

Water Stewardship



2020 Goal



Reduction of water withdrawal per unit

of revenue for **10%**
compared to the 2015 baseline

Performance Against Goal

Percentage of Water Withdrawal Intensity Reduction, compared to the 2015 baseline



Water Withdrawal Intensity (cubic meters per million Baht of revenue)



Key Performance in 2020



Water withdrawal intensity per revenue unit

17.46

(m³ per million Baht)



Water reused and recycled

by **7.90%** of total water withdrawal



100%

completion of water risk assessment of the Company's operational areas (only consisting of CP ALL Plc., Siam Makro PCL. and CPRAM)



100%

completed review of water scarcity risk assessment in Critical Tier 1 Suppliers operational areas

Supporting the SDGs



SDG6 Ensure availability and sustainable management of water and sanitation for all

- 6.3 Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- 6.4 Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity.



SDG12 Ensure sustainable consumption and production patterns

- 12.2 Sustainable management and use of natural resources.

Risk and Opportunity

The climate change situation with relevant to economic development, and population growth has led to changes in forms of water usage in industry, and higher demand for water in communities which resulted in scarcity risks for water, a primary resource for life and various business operations. Concurrently in 2020, the Coronavirus Disease pandemic (COVID-19) has increased risks in terms of both quantity and quality of water resources. CP ALL Public Company Limited and its subsidiaries (“the Company”) recognizes the issue and impact from such risks and strives to focus on efficient and complete management of water resources throughout the supply chain. Additionally, the Company established sharing opportunities to access water resources in all areas and prepares for risks and changes which may occur during crisis. This measure enables equal, safe and sustainable water usage in all social strata.



Progress in 2020



Continuing project in performing water scarcity risk assessment in the Company's operational areas



Continuing project in performing water scarcity risk assessments in Critical Tier 1 Suppliers' operational areas

Management Approach

The Company focuses on efficient water resource stewardship throughout the supply chain from upstream to downstream. In order to provide emphasis in this matter and pay additional attention to the customers by fully acknowledging responsibility, the Company has deployed measures to assure customer satisfaction in the aspect of quality (freshness, cleanliness, and safety). Additionally, the Company plans to increase the efficiency of water withdrawal per unit of revenue by the management of water scarcity risks, increasing portions of water for recycle and reuse, promoting the water stewardship, the conservation of water, campaigning for economical water usage to people within the organization as well as stating importance in promoting the communities' access to water sources.

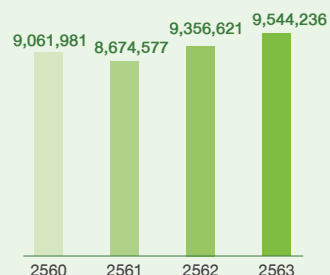
Guidance on Mitigating and Preventing the Risk of COVID-19



The COVID-19 pandemic has had an impact towards enhancing access to safe and sanitary water in addition to the scarcity of clean water amidst increasing demand. The Company realizes the importance of access to clean water and takes into account the long-term demand for water. Therefore, the Company has devised more efficient water management practices to respond to customers and communities in society in every situation that could occur both in the present and in the future.

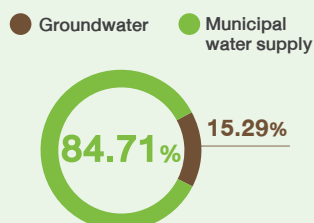
Water Stewardship Dashboard

Total Water Withdrawal (cubic meters)

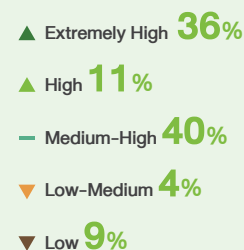


Proportion of Water Withdrawal According to Sources (cubic meters)

in 2020



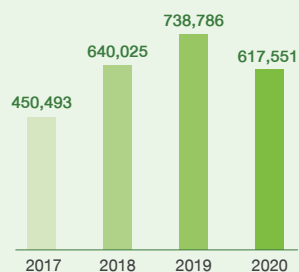
Proportion of Water Withdrawal from the Company's Operation Sites with Water Stress



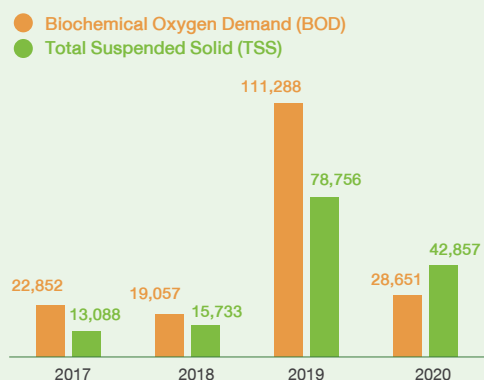
Water Withdrawal Intensity (cubic meters per million Baht of revenue)



Treated Wastewater Volume (cubic meters)



Quality of Treated Wastewater (kilogram)



Note: Volume and quality of treated wastewater data measurement values adheres to legal requirements and was obtained from CPRAM Company Limited only.



Water Risk Assessment Throughout the Supply Chain

The Company's primary source of water is the national municipal water, which is used for general purposes such as, washing and cleaning, and for the production processes. Additionally, the Company obtains water from other sources such as groundwater, which is specifically used in some operating areas by CPRAM Company Limited and Siam Makro PCL. However, the Company realizes the importance of water use and prevents water scarcity in community areas. The efficient management of water sources is achieved by conducting water scarcity risk assessments (Water Stress) in all Company operating areas by using the Aqueduct Tool* developed by the World Resources Institute (WRI). The risk assessment conducted reveals that 36% of Company's operating areas are categorized as Extremely High and 11% of Company's operating areas are categorized as High. Upon assessing water scarcity within the stated operating area, the Company proceeds to manage risks by appointing a work committee with the target and plan to reduce water consumption by 10%, in accordance to Company goals. Additionally,

various projects have been established to support the reduction of water consumption, wastewater treatment, and the reuse of water.

Additionally, the Company foresees an opportunity to jointly manage water while maintaining water impact at a minimal for water consumers. In 2020, the Company proceeded with water scarcity assessments for 216 Critical Tier 1 Suppliers using the Aqueduct Tool. The results of the assessment reveals that 31 Critical Tier 1 Suppliers are operating in an area with potential water scarcity categorized as Extremely High and High. As a result of the information obtained, the Company proceeded to collaborate with suppliers in an effort to reduce risks related to water and enact the stewardship of water resources. The various examples of such effort include to the collaboration with various agencies and communities, the utilization of highly effective tools to ensure efficient usage of water, and the reuse of water. The current collaboration with Critical Tier 1 Suppliers in High risk is at 100%.

* Refer to Aqueduct Global Maps 3.0 Data, August, 2019



The Company manages water resources in various appropriated ways depending on operating conditions and context of each operating area through the following operations.

Water Conservation Project

Zero Wastewater Discharge Project

The Company realizes the importance of water resources and therefore has continuously implemented the Zero Wastewater Discharge project through efficient usage of water, wastewater management aiming for utilization and reduction of wastewater discharge into public waterbody through implementations and collaboration of various departments. such as



Reused of Water Discharge from Air Conditioning Unit Project at Suvarnabhumi Distribution Center

The Suvarnabhumi Distribution Center has discovered that discharge water from air-conditioning units, which flows into drains, within the canteen area accounts for an average of 36,000 liters per year. The engineering department has proceeded to install a water collection reservoir to accumulate this amount of water for reuse, such as for watering plants within the center. As a result, over 36 cubic meters of water per year was saved.



Hatyai Distribution Center Project

The Hatyai Distribution Center has proceeded to install an automatic sprinkler system which uses quality-standard-assured treated wastewater to water plants, the lawn and trees within the distribution center. This initiative reduced water consumption by 15 cubic meters per day. Additionally, the Company uses water runoff from cleaning product crates to water plants within 4 distribution centers including the Buriram Distribution Center, Nakhon Sawan Distribution Center, and Bang Bua Thong Distribution Center, in an initiative for the most cost-effective use of water.



Water Efficiency Improvement Project

CPRAM Company Limited (Lat Lum Kaeo factory) has established a water stewardship department responsible for managing water scarcity issues in the water supply system of surrounding communities through the usage of groundwater sources instead of the surface water sources. The Company has pumped groundwater from approximately 500 meters depth. The pumped water has temperature at 50 degrees Celsius which is used for production equipment washing. This new method replaces the previous which requires electrical heating of water. In addition, the development of wastewater treatment enables a discharge of higher quality than the level stipulated by law and enables the recycling of wastewater from production processes within the factory into completely reusable water for other purposes i.e. temperature control functions within coolant towers of the cooling system, watering plants, and cleansing of surface areas. This project assisted our development of advanced technology for water quality improvement, created a positive attitude among the community people, and reduced environmental impact to a minimum.

Impacts and Benefits



Reduction of municipal water supply usage by **23,865** cubic meters



Usage of groundwater instead of municipal water, reducing **1,287,837** cubic meters of municipal water consumption



Reduction of electricity consumption within the system by **362,060** kilowatt-hour per year



Recycling of wastewater by **27,550** cubic meters



Conserving Water, Preserving the Future Project

Siam Makro PCL. recognizes the significance of proper water discharge drainage into public water sources and sustainable living with the community. Thus, measures including the reduction in water resource consumption and wastewater treatment that adheres to quality standards and regulations relating to discharge are taken before water release into public water sources. Additionally, processes to reuse treated wastewater for watering plants are automated within the Makro stores in order to reduce municipal water usage. Currently, these upgrades have been installed in 72 stores nationwide and the result of this project is a reduction in municipal water usage of up to 93,960 – 104,000 cubic meters per year. Furthermore, measures in place reduce numerous environmental impact issues in communities which range from discharge of wastewater into community water sources, the reduction of risks, and instilment of employee consciousness regarding environmental impact reduction in communities.



Groundwater Bank Project

Siam Makro PCL. recognizes the impact drought has towards water resource consumption, usage and access. As citizens have a fundamental right to accessing quality water sources, the Company has adopted and applied the Royal Initiative of the King Rama IX regarding groundwater banks. In an effort for proper water treatment and usage, treated water has been redirected to water plants within the organization. Thus, the Company reduces water consumption and expenses relating to municipal water and increases green area surrounding the store. Currently, the stores in Yasothon Province have adopted this project and has accordingly, reduced municipal water consumption by 1,846 cubic meters or 0.3% of water consumption from the previous year, and a reduction in expenses of 60,000 Baht. Furthermore, this measure has increased green space within the organization for employees' recreational purposes and has expanded to become a knowledge source and field trip site for surrounding communities to learn and adopt in an effort to reduce impact from droughts and water scarcity in the future.

Supplier Collaboration Project



Organic Fish Farm for Sustainability Project

The Siam Makor PCL., wholesale business, has organized projects to encourage and support suppliers and recognizes challenges farmers have in traditional freshwater fish farming methods in coops. The impact from changing weather conditions, reduction in production arising from drought, and produce contaminated from chemicals discharged into natural water sources, has caused farmers to suffer losses. Such losses also stem from the consequential reduction in income from raising fish, the inability to control produce quality, safety, and traceability before delivery to consumers/customers. Therefore, the Company has initiated a project in collaboration with relevant agencies, such as Sakon Nakhon Rajabhat University, Kasetsart University, and the Thai Chamber of Commerce, to organize activities to provide advice in the raising

of fish such as catfish and tilapia in closed systems as an alternative to traditional cage farming methods. Additionally, technologies which are suitable for solving water problems such as Biofloc, solar cell powered backup systems, and automatic feeding systems were introduced. Furthermore, other developments include a prototype farm, the creation of a quality control system for raising Tilapia, plans for pathogens and chemical contaminants inspection, and trial production of Tilapia free from parasites under the quality control and product inspection plan. At present, 8 farmer households have participated and as a result those 8 households have gained up to 180,000 Baht per year in income. Moreover, the correct farming of fish forms the benefit of not releasing polluted water, which causes destruction towards the environment, and provides consumers with clean and safe food.

