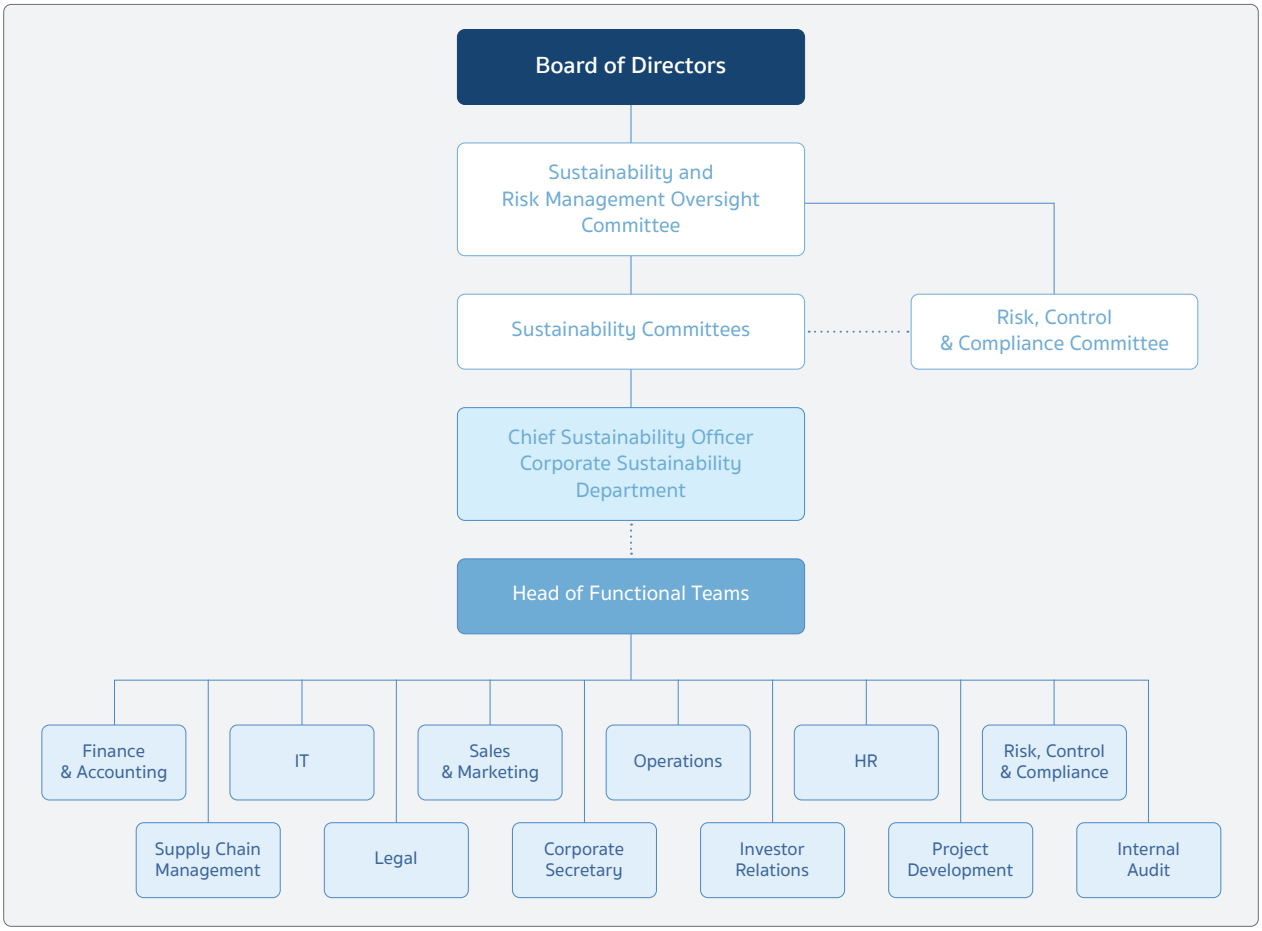
TCFD Report

Climate change is a global phenomenon that negatively impact all life on the Earth, and mainly contributed from man-made activities. In 2022, we further deploy the Task Force on Climate-related Financial Disclosures (TCFD) recommendations to the enterprise risk management by outlining quantitative risks and opportunities. Financial impacts of vulnerable areas are estimated by the assessment of potential physical risks with different scenarios of RCP8.5 and RCP2.6. For transition risks, financial impacts of carbon prices and electricity prices are quantified in potentially impacted areas in two scenarios: business as usual and net-zero emission. Both assessments are presented in short (present - 2030), medium (present - 2040), and long (present - 2050) terms.

Four elements of recommended Climate-related Financial Disclosures:

Governance	Strategy	Risk Management	Metrics and Targets
The organization's governance around climate-related risks and opportunities	The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	How the organization identifies, assesses, and manages climate-related risks	The metrics and targets used to assess and manage relevant climate-related risks and opportunities

Governance



Climate-related risks and opportunities are managed by the Risk, Control & Compliance Committee, in cooperation with the Corporate Sustainability Department, and reporting to the Sustainability and Risk Management Oversight Committee. In November 2022, the Board of Directors considered and approved the establishment of Sustainability and Risk Management Oversight Committee to oversee the Sustainability Committee and the Risk, Control & Compliance Committee. The committee consists of a minimum of three members of Board of Directors, with the role to assist the Board in its oversight of the company's strategic activities, policies and practices for sustainability and management of key risks, including strategic, operational risks, and climate-related risks, as well as the guidelines, policies, and processes for monitoring and mitigating such risks. This includes identifying opportunities that may arise from such risks.

Identified climate-related risks and opportunities are translated into company's sustainability strategy, goals, and programs. Our efforts to embed sustainability in all business units receive strong support from the Board of Directors and senior management. The Board endorses Minor long-term sustainability goals and rolling 3-Year Sustainability Strategy, which is presented annually, and reviews progress quarterly.

Minor's Sustainability Committee was established to oversee development and implementation of sustainability strategy. The Committee is attended by C-Suite Officers and senior management of relevant functions from all business groups, and the Corporate Sustainability Department and meets quarterly to discuss implementation plans, review progress towards sustainability goals, and provide necessary resources. The Corporate Sustainability Department is responsible for developing, updating, and executing company's sustainability strategy. The team consults with senior management of all business units and works closely with all business units to embed sustainability and ensure our sustainability initiatives and practices are aligned with company's overall strategic direction. The team also facilitates by monitoring and communicating progress of our sustainability initiatives and practices.

The Risk, Control & Compliance Committee meets at least quarterly, and is comprised of the following C-Suite Officers and executives: Corporate Chief Financial Officer (Chairman), Chief Commercial Officer and General Counsel (Vice-Chairman), Vice President of Risk, Control & Compliance (Secretary), Corporate Chief Information Officer, Corporate Chief People Officer, Chief Financial Officer of each business group, Chief Operating Officer of each business group, Vice President of Finance – Minor Lifestyle, Senior Vice President Operations, Asia – Minor Hotels, and Chief Sustainability Officer. The Committee has the responsibility for reviewing overall implementation of risk management across the group to assure that key risks are effectively identified and managed. This includes climate-related risks and opportunities. The CEO's and CFO's of each business units are responsible for identifying risks, monitoring, and implementing risk management measures. The business units are risk owners and have primary responsibility to promote risk awareness within their operations and effectively managing risks on a day-to-day basis. Furthermore, the business units are also responsible for identifying their own risk appetite and risk tolerant within their operations and aligning with the broader risk appetite cascaded down to them.

Details of Sustainability Governance Structure are presented on Minor's website under Sustainability Governance Structure.

Strategy

We identified climate-related risk drivers through all business units' activities with the assessment boundary covering 25 countries under Minor's operational control. All identified climate-related risk drivers were analyzed for the short term (present - 2030), medium term (present - 2040), and long term (present - 2050) timeframes. Potential impacts and opportunities that may affect our business operation along the value chain, upstream and downstream, were identified. Metrics and targets were developed to maintain resilience of business. We proactively mitigate the downside risks while maintaining the ability to act on opportunities for the continual improvement.

Physical & Transition Risk Identification and Assessment

We undertook exposure screening to identify key physical and transition climate-related risks to Minor's operations. We develop scenario analysis by applying qualitative and quantitative methods for each climate-related risk as follows:

Physical risk

- Business as usual - BAU: A high emissions (IPCC RCP8.5) scenario under a worst-case business as usual scenario where physical climate risks become increasingly prominent
- Low future carbon: A low emissions (IPCC RCP2.6) scenario to understand the lower limit of physical impacts of climate change to the business in the future where the transition to a low carbon economy is prioritized

Transition risk

- Business as usual - BAU: Stated policy scenario (IEA: STEPS) reflects current policy settings
- Low future carbon: Net-zero emission scenario (IEA: NZE) reflects the implementation of high ambition climate-related policy to achieve net-zero target

Physical risk

Climate impact driver	Indicator	Scenario	Potential impacts and opportunities	Responses and opportunities to develop resilience
Inland flood	• Rainfall • The annual expected impact of flood • Elevation	RCP2.6 RCP8.5	• Interrupted or suspended transportation for customers and employees to reach hotels/ restaurants/ retail shops and offices • Decrease or unstable flows of business due to booking cancellation and diversion from affected area. • Interrupted or suspended transportation and logistics of goods and services • Supply chain disruption resulting in supply shortages and higher costs • Company operations affected by the shutdown of online server • Higher operating costs to navigate through climate impact disruptions events • Damage of infrastructures and facilities resulting in business interruption • Increase capital expenditure for restoration, maintenance, and insurance • Forced higher cost in restoration of biodiversity nearby our premises • Health impact from exposure affected areas e.g. diseases from prolonged flooding, physical harm from storms to employees and customers • Increased customers complaint and may result in negative reputation if the company cannot manage the situation effectively • Opportunity to encourage customers to be part of our low-carbon activities and biodiversity conservations • Opportunity to engage with local communities to mitigate the climate change impact and elevate brand image/ reputation	• Conduct training and create a crisis management plan to prepare for harsh situation and to limit the consequences of an emergency incidents from getting out of control • Take a proactive approach to handling potential crisis by developing a business continuity plan (BCP) and business continuity management (BCM) system which cover major operations and the supply chain • Prepare backup plan for freshwater and electricity in case of water and electricity shortage • Prepare back up plan for supply shortages • Review vulnerability areas and assets in each climate impact driver and implement adaptive prevention and mitigation plans • Reinforce infrastructure strength in the areas most likely impacted e.g. roofs, flood barriers (temporary/ permanent) • Install water drainage/ increase elevation • Install and improve lightning protection systems to the identified vulnerable areas • Ensure health and safety measures are in place • Engage with local communities to mitigate the climate impact and elevate company reputation • Establish conservation measurement methodology to ensure positive impact and engage customers and communities in conservation activities
Tropical cyclones and windstorms	• The annual expected impact of tropical cyclone			
Lightning	• Mean surface temperature change • Lightning density			
Coastal flood	• Sea level rise • Elevation			

Transition risk

Climate impact driver	Indicator	Scenario	Potential impacts and opportunities	Responses and opportunities to develop resilience
Policy and regulation	• Operating cost • Investment cost • Electricity consumption cost • Carbon price • Cost saving from government monetary incentive	IEA: STEPS IEA: NZE	• Higher operating and investment cost due to the deployment of low-carbon equipment/ tools/ materials in compliance to regulations • Threats to securing license-to-operate with remaining high-carbon activities • Carbon tax impacts cost of goods or services resulting in business having either lower margin or having to increase price which may cause customer complaints or sales decrease • Opportunity to pay lower electricity cost as the trend of electricity price in STEP scenario will gradually decrease overtime. In NZE scenario, there will be dramatic decrease in electricity price due to the increase in the proportion of renewable energy in electricity generation. • Opportunity to utilize government's tax incentives to further drive eco-friendly initiatives • Opportunity for trial and error in developed markets and deploy to developing markets - thereby reducing implementation time and cost	• Apply Net-zero Standard Science-Based Targets • Deploy 4R – reuse, reduce, recycle, and replace approach • Implement company's risk adaptation plan to withstand potential impact in identified vulnerable areas • Implement energy efficiency programs through switching to low carbon technology e.g. installation of new air conditioner system for more energy saving and use of lower GHG emission refrigerant • Responsibly source and replace existing raw materials and products where applicable, with more environmental-friendly options • Increase/ scale up the renewable energy consumption in operation sites where applicable • Study on lower emission fuel to substitute the use of diesel oil in electricity generators • Educate, audit, and monitor sustainability performance of identified high-risk suppliers to assure that their operation are align with local regulations • Launch low-carbon or healthy products and services • Engage and encourage customers to be part of our low-carbon activities • Partner with skilled conservation agencies to create long-term conservation initiatives and engage customers and communities in conservation activities • Engage with local communities to mitigate the climate impact and elevate company reputation • Establish conservation measurement methodology to ensure positive impact and ability to offset residual carbon • Engage with financial institutions and investors to communicate the sustainability initiatives
Market and technology	• Operating cost • Investment cost • Carbon price • Electricity consumption cost • Number or frequency of customers complaints or feedback • Revenue loss from slow response to market • Revenue generation from low-carbon products and services • Cost saving from implementing low carbon activities		• Increased demand from stakeholders, particularly customers, investors, and creditors, for energy-efficient and lower-carbon operations, products, and services • Higher operating and material costs of low-carbon products and services • Higher investment in technology platform in response to stakeholders' low-carbon demand • Opportunity to launch low-carbon products and services • Opportunity to lower operation costs from resource management efficiency • Opportunity to improve efficiency and reduce costs by utilizing new technology to provide in-depth analysis • Opportunity to access better financing sources and cost	
Reputation	• Number of complaints • Result from social listening • Revenue loss		• Risk of negative reputation if the company cannot keep up with regulations and market requirements for low carbon operations. • Risk of loss of trust and confidence in management to make commitment and transform to low-carbon economy • Opportunity to enhance reputation and brand value	

Risk Management

Climate-related risks are considered as one of the key sustainability risks and is included as one of the enterprise risk factors. To maintain and enhance the enterprise risk management (ERM) framework, the Board of Directors considered and approved the establishment of Sustainability and Risk Management Oversight Committee to oversee the Sustainability Committee and the Risk, Control & Compliance Committee, enabling the integration of the TCFD framework into the existing ERM framework. This approach will facilitate the identification and assessment of risks, risk responses, tracking of risks and reporting of risks, as well as the identification of opportunities, that are linked to the Company's sustainable strategies.

The Risk, Control and Compliance function will continue to collaborate with Corporate Sustainability to further refine risk management procedures to include elements from the TCFD recommendations. This includes risk assessment guidelines to quantify the potential impact, to facilitate the embedment of climate-related risks into our enterprise risk management and support the sustainability of our business and the environment. The team also works closely with finance functions to integrate climate-related risks and opportunities in financial planning.

At the corporate level, to reduce our impact to the environment and manage our climate-related risk and opportunities exposures, we develop proactive initiatives to preempt potential climate-related risks while exploring business opportunities. We commit to becoming Net-zero Carbon Organization by 2050 and to set near-term and net-zero science-based targets. While we progress on setting science-based targets for approval, we have set mid-term environmental goals to reduce energy, water, and carbon emission intensities and reduce the use of single-use plastic. We have also set goal to enhance long-term biodiversity conservation by our nature-based hotels.

Climate change adaptation has also been incorporated into our risk management process. For new properties, the investment and project development/ technical services teams assess physical risks based on the property's location. If the location is deemed to be high risk, local consultants are engaged to further assess the potential risks and develop mitigation and adaptation measures to be incorporated into the investment valuation, design and construction of the property. For example, local consultants were engaged to design coastal erosions mitigation measures for our properties in the Maldives and land erosion from torrential rain in Bali and Phuket. For existing properties, mitigation and adaption measures are being implemented based on properties' risk identification. For example, properties which are prone to lighting strikes are installing lighting protection systems, while properties in water stressed areas are investing in water efficiency technologies to reduce water consumption.

In our upstream value chain, Minor continues its efforts in ensuring food safety and food quality of products and/ or services as well as compliances on environmental, occupational health and safety, and human rights (sustainability) of our upstream suppliers. We have incorporated the assessment and monitoring of our critical suppliers' sustainability into our sustainability goals.

In Minor's downstream value chain, we established a sustainability goal: "All Minor Food brands offer at least one new sustainable or healthy menu by 2024" in response to customers' increased awareness and consciousness in health and environmental issues.

Scenario analysis and results

Physical and transition risk scenarios are analyzed for the short term (present - 2030), medium term (present - 2040), and long term (present - 2050) timeframes to assess vulnerable area in the countries where Minor has footprint. Financial impacts of vulnerable areas are estimated by the assessment of potential physical risks with different scenarios of RCP8.5 and RCP2.6. For transition risks, we used the forecast carbon and electricity price data from International Energy Agency (IEA). Financial impacts of carbon prices and electricity prices are quantified in potentially impacted areas in two scenarios: business as usual and net-zero emission.

Physical risk scenarios

Physical risk scenario	Description	2046 - 2065 temperature change
RCP2.6	• The mean radiative forcing at the earth's surface is 2.6 W/m^2 • High effort on the implementation of decarbonization	0.4 to 1.6 °C
RCP8.5	• The mean radiative forcing at the earth's surface is 8.5 W/m^2 • Low effort on the implementation of decarbonization	1.4 to 2.6 °C

Transition risk scenarios

Transition risk scenario	Description	Objectives
Net-zero Emissions Scenario (NZE)	A scenario which sets out a pathway for the global energy sector to achieve net-zero CO_2 emissions by 2050. It is not dependent on emissions reductions from outside the energy sector to achieve its objectives. Universal access to electricity and clean cooking are achieved by 2030.	To show what is needed across the main sectors by various stakeholders, and by when, for the world to achieve net-zero energy-related and industrial process CO_2 emissions by 2050 while meeting other energy-related sustainable development goals such as universal energy access.
Stated Policies (STEPS)	A scenario which reflects current policy settings based on a sector-by-sector and country-by-country assessment of the specific policies that are in place, as well as those that have been announced by governments around the world.	To provide a benchmark for assessing the potential achievements (and limitations) of recent developments in energy and climate policy.

We performed scenario analysis from the assessment boundary of 25 countries and identified the vulnerable area and non-vulnerable area that have higher chance to face impact from climate-related risk (NVAHR) in below table:

Minor international[1]	Physical risks			Transition risks		
	Short term (Present - 2030)	Medium term (Present - 2040)	Long term (Present - 2050)	Short term (Present - 2030)	Medium term (Present - 2040)	Long term (Present - 2050)
Australia						
Botswana						
Brazil						
Cambodia						
China						
India						
Indonesia						
Laos						
Lesotho						
Malaysia						
Maldives[2]						
Mauritius						
Mozambique						
Namibia						
New Zealand						
Oman						
Qatar						
Seychelles[3]						
South Korea						
Sri Lanka						
Thailand						
Tunisia						
United Arab Emirates						
Vietnam						
Zambia						

No impact, lower impact
Low adverse impact
Medium adverse impact
High adverse impact
Very high adverse impact

Remarks:
(1) Minor Hotels covers 25 countries, Minor Food covers 2 countries (Australia and Thailand), and Minor Lifestyles covers only Thailand
(2) No GHG scope 2 emission data due to utilization of self-generated electricity – Maldives
(3) No electricity price data – Seychelles

The results of climate risk assessment under different climate scenarios enable us to identify the areas with vulnerable areas and non-vulnerable areas that have higher chance to face impact from climate-related risk (NVAHR). Climate impact drivers from physical risks were assessed by the following approach and tools:

Climate impact driver	Vulnerable area	Approach	Tools
Inland flood	**Vulnerable Area** Cambodia China Laos South Korea Thailand Vietnam **NVAHR(1)** India UAE Oman Qatar Zambia	We used data from the Climate Impact Explorer developed by the Climate Analytics. Annual expected damage from the flood was selected as the indicator to project the future impact data under RCP2.6 and 8.5 for the countries under Minor's operational control	• Climate analytic tool – Impact Explorer Data • Aqueduct water risk atlas
Tropical cyclone and windstorm	**Vulnerable Area** Cambodia China Laos South Korea Thailand Vietnam **NVAHR(1)** India UAE Oman Qatar Zambia	We used data from the Climate Impact Explorer developed by Climate Analytics. Annual expected damage from tropical cyclones was selected as the indicator to project the future impact data under RCP2.6 and 8.5 for the countries under Minor's operational control	• Climate analytic tool – Impact Explorer Data
Lightning	**Vulnerable Area** Brazil Cambodia Indonesia Laos Lesotho Malaysia Sri Lanka Thailand Vietnam **NVAHR(1)** Australia Zambia	We used the country's average lightning density data from VAISALA Lightning Statistic Interactive Map (2018 - 2022) as a baseline. For the future projection, according to Romps et al. 2014, "When this proxy is applied to 11 climate models, CONUS lightning strikes are predicted to increase 12 ± 5% per degree Celsius of global warming and about 50% over this century". Since we know the change in temperature under RCP2.6 and 8.5 from the data developed by the Climate Analytic Tool website, we calculated the new lightning density for each country under RCP2.6 and 8.5 in three different time frames	• Climate analytic tool – impact explorer data • Literature from the University of California • Vaisala Xweather

Remark:
(1) NVAHR - Non-vulnerable area that have higher chance to face impact from climate-related risk in the future

Climate impact driver	Vulnerable area	Approach	Tools
Coastal flood	**Vulnerable area in RCP2.6** Brazil China Indonesia Malaysia Maldives Mauritius Mozambique Oman Qatar Seychelles Sri Lanka Tunisia Vietnam Thailand UAE **Vulnerable area in RCP8.5** China Indonesia Malaysia Maldives Mozambique Oman Qatar Tunisia Vietnam Thailand UAE	We used the Climate Central website to analyze the risk of coastal flooding in each area under Minor's operational control. Climate Central's sea level rise and coastal flood maps are based on leading peer-reviewed science journals. These maps are regarded as screening tools to identify places that may require deeper investigation of risk as these were derived through big datasets which always include some errors. Our locations have been plotted on the coastal flood map to analyze the risk under two warming scenarios RCP2.6 and 8.5 in 2050.	• Climate central coastal flood map

We have identified the major transition risks influenced by the change in national climate-related policy and regulation. The two risk drivers which are the increasing carbon price and the change in electricity price have been considered to run impact analysis. Climate impact drivers from transition risks were assessed by the following approach and tools:

Climate Impact Driver	Vulnerable Area	Approach	Tools
Policy and regulation - Increasing Carbon price	Implemented carbon pricing China Indonesia New Zealand South Korea High carbon tax country in the future Australia Brazil India	The assessment was conducted using input dataset from The Global Energy and Climate (GEC) Model developed by International Energy Agency (IEA) – the World Energy Outlook (WEO) and the Energy Technology Perspective (ETP). The main objective is to assess the medium to long-term outlooks. The key input includes selected data for two modelled scenarios (STEPS and NZE) while the estimation of GHG emission scope 1 projection was based on our GHG intensity	• IEA data
Policy and regulation - Electricity price	Country with higher cost of electricity generation price Australia New Zealand South Korea	The change of electricity price was estimated using data from International Energy Agency (2022), Global Energy and Climate Model Documentation 2022, IEA, Paris and IEA's World Energy Outlook 2022. While the base electricity price and emission factors are from GlobalPetrolPrice.com (June 2022 data) and UNFCCC's Harmonized IFI Default Grid Factors 2021 v3.2. The estimated electricity consumption was calculated using our GHG scope 2 intensity	• IEA data • UNFCCC emission factor • Global petrol price data
Market and technology	All operated countries	Identify external pressures/ complaints from key stakeholders through qualitative analysis such as investors, customers, etc. External pressures/ complaints can be described as the growing expectations for company's responsibility in climate related issues, internal renewable energy consumption, phasing out the use of fossil fuel and offsetting GHG emission from our inventory	• Other online open sources
Reputation	All operated countries		

Metrics and Targets

Management of climate-related risks and opportunities at Minor:

Commitment to becoming Net-zero Carbon Organization by 2050 and to set near-term and net-zero science-based targets

- Consolidate carbon inventory of scope 1, scope 2 and scope 3
- Apply Net-zero Standard Science Based Targets
- Deploy 4R – Reuse, Reduce, Recycle, and Replace approach
- Offset residual carbon
- Submit targets for approval by the Science Based Targets initiative (SBTi)

100% of Nature-based hotels have at least one long-term conservation initiative by 2023

- Partner with skilled conservation agencies to create long-term conservation initiatives with focus on elephants, turtles, wildlife, and their habitats.
- Establish conservation measurement methodology to ensure positive impact and ability to offset residual carbon
- Invite customers and communities to be part of environmental advocates through engagement and education

100% of Thailand and Australia local critical suppliers assessed on sustainability risk by 2023
100% of identified high-risk suppliers audited and developed each year

- Educate and assess food and packaging and project suppliers on sustainability: Environment, Occupational Health and Safety, and Human Rights
- Audit and monitor sustainability performance of identified high-risk suppliers to ensure their continual improvement

By 2024, all Minor Food brands offer at least one new sustainable or healthy menu

- Work closely with suppliers to develop sustainable or healthy menu in response to customers' increasing health and wellness preference
- Communicate health and environmental impacts through menu offerings

15% reduction in energy and carbon dioxide emission intensities for Minor Hotels (Baseline 2019) by 2025*

- Drive our efforts through the 4R approach: Reduce, Reuse, Recycle natural resources such as water and energy and discharges such as wastewater and waste, and Replace existing materials with more environmental-friendly and sustainable alternatives
- Promote environmental friendly or green initiatives including renewable energy, where applicable
- Reduce consumption of disposable items by changing employees' behaviors and adapting operations process

10% reduction in water intensity for Minor Hotels (Baseline 2022) by 2025*

- Drive our efforts through the 4R approach: Reduce, Reuse, Recycle natural resources such as water and discharges such as wastewater, and Replace existing materials with more environmental-friendly and sustainable alternatives
- Promote environmental friendly or green initiatives including low-flow fixtures, where applicable
- Reduce water consumption by changing employees' behaviors and adapting operations process

75% reduction in single-use plastic (Baseline 2018) by 2024

- Drive our efforts through the 4R approach: Reduce, Reuse, Recycle and Replace existing materials with more environmental-friendly and sustainable alternatives
- Responsibly source and replace existing raw materials and products, where applicable, with more environmental-friendly options
- Reduce consumption of disposable items by changing operations and behaviors
- Educate customers to be part of environmental advocates

Remark:

* Achievement of climate-related targets is directly tied to management performance appraisals and compensation. The KPIs apply to the CEO of Minor Hotels and cascade down to Minor Hotels Senior Executives (CFO (Chief Financial Officer), Senior Vice President of Projects & Technical Services, and Senior Vice President of Hotel operation), General Managers, Finance Directors, and Chief Engineers.