

CBG Water Management

1. Overview of CBG Water Usage

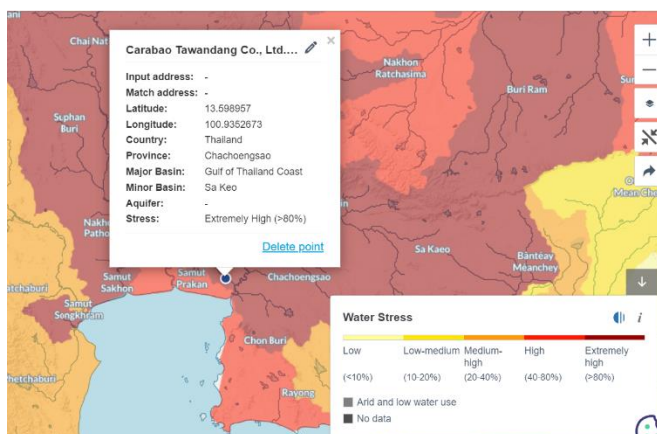
Carabao Group (CBG) as a beverage company strictly complies with the laws and regulations relevant to environmental management, especially water aspect. The company implements preventive and corrective measures for environmental impacts caused by the operations of the Company. CBG also uses resources efficiently and economically, implements an effective production wastewater treatment system and assesses environmental management system. By implementing efficient use of water, CBG monitor with 3rd party water supplier and measures water quality by third party juristic person before discharge to public water source. In addition, the Company manages the use of water resources to ensure that nearby communities can access their water source without any effect from CBG's production.

Water is considered a very important raw material in Carabao Group's beverage production, since water is directly affected the quality and quantity of the products. With the vision of 'World Class product, World Class Brand', product quality is what CBG put emphasis on. For CBG, product quality is its main selling point as much as its well-known Brand. However, Climate Change wreaks havoc on our environment, including the quantity and quality of water in natural resources, both surface water and groundwater. CBG's beverage production plant is located in Bangpakong, Chacherngsao province, which is an extremely high water stressed area (analyzing by Aqueduct tool of World Resources Institute). In order to fully control the quantity and quality of water it use and not withdraw from local water sources which might affect the adjacent communities, CBG obtained water from water suppliers, which operate legally on environmental and human rights laws and regulations, in accordance with CBG's Supplier Code of Conducts.

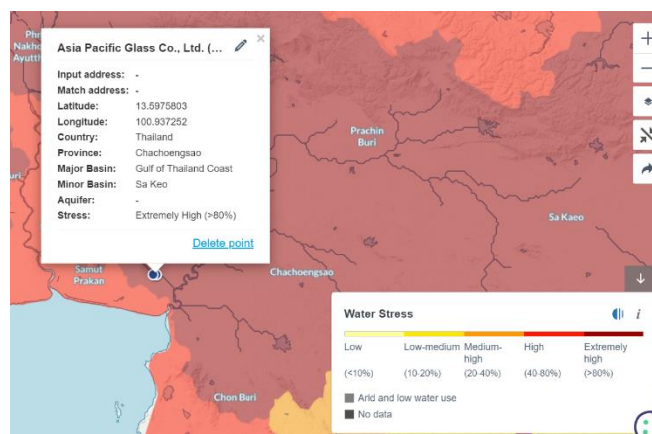
2. Water Risk Assessment

All 4 production plants of CBG is located in the same area in Bangpakong, Chacherngsao province, which is an extremely high water-stressed area 100% (analyzing by Aqueduct tool of World Resources Institute):

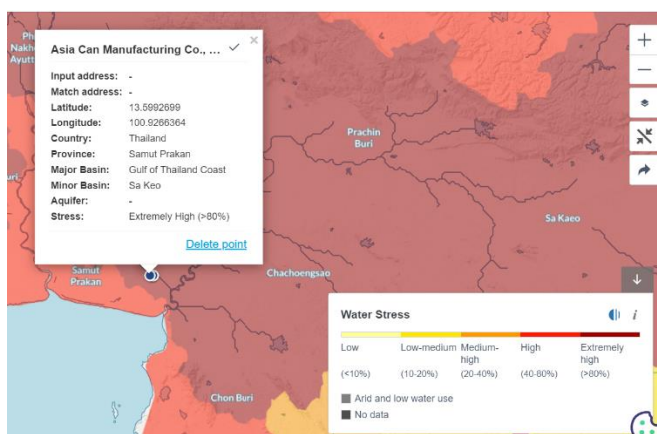
| Plants | Latitude | Longitude | Water-stressed level |
|---|------------|-------------|-----------------------|
| 1. Carabao Tawandang Co., Ltd. | 13.598957 | 100.9352673 | Extremely High (>80%) |
| 2. Asia Pacific Glass Co., Ltd. | 13.5975803 | 100.937252 | Extremely High (>80%) |
| 3. Asia Can Manufacturing Co., Ltd. | 13.5992699 | 100.9266364 | Extremely High (>80%) |
| 4. Asia Packaging Manufacturing Co., Ltd. | 13.5991966 | 100.9373909 | Extremely High (>80%) |



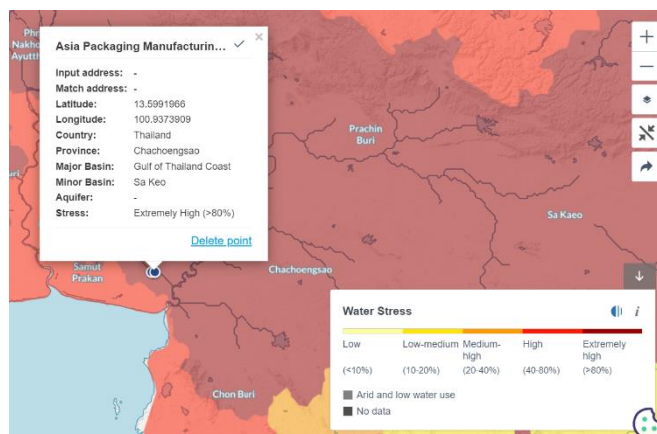
1. Carabao Tawandang Co., Ltd.



2. Asia Pacific Glass Co., Ltd.



3. Asia Can Manufacturing Co., Ltd.



4. Asia Packaging Manufacturing Co., Ltd.

Carabao Group expanded its water risk assessment to its business partners to consider doing business partnership and minimize future risks by analyzing the location of suppliers' sugar cane and coffee plantations. Sugar and coffee are two of CBG's high volume raw material and considered as critical tier-1 suppliers. The percentage of cost of goods purchased in 2022 of sugar cane is 7.06% and coffee is 0.33%

CBG analyzed its suppliers' water stressed area by using Aqueduct tool of World Resources Institute as well. The percentage of sourced agricultural commodities originating from water-stressed areas of sugar cane is 76-99% which is an extremely high and coffee is 1-10% which is a low water-stressed area.

Water-stressed level of suppliers' sugar cane and coffee plantations.

| Area | % of sourced agricultural commodities | Latitude | Longitude | Water-stressed level |
|---------------|---------------------------------------|------------|-------------|--|
| Sugar | | | | |
| Location No.1 | 37.29% | 14.8431594 | 99.7595835 | Extremely High (>80%)  |
| Location No.2 | 31.08% | 15.4601595 | 101.1923442 | Extremely High (>80%)  |
| Location No.3 | 22.52% | 14.4979012 | 102.1675663 | High (40-80%)  |
| Location No.4 | 4.61% | 17.198559 | 102.865906 | Extremely High (>80%)  |

| Area | % of sourced agricultural commodities | Latitude | Longitude | Water-stressed level |
|---------------|---------------------------------------|-------------|-------------|----------------------|
| Location No.5 | 4.51% | 15.35192429 | 100.2370846 | High (40-80%) |
| Coffee | | | | |
| Location No.6 | 100% | 10.7857272 | 98.7527646 | Low (<10%) |

Water Risks Management of Suppliers

CBG's critical tier 1 water supplier conducted water-related risk assessments including risks related to the quantity and quality of water, risks related to regulatory changes or changes in pricing structures, and risks related to stakeholder conflicts.

- **Risks related to the quantity and quality of water**

Eastwater, the key water supplier of CBG has tracking and monitoring system on water quantity and quality. The company uses daily data from the Royal Irrigation Department on water level and water quantity of both main water sources, and reserve water sources. Moreover, the Company also track rain level, and amount of water flowing into the reservoir, as well as forecast climate impacts from air pressure and effect of Pacific Ocean currents affects El Niño and La Niña precipitation events. The company conducts scenario analysis focusing on turbidity and conductivity of water in Chachoengsao Province to anticipate the change of quantity and quality of water.

- **Risks related to regulatory changes or changes in pricing structures**

Eastwater, the key water supplier of CBG, evaluated the risks related to regulatory changes and changes in pricing structures based on the global and local trends. Eastwater has set the pricing conditions in the contract with CBG forecasting on what might happen. Those conditions have been agreed on both sides to prepare for any changes that might happen, which will be considered every 3 years. However, any changes in the pricing will be discussed and settled between two parties to ensure water supply process. The company concluded 3 future potential regulatory changes on a local level which are 1. There might be determination of basic water usage rates divided by each basin. Water users must pay for water usage according to the type and amount of water used. 2. Additional payment of water usage in case of drought might be required. (The drought zone must be declared according to the watershed committee.) 3. The Department of Water Resources will periodically review the basic water usage rates as appropriate, subject to the opinions of the watershed committee and each river basin.

- **Risks related to stakeholder conflicts**

Eastwater, the key water supplier of CBG evaluate potential risks and closely monitored the trends of potential conflicts with stakeholders and listed down the possible way of mitigation by engaging with stakeholders especially the communities around the factories through various activities to enhance the sustainable management. The activities include environmental management training to communities, field trip, reforestation project and community engagement.

CBG conducted risk assessment comprehensively to minimize any negative impacts and water risks in the future:

- **Changes in Laws, Regulations, and Water Price Structure**

Impact

Raw material costs might increase. The rising cost of raw materials, local tax collections, and extra cost in adapting the production might affect the production significantly according to the changes in laws and regulations. The rule changes demand fees from Greenhouse Gas Emissions or higher cost of treating water to reach its standard quality before discharge to natural water sources.

Risk Management

CBG has a legal team to monitor and evaluated the risks related to all changes in laws, regulations, changes in water pricing structures based on the global and local trends, and new law from the government that might affect the business. Furthermore, CBG attended the public hearing of the Water Resources Act which related to water supply and water management of Department of Water Resource, collaborated with the Thammasat University Research and Consultancy Institute.

In addition, the Company has arranged water supply agreement with 3rd party water supplier to determine basic water usage rates divided by each basin and additional payment of water usage in case of drought. These procedure helps prepare the Company for any impacts from those law changes, including Water Reduction Target, new technologies, or improvement in the production to use less water.

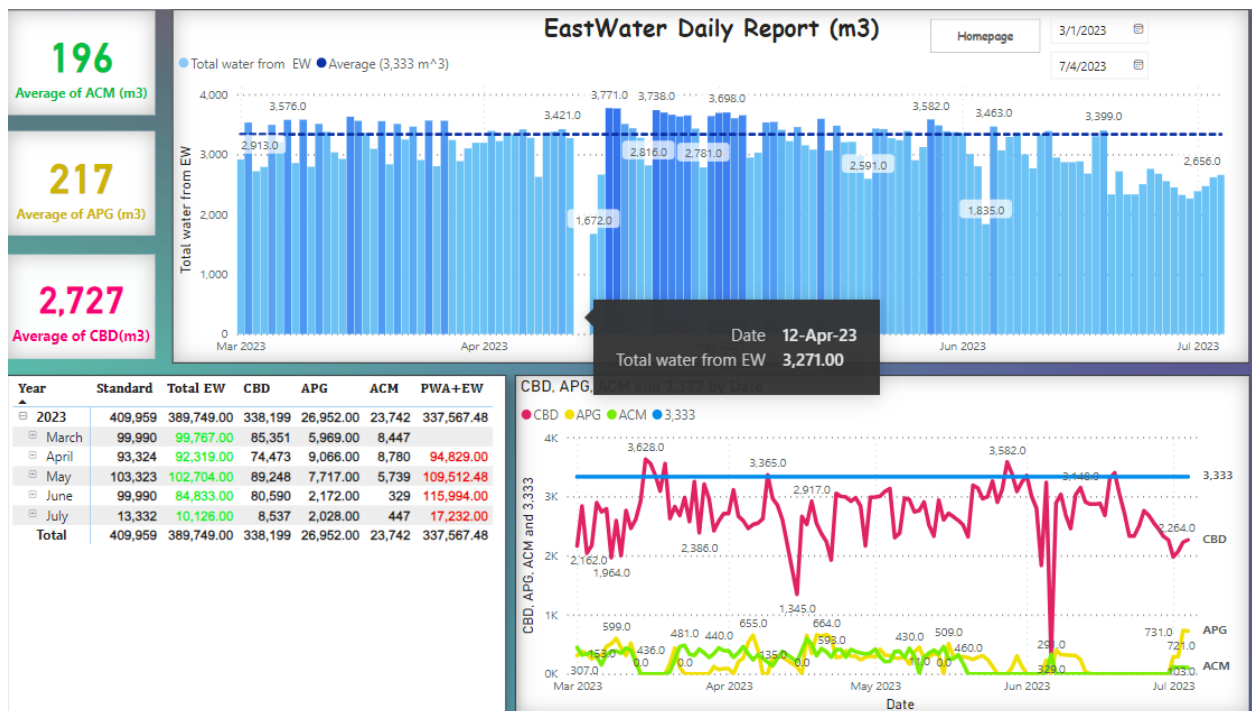
- **Climate Change that might cause drought, flood or higher temperature**

Impact

Raw material shortage because of lower yield, rising cost of raw material, and higher water price. All of these impacts might cause production disruption and unavailability in the market.

Risk Management

The Company has setup the mitigation program to minimize the risk of water scarcity in production by arranging water supply agreement with 3rd party water supplier to prepare the water supply for the growth of business and to prevent the water scarcity in the future. The Company arranged for water reserve to prevent the water shortage in production, including arrange for the backup water supplier in case the main supplier cannot provide the water with quantity and quality as the Company specified. The Company has set up Water Operation Team to monitor daily with 3rd party water supplier, test the water level and quality (as picture below), and report any water supplying issues to the water supplier regularly. Beverage manufacturing collects comprehensive water usage data, which the Company analyzes the data to find ways to improve production efficiency and production continuity for the maximum water usage. The data collection is separated in each plant of CBG and will be more thorough onwards. However, the Company is on the process to set the target for water intensity per unit to control the water usage effectively.



- Analysis of conflict between plants and surrounding communities and stakeholders

Impact

Conflict that might happen if CBG plants withdraw water into production in the quantity that affects the surrounding communities, the complaints might disrupt production and cause financial damage for unable to deliver products on time or pay fines. This also impacts on the Company's brand image as well.

Risk Management

The Company mainly uses water from 3rd party water supplier. In case that water supplier cannot provide water to the plants, the Company has set the backup system with Provincial Waterworks Authority to acquire water in separate pipeline, not using the local pipeline, which the water will be supply at nighttime when the water usage is low. Besides, the 3rd party water supplier has worked with the communities and stakeholders through Sustainability activities in the water source that the supplier withdrew from, such as plants upstream forests, water quality checkup, release the fishes, and restore water sources.

3. Scenario analysis for water management

- In case of water shortage, although there are arrangements and a backup plan, if water shortages disrupt the production for 4-7 days, the damage costs is estimated around 100 billion Baht which is considered from inventory stock that helps alleviate the products availability in the market.
- If water shortages disrupt the production more than 4-7 days, the damage cost would be around 50 million Baht per day.
- In case of the rising price of water from Provincial Waterworks Authority (PWA) which hasn't adjusted the price for 23 years now, there is a probability of rising price by an average of 15-20 percent, which will be being proposed to the new government.

The contract of water supply between CBG and the key water supplier has specified that the supplier has to pay the additional cost in case of the supplier cannot supply the water to CBG, which should be around 26 Baht per cubic meter compared to CBG average of water usage at 3,025 cubic meter per day, the damage cost would be increased by 78,650 Baht per day. The rising cost may cause the supplier to ask for contract amendment, adding extra conditions, to the termination of the contract, which affect to the Company.

4. Water Consumption Reduction Target

CBG's plants operates their water management effectively. The 2022 target for water consumption reduction are:

| 2022 Target | 2022 Results |
|---|---|
| Reduced water consumption (CBD plant) | |
| Refilled water to the deaerators by more than 6,000 cubic meters/year | Reused water after washing cans in the boilers, reducing water consumption by 13,114 cubic meters/year. Saved costs in terms of fuel consumption and reduced RO water consumption worth 1,326,892.59 Baht/year. |
| Reused RO-REJECT water by supplying more than 24,000 cubic meters/year to APG | Supplied RO-reject water to APG for use in peripheral processes at 34,548 cubic meters/year, which could be used in place of tap water which costs 15.75 baht/cubic meter. This reduced the water consumption costs by 544,131 Baht/year. |

| 2022 Target | 2022 Results |
|---|---|
| Reduced water consumption (ACM plant) | |
| Increased the reuse of RO reject water by 5%. | ACM Plant Implemented RO Water Recycle Project, in which reject water was reused to wash the floor, mops, and spray the dewatering machines, accounting for RO reject water reuse rate of up to 5%, and as a result reducing tap water consumption by up to 5 cubic meters per day and saving up to 35,451 Baht/year. |

In addition, each factory has developed a project to maximize the use of water by way of reuse and recycle, such as:

1. Reuse water that went through Reverse Osmosis (RO) filter system and left out of the production process. These water was used in floor cleaning and plant watering. It helps decreasing the use of piped water 5 cubic meters per day, which equals to the cost of 35,451 Baht/year.
2. Recycle water after treatment by watering plant in the green area of water treatment system and send to Asia Pacific Glass Co., Ltd. to use in glass bottle washing process. With the volume of 34,548 cubic meters per year, it equals the cost of piped water at 544,131 Baht/year (at the piped water rate of 15.75 Baht/cubic meter).

CBG has assessed the risks comprehensively, with mitigation plans to minimize the risk level and set up the Water Operation Team specifically to handle water-related issues. This effort helps CBG to be free from water incidents in 2019-2022 and no fine or complaints regarding water management.

CBG water demand was lower than the amount East Water supply to CBG. With plenty of room for the business growth, CBG certain that the water supply wouldn't be a problem in a short-medium term future.

