PORT OF SUAO

ENVIRONMENTAL REPORT

TAIWAN INTERNATIONAL PORTS CORPORATION, LTD.

TIPC

2025

Port of Suao
▪ T A I W A N ▪

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Suao Port Environmental Report Team

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Taiwan International Ports Corporation Environmental Policy

Taiwan International Ports Corporation Environmental Policy

"Leverage innovation effectively to connect and communicate with global trade flows. Mature into a world-class port management group" is the vision of Taiwan International Ports Corporation (TIPC). TIPC manages and operates commercial ports in Taiwan and is engaged in maritime transport related services, free trade zones, and the development of relevant tourism and recreational projects.

While TIPC pursues business growth, we are well-aware of the importance of our social responsibility, which is to ensure both environmental and economic sustainability. With the goal to establish green and sustainable ports, we will proactively identify environmental risks that may be associated with our activities and manage the risks accordingly to minimize the environmental impacts.

We commit to:

1. Implement and follow through with the Green Port Policy to establish extraordinary world-class ports.
2. Comply with applicable environmental regulations to fulfill corporate environmental responsibility.
3. Execute pollution prevention, monitoring, and control mechanism to enhance environmental quality in and around port areas.
4. Reinforce environmental education to cultivate environmental awareness among employees.
5. Strengthen the communication with local communities, and pursue sustainable development for both the ports and the cities where we are operating.

Date: 2024 /10 /30

Hsien-Yi Lee

Hsien-Yi Lee
Chairman of TIPC

Date: 2024 /10/30

Chin-Jung Wang

Chin-Jung Wang
President of TIPC

Port of Keelung, TIPC
Environmental Policy

Environmental Policies
Port of Keelung
(Including Keelung Port, Taipei Port, Suao Port)

The Port of Keelung acknowledges its responsibility, as a port management authority, to maintain and improve the environmental quality of the port. Environmental protection is regarded as an essential part of the port' s sustainable operation. We are committed to proactively preventing any negative impact of port activities on the environment and to building a high-quality port that is environmentally friendly, sustainable, and progressive.

To minimize both potential and actual environmental impacts from port operations, the Port of Keelung identifies operational activities with the greatest environmental impact. A self-management approach is adopted to regularly review and continually improve environmental performance.

We commit to the following actions and will continue to promote them:

- **Regularly review port operations to identify and monitor pollution generated by various activities.**
- **Establish environmental improvement objectives and continuously reduce environmental impacts caused by port operations.**
- **Comply with environmental regulations, fulfill our environmental responsibilities, and prioritize pollution prevention.**
- **Promote environmental education to enhance employees' environmental awareness and ensure policy implementation.**
- **Actively engage in external communication and cooperation, building partnerships to realize sustainable port development.**

This environmental policy has been communicated with employees and relevant stakeholders of the Port of Keelung to ensure a full understanding of, and alignment with, the port' s environmental commitments.

President of Port of Keelung, TIPC Song, I-Ching

Date 2025 / 6 / 9

Port of Keelung, Taiwan International Ports Corporation, LTD. No. 1, Chung-Cheng Road, Keelung 20202, Taiwan, R.O.C.

Port of Suao
Environmental Objectives

Environmental Objectives
Port of Suao

To implement the commitments of Suao Port environmental policy, the following environmental objectives are set based on the ten major environmental issues from the port:

Port Air Quality Maintenance
Establish designated Air Quality Control Zones and implement routine ambient air quality monitoring to maintain clean air within the port area.

Fugitive Dust Suppression
Install dust suppression equipment and reinforce pollution control measures in construction and operational zones to minimize the dispersion of particulate matter (PM).

Waste Classification and Resource Recycling
Enforce mandatory waste segregation for all vessels and promote resource recycling and reuse to reduce overall waste generation.

Hazardous Cargo Management
Ensure deployment of oil containment booms during the handling of hazardous materials and conduct daily environmental inspections within the port premises.

Reduction of Vessel Emissions
Encourage the use of shore power (cold ironing) and implement vessel speed reduction measures to lower emissions of air pollutants.

Cargo Spillage Prevention
Strengthen supervision and inspection of terminal operations to prevent cargo leakage and mitigate associated environmental impacts.

Port Land Development
In line with national development policy, promote integrated tourism and industrial development to stimulate local employment and economic growth.

Enhancement of Port–Community Relations
Incorporate local cultural elements, foster active engagement with surrounding communities, and ensure transparent environmental information disclosure.

Climate Change Adaptation and Carbon Reduction
Carry out greenhouse gas (GHG) inventories across port operations, enhance energy efficiency, and progressively achieve carbon reduction targets.

Port Water Quality Protection
Enforce proper collection and treatment of ship-generated waste oil and wastewater, conduct regular water quality assessments, and monitor coral reef conditions in adjacent waters.

The President, Port of Keelung, TIPC is responsible for the implementation, maintenance and communication of the environmental objectives. To fulfill commitments, the objectives and corresponding action plans are reviewed and adjusted to the condition of the Port.

President of Port of Keelung, TIPC Song-I-Ching

Date 2025 / 6 / 9

Suao Port Branch Office of Port of Keelung, Taiwan International Ports Corporation. Ltd No1, Gangcyu, Su-ao Township, Yilan County 270011, Taiwan, R.O.C.

01

Message from Port of Suao, TIPC

In response to the impacts of global climate change and global warming, the development of port economies with goals of "green" and "sustainability" has become a key concern for port management authorities worldwide. Since 2013, the Keelung Branch of Taiwan International Ports Corporation, Ltd. (TIPC), which oversees the Port of Keelung, Port of Taipei, and Port of Su-Ao, has continuously implemented the Taiwan Greening the Ports Action Plan to fulfill environmental objectives across its ports. Through this effort, the branch fulfills its corporate social responsibility, enhances communication and engagement between port areas and urban development, establishes a positive corporate image, strengthens core capabilities in environmental management, and gradually improves the overall port environment.

The Port of Keelung is positioned as the primary maritime gateway for cargo in northern Taiwan and as an international cruise port. While pursuing steady economic growth of port operations, the port authority is also actively advancing toward the management vision of a Green Port. Environmental planning, pollution prevention, and fostering community-friendly relations are integrated as part of its sustainable development strategy. By mitigating the environmental burden caused by port operations and strengthening the relationship between the port and the city, the Port of Keelung aims to become a truly friendly and green port. Through the renewal process of EcoPort certification, the port continues to align with international practices and engage in global exchanges, striving to create a harmonious and sustainable port-city environment.

Song, I-Ching

President *of Keelung Branch*
Taiwan International Ports Corporations, Ltd.

02

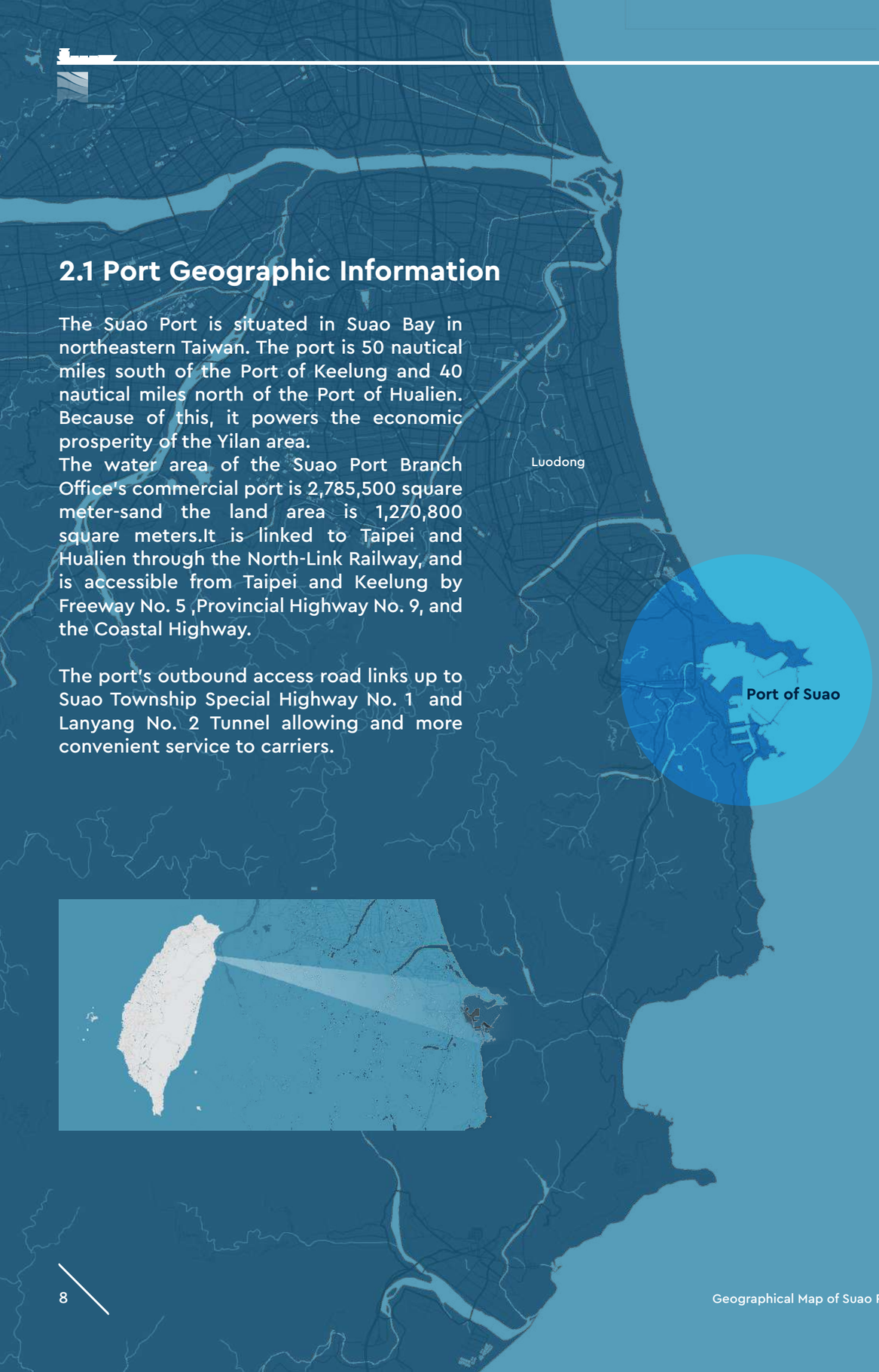
Port Profile

2.1 Port Geographic Information

The Suao Port is situated in Suao Bay in northeastern Taiwan. The port is 50 nautical miles south of the Port of Keelung and 40 nautical miles north of the Port of Hualien. Because of this, it powers the economic prosperity of the Yilan area.

The water area of the Suao Port Branch Office's commercial port is 2,785,500 square meter-sand the land area is 1,270,800 square meters.It is linked to Taipei and Hualien through the North-Link Railway, and is accessible from Taipei and Keelung by Freeway No. 5 ,Provincial Highway No. 9, and the Coastal Highway.

The port's outbound access road links up to Suao Township Special Highway No. 1 and Lanyang No. 2 Tunnel allowing and more convenient service to carriers.

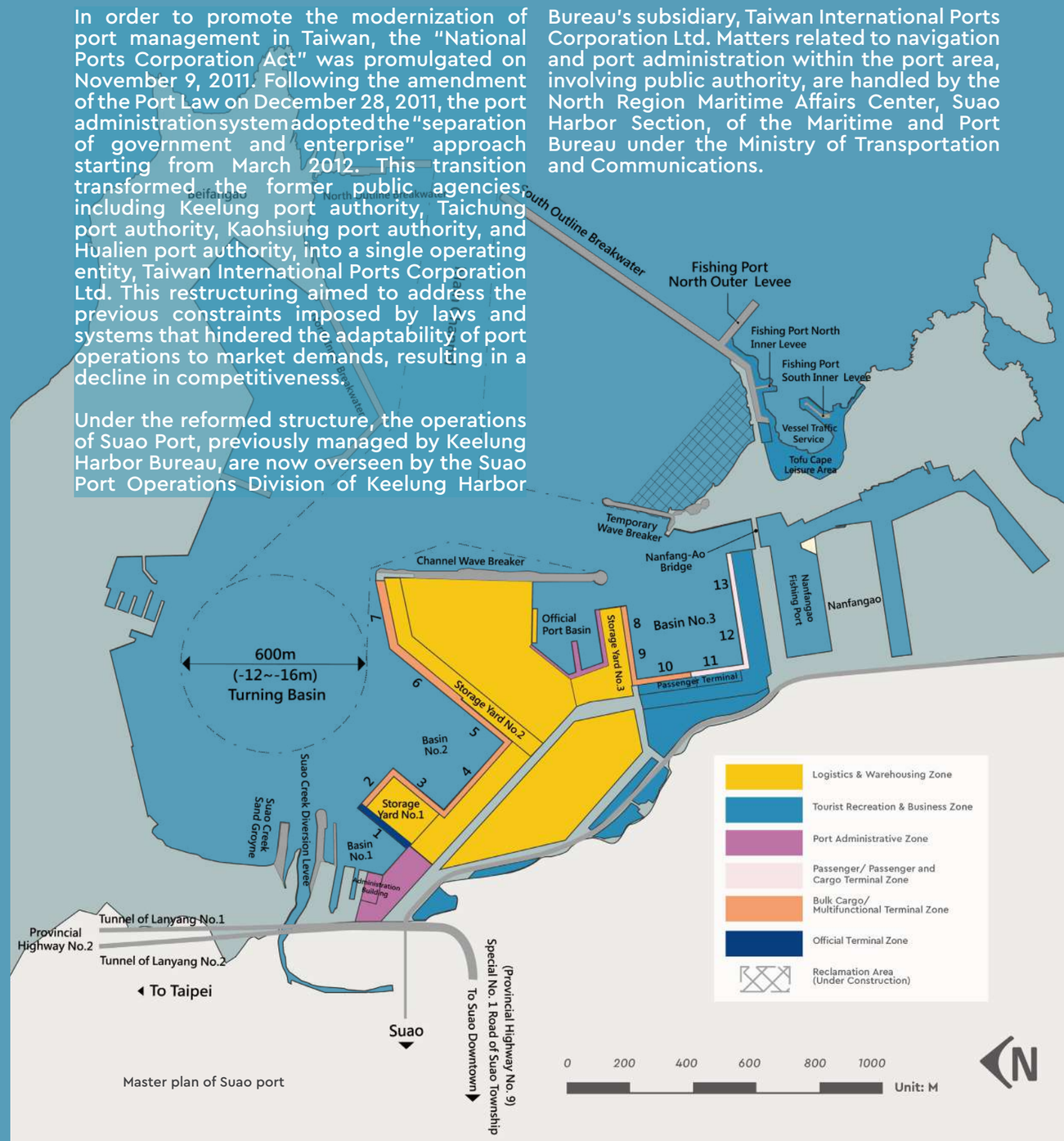


Geographical Map of Suao Port

2.2 Legal Status and Port Operators

In order to promote the modernization of port management in Taiwan, the "National Ports Corporation Act" was promulgated on November 9, 2011. Following the amendment of the Port Law on December 28, 2011, the port administration system adopted the "separation of government and enterprise" approach starting from March 2012. This transition transformed the former public agencies, including Keelung port authority, Taichung port authority, Kaohsiung port authority, and Hualien port authority, into a single operating entity, Taiwan International Ports Corporation Ltd. This restructuring aimed to address the previous constraints imposed by laws and systems that hindered the adaptability of port operations to market demands, resulting in a decline in competitiveness.

Under the reformed structure, the operations of Suao Port, previously managed by Keelung Harbor Bureau, are now overseen by the Suao Port Operations Division of Keelung Harbor Bureau's subsidiary, Taiwan International Ports Corporation Ltd. Matters related to navigation and port administration within the port area, involving public authority, are handled by the North Region Maritime Affairs Center, Suao Harbor Section, of the Maritime and Port Bureau under the Ministry of Transportation and Communications.



Master plan of Suao port

2.3 Main Commercial Activities

Suao Port's commercial port area consists of a total of 13 piers, including 1 for port operations and 12 for specific purposes such as general cargo, coal, petroleum, cement, and chemicals. The main transportation focus of the port is bulk cargo. Within the port, various commercial activities take place, including cargo distribution, shipbuilding and maintenance, solar power/ energy storage generation, and general manufacturing.

Main Commercial Activities

Commercial Activities	
Aggregates (sand, gravel)	Repair
Marinas / Leisure	General manufacturing
Cargo Handling	
Dry bulk	Liquid bulk (non-oil)
Petroleum / Oil products	General cargo

2.4 Main Cargoes

In 2023 and 2024, the primary imported cargoes at the Port of Su-Ao included coal, limestone, slag, and steel billets. The main exported cargo was cement pipelines, followed by purified terephthalic acid (PTA), potassium sulfate, and iron oxide. Most of the cargo handling operations were conducted via direct alongside ship loading or unloading methods.

2023–2024 Main Import Cargoes of Port of Suao

Type	2023	2024	Comparison between 2023 and 2024	
			Actual Number	%
Coal	1,006,965	816,095	-190,870	-18.95
Para-Xylene	269,204	444,507	175,303	65.12
Slag	318,834	297,651	-21,183	-6.64
Steel Ingots	236,540	188,394	-48,146	-20.35

Unit:MT

2023–2024 Main Export Cargoes of Port of Suao

Type	2023	2024	Comparison between 2023 and 2024	
			Actual Number	%
Cement (via pipeline)	1,088,260	751,960	-336,300	-30.90
Pure P-Xylene Acid	62,685	90,276	27,591	44.02
Potassium Sulfate	17,279	15,244	-2,035	-11.78

Unit:MT

Business statistics 2023–2024

Business item		2023	2024	Comparison of changes in 2023 & 2024	
				Difference	%
Incoming and outgoing ships	Total number of ships (vessel)	727	805	78	10.73
	Total tonnage (ton)	9,690,945	9,592,080	-98,865	-1.02
Cargo throughput	Imported cargo (metric ton)	2,259,612	2,320,668	61,056	2.70
	Exported cargo (metric ton)	93,294	130,577	37,283	39.96
	Domestic cargo (metric ton)	1,353,600	1,171,403	-182,197	-13.46
	Total (metric ton)	3,706,506	3,622,648	-83,858	-2.26
Number of travelers	Total number of travelers (number of people)	-	3951	3951	-

03

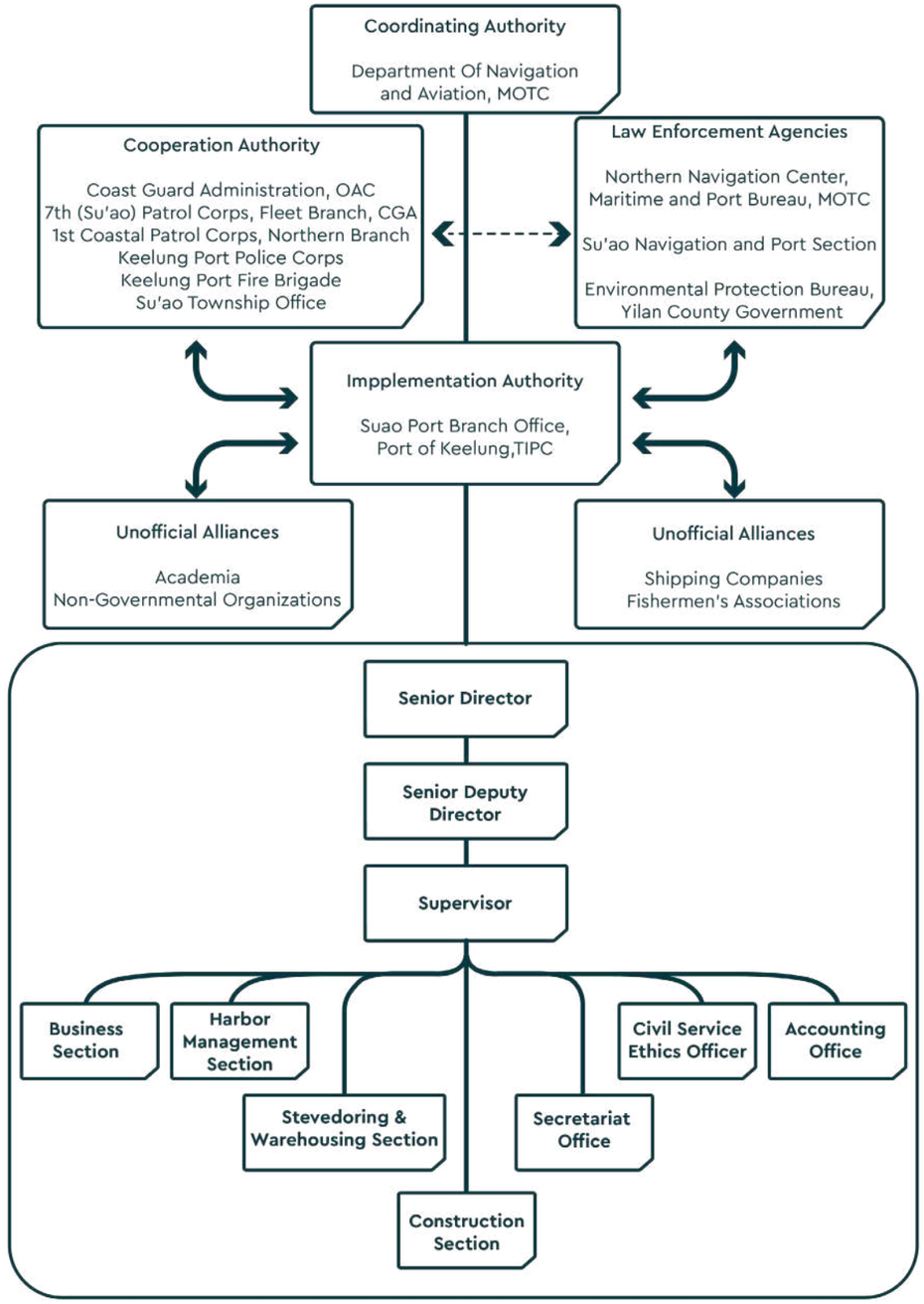
Environmental Management

3.1 Organization Structure

The Suao Port Branch Office is in charge of managing the environment of the Port of Suao. However, environmental aspects involve the division of responsibilities among differ-ent agencies. In addition to the Suao Port Branch Office, the Suao Port Branch Office of the Northern Maritime Affairs Center of Maritime and Port Bureau of MOTC, Environ-mental Protection Department of Yilan county Government, Environmental Protection Administration of Executive Yuan, Ocean Conservation Administration, Keelung Harbor Police Department Suao Unit of National Police Agency, Ministry of The Interior, Suao Harbor Subsection of Keelung Harbor Fire Brigade of National Fire Agency, Ministry of The Interior , Offshore Flotilla 7,Maritime Patrol Directorate General Of Coast Guard Administration, Executive Yuan.

The Suao Port Branch Office has 7 internal divisions, Duties of the sections/offices of Suao Port Branch Office are listed in the table below.

Department	Functions of the divisions at Taichung Port
Business Section	Customer service operation and management, invest-ment attraction, and port service and profit develop-ment
Construction Section	Port construction planning, design, commission, procurement, and supervision, and commercial port service maintenance
Harbor Management Section	Berth allocation, in-port ship traffic management, envi-ronmental protection, contamination prevention, labor safety and health ,port operation and management, and disaster prevention and rescue
Stevedoring and Warehousing Section	Stevedoring and weighing, passenger liner service, labor safety and health, and port service maintenance and management
Accounting Office	Budget, income, and expenditure administration, income and expenditure auditing, and annual and monthly report examinations
Secretariat Office	Branch office human resources and property manage-ment, public relations, cashiers, personnel affairs, and employee benefits
Civil Service Ethics Office	Service ethics formulation and promotion, corruption prevention and investigation, service ethics examina-tion and reward, confidential information protection, and security system maintenance



Authorization of environmental management units

3.2 Relevant International Regulations

Competent Authority		Laws Title		Central Competent Authority	Local Law Enforcement Agencies
Sectors in the Ministry of transportation and communications		The Commercial Port Law	2023/06/28	Ministry of Transporation and Communications	Suao Port Division of North Maritime Affairs Center, Maritime and Port Bureau, MOTC
		Shipping Act	2018/11/28		
		The Law Of Ships	2014/01/22		
		Act for the Establishment and Management of Free trade zones	2019/01/16		
Sectors related to agricultural		Wildlife Conservation Act	2025/02/18	Ministry of Agriculture	Yilan county Agriculatture Departmant
Sectors in the Ministry of the Interior		Fire Services Act	2024/11/29	Ministry of the Interior National Police Agency	Yilan county Fire Bureau
Sectors related to environmental protection		Marine Pollution Control Act	2023/05/31	Ocean Affairs Council	Ocean Conservation Administration
		Basic Environment Act	2002/12/11	Ministry of Environment	Environmental Protection Bureau, Yilan county Government
		Air Pollution Control Act	2002/12/11		
		Water Pollution Control Act	2018/08/01		
		Waste Disposal Act	2018/06/13		
		Environmental Impact Assessment Act	2017/06/14		
		Environmental Education Act	2023/05/03		
		Noise Control Act	2017/11/29		
		Indoor Air Quality Management Act	2021/01/20		
		Toxic and Concerned Chemical Substances Control Act	2011/11/23		
		Soil and Groundwater Pollution Remediation Act	2019/01/16		
		Climate Change Response Act	2010/02/03		
		Environmental Agents Control Act	2023/02/15		
		Public Nuisance Dispute Mediation Act	2009/06/17		Public nuisance in Yilan County Government Dispute Mediation Committee
Intersectoral		Disaster Prevention and Protection Act	2022/06/15	Ministry of Interior	Yilan county Government

3.2 Stakeholders

As an important enterprise in Suao Towhship, the Suao Branch Office of TIPC uses a variety of methods to communicate with stakeholders. Their needs and expectations are gathered and incorporated into the company's policy. The Port of Suao believes that good communications with the stakeholders help identify key environmental issues and create value. Therefore, it collected surveys to help formulate the Port's Environmental Objectives.

Sector	Environmental Concerns	Relevant Environmental Objectives
Government	Port area air quality, dust, hazardous cargo management, vessel emissions, climate change, and port water quality	Issue 1: Air Quality Issue 2: Dust Issue 3: Port Waste Management Issue 4: Hazardous Cargo Management Issue 5: Vessel Emissions Issue 6: Cargo Spillage Prevention Issue 9: Climate Change
Employee	Overall environmental quality management of the port area	Issue 1: Air Quality Issue 2: Dust Issue 3: Port Waste Management Issue 5: Vessel Emissions Issue 8: Relationship with the Local Community Issue 9: Climate Change Issue10: Port Water Quality
Clients	Air quality, dust, hazardous cargo management, vessel emissions, cargo spillage prevention, port development, and port water quality	Issue 1: Air Quality Issue 2: Dust Issue 4: Hazardous Cargo Management Issue 5: Vessel Emissions Issue 6: Cargo Spillage Prevention Issue 7: Port Development Issue10: Port Water Quality
Community	Air quality, vessel pollution emissions, port area environmental cleanliness, and cargo management	Issue 1: Air Quality Issue 3: Port Waste Management Issue 4: Hazardous Cargo Management Issue 5:Vessel Emissions

Port of Suao

Environmental Issues

Top 10

04

State of the Environment

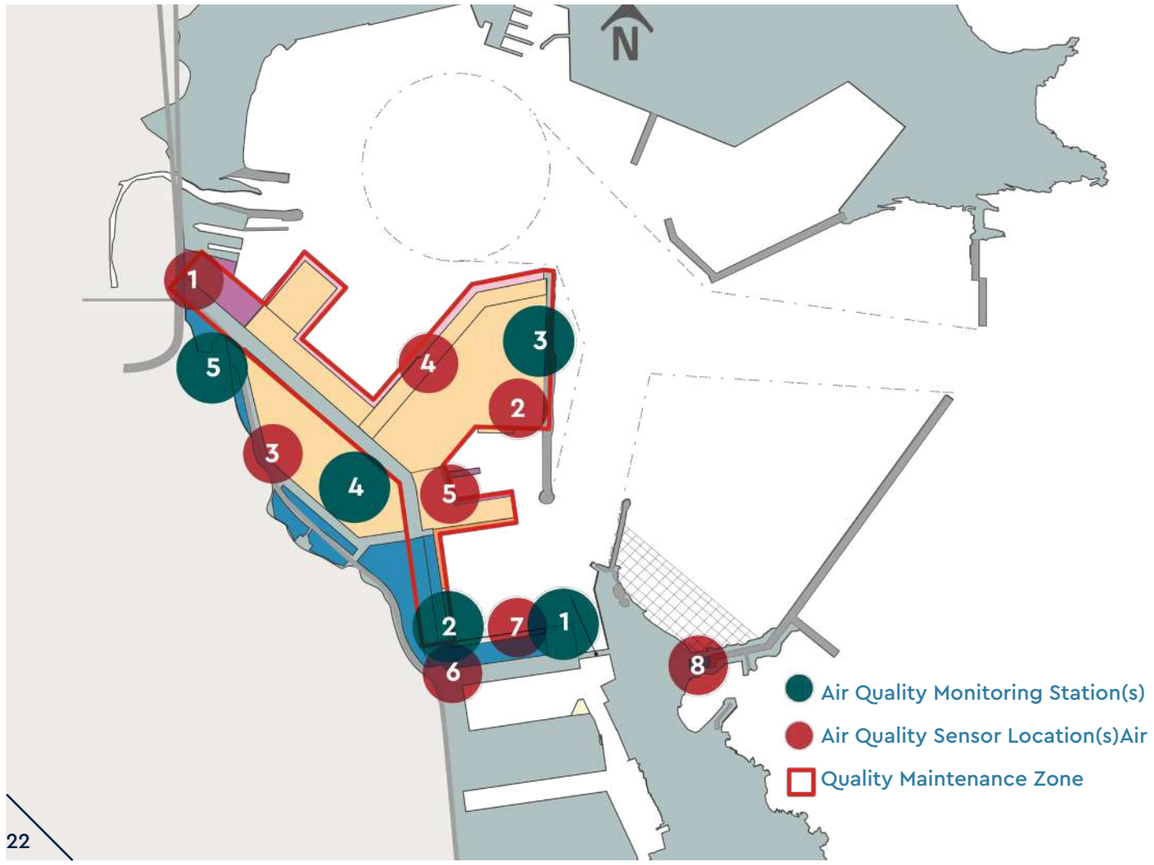
4.1 Air quality

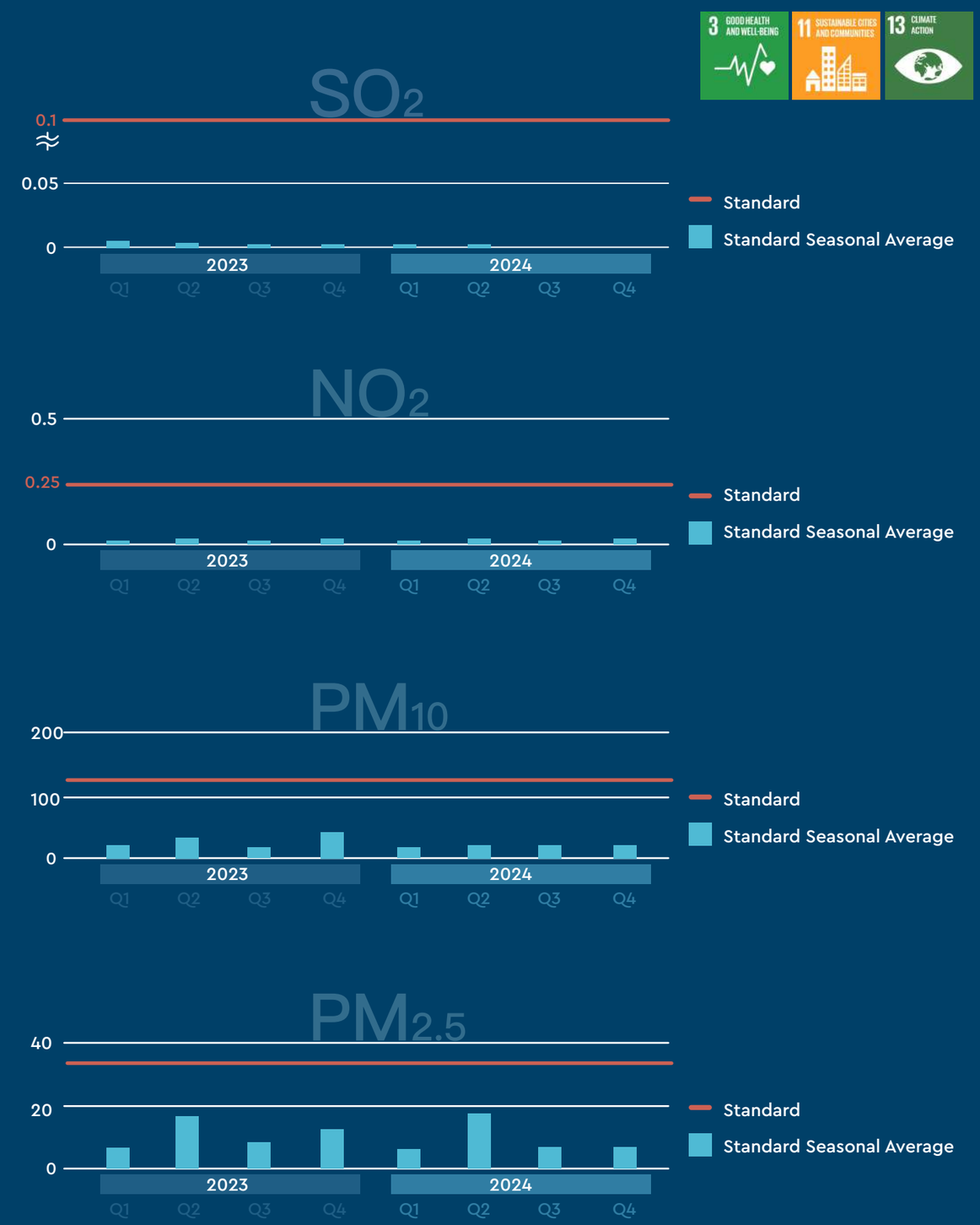
The primary sources of air pollution at the Port of Su-Ao include exhaust emissions from fuel combustion by vessels within the port, vehicle movement emissions, and suspended particulate matter generated during cargo handling operations. Therefore, maintaining air quality in the port area has long been a critical issue for the Su-Ao Port Operations Center and the surrounding community.

Since 2022, the Su-Ao Port has collaborated with the Environmental Protection Bureau of Yilan County Government to repeatedly promote self-inspection among diesel vehicle operators entering and exiting the port at the Bureau's diesel vehicle emissions testing station. In 2023, the port area was designated as Yilan's first "Air Quality Protection Zone," prohibiting the entry of diesel vehicles that do not meet the testing standards of the Environmental Protection Bureau. This initiative aims to reduce health exposure risks and improve air quality. Additionally, in 2022, the Port of Su-Ao installed eight air quality sensors to continuously monitor ambient temperature, humidity, PM2.5, SO_2, and NOx levels in the port area.

Routine Air Quality Monitoring

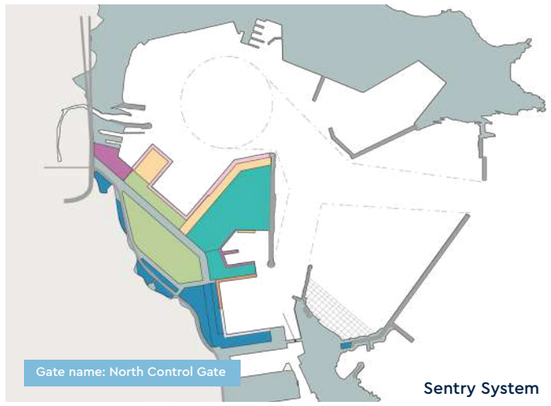
The Port of Su-Ao has established five designated monitoring locations for routine air quality assessment. The monitored pollutants include suspended particulates (PM2.5 and PM_{10}), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2), in compliance with the air quality monitoring standards announced by the Environmental Protection Administration. These efforts aim to safeguard the health of port personnel and nearby community residents. From 2023 to 2024, the air quality compliance rate reached 100%.





4.1 Air quality

When container trucks or bulk cargo trucks pass through the automated vehicle lanes, the Automatic Gate Sentry Post Control System can automatically capture license plate numbers, container numbers, and RFID personnel pass data. The system instantly cross-checks this information with cargo dispatch records to assist harbor police in verifying the identity of drivers, vehicles, and containers. This process significantly expedites port entry and exit procedures and greatly enhances port operational efficiency.



Sentry System

Since its implementation in 2013, the Automatic Gate Sentry Post Control System at the Port of Su-Ao has yielded notable air pollution reduction benefits. These include reduced vehicle idle time, which significantly lowers exhaust emissions during queuing, thereby improving air quality. Additionally, the digitalization of forms has led to substantial savings in paper usage, contributing to resource conservation.


Sentry System

Sentry System energy saving efficiency

item	Actual energy saving efficiency
Reduce vehicle pollution	• Previously, manual submission of paper documents to harbor police required approximately 4 minutes (about 240 seconds). Based on on-site measurements and statistics, the use of the Automatic Gate Sentry Post Control System reduced the sensing and passage time to only 20 seconds, achieving a total reduction of around 220 seconds. This effectively reduced truck idling exhaust emissions by 91.6%.
Improve energy efficiency	• Electronic forms are used for cargo truck entry and exit operations at the port. • Automated recognition systems identify license plates, driver identification, and vehicle permits. • Electronic display panels are utilized to confirm the type and quantity of cargo carried by each truck. • In 2023, the total number of vehicle passages through the Automatic Gate Sentry Post Control System reached 185,038 trips, resulting in a reduction of 98.48 metric tons of CO_2 emissions. • In 2024, the total number of vehicle passages increased to 204,985 trips, resulting in a reduction of 109.16 metric tons of CO_2 emissions.

4.2 Dust Emission Control

The primary operations of the Su-Ao Port Operations Center involve the transportation of coal, fuel oil, slag, steel billets, cement, and other cargoes and raw materials. In addition, the loading and unloading of aggregates and other bulk cargoes often generate fugitive dust. As such, port-generated dust is considered one of the major environmental concerns and has been listed among the top ten key environmental issues of the port.
To control fugitive dust, reduce air pollution, and safeguard both the working environment in the port and the quality of life in the surrounding urban areas, the Su-Ao Port Operations Center has adopted the following fugitive dust control strategies:

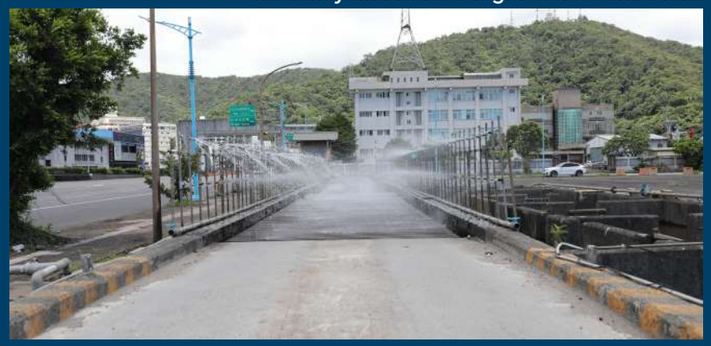
Suao Port Fugitive Dust Control Measures

Item	Implementation Details	
Cargo Handling Operations	• Operate with automated coal unloaders • Assist cargo handling operators in installing fixed and mobile dust screens • Install mobile sprinkler systems • Use underground conveyor pipelines to directly transport raw materials to industrial facilities/centers	• Fugitive Dust Suppression Facilities at the Port of Su-Ao: • 15 sets of mist sprayers • 24 dust screens • 3 automated coal unloaders
Vehicle Access Control	• Integrate the locations of weighbridges and vehicle washing stations to improve traffic flow efficiency • Install electric lifting gates to enhance the cleaning performance of vehicle washing stations • Inspect and supervise compliance with the requirement to lower the dust cover at least 15 cm over the truck bed and ensure vehicle body cleanliness • Clean internal and surrounding access roads in the port area to maintain roadway cleanliness • From 2023 to 2024, the coverage rate of dust covers on top of vehicles consistently reached 100%	


Using underground conveyor pipelines to transport raw materials reduces fugitive dust emissions


Automated coal unloaders and mist sprayers: enhance operational efficiency and reduce fugitive dust emissions


Install dust screens at cargo handling piers for fugitive particulate materials


Sensor-activated vehicle washing station (utilizing recycled spring water)

4.3 Port Waste Classification and Resource Recycling

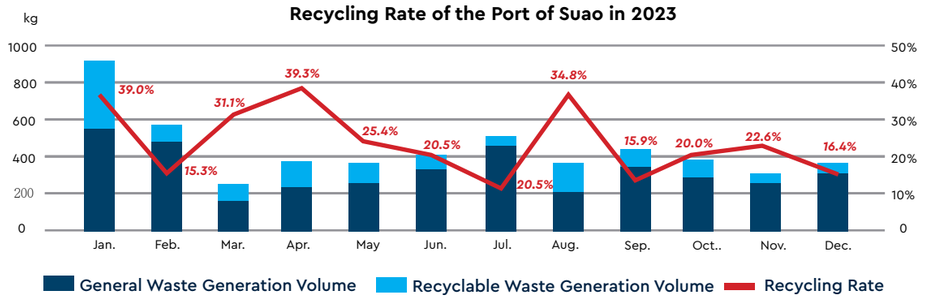
When container trucks or bulk cargo trucks pass through the automated vehicle lanes, the Automatic Gate Sentry Post Control System can automatically capture license plate numbers, container numbers, and RFID personnel pass data. The system instantly cross-checks this information with cargo dispatch records to assist harbor police in verifying the identity of drivers, vehicles, and containers. This process significantly expedites port entry and exit procedures and greatly enhances port operational efficiency.

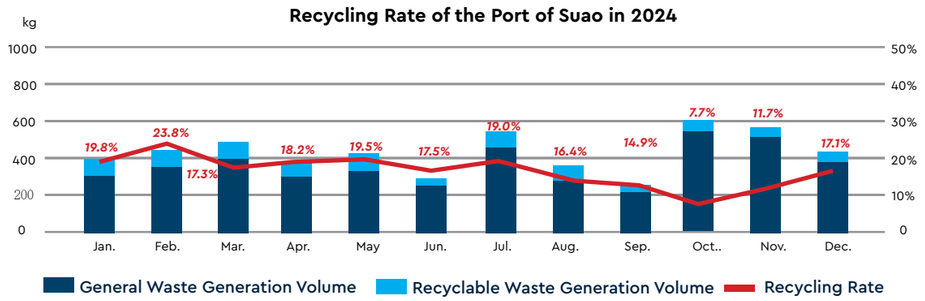
Since its implementation in 2013, the Automatic Gate Sentry Post Control System at the Port of Su-Ao has yielded notable air pollution reduction benefits. These include reduced vehicle idle time, which significantly lowers exhaust emissions during queuing, thereby improving air quality. Additionally, the digitalization of forms has led to substantial savings in paper usage, contributing to resource conservation.

Item / Year	2023	2024
Total Waste Generated (kg)	5,222.7	5,247.1
General Waste Disposed (kg)	3,915.9	4378
Recyclables Collected(kg)	1,306.8	869.1
Recycling Rate (%)	25%	16.6%

Removal of large volumes of waste generated by typhoons

Removal of marine surface debris





4.4 Port Hazardous Cargo Management

Operators engaged in the storage and transportation of hazardous cargo at the Port of Su-Ao are enterprises with a higher potential for environmental risks. In the event of an emergency, spilled materials may pose serious threats to the ecosystem and nearby residents. Therefore, the effective management of hazardous materials and the enhancement of port safety are considered key environmental issues for the Port of Su-Ao.

To maintain port safety and ensure sound environmental management, the Su-Ao Port Operations Center has installed CCTV systems to monitor port operations around the clock. In addition, personnel are regularly dispatched to conduct environmental inspections within the port area. Upon detection of any pollution, immediate on-site advisories are issued, or the incident is reported to competent authorities for enforcement and penalties. Furthermore, when signing contracts with port tenants, the Su-Ao Port Operations Center explicitly requires them to comply with environmental regulations and to establish appropriate pollution prevention measures.

The Su-Ao Port Operations Center follows the "Chemical Spill Emergency Response Plan of the Keelung Branch" to respond to hazardous chemical spill incidents or potential threats within the international commercial port area. It also coordinates with the Ministry of Transportation and Communications and the Ministry of Environment in emergency operations to mitigate disaster impacts, safeguard environmental and human safety, maintain normal port operations, and minimize the environmental and safety risks posed by chemical incidents.

Item / Year	2023	2024
Environmental Inspections	686	660
Joint Supervisions	13	12

The Port of Su-Ao monitors port conditions in real time through CCTV surveillance systems

Functionality test of the smart emergency call tower

Pre-Lunar New Year joint inspection and supervision operations

Power audit conducted by Fu-Wei Power Corporation

4.5 Reduction of Vessel Berthing Pollution

n addition to fugitive dust generated during cargo handling operations and emissions from vehicle movements within the port area, exhaust gases from vessel fuel combustion are also a major source of air pollution in ports. To effectively reduce vessel exhaust emissions within the port area, the Su-Ao Port Operations Center has implemented an environmentally friendly vessel policy aimed at improving air quality, protecting the health of port employees, surrounding communities, and the environment. In response to climate change, the port has also adopted measures such as vessel speed reduction and the use of Alternative Maritime Power (AMP) systems to lower greenhouse gas emissions.

Use of low-sulfur diesel

All service vessels operating within the Port of Su-Ao have adopted 100% use of ultra-low sulfur diesel with a sulfur content below 10 ppm, aiming to reduce sulfur dioxide emissions during voyages and effectively improve ambient air quality. In 2023 and 2024, approximately 132,063 liters and 164,403 liters of ultra-low sulfur diesel were used, respectively. It is estimated that, compared to traditional heavy fuel oil, this resulted in a reduction of 65.9 metric tons and 82.04 metric tons of carbon dioxide emissions in each respective year.

Vessel Speed Reduction Control

To reduce air pollution from vessels, ships entering and leaving the Port of Su-Ao are encouraged to reduce their speed to below 12 knots within a 20-nautical-mile radius of the port. The port authority has promoted the Vessel Speed Reduction (VSR) policy since 2015 and officially implemented the program in 2016. In 2021 and 2022, the vessel speed reduction compliance rates reached 81% and 80%, respectively. Through this initiative, the Port of Su-Ao has gradually improved air quality by mitigating emissions from vessel operations.

Government-operated tugboats use 100% low-sulfur diesel

Vessel Speed Reduction upon Port Entry

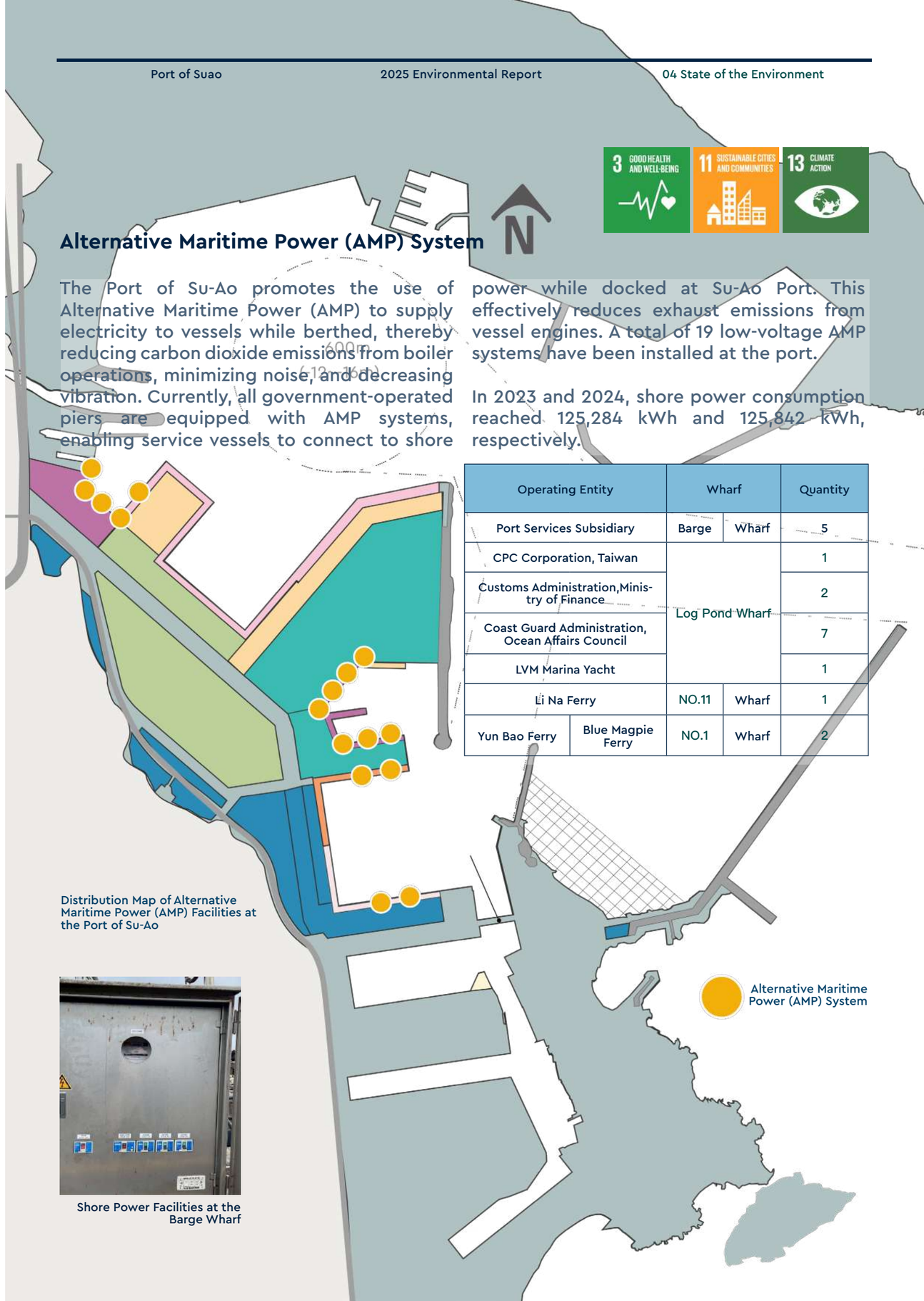
Vessel Use of Shore Power

Alternative Maritime Power (AMP) System

The Port of Su-Ao promotes the use of Alternative Maritime Power (AMP) to supply electricity to vessels while berthed, thereby reducing carbon dioxide emissions from boiler operations, minimizing noise, and decreasing vibration. Currently, all government-operated piers are equipped with AMP systems, enabling service vessels to connect to shore power while docked at Su-Ao Port. This effectively reduces exhaust emissions from vessel engines. A total of 19 low-voltage AMP systems have been installed at the port.

In 2023 and 2024, shore power consumption reached 125,284 kWh and 125,842 kWh, respectively.

Operating Entity	Wharf		Quantity
Port Services Subsidiary	Barge	Wharf	5
CPC Corporation, Taiwan	Log Pond Wharf		1
Customs Administration,Ministry of Finance			2
Coast Guard Administration, Ocean Affairs Council			7
LVM Marina Yacht			1
Li Na Ferry	NO.11	Wharf	1
Yun Bao Ferry / Blue Magpie Ferry	NO.1	Wharf	2



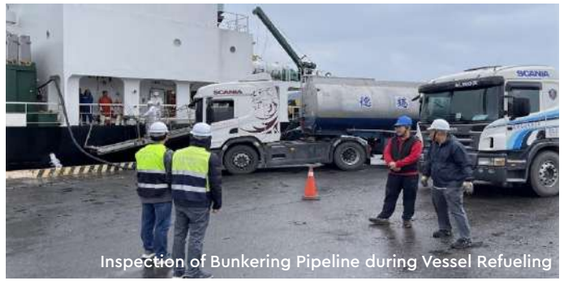
Distribution Map of Alternative Maritime Power (AMP) Facilities at the Port of Su-Ao

Shore Power Facilities at the Barge Wharf

4.6 Cargo Spillage Prevention

The operational area of the Port of Su-Ao is adjacent to several ecologically sensitive areas, including the Su-Ao Fishery Resource Conservation Zone, Wuweigang Wetland, Lanyang River Estuary Wetland, and the Su-Ao and Sanxianjiao Aquatic Flora and Fauna Breeding and Conservation Zones. To strengthen water body protection in the port and implement pollution prevention measures for high-risk operations, the Su-Ao Port Operations Center has established a comprehensive Marine Oil Pollution Emergency Response Plan. During the port entry and berthing of chemical and oil tankers, relevant units are required to deploy oil containment booms throughout the entire docking process to prevent potential environmental impacts from accidental spills.

In 2023 and 2024, there were 64 and 56 chemical and oil tankers, respectively, that entered or departed the port. All of them complied with the mandatory boom deployment requirement, achieving a 100% deployment rate—demonstrating the Operations Center's strong commitment to pollution prevention practices. In addition to boom deployment, the wharf operational areas are equipped with surveillance camera systems. Personnel are required to inspect oil pipelines and port waters every two hours. During actual oil transfer operations, additional staff are stationed on site to enhance operational safety and strengthen pollution prevention efforts, thereby strictly controlling cargo spillage risks at the source.


Inspection of Bunkering Pipeline during Vessel Refueling

Vessel Bunkering


Deployment of Oil Containment Booms during Vessel Bunkering

4.7 Landside Development of the Port

In addition to efforts in environmental protection such as water and air quality management, the Su-Ao Port Operations Center places equal importance on landside development within the port area. Development initiatives are aligned with the needs of local governments and surrounding communities, aiming to achieve the concept of sustainable co-existence with the public. These initiatives are categorized by purpose, including alignment with national policies, enhancement of TIPC's corporate image, expansion of port green spaces, safeguarding and increasing port land resources, improving local transportation, beautifying intersections, revitalizing aging facilities, and promoting industrial development within the port area.

The Su-Ao Port Passenger Terminal was completed in November 2023. In June 2024, it welcomed its first cruise vessel, Nippon Maru, followed by the Coral Geographer in October. As of that time, the total number of cruise visitors reached 3,951, contributing to the development of tourism, local employment opportunities, and enhancing the port's economic performance and overall image.

In terms of port greening, the Operations Center continued its existing environmental policies. Additional planting in 2023 and 2024 brought the total green space area in the port to 10.748 hectares, with the ongoing implementation of the "tree relocation instead of tree removal" strategy.

Objective	Project Title
Alignment with National Policies	• Commissioning of the Su-Ao Port Passenger Terminal
Expansion of Green Spaces within the Port	• Tree–Planting Activities and Installation of Planter Boxes
Enhancement of TIPC's Corporate Image	• Renovation of the Su–Ao Port Administration Building
Securing and Expanding Port Land Resources	• Reinforcement and Rock Revetment Repair of the South Breakwater • Land Reclamation Using Dredged Sediments
Promotion of Industrial Development within the Port	• Lease of Port Land by Fu–Wei Power Corporation

In response to the growing demand for green energy development and stable energy storage across Taiwan, the Su-Ao Port Operations Center introduced Fu-Wei Power Corporation to establish a 50 MW energy storage system on land plots No. 89–1, 89-2, and 89–3 of the Nanzheng Section within the port area. The site is located adjacent to the TPC Su-Dong Substation, offering both geographical and industrial advantages. Following the signing of the agreement in August 2022, the system was officially connected to the power grid in April 2024. In the future, it will provide ancillary services in coordination with Taiwan Power Company (TPC) to enhance the stability of the regional power grid.

4.8 Relationship with Local Communities

The Suao Port Operations Center regularly publishes its operational performance on the official website of the Keelung Branch of Taiwan International Ports Corporation (TIPC), allowing the public to stay informed about the port's current status. In addition, the Su-Ao Port website provides open access to port-related information and offers a complaint channel, serving as a bridge for communication with local communities. This mechanism helps the port authority better understand residents' perspectives and alleviate concerns about port operations.

To promote the local economy, the Operations Center collaborates with local cargo handling operators and mooring service providers. Each year, the port organizes an Environmental Cleanup Day, inviting port operators, community development associations, and local residents to participate in environmental education and friendly cleanup efforts. These activities help protect the surrounding environment and strengthen engagement between the Su-Ao Port Operations Center, local authorities, and civil groups—fostering regional harmony between the port and the community.

In addition, the port regularly provides public space, parking areas, and office facilities to government agencies or local organizations for event hosting, thereby building diverse partnerships and jointly advancing a sustainable vision.

Usage of Rental Space for Events

Year	Event	Organizer	Time
Annually	• Traffic and Parking Guidance in Nanfang'ao during Lunar New Year • Lanyang Mazu Cultural Festival • Sua o Ocean Carnival • Dragon Boat Festival, Tomb-Sweeping Day, and Mid-Autumn Festival Holidays • Salute to the Sea — Port Cleanup Activity • Tofu Cape Waters	• Suao Township Office • Yilan County Government • Suao Township Office • Suao Township Office • Suao Port Operations Center • Yilan County Government	• 5 Days • 3 Days • 1 Days • 1-2 Days • All year
2023	• Marine Debris & Cow Dung Eco-Aesthetics – Parent-Child Workshop	• World Vision Taiwan	2023/07/14
2024	• Suao Port Marine Debris DIY and Marine Environmental Education Activity	• Suao Port Operations Cente	2024/06/30

Lanyang Mazu Cultural Festival


Invited Swordfish Formation Welcome Performance by Nan-An Junior High School

2023 Marine Debris & Cow Dung Eco-Aesthetics Parent-Child Workshop


Su-Ao Port Marine Debris DIY Activity

Su-Ao Port Cruise Ship Sketching and Coloring Competition Entries


Su-Ao Port Marine Debris DIY and Marine Environmental Education Activity

4.9 Climate Change Response

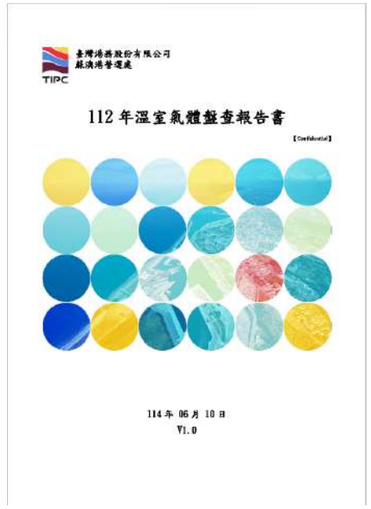
According to the Sixth Assessment Report released by the Intergovernmental Panel on Climate Change (IPCC), the global temperature is projected to rise by 1.5°C within the next 20 years, potentially triggering severe disasters such as extreme weather events and loss of biodiversity. In response to the challenges of climate change and sustainable development, the Port of Su-Ao has implemented various measures to manage greenhouse gas emissions and energy usage both inside and outside the port area. These measures include conducting a greenhouse gas inventory, implementing the "Four-Savings" energy project, and promoting emission reduction strategies for vessels and vehicles.

Greenhouse Gas Inventory

Since 2021, the Port of Su-Ao has been conducting its greenhouse gas inventory in accordance with the international standard ISO 14064-1. Emission sources are identified by departmental categories: emissions from transportation activities (official vehicles), firefighting operations, and engine power generation are classified under Category 1; purchased electricity is classified under Category 2; and emissions from employee commuting, vessel entry and departure, cargo truck movements, and waste disposal activities are classified under Categories 3 through 5.

Emission sources	2023	2024
Category 1	2.88	3.28
Category 2	399	412

Unit: Metric Tons of CO_2 Equivalent



2023 Greenhouse Gas Inventory Report

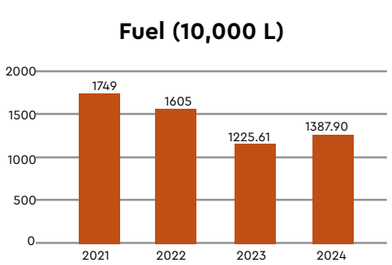
Mountain Spring Water Storage Facility

Resource Utilization

The Port of Su-Ao has implemented the "Four-Savings" (saving electricity, fuel, water, and paper) project to monitor the consumption of port resources and conducts quarterly performance reviews. The Port of Su-Ao has historically managed resources such as water, electricity, fuel, and paper. Since 2016, water resource management strategies have been improved, including the construction of a 500-ton ecological pond to enhance water efficiency.

To minimize resource consumption and move towards sustainable development, the Port of Su-Ao has comprehensively implemented an environmental accounting system to accurately record water, electricity, fuel, and paper usage within the port, and has also established a carbon reduction office. Resource usage statistics for the years 2023-2024 are detailed as follows:

Item	2023	2024
Oil Consumption (liters)	1,749	1,605
Electricity Consumption in the Port (kWh)	828,773	803,615
Water Consumption in the Port (cubic meters)	6,216	4,445
Paper Usage (500 sheets/pack)	119.3	119



(In the past two years, official vehicles have been gradually electrified, reducing fuel consumption.)

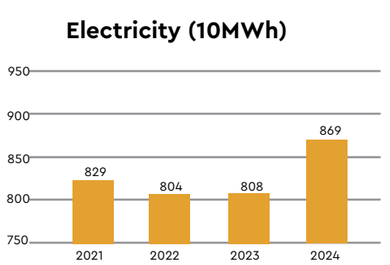
Renewable Energy

Since 2016, the Port of Su-Ao has begun leasing operations for photovoltaic solar energy systems. As of 2021, three solar power generation systems have been installed: the rooftop of Pihsiang Electric Vehicle Factory (1,996.4 kW), Warehouse No. 4 rooftop (500 kW), and Warehouse No. 15 rooftop (332 kW), with a combined generation capacity exceeding 2,800 kWp.

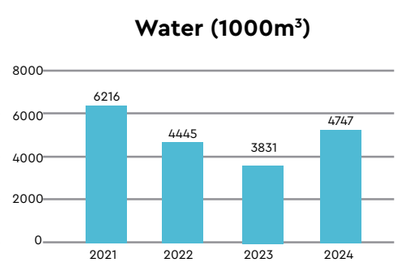
Photovoltaic System on the Roof of Pihsiang Machinery

Warehouse No. 15

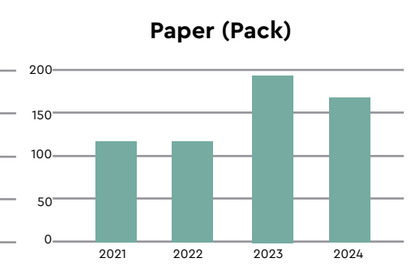
Photovoltaic Systems	Power Generation (kWh)		Carbon Reduction (metric tons CO_2e)	
	2023	2024	2023	2024
Pihsiang Electric Vehicle Factory	2,062,623	1,737,476	1,018	823
Warehouse No. 4	539,462	461,847	266.5	218.7
Warehouse No. 15	231,820	249,610	114.5	118.3
Total	2,833,905	2,448,933	1399	1160



(In the past two years, the official opening of the Su-Ao Port Passenger Terminal, renovation of the Port Administration Building, and electrification of transportation equipment have led to an increase in electricity consumption.)



(In the past two years, water consumption has decreased compared to 2021 and remained stable relative to 2022.)



(In the past two years, the volume of official business has increased compared to the pandemic-affected years, resulting in higher paper consumption.)

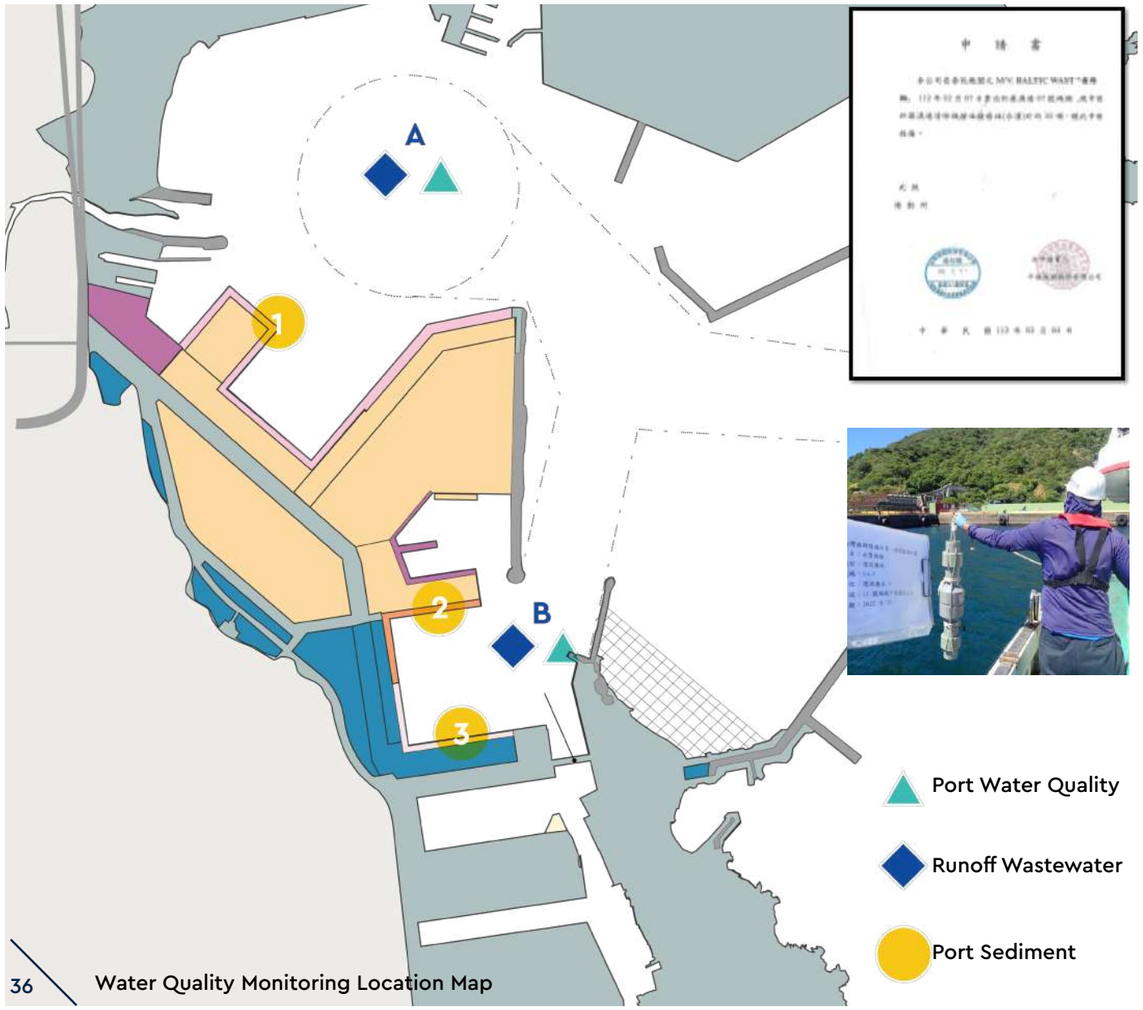
4.10 Maintenance of Port Water Quality

To mitigate the impact of port activities on surrounding water quality and ecosystems, the Port of Su-Ao has implemented multiple measures, including adhering to the "Keelung Port Guidelines for the Removal of Oily Waste from Ships" to ensure the proper collection of ship-generated wastewater and oily water. This helps prevent marine pollution from ship discharges. In 2023–2024, oily wastewater was collected from two vessels, with a total recovery volume of 39.48 metric tons.

Port Water Quality Monitoring

Regular monitoring of port water quality, stormwater runoff, and seabed sediments is conducted to ensure that the water environment within the port remains free from pollution.

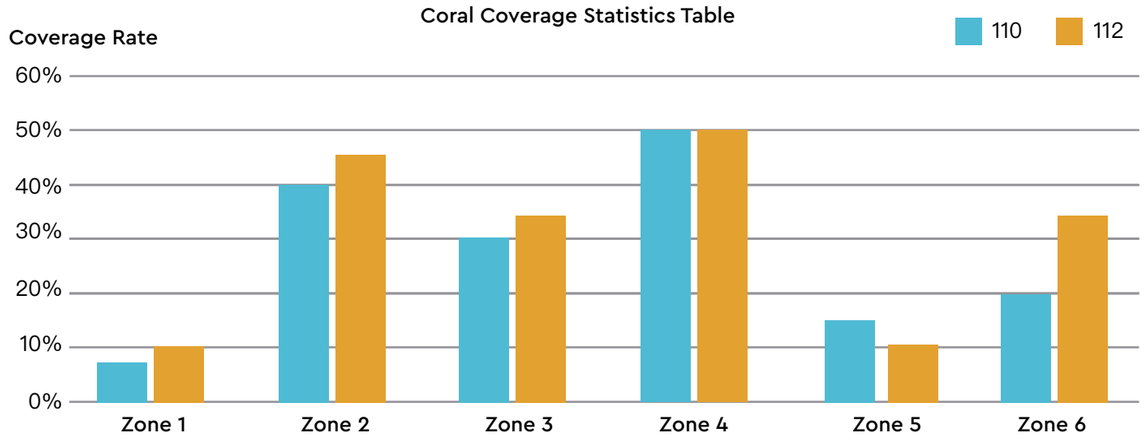
The Port of Su-Ao carries out routine annual monitoring of port water quality and stormwater runoff. The monitoring results for 2023–2024 indicate that the water quality and stormwater runoff in the port area comply with Class B marine environmental quality standards.



Water Quality Monitoring Location Map

Current Status of Coral Survey

Located in the southern waters of Su-Ao Port, the Dofu Cape area features clean water and rocky coastal terrain that is conducive to coral growth. The Port of Su-Ao regularly commissions professional diving teams to conduct coral ecological surveys in the Dofu Cape waters. According to the 2023 survey results, the highest coral coverage in the area reached 50%, and five out of the six survey sites showed an increase in coral coverage compared to the previous survey.








Environmental Performance Indicators

Significant environmental issues of Suao Port		Indicator	Calculation method		Target value	Indicator presentation (calculation details)	
						2023	2024
1	Air quality	Air quality compliance rate($PM_{2.5}$,PM_{10}, SO_2, NO_2) Note: Background values have been subtracted.	The compliance rate of air quality monitoring stations within the port with the "Air Quality Standards"		Compliance rate of daily averages with air quality standards in the port. • $PM_{2.5}$:100% • PM_{10}:100% • SO_2:100% • NO_2:100%	Compliance rate of daily averages with air quality standards in the port. • $PM_{2.5}$:100% • PM_{10}:100% • SO_2:100% • NO_2:100%	Compliance rate of daily averages with air quality standards in the port. • $PM_{2.5}$:100% • PM_{10}:100% • SO_2:100% • NO_2:100%
		Installation of automated gate sentry systems reduces truck idling time, thereby lowering exhaust emissions and paper consumption through digitalized processing	• Difference in idling time between manual clearance and automated gate sentry system and the corresponding reduction in exhaust emissions • Gasoline vehicles emit 0.145 kilograms of CO_2 per minute during idling		• Idling time reduced by up to 60% • CO_2 emissions reduced by over 50 metric tons	• Previously, manual paper-based document submission to port police took approximately 4 minutes (about 240 seconds). Based on on-site measurements and statistics, the automated gate sentry system reduced the processing time to just 20 seconds, cutting idling time by approximately 220 seconds and effectively reducing truck exhaust emissions by 91.6%. • In 2023, a total of 185,038 vehicles passed through the automated gate sentry system, resulting in a reduction of approximately 98.48 metric tons of CO_2 emissions.	• Previously, manual paper-based document submission to port police took approximately 4 minutes (about 240 seconds). Based on on-site measurements and statistical analysis, the automated gate sentry system reduced the processing time to just 20 seconds, cutting idling time by approximately 220 seconds and effectively reducing truck exhaust emissions by 91.6%. • In 2024, a total of 204,985 vehicles passed through the automated gate sentry system, resulting in a reduction of approximately 109.16 metric tons of CO_2 emissions.
2	Dust	Pollution control measures during cargo handling, including the quantity and usage rate of mobile enclosed loading/ unloading equipment	Annual installation and utilization rate of pollution control facilities in the port.		Maintenance or update of the quantity and utilization rate of pollution control facilities.	Coal: Automatic conveyer: 3 Utilization rate reached 100%	Three automatic coal unloaders Utilization rate: 100%
						Cement: Enclosed negative pressure pipeline Utilization rate reached 100%	Negative-pressure enclosed pipeline conveyance Utilization rate: 100%
						Cement clinker: Each grabber must accompany with sprinklers and dust nets. There are currently 15 sprinklers and 24 dust nets Utilization rate reached 100%	Grab buckets equipped with dust screens and mist sprayers 15 sets of mist sprayers 24 dust screens Utilization rate: 100%
		Controlled driving routes for cargo handling trucks require passage through truck washing stations	Percentage of trucks undergoing truck wash when passing through designated routes.		100% of trucks undergoing truck wash when passing through designated routes.	Ratio of cargo truck that goes through car wash stations: 100%	Ratio of cargo truck that goes through car wash stations: 100%
		Dust screens must be lowered over truck beds before exiting the port	Percentage of trucks with dustproof nets placed in the truck bed before departure = (Number of trucks with dustproof nets placed in the truck bed / Total number of trucks departing) x 100% Note: Empty trucks are excluded.		95% of trucks have dustproof nets placed in the truck bed before departure.	• The total number of trucks for miscellaneous cargo is 172,245. • The percentage of trucks with dustproof nets is 100%.	• The total number of trucks for miscellaneous cargo is 172,245. • The percentage of trucks with dustproof nets is 100%.
3	Port Waste Management	Resource (iron, paper, glass, metal, plastic) recycling rate.	Port land-based general waste resource recycling rate = (Weight of recycled materials / Total generated quantity × 100%)		• Annual recycling rate reaches 10%.	• Recycled volume: 600.1 kg • Total waste generated: 2,189.1 kg • Annual recycling rate: 600.1 kg ÷ 2,189.1 kg × 100% = 27.4%	• Resource recycling volume: 283.1 kg • Total waste generated: 1,879.1 kg • Annual recycling rate: 283.1 kg ÷ 1,879.1 kg × 100% = 15%

Environmental Performance Indicators

Significant environmental issues of Suao Port		Indicator	Calculation method		Target value	Indicator presentation (calculation details)	
						2023	2024
4	Port hazardous materials management	Handling of Dangerous Goods in the Port Area	Number of dangerous goods handling operations in the port area ÷ Number of assignments of dedicated personnel for dangerous goods storage management × 100%		• 100% assignment rate of dedicated personnel for dangerous goods storage management	• A total of 64 chemical and oil tankers called at the port, with 64 assignments of dedicated personnel for dangerous goods storage management, achieving a 100% assignment rate	• A total of 56 chemical and oil tankers called at the port, with 56 assignments of dedicated personnel for dangerous goods storage management, achieving a 100% assignment rate
		Inspection and Joint Supervision of Dangerous Goods	Number of inspections and joint supervisions for dangerous goods		• One inspection of dangerous goods conducted per day	• Number of inspections: 686	• Number of inspections: 660
		Emergency Drills for Dangerous Goods	Number of emergency drills and exercises for dangerous goods		• One emergency drill completed annually	• Number of joint supervisions: 13	• Number of joint supervisions: 12
5	Reduce Ship Emissions	Proportion of harbor vessels using low-sulfur fuel or biodiesel. Note: Low-sulfur fuel refers to fuel with sulfur content below 10 ppm.	The formula to calculate the proportion of harbor vessels using low-sulfur fuel (marine heavy fuel oil or marine gas oil) is as follows: (Number of harbor vessels using low-sulfur fuel / Total number of harbor vessels) * 100%		• All harbor vessels using low-sulfur fuel or biodiesel reach 100%.	• 4 vessels use low-sulfur fuel, achieving a 100% compliance rate. The usage of low-pollution fuel by harbor vessels is 130,558 liters, estimated to reduce approximately 36.09 metric tons of CO_2 emissions compared to 2020.	• 4 vessels use low-sulfur fuel, achieving a 100% compliance rate. The usage of low-pollution fuel by harbor vessels is 130,883 liters, estimated to increase approximately 0.85 metric tons of CO_2 emissions compared to 2021.
		The proportion of harbor service boats using shore power is as follows: • Number of harbor service boats: 4 • Number of harbor service boats utilizing shore power: 4 • Proportion of harbor service boats using shore power: 100%	The proportion of harbor service boats using shore power can be calculated as: (Number of harbor service boats using shore power / Total number of harbor service boats) × 100%		• The proportion of harbor service boats using shore power is 100%.	• All 4 harbor service boats utilize shore power when berthed, resulting in a 100% usage rate. The total electricity consumption of harbor service boats using shore power is 125,102 kWh.	• All 4 harbor service boats use shore power when berthed, resulting in a 100% utilization rate. The total electricity consumption of harbor service boats using shore power is 132,866 kWh.
		Vessel Speed Reduction Program: Proportion of vessels entering or leaving the port that reduced their speed to below 12 knots within 20 nautical miles of the port	Number of vessels reducing speed to below 12 knots within 20 nautical miles of the port ÷ Total number of vessels entering or leaving the port × 100%		Vessel Speed Reduction Compliance Rate: 2023: 80% 2024: 80%	• Vessel Speed Reduction Compliance Rate: 98.8%	• Vessel Speed Reduction Compliance Rate: 93.2%
6	Prevention of Cargo Spillage	Ratio of Oil Boom Deployment for Chemical and Oil Tankers	Number of oil boom deployments for chemical and oil tankers ÷ Number of chemical and oil tanker calls × 100%		The ratio of oil boom deployment for chemical and oil tankers reached 100%.	• Number of oil boom deployments for chemical and oil tankers: 64 times • Total number of chemical and oil tanker calls: 64 • 64 ÷ 64 × 100% = 100% • Ratio of oil boom deployment for chemical and oil tankers: 100%	• Number of oil boom deployments for chemical and oil tankers: 56 times • Total number of chemical and oil tanker calls: 56 • 56 ÷ 56 × 100% = 100% • Ratio of oil boom deployment for chemical and oil tankers: 100%

Environmental Performance Indicators

Significant environmental issues of Suao Port		Indicator	Calculation method		Target value	Indicator presentation (calculation details)	
						2023	2024
7	Port development	Maintain Port Green Area	Annual statistics on port green area		Expand and Maintain Port Green Areas	• An increase of approximately 1.548 hectares in green area compared to 2022, reaching a total of 10.548 hectares	• An increase of approximately 0.2 hectares in green area compared to 2023, reaching a total of 10.748 hectares
		Passenger Volume at Passenger Terminal	Statistics on cruise passenger arrivals		Increase Passenger Volume	• The passenger terminal has not yet commenced operations	• The number of passengers in 2024 was 3,951
8	Strengthen community relations	Provide venues such as parking lots to rent for public parades	Renting venues and organizing events		Annual target handling activities and renting venues 5 times	• A total of 10 events and venue rentals were held in 2021. • The Doufu Cape waters were open throughout the year.	• Total of 11 events and venue rentals were held in 2022. • The Doufu Cape waters were open throughout the year. • The sailing training base was operational starting from September 29th.
		Number of participants and events	Count of participants and event		Annual target 2 events 50 participants	• Total number of participants:140 • 2 activities held	• Total number of participants:178 • 3 activities held
		Environmental public grievances	Number of environmental public grievances		Number of handling environmental public grievances <3	• Number of handling environmental public grievances:0	• Number of handling environmental public grievances:0
9	Climate Change Response	Disclosure of Greenhouse Gas Inventory Data	In accordance with the ISO 14064 standard for greenhouse gas inventory, emissions are categorized based on different sources and calculated using the emission factor method for Scope 1 and Scope 2 data.		• Greenhouse Gas Emissions Disclosure Category 1 Category 2	• Category 1 : 2.8832 metric tons of CO_2 equivalent • Category 2: Approximately 399 metric tons of CO_2 equivalent (electricity emission factor: 0.494)	• Category 1 : 3.28 metric tons of CO_2 equivalent • Category 2 : Approximately 412 metric tons of CO_2 equivalent (electricity emission factor: 0.474)
		Total fuel, electricity, water, and paper consumption of the administration building and the port	Differences in fuel, electricity, water, and paper consumption between 2023 and 2024		• Fuel consumption: 5% decrease • Electricity consumption: 1% decrease • Water consumption reduction: 10% • Paper consumption: 1% decrease	Resource Consumption of the Administration Building • Fuel consumption: 1,225 liters • Electricity consumption: 311,175 kWh • Water consumption: 3,831 cubic meters • Paper consumption: 197 reams (500 sheets per ream)	Resource Consumption of the Administration Building • Fuel consumption: 1,387 liters • Electricity consumption: 316,479 kWh • Water consumption: 4,747 cubic meters • Paper consumption: 173 reams (500 sheets per ream)
						Based on consolidated port area usage data: • Fuel consumption increased by 13.2% (due to infrastructure projects and increased use of official vehicles) • Electricity consumption increased by 1.7% (due to the launch of the passenger terminal, renovation of the administration building, and increased electricity usage from electrified vehicles) • Water consumption increased by 23.9% (due to the launch of the passenger terminal and renovation of the administration building) • Paper consumption decreased by 12.1% (as administrative processes increasingly shift to digital formats)	

Environmental Performance Indicators

Significant environmental issues of Suao Port		Indicator	Calculation method		Target value	Indicator presentation (calculation details)	
						2023	2024
9	Climate Change Response	Spring water is utilized in the port area	Statistical Data		• Water intake reached 2 million cubic meters	• Total water intake: 236,644 cubic meters	• Total water intake: 274,030 cubic meters
		Renewable energy facilities are installed within the port area	Installed capacity and generation statistics of the solar power system		• A total of approximately 2,800 kWp of solar power capacity has been installed; annual total power generation and carbon reduction are calculated accordingly	• Rooftop solar system on Warehouse No. 4: installed capacity 500 kWp, annual generation 539,462 kWh • Rooftop solar system on Bishyang EV facility: installed capacity 1,996.4 kWp, annual generation 2,062,623 kWh • Rooftop solar system on Warehouse No. 15: installed capacity 332 kWp, annual generation 231,820 kWh • Total annual solar power generation: 2,833,905 kWh • Estimated annual carbon reduction: 1,399 metric tons of CO_2 emissions (emission factor: 0.494 kg CO_2/kWh)	• Rooftop solar system on Warehouse No. 4: installed capacity 500 kWp, annual generation 461,847 kWh • Rooftop solar system on Bishyang EV facility: installed capacity 1,996.4 kWp, annual generation 1,737,476 kWh • Rooftop solar system on Warehouse No. 15: installed capacity 332 kWp, annual generation 249,610 kWh • Total annual solar power generation: 2,448,933 kWh • Estimated annual carbon reduction: 1,160 metric tons of CO_2 emissions (emission factor: 0.474 kg CO_2/kWh)
10	Port water quality maintenance	Implementation status of commissioning qualified contractors to clean up ship waste oil and wastewater	Number of ship waste oil and wastewater collection operations conducted by qualified contractors ÷ Number of accepted ship waste oil and wastewater collection operations × 100%		The implementation rate of ship waste oil and wastewater cleanup by qualified contractors reached 100%	• Executed for 3 vessels; 3 ÷ 3 × 100% = 100% • A total of 30.9 metric tons of ship waste oil and wastewater were collected	• Executed for 4 vessels; 4 ÷ 4 × 100% = 100% • A total of 66.0 metric tons of ship waste oil and wastewater were collected
		Compliance rate of port water quality and runoff wastewater (pH, COD, BOD, SS, coliform group, NH_3-N, TP, DO, cyanide, phenols, mineral oil, total oil and grease)	Compliance rate of port water quality with Class B marine environmental quality standards		Water quality compliance rates: • Port water quality: 90% • Runoff wastewater: 90%	Water quality compliance rates: • Port water quality: 100% • Runoff wastewater: 100%	Water quality compliance rates: • Port water quality: 100% • Runoff wastewater: 100%
		Coral coverage area	Coral coverage rate		Coral coverage rate increased compared to the previous survey	• In Region 1, the coral coverage rate reached 10% in 2023, an increase of 2% compared to 2021 • In Region 2, the coral coverage rate reached 45% in 2023, an increase of 5% compared to 2021 • In Region 3, the coral coverage rate reached 35% in 2023, an increase of 5% compared to 2021 • In Region 4, the coral coverage rate remained at 50% in 2023, the same as in 2021 • In Region 5, the coral coverage rate dropped to 10% in 2023, a decrease of 5% compared to 2021 • In Region 6, the coral coverage rate increased to 35% in 2023, an increase of 15% compared to 2021	

05

Emergency Response

5.1 Port of Suao Emergency Response

To maintain the operational safety of the Port of Suao, personnel are assigned daily to conduct routine land patrols throughout the port area. When suspected pollution activities are identified, immediate warnings are issued, followed by emergency response actions or reporting to law enforcement authorities for penalties. No related incidents occurred in the Port of Suao between 2023 and 2024.

The Port of Suao regularly conducts emergency response drills to enhance personnel's ability to respond to accidents, familiarize relevant agencies and enterprises with inter-agency support channels, and strengthen overall disaster response capabilities. These efforts aim to minimize the harm caused by hazardous chemicals, air pollution, water pollution, soil contamination, and other pollutants, contributing to the achievement of Sustainable Development Goal 3—Ensure healthy lives and promote well-being for all at all ages.

For port pollution and disaster incidents, dedicated complaint and reporting channels are available through the Port of Suao, the Environmental Protection Bureau of Yilan County, and the Northern Navigation Center of the Maritime and Port Bureau, MOTC. The Port of Suao has also established emergency response procedures for various port-area disasters, including vessel-related accidents, fires, explosions, and other major incidents, to ensure prompt crisis management.

Suao Port 2023–2024 Accidental Incidents

Accident type/Year	2023	2024
Vessel collision, shipwreck, fire, oil and other chemical spillage	0	0
Ship machinery breakdown, tilt, strand	0	0
Major warehouse, storage tank explosion	0	0
Port minor pollution, fire, chemical spillage	0	0
Man overboard, occupational accident, flotsam	0	0

2023 Yilan County Marine Pollution Emergency Response Simulation Drill

Port of Suao Conducted Drills in 2023–2024

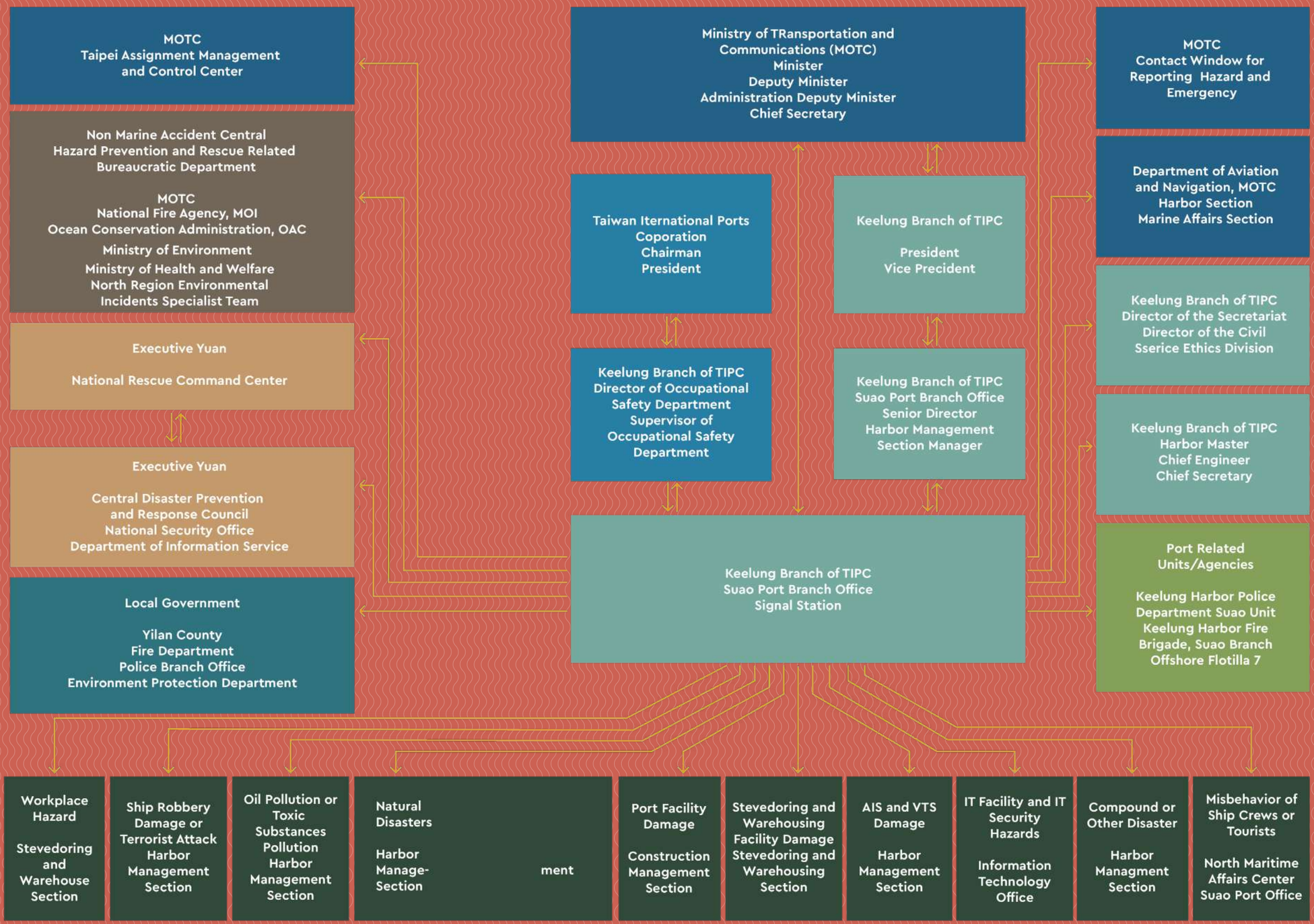
Year	Drill name	Content	Date
2023	• 2023 Port Security Drill at the Port of Suao • 2023 Chemical Spill Emergency Response Simulation Drill at the Port of Suao	• A simulated scenario in which intruders hide aboard a port service vessel entering the Port of Suao and infiltrate the port area to conduct sabotage. • Another scenario simulates wartime conditions where a chemical tanker carrying para-xylene at Berth No. 11 of the Port of Suao is attacked and catches fire. Relevant emergency response units within the port carry out emergency actions to demonstrate the port's disaster response and mobilization capabilities.	3/27 8/22
2024	• 2024 Q1 Port Security Drill at the Port of Suao • 2024 Q2 Port Security Drill at the Port of Suao • 2024 Q3 Port Security Drill at the Port of Suao • 2024 Q4 Port Security Drill at the Port of Suao	• A simulated scenario in which intruders infiltrate the port area to sabotage the main substation • All-out Defense Mobilization and Disaster Response Exercise — Min'an No. 10 Drill • Port Security Drill for the Energy Storage Facility of Fortune Electric at the Port of Suao • Intelligence indicates unidentified individuals operating remote-controlled drones illegally within the commercial port area	2/5 6/13 9/18 12/30


2023 Chemical Spill Incident Drill at the Port of Suao


Deployment of Port Firefighting Water Mist System

2024 Port Security Drill at the Port of Suao

Emergency Response



06

Involvement and Cooperation

6.1 Leveraging AI Technology to Enhance Environmental and Energy System Efficiency

Attention/Motives

In response to global trends toward sustainable development, the Port of Suao Operations Office is optimizing its port management systems through AI technology to enhance resource efficiency and strengthen port safety and environmental sustainability. Key initiatives include the installation of smart water and electricity meters for real-time monitoring to detect anomalies and achieve precise energy savings; an AI-controlled sprinkling system that activates automatically based on air quality to effectively reduce air pollution and manage water resources; smart emergency call towers that offer around-the-clock safety alerts and location tracking to enhance emergency response capabilities; and smart weighbridges that reduce labor costs and improve weighing efficiency. By integrating intelligent systems, the port enhances operational performance and environmental governance, fulfilling the goal of "technology-driven, green sustainability" in port management.

Environmental Management Strategy

- Smart Green Environment: Integrating artificial intelligence technology to optimize port management systems, enhance the efficiency of water and energy utilization, and achieve the dual goals of environmental protection and sustainable development.

Concrete Actions

(1) Establishment of Smart Energy Management System

In support of Taiwan's net-zero transition strategy—particularly the pillar of "Energy Transition"—the Port of Suao has installed 10 smart water meters and 24 smart electricity meters, and replaced all traditional sodium work lights with high-efficiency LED fixtures. The port's substation has been upgraded with integrated CCTV surveillance, access control systems, and additional temperature/humidity and fire sensors to strengthen site safety monitoring. All systems are incorporated into a "Smart Energy Management System" that utilizes data integration and AI analysis to monitor real-time energy usage, issue early warnings for equipment or system anomalies, and accelerate detection and resolution of irregularities. These efforts not only improve port management efficiency but also advance the goals of energy conservation, carbon reduction, and smart sustainability.

(2) Smart Sprinkler System for Pollution Control

As the first designated Air Quality Maintenance Zone in Yilan County, the Port of Suao handles bulk cargo such as large stones and fine sand at Berth No. 4, which are prone to generating fugitive particulate matter. To effectively reduce airborne particulates and considering the suitable building height in the area, a smart sprinkler system has been installed at Berth No. 4. The system spans 100 meters in length and reaches a height of two stories. It is equipped with air quality sensors that automatically activate the sprinklers when monitored values reach the warning thresholds (PM2.5 at 12 μg/m³ and PM10 at 30 μg/m³). The system can effectively spray up to 200 meters, significantly reducing the dispersion of suspended particulates in the air. This is the first installation of its kind among Taiwan's seven international commercial ports and has been recognized by the Ministry of Environment as a model for intelligent air pollution control.

(3) Smart Emergency Call Towers at the Port of Suao

In recent years, frequent extreme weather events have caused damage to surveillance cameras, system malfunctions, or cable interruptions in the port area, compromising the effectiveness of safety monitoring operations. To strengthen the port's emergency response capabilities, the Port of Suao Operations Office has installed smart emergency call towers integrated with cameras and central control systems. These installations ensure prompt replacement of malfunctioning equipment to avoid surveillance blind spots.

The smart call towers are equipped with real-time communication and alert functions. In the event of an incident or emergency, personnel can press a button on the tower to initiate immediate video communication with the monitoring center, which can also swiftly retrieve surrounding camera footage to assess the situation. At the same time, warning lights on the tower flash to alert nearby personnel, enhancing the speed and efficiency of on-site notifications and response. These towers have been installed at Berths No. 2, 4, 5, 6, and 9, as well as the container terminal building. As a key component of the port's smart safety infrastructure, the towers significantly enhance monitoring capabilities and demonstrate the Port of Suao's commitment to smart port development and innovative safety applications.

Smart Emergency Call Tower at the Port of Suao

Smart Sprinkler System for Pollution Control

Smart Emergency Call Tower at the Port of Suao

6.1 Leveraging AI Technology to Enhance Environmental and Energy System Efficiency

Concrete Actions

(4) Smart Weighbridge System
To enhance port operational efficiency and promote green port development, the Port of Suao Operations Office has installed two smart weighbridge systems. These systems incorporate AI-based Optical Character Recognition (OCR), self-service kiosks, and automated gate controls, and are integrated with digitalized entry/exit data and electronic delivery receipts, as well as unmanned weigh ticket generation. This comprehensive upgrade to the traditional weighing process has reduced the average processing time from about one minute to just 3 to 10 seconds, significantly improving operational efficiency.

Drivers can complete the weighing process without leaving their vehicles, minimizing wait times and effectively reducing energy waste caused by engine idling. It is estimated that this system cuts carbon emissions by approximately 83% to 95%, making a tangible contribution to environmental sustainability.

In addition, the weighbridge system ensures real-time data transparency, allowing operators to access weigh records and statistics via computers or mobile devices at any time, thereby improving management efficiency. Central control personnel can remotely manage multiple weighbridge stations simultaneously, reducing labor costs and establishing a new benchmark for smart, efficient, and low-carbon port operations.




Relevant Environmental Issues

Aspects including environmental sustainability, pollution control, safety protection, and smart management

Participating Unit

Port of Suao Operations Office

Stakeholders

Port of Suao Operations Office, port tenants, and local community residents

6.2 Carbon Reduction Measures at the Port of Suao

Attention/Motives

In response to climate change and the global trend toward carbon reduction, ports—as critical hubs for national transportation and logistics—bear the responsibility for reducing emissions and promoting sustainable development. The Port of Suao has long prioritized environmental protection and smart management. To support Taiwan's "2050 Net-Zero Emissions" target and green transition policy, the port actively implements various carbon reduction initiatives. These include pursuing EEWH Green Building certification for the passenger terminal, electrifying government vehicles, and promoting the use of electric-powered machinery to reduce emissions during operations. The port also promotes aggregate recycling and circular resource reuse, extending material life cycles and reducing waste generation.

Environmental Management Strategy

- Smart Green Environment: Integrating artificial intelligence technology to optimize port management systems, improve the efficiency of water and energy usage, and achieve the dual goals of environmental protection and sustainable development.

Concrete Actions

(1) Passenger Terminal Building Awarded Green Building Label
To promote sustainable architecture, the Port of Suao's "Passenger Terminal Construction Project" actively applied for the Green Building Label and officially passed the evaluation on September 11, 2024 (Year 113), obtaining the EEWH Green Building Label at the Qualified Level. According to the Green Building Evaluation Manual (Basic Version, 2019), the EEWH system includes nine evaluation indicators: biodiversity, greening, site water retention, energy saving for daily use, CO_2 reduction, waste reduction, indoor environmental quality, water resources, and sewage and garbage improvement. Among these, "energy saving for daily use" and "water resources" are mandatory indicators, and at least four indicators must be met to receive certification.

The Passenger Terminal incorporated carbon reduction and energy-saving concepts during its design and construction stages. It successfully passed the assessments for four indicators: "energy saving for daily use," "CO_2 reduction," "waste reduction," and "water resources," thereby earning the Qualified Level Green Building Label.

This achievement not only demonstrates the Port of Suao's proactive efforts in promoting low-carbon construction but also enhances the environmental quality of the port area and its overall tourism image. In the future, the terminal is expected to attract more international cruise ships and, in conjunction with the Guoguang Bus Transfer Station and the pedestrian-friendly Nanfangao fishing village area, stimulate greater tourist flow and economic vitality. This will promote local development, attract business investment, create job opportunities, and help realize the vision of a sustainable port city.


綠建築標章證書

建築物名稱：蘇澳港旅運中心興建工程
建築物概要：地上2層鋼筋混凝土構造空調型(商場及交通運輸旅客大廳分區)建築
建築執照字號：(113)(2)(1)建管使字第00026號
建築基地地號：宜蘭縣蘇澳鎮南三段96、96-2地號等2筆
建築物門牌：宜蘭縣蘇澳鎮蘇東里8鄰港區30號之1
有效期限：自113年9月11日至118年9月10日
評估版本：基本型(2019年版)
綠建築等級：合格級

內政部 部長 劉世芳


the Su-Ao Port Passenger Terminal

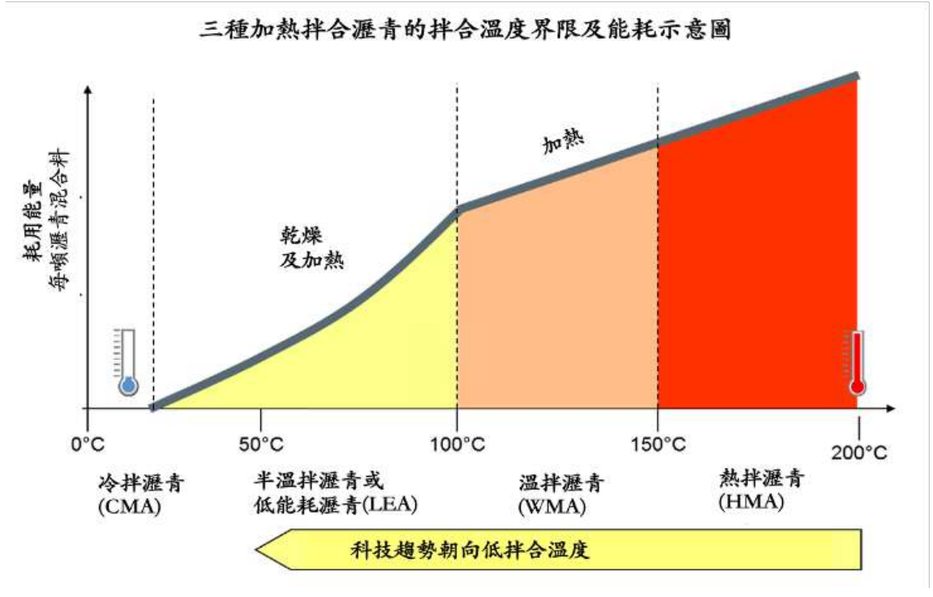
6.2 Carbon Reduction Measures at the Port of Suao

Concrete Actions

(2) Electrification of Government Vehicles
To support energy-saving and carbon-reduction policies and fulfill low-carbon transportation goals, the Port of Suao Operations Office has actively promoted the electrification of its government vehicle fleet. It has acquired one electric car and five electric scooters for routine inspection and official use, gradually phasing out traditional fuel-powered vehicles. To support this shift, a dedicated electric vehicle charging station has been installed within the port area to provide convenient and immediate charging services. This initiative effectively reduces emissions and air pollution from transportation and demonstrates the port's concrete actions in promoting green and sustainable mobility. It also lays the foundation for full-scale electrification of port transportation in the future.

(3) Net-Zero-Oriented Port Road Improvement Project
To enhance road durability and operational efficiency while meeting low-carbon and circular resource goals, the Port of Suao has recently advanced its road improvement works by incorporating Warm Mix Asphalt (WMA) technology and Reclaimed Asphalt Pavement (RAP). Compared to conventional Hot Mix Asphalt, WMA can save approximately 20% in energy consumption and reduce carbon emissions by 15–30%. It also significantly lowers the generation of smoke and volatile organic compounds (VOCs) during mixing, transport, and paving, thereby improving air quality and the working environment.

The project used asphalt concrete with a nominal maximum aggregate size of 25.0 mm—more durable than the previously used 12.5 mm—estimated to extend service life by 5–10 years, reduce rutting depth by 30%, and lower cracking rates by 10–15%, thus significantly cutting maintenance costs and frequency. In addition, a 30% RAP mix was applied to reduce demand for virgin aggregate, minimizing emissions from quarrying and long-distance transport. A carbon management mechanism was also introduced using Life Cycle Assessment (LCA) tools to monitor and optimize the carbon footprint throughout construction. Preliminary estimates suggest the project will reduce 41,000 to 76,000 kilograms of CO_2 equivalent, making it a benchmark case for low-carbon road technology in domestic port areas.



Evaluation Indicators	Nominal Maximum Aggregate Size of 25.0 mm (1") Performance Compared to 12.5 mm (1/2") Mixtures	Source
Durability	Increasing pavement density improves durability by 15–25%.	V Kumar et al. (2021)
Pavement Service Life	Extends pavement service life by 5–10 years while reducing cracking and rutting.	S Hu, F Zhou (2022)
Hamburg Wheel Tracking Test	Rutting depth can be reduced by 30% within 10 years.	Michael et al., 2003
IDEAL-CT	Cracking rate is reduced by 9.5%–14.5%.	S Hu, F Zhou (2022)
Compre hensive Evaluation	Crack repair demand decreases by 10–25%, and rutting maintenance costs are reduced by 15–20%.	U.S. Department of Transportation Maintenance Cost Report (DOT Maintenance Report)

Relevant Environmental Issues
Aspects including environmental sustainability, pollution control, safety protection, and smart management

Participating Unit
Port of Suao Operations Office

Stakeholders
Port of Suao Operations Office, port tenants, and local community residents

6.3 Involvement and Collaboration

The Port of Suao actively establishes diverse partnerships with domestic and international industry, government, and academic institutions to collaborate across fields such as culture, trade, education, technology, and environmental protection. In addition to understanding global environmental development trends, the port pursues its goal of becoming a green and sustainable port through technical cooperation, joint investment, collaborative inspections, academic lectures, and internship programs—working together to promote a shared vision of sustainability.

Association

Association of Pacific Ports (APP)

The APP aims to gather port authorities along the Pacific coast to discuss Pacific marine transportation development, seeking solutions for problems.

The International Association of Ports and Harbors

The IAPH is a NGO with tremendous influence on global port authorities, IAPH also provide the advisory to the main bodies of UN (eg. ECOSOC, IMO , UNCTAD , UNEP , ILO, WCO). The IAPH holds biennial conferences alternately in America, Asian Pacific, and European and African regions.

Port unit

LUNG TEH Shipbuilding CO.,LTD.

The Lung Teh Shipbuilding Co., Ltd.,The office has established an environmental policy to reach its goal of being a sustainable port through energy conservation and carbon reductions; pollution control and prevention; optimum utilization of materials and equipment.

FOXWELL Power Co., Ltd.

Suao Port facilitates the construction of a 50MW energy storage facility by Fuhwei Power Company. It provides AFC services to Taiwan Power Company, strengthening the stability of domestic power supply. The goal is to achieve "innovation, energy conservation, energy storage, and green energy trading" for the sustainable well-being of the planet.

Suao Port collaborates with Yongxin Company to create Taiwan's first port with a thin-film solar power generation system. The port has installed solar power systems on the rooftops of Warehouse No. 4 and Suao Pihsiang Machinery Electric Vehicle, making it the largest thin-film rooftop project in Taiwan.

Chii Lih Coral

Suao Port leased its old dormitory building to the Chii Lih Coral Company for development. The company opened a museum for tourists, a shopping mall, and a restaurant to create a new tourist venue in Yilan.

Pihsiang Machinery MFG. Co. Ltd.

Pihsiang Electric Vehicle MFG. Co., Ltd. The company introduced fully automated production facilities and adopted a zero-pollution electric vehicle production process that generates no industrial exhaust emissions or wastewater while providing a green traffic development opportunity.

National Taiwan Ocean University

In order to enhance international competitiveness and transportation quality, create a sound educational and academic research environment, and allow the port and educational institutions to prosper together, Taiwan International Ports Corporation signed a memorandum of cooperation with

Na ty

three public universities in 2012. In the future, the parties to the memorandum will be involved in academic exchanges, research and development, cooperative undertakings between companies and educational institutions, education and training, student internships, and port operation seminars. In addition

National Cheng Kung University

to enhancing training quality, the educational institutions involved can also provide intelligence to port affairs companies, and thus play an active role in assisting practical port management and operations, which will achieve a win-win outcome.

Environment Protection Bureau

The Institute of Transportation at the MOTC has served as a think tank that assists the ministry with formulating policies, integrating and coordinating transportation related decisions, and establishing a communication net-work for industrial, governmental, and academic transportation organizations.

Ocean Affairs Council

To promote multilateral negotiation between Central and Local Governments, Ocean Affairs Council was inaugurated in 2018 and , serving as the official governing body in charge of the planning("Smart Monitoring System in Harbor Establishment Project"), coordination and implementation of marine-related policies.

Taiwan's Ministry of Environment and the United States Environmental Protection Agency (US EPA) have collaborated under the "Agreement between the American Institute in Taiwan and the Taipei Economic and Cultural Representative Office in the United States for Technical Cooperation in the Field of Environmental Protection (1993)." This cooperation includes a series of strategic initiatives focused on port environmental issues. Regular seminars are held in Taiwan with invited U.S. experts to provide technical assistance and share information—examples include the "Improving Port Air Quality" initiative under the Regional Partnership Program and the Taiwan–U.S. Sustainability Forum.

Central Maritime Affairs Center, Maritime and Port Bureau

North Maritime Affairs Center, Maritime and Port Bureau, MOTC is in charge of Port safety, disaster rescue, pollution prevention services , responsible of decree execution, evidence collection, conducts joint spot check and pollution prevention drills.

Yilan county Environmental Protection Department

Suao Port cooperated with the Yilan County Environmental Protection Bureau to conduct periodic port district joint inspections and drills, and assisted the Environmental Protection Bureau in implementing related meetings and plans.

Suao Township Office

Suao Port regularly collaborates with the Su'ao Township Office to organize harbor cleaning activities and assists in the daily disposal of waste generated in the port, ensuring a clean and well-maintained port environment.

07

Training

7.1 Employee Education

To promote understanding of environmental education concepts, enhance environmental literacy, raise environmental awareness, and improve workplace safety through lifelong learning, the Port of Suao Operations Office regularly conducts environmental education and occupational health and safety training sessions.

In accordance with the Environmental Education Act, public enterprises and relevant institutions are required to develop annual environmental education plans, and each employee must receive more than four hours of environmental education each year.

In 2023 and 2024, the Port of Suao held approximately four sessions of environmental education courses for both internal and external personnel. These courses covered areas such as pollution prevention, natural disaster education, environmental monitoring, energy and environmental issues, and ecological education visits, aiming to foster environmental stewardship and provide high-quality education for sustainable development.

Suao Port's 2023–2024 Environmental Education Courses

year	name	Sessions	Number of participants
2023	Wulaokeng Scenic Area – Shakespeare Maze, 2023 Yilan Green Expo	2	52
	"Salute to the Ocean – Youth Gathering at the Port" Suao Port Cleanup Activity	1	12
2024	Wulaokeng Scenic Area – Earth Academy, 2024 Yilan Green Expo	2	38
	"Salute to the Ocean" Suao Port Cleanup Activity	1	120
Total		6	222

Shakespeare Maze – 2023 Yilan Green Expo

Earth Academy – 2024 Yilan Green Expo

"Salute to the Ocean" Suao Port Cleanup Activity

08

Communication and Publication

8.1 Communication & Publication

To ensure continuous engagement between the Port of Suao and external stakeholders, in addition to regularly interviewing stakeholders, the port disseminates information through various collaborative channels such as events, forums, seminars, workshops, public service activities, websites, publications, promotional materials, and exhibition spaces. These efforts aim to make port-related information accessible to the general public, port operators, academic institutions, and relevant departments within the branch office for reference and understanding.

Stakeholder Interviews

Port of Suao Tenant – Fortune Electric Corporation

Shipbuilding Company at the Port of Suao – Lungteh Shipbuilding Co., Ltd.

Yilan County Environmental Protection Bureau

Suao Township Office, Yilan County

Exchange/Symposium

Yilan County Environmental Protection Bureau

LEED Green Building Certification Seminar

Activities involving port operators

Children's Care and Red Envelope Giving Charity Event

2023 and 2024 Hondao Senior Care Charity Carnival

Children's Care and Red Envelope Giving Charity Event

2023 and 2024 "Love the Elderly, Cherish Reunion" Charity Even

Activities related to port operators

Inauguration of the Passenger Terminal and First Cruise Call Ceremony

Suao Port Safety and Health Family Program

Lunar New Year Military Appreciation Event

Sustainable Women's Power – The Resilience of Suao PortCeremony

Department of Shipping and Transportation Management, National Taiwan Ocean University – Visit to the Port of Suao

Communication & Publication

Websites

To showcase the achievements of green port initiatives on the international stage, Taiwan International Ports Corporation has launched bilingual (Chinese and English) web pages on its green policies, establishing a platform for communication and exchange between Taiwan and other countries.

Official Website of the Port of Suao

Environmental Sustainability Section of Taiwan International Ports Corporation

In alignment with national policies and its commitment to achieving net-zero emissions across all ports by 2050, Taiwan International Ports Corporation has established the "Environmental Sustainability Section" to inform the public and industry stakeholders about the company's environmental policies.

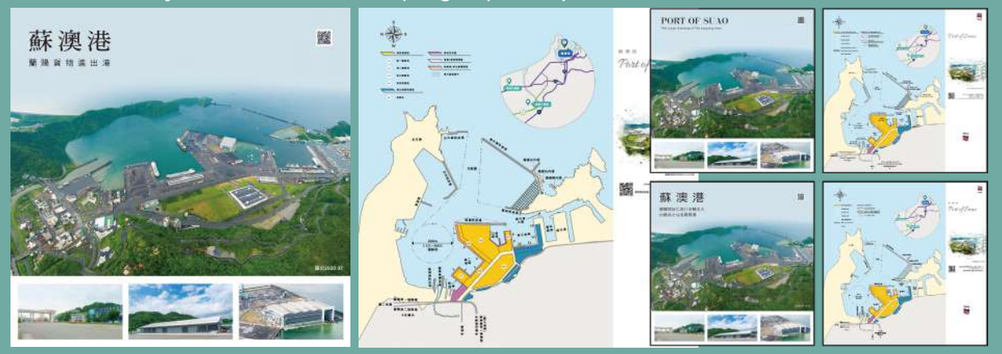
Promotional Materials of the Port of Suao

Publications

2023 Yearbook, Chapter 13

Publications – Port of Suao Promotional Brochure (Bilingual: Chinese-English)

Port of Suao Layout Brochure (Chinese, English, and Japanese)



09

Green Accounting

9.1 Environmental Investment and Cost

The Port of Suao Operations Office's environmental expenditures are primarily allocated to environmental maintenance, management, and monitoring, with the goal of preserving environmental quality and driving improvements. The expenditures are detailed as follows:

In 2023 and 2024, the Port of Suao Operations Office invested NT$5,727 thousand and NT$8,593 thousand, respectively, in environmental initiatives.

- Environmental Maintenance and Management: Port area greening, waste removal, and dredging operations
- Environmental Monitoring: Monitoring and inspections related to air quality, noise, water quality, sediment, and dredging within the port area

Environmental Expenditures of the Port of Suao in 2023 and 2024 (Unit: NT$1,000)

Items	2023	2024
Environmental Maintenance and Management	5,204	8,055
Environmental Monitoring	523	538
Total	5,727	8,593

9.2 Environmental Assets

Suao Port aims to develop as a port for the import and export of miscellaneous goods in the Lanyang area, while also transitioning into a port with passenger and tourism functions. To achieve this goal, Suao Port Branch Office has developed a series of port development plans, which can be categorized into land improvement and building and infrastructure plans. These plans include the construction of Suo-Ao Port Travel Center, cleaning of abandoned fishing nets, repair of seawalls and dredging of water areas, improvement of port roads, and beautification and renovation of port public facilities.

In 2021 and 2022, Suao Port invested a total of EUR €130,912 and EUR €1,529,853 respectively in fixed assets related to environmental issues(Rate of exchange 34.0).

Fixed Asset Investment by the Port of Suao in 2023 for Environmental Initiatives (Unit: NT$1,000)

Project		Cost
Land Improvement	Repair of Breakwater Head Riprap at the Navigation Channel and Temporary Breakwater of the Port of Suao	50,004
General building and Construction	Reconstruction and Maintenance of Public Roads at the Port of Suao	19,045
Commissioned Service Expenses	Dredging of Public Waters and Reclamation of Fill Areas at the Port of Suao	9,737
Total		78,786

Fixed Asset Investment by the Port of Suao in 2024 for Environmental Initiatives (Unit: NT$1,000)

Project		Cost
Land Improvement	Repair of Breakwater Head Riprap at the Navigation Channel and Temporary Breakwater of the Port of Suao	6,716
General building and Construction	Reconstruction and Maintenance of Public Roads at the Port of Suao	8,990
Commissioned Service Expenses	Dredging of Public Waters and Reclamation of Fill Areas at the Port of Suao	8,604
Total		24,310

10

Improvement Recommendations

In response to the global trend toward green and sustainable development, the Port of Suao has reviewed and formulated strategic development plans to align with the growing demand for passenger cruise tourism and regional economic development. By staying in step with the times, the port is transforming into a tourism-oriented port and developing an economic waterfront, guided by a blueprint of corporate social responsibility to shape a green and sustainable port.

As the global economy evolves, the international energy landscape is undergoing significant changes. The Port of Suao has proactively kept pace by implementing initiatives such as constructing ecological ponds for water reuse, embracing green energy value-added logistics, and utilizing dredged soil for land reclamation. These efforts form part of its green port policy, while also enabling the port to provide high-quality services that support passenger, cargo, tourism, and related industries. In coordination with local governments, businesses, and communities, the port is helping to stimulate the local economy while balancing economic growth, environmental protection, and social sustainability—achieving a win-win outcome.

From advancing green port policies to obtaining EcoPort certification and preparing for the next stage of alignment with the United Nations Sustainable Development Goals (SDGs), the Port of Suao not only fulfills its corporate responsibilities but also confronts global climate challenges head-on. Through these efforts, the port enhances its environmental competitiveness and moves toward becoming a resilient and sustainable port.

If you have any inquiries regarding this report, please contact us.

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