

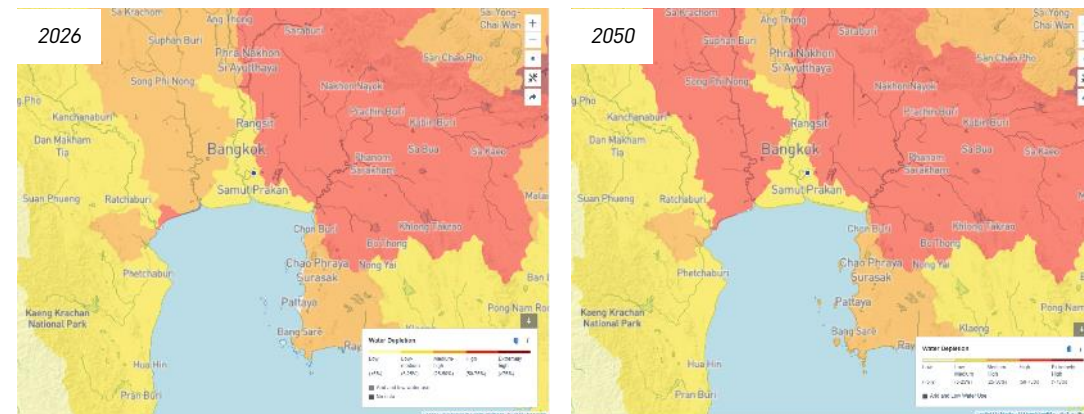
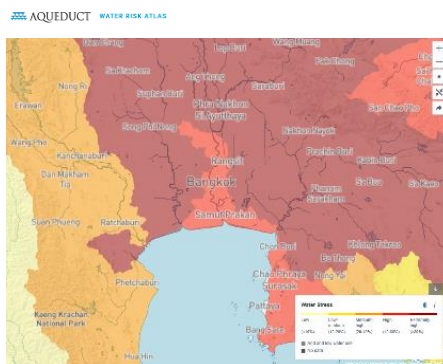


# **Water Risk Management**

# Water Risk Assessment

The Company conducts a comprehensive assessment of water-related risks across multiple dimensions, including water quality and quantity, regulatory changes, pricing structures, and potential conflicts among stakeholders regarding water resource usage. To support this analysis, the Company utilizes tools such as the **AQUEDUCT Water Risk Atlas** and **Water Footprint Assessment**. The assessment covers both current and future risk projections, taking into account two primary categories: dependency-related water risks and impact-related water risks.

In the Company's organizational risk assessment, flood and water scarcity have been identified as key risks. The Company conducted a water stress assessment for the **Bangchak Phra Khanong Refinery** and **Bangchak Sriracha Refinery** using internationally recognized assessment tools. The assessment also considers drought, flood and river-level conditions to better understand water-related risks. In 2025, the assessment revealed that the refinery is situated in an area classified as having high water stress, accounting for 53% of the cost of goods sold.



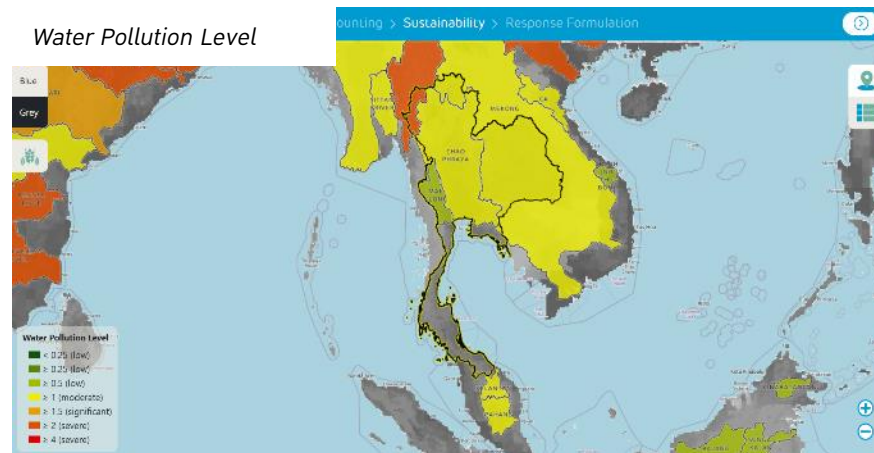
In terms of water quantity, specifically water depletion which is related to dependency of organization for operation, the assessment indicated that the **Bangchak Refinery** area is currently exposed to a low-medium level of risk. Under a **Business-as-Usual** scenario, the projected risk also declines to a low-medium level by 2050.

However, the Company has established mitigation measures to improve water resilience. These include applying the **3Rs principle (Reduce, Reuse and Recycle)**, improving water use efficiency through modern technologies, monitoring data from the **Metropolitan Waterworks Authority** to evaluate water scarcity risks that could affect production processes, securing emergency water sources if needed, and monitoring water levels in the **Chao Phraya River** to support operational continuity.

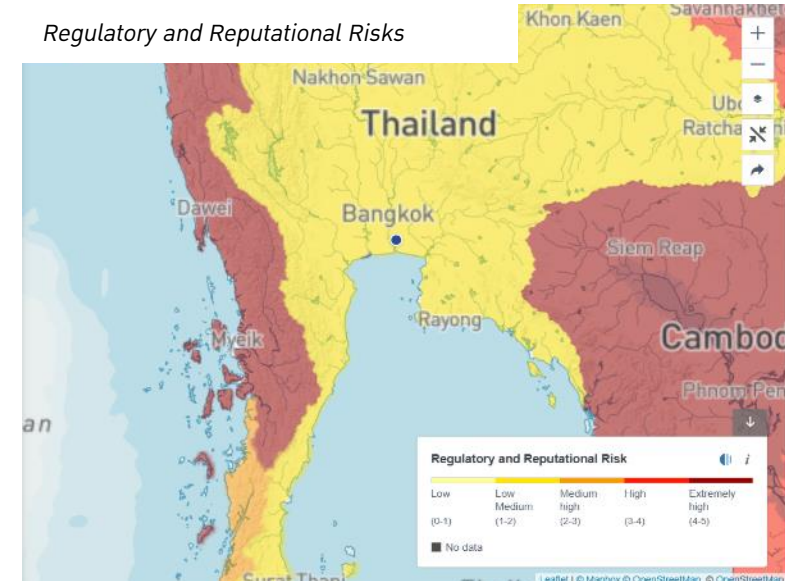
Although **Bangchak Sriracha Refinery** is located in a high water-stress area, the refinery mitigates its exposure to freshwater-related risks by utilizing desalinated seawater, thereby reducing its reliance on freshwater from natural sources.

# Water Risk Assessment

In terms of water quality, according to data from the Water Footprint Assessment, the current water pollution level of the Chao Phraya River is classified as moderate. Nevertheless, based on the EIA reports, the company has consistently implemented scientifically-based measures to control the quality of wastewater discharged from the project. The wastewater quality has continuously complied with the standards set by the Department of Industrial Works. The company will continue to monitor and assess the water quality of the Chao Phraya River throughout each phase of the project, in accordance with the prescribed environmental measures, in order to ensure the ongoing protection and preservation of the river's water quality in the future. Water management performance is regularly monitored and reviewed to support continual improvement and ensure compliance throughout project operations.



The assessment of regulatory and reputational risks evaluates potential exposure to uncertainties in regulatory changes and public concerns related to water issues. At present, the Company is assessed to have a low to moderate level of risk. Recognizing the importance of this issue, the Company has identified water and wastewater management as a material topic. To mitigate future risks, the Company implements effective water and wastewater management practices, regularly engages with surrounding communities and relevant government agencies to communicate environmental management practices and gather stakeholder feedback, while maintaining active collaboration with stakeholders and external agencies to support responsible water management.





- Risk Event :

Water shortage (drought) causing production units to stop.
- Root Cause Analysis :

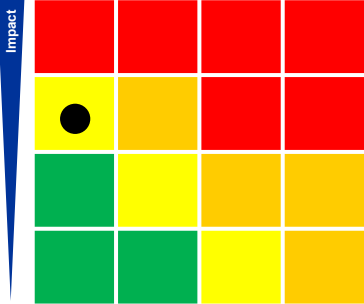
Tap water is not sufficient for the amount required in the production process.

1. Caused by inclement weather or El Niño conditions

2. Result from the population density in the area surrounding the refinery.
- Risk Impact :

1. Production processes are stopped, Main system is disrupted

2. There may be complaints from the community that this is the cause of water shortages in the vicinity of the refinery.



|  | Risk Event                                                | KRI                                          | Status 2025                                  | Normal                                        | Monitor                                                               | Dealt with immediately                         |
|--|-----------------------------------------------------------|----------------------------------------------|----------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------|
|  | Water shortage (drought) causing production units to stop | Tap water runs as usual and low conductivity | Tap water runs as usual and low conductivity | Tap water runs as usual and low conductivity. | Warning from the Metropolitan Waterworks Authority regarding drought. | Tap water is not running and high conductivity |

Existing Risk Response

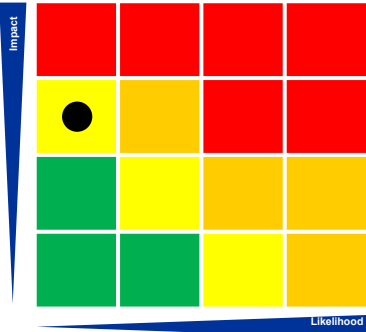
- Coordinate with Metropolitan Waterworks Authority to continually know the situation closely.
- There is a backup water supply system.
- There is an underground water system that can support water shortage conditions for a long time.



**Risk Event :** High sea levels cause flooding of production units, causing stop production process.

**Root Cause Analysis :** The sea level is higher than usual due to inclement weather

**Risk Impact :** Production processes are stopped, Main system is disrupted.



|  | Risk Event                                                                          | KRI                                               | Status 2025 | Normal  | Monitor     | Dealt with immediately |
|--|-------------------------------------------------------------------------------------|---------------------------------------------------|-------------|---------|-------------|------------------------|
|  | High sea levels cause flooding of production units, causing stop production process | Chao Phraya water level In front of Bangchak Pier | <1.7 m      | < 1.7 m | 1.7 – 2.5 m | > 2.5 m                |

## Existing Risk Response

- Continuously monitoring water level of Chao Phraya river, especially during the rainy season.
- Prepare sandbags in case of the water level starts to tend to be high or during the rainy season.
- Bangkok's water protection system around the Bangchak refinery, Bangchak oil refinery
  - The flood protection barrier was able to support the water level in 2011 (equivalent to 2.23 m. at Bangchak Port).
  - Temporary protection in areas where the sea level is higher than the flood barrier.
  - Bang O canal and Bang Chak canal pumping stations
  - Giant Tunnel of Suan Luang Rama IX
  - Road and drainage improvement project in Thangrotfaisaikao road.