

CHAPTER 8

RESILIENCE

7 AFFORDABLE AND CLEAN ENERGY



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



17 PARTNERSHIPS FOR THE GOALS



Material topics covered:

Climate
resilienceGHG
emissionsAir
emissionsEnergy
managementSupply chain
management

At the 29th Conference of the Parties to the United Nations Framework Convention on Climate Change (the “UNFCCC”), which concluded in November 2024, developed countries pledged at least US\$300 billion of climate finance annually to developing countries by 2035 to address climate change challenges. All countries are required to submit updated nationally determined contributions (the “NDC”) and climate action plans by February 2025 to accelerate the progress towards global carbon neutrality. As one of the first parties to the UNFCCC and also one of the first countries to sign and ratify the Paris Agreement, China attaches great importance to addressing climate change and is currently working on updating the NDC. The shipping industry is a key sector for GHG emissions. As a port logistics service provider with a shipping company background and an active global presence, the Group integrates climate change factors into its daily operations and business development, continuously advancing energy saving and carbon reduction efforts. It supports the construction of green shipping corridors and collaborates closely with all stakeholders to jointly promote the achievement of carbon neutrality.

PERFORMANCE HIGHLIGHTS IN 2024

Scenario Analysis and Scope 3 GHG Emissions Inventory – The Group completed a qualitative analysis of climate scenarios, assessing physical and transition risks and opportunities to further enhance its climate adaptability and resilience by managing the identified climate-related risks and opportunities. The Group also conducted its first comprehensive inventory of Scope 3 GHG emissions to understand the emission hotspots within the value chain. Categories 1, 3, 9 and 15 were identified as the main sources of Scope 3 GHG emissions, laying a solid foundation for value chain emission reduction.

Green and Low-carbon Transition – During the year, the Group released the COSCO SHIPPING Ports' Green and Low-Carbon Transition and Development Plan. For details, please refer to Chapter 9 of this report. To fulfil its commitment to building green and low-carbon ports, the Group continued to reduce operational GHG emissions through equipment electrification, the application of driverless and electric container vehicles, the use of renewable energy and technological innovation and research. During the year, green and low-carbon investment amounted to approximately US\$2.48 million. By the end of 2024, the Group's total installed capacity of photovoltaic projects increased to 12 MW, with an estimated annual power generation of approximately 11 million kWh. The proportion of new energy and clean energy container vehicles at the terminal subsidiaries in China exceeded 50%, while shore power connection to 6,028 vessels was made for the year, representing an increase of 48% year-on-year. Xiamen Ocean Gate Terminal was recognised as the APSN Green Port for the third time; the largest photovoltaic building-integrated project among all ports in China was officially connected to the grid and put into use at Guangzhou South China Oceangate Terminal; Lianyungang New Oriental Terminal was selected as one of the five pilot near-zero carbon terminals nationwide; Tianjin Container Terminal began using hydrogen-powered container vehicles for operations; the world's largest pure electric container ship docked at Nantong Tonghai Terminal to complete charging and battery replacement. These efforts not only demonstrated the Group's commitment to low-carbon transition and environmental protection but also solidified its leading position in promoting the construction of green ports and sustainability.

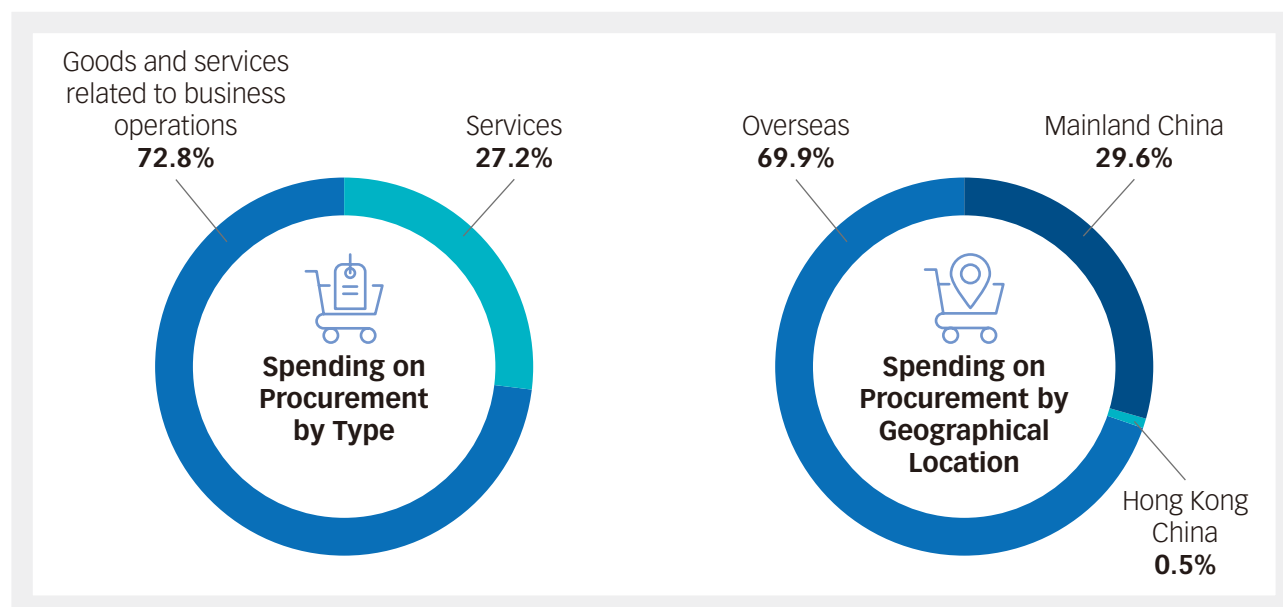
Revising Energy Saving and Emission Reduction Targets – The Group's digital and green and low-carbon transition initiatives have yielded significant results, with the terminal subsidiaries achieving mid-term targets ahead of schedule. Therefore, the Group has set more ambitious energy saving and emission reduction targets as follows:

Targets		Performance ⁵
Carbon reduction	Long term:	Scope 1 and 2 GHG emission intensity:
	<ul style="list-style-type: none"> To achieve carbon neutrality no later than 2050 	1.36 tonnes of CO ₂ e per US\$10,000 of revenue ↓ 13.1% year-on-year
	Mid-term:	↓ 35.3% against 2020
	<ul style="list-style-type: none"> To reduce Scope 1 and 2 GHG emission intensity of the Group by 55% in 2035, setting 2020 as the baseline year 	
Energy saving	Mid-term:	Energy consumption intensity:
	<ul style="list-style-type: none"> To reduce energy consumption intensity of the Group by 45% in 2035, setting 2020 as the baseline year 	0.014 TJ per US\$10,000 of revenue ↓ 5.8% year-on-year ↓ 29.5% against 2020

5 CSP Chancay Terminal and Xiamen Haicang Supply Chain, which commenced operations in November 2024, are not included.

Supply Chain Management – Adhering to the core principles of sustainable procurement, the Group gradually added and refined a series of ESG requirements for suppliers during the year to ensure the long-term sustainability of supply chain.

During the year, the Group's spending on procurement was as follows:



MANAGEMENT SYSTEM

For the management approach to each topic, please refer to the section headed "Sustainability – Approach & Frameworks" on the Company's official website.

The Group continuously improves the environmental management system, regularly reviews the environmental performance of the subsidiaries, and encourages them to enhance management through third-party certification and assessment. During the year, the ISO 14001 Environmental Management System certification, ISO 14064 Greenhouse Gas Accounting and Verification certification, ISO 50001 Energy Management certification and EMAS EU Eco-Management and Audit Scheme certification obtained by each subsidiary are as follows:

Subsidiaries	ISO 14001	ISO 14064	ISO 50001	EMAS
Tianjin Container Terminal	√			
Lianyungang New Oriental Terminal	√		√	
Nantong Tonghai Terminal	√		√	
CSP Wuhan Terminal	√		√	
Xiamen Ocean Gate Terminal	√		√	
Guangzhou South China Oceangate Terminal	√		√	
CSP Abu Dhabi Terminal	√			
CSP Abu Dhabi CFS	√			
CSP Valencia Terminal	√	√	√	√
CSP Bilbao Terminal	√		√	√

In addition, the Group has achieved remarkable results in promoting the construction of green ports and the terminal subsidiaries that have obtained green port titles and the years of acceptance are as follows:

Terminal Subsidiaries	Green Port Certification
Xiamen Ocean Gate Terminal	APEC Port Services Network (APSN) "Green Port" (2024) China Ports & Harbors Association "Four-star Green Port" (2023)
Lianyungang New Oriental Terminal	"Four-star Green Port" in Jiangsu Province (2023)
Nantong Tonghai Terminal	"Three-star Green Port" in Jiangsu Province (2021)
Tianjin Container Terminal	China Ports & Harbors Association "Four-star Green Port" (2020)

CLIMATE RESILIENCE

The Group has integrated climate change into its risk management and decision-making processes. During the year, in accordance with the requirements and standards of the IFRS S2, the Climate-related Disclosures set out in the ESG Reporting Guide of the SEHK and the recommendations of the Task Force on Climate-related Financial Disclosure (the "TCFD"), the Group completed its first forward-looking climate scenario analysis, to further identify, assess, and comprehensively manage climate-related risks, and to grasp climate opportunities and improve its climate governance and management capabilities. This report discloses climate-related information around the four pillars of governance, strategy, risk management, and metrics and targets.

MANAGEMENT STRUCTURE

The Group has established a robust management structure and is committed to systematically promoting green and low-carbon transition and enhancing climate resilience. The Group has set up a Green and Low Carbon Leading Group, comprising the Company's management, to lead and set directions for the overall green and low-carbon strategy, planning, development and initiatives, with the aim of achieving carbon neutrality. The Green and Low-carbon Working Group and various project teams, each comprising the Company's management and key personnel from relevant departments or persons-in-charge of the subsidiaries, have been set up under the Green and Low-carbon Leading Group to lead and direct the implementation of green and low-carbon projects, prepare and publish development plans and annual work plans of green and low-carbon ports, coordinate green and low-carbon investments, and guide the subsidiaries on budget planning.

In addition, the Group has set up the Energy Saving and Emission Reduction Leading Group, which is composed of the Company's management and the persons-in-charge of energy saving and emission reduction of each subsidiary in China, to take charge of the implementation of energy saving and emission reduction work plans and the approval of major matters relating to energy saving and emission reduction. The Energy Saving and Emission Reduction Management Office, set up under the Energy Saving and Emission Reduction Leading Group, is responsible for formulating the energy saving and emission reduction management system, organising the implementation of the work plans, participating in the energy saving assessment of major investment projects and reviewing the assessment of energy saving and emission reduction investment projects.

To strengthen the safety management of typhoon and flood prevention, the Group has established the Typhoon and Flood Prevention and Control Office, which is responsible for overseeing and guiding the subsidiaries in China on coping with extreme weather and resolving major problems or hidden hazards. The subsidiaries in China are the main body of responsibility for their typhoon and flood prevention initiatives and are responsible for the day-to-day management and supervision of typhoon and flood prevention.

CONSTRUCTION OF POLICIES AND SYSTEMS

During the year, the Group conducted a comprehensive review of its climate-related policies, and revised and issued the Regulations on Management of Typhoon and Flood Prevention and the Guidelines on Standardisation of Container Handling to further regulate the operation standards under extreme weather, enhance the Company's ability to provide comprehensive instruction and coordination to the subsidiaries in coping with extreme weather, thereby strengthening the overall climate resilience.

CLIMATE-RELATED RISK MANAGEMENT PROCESS

During the year, the Group identified climate risks and opportunities for scenario analysis in accordance with the internal climate-related risk management process. Through stakeholder engagement, the Group identified significant risks and opportunities under different scenarios, reviewed existing measures, and incorporated the results of the analysis into its climate change response plan as the basis for quantifying the financial impact, to assess the comprehensiveness and adequacy of the existing measures, and continue to strengthen its climate mitigation and adaptation measures.

Step 1	Step 2	Step 3	Step 4
Identification of Risks and Opportunities	Scenario Analysis	Risk Management	Risk Monitoring
A series of potential climate risks and opportunities were systematically identified in accordance with the TCFD recommendations and based on the actual situation of business development, combined with in-depth research on industry dynamics and global trends.	After defining high, medium and low carbon scenarios and different time dimensions, qualitative analysis was conducted to identify significant risks and opportunities based on the likelihood and severity of occurrence of the climate impact indicators; transmission pathways of the financial impacts of the significant risks and opportunities were defined to quantify the expected financial impacts on the Group through financial model.	The existing climate management policies and measures were reviewed to assess their adequacy and effectiveness; response measures and actions in response to significant risks and opportunities were formulated to continuously improve the Group's overall climate management plan.	Climate risks are incorporated into all aspects of the Group's risk management process; key climate-related indicators and targets are set, and progress made against the targets and the effectiveness of climate actions are continuously monitored.

SCENARIO ANALYSIS

To obtain a comprehensive understanding of the climate risks and opportunities faced by the Group, it has analysed the climate risks and opportunities faced by each of the terminal subsidiaries and supply chain companies over short, medium and long-term timeframes using the widely used climate science datasets published by the Intergovernmental Panel on Climate Change of the United Nations (the "IPCC") and the International Energy Agency (the "IEA") to define high, medium and low carbon scenarios. This analysis enables the Group to gain an in-depth understanding of the climate pressures it faces under extreme scenarios and to grasp the opportunities arising from green and low-carbon transition.



Types of Risks and Opportunities	Timeframes	Scenario Selected
Physical Risks		
<ul style="list-style-type: none"> Acute (covering a total of eight physical disasters including extreme heat, extreme cold, riverine flooding, extreme precipitation flooding, coastal flooding, typhoons, wildfires, and landslides.) Chronic (including water stress and drought) 	<ul style="list-style-type: none"> Baseline⁶ 2030⁷ 2050⁷ 2080 	<p>Shared Socioeconomic Pathways ("SSP") set out in the IPCC Sixth Assessment Report:</p> <ul style="list-style-type: none"> Low-carbon scenario, which is consistent with the Paris Agreement: SSP1-2.6 Medium-carbon scenario: SSP2-4.5 High-carbon scenario: SSP3-7.0
Transition Risks		
<ul style="list-style-type: none"> Policies and regulations Technology Market Reputation 	<ul style="list-style-type: none"> 2030 2040 2050 	<p>IEA:</p> <ul style="list-style-type: none"> Low-carbon scenario, which is consistent with the Paris Agreement: Net Zero Emissions Scenario ("NZE") High-carbon scenario: Stated Policies Scenario ("STEPS")
Transition Opportunities		
<ul style="list-style-type: none"> Energy efficiency Energy sources Products and services Market 		


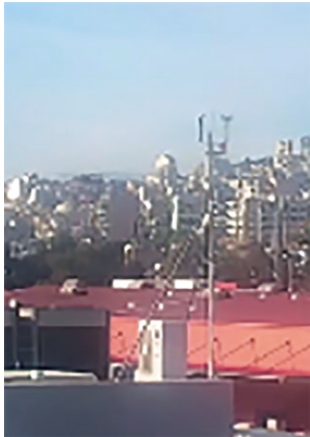
⁶ The baseline covers climate data from 1985 to 2014.

⁷ The year 2030 and 2050 cover climate data from 2015 to 2044 and from 2035 to 2064, respectively.

The main results of the scenario analysis and the response measures of the Group are as follows:

Physical Risks

Main Disasters	Potential Risk Description and Impact	Risk Level			Response Measures
		2030	2050	2080	
Coastal flooding	<ul style="list-style-type: none">Floods may damage critical sites and infrastructure, such as yards, warehouses, container handling equipment, and shore power equipment, leading to asset impairment and an increase in repair expenditure.Floods may block major shipping routes and affect operations, hindering the Group from completing cargo handling on time, and resulting in a decrease in revenue and an increase in operating cost.Contaminated floodwaters may cause equipment scrapping.Floods may pose a threat to the health and safety of workers, resulting in evacuation and disruption of work, a decrease in revenue, and an increase in labour cost.	High	High	High	<ul style="list-style-type: none">Conduct safety inspections to identify areas that are susceptible to flooding, and assess whether it is necessary to raise the foundation height or enhance flood prevention, such as installing floodgates, placing sandbags, improving drainage systems, and adding additional pumps. <div></div> <p><i>Floodgate in Nantong Tonghai Terminal</i></p> <ul style="list-style-type: none">Inspect the flood discharge facilities, clear drainage ditches, identify flood risks, and develop emergency plans for critical equipment damage or failure before rainy season and typhoons.
Riverine flooding/ Extreme precipitation flooding		Low	Low	Low	<ul style="list-style-type: none">Develop the Typhoon and Flood Prevention Management Regulations and issue the Guidelines for Standard Container Handling to regulate operational processes.Arrange flood control training and emergency drills for employees to improve their ability to respond to floods.
Typhoons	<ul style="list-style-type: none">High wind speed and debris from a typhoon may damage critical sites and infrastructure, such as yards and warehouses, as well as vehicles, port railways, and container handling equipment, leading to an increase in repair expenditure and asset impairment; ships berthed in the port may collide or drag their anchors, affecting operations.Typhoons may destroy power transmission systems, causing operational disruptions. System maintenance may lead to a decrease in revenue and an increase in maintenance costs in that period.Debris from a typhoon and resulting floods may block major shipping routes, posing a threat to the health and safety of workers, and resulting in evacuation and disruption of work, a decrease in revenue and an increase in labour costs.	Medium	High	High	<ul style="list-style-type: none">Check whether the container handling equipment can withstand the maximum estimated typhoon wind speeds in the future.Inspect the strong wind protection measures before a typhoon arrives.Closely monitor typhoon warnings from local meteorological agencies, develop contingency plans in advance, and develop emergency plans for critical equipment damage or failure.Develop the Typhoon and Flood Prevention Management Regulations and issue the Guidelines for Standard Container Handling to regulate operational processes, and provide guidance on responses to extreme weather.Organise typhoon response training and emergency drills for employees to improve emergency response capabilities.During the year, Xiamen Ocean Gate Terminal, Quan Zhou Pacific Terminal and Jinjiang Pacific Terminal, which are located in the typhoon-prone Fujian region, achieved a 100% success rate in typhoon prevention after taking effective defensive measures. <div></div> <p><i>Xiamen Ocean Gate Terminal prepared for Typhoon Gaemi</i></p>

Main Disasters	Potential Risk Description and Impact	Risk Level			Response Measures
		2030	2050	2080	
Extreme heat	<ul style="list-style-type: none">The health and safety of workers (especially outdoor workers in container handling and other key areas) may be affected, resulting in susceptibility to heat stroke and sunburn.An increase in indoor cooling demand may lead to an increase in energy consumption for air conditioning, resulting in an increase in operating costs.	Low	Medium	High	<ul style="list-style-type: none">Provide shaded rest areas for outdoor workers; set up special funds to ensure that the site is equipped with sufficient heatstroke prevention and cooling materials, such as electric fans and cool drinking water; ensure adequate sleep, rest, and hydration for employees working in high temperatures.When the temperature exceeds local workplace heat standards, shift work will be reasonably arranged reasonably to shorten single work period.Regular health checks are arranged, and heatstroke prevention trainings are provided to enhance awareness of heatstroke prevention and cooling, thereby improving emergency response capabilities. <div></div> <div>Heatstroke prevention and cooling emergency drill</div>
Extreme cold	<ul style="list-style-type: none">Energy demand for indoor heating may increase to prevent equipment from freezing and protect the health of workers, leading to an increase in operating costs.At extremely low temperatures, electrical equipment may be prone to failure, which may lead to accidents such as short circuits and electric shocks, or accidents caused by the deformation, rupture or failure of equipment and metal structures, resulting in a decrease in revenue and damage to reputation, as well as posing health and safety risks to outdoor workers.Severe cold or icy events may cause blockage of shipping routes, leading to minor operational disruptions and a decrease in revenue.	Low	Low	Low	<ul style="list-style-type: none">Provide shaded rest areas equipped with windproof and heating facilities for outdoor workers to mitigate the impact of severe cold and cold winds on the workers.Facilitate remote operations through digital and automated transition to reduce the outdoor working hours in extreme weather conditions.When temperature reaches local severe cold standards, shift work will be reasonably arranged to shorten single work periods.Piraeus Terminal's already established weather station has been further supplemented in 2024 with 22 weather stations in several operational areas through which the weather conditions can be monitored in real time and provide weather forecast of high accuracy via artificial intelligence technology. <div></div> <div>Supplementary weather station installed in Piraeus Terminal</div>

In future climate scenarios, the risk of wildfires and landslides are assessed to be at low-risk level.

Transition Risks

Type of Risks	Potential Risk Description and Impact	Risk Level			Response Measures
		2030	2040	2050	
Policy and regulations	<ul style="list-style-type: none">The EU Emissions Trading System⁸ and EU Carbon Border Adjustment Mechanism⁹ may increase the operational and compliance costs of assets in the European Union.Capital expenditure may increase due to investments in technological innovation, technological transition and facility upgrades and iterations against the backdrop of China’s “3060” dual carbon targets, the green and low-carbon transition development strategy for ports and the International Maritime Organization’s (the “IMO”) 2050 emission reduction targets.Rising carbon pricing may lead to increased costs for energy and raw materials, resulting in an increase in operational and compliance costs.Stricter requirements for climate-related disclosures may increase operational and compliance costs.The Poseidon Principles industry framework may raise financing costs.Climate-related litigation may increase operational costs and result in damage to reputation.	Low	Medium	Medium	<ul style="list-style-type: none">Keep abreast of the updates to climate-related laws and regulations, and regularly assess progress on shipping emission reductions and green port policy requirements, to identify potential risks in advance, and develop response strategies.Comply with the latest climate-related information disclosure requirements to improve information transparency.Continue to promote energy saving and emission reduction initiatives, such as the supply of shore power to vessels and the electrification of container handling equipment at ports, to meet the requirements of climate policies such as the dual control of energy consumption.
Technology	<ul style="list-style-type: none">To align with the energy transition of the shipping industry, ports may need to develop corresponding technologies and infrastructure, which results in increasing capital expenditures.To achieve carbon neutrality as early as possible, ports may need to promote measures such as the supply of shore power for vessels, the electrification of container handling equipment, and the application of renewable energy, and eliminate high energy-consuming equipment, resulting in an increase in capital expenditure and research and development costs.	High	High	Medium	<ul style="list-style-type: none">Actively invest in technology research and development as well as application, and orderly promote the implementation of projects such as energy conversion of port equipment, the application of renewable energy, and the construction smart port.
Market	<ul style="list-style-type: none">The market demand for green shipping and low-carbon services is increasing. If ports and terminals fail to meet customer demand, it may lead to a decrease in revenue.	Low	Low	Medium	<ul style="list-style-type: none">Speed up green transition, actively invest in the construction of green shipping corridors, closely monitor the transition to non-fossil fuels for vessels to take the lead in researching and planning alternative fuel refuelling facilities, and at the same time participate in the formulation of international industry rules to provide green and low-carbon solutions.
	<ul style="list-style-type: none">Amid low-carbon transition, fluctuations in electricity and fuel prices may lead to an increase in operational costs.	Low	Medium	Medium	<ul style="list-style-type: none">Closely monitor the development of the energy market, actively engage in the planning and application of renewable energy, and explore the development and application of low-carbon energy sources such as hydrogen energy.
Reputation	<ul style="list-style-type: none">External stakeholders are increasingly concerned about climate action. If the Group fails to make additional efforts to reduce emissions, it may lead to damage to reputation.	Low	Low	Low	<ul style="list-style-type: none">Disclose climate actions and improve information transparency in accordance with the latest and widely adopted climate disclosure frameworks.

8 The world’s first emissions cap-and-trade system which covers the member states of the European Union, member countries of the European Free Trade Association and Northern Ireland.

9 A policy tool, introduced by the European Union, which imposes taxes on the embedded carbon emissions of certain imported goods to address the issue of carbon leakage amid the European Union’s efforts in mitigating climate change.

Transition Opportunities





Type of Opportunities	Opportunity Description and Impact	Opportunity Level			Response and Planning
		2030	2040	2050	
Resource efficiency	<ul style="list-style-type: none">Electrification of terminal equipment through gradual replacement of traditional fuel-powered equipment to get rid of fossil fuels, reduce energy costs, and improve operational efficiency.Optimise energy management, reduce energy waste, and further reduce operational costs through digitalisation, green and low-carbon transition, and other means.	High	High	High	<ul style="list-style-type: none">Accelerate the upgrading and iteration of equipment, and switch to using electricity or renewable energy as main energy sources; gradually phase out high-energy-consuming and high-emission fuel-powered machinery by introducing electric container handling equipment and electric trailers.Improve energy use efficiency through technological innovation, together with cutting-edge technologies such as artificial intelligence, the Internet of Things, big data, and cloud computing, to speed up the realisation of smart port services and achieve the efficient integration of cost reduction, efficiency improvement, and green transition.
Energy sources	<ul style="list-style-type: none">Under the trend of energy transition, gradually phase out fossil fuels, accelerate the deployment and application of renewable energy, reduce the procurement of and dependence on fossil fuels, and meet the demand for green shipping.	Low	Low	Low	<ul style="list-style-type: none">Deploy photovoltaic solar energy and wind power, promote the use of hydrogen-powered container vehicles and other renewable energy facilities to increase the proportion of renewable energy use.
Market	<ul style="list-style-type: none">Seize market opportunities, plan early and provide low-carbon products and services to increase market share as customer awareness of low carbon gradually increases.	Low	Low	Medium	<ul style="list-style-type: none">Promote the construction and use of shore power to provide power supply to berthing vessels, while increasing revenue from green services.Expand intermodal transportation services such as rail-water intermodal transportation to achieve strong synergy and provide efficient, convenient and low-carbon port logistics supply chain solutions.
Products and services	<ul style="list-style-type: none">The increasing demand for green solutions is creating new market needs. In combination with the development of green shipping corridors and a focus on new technology applications, this presents new opportunities for growth.	Low	Medium	Low	<ul style="list-style-type: none">Participate actively in the development of green shipping corridors, conduct research and application of new low-carbon shipping fuels, and explore the feasibility of bunkering methods for low-carbon fuels such as methanol and biomass fuels to provide shipping companies with clean energy support.

GHG EMISSIONS

To support China in achieving carbon peak by 2030 and carbon neutrality by 2060, and respond to international initiatives such as the IMO’s target to achieve net-zero emissions in international shipping around 2050, the Group has actively promoted energy saving and emission reduction in its own operations. Simultaneously, the Group is working with customers to reduce GHG emissions across the value chain. By providing “COSCO SHIPPING Ports green and low-carbon solutions”, the Group is committed to driving sustainable practices to achieve carbon neutrality.

CARBON NEUTRALITY ROADMAP

Continuous Carbon Reduction Measures

-  Terminal equipment electrification
-  Digital and intelligence transformation
-  Energy regeneration from cranes
-  Renewable energy use

2020-2024

Achievements

>50%

New energy and clean energy-powered container vehicles*

12MW

Renewable energy installed capacity*

87%

LED lighting^

20%

Electrification of mobile machinery*

97.7%

Electrification of gantry cranes*

2025

Targets

60%

New energy and clean energy-powered container vehicles*

14MW

Renewable energy installed capacity*

2030

Targets

100%

New energy and clean energy-powered container vehicles*

19MW

Renewable energy installed capacity*

2035

Targets

↓55%

Scope 1 and 2 GHG emission intensity#

↓45%

Energy consumption intensity#

2050


Carbon Neutral



Carbon Reduction Measures for Industry Chain

- 100%

container berths equipped with shore power supply facilities since 2021 (will be gradually extended to other berths)*
- >80%

terminals to be equipped with shore power supply facilities at container berths by 2030^
- 

support for green shipping corridors

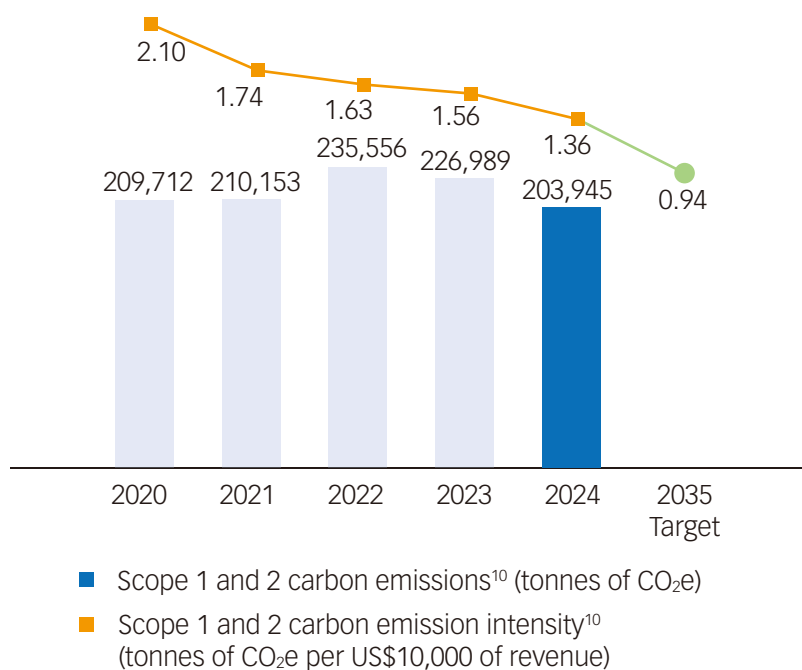
* Terminal subsidiaries in China
The Group
^ Terminal subsidiaries in China and overseas



SCOPE 1 AND SCOPE 2 CARBON EMISSIONS

Under the leadership of the Board, the Group regularly reviews the progress made against its energy saving and carbon reduction targets and the effectiveness of related initiatives to ensure that its green and low-carbon transition plan is in line with actual development with the aim of achieving sustainable and high-quality development. Upon the approval of the Board, the Group has revised more ambitious energy saving and carbon reduction targets. On the one hand, these targets have been expanded to the supply chain companies in which the Company has a controlling stake, reflecting its vision to become a global port logistics service provider. On the other hand, the targets are aligned with the global and industry low-carbon transition timetable, underscoring the Group's commitment to providing customer-centric services. In particular, the Group will strive to achieve carbon neutrality in 2050, which is ten years earlier than the original plan, and to reduce the Scope 1 and 2 GHG emission intensity by 55% in 2035, as compared to 2020.

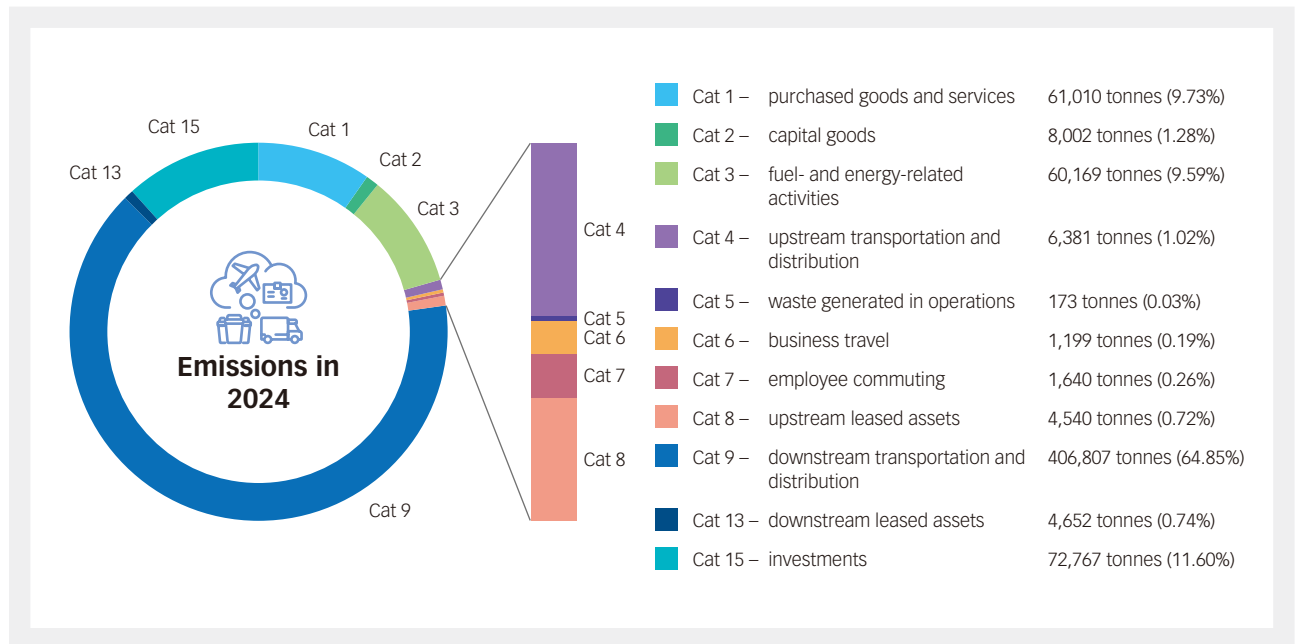
During the year, the Group's Scope 1 and 2 GHG emissions totalled 203,945 tonnes of CO₂e, representing a year-on-year decrease of 10.2%; GHG emission intensity was 1.36 tonnes of CO₂e per US\$10,000 of revenue, representing a year-on-year decrease of 13.1%.



¹⁰ The reporting scope of the sustainability reports for previous years covered joint ventures and associates. To more accurately and comprehensively reflect the Group's environmental performance, the relevant data will only cover the Company and the subsidiaries within the reporting scope from 2024 onwards, and will no longer include joint ventures and associates which are not controlled by the Company. For details, please refer to Chapter 1 of this report.

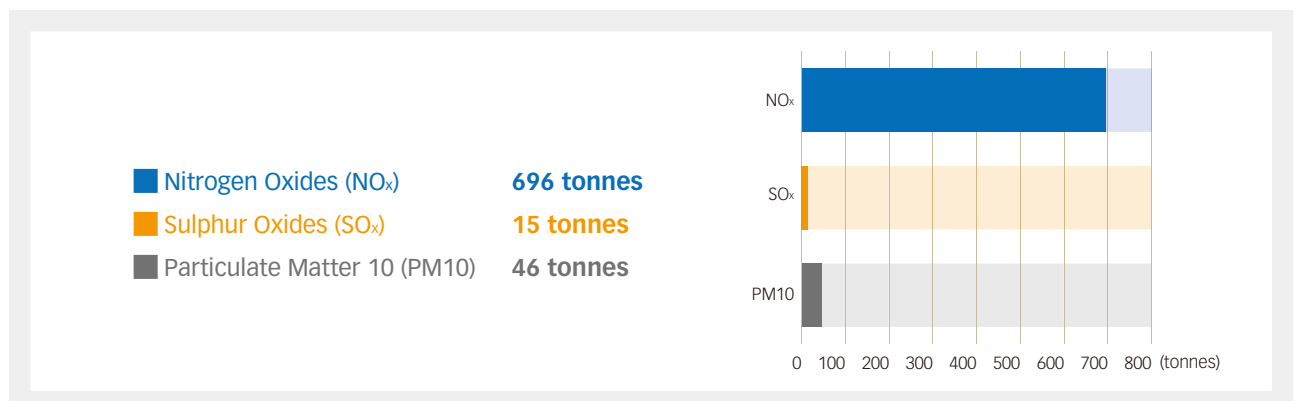
SCOPE 3 GHG EMISSIONS

During the year, the Group further enhanced the disclosure of Scope 3 emissions and conducted a comprehensive inventory for 11 categories¹¹ in accordance with the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011) and the Greenhouse Gas Protocol Technical Guidance for Calculating Scope 3 Emissions. After calculation, the Group's Scope 3 GHG emissions in 2024 totalled 630,438 tonnes of CO₂e, with the majority originating from downstream transportation and distribution, investments, fuel- and energy-related activities, as well as purchased goods and services. The Group will continue to improve the completeness and granularity of Scope 3 GHG emissions inventory. By optimising internal processes and closely collaborating with suppliers and business partners, the Group will actively identify and evaluate primary sources to effectively reduce carbon emissions across the value chain.



AIR EMISSIONS

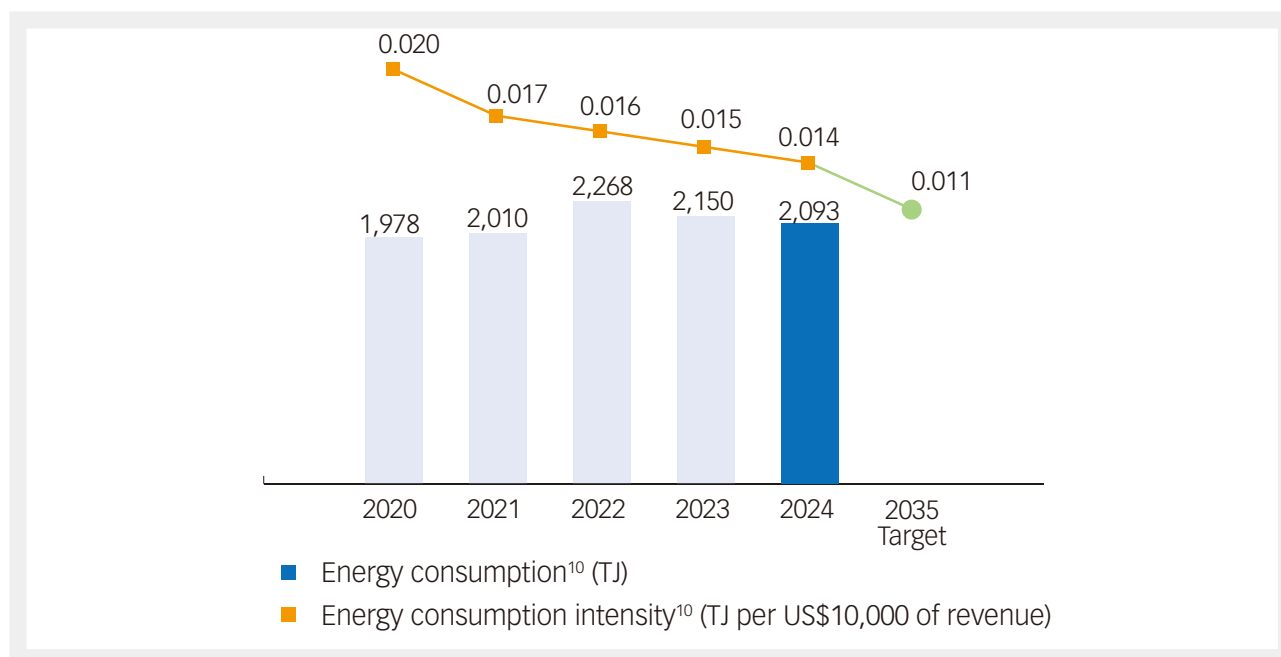
The Group's air emissions in 2024¹⁰ was as follows:



¹¹ The Group is mainly engaged in the provision of port logistics services and is not involved in the production and sale of products. Therefore, the scope of the inventory check did not include the following four categories, i.e. processing of sold products (Category 10), use of sold products (Category 11), end-of-life of sold products (Category 12) and franchises (Category 14).

ENERGY MANAGEMENT

Under the new energy saving and carbon reduction targets, the Group will strive to reduce the Group's energy consumption intensity by 45% in 2035 compared to 2020. During the year, the Group's energy consumption totalled 2,093 TJ, representing a decrease of 2.6% year-on-year; energy consumption intensity was 0.014 TJ per US\$10,000 of revenue, representing a decrease of 5.8% year-on-year.



To further accelerate green and low-carbon transition, the Group has actively implemented energy saving and carbon reduction initiatives in its own business operations and along the value chain, supporting the construction of green shipping industry chain.

DECARBONISATION OF OWN OPERATIONS

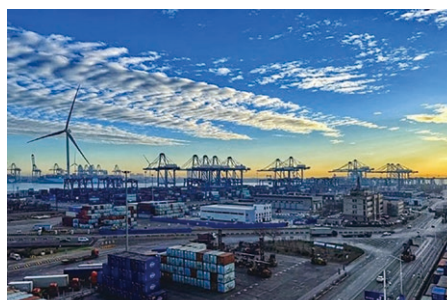
ELECTRIFICATION OF TERMINAL EQUIPMENT AND VEHICLES

The Group has actively promoted the electrification of equipment in the terminal subsidiaries in China with the aim of improving energy efficiency and effectively reducing GHG and air emissions. As of the end of 2024, the terminal subsidiaries in China had largely completed the transition from diesel to electric-powered gantry cranes, where cranes, forklifts, loaders, reach stackers, straddle carriers, stacker cranes and other equipment achieved an overall electrification rate of 20%. In terms of terminal vehicles, the Group continued to advance the iteration of new energy and clean energy-powered container vehicles at the terminal subsidiaries in China, accounting for more than 50% during the year.

CASE

Tianjin Container Terminal deployed a series of clean energy-powered machinery and equipment including hydrogen energy-powered container vehicles

During the year, Tianjin Container Terminal gradually put into use 20 hydrogen energy-powered container vehicles and one modified electric empty container stacker, with a cumulative use of more than 400 kilograms of hydrogen energy. Those hydrogen energy was a by-product of the surrounding factories, i.e. by-product hydrogen, and hydrogen generated by photovoltaic electrolysis, which fully embodied the concept of environmental protection. According to statistics, each hydrogen energy-powered container vehicle can reduce emission of approximately 61.5 tonnes of CO₂e per year.



GREEN AND SMART LIGHTING APPLICATION

The Group continued to promote the green and intelligent development of lighting fixtures, with all terminal subsidiaries achieving significant results in lighting energy conservation. During the year, Xiamen Ocean Gate Terminal completed LED energy-saving retrofits for 98% of its high-power lighting fixtures; Quan Zhou Pacific Terminal upgraded its yard high-mast lights to LED and equipped newly-purchased quay cranes with LED smart lighting systems; Lianyungang New Oriental Terminal's lighthouse lighting system had been fully converted to energy-efficient lighting; Jinzhou New Age Terminal successfully implemented energy-saving retrofits for quay crane lighting, with an estimated annual electricity savings of 60,000 kWh, corresponding to a reduction of approximately 58.95 tonnes of CO₂e. During the year, the terminal subsidiaries in China and overseas had installed over 15,000 LED fixtures, accounting for more than 87% of the total lighting equipment.

RENEWABLE ENERGY APPLICATION

The Group is committed to promoting the application and technological exploration of renewable energy, to optimise energy mix in the ports and reduce the consumption of fossil fuels and GHG emissions. As of the end of 2024, the total installed capacity of photovoltaic systems at the terminal subsidiaries in China reached 12 MW, with an estimated annual power generation of approximately 11 million kWh, corresponding to a reduction of approximately 5,200 tonnes of CO₂e. All photovoltaic power generation projects adopt the "self-generation and self-consumption with surplus power back to the grid" model. During the year, the Group's total renewable energy generation reached 7,844,282 kWh.

During the year, Guangzhou South China Oceangate Terminal completed the largest 7.3 MW building-integrated photovoltaic project ("BIPV") among the ports in China, which had been officially put into operation and achieved full-capacity grid connection. With an operational period of 25 years, it is expected to generate an average of 6.8 million kWh annually, corresponding to a reduction of 4,338 tonnes of CO₂e. In October 2024, the 0.43 MW BIPV project at Jinjiang Pacific Terminal had been connected to the grid and started generating electricity. It is expected to generate an annual average of 450,000 kWh of electricity, corresponding to a reduction of approximately 316 tonnes of CO₂e.

In addition, Tianjin Container Terminal's 4.5 MW distributed wind power project has been connected to the grid in the first quarter of 2025 and is expected to generate over 9 million kWh of electricity annually, corresponding to a reduction of approximately 6,700 tonnes of CO₂e.



*The 7.3 MW BIPV project of
Guangzhou South China Oceangate Terminal*



The 0.43 MW BIPV project of Jinjiang Pacific Terminal

CONSTRUCTION OF DIGITAL, SMART AND AUTOMATED TERMINALS

The Group actively leads corporate development by innovative thinking through digital and intelligent empowerment of customer service, port production automation and intelligent information management. During the year, the Group actively increased its efforts in technological innovation, pioneering the CSP Port Digital Twin Integrated Energy Management Platform, which empowers ports to achieve multi-dimensional control of energy consumption processes before and after the move, and supports the enhancement of energy efficiency of ports. For details, please refer to Chapter 9 of this report.

VALUE CHAIN COLLABORATION FOR MUTUAL BENEFIT

SHORE POWER APPLICATION

To promote the construction of a green shipping industry chain, the Group has increased its efforts to promote the use of shore power facilities to provide stable power supply to berthing vessels, significantly reducing fuel consumption, GHG emissions, exhaust gas and noise pollution. At the same time, the Group supports its terminal subsidiaries in formulating a sound system for the use and management of shore power to encourage shore power connection.

During the year, the terminal subsidiaries in China achieved full coverage of shore power at container berths, with shore power connection with 6,028 vessels, representing an increase of 48% year-on-year, and electricity demand of approximately 9.59 million kWh, representing an increase of 160% year-on-year, corresponding to a reduction of 8,628 tonnes of CO₂e.

During the year, Guangzhou South China Oceangate Terminal and Guangzhou Nansha Stevedoring Terminal expanded their shore power capacity. In April 2024, Nantong Tonghai Terminal completed recharging for the world's largest pure electric container ship, namely Zhong Yuan Hai Yun Lv Shui 01, achieving net-zero emission operations in river-sea intermodal transport.



Zhong Yuan Hai Yun Lv Shui 01 berthed at Nantong Tonghai Terminal for recharging

SUPPORT FOR GREEN COMMUTING

The Group promotes green commuting among employees and has added electric vehicle charging facilities at its terminal subsidiaries in China. As of the end of 2024, Jinjiang Pacific Terminal has added and put into use six charging piles, while CSP Wuhan Terminal, per employee feedback, will install charging piles for new energy vehicles to address employees' charging needs while also contributing to the reduction of Scope 3 GHG emissions.

SUPPORT FOR THE DEVELOPMENT OF GREEN SHIPPING CORRIDOR

To respond to the future trend of low-carbon transition, the Group adheres to the principle of being proactive and has initiated feasibility studies on the supply of green energy for vessels in ports. This forward-looking measure aims to seize the challenges and opportunities brought by the low-carbon transition, turning crises into opportunities and promoting corporate sustainable development.

In 2024, Piraeus Terminal conducted a research on providing biofuels to shipping companies by analysing the types of biofuels currently available in the market and their bunkering methods. The terminal also planned to carry out within 2025 a market study on alternative fuel sources for shipping, and proceed with the design of bunkering manuals for methanol and liquefied natural gas (LNG). These efforts aim to provide more decarbonisation support for customers and seize new opportunities brought by the industry's transition.

COOPERATION WITH BUSINESS PARTNERS TO PROMOTE CARBON REDUCTION

As a council member of Hong Kong Business Environment Council ("BEC"), the Company signed the BEC Net-zero Carbon Charter in early 2024 and actively participated in the advisory groups and seminars organised by BEC to provide suggestions and encourage exchanges with peers on the low-carbon transition of the industry, with the aim of contributing to climate transition and carbon reduction.



COSCO SHIPPING Ports has signed the BEC Net-zero Carbon Charter

SUPPLY CHAIN MANAGEMENT

The Group has established a sound management structure. During the year, departments dedicated to procurement management and supplier management were designated to strictly regulate the Group's procurement activities. Each subsidiary has formulated their own management regulations in accordance with applicable laws and regulations of the places where they operate. These measures aim to standardise procurement practices and ensure supply security. During the year, the Group comprehensively reviewed and continuously improved its management system.

In 2024, there were a total of 6,329 suppliers in the Group's supplier database, of which 3,214 were in Mainland China and 3,115 were in countries and regions outside Mainland China.

SUPPLIER ADMISSION AND MANAGEMENT

The Group has developed detailed management regulations for supplier admission, selection, evaluation, and rewards and penalties to continuously optimise the supplier structure, strengthen cooperation with high-quality suppliers, and effectively manage procurement and supply risks. During the admission stage, the Group reviews supplier information and ensures that suppliers understand and commit to complying with the Group's business principles and ESG-related requirements. The review process comprehensively covers legal compliance, safe production, environmental protection, prohibition of using child labour and forced labour, compensation management, anti-discrimination, among others.

During the year, the Company introduced a series of ESG assessment requirements for newly-onboarded suppliers and plans to gradually extend these requirements to all suppliers in the database by 2025 to enhance supplier assessment. These requirements include carbon reduction and carbon neutrality targets, Scope 1 and 2 GHG emissions and intensity, assessment of climate-related risks and opportunities, nature or biodiversity assessments, anti-corruption and anti-bribery policies, and the level of information disclosure in sustainability report.

Additionally, the Company also requires suppliers to confirm that they have read and agree with the following principles:

- Operating in an environmentally friendly manner, ensuring compliance with all applicable environmental laws, regulations and standards, and establishing a robust environmental management system to seek continuous improvement and to mitigate or minimise any adverse impact on the environment;
- Creating an equal, inclusive, and diverse workplace for all employees, opposing any form of discrimination in recruitment and employment, strictly prohibiting child labour, forced labour or human trafficking, and ensuring no modern slavery exists in their operations;
- Providing a safe and healthy working environment for all employees, ensuring compliance with all applicable laws, regulations, and standards, and establishing an effective occupational health and safety management system;
- Adhering to the highest standards of ethical conduct in business operations, ensuring compliance with all applicable anti-corruption and anti-bribery laws, directives, and regulations as well as anti-trust and other competition laws, and avoiding any form of corrupt or bribery practices; and
- Committing to international initiatives including the [Universal Declaration of Human Rights](#) of the United Nations and the standards of the [International Labour Organization](#).

REGULAR EVALUATION AND ASSESSMENT

The Group conducts dynamic evaluations of suppliers with whom they have conducted transactions during the year. The evaluation results categorise suppliers into four groups from excellent (A), qualified (B), coaching or improvement required (C) to unqualified (D). The assessment covers but is not limited to ESG-related criteria such as environmental and safety assurance, innovation, commercial bribery and ethical risks. Unqualified suppliers will be removed from the supplier database.

During the year, the Group completed dynamic evaluations of 3,369 suppliers, of which 56.9% were rated as excellent and 40.7% as qualified.

GREEN PROCUREMENT PRACTICE

The Group practices green procurement principles. When conducting project engineering and equipment procurement, the Group requires suppliers to comply with relevant environmental laws and regulations in the project locations, taking local environmental protection requirements into regard, reinforcing the Group's sustainability philosophy.

When preparing procurement tender documents, the Group focuses on the performance of manufacturers in terms of quality, occupational health, and environmental protection systems. Suppliers with green product certification, green factory certification, or other green manufacturing certifications are given additional points as an incentive to encourage and guide suppliers to adopt more environmentally friendly production practices.

In 2024, CSP Valencia Terminal and CSP Bilbao Terminal put into use a total of 11 hybrid-powered cranes, aiming to reduce GHG and air emissions while saving approximately 40% on fuel costs compared to the original equipment.

