Water Consumption and Wastewater Management

Challenges

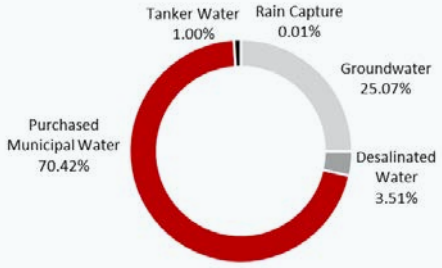
- Climate change and drought pose significant risks that contribute to water stress, potentially impacting the Company's business operations. Without a proper assessment of water usage risks, a water management plan, or a backup plan for water storage, the Company may face increased costs for water procurement and disruptions in service delivery. This is particularly critical for the hotel business, which requires a large amount of water and shares water sources with local communities. Failure to manage both water usage and grey water properly may pose risks to the environment and surrounding communities. Additionally, compliance with laws regarding wastewater treatment before discharge into public water sources must be considered, as non-compliance may result in the revocation of the business license.

Opportunities

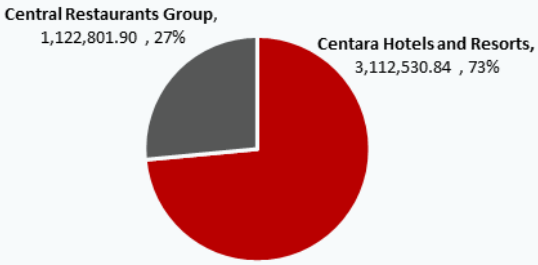
- Effective water management, including water usage, grey water, and quality of water and grey water, is a crucial responsibility for the Company to demonstrate its responsibility and commitment to minimizing the impact of water consumption by implementing water-saving equipment or technologies, reusing treated grey water in compliance with standard, and regularly monitoring water usage. These efforts not only help reduce costs in the long run but also prepare businesses for the challenges posed by water stress and climate change.

In 2024, the Company's hotel and food business operations consumed a total of 4,235,332.74 cubic meters of water. The majority of this was purchased tap water, accounting for 71.42%, followed by groundwater, seawater, and rain capture, respectively.

Total Water Withdrawal (M3)



Water Consumption by Business (M3)



Hotel Business

Targets:

- To reduce water usage per occupied room by 20% by 2029 compared to the base year of 2019.
- In 2024, the water usage intensity rate per occupied room decreased by 2%, compared to the previous year.

17.03% of water was recycled and reused.

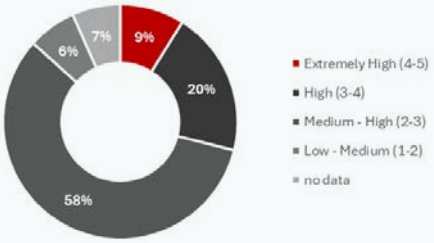
Hotel guests participated in the water conservation program, totaling 326,645 room stays.
(Going Greener, My Green Day and Reserve Water Drop)

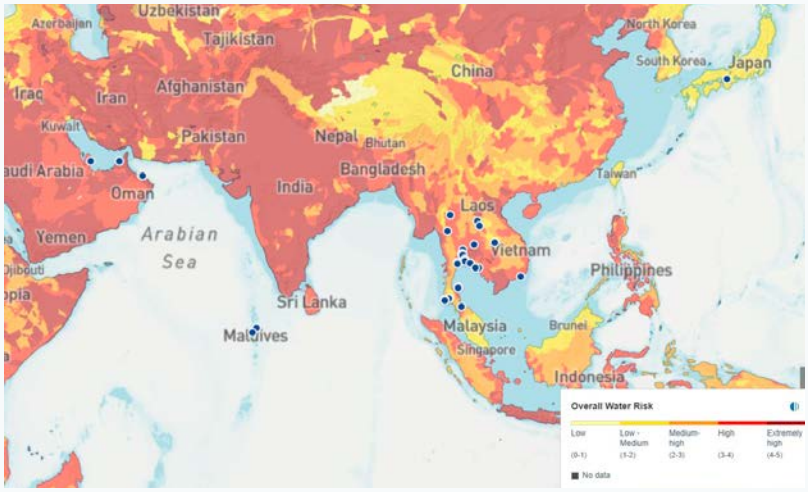
Water Scarcity Risk Assessment

The impacts of climate change have led to unpredictable seasonal patterns, causing global challenges due to extreme weather fluctuations such as monsoons, floods, and droughts. This presents a significant challenge for the hotel industry, particularly regarding water usage, which is a critical factor in operations. The expansion of hotel facilities, including swimming pools, spas, pool villas, laundry services, and landscaping, has resulted in continuously increasing water consumption. On the other hand, the declining availability of freshwater for consumption poses a risk to water supply in various areas, potentially leading to water stress and impacting both business operations and customer trust.

To prevent and mitigate the risk of water shortages in surrounding areas, the Company conducted a Water Stress Assessment using the World Resources Institute's AQUEDUCT Water Risk Atlas. The assessment revealed that 29% of Centara Hotels & Resorts face very high or high-water risk, with physical risks affecting both water quantity and quality.

Water Stress Assessment





Hotel Name	Overall Water Risk	Physical Risks Quantity	Physical Risks Quality
Centara West Bay Hotel & Residences Doha	High (3-4)	• Water Stress • Interannual Variability	
Centara Life Muscat Dunes Hotel	Extremely High (4-5)	• Water Stress • Interannual Variability • Riverine flood risk Stress	
Centara Muscat Hotel	Extremely High (4-5)	• Water Stress • Groundwater Table Decline • Interannual Variability • Riverine flood risk Stress	
Al Hail Waves Hotel	Extremely High (4-5)	• Water Stress • Groundwater Table Decline • Interannual Variability • Riverine flood risk Stress	
Centara Mirage Resort Mui Ne	High (3-4)	• Riverine flood risk Stress	Untreated Connected Water
Centara Korat	High (3-4)	• Water Stress • Interannual Variability	Untreated Connected Water
Centara Life Government Complex Hotel & Convention Centre Chaeng Watthana	Extremely High (4-5)	• Water Stress	Untreated Connected Water
Centara Ayutthaya	High (3-4)	• Water Stress	Untreated Connected Water
Centara Riverside Hotel Chiang Mai	High (3-4)	• Water Stress	Untreated Connected Water
COSI Samui Chaweng Beach	High (3-4)	• Water Stress • Coastal flood risk	Untreated Connected Water
Centara Villas Samui	High (3-4)	• Water Stress • Coastal flood risk	Untreated Connected Water
Centara Reserve Samui	High (3-4)	• Water Stress • Coastal flood risk	Untreated Connected Water
Centara Life Lamai Resort Samui	High (3-4)	• Water Stress • Coastal flood risk	Untreated Connected Water

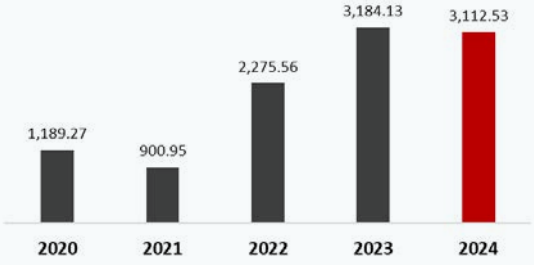
Based on the risk assessment, the Company has established guidelines to optimize water usage efficiency. These measures begin with collecting water usage data and setting key performance indicators (KPIs) for each hotel to monitor and control water consumption.

The Company also implements water-saving technologies, such as installing automatic faucets in sinks and toilets in common areas, dual-flush toilets, aerated and low-flow faucets to reduce water flow, and water-efficient sanitary ware certified with Thai Industrial Standard 2067-2552 (TIS 2067-2552). Additionally, hotels with water treatment plants are encouraged to treat grey water to appropriate quality levels for reuse in watering plants, maximizing water resource efficiency.

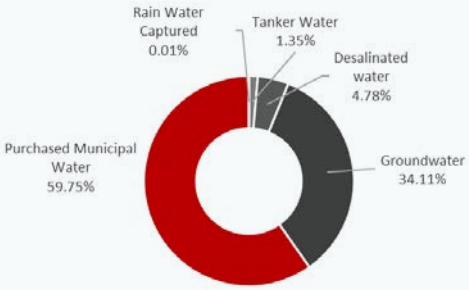
In the Middle East, water tanks and rainwater storage systems have been installed to support emergency water management. Furthermore, employee training programs and water-saving signage in restrooms are implemented to promote responsible water usage among staff.

Each hotel sources water from various sources, including tap water, groundwater, purchased water from water trucks, rainwater, and desalination. The total water consumption amounts to 3,112.53 megaliters, with a water usage intensity rate of 1,198.40 liters per occupied room. This represents a 26.62% decrease from the base year and an 18.47% reduction compared to the target set for the same year.

Water Withdrawal (ML)



Type of Water Withdrawal



Water Intensity