

THE PLACE TO BE

The Task Force on Climate-Related Financial Disclosures (TCFD) Report

2023

CENTARA RESERVE



CENTARA
GRAND

CENTARA

CENTARA
LIFE



CENTARA
HOTELS & RESORTS

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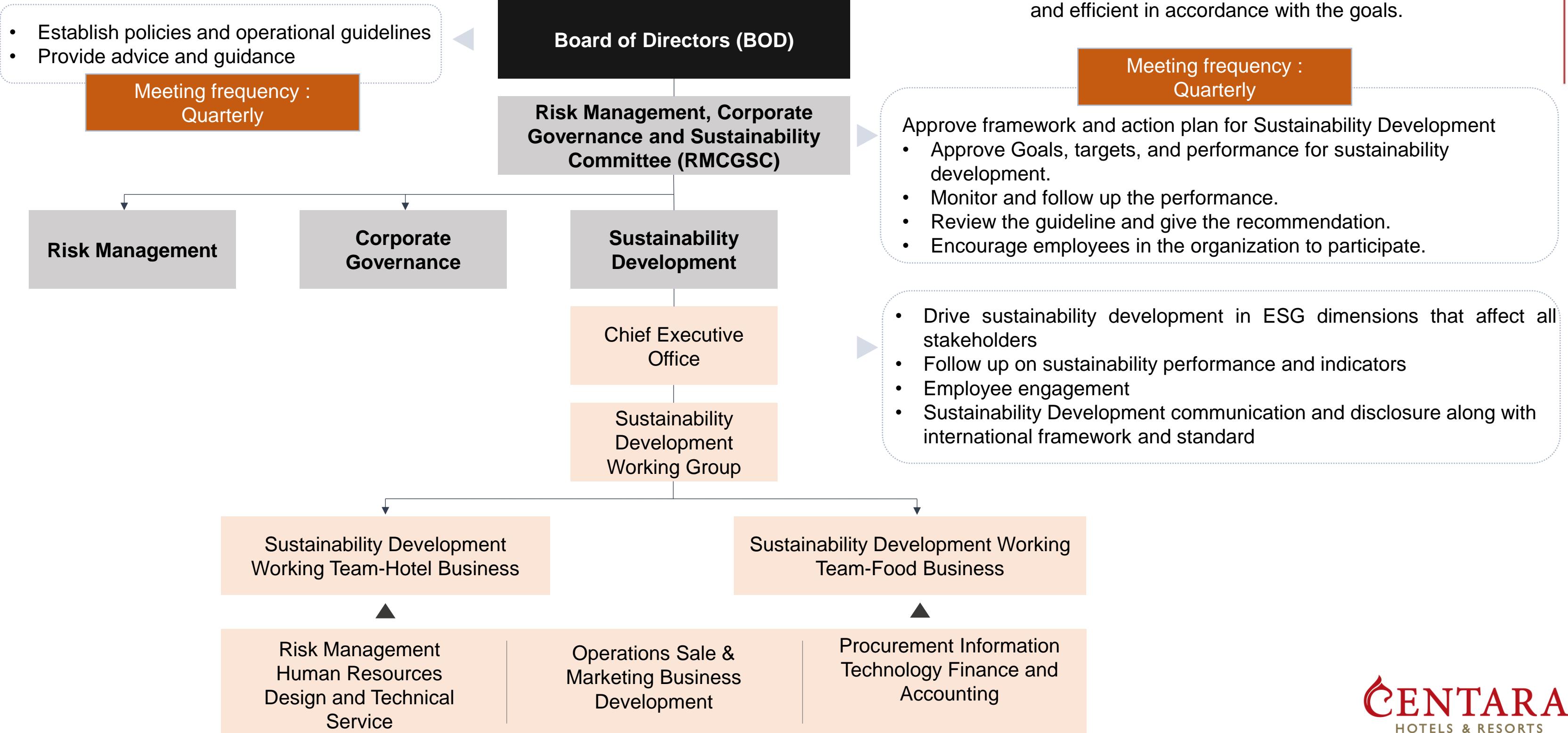
GOVERNANCE

To enable users of general-purpose financial reports to understand CENTEL's Governance processes, controls and procedures CENTEL uses to monitor, manage and oversee climate-related risks and opportunities

CENTEL's oversight of climate-related risks and opportunities is embedded at the management level of our organization.

Our corporate governance structure is constantly evolving as we become more conscious of the need of addressing climate change and its implications for our business.

GOVERNANCE AND STRUCTURE OF SUSTAINABILITY MANAGEMENT



Central Plaza Hotel Public Company Limited recognizes the importance of integrated organizational risk management which is vital to stakeholders' confidence in the company's ability to achieve its objectives and goals amid the current business conditions and uncertainties.

Board of Organization	Role and Responsibilities	Frequency
Board of Directors (BOD)	<p>The Board of Directors has appointed the Committee for Risk Management, Corporate Governance, and Sustainability to be responsible for policy-making and recommendations on appropriate risk management so as to optimize business operations, consider and advise management and staff on risk management, promote and support risk management process following well-defined guidelines and policies, as well as monitor the results from the company's corporate governance and sustainable development.</p> <p>The BOD oversees the Risk Management, Corporate Governance and Sustainability Committee and governs the decision-making on climate-related issues by assessing RMC and CGC's performance quarterly and reporting outcomes to shareholders through the Central Plaza Hotel Public Company Limited annual report.</p>	Quarterly
Risk Management, Corporate Governance and Sustainability Committee (RMCGSC)	<p>The RMCGSC is responsible for oversee the work of the risk management department and the working group on climate change issues in the hotel and food business as well as responsible for defining risk management strategies based on risk appetite and policy. The team monitors and recommends risk management strategies to support CENTEL's strategic and business goals. The RMCGSC establishes comprehensive risk management policies and processes, including for climate-related hazards, evaluates risks, taking into account both internal and external factors that may impact goal achievement, and takes necessary measure to address them. The RMCGSC reports to the BOD based on their given roles and responsibilities. The corporation evaluates and reviews climate-related issues affecting the entire company, such as energy efficiency, GHG mitigation, reduction and targets.</p>	Quarterly

Management Body	Role and Responsibilities	Frequency
Chief Executive Officer (CEO)	<p>Chief Executive Officer is the leader to drive integrated sustainable operations. Meeting is held on a quarterly basis to review and follow up on the company's operations to achieve the goals as determined in the company's business practices and sustainability policies which will lead to the achievement of environmental dimensions.</p>	-
Sustainability Development Working Group	<p>The Working Group on Sustainability Development co-ordinates with all departments of the hotel business and food business to report operating results in the economic, social, and environmental dimensions to management team and the Risk and Governance and Sustainability Development Committee which is responsible for supporting and overseeing risk and sustainable operations.</p> <ul style="list-style-type: none"> • Gathering data and work with representatives from various departments within the organization • Monitor and evaluate the effective governance of climate-related risks and opportunities • Develop comprehensive action plans to drive the Company's transition towards achieving net-zero greenhouse gas emissions 	Quarterly

SKILLS OF OUR BOARD MEMBER TO OVERSEE THE RESPOND TO CLIMATE-RELATED RISKS AND OPPORTUNITIES



Mr. Norachit Sinhaseni

(Independent Director Member of Audit Committee
Chairman of Nomination and Compensation Committee
Chairman of Risk Management, Corporate Governance and Sustainability Committee)

Mr. Norachit has a background in Law and has experience in Permanent Secretary, Ministry of Foreign Affairs. With experience in policy development and advocacy, Mr. Norachit leads the development of climate risk management policies and procedures, establishing frameworks for identifying, assessing, and mitigating climate-related risks across business functions.

Mr. Norachit oversees the assessment of climate-related risks and their potential impact on the organization's operations, finances and reputation. This involves coordinating with audit committees to ensure alignment and collaboration in addressing climate-related issues. Oversee the monitoring of climate-related risks and the effectiveness of mitigation measures. This includes regularly reviewing key performance indicators (KPIs), metrics, and reports to track progress and identify emerging risks or opportunities.



Mr. Sudhitham Chirathivat

(Director Member of Nomination and Compensation Committee
Member of Risk Management, Corporate Governance and Sustainability Committee)

Mr. Sudhitham possesses a professional background in the fields of Electrical Engineering and MBA. With strategic management, business law, scientific principles and analytical method skills, Mr. Sudhitham can participate in strategic planning sessions, address financial implications of climate-risks and develop strategies to mitigate risks and capitalize on opportunities for sustainability growth

Mr. Sudhitham ensures that climate risks are addressed in executive compensation plans and oversees the integration of climate risk management into corporate governance practices

Mr. Sudhitham provide oversight of the organization's climate risk management efforts. This includes reviewing and approving risk management policies, monitoring the effectiveness of risk mitigation strategies, and ensuring that climate-related risks are adequately addressed in the organization's risk management framework.



Mr. Prin Chirathivat

(Director Member of Nomination and Compensation Committee
Member of Risk Management, Corporate Governance and Sustainability Committee)

Mr. Prin has served as the Chairman of the Audit Committee in the finance sector and holds an MBA. With a deep understanding of financial analysis, risk assessment, and reporting, Mr. Prin can apply this knowledge to assess the financial implications of climate-related risks and opportunities, including evaluating the potential impact on assets, liabilities, and financial performance.

Mr. Prin ensures that climate risks are addressed in executive compensation plans and oversees the integration of climate risk management into corporate governance practices

Mr. Prin provides oversight of the organization's climate risk management efforts. This includes reviewing and approving risk management policies, monitoring the effectiveness of risk mitigation strategies, and ensuring that climate-related risks are adequately addressed in the organization's risk management framework.



CLIMATE-RELATED REMUNERATION



Remuneration policies to monitor progress towards climate-related risk and opportunities

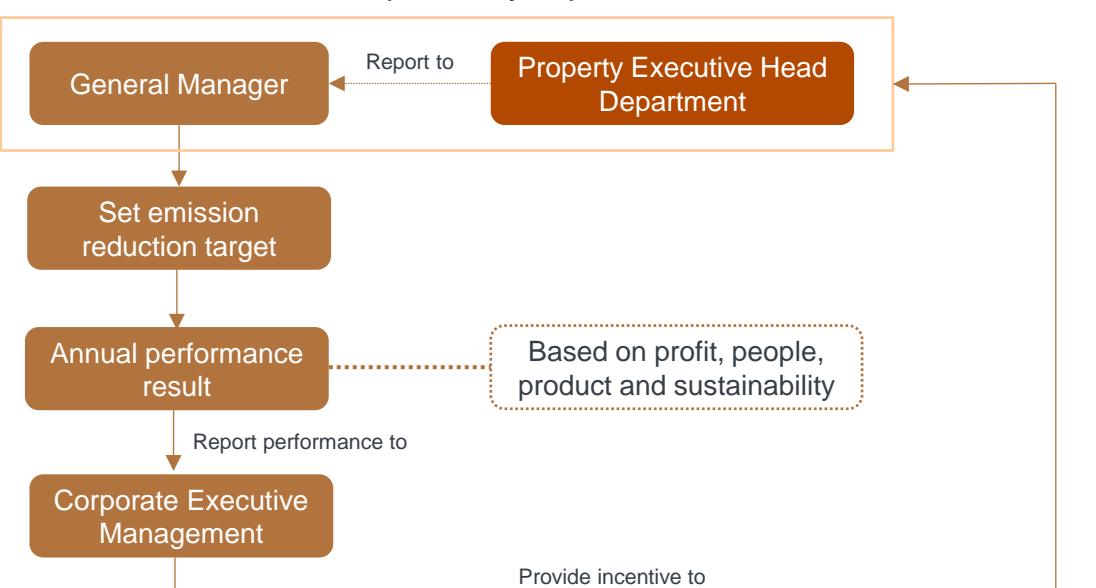
CENTEL acknowledges the importance of linking board and executive remuneration to climate-related performance metrics, as it incentivizes effective climate governance and aligns with the low-carbon transition. CENTEL will engage stakeholders to ensure a robust approach for incorporating climate considerations into executive incentive plans. This demonstrates CENTEL's dedication to addressing climate change through its operations, decision-making, and ongoing sustainability initiatives.

To ensure accountability for sustainability and climate-related actions, CENTEL has integrated the achievement of the climate change-related key performance indicators (KPIs) linked through monetary rewards. The KPIs related to CEO, corporate executive team, sustainability team, process operation team, property manager and Centara EarthCare team.

The incentives include :

- Outcomes from ESG operations aligned with 20% GHG reduction target by 2030 compared to 2019 base year and Net Zero emission by 2050 for CEO
- Achievement performance KPIs in energy, electricity and water reduction of annual, short-term and long-term emissions of environmental dimension target for executive management of each property
- For further detail , please see "Metric and Target" section, page 44

Our incentive practice/guideline process is illustrated by the subsequent stages. This is an additional incentive that is evaluate independently of performance KPIs.



STRATEGY

To enable users of general-purpose financial reports to understand An entity's strategy for managing climate-related and opportunities

CENTEL has formulated strategies and assessed climate change risks and opportunities in the short-term, medium-term and long-term and assessed the financial impact for the cycle period of our report.

CENTEL will continuously improve the robustness of data for the climate-related financial impacts, covering risk and opportunities from the impacts of climate change of short-, medium-, and long-term

In 2023, CENTEL deepened the scenario analysis conducted for both physical risks and transition risks and opportunities to better identify, evaluate and manage their potential impacts. The assessment of climate-related risk scenario is examined and classified according to scenarios patterns. The assessment was conducted through a three-step approaches.

STEP 1
Identification of risk/opportunities drivers

STEP 2
Scenario Analysis

STEP 3
Implication Analysis

▲ **CENTEL will continuously disclose** information about climate resilience at each reporting year and in line with strategic planning cycle. Including a multi-year strategic planning cycle (e.g. every 3-5 years)

▲ In some reporting periods CENTEL's disclosures in accordance with climate scenario analysis's scope of work could remain unchanged from the previous reporting period if CENTEL does not conduct a scenario analysis annually.

STEP 1



STEP 2



STEP 3



Identification of risk/opportunity drivers

CENTEL has taken latest climate-related policies, regulations, market trends and historical hazard events in both its own and managed operation countries. CENTEL has considered the emerging risk types of corporate risks from its Enterprise Risk Management Manual in the identification of climate-related risk and opportunities drivers to enhance alignment of its climate risk management with the corporation's overall risk management system.

Scenario analysis

Following the shortlisting of climate-related drivers, CENTEL held internal workshops to gather opinion regarding the extent and probability of each driver's effects across short- (2020 baseline), medium- (2030), and long-term(2050) time frames. Through the process, CENTEL can plot the drivers on a risk matrix that shows how important each driver is to CENTEL's business in relation to both a low-emissions scenario and the base case, or high-emission scenario. Thereafter, an indicator from external climatic scenario was assigned to each driver. Scenario data were incorporated in CENTEL's evaluation to enable the incorporation of an impartial viewpoint grounded in science

Implication analysis

CENTEL has taken latest climate related policies, regulations, market trends and historical hazard events in both own and managed operation's countries. CENTEL has considered the Sustainability risk types of corporate risks from its Enterprise Risk Management Manual in the identification of risk associated with climate-related risk and opportunities drivers to enhance alignment of its climate risk management with the corporate's overall risk management system.

We have created and adopted the CENTEL Net Zero Pathway with the goal of achieving Net Zero emissions by 2050 in accordance with the Paris Agreement, which aims to limit global warming to well below 2°C from pre-industrial levels and pursue measures to further limit warming to 1.5°C. To achieve our goal, CENTEL's strategy development, risk management, environmental, and sustainability teams regularly evaluate opportunities and risks related to climate change and incorporate the findings into our business operation plan to reduce and prepare for its effects.

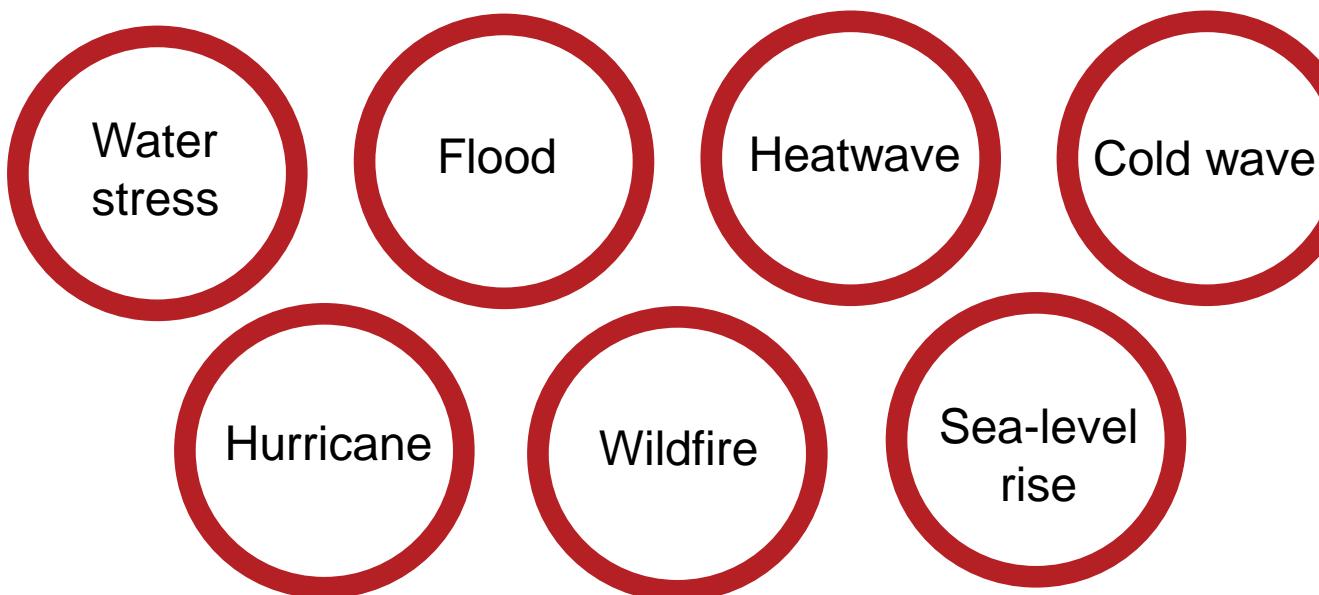
In 2023, CENTEL has conducted both physical and transition climate scenario analyses qualitatively and quantitatively by taking context-specific factors applicable to each of CENTEL's assets into consideration to identify the possibility and severity of potential climate related impacts.

Our assessment included three consistent timeframes, management measurement, adaptation plans and financial planning.

The analyses cover our 16 own operations hotels and resorts which operates across Thailand and Republic of Maldives including Central Restaurant Group (CRG) in Thailand (33 assets under CRG were also assessed for physical risk). The right table ranked top sites at risk of moderate scenario - 2050. Finally, we selected the three significant hazards for this report from the study of seven hazards that is provided in the next slide.

Rank	Country	Universal Site Name
1	Thailand	Centara Life Government Complex Hotel & Convention Centre Chaeng Watthana
2	Thailand	Central Restaurant Group
3	Thailand	Centara Grand Beach Resort & Villas Krabi
4	Thailand	Centara Grand & Bangkok Convention Centre at Central World
5	Thailand	Centara Grand at Central Plaza Ladprao Bangkok
6	Thailand	Centara Grand Beach Resort Phuket
7	Thailand	COSI Samui Chaweng Beach
8	Republic of Maldives	Centara Ras Fushi Resort & Spa Maldives
9	Thailand	Centara Kata Resort Phuket
10	Republic of Maldives	Centara Grand Island Resort & Spa Maldives
11	Thailand	Centara Grand Mirage Beach Resort Pattaya
12	Thailand	Centara Karon Resort Phuket
13	Thailand	Centara Villas Phuket
14	Thailand	Centara Villas Samui
15	Thailand	Centara Grand Beach Resort & Villas Hua Hin
16	Thailand	Centara Hotel Hat Yai

Identified Physical Risk Drivers



A summary of the **PHYSICAL RISK** drivers, identified in scenario assessment.

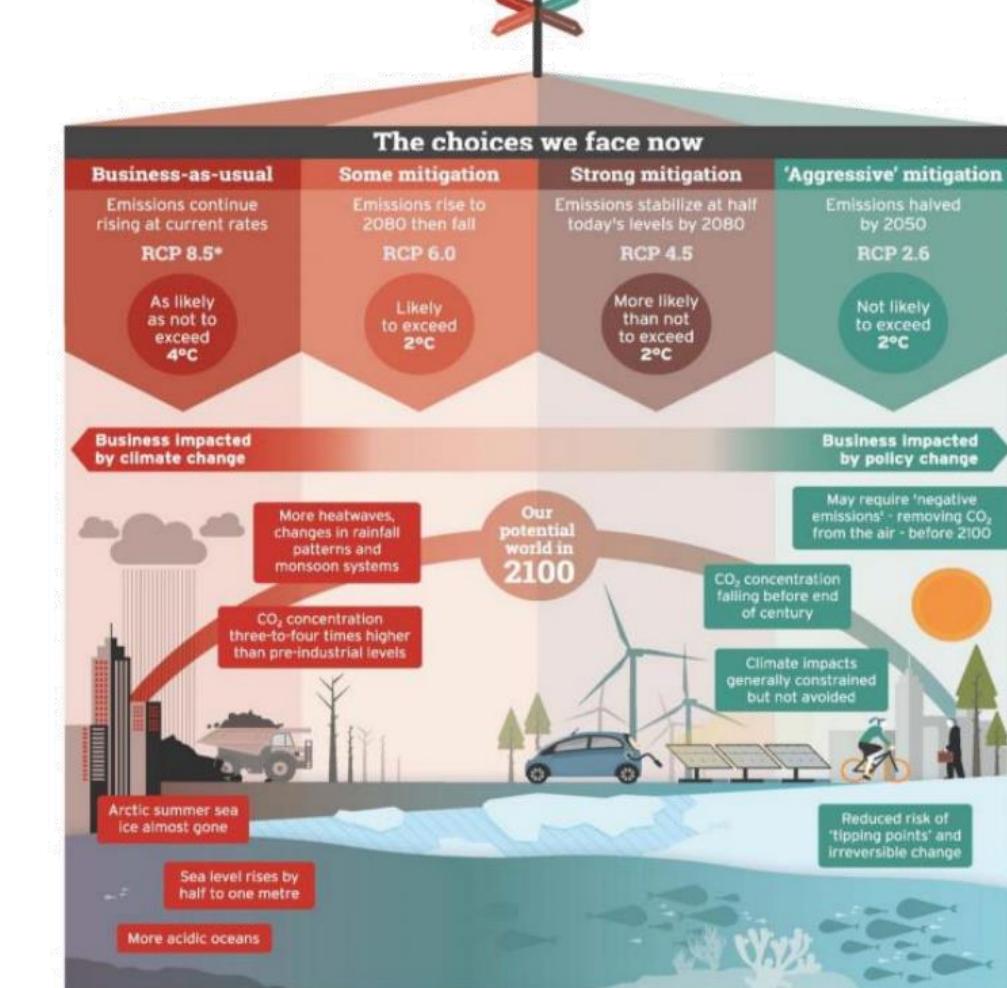


Physical Risk Exposure for Operation



Company Level Operational Analysis
Hotels, Resorts, Food service

Study Timeframes : 2020 (baseline), 2030 (medium-term) and 2050 (long-term)			
Physical risk Scenarios	Description	Global Mean Temperature Change	Maintain at 2 degrees Celsius by 2050
RCP 2.6 (Low Climate Change Scenario)	Aggressive mitigation actions to halve emissions by 2050. This scenario is likely to result in warming of less than 2 degree Celsius by 2100.	1.6 °C in 2050	Possible
RCP 4.5 (Moderate Climate Change Scenario)	Strong mitigation actions to reduce emissions to half of current levels by 2080. This scenario is more likely than not to result in warming in excess of 2 degrees Celsius by 2100.	2.0 °C in 2050	Possible, with high uncertainty
Our preferred scenario used to identify mitigation and adaptation			
RCP 8.5 (High Climate Change Scenario)	Continuation of business as usual with emissions at current rates. This scenario is expected to result in warming in excess of 4 degrees Celsius by 2100.	4.3 °C in 2050	Not Possible



Source: TCFD (2019)

CLIMATE HAZARD INDICATORS AND ITS RATIONAL IN OUR STUDY

Climate Hazard Indicator	Analysis Metric	Indicator Definition	Geographic Coverage	Spatial Resolution	Data Sources
Water Stress	Water Stress Index	Projected future ratio of water withdrawals to total renewable water supply in a given area.	Global	River Basin	WRI Aqueduct Trucost Analysis
Flood	Flood Risk Index	Index representing the risk of flood at a given location in a given year.	Global	Approx. 1x1 km (High resolution flood dataset at 30x30m coming soon)	WRI Aqueduct Trucost Analysis
Heatwave	Heat Wave Days	The occurrence of periods of extreme heat relative to local climatic conditions, measured based on the Excess Heat Factor.	Global	100x100km to 200x200km	CMIP5 multi-model average Trucost Analysis
Coldwave	Cold Wave Days	The occurrence of extreme cold relative to local climatic conditions, measured based on the Excess Cold Factor.	Global	100x100km to 200x200km	CMIP5 multi-model average ³ Trucost Analysis
Hurricane	Hurricane Index	Composite index representing the historical incidence and severity / strength of hurricane, typhoon or cyclone activity at a given location, weighted in favour of recent events.	Global	Approx. 10x10km	NOAA Trucost Analysis
Wildfire	Burnt Area	Risk of wildfire occurrence by location based modelled area of burnt vegetation.	Global	100x100km to 200x200km	CMIP5 multi-model average Trucost Analysis
Sea Level Rise	Inundation Depth	The extent and depth of coastal inundation due to sea level rise at a given location in a given year.	Global	Approx. 5x5m (USA) Approx. 30x30m (Rest of World)	Climate Central Trucost Analysis

A summary of the **TRANSITION RISK and OPPORTUNITIES** drivers, identified in scenario assessment.

Policy & Legal

Market

Technology

Reputation

Identified Transition Risk/Opportunities Drivers	Driver	Impact Type	TCFD Category	Financial impact	Business Implications	Response Measure
	Carbon pricing (operational)	Risk	Policy & Legal	OPEX	Policy actions to constrain actions that contribute to climate change or policy actions promoting adaptation to climate change. Include implementing carbon-pricing mechanisms to reduce GHG emissions, shifting energy use toward lower emission sources, adopting energy-efficiency solutions, encouraging greater water efficiency measures. Carbon prices associated with emission trading schemes, carbon taxes, fuel taxes and other policies are expected to rise in the future as governments take action to reduce GHG consistent with Paris Agreement. The speed and level to which carbon prices may rise is uncertain and likely to vary across countries and regions	Invest in energy-efficient technologies and practices to reduce energy consumption and associated GHG emissions. This could include upgrading lighting systems, HVAC systems, and appliances, as well as implementing energy management systems to optimize energy usage. Invest in renewable energy sources such as solar panels to generate clean energy onsite. Implement waste reduction and recycling programs. This include composting organic waste, recycling materials such as paper, plastic, and glass, and reducing single-use plastics and packaging.
	Suppliers carbon pricing risk	Risk	Market	EBITDA	Shift in supply and demand for certain commodities, products, and services as climate-related risks and opportunities are increasingly considered	Work with suppliers to increase transparency in the supply chain by identifying high-emission activities and materials. Collaboratively develop strategies to track and monitor emission throughout supply chain
	Product and service : Resource efficiency and *GSTC certification	Opportunity	Technology	OPEX CAPEX	Substitution of existing products and services with lower emission options, and costs to transition to lower emissions technology	Green operational practices and eco-friendly amenities. Sustainability programme goes beyond banning all single use plastics. Specialized water treatment facilities at our property. Transformed all food waste into biogas for use in kitchen. Install solar panels on site.
	Shareholder and stakeholder sentiment	Risk	Reputation	Valuation	Increase stakeholder concern or negative stakeholder feedback. The higher the overall reputational risk exposure facing a company, the more likely it is to face challenges regarding talent attraction and retention, long-term customer relationships, license to operate and access to capital	Enhance transparency and disclosure of environmental and social performance, including climate-related risks and opportunities. Provide regular reports and updates on sustainability initiatives, carbon reduction efforts, and progress towards environmental goals to demonstrate commitment and accountability.

*GSTC : Global Sustainability Tourism Council Hotel Criteria

Transition Risk/Opportunities Scenarios	<p>Purpose</p> <p>To analyze whether transition related drivers (policy/legal, market, technology, reputation) have a significant impact on CENTEL's business in the future, and what risk mitigation actions are required for significant risks.</p>
	<p>Scenarios</p> <p> 1. High Carbon Price Scenario : represents the implementation of policies that are considered sufficient to reduce greenhouse gas emissions in line with the goal of limiting climate change to 2°C by 2100. This scenario is based on research by OECD and IEA (2017) </p> <p> 2. Moderate Carbon Price Scenario : assumes that policies will be implemented to reduce greenhouse gas emissions and limit climate change to 2°C in the long-term, but with action delayed in the short-term. This scenario draws on research by OECD and IEA along with assessments of the sufficiency of country Nationally Determined Contributions (NDC). Countries with NDC that are not aligned to the 2°C goal in the short term are assumed to increase their climate mitigation efforts in the medium- and long-term </p> <p> 3. Low Carbon Price Scenario : represents the full implementation of country NDC under Paris Agreement, based on research by OECD and IEA (2017). Prices in this scenario are considered likely to be insufficient to achieve the goals of the Paris Agreement </p>
	<p>Scenario Time Horizons</p> <ul style="list-style-type: none"> • 2020 (baseline) • 2030 (medium-term) • 2050 (long-term) <p>These scenario time horizons are aligned with CENTEL's risks and opportunities identification timeframes.</p>
	Scope of financial impact calculation

Physical Risk Exposure for Operations

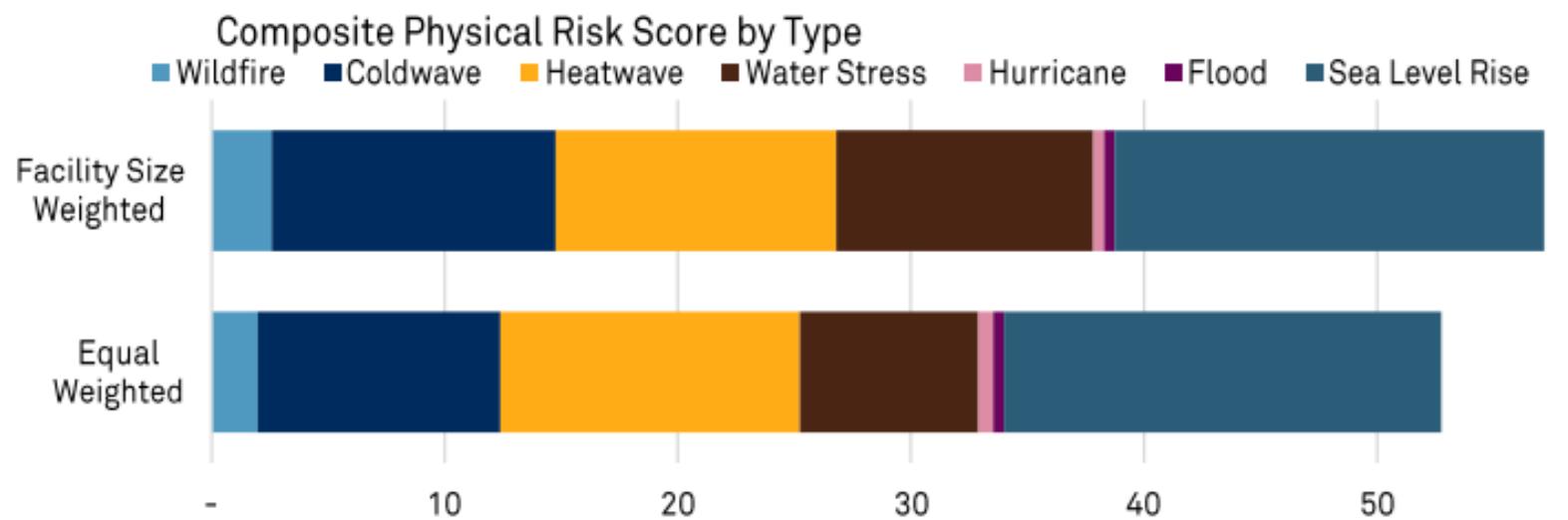
2050 Composite Physical Risk Scores:

Facility Size Weighted

Low Scenario
54/100
Moderate Risk

Moderate Scenario
57/100
Moderate Risk

High Scenario
60/100
Moderate Risk



We consider small changes in physical risk scores (less than 3 points up/down) to be significant and most likely explained by variation and uncertainty in the underlying climate change models.

Overall, CENTEL faces moderate physical risk with major risk exposure to sea level rise, heat wave and water stress.

Composite risk levels are comparably high in 2050 than in 2020 and 2030 under three scenarios, as sea level rise and water stress are driven mostly by long-term climate change impact.

Score weighted by facility are higher because facilities that have large size, such as Central Restaurant Group, also face high physical risk scores.



Company Level Results-Top Sites at Risk

Moderate Scenario - 2050

CENTEL's asset-level data, broken down into hotels, resorts and the restaurant group headquarter, show that the relatively top risk sites also have big facility sizes. This is particular true for Central Restaurant Group, the location of which is exposed to high risk from sea level rise and water stress.

Rank	Country	Universal Site Name	% Facility Size	Facility Size (m2)	Risk Exposure Score		Long-term Risk Exposure trend (2020-2050)		Wildfire	Coldwave	Heatwave	Water Stress	Riverine Flood	Sea Level Rise	Hurricane
					Classification	trend	Classification	trend							
1	Thailand	Centara Life Government Complex Hotel & C	7.0%	44,298	77	High	High	High	8	33	21	44	1	100	1
2	Thailand	Central Restaurant Group	17.3%	108,588	73	High	High	High	7	33	21	44	1	80	1
3	Thailand	Centara Grand Beach Resort & Villas Krabi	3.9%	24,766	71	High	High	High	4	20	48	4	1	100	1
4	Thailand	Centara Grand & Bangkok Convention Centre at C	16.5%	103,967	64	Moderate	Moderate	Moderate	7	33	21	44	1	40	1
5	Thailand	Centara Grand at Central Plaza Ladprao Bangkok	8.8%	55,000	64	Moderate	Moderate	Moderate	7	33	21	44	1	40	1
6	Thailand	Centara Grand Beach Resort Phuket	4.9%	30,535	56	Moderate	Moderate	Moderate	3	19	48	4	1	40	1
7	Thailand	COSI Samui Chaweng Beach	0.9%	5,749	56	Moderate	Moderate	Moderate	2	23	38	9	1	40	4
8	Republic of Maldives	Centara Ras Fushi Resort & Spa Maldives	2.3%	14,287	53	Moderate	Moderate	Moderate	1	3	1	1	1	100	1
9	Thailand	Centara Kata Resort Phuket	2.8%	17,756	49	Moderate	Moderate	Moderate	2	19	48	4	1	20	1
10	Republic of Maldives	Centara Grand Island Resort & Spa Maldives	1.8%	11,530	46	Moderate	Moderate	Moderate	1	3	21	22	1	80	1
11	Thailand	Centara Grand Mirage Beach Resort Pattaya	13.0%	81,485	45	Moderate	Moderate	Yellow	8	32	48	4	1	1	1
12	Thailand	Centara Karon Resort Phuket	8.0%	50,400	42	Moderate	Moderate	Moderate	3	19	48	4	1	1	1
13	Thailand	Centara Villas Phuket	0.7%	4,591	42	Moderate	Moderate	Moderate	3	19	38	9	1	1	1
14	Thailand	Centara Villas Samui	0.8%	4,862	42	Moderate	Moderate	Moderate	2	23	18	6	1	1	4
15	Thailand	Centara Grand Beach Resort & Villas Hua Hin	6.2%	38,904	36	Moderate	Moderate	Yellow	7	29	1	20	1	1	1
16	Thailand	Centara Hotel Hat Yai	5.1%	31,833	28	Low	Low	Low	3	18	1	1	1	1	1

Sea Level Rise



CENTEL's asset-level data, broken down into hotels, resorts and the restaurant group headquarter, show that the relatively top risk sites also have big facility sizes. This is particular true for Central Restaurant Group, the location of which is exposed to high risk from sea level rise and water stress.

2050 All Site Sea Level Rise Scores: Facility Size Weighted

Low Scenario
33/100
Low Risk

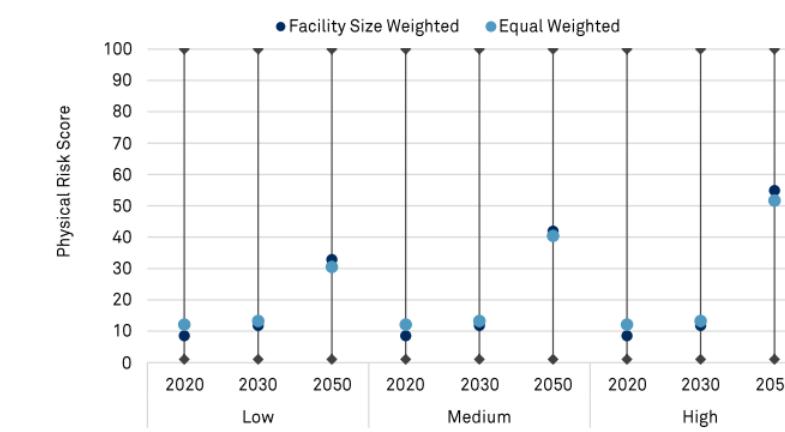
Moderate Scenario
42/100
Moderate Risk

High Scenario
55/100
Moderate Risk

Sea Level Rise Score Contribution by Asset



Sea Level Rise Score - All Scenarios & Years
Composite Score Range



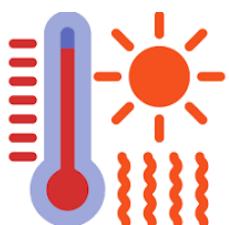
Sea Level Rise
Moderate Scenario - 2050

Rank	Country	Universal Site Name	State	Facility Size (m²)	% Facility Size	Risk Exposure Score	Risk Exposure Classification	Long-term trend (2020-2050)	Contribution	RANK
1	Thailand	Centara Grand Beach Resort & Villas Krabi	Krabi	24,765	4%	100	High	High	3.94	4
2	Republic of Maldives	Centara Ras Fushi Resort & Spa Maldives	North Male Atoll	14,287	2%	100	High	Medium	2.27	6
3	Thailand	Centara by Centara Government Complex Hotel & Convention C Bangkok	Bangkok	44,295	7%	100	High	Medium	7.00	2
4	Republic of Maldives	Centara Grand Beach Resort & Spa Maldives	North Male Atoll	11,920	60%	100	High	Medium	1.47	5
5	Thailand	Central Restaurant Group	Bangkok	108,568	17%	80	High	Medium	13.82	1
6	Thailand	Centara Grand & Bangkok Convention Centre at Central World Bangkok	Bangkok	103,967	17%	40	Moderate	Medium	6.62	3
7	Thailand	Centara Grand at Central Plaza Ladprao Bangkok	Bangkok	55,000	9%	40	Moderate	Medium	3.50	5
8	Thailand	Centara Grand Beach Resort Phuket	Phuket	30,535	5%	40	Moderate	Medium	1.94	7
9	Thailand	COSI Samui Chaweng Beach	Surat Thani	5,749	1%	40	Moderate	Medium	0.37	10
10	Thailand	Centara Kata Resort Phuket	Phuket	17,794	3%	20	Low	Medium	0.56	9
11	Thailand	Centara Grand Beach Resort & Villas Phuket	Phuket	31,833	5%	1	Low	Medium	0.08	12
12	Thailand	Centara Grand Mingle Beach Resort Pattaya	Chonburi	81,485	13%	1	Low	Medium	0.13	11
13	Thailand	Centara Hotel Hat Yai	Songkhla	31,833	5%	1	Low	Medium	0.05	14
14	Thailand	Centara Kata Resort Phuket	Phuket	50,400	8%	1	Low	Medium	0.08	12
15	Thailand	Centara Villas Phuket	Phuket	4,591	1%	1	Low	Medium	0.01	16
16	Thailand	Centara Villas Samui	Surat Thani	4,862	1%	1	Low	Medium	0.01	15

CENTEL faces moderate exposure to sea level-rise under high emissions scenario by 2050 at a company level. However, there are a number of sites facing extremely high risk. These include **Centara Grand Beach Resort, Centara Ras Fushi Resort, Centara Life Government Complex Hotel and Central Restaurant Group**.

The impact of sea-level rise is damaging to coastal resorts. If not managed well, this could cause significant asset and human life losses

Heatwave



CENTEL's exposure to heatwave is considered moderate at the company level in high scenario by 2050. Yet, **Centara Karon Resort, Grand & Bangkok Convention Center, Grand Mirage Beach Resort and Grand Beach Resort** top among all the other assets in their exposure to heatwave.

2050 All Site Heatwave Scores: Facility Size Weighted

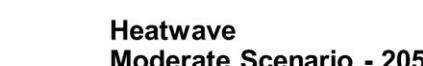
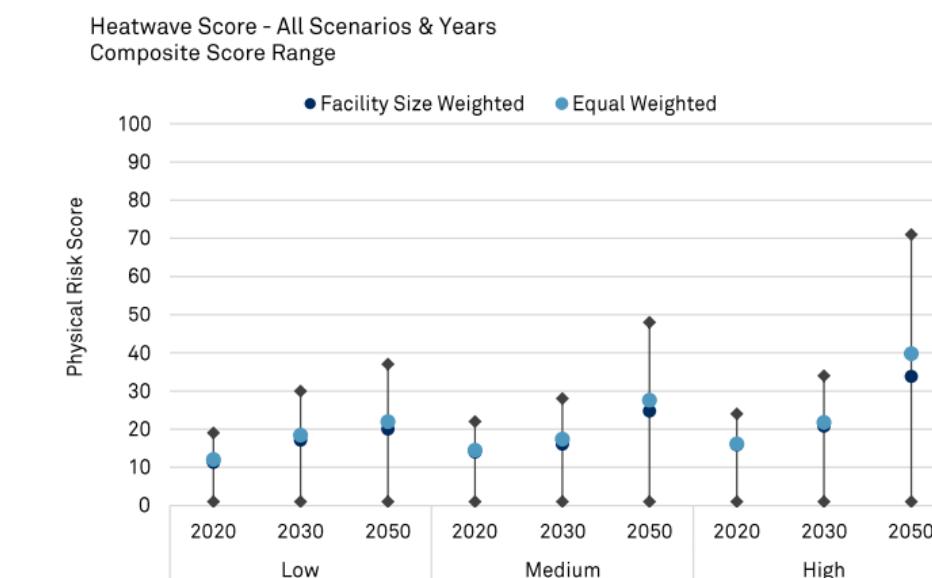
Low Scenario
20/100
Low Risk

Moderate Scenario

25/100

Low Risk

High Scenario
34/100
Moderate Risk



Rank	Country	Universal Site Name	State	Facility Size (m ²)	% Facility Size	Risk Exposure Score	Risk Exposure Classification	Long-term trend (2020-2050)	Contribution Heatwave	RANK Contribution
1	Thailand	Centara Grand Beach Resort & Villas Krabi	Krabi	24,766	4%	48	Moderate	High	1.89	1
2	Thailand	Centara Grand Beach Resort Phuket	Phuket	30,535	5%	48	Moderate	Medium	2.33	2
3	Thailand	Centara Kata Resort Phuket	Phuket	17,756	3%	48	Moderate	Medium	1.36	3
4	Thailand	Centara Karon Resort Phuket	Phuket	50,400	8%	48	Moderate	Medium	1.85	4
5	Thailand	Centara Villas Phuket	Phuket	4,591	1%	48	Moderate	Medium	0.35	5
6	Thailand	Centara Villas Samut	Surat Thani	4,862	1%	38	Moderate	Medium	0.29	6
7	Thailand	COSI Samui Chaweng Beach	Surat Thani	5,749	1%	38	Moderate	Medium	0.35	7
8	Thailand	Centara Grand & Bangkok Convention Centre at Central World	Bangkok	103,967	17%	21	Low	Medium	3.47	8
9	Thailand	Centara Grand at Central Plaza Ladprao Bangkok	Bangkok	55,000	9%	21	Low	Medium	1.84	9
10	Thailand	Centara Grand Mirage Beach Resort Pattaya	Chonburi	81,485	13%	21	Low	Medium	2.72	10
11	Thailand	Centra by Centara Government Complex Hotel & Convention C	Bangkok	44,298	7%	21	Low	Medium	1.48	11
12	Thailand	Central Restaurant Group	Bangkok	108,588	17%	21	Low	Medium	3.63	12
13	Thailand	Centara Grand Beach Resort & Villas Hua Hin	Prachuap Khiri Khan	38,904	6%	18	Low	Medium	1.11	13
14	Republic of Maldives	Centara Grand Island Resort & Spa Maldives	South Ari Atoll	11,530	2%	1	Low	Medium	0.02	14
15	Thailand	Centara Hotel Hat Yai	Songkhla	31,833	5%	1	Low	Medium	0.05	15
16	Republic of Maldives	Centara Ras Fushi Beach & Spa Maldives	North Male' Atoll	14,282	2%	1	Low	Medium	0.02	16



According to World Bank Group study, Thailand is projected to experience very significant increases in the number of days in which Heat Index exceeds 35°C , particularly under high emission pathway scenario.

Water Stress



Water stress risk has been weighted by water use on the basis that water intensive facilities are more likely to be sensitive to restricted access to water resources. Central Restaurant Group ranks the highest in water-consumption adjusted risk, though the total risk exposure is still considered moderate. Water stress risk retreat modestly under high scenario potentially because of rising risk of sea level rise.

2050 All Site Water Stress Scores:

Water Consumption Weighted

Low Scenario
28/100
Low Risk

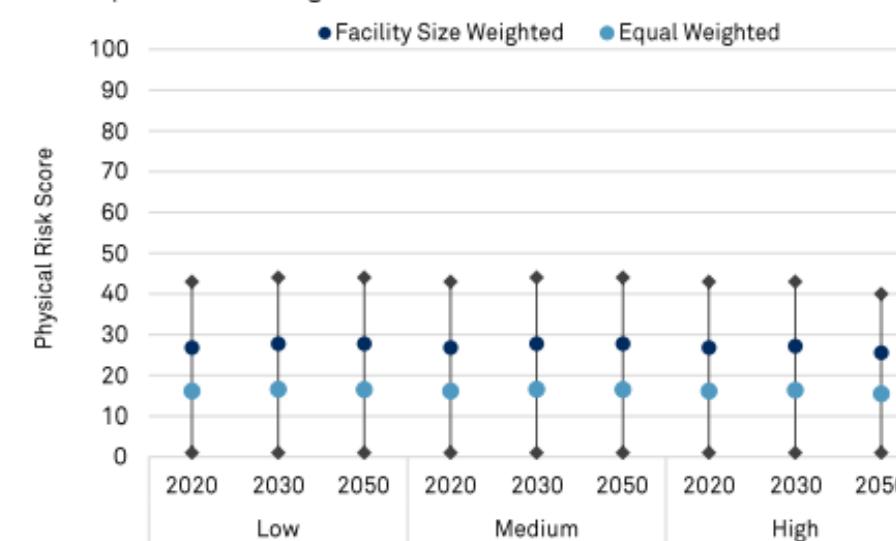
Moderate Scenario
28/100
Low Risk

High Scenario
26/100
Low Risk

Water Stress Score Contribution by Asset



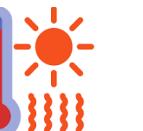
Water Stress Score - All Scenarios & Years
Composite Score Range



Water Stress Moderate Scenario - 2050

Rank	Country	Universal Site Name	State	Water Consumption (m3)	% Water Consumption	Risk Exposure Score	Risk Exposure trend (2020-2050)	Long-term Water Stress	Contribution	RANK Contribution
1	Thailand	Centara Grand & Bangkok Convention Centre at Central World	Bangkok	304,078	11%	44	Moderate	Low	5.02	2
2	Thailand	Centara Grand at Central Plaza Ladprao Bangkok	Bangkok	182,188	7%	44	Moderate	Medium	3.01	3
3	Thailand	Centra by Centara Government Complex Hotel & Convention Centre Bangkok	Bangkok	47,671	2%	44	Moderate	Medium	0.79	5
4	Thailand	Central Restaurant Group	Bangkok	887,335	33%	44	Moderate	Low	14.64	1
5	Thailand	Centara Grand Mirage Beach Resort Pattaya	Chonburi	304,680	11%	22	Low	Medium	2.51	4
6	Thailand	Centara Hotel Hat Yai	Songkhla	64,606	2%	20	Low	Medium	0.48	6
7	Thailand	Centara Villas Samui	Surat Thani	21,365	1%	9	Low	Medium	0.07	12
8	Thailand	COSI Samui Chaweng Beach	Surat Thani	10,760	0%	9	Low	Medium	0.04	14
9	Thailand	Centara Grand Beach Resort & Villas Hua Hin	Prachuap Khiri Kh	136,075	5%	6	Low	Medium	0.31	7
10	Thailand	Centara Grand Beach Resort & Villas Krabi	Krabi	165,506	6%	4	Low	Medium	0.25	9
11	Thailand	Centara Grand Beach Resort Phuket	Phuket	169,795	6%	4	Low	Medium	0.25	8
12	Thailand	Centara Kata Resort Phuket	Phuket	56,524	2%	4	Low	Medium	0.08	11
13	Thailand	Centara Karon Resort Phuket	Phuket	121,370	5%	4	Low	Medium	0.18	10
14	Thailand	Centara Villas Phuket	Phuket	29,432	1%	4	Low	Medium	0.04	13
15	Republic of Maldives	Centara Grand Island Resort & Spa Maldives	South Ari Atoll	78,459	3%	1	Low	Medium	0.03	16
16	Republic of Maldives	Centara Ras Fushi Resort & Spa Maldives	North Male' Atoll	86,592	3%	1	Low	Medium	0.03	15



Risk		Physical risk		PHYSICAL RISK
Drivers		 Sea-level rise	 Heatwave	 Water Stress
Business impact		Operation		
Impact of identified risks to CENTEL business	Flooding and severe weather events associated with rising sea levels can disrupt the operations, leading to cancellations, loss of revenue, and additional expenses for cleanup and repairs. Assets located along coastlines may lose beachfront access as sea levels rise and beaches erode. This can diminish the attractiveness of the property to potential guests and impact revenue from beach-related activities.	Assets may experience higher energy costs during heatwaves due to increased use of air conditioning to keep guests comfortable. This can impact operational expenses and reduce profitability, especially if energy prices spike during periods of high demand.	Assets may face higher water costs as water becomes scarcer and more valuable. Rising water prices can impact operational expenses, particularly for properties with large water consumption requirements for landscaping, laundry, and guest amenities.	
Financial Implication	<u>Impact on revenue : based on the 1 month of operation shut down period</u> RCP 4.5 2030 : 22 million THB RCP 4.5 2050: 156 million THB	<u>Impact on energy cost (electricity) : based on Number of days with heat index > 41 degree Celsius will affect the electricity consumption</u> RCP 4.5 2030 (13 days) : 606 million THB RCP 4.5 2050 (43 days): 11,452 million THB		-
Business impact		Supply chain/Value chain		
Impact of identified risks to CENTEL business	The assets in areas affected by sea-level rise may suffer damage to our reputation and brand image if we are perceived as being at greater risk of environmental hazards. This could lead to decreased bookings and difficulty attracting guests.	Extreme heat can disrupt supply chains, impacting the availability of essential goods and services. For example, delivery delays or shortages of food, beverages, linens, and other supplies could affect operations and guest experience. In addition, maintaining guest comfort during heatwaves is crucial for ensuring satisfaction and positive reviews. If we are unable to adequately cool their rooms or provide other amenities to help guests beat the heat may receive complaints or negative feedback, which can damage their reputation and future business.	Water stress can lead to disruptions in water supply, either due to droughts, infrastructure failures, or regulatory restrictions. Hotels may experience shortages or intermittent water service, which can disrupt operations and inconvenience guests. Assets that operate in regions experiencing water stress may face pressure from local communities and stakeholders to minimize water usage and contribute to water conservation efforts. Engaging with local water management initiatives and community outreach programs can help hotels build positive relationships and demonstrate their commitment to sustainability.	
Financial Implication	-	-	-	-

Policy Risk Exposure

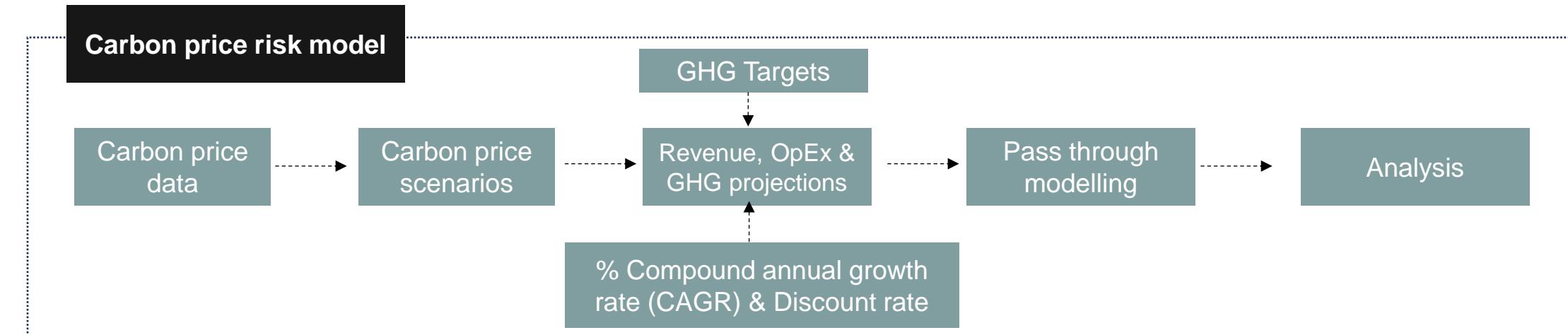


In order to assess exposure to climate-related policy risk, we have assembled a database of publicly available information on current carbon prices across over 100 geographies. The database includes information on prices and sector coverage for emissions trading schemes, carbon taxes and fuel taxes in each geography.

#	Model Input Assumption
1	Operating income – hotel business (12 months to Dec-31-2019)
2	Operating income – hotel business (12 months to Dec-31-2019)
3	CARG% for operating income and expenses (2020-2022) – hotel business
4	CARG% for operating income and expenses (2022-2025) – hotel business
5	CARG% for operating income and expenses (2025-2050) – hotel business
6	CARG% for operating income and expenses (2020-2022) – food business
7	CARG% for operating income and expenses (2022-2025) – food business
8	CARG% for operating income and expenses (2025-2050) – food business
9	Scope 1&2 Location-based GHG emission reduction (2019-2029) – hotel business

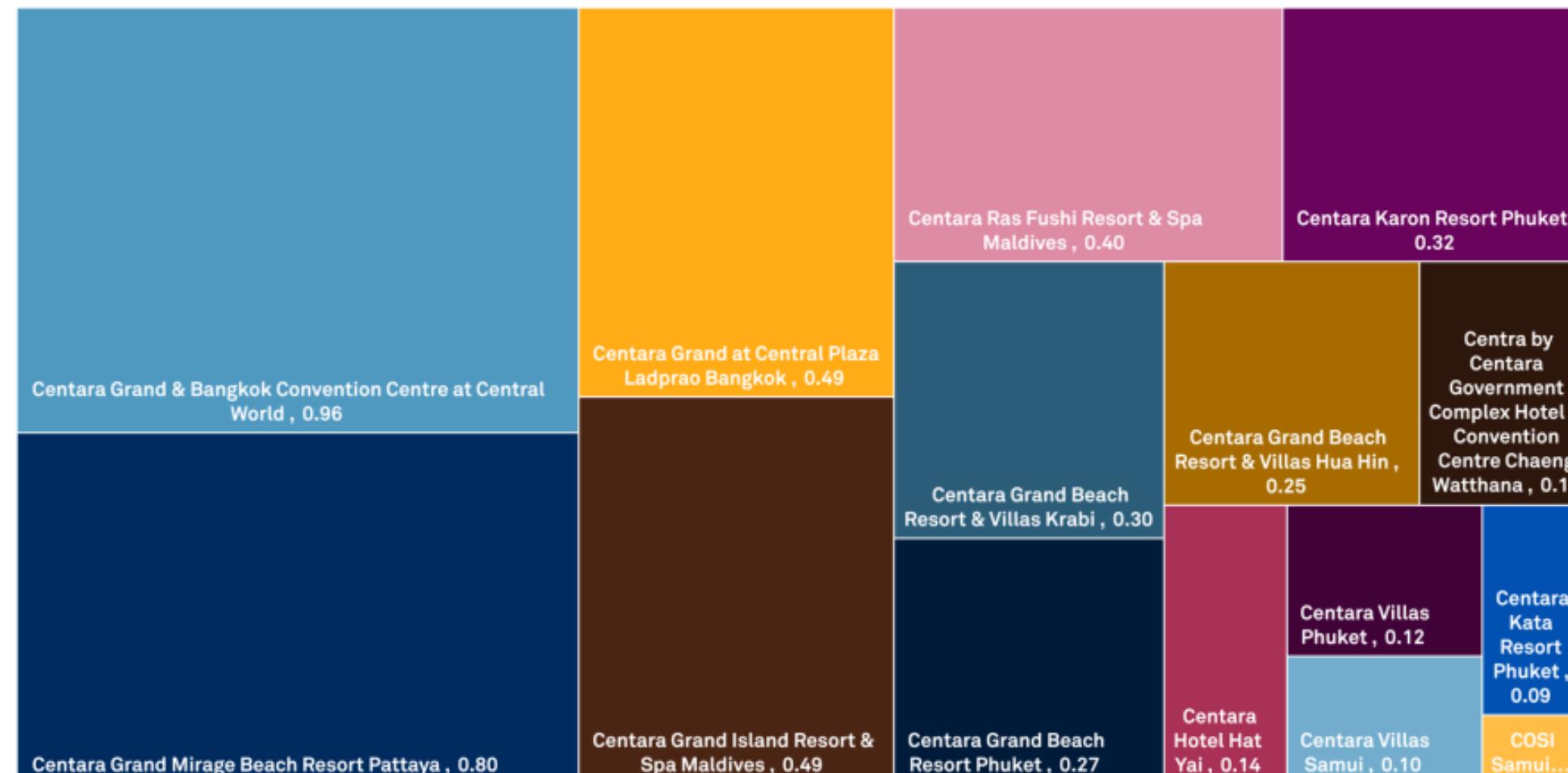
*Assumes hotel business has no 2050 net-zero GHG emission targets for base scenario and has GHG emission target to reduce Scope 1&2 to zero by 2050

** Assumes food business does not have GHG emission reduction target at this stage



The below figure presents the carbon pricing risk by business units in a high carbon price scenario for 2030, based on the assumption that CENTEL would reduce Scope 1&2 emissions to net zero by 2050. The ranking of carbon footprint shows that CENTEL's Centara Grand & Bangkok Convention Center is exposed to the greatest carbon pricing risk, followed by Centara Grand Mirage Beach Resort, Centara Grand at Central Plaza and Centara Grand Island Resort. These fours hotels and resorts accounted for 56% of the total carbon pricing risk out of the 15 hotels portfolio CENTEL currently owns.

Carbon pricing risk by business unit (high scenario, 2030, \$mn)



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A) Description provided of the specific climate-related issues potentially arising in each time horizon

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B) Disclose information on the potential impacts of climate-related risks and opportunities on business, strategy, and financial planning in the following areas : Products and Services; Supply Chain/value chain; Adaptation and mitigation activities; Investment in research and development; Operation; Acquisitions or divestment; Access to capital



Policy Risk Exposure

HOTEL BUSINESS

Carbon pricing risk is dependent on both the total amount of GHG emissions from a location and potential carbon price increases at that location. The below two tables show different results under 2 different scenarios. The first table shows the scenario where CENTEL would not have net-zero GHG emission target by 2050. Under this scenario, we assume GHG emission intensity (tonne/mn USD revenue) remains the same post 2029. The second table shows the results of a scenario where CENTEL continues to reduce GHG emissions (Scope 1&2) to zero by 2050. Both scenario assume CENTEL will achieve 20% GHG emissions reduction for Scope 1 and Scope 2 by 2029 (compared to baseline year of 2019)

Table 1 : Enterprise carbon pricing risk : Impact of future carbon prices on company financials without net zero GHG emissions target by 2050 (in 2019 \$US)*

Scenario	Total Carbon Pricing Risk	\$US Million	2025			2030			2040			2050		
			Low	Moderate	High	Low	Moderate	High	Low	Moderate	High	Low	Moderate	High
No net-zero target by 2050	Total Scope 1 Carbon Pricing Risk	\$US Million	\$0.57	\$2	\$3	\$1	\$3	\$6	\$7	\$14	\$24	\$20	\$75	\$75
	Total Scope 2 Carbon Pricing Risk	\$US Million	\$0.14	\$0.50	\$0.98	\$0.43	\$1	\$2	\$2	\$5	\$8	\$7	\$26	\$26
	Total Scope 3 Carbon Pricing Risk	\$US Million	\$0.39	\$0.92	\$2	\$0.82	\$2	\$3	\$4	\$7	\$13	\$12	\$40	\$40
	Total Scope 3 Carbon Pricing Risk	\$US Million	\$0.04	\$0.12	\$0.23	\$0.18	\$0.41	\$0.72	\$0.83	\$2	\$3	\$3	\$10	\$10
% Change in Operating Expenditure		%	0.5%	1.4%	2.6%	0.8%	1.8%	3.2%	1.5%	3.1%	5.4%	1.9%	6.6%	6.6%
Carbon-adjusted Operating Profit Margin		%	64%	64%	64%	66%	65%	65%	68%	68%	67%	71%	70%	70%

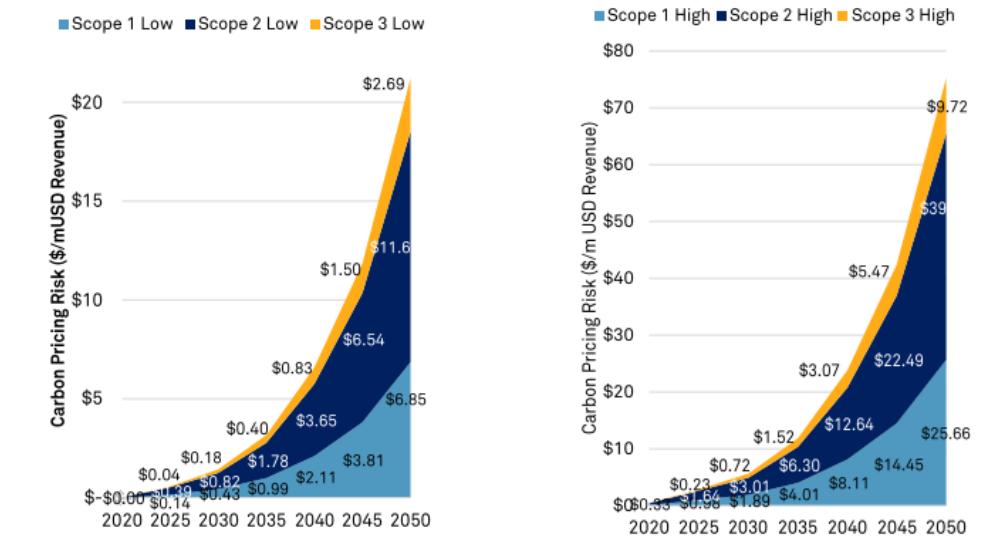
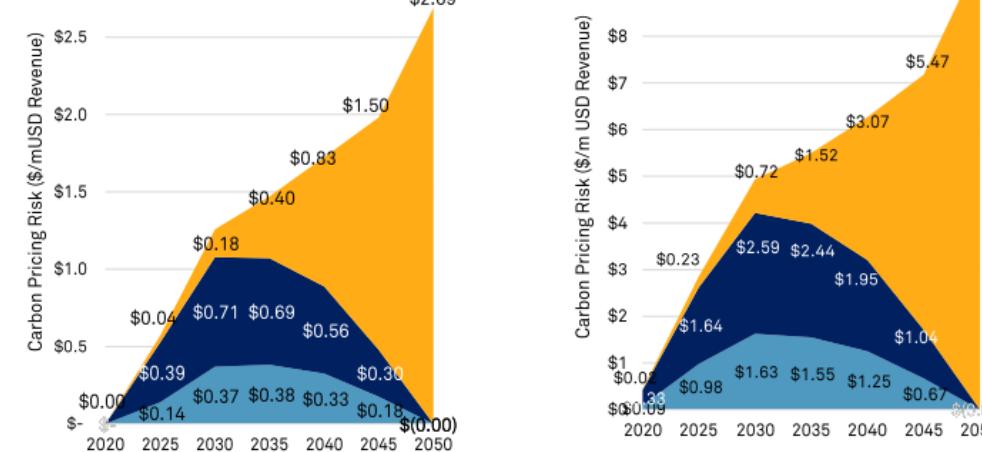


Table 2 : Enterprise carbon pricing risk : Impact of future carbon prices on company financials with net zero GHG Scope 1&2 emissions target by 2050 (in 2019 \$US)*

Scenario	Total Carbon Pricing Risk	\$US Million	2025			2030			2040			2050		
			Low	Moderate	High	Low	Moderate	High	Low	Moderate	High	Low	Moderate	High
Net-Zero Target by 2050 for Scope 1 and 2	Total Scope 1 Carbon Pricing Risk	\$US Million	\$0.57	\$2	\$3	\$1	\$3	\$5	\$2	\$4	\$6	\$3	\$10	\$10
	Total Scope 1 Carbon Pricing Risk	\$US Million	\$0.14	\$0.50	\$0.98	\$0.37	\$0.90	\$2	\$0.33	\$0.71	\$1	\$0.00	\$0.00	\$0.00
	Total Scope 2 Carbon Pricing Risk	\$US Million	\$0.39	\$0.92	\$2	\$0.71	\$2	\$3	\$0.56	\$1	\$2	\$0.00	\$0.00	\$0.00
	Total Scope 3 Carbon Pricing Risk	\$US Million	\$0.04	\$0.12	\$0.23	\$0.18	\$0.41	\$0.72	\$0.83	\$2	\$3	\$3	\$10	\$10
% Change in Operating Expenditure		%	0.5%	1.4%	2.6%	0.7%	1.6%	2.8%	0.4%	0.8%	1.4%	0.2%	0.9%	0.9%
Carbon-adjusted Operating Profit Margin		%	64%	64%	64%	66%	65%	65%	69%	69%	68%	71%	71%	71%



* Scope 3 includes carbon pricing risk associated with Scope 1, 2 & 3 GHG emissions. Only upstream Scope 3 emissions are included in our analysis

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A)

Description provided of the specific climate-related issues potentially arising in each time horizon

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B)

Disclose information on the potential impacts of climate-related risks and opportunities on business, strategy, and financial planning in the following areas : Products and Services; Supply Chain/value chain; Adaptation and mitigation activities; Investment in research and development; Operation; Acquisitions or divestment; Access to capital



Policy Risk Exposure

FOOD BUSINESS

The below two tables show the carbon pricing risk results for food business under the assumption that there is currently no GHG emissions reduction target and no target to reduce emission to zero by 2050. Under this condition, Scope 2 emissions will contribute the most to total carbon pricing risk and drive total carbon pricing risk to \$206 million USD by 2050 in a high carbon price scenario. CENTEL's food business operation's Scope 2 emission are higher compared to Scope 1 and current upstream Scope 3 emissions. However, current Scope 3 emission data only includes GHG emissions generated from waste. Potential inclusion of purchase raw materials and food, upstream transportation and distribution and employee commuting, for example, to upstream Scope 3 emissions in the future could result in even higher Scope 3 carbon pricing risk.

Table 1 : Enterprise carbon pricing risk : Impact of future carbon prices on company financials without net zero GHG emissions target by 2050 (in 2019 \$US)*

Scenario	Total Carbon Pricing Risk	\$US Million	2025			2030			2040			2050		
			Low	Moderate	High	Low	Moderate	High	Low	Moderate	High	Low	Moderate	High
No GHG Emissions Targets	Total Scope 1 Carbon Pricing Risk	\$US Million	\$0.74	\$2	\$3	\$3	\$6	\$11	\$16	\$32	\$55	\$60	\$206	\$206
	Total Scope 2 Carbon Pricing Risk	\$US Million	\$0.01	\$0.02	\$0.04	\$0.03	\$0.07	\$0.12	\$0.16	\$0.36	\$0.63	\$0.63	\$2	\$2
	Total Scope 3 Carbon Pricing Risk	\$US Million	\$0.62	\$1	\$3	\$2	\$5	\$9	\$13	\$26	\$44	\$48	\$165	\$165
% Change in Operating Expenditure	Carbon-adjusted Operating Profit Margin	%	\$0.11	\$0.32	\$0.59	\$0.5	\$1	\$2	\$3	\$6	\$10	\$11	\$38	\$38
	Carbon-adjusted Operating Profit Margin	%	0.4%	0.9%	1.6%	0.8%	1.7%	3.0%	1.4%	2.9%	5.0%	1.8%	6.1%	6.1%
	Carbon-adjusted Operating Profit Margin	%	52%	52%	52%	54%	54%	53%	58%	57%	56%	61%	59%	59%

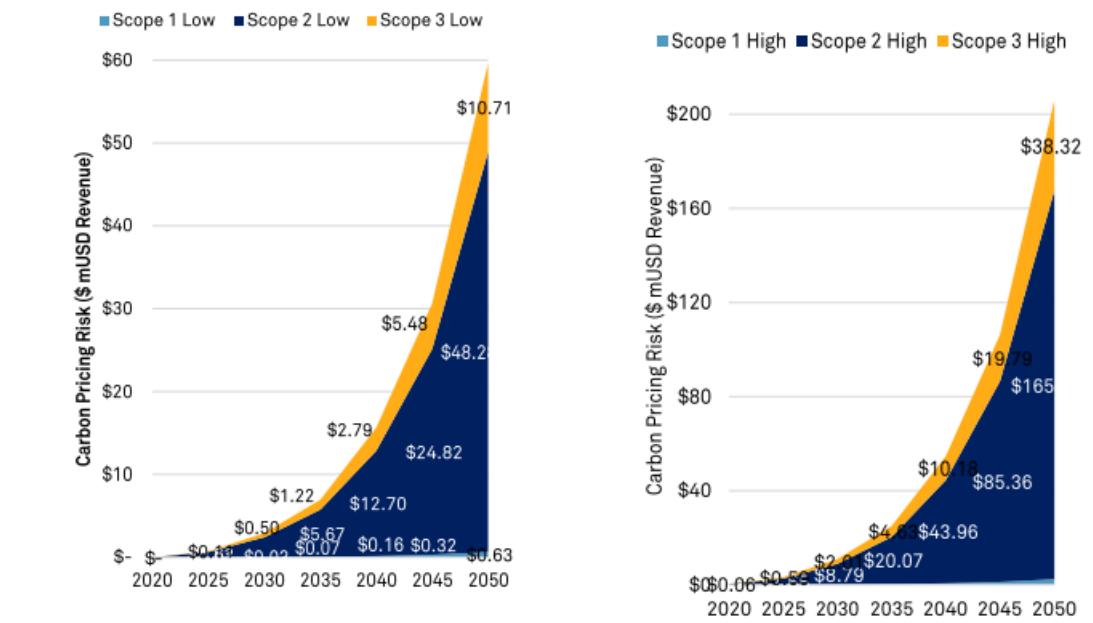
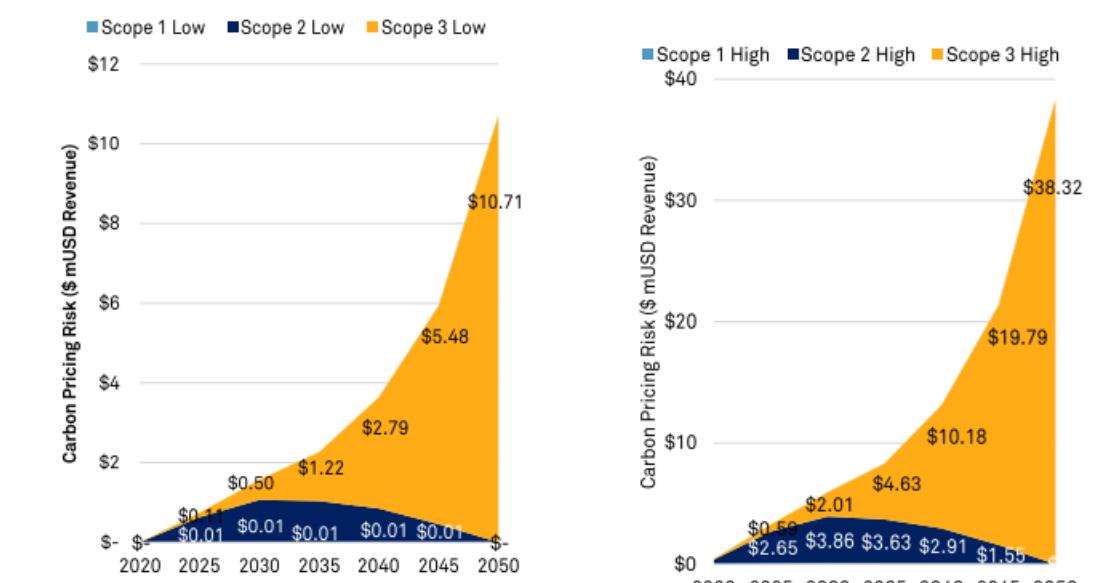


Table 2 : Enterprise carbon pricing risk : Impact of future carbon prices on company financials with net zero GHG Scope 1&2 emissions target by 2050 (in 2019 \$US)*

Scenario	Total Carbon Pricing Risk	\$US Million	2025			2030			2040			2050		
			Low	Moderate	High	Low	Moderate	High	Low	Moderate	High	Low	Moderate	High
No GHG Emissions Targets	Total Scope 1 Carbon Pricing Risk	\$US Million	\$0.74	\$2	\$3	\$2	\$3	\$6	\$4	\$8	\$13	\$11	\$38	\$38
	Total Scope 2 Carbon Pricing Risk	\$US Million	\$0.01	\$0.02	\$0.04	\$0.01	\$0.03	\$0.05	\$0.01	\$0.02	\$0.04	\$0	\$0	\$0
	Total Scope 3 Carbon Pricing Risk	\$US Million	\$0.62	\$1	\$3	\$1	\$2	\$4	\$0.84	\$2	\$3	\$0	\$0	\$0
% Change in Operating Expenditure	Carbon-adjusted Operating Profit Margin	%	\$0.11	\$0.32	\$0.59	\$0.5	\$1	\$2	\$3	\$6	\$10	\$11	\$38	\$38
	Carbon-adjusted Operating Profit Margin	%	0.4%	0.9%	1.6%	0.4%	0.9%	1.6%	0.3%	0.7%	1.2%	0.3%	1.1%	1.1%
	Carbon-adjusted Operating Profit Margin	%	52%	52%	52%	54%	54%	53%	58%	58%	62%	62%	61%	61%



* Scope 3 includes carbon pricing risk associated with Scope 1, 2 & 3 GHG emissions. Only upstream Scope 3 emissions are included in our analysis

A)

Description provided of the specific climate-related issues potentially arising in each time horizon

S

B)

Disclose information on the potential impacts of climate-related risks and opportunities on business, strategy, and financial planning in the following areas : Products and Services; Supply Chain/value chain; Adaptation and mitigation activities; Investment in research and development; Operation; Acquisitions or divestment; Access to capital

Market Risk Exposure : Supplier Carbon Pricing Risk

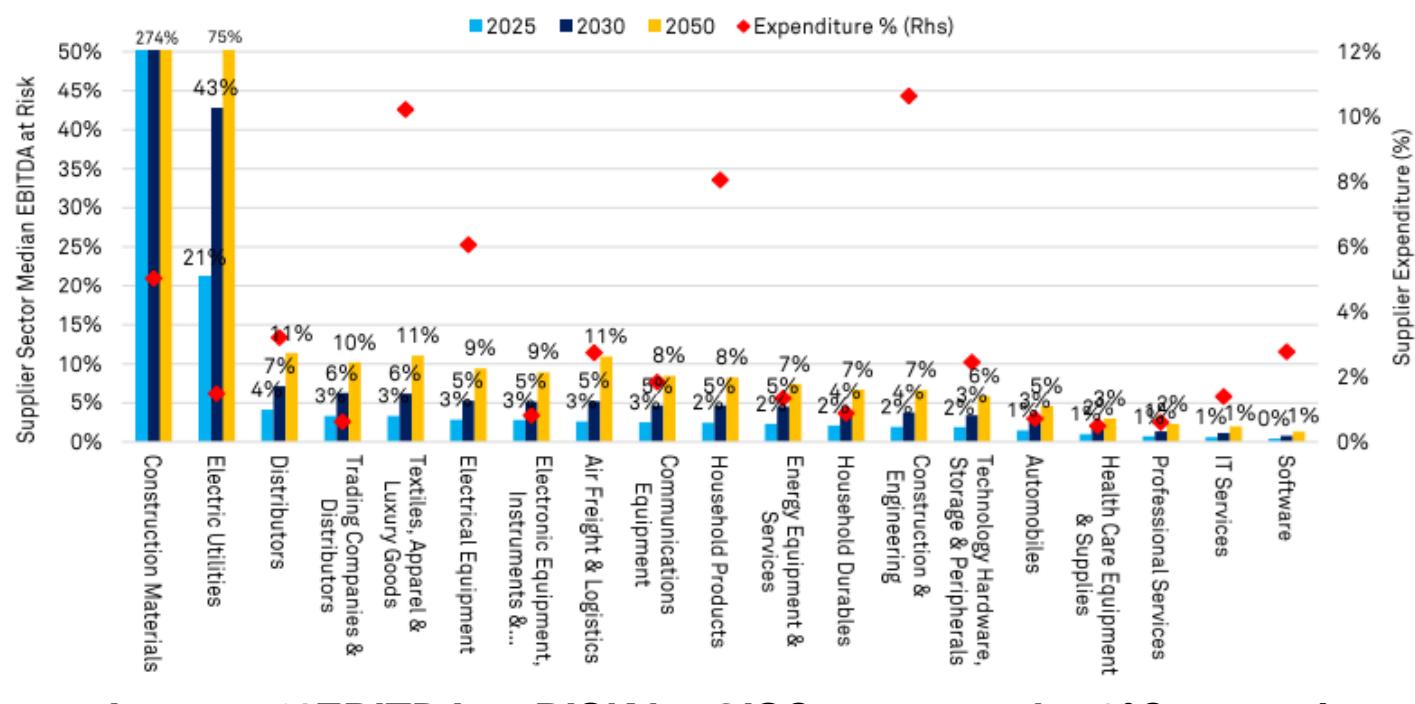
CENTEL identifies changes in revenue mix and sources, resulting in decreased revenues, as an example of climate-related market risk. As a measure of market risk exposure, we have calculated the increased carbon pricing risk associated with CENTEL's suppliers under different carbon pricing scenarios. We have calculated the market risk using a metric '**EBITDA at Risk**' allows us to calculate forward-looking estimated of the financial risk of CENTEL's suppliers and assessed the potential impact to a companies' earning today if companies had to pay a future price for GHG emissions.

CENTEL's suppliers, if faced with increased carbon taxes (e.g. on diesel fuel use), may seek to pass these increases on via higher priced products. This assessment, therefore, allowed CENTEL to identify upstream parts of the value chain that are subjected to carbon pricing risks under a 2°C scenario, and help to identify ways of reducing exposure to these risks over time by exerting influence over its suppliers and encouraging its suppliers to reduce their own GHG emissions.



HOTEL BUSINESS

Among all sectors that the upstream suppliers of CENTEL's Hotels Business operate in, **Construction Material and Electric Utilities are the two major sectors that have high EBITDA at Risk**. Due to the nature of the business of these two sectors, which are high emitting. CENTEL may consider to source materials suppliers that have lower emissions intensity than average and increase use of renewable electricity. CENTEL has a high percentage of supply chain expenditure in construction & engineering sector, textile & apparel and household product sectors, While these sector's average EBITDA at Risk are not as high, they represent part of embodied emissions for buildings and supply chain risk that CENTEL might need to consider to reduce.

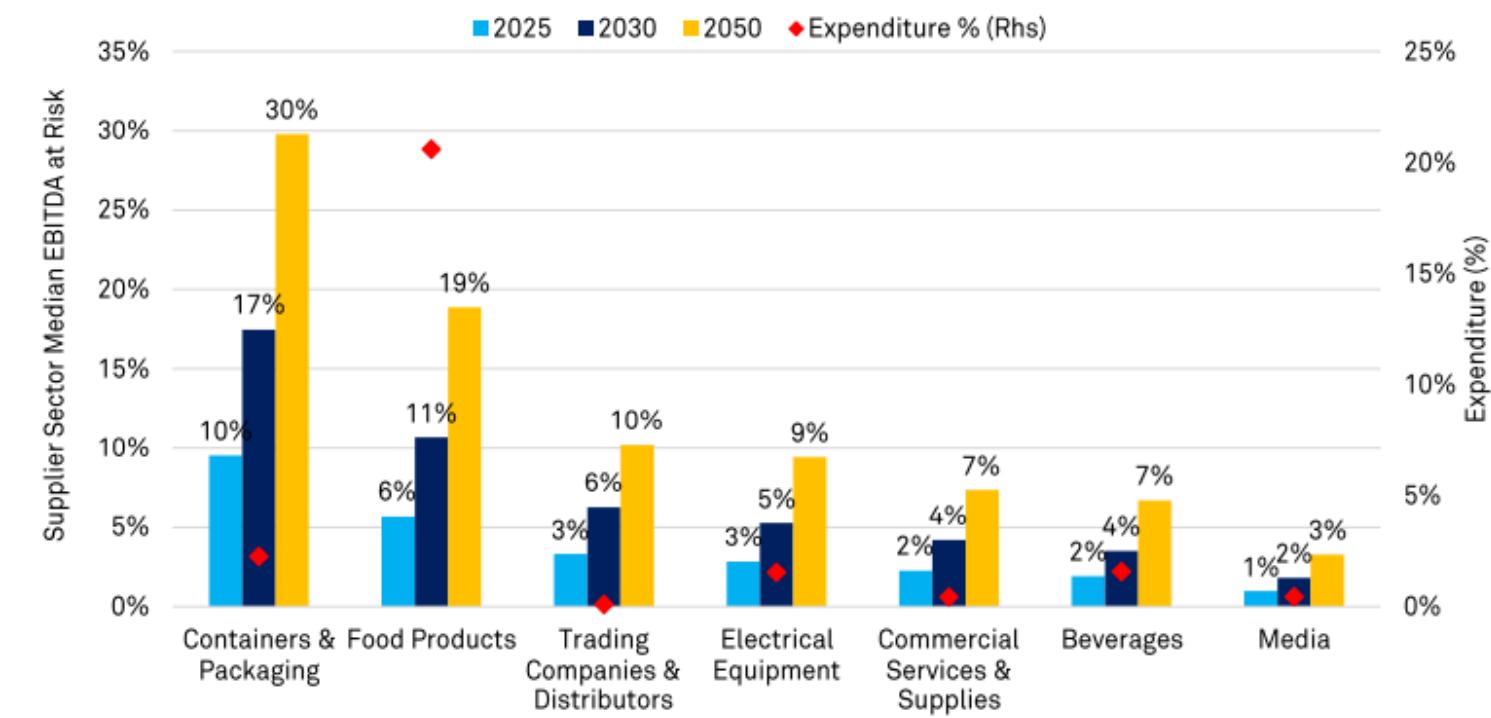


Average %EBITDA at RISK by GISC sector under 2°C scenario



FOOD BUSINESS

For food business, the highest sector of average EBITDA at Risk is **Containers & Packaging**, while CENTEL's expenditure in this sector is relatively low among the top 50 suppliers. CENTEL might still want to partner with suppliers that have low carbon pricing risk compared to industry average. Most of CENTEL's supply chain spending goes to food products sector, while the sector see 11% and 19% of carbon pricing risk by 2030 and 2050 respectively based on our data. The shifting consumer demand for more sustainable and low-carbon food may also impact CENTEL's food materials sourcing.



Average %EBITDA at RISK by GISC sector under 2°C scenario

Technology

Product and Service : Resource Efficiency & GSTC Certification

Primary potential financial impact : Reduced indirect operating cost



HOTEL BUSINESS

CENTEL have low-carbon products and services provided, in the form of improving energy efficiency of buildings, renewable electricity powered in hotels, green buildings standards and technology to track efficiency and reduce waste. However, we have a plan to implement on R&D in green technology and sustainable in the future.



FOOD BUSINESS

CENTEL reports healthy and sustainable food through organic planting and responsible supply chain sourcing. Focuses are also on water and waste management, biodiversity conservation and agro-forestry and circular economy. Due to the position in downstream value chain for food and restaurant business, technology is mostly used in tracking and managing carbon footprint and reducing food waste. Investment and expenses include campaigns for awareness building, programs to improve water efficiency, reduce food waste and increase responsible food sourcing and partnerships with external organizations in animal wellbeing and biodiversity protection.

Business	Evidence of Low-Carbon Transition Goods/Service	Evidence of Green R&D or Green Capex	Business plan	Financial Implication figure
Central Plaza Hotel	Hotel Business Make use of technology to measure and manage energy efficiency and sustainable progress such as: <ul style="list-style-type: none"> • Around 80% of lighting was converted to LED lighting • Invested in a solar installation project • Increase the number of electric vehicle charging stations 	Investments in renewable and solar projects	The company is committed to driving the business to accomplish sustainable goals. According to the target plan from 2020-2029, the Company plans to reduce energy consumption, water usage, waste, and the emission of greenhouse gases by 20%, compared to 2019. Currently, progress is being made on the plan.	By 2030 CENTEL's focus on operation energy efficiency, water usage and waste actions is anticipated to enable businesses to achieve a 20% energy efficiency saving. With recurring renewable energy installation, cost savings coming from this implementation is 3,436,429.08 THB or 6% cost savings. Traditionally, utility (ex. electricity and water) accounts for 5-7% of a hotel's P&L cost. This translates to P&L performance improvement.
	Food Business Installed outdoor solar LED lights on the terrace of COAST restaurant; address food waste and grow organic herbs and vegetables; use recyclable packaging and materials	Be an active partner of Scholars of Sustenance Foundation (SOS)	In 2023, 25 hotels of Centara Hotels and Resorts received Global Sustainable Tourism Council (GSTC) certifications, We plans to ensure that all hotels will receive GSTC by 2025. https://centel.listedcompany.com/msc/one-report/centel-one-report-2023-en.pdf	



Product and Service : Development or expansion of low emission goods and services

Hotel Business : Direct Operation **Primary potential financial impact : Increased revenues resulting from increased demand for products and services**

CENTEL has a significant opportunity to establish a distinct differentiate in its interactions with guests, authorities, local communities, and shareholders. In addition, the expectations of B2B corporate customers and B2C leisure customers are gradually changing. These expectations have a direct impact on CENTEL's business. The sustainable development team have been collaborating on sustainable development criteria in the decision-making process, particularly for property that aspire to be sustainable model. As part of Centara Reserve Samui's commitment to sustainability, the luxury resort incorporates environmentally conscious designs with green operational practices and amenities. The resort's impressive sustainability programme goes beyond banning of all single-use plastics. Specialised water treatment facilities enable still and sparkling water to be safely bottled in-house, and all food waste is transformed into biogas for use in the resort kitchens to reduce energy consumption. Customers can also harvest ingredients from the garden for their food at any outlet to further lower their carbon footprint and food miles.

Potential financial impact figure: A growing body of research indicates that corporate travelers and stakeholders are increasingly seeking for hotels with a strong commitment to social and responsibility. Keeping CENTEL appealing to customers and investor requires the company to take part in a worldwide sustainability plan the address climate change. We have the potential to further increase its market share. **For example, an increase of 78% of revenue in 2023 represents 303.8 million THB**





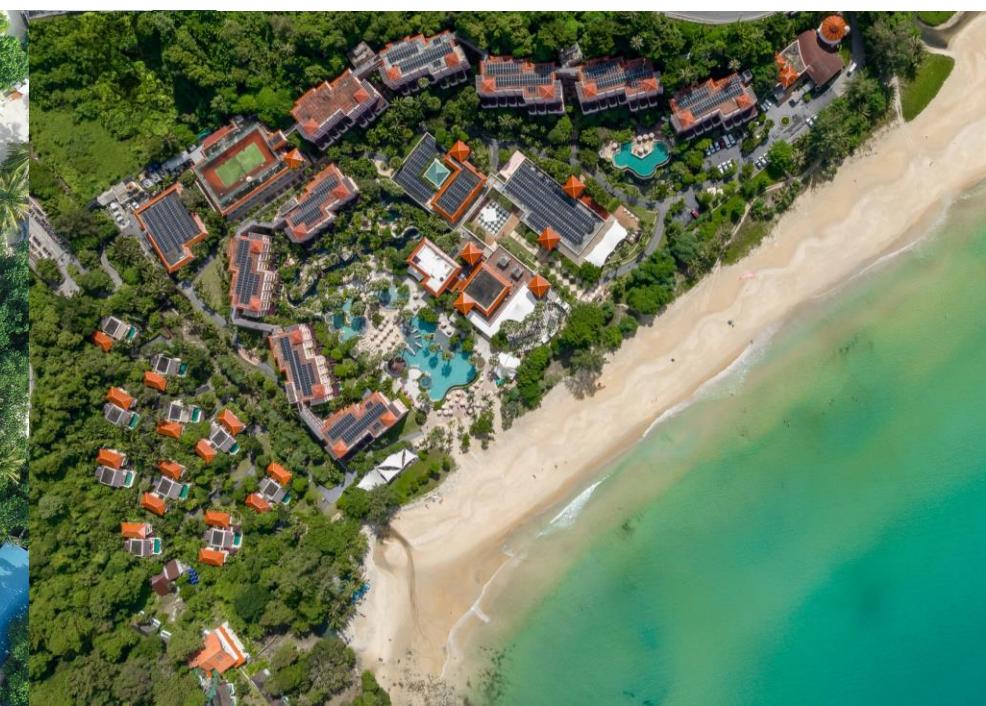
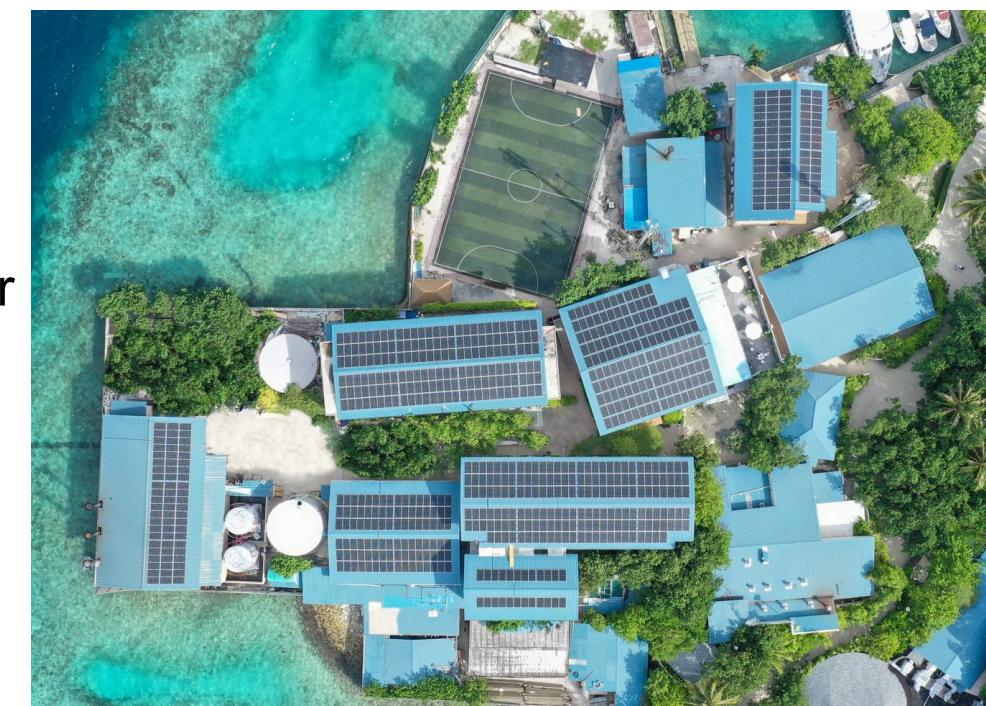
Hotel Business :
Direct Operation

Energy source : Use of lower-emission sources of energy

Primary potential financial impact : Reduce indirect (operating) cost

CENTEL invested approximated 8,568,680.00 THB to install solar PV in 2 owned hotel (Thailand and Maldives)

Potential financial impact figure : Financial impact is calculated from hotel business's solar rooftop project Total 905 kWp was installed. It accounted for 4,800,000 THB per year in electricity cost savings.



Food Business :
Direct Operation

CENTEL works with CRG International Food (CRGI) , on CENTEL's Solar Rooftop project. CRGI invested approximated 3,00,000 THB to install solar PV in food factories in Thailand.

Potential financial impact figure : Financial impact is calculated from food business's solar rooftop project Total 145 kWp was installed. It accounted for 780,000 THB per year in electricity cost saving.



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A) A description of the process used to determine which risks and opportunities could have a material financial impact on the organization

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B) Describe how climate-related issues serve as an input to their financial planning process; and how these risks and opportunities are prioritized

Climate Risk Assessment

1

This assessment considers various factors, including physical risks (such as extreme weather events, rising sea levels, and changing precipitation patterns), transitional risks (such as regulatory changes, carbon pricing, and shifts in consumer preferences), and liability risks (such as potential legal claims related to climate impacts).

Vulnerability Analysis

2

Evaluates the vulnerability of its assets to climate-related hazards. This analysis considers factors such as location, exposure to climate hazards, building design, resilience measures, and dependency on critical resources (such as water and energy). Vulnerability mapping and scenario analysis used to assess the potential magnitude and likelihood of climate-related impacts on CENTEL's assets and operations.

Opportunity Identification

4

We prioritize by

- Customer preferences and market demand
- Improve long-term competitiveness
- Return on investment analysis

In addition to risks, CENTEL identified opportunities to capitalize on the transition to a low-carbon and climate-resilient economy. This includes opportunities to reduce greenhouse gas emissions, enhance energy efficiency, optimize resource use, and innovate sustainable practices. CENTEL explores opportunities to differentiate its brand, attract environmentally conscious customers, and access green financing and incentives.

Risk Mitigation and Adaptation Strategies

5

Based on the risk assessment and financial impact analysis, we developed risk mitigation and adaptation strategies to manage climate risks effectively. This may involve investing in climate-resilient infrastructure, implementing disaster preparedness and response plans, diversifying revenue streams, securing insurance coverage, and integrating climate considerations into business decision-making processes and investment criteria.

Financial Impact Assessment

3

Once climate risks are identified and assessed, we conducts a financial impact analysis to quantify the potential effects on its financial performance. This analysis considers the direct costs of physical damage, business interruption, and operational disruptions caused by climate-related events, as well as indirect impacts on revenue, profitability, asset value, and market competitiveness. Financial modeling and scenario analysis are used to estimate the range of potential financial outcomes under different climate scenarios.

Monitoring and Reporting

6

CENTEL establishes mechanisms to monitor climate risks and opportunities, track progress on risk management and adaptation measures, and report transparently on its climate-related performance to stakeholders. This may include regular risk assessments, performance indicators, disclosure frameworks (such as the Task Force on Climate-related Financial Disclosures), and sustainability reporting standards (such as the Global Reporting Initiative).

The Company conducts analysis and reviews information on key climate issues that affect both the organization internally and externally, involving all stakeholders, and considers prioritizing two areas : issues that are significant and impact the organization's operations, and issues that affect all groups of stakeholders, including customers, employees, suppliers, business partners, shareholders, investors, communities, and society.

By following this process, CENTEL can proactively identify and address climate risks while seizing opportunities to enhance its resilience, sustainability, and long-term financial performance in a changing climate.

CENTEL takes action to mitigate climate change impacts and strengthen the company's resiliency, which is critical to CENTEL's capacity to meet our Net Zero target. We have determined and created mitigation and adaptation strategies based on type of impacts from our analysis. Our mitigation and adaptation strategies focus on three main areas: **developing a climate strategy plan** (full version will be published within the next reporting cycle) , **investing in new technology for product and service** and **utilizing alternative energy sources**.

We are committed toward a net-zero future and reducing our greenhouse gas emissions in line with climate science.

BY 2030, WE ARE COMMITTED TO :



CARBON/ENERGY

Cut electricity consumption 20%



WATER

Cut water use by intensity by 20%



Cut landfill waste intensity by 20%



GHG Scope 1&2 emission reduction by 20% compared to 2019 base year



Note: Environmental information of the hotel business

Year 2019-2021 17 hotels owned by the Company.

Year 2022 34 hotels, including owned hotels and managed hotels.

Year 2023 47 hotels, including owned hotels and managed hotels.

The Company has developed a sustainability management system for the hotel business named 'Centara EarthCare' and has achieved certification status. This system is recognized by the **Global Sustainable Tourism Council (GSTC)** and collects environmental data using the Greenview Portal system.

In 2023, 24 hotels under Centara Hotels & Resorts, along with its Head Office, passed the assessment and received a certificate of sustainable tourism in the hotel category from the World Sustainable Tourism Council. Based on an assessment by Vireo SRL and Bureau Veritas, agencies that inspect sustainability operations in the tourism business, one location has been certified by Green Key, a tourism sustainability standard that has achieved GSTC-Recognized status.

The goal is for all hotels and resorts under the Centara Group to be certified to meet sustainability standards by 2025. Currently, operating results account for 52% of the hotels in operation.



OUR PROJECTS IN ENERGY CONSUMPTION MANAGEMENT

1. To reduce energy consumption by 8% compared to the base year of 2019 or intensity value of 218.12 kWh/sqm.

GOAL 2. Total electricity consumption for the whole year is 176,603,974 kilowatt-hours, while the actual electricity consumption is 163,687,562.10 kilowatt-hours, resulting in a reduction of electricity consumption from the set target by 7%.

Energy Intensity



Renewable Energy (kWh)



RENEWABLE ENERGY PROJECTS



The Company has been supporting the use of renewable energy by installing a solar power generation system on the roof of the main building of Centara Ras Fushi Resort & Spa Maldives since 2019, with the goal of meeting 40% of the hotel's total electricity demand by producing electricity from solar energy.

In 2023, it can produce 483,408.78 kilowatt hours of electricity. Additionally, expanding the installation of solar panels in another location at Centara Watergate Pavilion Hotel Bangkok, capable of producing 61,050 kilowatt hours of electricity, making the total electricity production from solar energy to 544,458.78 kilowatt hours.

This initiative saves costs amounting to 1,884,561.11 Baht and reduces greenhouse gas emissions by approximately 391.48 tCO2e. From 2024 onwards, the Company will implement project plans to install solar panels on the rooftops of other hotels, aiming to reduce electricity costs and greenhouse gas emissions.



ENERGY EFFICIENCY PROJECTS



The hotel business places importance on the use of technology to increase work efficiency and benefit from energy usage. This aligns with the goal of reducing energy use by 20% from the base year of 2019 through various projects, such as installing the Room Control Unit system to manage energy use in guest rooms. Additionally, the installation of a smart motion detection system in guest rooms provides innovative intelligent control, saving energy. This system controls energy consumption with the Room Flex System Manager & Dashboard in real-time, displaying the status of energy consumption while guest rooms are occupied, aimed at efficiently controlling energy consumption. Furthermore, sensor systems on balcony doors inside the guest rooms and in public restroom areas help save electricity by detecting when doors are opened.

- The project of solar panel installation on the hotel rooftop aims to reduce the cost of electricity usage and decrease greenhouse gas emissions.
- Heat pumps installed for jacuzzis are water heaters that utilize electricity to transfer heat from one place to another instead of generating heat directly. Consequently, they can save 2-3 times more energy than a conventional water heater.
- Aircon Saver is an electricity-saving device designed for use with split-type air conditioning systems. It helps reduce electricity usage without lowering the temperature.
- The Hybrid-type Solar Air Conditioner utilized in the Pool Villa utilizes split-type air conditioners. The Solar Series system is designed to be powered by both electricity and solar energy, thereby reducing electricity usage costs.
- Charging stations are installed for electric cars to serve customers. Currently, there are 26 electric charging stations spread across 14 hotels nationwide

BIOGAS



Since 2019, the hotel business has been powered by biogas produced by T.O.B.Y (turn organic by you) machines, which convert organic general waste into energy and fertilizer for use in hotels. Currently, T.O.B.Y machines are installed in three hotels: Centara Life Maris Resort Jomtien Pattaya, Centara Reserve Samui, and Centara Grand Beach Resort Phuket. In 2023, a total of 17,128.48 kWh of energy was generated from biogas, resulting in the reduction of greenhouse gas emissions by approximately 59.79 tCO2e.

WATER CONSUMPTION



2023 GOAL

To reduce the intensity rate of water consumption by 8% (unit: liters per square meter) compared to the base year (2019). The actual intensity rate of water consumption decreased by 24%.

The hotel business uses water from various sources for business operations. The main source of water used is **tap water, followed by groundwater**. To prevent and reduce the risk of water shortages in surrounding areas, which may affect business operations, the Company has therefore implemented water management to reduce risks by assessing the water risk. Using the **World Resources Institute's AQUEDUCT tool**, the results of the assessment found that 13% of hotels are located in areas with an extremely high risk of water shortages.

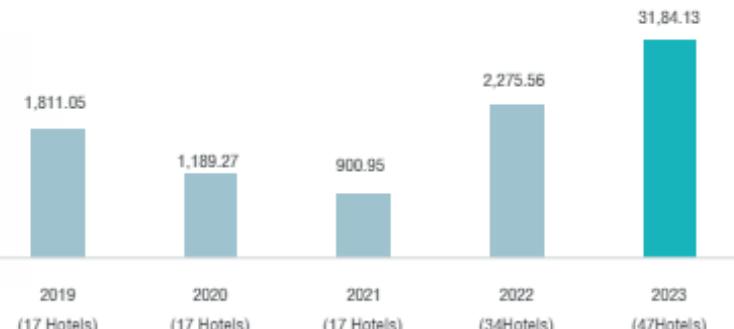
Based on the results of the water risk assessment, the Company has prepared a policy and established guidelines for more efficient water usage, such as the installation of an automatic faucet system in sinks and dual flush toilet systems in the hotel's common toilet areas to conserve water. Additionally, aerated and low-flow faucets have been installed to reduce water flow, and treated water is reused for increased efficiency in water consumption. Monthly monitoring of both used water and treated wastewater quality ensures compliance with used water quality standards and control of wastewater quality standards, aiming to prevent adverse impacts on the environment and surrounding communities. In 2023, the hotel business sourced its total water consumption from various sources, including municipal water, groundwater, tanker water, and desalinated water. The total amount of water consumption amounted to 3,184.13 megaliters, with a water intensity rate per unit area of 2,741.60 liters per square meter. This represents a 16% increase from the previous year but a 24% decrease from the base year. Meanwhile, the intensity of water consumption per occupied room was 1,291.12 liters, marking a 17% decrease from the previous year and a 19% decrease from the base year.



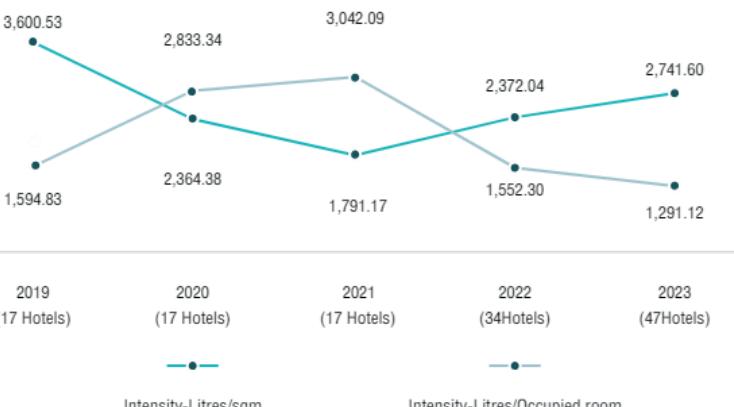
OUR PERFORMANCE



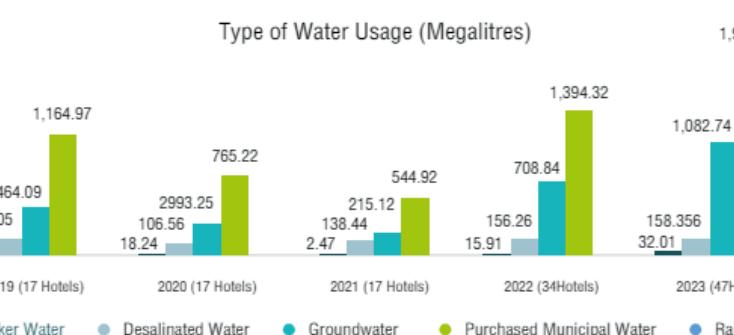
Total Water Usage (Megalitres)



Water Intensity (Litres)



Type of Water Usage (Megalitres)



Type of Water Usage (Megalitres)



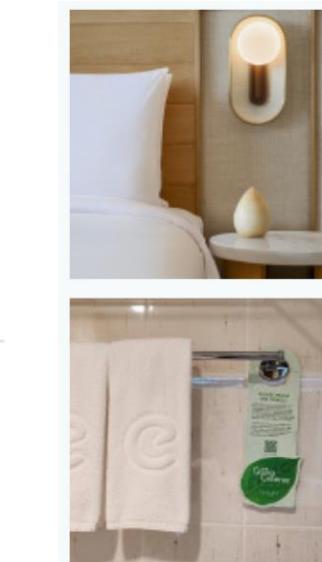
CUSTOMER HIGHLIGHT



In addition, customers are encouraged to participate in saving water usage by inviting those staying more than one night to join the My Green Day Project, allowing them to opt out of room cleaning services, and the Going Greener Project, which encourages customers to reuse bedsheets and towels to reduce water and chemical usage for cleaning. This initiative includes training to provide employees with knowledge about water conservation and ensuring consistent maximum efficiency in water usage. Furthermore, Centara Reserve Samui runs the Reserve Water Drop Project to raise awareness among customers. If the customer chooses to repeat the use of towels and not change the bedsheets, a "water drop" symbol can be placed on the bed to notify staff. Since the cooperation began in 2023, there have been 4,034,929 pieces of bedsheets and towels that did not need to be changed for customers, reducing the cost of using water and chemicals for cleaning by 23 million Baht. Through the My Green Day Project, 141,418 rooms of customers are requesting to join, which can reduce room cleaning costs by 7 million Baht. Customers will receive cash cards to exchange for drinks during their stay as the hotel's appreciation for their participation in this environmentally friendly initiative.



WASTEWATER MANAGEMENT



The Company has established guidelines for wastewater management, which involve analyzing wastewater quality on a monthly basis and preparing a report on the results of the annual wastewater treatment system inspection by certified external auditors. This is done to ensure that wastewater from the hotel business will not have an impact on the surrounding community. In 2023, data will be collected from 32 hotels that have basic wastewater treatment systems within the hotels. The amount of wastewater that has been treated before releasing into public waterways is 1,261.1 megaliters, and the total amount of treated water to be reused is 460.4 megaliters, accounting for 36% of treated wastewater. This treated wastewater is used for watering trees, lawns, and washing the floor in order to reduce the amount of water used.

WASTE MANAGEMENT



GOAL

To reduce the average rate of general waste and waste sent to landfills by 8% (unit: kilograms per occupied room) compared to the base year of 2019.

The hotel business has established guidelines for general waste and waste management to ensure proper operations for all hotels in the Centara Group. Waste is separated at its source and then sent to disposal operators for appropriate handling. It is categorized into 4 main types: general waste, food waste, hazardous waste, and recycle waste, such as various types of plastic, paper, aluminum, organic waste, and food waste. These are then transformed into fertilizer, animal feed, or converted into energy. Contractors or waste disposal service providers must possess proper licensing, or local agencies in each area are responsible for general waste disposal. This ensures that general waste and waste generated from hotel operations do not adversely impact or slightly affect the community or society in the area where the hotel operates and aims to minimize the amount of general waste sent to landfills. Recycle waste is processed to be reused.

Reviewing the knowledge on waste segregation for employees is an ongoing initiative within the Company. The aim is to raise awareness and ensure employees have a comprehensive understanding of waste segregation. Information is regularly communicated to employees, and educational materials are prepared for this purpose. Furthermore, general waste management training sessions were organized for 61 Centara Earth care Champions from the hotel to enable them to apply their knowledge and adopt correct practices in accordance with the Centara Waste Management Plan. **Additionally, the Company has communicated with suppliers to reduce single use packaging. Moreover, it is required that fruit and vegetable raw materials be deposited into separate containers provided by the hotel as part of the effort to minimize waste.**

In 2023, the total amount of general waste was 8,303.01 tons, equivalent to an average of 3.37 kilograms of general waste per occupied room, representing an 18% decrease compared to the previous year and a 23% decrease compared to the base year (2019).

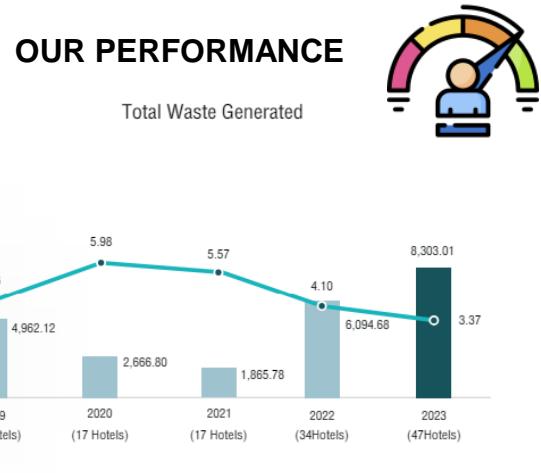
The total amount of waste sent to landfill was 5,947.28 tons, representing an average amount of waste per occupied room of 1.68 kilograms, a 46% decrease compared to the previous year, and a 29% decrease compared to the base year (2019).

The total amount of hazardous waste was 19.84 tons, representing an average amount of hazardous waste per occupied room of 0.01 kilogram. This indicates a decrease of 50% compared to the previous year. These wastes will be disposed of by external agencies that are properly authorized and can be inspected, such as municipalities or specialized hazardous waste disposal companies.



OUR PERFORMANCE

Total Waste Generated



Total Waste to Landfilled



Total Hazardous Waste



Total Recycle Waste (ton)



Total Waste (ton)

Total Waste (Kg) / Occupied room

RECYCLE WASTE



The establishment of a general waste separation policy to reduce the amount of general waste going to landfills enable the Company to separate different types of recyclable waste, including plastic, paper, cardboard, metal, glass, and used oil from hotel kitchens. Additionally, some food waste will be used as animal feed, composted, and converted into biogas, thereby decreasing the amount of general waste sent to landfills. In 2023, the total amount of recycled waste was 2,335.89 tons, with an average rate of recycled waste per occupied room of 0.95 kilograms, marking a decrease of 35% from the previous year.

In 2023, Centara Mirage Beach Resort Dubai collaborated with UNISOAP in the United Arab Emirates through Goumbook, a social enterprise organization dedicated for society and sustainability drive. A total of 118 kilograms of used soap were collected from guest rooms, cleaned, and delivered to the UNISOAP to be melted down into new soap, which would then be distributed to vulnerable groups in the local community, providing them with greater access to basic hygiene. Furthermore, the hotel has also participated in the 'Save the Butts' project with the Goumbook by collecting cigarette butts from within the hotel premises and gathering beach trash. A total of 6,250 pieces, equivalent to a weight of 1.25 kilograms, were collected to aid in reducing the problem of marine trash that adversely affects beach and sea ecosystems. This initiative also aims to raise environmental awareness among employees, customers, and members of the community. Centara Reserve Samui has collected broken glass from its usage and donated it to the Baan Maprao community at Nathon Beach, Ko Samui, to be repurposed into bricks for paving the road foundation. Totally 1,140 kilograms of glass scraps were contributed to the recycling process.

FOOD WASTE



29% of food waste is used as animal feed,

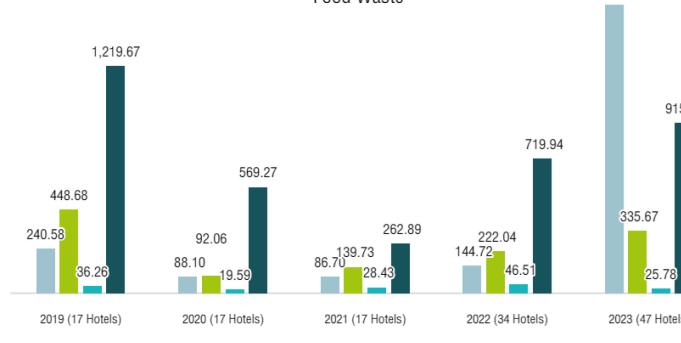
22% is utilized to make compost for use in hotels

1% is converted into biogas energy

We have been continuously implementing a project to donate food surplus to the Scholars of Sustenance (SOS) foundation Thailand since 2017. In 2023, 6 hotels participating in the project donated 25,630.16 kg, equivalent to 107,647 meals, and were able to reduce GHG by 64.84 tCO₂e



Food Waste

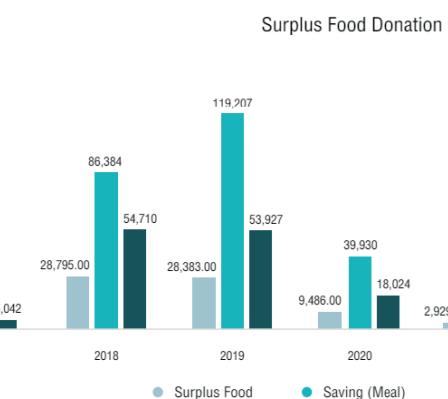


Food Waste to Landfill

Food Waste to Fertilizer

Food Waste to Energy

Food Waste to Farm feed



Surplus Food

Saving (Meal)

GHG (kgCO₂e)

The major global issue facing Maldives is climate change, global warming and subsequent sea-level rise. The small size of the islands and their low elevation above MSL makes possible impacts of it very seriously. Consequently, the country plays a prominent role in for-fronting environmental issues faced by many other small islands developing's states including the Maldives in the international area. The Maldives is, therefore, a party and signatory to various international conventions and declarations. These include;

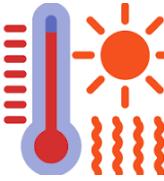
-  UN Convention on the Law of the Sea-UNCLOS (1982)
-  International Convention for the Prevention of Pollution of the Sea by Oil (1982)
-  Vienna Convention for the Protection of the Ozone Layer (1985)
-  Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
-  Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal (1989)
-  The London Amendment to the Montreal Protocol on Substance that Deplete the Ozone Layer (1990)



Identified Risk	Management Measures and Adaptation Plan	Investment/ Cost of Response
Sea level rise 	<p>Conduct a thorough assessment of the asset's vulnerability to sea-level rise, considering factors such as location, elevation, historical flood data, and projected sea-level rise scenarios. Identify critical assets, infrastructure, and operational systems that are at risk of damage or disruption due to sea-level rise.</p>	698,466,476 THB

Case study

The forthcoming property in Maldives project : Based on the physical risk assessment, it has been determined that the primary risk to our operation in Maldives is the rise in sea levels. To mitigate the risk of flooding and damage, we have constructed infrastructure at a higher elevation than the anticipated sea levels. This approach will help ensure the functionality of our operation and avoid the need for costly replacements. We completed a project feasibility study that involved analyzing the long-term business plan (spanning over 10 years) with a specific focus on sea-level rise. The minimum top level of the islands is +2.2m MSL for island 1 and 2, and +2.3m MSL for island 3 which takes into account high tide, storm surge and wave set up, sea level rise due to climate change and wave run up. Our engineering team will continuously monitoring sea-level rise trends and adaptation measure to assess effectiveness and adapt strategy as needed. Adaptive management involves learning from past experiences, adjusting plans based on new information, and remaining flexible in response to changing climate conditions.

Identified Risk	Management Measures and Adaptation Plan	Investment/ Cost of Response
Heatwave 	<p>Improve energy efficiency and climate control systems to reduce the asset's environmental footprint and operational costs by conducting energy audits to identify opportunities for energy savings and implementing low-cost measures such as sealing air leaks and upgrading lighting fixtures. Investing in renewable energy technologies such as solar panels or geothermal heat pumps to offset electricity consumption and reduce reliance on fossil fuels. Train staff on emergency procedures, communication protocols, and response to heat-related illnesses. Conduct regular assessments of guest satisfaction, employee feedback, and operational performance during heatwave events to identify areas for improvement and refinement of adaptation measures.</p>	N/A
Water stress 	<p>Identify opportunities for water conservation, efficiency improvements, and alternative water sources. Install low-flow fixtures, aerators, and water-efficient appliances in guest rooms and common areas to minimize water wastage. Implement water reuse and recycling systems for greywater, rainwater harvesting, and air conditioning condensate to supplement freshwater supplies (we are studying on this implementation) and reduce reliance on potable water sources.</p> <p>Train staff on water-saving practices, such as turning off taps when not in use, using water-efficient cleaning methods, and reporting leaks or malfunctions promptly.</p> <p>Continuously collaborate with local authorities, water utilities, and community stakeholders to explore opportunities for water sharing, water banking, or joint water management initiatives to address water scarcity challenges collectively.</p>	N/A

RISK MANAGEMENT

To enable users of general-purpose financial reports to understand an entity's processes to identify, assess, prioritize and monitor climate-related risk and opportunities, including whether and how those processes are integrated into and inform the entity's overall risk management process

Climate risk is assessed and managed through the CENTEL's annual risk assessment. CENTEL has developed an environmentally conscious risk taxonomy to classify risks according to strategic risks, financial risks, operational risks, financial risks, compliance risks and sustainability risk. It integrates climate-related issues into various categories so that CENTEL can identify different types of climate-related risks that may affect our business.

Describe the organization's processes for identifying and assessing climate-related risks.

CENTEL's climate risk identification and assessment process is integrated into our company's company-wide risk-management process. This includes identifying, assessing, and responding to climate-related risks and opportunities in our own and managed operations. Short-, medium- and long-term risk are evaluated. The Board is responsible for overseeing the Company's processes for assessing and managing risk. The Board considers our risk profile annually when reviewing our annual business plan and incorporates risk assessment into its decisions impacting the Company. In performing its oversight responsibilities, In carrying out its oversight obligations, the Board receives an annual risk assessment report from the Chief Financial Officer and Executive Vice President, Business Operations, and examines the most significant risks facing the Company.

The Company sets up a risk management process to ensure risk management procedures and methods are carried out in systematic manner and with the same standard throughout the organization in compliance with international standards as per following details:

- 1. Internal Environment** is a crucial factor in determining the direction of corporate risk management framework, which consists of many factors namely organizational culture, management's policy, personnel work guideline, work process, and information system, etc.
- 2. Objective Setting** must be consistent and aligned to ensure that various activities carried out by business units, executives, and employees will enable the organization to achieve the intended objectives. Risk management objectives must be set up in line with corporate strategies and tolerable risk level to ensure organizational risk management goals are clearly and appropriately determined.
- 3. Risk Identification** Event identification is a collection of events that may pose a risk to the objectives set up by the organization. The executives must consider all potential risks that may arise which can be identified through interviewing senior executives or management responsible for the plan or operation, and then gather critical risk issues that are of great interest or concerns for creating corporate risk profile. This profile shall include key risks that may cause the Company's operations to not be in line with the determined visions, objectives, and goals and are likely to occur in the future or causing the organization to lose business opportunities. By identifying risks, both the internal and external environment of the organization should be considered. CENTEL prioritizes climate-related risks relative to sustainability risk (environmental dimension : Risk Associated with Climate Change) under 6 business risk factors
- 4. Risk Assessment** Risk assessment is a process of analyzing, assessing, and categorizing risks that may prevent achievement of the objectives set up by a function or the organization. These risks should be assessed in terms of positive or negative impact concerning the achievement of determined objectives, and it should be assessed in a manner of comparison between the level of risk obtained from risk analysis and the level of risk that is acceptable (Risk Appetite). This is to ensure that such risks will be handled in a timely manner in the event the level of risk is not within the acceptable level. To assess risks, the likelihood of risks and their impacts are considered to prioritize the risks using a risk map and determining acceptable level of risk and key risk indicators.
- 5. Risk Response** defines a management plan to lower and maintain risks at an acceptable level. The executives may choose to implement one or a combination of risk management methods to reduce the likelihood and impact of an event to be in line with corporate risk tolerance. This includes purchasing insurance, using subcontractors or canceling extremely risk activities where risk management methods are not worth the benefits.
- 6. Control Activity** Control activity consists of operational policies and procedures that ensure the organization has implemented risk management in a concrete way by managing risks to an acceptable level and preventing it from affecting the organizational goals.
- 7. Information and Communication** Information and communication involve establishing good communication and risk information systems to ensure all executives and employees understand the risk management process and their roles and responsibilities in hope to drive effective implementation of the risk management plan. The Company publicizes risk management knowledge among the directors, executives, and all employees through training and assessment in hope to raise awareness concerning risk management and its implementation at workplace.
- 8. Monitoring** The Company has designated the management to be the risk owner and in charge of monitoring and taking steps in managing risks to an acceptable level, including reporting risk management results to the Risk Management and Corporate Governance Committee on a quarterly basis.



Risk Map

IMPACT	LIKELIHOOD				
	1	2	3	4	5
5	(5)	(10)	(15)	(20)	(25)
4	(4)	(8)	(12)	(16)	(20)
3	(3)	(6)	(9)	(12)	(15)
2	(2)	(4)	(6)	(8)	(10)
1	(1)	(2)	(3)	(4)	(5)

Risk Score	Risk Level	Interpretation
20-25 points	Extreme	Extremely high risk and must be immediately managed
10-16 points	High	High risk and must be urgently managed
6-9 points	Medium	Medium risk and must be regularly monitored
4-5 points	Low	Low risk that is currently controlled and maintained under acceptable level
1-3 points	Insignificant	Very low risk that is under acceptable level and does not require further actions

Risk types are considered in the company's climate-related risk assessment

Relevance & inclusion		Explain
Current regulation	Relevant	CENTEL is subject to a variety of laws and regulations around the international countries, including environmental laws and regulations. These can be regulation always included related to carbon pricing, energy efficiency and waste disposal. The impact of applicable laws and regulations are relevant and included in CENTEL's climate-related risk assessments. CENTEL's pertinent departments collaborate to ensure that our assets comply with regulatory requirements.
Sustainability risk	Relevant	The impact of the global economic situation has affected the Company's financial costs and expenditure, and the operating results are not as expected. This includes emerging regulations related to carbon pricing, energy efficiency and waste disposal. The impact of emerging laws and regulations are relevant and included in CENTEL's climate-related risk assessments.
Technology	Relevant	Technology risk may offer prospects for the company. Implementing technologies to track and reduce energy and water consumption, increasing the use of renewable energy, managing climate and water-related risks, reducing waste and food waste, supporting innovation ecosystem restoration initiatives, and emphasizing responsible and local sourcing are all aspects of CENTEL's sustainability strategy and initiatives.
Legal	Relevant	Legal risks are relevant and included in CENTEL's climate-related risk assessments in the context of regulatory compliance. As a company with international operations, we are subject to a wide variety of laws, regulations, and government policies and in jurisdictions of international countries. For example, relevant departments at CENTEL work with executive management of all properties to be aware of current and emerging regulations. Failure to comply with these laws could result in fines or other regulatory action.
Market	Relevant	Relevant market risks are incorporated into our climate-related risk assessment. There is a growing trend among group and business clients, meeting organizers, individual travelers, and other stakeholders to incorporate climate change concerns into their travel choices when staying at our hotels.
Reputation	Relevant	CENTEL's climate-related risk assessments consider reputational issues. Consumer travel choices may change due to sustainability. We may face higher operational costs, reduced demand, and growth limits, which could negatively impact our profits. CENTEL engages with various stakeholders (customer, employee, investors, business partners, nonprofit organizations, and communities) to understand their expectations and manage reputational risks.
Acute physical	Relevant	Climate change poses physical concerns, such as sea level fluctuations, water shortages, droughts, and natural disasters. Natural calamities like hurricanes, droughts, and wildfires can lower accommodation demand and cause property closures, negatively impacting our business. CENTEL conducted a climate scenario analysis in 2022 of our hotel and food business. The analysis ranked current and future exposure to acute hazards based on present-day and future exposure at three-time horizons: 2020 (baseline), 2030 and 2050,
Chronic physical	Relevant	Climate risks, including temperature increases and harsh weather, can challenge facilities management, particularly HVAC (Heating Ventilation and Air Conditioning) systems. Exposure to chronic risks, including temperature, precipitation, energy demand, coastal and inland flooding, drought, and wildfire, was graded by present-day exposure and future rise in 2030, and 2050. For each chronic physical risk, high-risk property sites were identified for further desk research and vulnerability assessments.

Company's processes

Enterprise Risk Assessment processes through which executive management and the Board of Directors identify the top business, emerging risks and sustainability risks facing the company. The outcomes of this procedure are presented to the Board of Directors and reviewed by executive management. Risks with high potential for effect are highlighted during annual review, and data is gathered about current and long-term mitigation efforts, challenges, and performance tracking mechanisms. Priorities for addressing the risk are established within the framework of corporate business strategy.

Prioritizing

When defining and prioritizing climate-related risks, we focus on those relevant to hotel and food businesses, as well as those associated with customer preference and our reputation. Our enterprise-wide approach to business continuity planning manages and updates acute physical climate-related risk, including severe weather occurrences. This includes risk identification, readiness, response and adaptation during the operational disruption. Our corporate risk department develops and maintains insurance coverage policies for managed properties, as well as business interruption insurance for our business in areas vulnerable to natural disasters including floods, wildfires, and tropical storms

Climate-related risk management

Evaluating the possible effects of transition and chronic physical climate-related risks on CENTEL's operations is an integral part of our governance and strategic evaluation platform for sustainability and value chain impact. The purpose of the risk management and operations team is to assess the properties owned by CENTEL for potential climate-related hazards and to devise plans, initiatives, and education to make the entire portfolio more resistant to the effects of climate change.

CASE STUDY/EXAMPLE OF HOW PROCESS IS APPLIED:

Physical Situation: The frequency and intensity of natural catastrophes are rising, which might have a negative impact on CENTEL's profits through reduced demand, operating disruptions or limitations, growth restraints, and physical asset damage.

Task: To manage these risks, it is necessary for CENTEL to understand the impacts to the company's assets, including the assets that are at risk in the short-, medium, and long-term.

Action: In 2023, CENTEL applied the Greenview portal program and World Resources Institute's AQUEDUCT tool to identify water stress area for hotel business.

Result: The results of the assessment found that 13% of hotels located in areas with an extremely high risk of water shortages. To conserve water, we have implemented a strategy and recommendations for water efficiency, such as installing automatic faucets in sinks and dual flush toilets in hotel common spaces. Aerated and low-flow faucets have been installed to reduce water flow, and treated water is reused for increased efficiency in water consumption. Monitoring used water and treated wastewater quality monthly guarantees compliance with used water quality requirements and wastewater quality control, preventing environmental and community consequences.

CASE STUDY/EXAMPLE OF HOW PROCESS IS APPLIED:

Transition Situation: CENTEL identified customer travel preferences shifting due to sustainability related concerns as a potential risk to the company.

Task: To address the growing stakeholder interest around sustainability, CENTEL must continue to execute on the company's sustainability platform, while also implementing additional targets where appropriate to address emerging issues or concerns.

Action: In 2021, CENTEL announces the Net Zero Target by 2050, committing to set a target to reach net-zero in our operation greenhouse gas (GHG) emissions by no later than 2050, in line with the criteria and recommendations of the Paris Agreement.

Result: As a result, CENTEL expects to implement initiatives that may include increased use of renewable energy, building electrification to maximize renewable electricity (for new properties), continued modifications to design standards so buildings are designed to be more efficient, and the installation of automation systems and energy efficiency upgrades. In addition to the company's goal to provide further visibility of the carbon footprint and environmental impact of their travel with CENTEL, the company expects to provide customers enhanced visibility on existing sustainability efforts such as solid waste, water usage, energy efficiency and food waste reduction.



Identification Risk

Identification and screening of climate-related risks and opportunities in the areas of physical risks, transition risks and opportunities

Prioritization Risk

Evaluate the identified risks and opportunities in terms of their level of impact and likelihood, including both financial and non-financial impact. Subsequently, prioritize and analyze those materials

Centralized Enterprise Risk/Opportunity Management Process

Report the prioritized risks and opportunities to relevant executive management

Relevant functions

Executive management

Board of Directors

RISK GOVERNANCE

CENTEL continues and expands the risk management to all businesses by implementing the CENTEL Way of Conduct

LEADERSHIP

The Board of Directors and Executives place great importance on the subject of risk management by continuously and closely monitor the process of risk management.

RISK STRUCTURE

Risk management structure covers the whole organization at all levels (Relevant functions, executive management and Board of Director).

RISK TECHNIQUE

The international standards of COSO, as well as the risk management tools, such as risk map, Key Risk Indicators (KRI), Value at Risk (VaR) and Early Warming System (EWS), are applied to the CENTEL's risk management.

RISK COMMUNICATION

CENTEL's internal and external communications are processed continuously in order to promote risk management awareness.

RISK MANAGEMENT KNOWLEDGE

Strengthen risk management knowledge at all levels through e-learning programs and Knowledge Management System.

MATRIC AND TARGET

To enable users of general-purpose financial reports to understand an entity's performance in relation to its climate-related risks and opportunities, including progress towards any climate-related targets it has set, and any targets it is required to meet by law or regulation.

CENTEL track progress towards the GHG targets and key performance indicators in different time horizons for the focused climate topics of the Company.

CENTEL believes that setting annual performance targets as its interim progress is supportive to the success of our 2029 targets.

CLIMATE-RELATED METRIC AND TARGET

CENTEL has set targets for our business to raise its ambition level. In addition to the target to reduce GHG emissions, CENTEL also has established target for the other climate-related metrics and targets include utilization of renewable energy, initiative to mitigate water usage, wastewater management, waste generation and energy management

GHG EMISSION REDUCTION TARGET

CENTEL has committed to establish net zero target (cover GHG Scope 1 and 2 emissions) for the organization in the long-term and to further reduce 20% Scope 1 and 2 GHG emissions in the near-term by 2029. CENTEL has been predominantly reducing emissions by incorporating biogas produced from organic general waste for the energy used in the hotels and installing solar panels on properties rooftops. Additional information regarding the roadmap for achieving near-term and long-term objectives will be provided by CENTEL in the upcoming reporting year. The Sustainability Report 2023 of CENTEL contains information on emission reduction initiatives for the reporting year.



20%

Reduction of Scope 1 and 2 GHG emissions, compared to 2019 base year by 2030



**Net
Zero**

Of Scope 1 and 2 GHG emissions by 2050, compared to 2019 base year



>50%

Renewable energy By 2028
>50% of Owned hotel

GHG EMISSION METRIC : HOTEL BUSINESS



Performance of GHG Metrics	Unit	2019 (17 hotels)	2020 (17 hotels)	2021 (17 hotels)	2022 (17 hotels)	2023 (47 hotels)
Scope 1 GHG emissions	MT CO2e	17,384.49	9,214.31	9,912.75	14,793.45	17,046.90
Scope 2 emissions (location-based)	MT CO2e	39,873.19	24,572.99	18,523.35	50,372.26	67,121.41
Scope 2 emission (market-based)	MT CO2e	-	-	-	-	64,656.93
GHG Scope 1 and Scope 2 emissions	MT CO2e	57,257.68	33,787.30	28,436.10	65,165.71	84,168.31
GHG emissions intensity (Scope 1+2) per occupied room	MT CO2e/ occupied room	0.05	0.08	0.09	0.04	0.03
GHG emissions intensity (Scope 1+2) per square meter	MT CO2e/ sqm.	0.11	0.07	0.05	0.07	0.08
GHG Scope 3 emission	MT CO2e	7,727.52	4,169.58	3,155.29	10,735.22	16,497.32
Category 1 : Purchased Goods and Services (only Water Supply)	MT CO2e	1,439.42	945.23	716.08	1,808.62	13,797.69
Category 5 : Waste Generated in Operations	MT CO2e	6,178.72	3,205.10	2,415.77	8,845.44	2,556.04
Category 6 :Business Travel (Air Transportation)	MT CO2e	109.38	19.25	23.44	81.16	143.59
Total GHG emission (Scope 1+2+3)	MT CO2e	64,985.20	37,011.65	30,875.31	74,092.31	100,665.63

GHG EMISSION METRIC : FOOD BUSINESS



Performance of GHG Metrics	Unit	2019 (17 hotels)	2020 (17 hotels)	2021 (17 hotels)	2022 (17 hotels)	2023 (47 hotels)
Scope 1 GHG emissions	MT CO2e	788.77	685.53	721.50	948.95	608.97
Scope 2 emissions (location-based)	MT CO2e	46,284.57	41,853.35	39,949.31	46,657.16	45,234.64
Scope 2 emission (market-based)	MT CO2e	-	-	-	-	-
GHG Scope 1 and Scope 2 emissions	MT CO2e	47,073.34	42,538.88	40,670.81	47,606.11	45,843.61
GHG Scope 3 emission	MT CO2e	14,509.44	13,012.09	12,706.39	13,709.02	15,114.07
Category 1 : Purchased Goods and Services (only Water Supply)	MT CO2e	705.26	600.56	515.9	782.63	783.43
Category 5 : Waste Generated in Operations	MT CO2e	13,840	12,412	12,190	12,926	14,331
Total GHG emission (Scope 1+2+3) intensity per revenue	MT CO2e/ million THB	5.01	5.48	5.74	5.25	4.83
Total GHG emission (Scope 1+2+3) intensity per square meter	MT CO2e/ sqm.	1.50	2.03	2.17	2.27	2.09

METHODOLOGY

Reporting Coverage	Data Collection	Emission Factor	Third-party Verification
<p>The information contained in this report is derived from the fiscal year 2023, covering the period of January 2023 to December 2023, and focuses on CENTEL Group's businesses. Data were collected from 37 sites in Thailand and 10 sites in international countries of the hotel business and 1 food business</p> <p>GHG Scope 1 : Stationary combustion, Mobile Combustion and Fugitive emission</p> <p>GHG Scope 2 : Purchased electricity where both location-based and market-based instrument methodologies are used</p> <p>GHG Scope 3 : Beginning in FY2019, CENTEL began reporting other indirect (Scope 3) GHG emissions in accordance with the reporting requirements of the GHG Protocol.</p>	<p>CENTEL used its own environmental data gathering from Greenview platform to standardize data collection and processing. This tool track energy, emissions, water, wastewater, waste and environmental compliance.</p> <p>GHG Scope 1 : Stationary combustion, Mobile Combustion and Fugitive emission</p> <p>GHG Scope 2 : Purchased electricity where both location-based and market-based instrument methodologies are used</p> <p>GHG Scope 3 : Beginning in FY2019, CENTEL began reporting other indirect (Scope 3) GHG emissions in accordance with the reporting requirements of the GHG Protocol.</p>	<p>CENTEL employs emission factors from the Greenview platform which adhere to rigorous third-party verification standards such as the GHG Protocol, ISO 14064 and the Science-based Targets initiative (SBTi). As part of our sustainability reporting procedure, our GHG data is subject to annual third-party assurance (refer to pages 190 and 230-231 of CENTEL's Annual Report 2023)</p>	<p>CENTEL has finalized its evaluation of Scope 1,2 and 3 (Category 1,5 and 6) emissions, which has also been independently verified by a third party. As well as climate-related metrics on energy consumption, energy intensity, water consumption, waste generated, and waste diverted from disposal as per GRI standards 2021.</p> <p>In the future, we intends to cover Scope 3 boundary. The assurance report is located on pages 230-232 of CENTEL's Annual Report 2023.</p>

OTHER CLIMATE-RELATED METRICS

Transition Risk and Opportunity	2019 (17 hotels)	2020 (17 hotels)	2021 (17 hotels)	2022 (17 hotels)	2023 (47 hotels)
Energy (20% reduction by 2030 in the unit of kWh/occupied room)					
Energy Usage : kWh	153,711,880.14	87,562,357.69	79,014,585.43	174,457,455.98	243,231,593.63
Intensity : kWh/Occupied room					
136.36	208.61	266.80	119.01	98.63	
Water Usage (20% reduction by 2030 in the unit of liter/occupied room)					
Consumption: Megaliters	1,811.05	1,189.27	900.95	2,275.56	3,184.13
Intensity: Liters/Occupied room	1,594.83	2,833.34	3,042.09	1,552.30	1,291.12
Waste to landfill (20% reduction by 2030 in the unit of kg/occupied room)					
Waste to landfill : kg	2,663.24	1,552.83	1,210.25	4,217.84	5,947.28
Intensity : Kg/Occupied room	3.1	3.95	4.34	3.34	2.42

CLIMATE-RELATED RISK AND OPPORTUNITY METRICS AND TARGETS

Transition Risk and Opportunity	2019 (17 hotels)	2020 (17 hotels)	2021 (17 hotels)	2022 (17 hotels)	2023 (47 hotels)
Low Carbon Products					
Revenue from low carbon products (% of total revenue)					
Hotel business : kWh	26,507.48	177,656.90	394,252	512,671	544,458.78
Renewable energy generations (kWh) : we do not have the target during this reporting year					
Food business : kWh	-	-	-	314,842.3	312,133.57
Total kWh	26,507.48	177,656.90	394,252	827,513.3	856,592.35
Biogas generations (kWh) : we do not have the target during in this reporting year					
Hotel business : kWh	10,244.26	5,534.33	10,137.34	38,570.95	17,128.48

CLIMATE PERFORMANCE METRICS WHICH INCORPORATE INTO REMUNERATION

Entitled to Incentive	Type of Incentive	Type	Activity Incentivized	Description
Chief Executive Officer (CEO)	Monetary reward ¹	<ul style="list-style-type: none"> Bonus-% of salary Salary increase 	<ul style="list-style-type: none"> Climate-related Management 	Outcomes of ESG operations aligned with GHG emission reduction and Net-zero target. The Board of Directors evaluate the performance of the CEO annually which is based on performance outcome in the present year, coupled with the consideration on performance outcome aligning with short-, and long-term goals and plans.
Executive Management	Monetary reward ¹	<ul style="list-style-type: none"> Bonus-% of salary Salary increase 	<ul style="list-style-type: none"> Climate-related Management 	Management performance appraisals and KPIs are directly correlated with the achievement of climate-related management and targets. Achievement performance in energy, electricity and water reduction of annual, short-term and long-term emissions of environmental dimension target.
Sustainability Management Team	Monetary reward ¹	<ul style="list-style-type: none"> Bonus-% of salary Salary increase 	<ul style="list-style-type: none"> GHG performance (emission reduction) ESG development 	Achievement of sustainability-related goals, including achievement of the corporate greenhouse gas (GHG) reduction target, is typically tied to KPIs for sustainability team which include %reduction in GHG emissions or the improvement of climate-related scoring which we set for each year or improvement in employee engagement on climate-related issues.
Process Operation Team	Monetary reward ¹	<ul style="list-style-type: none"> Bonus-% of salary Salary increase 	<ul style="list-style-type: none"> Electricity, energy, waste, and water reduction GHG emission reduction (emission reduction) 	The environmental dimensions actions reflect the sustainability development performance through, for example, energy efficiency improvement. Process operation teams have target in maintain quality, follow-up of energy consumptions and action plans for reduction. Using the in-house water and energy management application, they can track their progress toward their goals and .
Property General Manager	Monetary reward ¹	<ul style="list-style-type: none"> Bonus-% of salary Salary increase 	<ul style="list-style-type: none"> Electricity, energy, waste, and water reduction GHG performance (emission reduction) 	Environmental green award and innovation award are provided every years subsequently the annual review performance process based on GHG performance of each property and environmental dimension
Centara EarthCare Champion Team/Quality Manager	Non-monetary reward	<ul style="list-style-type: none"> Employee of the month Employee of the year 	<ul style="list-style-type: none"> Environmental data collection 	Drive the sustainability projects and be a key person to report the environment statistic to property general manager

Note¹ : The incentive structure is designed to reward the above relevant teams based on their collective performance in achieving the established KPIs.

The achievement of the corporate KPI is linked to monetary rewards such as bonuses and salary increase.

The approximate monetary reward is contingent upon the total revenue of each reporting year, which is approximately 2-5% of total revenue.

Carbon price

CENTEL did not define the internal carbon price figure in 2023 reporting year

Carbon pricing is one of the most effective instruments available to CENTEL for the assessment and management of the cost of climate change within CENTEL business model.



To date, a shadow carbon price has not been employed to the potential impact of new regulated carbon pricing on hotel operating costs under various price scenarios, as well as the business case for investing in energy efficiency and renewable energy measures.

CENTEL has been acknowledged that incorporation of internal carbon price into decision making process will be better equipped to manage the low carbon transition. We will be working on the systematic approach to define the internal carbon price of our business in the future.

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