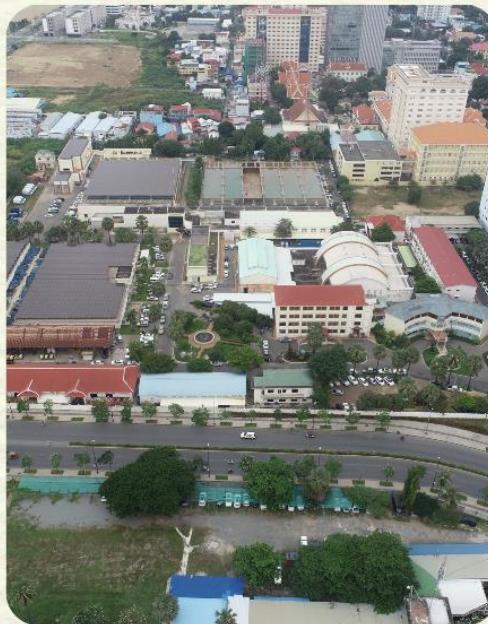




# SUSTAINABILITY REPORT 2024



# Table of Content

<b>Message from Director General</b>	<b>i</b>
<b>Vision</b>	<b>1</b>
<b>Mission</b>	<b>1</b>
<b>Water Treatment and Supply Process of PPWSA</b>	<b>1</b>
<b>Compliance and Sustainable Management</b>	<b>2</b>
<b>Table “A” information</b>	<b>4</b>
Operation Information	4
Governance of Sustainability	4
Corporate Social Impacts	5
Environmental Impacts	8
Climate Impacts	9

# MESSAGE FROM

## Delegation of the Royal Government of Cambodia In Charge of The Director General of Phnom Penh Water Supply Authority



**H.E. LONG NARO**  
Director General

PPWSA, with the full support of the Royal Government of Cambodia, Parent Manistries, and the Board of Directors, PPWSA has been able to develop itself strongly in expanding its capacity in providing clean water to residents with quality, safety, sustainability, and reasonable prices.

Based on the Updated Master Plan Phase 3 (2021-2030) PPWSA has committed to collaborating with development partners to implement projects to expand water production and supply capacity, thereby contributing to achieving Goal 6 on “Clean Water and Sanitation” of the Sustainable Development Goals, in particular Goal 6.1, to ensure that everyone has access to safe and affordable drinking water, in addition to the goal of the Pentagon Strategy Phase 1 of the 7<sup>th</sup> Royal Government on the provision of clean water by 2030.

In 2024, PPWSA achieved a fruitful achievement of officially launching two new Water Treatment Plants: Bakheng Water Treatment Plant Stage 2 and Boeung Thom Water Treatment Plant, this allow PPWSA to increase its capacity to treat clean water at 988,000m<sup>3</sup>/day. The Launching of the Boeung Thom Water Treatment Plant is a significant achievement and provides great benefits to 10 villages in Sangkat Protas Lang, Sangkat Boeng Thom, and Sangkat Pong Teuk of Khan Kambol, approximately 3,000 families, who will be able to receive clean water faster than planned. Without this project, residents in the aforementioned geographical area would not be able to receive clean water supplied by PPWSA at this time due to the PPWSA master plan, and they would have to wait until the following few years. Bakheng Water Treatment Plant Phase 2 is a new water treatment plant equipped with a solar system with a total capacity of 1.9 megawatts. Moreover, there are other water treatment plants that have solar systems in the past, like Phum Prek Water Treatment Plant (with a total capacity of 779 kilowatts) and Bakheng Water Treatment Plant Phase 1 (with a total capacity of 1.9 megawatts). In order to contribute to environmental protection through the use of clean energy and energy-saving, it leads to a reduction in carbon dioxide emissions into the atmosphere.

Meanwhile, PPWSA’s water treatment process complies with National Drinking Water Quality Standards and the World Health Organization (WHO), with a water quality laboratory for analysis. At the same time, we also regularly conduct water quality analysis with overseas laboratories (Singapore and Shanghai Laboratories). This constant attention and monitoring of water quality can allow PPWSA to guarantee customers clean water that can be drunk directly from the tap, to ensure the slogan “Clean Water for All.” as well as to provide a quality supply of Clean Water Sanitation and Sustainability for a healthy life, a better standard of living and a good environment.

Apart from that, Phnom Penh Water Supply Authority has also contributed to many social activities, such as responsibility towards officers and employees (through training, payment to the National Social Security Fund, etc). Donations to the Cambodian Red Cross and the Red Crescent, donations to Cambodia Kantha Bopha Foundation and Clean Water Supply through fire hydrants, etc. In addition, to contributing to the implementation of the Royal Government of Cambodia's poverty reduction policy, Phnom Penh Water Supply Authority has begun implementing a policy to provide clean water to low-income families since 1999.

In addition to contributing to reducing environmental impacts and responding to climate change, Phnom Penh Water Supply Authority (PPWSA) has also implemented a program to reduce the rate of non-water revenue (NRW), a program called the Mobile App is implementing a smart water network management project, an Asset Management and Maintenance System Project along with solar energy systems installation in some Water Treatment Plants, helping PPWSA save energy and reduce carbon dioxide emissions.

PPWSA is greatly appreciated for the support of the Royal Government and its two guardians, Ministry of Economy and Finance and Ministry of Industry, Science, Technology, and Innovation. For their assistance and wise vision, we also would like to express our gratitude the Board of Directors. Meanwhile, we would like to express our gratitude to the development partners who have made substantial contributions to PPWSA for the development of their capability of producing and supplying treated water. Lastly, we also want to express our gratitude to all of the clients who have helped PPWSA become the success it is today.

PHNOM PENH, DECEMBER 26, 2025

**Delegation of the Royal Government of Cambodia  
In Charge of The Director General of  
Phnom Penh Water Supply Authority**

**LONG NARO**

# KINGDOM OF CAMBODIA

## NATION RELIGION KING



PHNOM PENH WATER SUPPLY AUTHORITY

«PPWSA»

# SUSTAINABILITY REPORT 2024

## VISION

PPWSA has committed to continue to grow its clean water supply services in a sustainable manner and to act as a consultant, as a facilitator for people who are living in towns, provinces, and the cities throughout the Kingdom of Cambodia and residents in the developing countries of the world, to access to clean water.

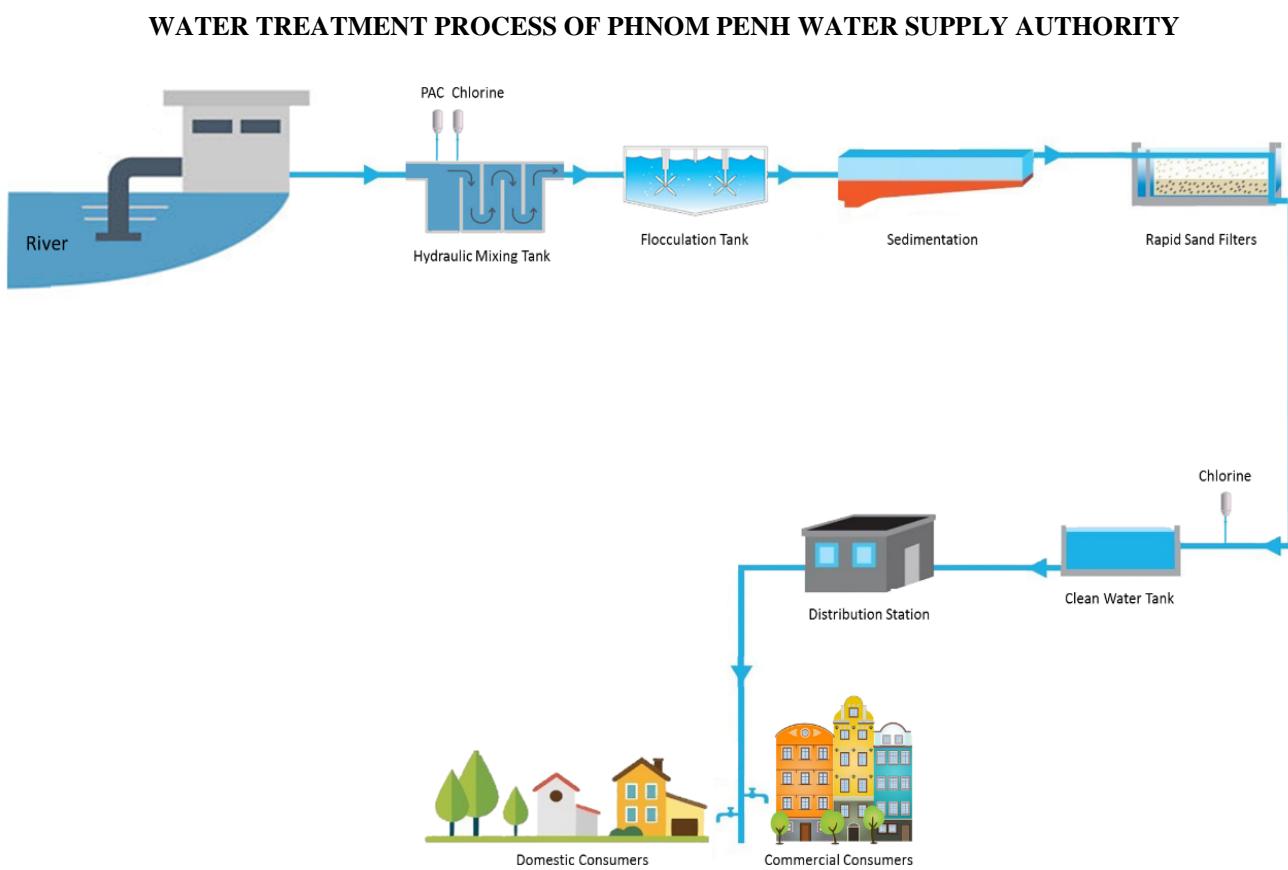
## MISSION

PPWSA's mission is to keep supplying of clean water 24 hours a day, 7 days a week with sufficient pressure and at a reasonable price to the people in Phnom Penh and the town of Kandal province adjacent to Phnom Penh, and low-income residents. In addition, PPWSA has been sharing its work experiences with a number of provincial and municipal water utilities in the Kingdom of Cambodia, as well as regional and global water to achieve the Cambodia's Sustainable Development Goals (CSDGs).

## WATER TREATMENT AND SUPPLY PROCESS OF PPWSA

In 2024, Phnom Penh Water Supply Authority (PPWSA) provided Clean Water to residents within its service area from a total of 6 Water Treatment Plants, which use water sources from the Mekong River, Tonle Sap River, Tonle Bassac River and Prek Tnaot River which has an average capacity to produce clean water a total of 988,000m<sup>3</sup>/day. In this Water Treatment Process, PPWSA used PAC, Chlorine, and Lime to ensure the quality of the clean water meets the National Drinking Water Quality Standards as well as the World Health Organization (WHO) Drinking Water Quality Standards. Moreover, by supplying clean water from the 6 Water Treatment Plants, the water pressure for customers at the end of the connection may reach approximately 1.5 to 2 bars.

Below is a representative image of the water treatment process for the distribution of PPWSA:



## COMPLIANCE AND SUSTAINABLE MANAGEMENT

### MAINTAINED Water

#### Quality 100%

Water's quality analysis meeting National Water Drinking Quality Standard and WHO Drinking Water Guidelines



### The Reduction of CO<sub>2</sub>

#### Emission

PPWSA is using the Clean Energy from Solar Energy System in the operation in order to reduce the CO<sub>2</sub> Emission.

### COLLECTION RATIO 99.90%



PPWSA is using Spot Billing System for reading and invoicing water consumption at place, to ensure better efficiency and productivity in collecting water bills from customers.

Moreover, PPWSA's customers may pay their bill directly at the 6 Branch Counters of PPWSA and online payment thought PPWSA's partners.

## COMPLIANCE AND SUSTAINABLE MANAGEMENT

PPWSA has been striving to produce quality and safe water to supply to its customers. To gain more trust from its customers PPWSA has sent the sample of water taken from Bakheng Water Treatment Plant of PPWSA, to TUV SUD PSB Pts Ltd., Singapore's independent laboratory for the water's quality analysis by testing 126 items (*detail in Annual Report 2024 on page 29*)



Bakheng Water Treatment Plant, Phase I & II



Solar energy

PPWSA had installed clean energy system that produce solar energy system at some water treatment plants. The system is used in conjunction with electricity supplied by Electricite du Cambodge. by EDC (ELECTRICITÉ DU CAMBODGE).

PPWSA is using Spot Billing System for reading and invoicing water consumption at place, in order to ensure better efficiency and productivity in collecting water bills from customers.



Reading and Invoicing by using Spot Billing System



Customers can easily pay their water bills with auto payment through the PPWSA APP, Banks, Micro Finance Institutions, and Transfer agencies.

**TABLE A**

<b>OPERATION INFORMATION</b>		
1	The Listed Entity's business model	<p>The Business Model has been described in the Annual Report of PPWSA Year 2024 (Section 2: Information about business results from pages 10 to 12).</p> <p>It is also mentioned briefly in the covering text of this report.</p>
<b>GOVERNANCE OF SUSTAINABILITY</b>		
2	Measure or method that PWSA has planned to set the specific sustainability development goals (SDGs) in the business strategy or governance management or operational processes of the PPWSA.	<p>The business of PPWSA is fully aligned with the SDG Goal 6 (Clean Water and Sanitation), in particular the implementation of Target 6.1, “by 2030, achieve universal and equitable access to safe and affordable drinking water for all”. This has been an important determining factor in guiding our Updated 3rd Master Plan 2021-2030 and in expanding our production system capacity and our water supply network.</p>
3	Significant risks related to climate conditions, environmental and social factors for the short, medium or long term, PPWSA identifies these risks arising from the operations process of PPWSA.	<p>The key risks that may affect the water treatment process is in the future level and quality of water. As air temperatures and humidity increase, and water cycles become faster, rain precipitation is expected to become more intense, as well as more frequent in rainy months, and less frequent in dry months. This creates the risk that water levels in the rivers that PPWSA uses will become higher (with faster flowing water) in the rainy season, and lower in the dry season. It also increases the longer term risks of riverine flooding in winter and of flash floods in summer.</p> <p>Increases in heat as well as increased needs for water resources in upstream countries may also lead to increased consumption of river water before it arrives at Phnom Penh. This also needs consideration.</p> <p>In the future, PPWSA may review of these risks and for the creation of a suite of timely possible actions and responses. Those responses will be important to offset the future risks that they pose to our infrastructure and to ensure that we remain able to provide all our customers with access to safe and affordable drinking water for all.</p> <p>Please also see the Annual Report Year 2024 Section 1: General Information of Phnom Penh Water Supply Authority.</p>

4	Risk management operation: the processes were used by PPWSA to identify and manage risks related to climate conditions, environmental and social factors.	The Planning and Project Department leads an annual process on risk factor and countermeasure. This is summarized in PPWSA's Annual Report 2024 in Section 1: General Information of Phnom Penh Water Supply Authority.  Other than this, we do not have a stand-alone risk management framework. All risks that arise are identified by operations and are resolved and corrected on an ongoing basis.
5	Strategies or plans that PPWSA implements to manage risks related to climate, environmental, and social factors.	As described above, these risks are at present considered medium to long term risks, and we may review for the creation of strategies and plans to manage them. In the meantime, we have suites of operational responses that are appropriate to current risks.
6	Governance of Risks: The governance and reporting process used by PPWSA Board of Directors to monitor climate, environmental, and societal risks.	PPWSA's Board of Directors is considering expanding the scope of work of the Audit Committee to include the oversight of risk.
7	Key indicators and metrics that PPWSA uses to monitor and assess risks related to climate, environmental and social factors	PPWSA already actively monitors water quality and water level to ensure the quality of treated water and sufficient quantity and pressure for its customers.  The organization does not yet have indicators specifically to monitor the medium to long term risks described above but is considering
8	Target risk that PPWSA uses to manage risks associated with climate, environmental and social factors as well as the actual outcomes in relation to these target risk.	It is a key target that PPWSA need to provide water to customer 24 hours per day and 7 days per week. This target will guide our work on the management of the medium to long term risks described above.

### CORPORATE SOCIAL IMPACTS

9	Training hours per employee	The total number of employees is 1,434. Among them, there are 519 employees who received a total of 15,120 hours of training. The training hours per employee is therefore 10.54 hours/employee.
10	Occupational Risk and mortality rate during work	In 2024, there were 10 work accidents, resulting in 8 employee injuries and 2 deaths.  Summary of the accidents:

		<ul style="list-style-type: none"> <li>• Total number of work accidents : 10 employees</li> <li>• Total number of employees injures : 10 employee including: <ul style="list-style-type: none"> <li>- Minor injuries: 8 employees (working and traffic accidents)</li> <li>- Deaths: 2 employees (traffic accidents and health problems)</li> </ul> </li> </ul> <p>The fatalities are greatly lamented. Please note that they were not caused by operational matters but by a road accident on the way to work and by a tragic death on the premises related to individual health.</p>
11	Policies or commitments of PPWSA regarding child labor and forced labor	PPWSA takes a strong position on child labor. Staff statutes, approved by the Board of Directors, require employees to be at least 18 years old to be eligible for work. This is stricter than the requirements of Cambodia's labor laws which allow for recruitment from the age of 15.
12	Policies related to grievance handling, including employee complaints about PPWSA	<p>Meanwhile, PPWSA has established clear and easy channel for the submission of customer requests or complaints. Customers can submit requests through:</p> <ul style="list-style-type: none"> <li>• The official Facebook page: “<b>នគរកសឹកស្សែតក្រុងតុលាង</b> Phnom Penh Water Supply Authority”</li> <li>• Telegram channel: @ppwsa_kh or by phone: +855-31-935-8080</li> </ul> <p>All requests received through these channels are recorded and systematically managed according to internal procedures to ensure proper tracking and timely resolution. Currently, this work is under the management of the Commercial Department.</p>
13	PPWSA's policy regarding anti-corruption	Any employee suspected of committing acts of corruption or bribery will fall under the remit of the PPWSA Disciplinary Council. That Disciplinary Council is stipulated in its staff statutes and approved by the Board of Directors to determine disciplinary for employees found to have committed violations, and the level of punishment will depends on the seriousness of each offense.
14	Confidential reporting policy (Whistle Blowing)	PPWSA has appointed employee representatives and has installed mailboxes in selected buildings for employees to submit requests or proposals. However, there is none any formal procedure for reviewing these requests yet. This is

		because in the past several years, no requests have been received through the mailbox or employee representative system.												
15	Proportion of female board members and senior staff	<table border="1"> <thead> <tr> <th></th><th>Total members</th><th>Number of Women</th><th>The percentage of women/ Total members</th></tr> </thead> <tbody> <tr> <td>Board of Director</td><td>8</td><td>0</td><td>0</td></tr> <tr> <td>Senior staffs</td><td>27</td><td>6</td><td>22%</td></tr> </tbody> </table>		Total members	Number of Women	The percentage of women/ Total members	Board of Director	8	0	0	Senior staffs	27	6	22%
	Total members	Number of Women	The percentage of women/ Total members											
Board of Director	8	0	0											
Senior staffs	27	6	22%											
16	Total number of workers is broken down by gender	<p>The total number of employees as at December 2024 was:</p> <ul style="list-style-type: none"> <li>• Total number of employees were 1,434</li> <li>• Total number of men employees were 1,186, representing 82.7% of the total workforce.</li> <li>• Total number of women employees were 248 were female, representing 17.3% of the total workforce.</li> </ul>												
17	Policies related to promoting gender diversity	<p>PPWSA is committed to gender equality, ensuring that both men and women have equal rights and opportunities in the workplace. Promotions and compensation are determined solely based on merit, ability, and performance, regardless of gender.</p> <p>To further support gender inclusivity, PPWSA has established a Women's Representative Committee to assist and advocate for female employees. Women employees are encouraged to submit complaints, suggestions, or requests to their designated representatives for guidance and resolution of any work-related concerns.</p> <p>In addition, PPWSA statute affirms the rights of women by providing benefits such as:</p> <ul style="list-style-type: none"> <li>• Three months of maternity leave with full basic salary</li> <li>• The right to leave work one hour early each day for one year after childbirth, to support breastfeeding and childcare.</li> </ul> <p>These measures demonstrate the commitment of PPWSA to promoting an equitable work environment, inclusive activities, and support for all female employees.</p>												

18	Description of the policy on cooperation with local communities and indigenous peoples	Treated water for low-income residents: to contribute to the implementation of the poverty reduction of the Cambodian government, Phnom Penh Water Supply Authority has been implementing a policy of providing treated water to low-income households since 1999. PPWSA has provided water to low-income residents for both inside and outside the community through a subsidized water subscription policy of 30%, 50%, 70%, and 100% under the program 'Clean Water for all'. In addition, PPWSA also actively contributed to charitable activities, such as donating funds to Kantha Bopha Children's Hospital and the Cambodian Red Cross Society every year, and collaborating in building schools and other infrastructure projects in various provinces across Cambodia.
<b>ENVIRONMENTAL IMPACTS</b>		
19	Description of main impacts from PPWSA's business activity on the environment.	The main impacts from PPWSA's business activity on the environment are: <ul style="list-style-type: none"> <li>• Desludging water resulting from the treatment process</li> <li>• Packaging waste, waste of old or broken appliances</li> </ul>
20	Description of the policy on reducing negative impacts from PPWSA's business activity on the environment.	The policy on reducing negative impacts from PPWSA's business activity on the environment are: <ul style="list-style-type: none"> <li>• Operating machinery powered by electricity (EDC) and solar energy.</li> <li>• Using chlorine gas and liquid chlorine produce from salt.</li> <li>• Arrangements to minimize solid waste by cleaning or disposing of solid waste such as chlorine drums, which are contracted with suppliers to replace the drums with new ones and keep them in a safe place.</li> <li>• Using highly efficient machinery to reduce energy consumption.</li> <li>• Use noiseless machinery.</li> </ul>
21	Total amount of water withdrawn for use in PPWSA's operation and business.	The total amount of raw water withdrawn for use in PPWSA's operation and business in 2024 is 323,748,643m <sup>3</sup> . This was all drawn from rivers (surface water).
22	Proportion of wastewater generated, treated and recycled by PPWSA	Wastewater is the waste water generated from the daily use or rain water which has been drained into the public drainage system.

23	Total solid waste generated from PPWSA's operations and business.	The total solid waste generated from PPWSA's operations and business includes: packaging waste, broken solar panels, and garbage generated from administrative processes, which are cleaned and transported by waste collection companies.
24	Proportion of solid waste recycled or recovered by PPWSA	As there is relatively little solid waste at PPWSA, the opportunities for recycling etc are limited. All solid waste in 2024 was disposed of through licensed waste management companies under the license of Enterprise for Managing Municipal Solid Waste in Phnom Penh.
<b>CLIMATE IMPACTS</b>		
25	Description of main impacts from PPWSA's business activity on climate.	Climate impacts resulting from the business activities of PPWSA occur through the energy use purchased from Electricité du Cambodge and through the combustion of fuel for site and administrative work.
26	Description of the policy on reducing negative impacts from PPWSA's business activity on climate.	To reduce the negative impacts, the PPWSA has installed solar energy systems at three water treatment plants as follows: <ul style="list-style-type: none"> <li>- Phum Prek Water Treatment Plant</li> <li>- Bakheng Water Treatment Plant</li> <li>- Mlech Water Treatment</li> </ul>
27	Total energy consumed for PPWSA's operation and business.	The total amount of electricity consumed for PPWSA's operation and business was <b>90,479,521 kWh</b> , of which purchased electricity for production was 84,172,509 kWh, purchased electricity for administration was 774,178 kWh and solar electricity produced by PPWSA was 5,532,834 kWh. <p>Meanwhile, PPWSA used a total of 608,034 liters of gasoline and a total of 1,564,494 liters of diesel for daily administrative and site work in 2024. So, if we convert to energy, the amount of energy used from fuel is equivalent to <b>21,682,017 kWh</b>.</p> <p>Therefore, the total amount of energy used in the operations and business of the PPWSA is approximately <b>112,161,538 kWh</b>.</p>
28	Proportion of using the renewable energy in PPWSA's operation and business.	The proportion of renewable energy used in PPWSA's operation and business is approximately 5 percent (5,532,834kWh/ 112,161,538kWh).

29	Total amount of energy produced and proportion of renewable energy produced by PPWSA	The total amount of energy produced from the solar system, which is renewable energy, was 5,532,834 kWh.
30	Scope 1: Greenhouse gas emissions directly related to PPWSA's operations and business	In 2024, the Greenhouse Gas emissions directly from operations and business of PPWSA was approximately 5,823 tCO <sub>2</sub> eq. This is our best estimate, based on USEPA emission factors as a proxy for factors in Cambodia.
31	Scope 2: Greenhouse gas emissions indirectly related to PPWSA's operations and business	In 2024, the Greenhouse Gas emissions related to the purchase of energy for PPWSA's operations and business was approximately 57,086 tCO <sub>2</sub> eq. This is our best estimate, based on an Emission Factor included in a 2012 analysis by the Ministry of Environment of Cambodia and the Institute for Global Environmental Strategies (0.672 tCO <sub>2</sub> eq/ MWh).