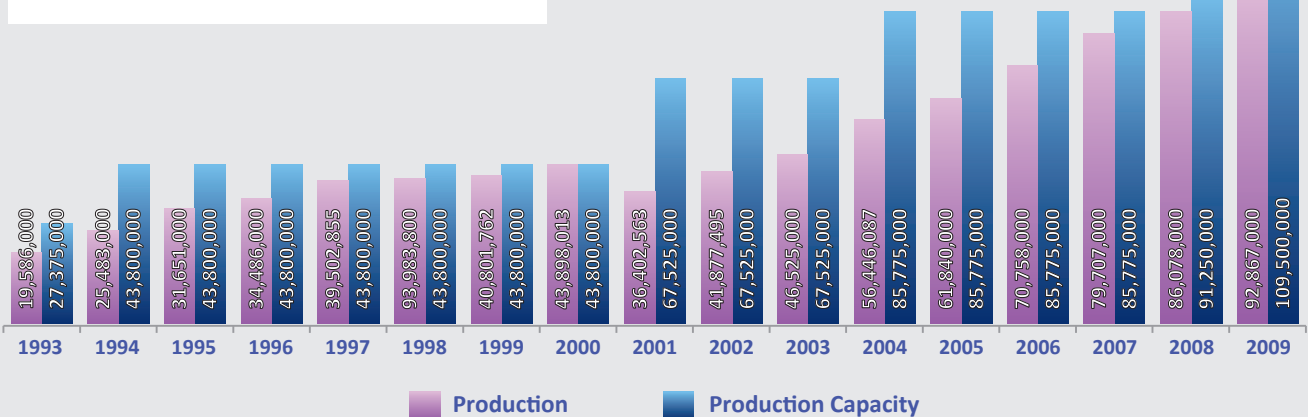
The PPWSA's "incredible progress within such a short time frame," states a 2010 report from the ADB, "is perhaps unrivalled by any utility anywhere in the world."

This recognition from Stockholm is very good for business. International companies already operating in Cambodia such as Coca-Cola and Nike will be pleased with the international stamp of approval, which could help attract more investors in the future.

In 2009, we made a significant contribution to the growth of industry in Cambodia by providing water connections to 2,755 factories with 6,976,346 cubic meters of water.

Without clean, reliable, and low-cost municipal water these factories—ranging from garment and ice factories to breweries and paper manufacturers—could not operate, and thus over 300,000 workers from the countryside would be out of work and unable to earn an income for their families.

Production of Clean Water Through the Years from 1993 to 2009



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The story of Phnom Penh 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.

—Asian Development Bank, “Country Water Action: Cambodia Phnom Penh Water Supply Authority: An Exemplary Water Utility in Asia

The PPWSA’s next major task is to take a distribution pipe across the Tonle Sap River, to the rapidly developing land to the east.

“Since 1973 we have had no water on the other side,” says DGD Long Naro. “The sellers, they pump the water untreated and sell to the people

over there five times higher than our treated water. We don’t have drawings related to the underground systems so we cannot bring the machinery to lay the pipe in this location. We need to dig by hand. But after we cross the bridge we can lay the pipe by machinery.”¹

But we have other “bridges to cross,” including increasing our collection efficiency, improving water regulation, and expanding water delivery to the poor and water provision at the same rates and standards to Phnom Penh’s suburban areas and surrounding regions—all while decreasing NRW from the current 6% to < 5% by 2020.

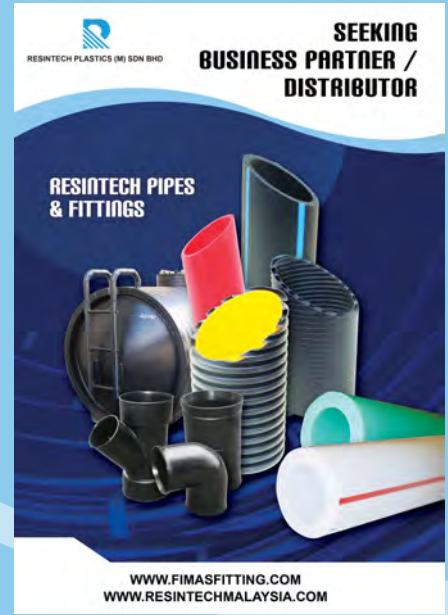
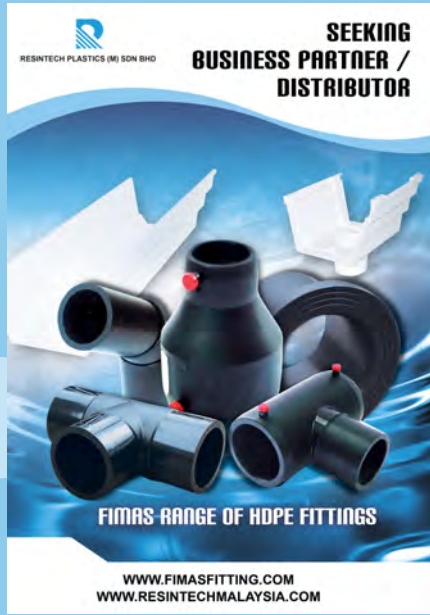
In addition, all of PPWSA’s five departments are hard at work making a new plant—Niroth Water Treatment Plant—a reality.

Niroth is being co-financed by JICA, AFD, and PPWSA, and will be completed by 2013—when it is expected to be moving 260,000 cubic meters of water per day.

In 2011, PPWSA has public listing on Cambodia’s first-ever stock exchange to look forward to. Our Finance Department is now teaming with ACLEDA Bank, the Foreign Trade Bank of Cambodia (FTB) and Mobitel to allow customers to pay their water bill online, at the ATM, or with their mobile phone.

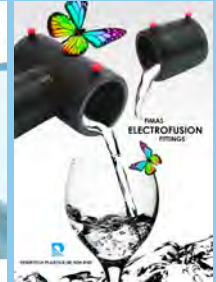
As for the low water tariff, the GD says he believes the water tariff at its current level can be maintained for at least another five years, ensuring safe, affordable water to Phnom Penh’s citizens now and for years to come.

¹ Quoted in ADB documentary, *Water Voices*



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 Endress+Hauser congratulates Phnom Penh Water Supply Authority PPWSA for winning the prestigious Stockholm Industry Award 2010. We are very proud having PPWSA as our valued customer and being able to add value as a competent supplier.

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INTROSPECTION

PPWSA is no stranger to international recognition. In 2006, our General Director was recognized with the Magsaysay Award for his government service. This year, the Government of France awarded him with their highest decoration, the **Chevalier dans l'ordre de la légion d'honneur**.

In 2004, PPWSA won the ADB Water Prize; in 2006 alone, our most respected Prime Minister Samdech Hun Sen named our GD the **Hero of Water Resource**. He is now recognized as **ADB Water Champion**.

The **Stockholm Industry Water Award** greatly adds to the authority's prestige. Nevertheless, to our employees and development partners this honor does not represent satisfaction itselfstead, the **Stockholm Award** reflects the pride, determination, and creativity with which we approach our work each day.

"Winning this award," says Ek Sonn Chan, "Is some kind of introspection to me. I like justice. I have no relatives who work here and all my subordinates are like my children or brothers. We

are a family. This is not a private business. We are not looking for money to fill our own pockets. We are here to fill the pockets of our fellow citizens."

"I never was trained or educated on my management style," he says. "My principle is do to the other people whatever you would have them do to you. Be fair. Treat people with respect."

Playing fair, providing a high quality, essential product – and making a profit?

Now that is something all of Phnom Penh's citizens can drink to.



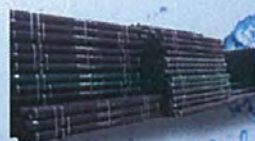
ACHIEVING
TRUSTED SOLUTIONS TO SUPPORT
THE ENTIRE WATER CYCLE



- Delivery of high quality piping system solutions for infrastructure projects within the water purification and wastewater treatment industry in the Asia Pacific region.

- Supply of over 750 items and accessories for piping systems, customized within our fabrication plants to suit our clients' specific requirements.

- Product range includes **ductile iron pipes and fittings, valves, flange adaptors, couplings, flow control equipment, pipeline corrosion wrapping tapes, manhole ic cover, repair clamps, water meter, control and flow regulating device, gaskets, bolts and nuts, etc.**



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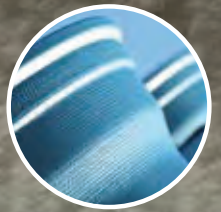
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Everyone everywhere is entitled to water

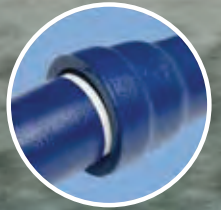
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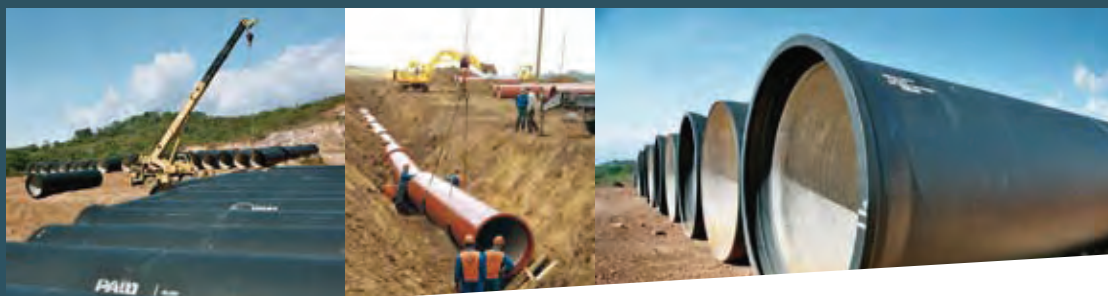


COMPREHNSIVE
DUCTILE IRON
PIPE SYSTEMS



Year	Project	Length	Range
1895	Daun Penh district (Pont-à-Mousson)	44,500 m	Ø 60 - Ø 500
1957	Cast iron pipes (Pont-à-Mousson)	35,900 m	Ø 80 - Ø 300
1960	Cast iron pipes (Pont-à-Mousson)	164,650 m	Ø 80 - Ø 700
1968	Sonexim	27,180 m	Ø 60 - Ø 300
1992	Degremont - Cham Car Morn WTP	10,000 m	Ø 80 - Ø 300
1994	Phnom Penh Water Supply	11,300 m	Ø 150 - Ø 300
1995	Daun Penh	15,000 m	Ø 100 - Ø 300
1996	Phnom Penh Water Supply	8,700 m	Ø 100 - Ø 200
1998	Phnom Penh Water Supply	10,000 m	Ø 200 - Ø 300
2000	ADB-Loan 1468 CAM-SF	15,200 m	Ø 600 - Ø 1600
2001	PMU-ADB	20,000 m	Ø 400 - Ø 600
2001	World Bank Loan 3041 KH	37,000 m	Ø 250 - Ø 400
2003	Phnom Penh Water Supply	5,940 m	Ø 400 - Ø 500
2007	Peri 04G PMU AFD	6,150 m	Ø 600 - Ø 800
2008	Chruoy Chang War WTP	1,900 m	Ø 100 - Ø 1000
2010	Niroth priority section	500 m	Ø 1400 - Ø 1600

Saint-Gobain PAM,
partner of PPWSA
since 1895
with more than 400km
of Ductile Iron Pipes
installed in Phnom Penh,
congratulates PWSA
for Stockholm Industry
Water Award 2010.



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FOR EVERYONE**

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DUCTILE IRON
PIPE SYSTEMS**



SAINT-GOVAIN PAM is involved in both major irrigation and sewerage operations at regional scale and on proximity work sites for a city or district. Every year, these work sites are spread on average over more than 120 countries, making a total of more than 40000 km of pipelines.



SAINT-GOBAIN PAM

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E-mail: min.huang@saint-gobain.com**

ZI AVANCE - 11/2010 - PHOTOGETTY IMAGES

SAINT-GOBAIN
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OUR COMPANY

Our Vision

To develop a sustainable future by providing excellent environmental engineering products and services.

Our Mission

To maximize long-term returns for our stakeholders through corporate excellence, innovation and sustainable business models.

Our Strategies

- We focus on what we do best: operational excellence in engineering, procurement & construction (EPC) and turnkey design & build projects.
- We engage our clients and business associates as partners in the delivery of cost-effective and value-added solutions.
- We provide a supportive working environment and rewarding career development for our staff through holistic people developer programs.
- We embrace corporate social responsibility in all the communities that we operate in.

Our Core Values

Agility

We maintain our agility in the marketplace and build enduring relationships with our customers and stakeholders by being responsive and communicative.

Collaboration

We work as a team, where everyone is treated equally, individual rights are respected and diversity is embraced. We stand united in reaching our common goals.

Excellence

We encourage our staff to be their best – professionally and ethically – in our relentless pursuit of corporate excellence.

Sustainability

We strive to create value for all stakeholders and a sustainable growth for us. We demonstrate this through embracing our social and corporate responsibilities.



BUSINESS OVERVIEW

Addressing the needs of Municipal and Industry water and wastewater users

For over 20 years, Moya Dayen Limited has been at forefront of water and wastewater treatment, providing a comprehensive suite of services and related products to meet municipal and industrial water needs.

With uncompromising service delivery a key tenet at Moya Dayen, we go the extra mile to ensure that our customers expectations are met whatever the stage of project progress may be. Be it product sales or turnkey projects, our team works tirelessly to deliver exceptional value for our customers by constantly sharpening our execution prowess through innovation and precision.

Sectors

Municipal, Automotive, Pharmaceutical, F&B, Electroplating & Metal Finishing, Oil & Gas, Power, Pulp & Paper, Semiconductor & Electronics.

Our geographical reach

We have successfully executed more than 800 projects of varying complexity and value. Headquartered in Singapore, our geographical reach extends to overseas projects in China, Cambodia, Middle East, Malaysia, Papua New Guinea, Turkmenistan and Uzbekistan.

What We Do At a Glance

- Design and Build
- Engineering Procurement & Construction (EPC)
- Build-Operate-Transfer (BOT)
- Value Engineering & Consultancy
- Industrial Products

Singapore
(headquarters)

China

Cambodia

Middle East

Malaysia

Papua New Guinea

Turkmenistan

Uzbekistan



OUR EXPERTISE

As a leading EPC company in Singapore, our capabilities in handling environmental engineering contracts include:

- Pumping Stations
- Liquid Treatment Systems
- Solids Treatment and Minimization Systems
- Dewatered Sludge Storage and Conveyance Systems
- Industrial Water Systems
- Membrane Systems (MBR, mF, uF and RO)
- Brackish and Seawater Reverse Osmosis (RO) Systems
- Chlorination, Chloramination and Ultra-Violet (UV) Disinfection system
- Foul Air Containment, Extraction and Treatment Systems
- Chemical Dosing System
- Air Scrubbing System
- Ozone Generation Plant
- Instrumentation and Control Systems

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