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PORT OF HUALIAN

ENVIRONMENTAL REPORT

TAIWAN INTERNATIONAL PORTS CORPORATION, LTD.

TIPC

2022/08

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Content

Message from Port of Hualien

Located on the eastern coast of Taiwan, Hualien Port is surrounded by natural and pure mountains and waters, and it has won the Best Tour Experience award from Cruise Insight, a leading British cruise industry magazine. Hualien Port is the only international commercial port in the East and a port for sightseeing and recreation. In addition to improving the quality of goods entering and leaving the Hualien area, the port is also actively developing in the direction of tourism and environmental sustainability, creating a water-friendly and environmentally friendly space for the public.

The Port of Hualien TIPC actively incorporates environmental friendliness into port planning and construction to create quality port space and drive local economic prosperity and development. In addition to taking advantage of the geographical characteristics of the port area, the Hualien Port Branch has promoted the construction of water-filling related equipment in the port area to significantly reduce the use of water resources, and is committed to promoting a smart port by building a smart grid network water-filling system to achieve the goal of automatic control and remote control intelligence to improve the overall reuse of water resources. We were awarded the "Excellent Water Conservation Unit – Agency Group" by the Water Resources Department, Ministry of Economic Affairs in 2021.

In addition, upholding the spirit of continuous improvement, the Hualien Port implements environmental management measures, and actively assists port operators to purchase pollution prevention equipment to reduce environmental pollution caused by cargo handling; the installation of automatic door sentry system and the promotion of ship speed reduction system to reduce pollution from mobile sources such as ships and vehicles in the port. In order to improve the effective operation of the environmental management system in the port area, the international eco-port certification review and external greenhouse gas inventory are conducted regularly, and the environmental performance of the port area is verified by a third notary company. Moreover, we also promote environmental practices such as coastal cleaning and reuse of waste rocks from the caisson composite to the breakingwaters, which are listed in the database of the European Foundation for Ecologically Sustainable Logistics Chain for reference by other international eco-port partners.

In terms of corporate responsibility, the Hualien Port Branch also provides 4.6 hectares of port land for the construction of a scenic area and a bicycle trail connecting the two ponds (Qixing Lake and Liyu Lake), and actively promotes the greening and maintenance of the port area. In 2019 and 2020, we won the Silver Award in the "Garden City, Hundred Scenes Flower Group Open Greening" competition by Hualien County Government in 2019 and 2020, which showed that the Port of Hualien TIPC is committed to the development of local tourism and the sustainable development of the environment.

In order to implement the policy of promoting green ports, Hualien Port Branch continues to improve and ensure the implementation of economic development and resource conservation, and to combine the input of port-related units (including carriers, operators, shipping and port authorities, local governments, etc.). In the future, through the continuous promotion of various port facilities construction projects, we will optimize the safety of port operations and provide a friendly service vision between carriers, operators and the city, in order to reduce environmental pollution, improve the quality of life of local residents and achieve the goal of sustainable port operation.

President of Port of Hualien
Taiwan International Ports Corporation, Ltd.

Environmental Policy and Objective

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.

Hsien-Yi Lee

Hsien-Yi Lee
Chairman of TIPC
Date: 2020 / 03 / 26

Shao-Liang Chen

Shao-Liang Chen
President of TIPC
Date: 2020 / 03 / 26

Environmental Objectives

Port of Hualien

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

Improvement of Air Quality

Regularly monitor air quality and strengthen environmental inspections in the port area to facilitate supervision and control over the sources of pollution.

Reduction of Dust in the Port Area

Strengthen water spraying in port area and cleaning of transportation vehicles to reduce dust.

Reduction of Port Waste

Promote waste reduction in the port area, proper disposal of waste and recycling of resources.

Reduction of Noise in the Port Area

Set up buffering green belts and underground joint roads to reduce noise in the port area and traffic.

Improvement of Ship Emissions

Promote the use of super diesel, shore power and speed reduction for ships entering and leaving the port.

Implementation of bulk unloading management

Strengthen the audit of bulk ship material unloading process pollution prevention measures.

Refinement of Port Development

Ecological review of land area projects in port areas and coastal retreat maintenance measures.

Measures of Climate Change Mitigation

Regularly check greenhouse gases, implement carbon sequestration by planting and build renewable energy by solar power.

Maintenance of Water Quality in the Port Area

Drainage system in the port area should be dredged and the water quality of the port should be monitored on a long-term basis.

Enhance of Community Relationship

Organize activities to strengthen public participation and increase interaction with the community.

President of Port of Hualien, TIPC Wang Pai-Feng

Date 4 / MAY / 2022

The Port of Hualien Taiwan International Ports Corporation, LTD. No.66, Hai-an Rd., Hualien City, Hualien County 970, Taiwan (R.O.C.)

Environmental Policies

Port of Hualien

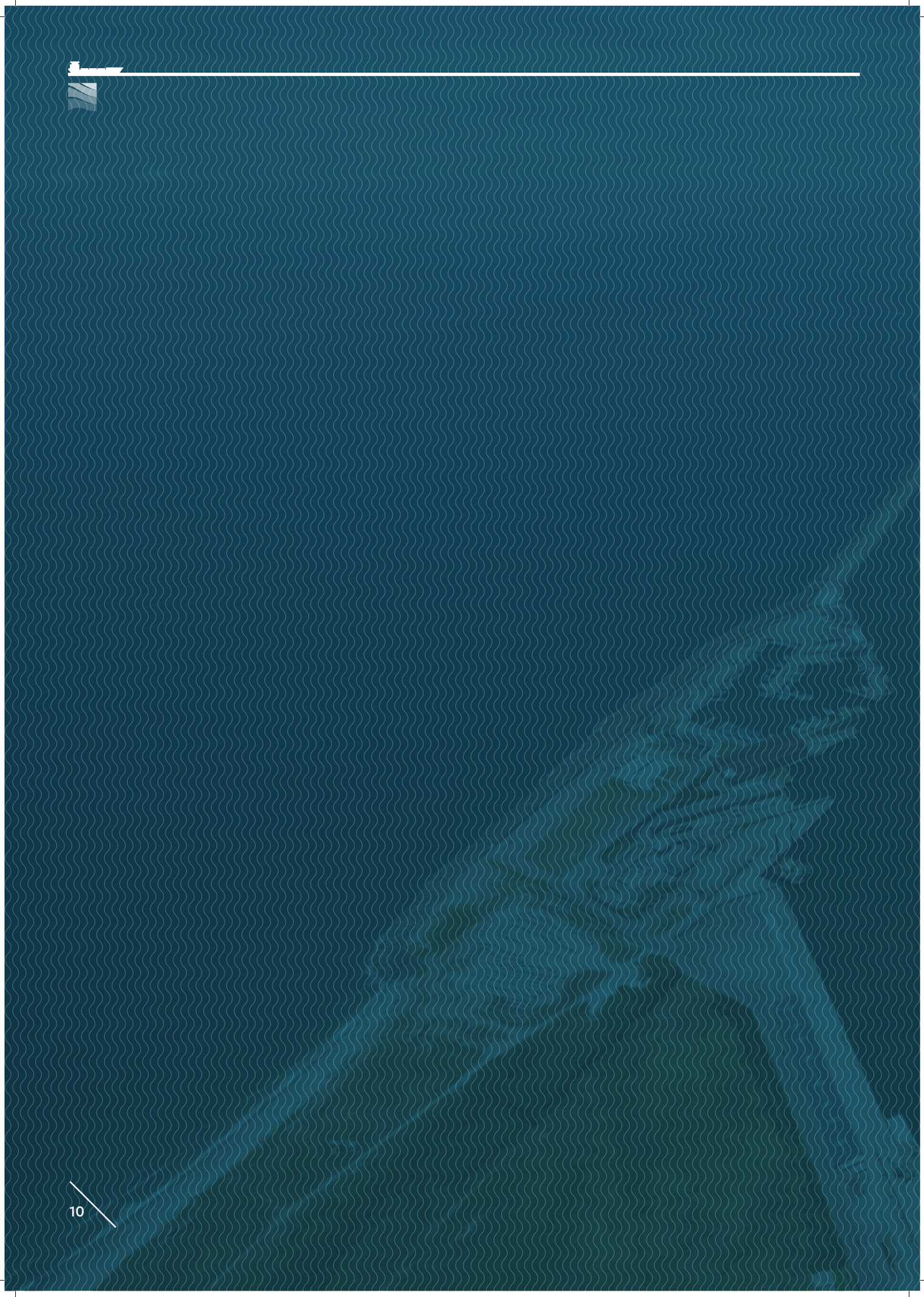
In order to protect the marine environment and sustainable development, Hualien Port Branch is committed to environmental protection, resource conservation, environmental education and ecological sustainability in the port area, and continues to implement on-site inspections to achieve environmental goals and performance in accordance with the relevant environmental protection policies of the Ministry of Transportation and the Environmental Protection Administration. Hualien Port Branch has formulated the environmental policies as follows:

- **Comply with environmental protection laws and regulations to build a green port.**
- **Adopt environment-friendly plans to reduce pollution emissions.**
- **Implement recycling to secure resource conservation.**
- **Establish an audit and tracking system to ensure continuous improvement.**

President of Port of Hualien, TIPC Wang, Pai-Feng

Date 4 / MAY / 2022

The Port of Hualien Taiwan International Ports Corporation, LTD. No.66, Haian Rd., Hualien City, Hualien County 970, Taiwan (R.O.C.)



01

Port Profile

1.1 History and Development

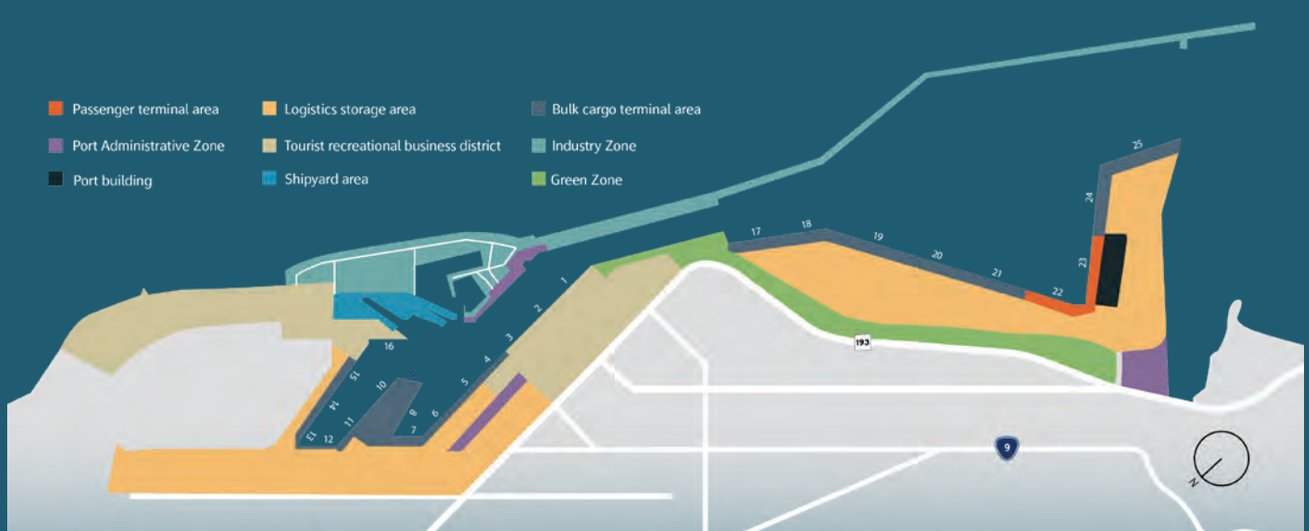
In early 20th-century Taiwan, before the development of a strong road and rail network, both trade and communication were accomplished by sea. Due to the lack of suitable natural harbors on the eastern coast of Taiwan, steamships might lay their anchors at any point between the mouths of the Hualien and Meilun Rivers, where Amis laborers would load the cargo onto barges and ferry it upstream. To expedite the shipment process, Japan's Imperial Diet passed a motion in 1930 to construct the Port of Hualien. Construction officially began in October of 1931, with three wharves completed by 1939. These wharves served for the export of sugar to Japan and the transport of goods locally around the island.

Once Taiwan's period of Japanese colonial rule had come to an end, the Taiwanese government was free to open the Port of Hualien to international trade, which it did on September 1, 1963 in a bid to facilitate economic and industrial development in the region. Over the years, Hualien Harbor has undergone four separate expansion projects to relieve congestion from steadily increasing cargo ship traffic, with the final project completed in December of 1991. The port now boasts 25 wharves, each serving freighters carrying below 100,000 tons and cruise lines international ships 220,000 tons–easily enough capacity to support Eastern Taiwan's still-burgeoning industrial economy.

1.2 Port Location and Port Area

The Port of Hualien situates in northeastern Hualien, Taiwan (23°59′11″N, 121°37′35″E). Embedded by the Pacific Ocean to the east and Meiluen Mountain to the west, the Port of Hualien is the only international commercial port in Eastern Taiwan. The overall area of the port is 1,469 ha (land area: 159ha; waterside area: 1,310 ha)

Ships enter the inner harbor through a northward narrow waterway from the outer harbor. In the inner harbor zone, 16 wharves exist, where the water depth is 6.5–10.5 m and the wharf length is 2.5 km. The outer harbor contains 9 deep-water wharves, with 12–16.5 m deep and 2.3 km of wharf length.



Map of Port of Hualien

1.3 Legal Status and Port Operators

To promote modernized commercial port management system reforms, The Taiwan International Ports Corporation, Ltd. Establishment Act was promulgated on November 9, 2011, Taiwan amended the Commercial Port Law on December 28, 2011. In March 2012 the maritime system changed to a "separation of government and corporation" method. Previously publicly managed organization was transformed into state enterprise organizations, which combined port operation originally under Keelung Port Bureau, Taichung Harbor Bureau, Kaohsiung Harbor Bureau, and Hualien Harbor Bureau into a company managed system (Taiwan International Ports Corporation). This solved previous problem of commercial ports being limited by legal and system restrictions, which caused an inability to respond to market changes and decreased competitive strength. After restructuring of the Hualien Port Bureau, stevedore operation business is now the responsibility of the Port of Hualien, TIPC. Maritime administration, operation items, and public authority within the harbor are handled by the East Taiwan Maritime Affairs Center of the Maritime and Port Bureau (MPB).

1.4 Main Commercial Activities

Currently, the Port of Hualien consists of 25 wharves, among which some have multiple functions, and others were mainly built for stevedoring bulk cargo and wood. The major commercial activities in the port include the transportation of aggregates (sand and gravel), warehousing and transportation,ship repair. The incoming and outgoing cargos for stevedoring primarily include dry bulk, petroleum, general cargo, and ores. Tramp shipping lines from the near ocean are the major operating lines in the Port of Hualien. The commercial activities in the port include tourism, recreation, and the storage and transportation of cement, ores (sand), and stone products

Commercial Activities	
Aggregates(sand、gravel)	Tourism, recreation
Ship repair	
Cargo Handling	
Dry bulk(Timber products, Silica Sand)	Petroleum(Refined products)
Pyrites minerals(Cement)	Ores(Coal, gypsum)

Source: Hualien Branch of TIPC

1.5 Main Cargoes

The main incoming cargo of Hualien Port in 2020 were mineral products (55.2%), wood, bamboo, rattan and their products (42.7%). In 2021, the main incoming cargo inbound goods are still mineral products (52.6%), wood, bamboo, rattan and their products (46.5%)

Type	2020	2021	Comparison of changes in 2020 & 2021	
			Difference	%
Mineral Products	1,005,381	1,110,411	105,030	10.45%
Products of the Chemical or Allied Industries	37,135	14,526	-22,609	-60.88%
Wood, Bamboo and Rattan Products	777,393	981,700	204,307	26.28%
Non-metallic mineral products	210	1,550	1,340	638.1%
Base Metals and Articles of Base Metal	46	19	-27	-58.7%
Mechanical electrical appliances and their products	124	459	335	270.16%
Transportation	938	3,214	2,276	242.64%
Miscellaneous Products	2	1	-1	-50%

Unit:tons
Source: Hualien Branch of TIPC

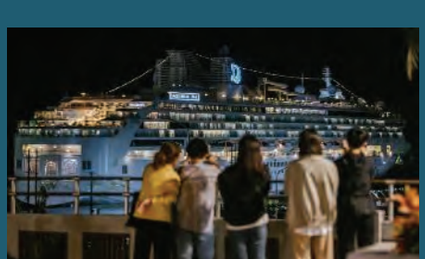
1.6 2020–2021 Business of Port of Hualien

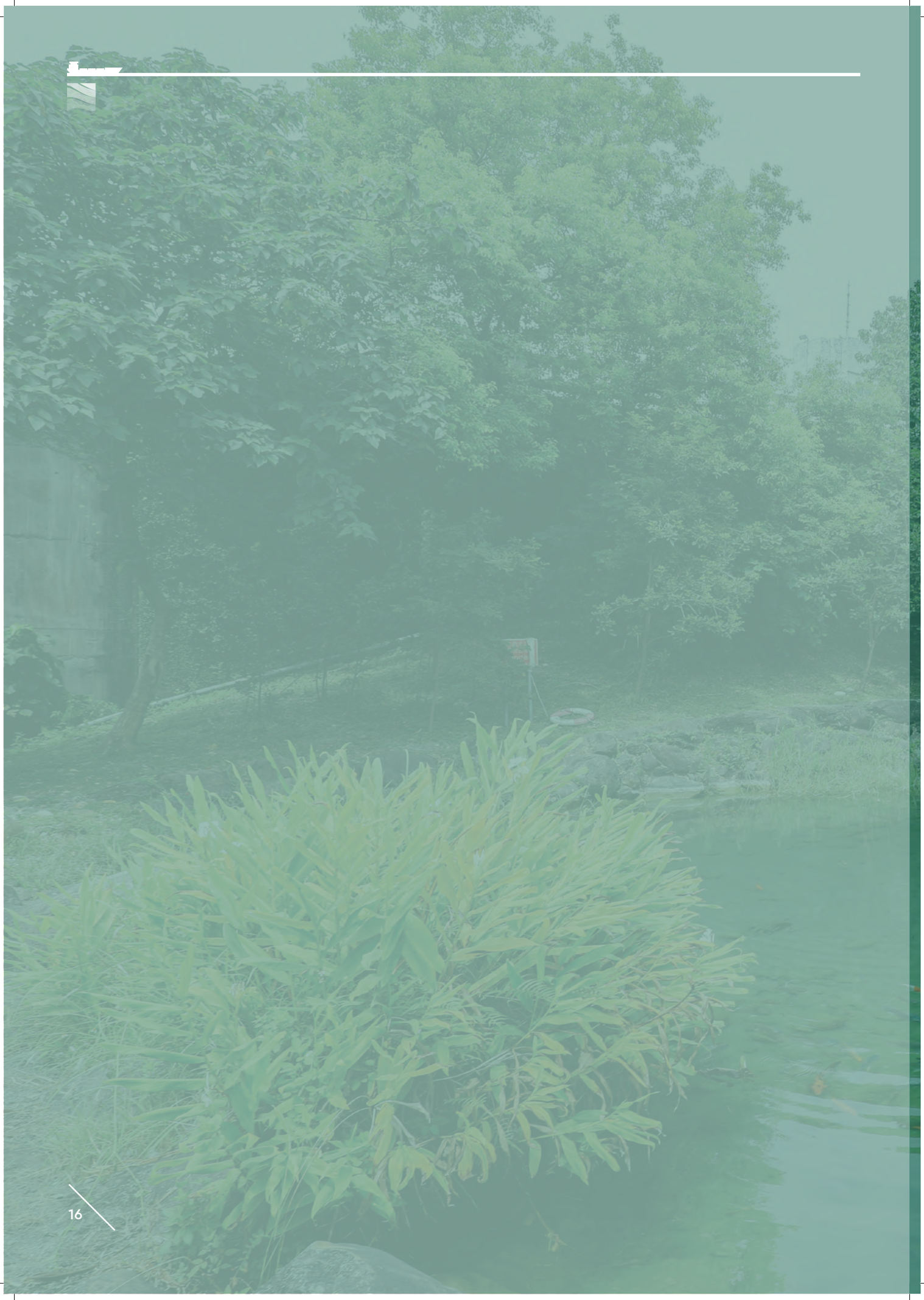
Type		2020	2021	Comparison of changes in 2020 & 2021	
				Difference	%
Incoming and Outgoing Ships	V	2,519	2,228	-291	-11.55%
	G.T	21,803,660	20,430,782	-1,372,878	-6.30%
Volume of Cargo Handled	Dry bulk and Groceries (Revenue Ton)	9,057,765	9,141,233	83,468	0.92%
	Pipeline cargo (Revenue Ton)	557,195	341,540	-215,655	-38.70%
	Revenue Ton)	9,614,960	9,482,773	-132,187	-1.37%
Volume of Imports & Exports	Imports(Ton)	1,821,229	2,111,880	290,651	15.96%
	Exports(Ton)	901,115	695,417	-205,698	-22.83%
	Domestic(Ton)	6,427,648	6,205,384	-222,264	-3.46%
	Total(Ton)	9,149,992	9,012,681	-137,311	-1.50%
Incoming and Outgoing Passenger	Domestic Line(Number)	65,945	34,799	-31,146	-47.23%
	International Line(Number)	0	0	0	0
	Total assenger (Number)	65,945	34,799	-31,146	-47.23%

source: Annual Statistical Report, TIPC, 2021

1.7 Cruise ships and tourist

The Hualien Branch of the Taiwan International Ports Corporation (TIPC) has also been actively stimulating tourism by leasing out underutilized facilities for recreational use. Opening such underutilized wharves to alternate commercial uses enables the tourism industry to capitalize on offshore recreational opportunities, like conducting sightseeing tours of Hualien's skyline from a cruise ship at night. In recent years, the international cruise market has seen marked growth in the Asia-Pacific region. In keeping with this trend, the Port of Hualien not only serves the regularly scheduled Lina cruiseliner (traveling the so-called "Blue Highway" between Su'ao and Hualien)





02

Environmental Management

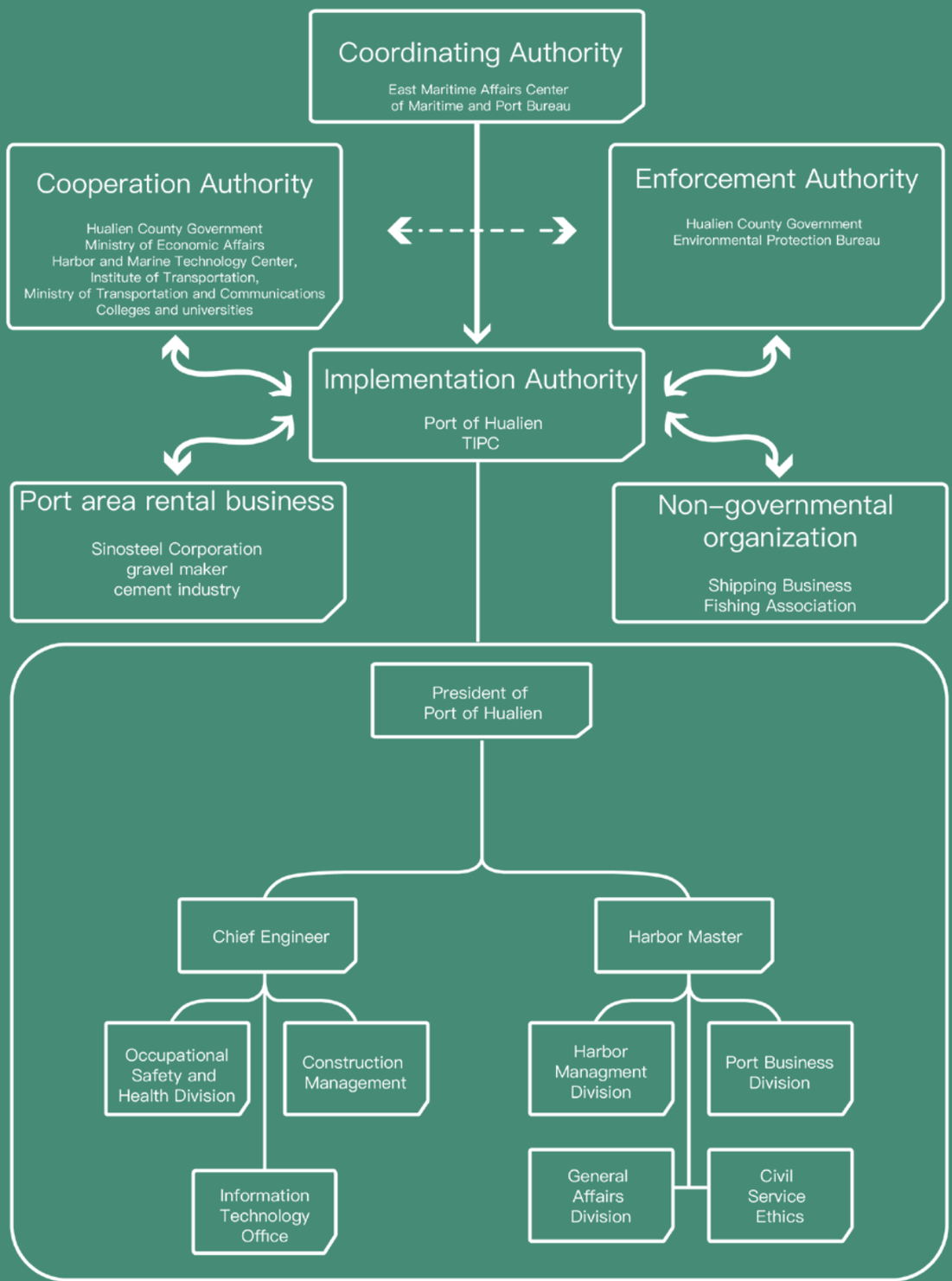
2.1 Environmental Management Organization Structure

The Hualien Branch of TIPC consists of 6 divisions, including Port Business Division, Harbor Management Division, Construction Management/ Equipment Division, Information Technology Office, Occupational Safety and Health Division, Personnel Division, Civil Service Ethics Division, Accounting Division, Secretariat Division. In the Hualien Branch of TIPC, the division responsible for the operation and management of the environment is the Occupational Safety and Health Division that consists of the Safety and hygiene Section, Environmental Safety Section.

The Safety and Hygiene Management Section is in charge of management of occupational safety and hygiene; the Environment Safety Section deals with pollution control, environmental law, EIA, ambient monitoring, emergency response, environmental education, plant conservation, waste treatment and recycling.
The Hualien Branch of TIPC is in charge of managing the environment of the Port of Hualien. However, environmental aspects involve the division of responsibilities among different agencies. In addition to the Hualien Branch of TIPC, agencies responsible for environmental aspects include the East Maritime Affairs Center of Maritime and Port Bureau (MPB), Environmental Protection Bureau of Hualien County Government, Environmental Protection Administration, Ocean Affairs Council,Coast Guard Administration, Maritime Patrol Directorate General, 6th offshore Flotilla, Coast Patrol Group 12, Eastern Branch, Coast Guard Administration, Ocean Affairs Council, Hualien Harbor Police Division of National Police Agency, Hualien Harbor Fire Brigade of National Fire Agency, East Control of Centers for Disease Control.
Based on the Commercial Port Act, the MPB and the Hualien Branch of TIPC are responsible of Hualien Port's environmental management, which the Hualien Branch of TIPC is in charge of port operation related issues and the MPB is in charge of port authority related issues

Duties of the Divisions of the Hualien Branch of TIPC

Division/office	Duty
Port Business Division	Port development, stevedoring, promotion of private investments and operations in the port, passenger clearance services
Harbor Management Division	Management of port security , navigation safety and berth scheduling
Information Technology Office	Integrating and maintaining information systems and devices.
Construction Management/Engineering Division	Port construction project management and repairs; maintenance and management of electrical and mechanical engineering equipment, ship machinery, and other machines.
Occupational Safety and Health Division	ort environmental protection, pollution, and occupational safety management
General Affairs Division	Management of general affairs ,human resource management , auditing revenues and expenditures in the budget and final accounts, public relations for the Hualien Branch of TIPC
Civil Service Ethics	Prevention, inspection, and punishment related to civil service ethics



Organization chart of Hualien Branch of TIPC

2.2 Environmental Aspects and Legal Requirements

According to the environmental regulations that the Hualien Branch of TIPC complies with, sources of pollution can be divided into pollution from ships at sea and discharge of pollutants during operation at port. The former is regulated by international conventions and norms, whereas the latter is mostly governed by domestic regulations.

The Hualien Branch of TIPC follows relevant international specifications, such as International Convention for the Prevention of Pollution from Ships (MARPOL73/78), London Dumping Convention, International Convention for the Control and Management of Ships' Ballast Water and Sediments, International Convention on the Control of Harmful Anti-fouling Systems on Ships etc. In addition to the international environmental specifications and conventions, The Hualien Branch of TIPC collaborates with local authorities to manage the environment in the Port in compliance with relevant environmental laws and regulations in Taiwan.

Relevant Environmental Laws and Regulations Related to Ports in Taiwan

Laws Title		
Sectors in the Ministry of transportation and communications	The Commercial Port Law	2021/04/28
	The Law Of Ships	2010/12/08
	Shipping Act	2014/01/22
Sectors related to agricultural	Wildlife Conservation Act	2013/01/23
Sectors in the Ministry of the Interior	Fire Services Act	2022/05/11
Sectors related to environmental protection	Marine Pollution Control Act	2014/06/04
	Basic Environment Act	2002/12/11
	Air Pollution Control Act	2018/08/01
	Toxic and Concerned Chemical Substances Control Act	2019/01/16
	Indoor Air Quality	2011/11/23
	Water Pollution Control Act	2018/06/13
	Waste Disposal Act	2017/06/14
	Soil and Groundwater Pollution Remediation Act	2010/02/03
	Noise Control Act	2021/01/20
	Environmental Impact Assessment Act	2003/01/08
	Greenhouse Gas Reduction and Management Act	2015/07/01
	Environmental Education Act	2017/11/29
	Environmental Agents Control Act	2016/12/07
	Public Nuisance Dispute Mediation Act	2009/06/17
Intersectoral	Disaster Prevention and Protection Act	2022/06/15

	Central Competent Authority	Local Law Enforcement Agencies
	Ministry of Transportation and Communications	East Maritime Affairs Center, Maritime and Port Bureau, MOTC
	Council of Agriculture	Agriculture Bureau, Hualien City Government
	Ministry of the Interior	Hualien Harbor Fire Brigade
	Ocean Affairs Council	Environmental Protection Bureau, Hualien City Government
	Environmental Protection Administration	
		Public Nuisance Disputes Mediation Committee, Hualien City Government
	Hualien City Government	

Source: Hualien Branch of TIPC

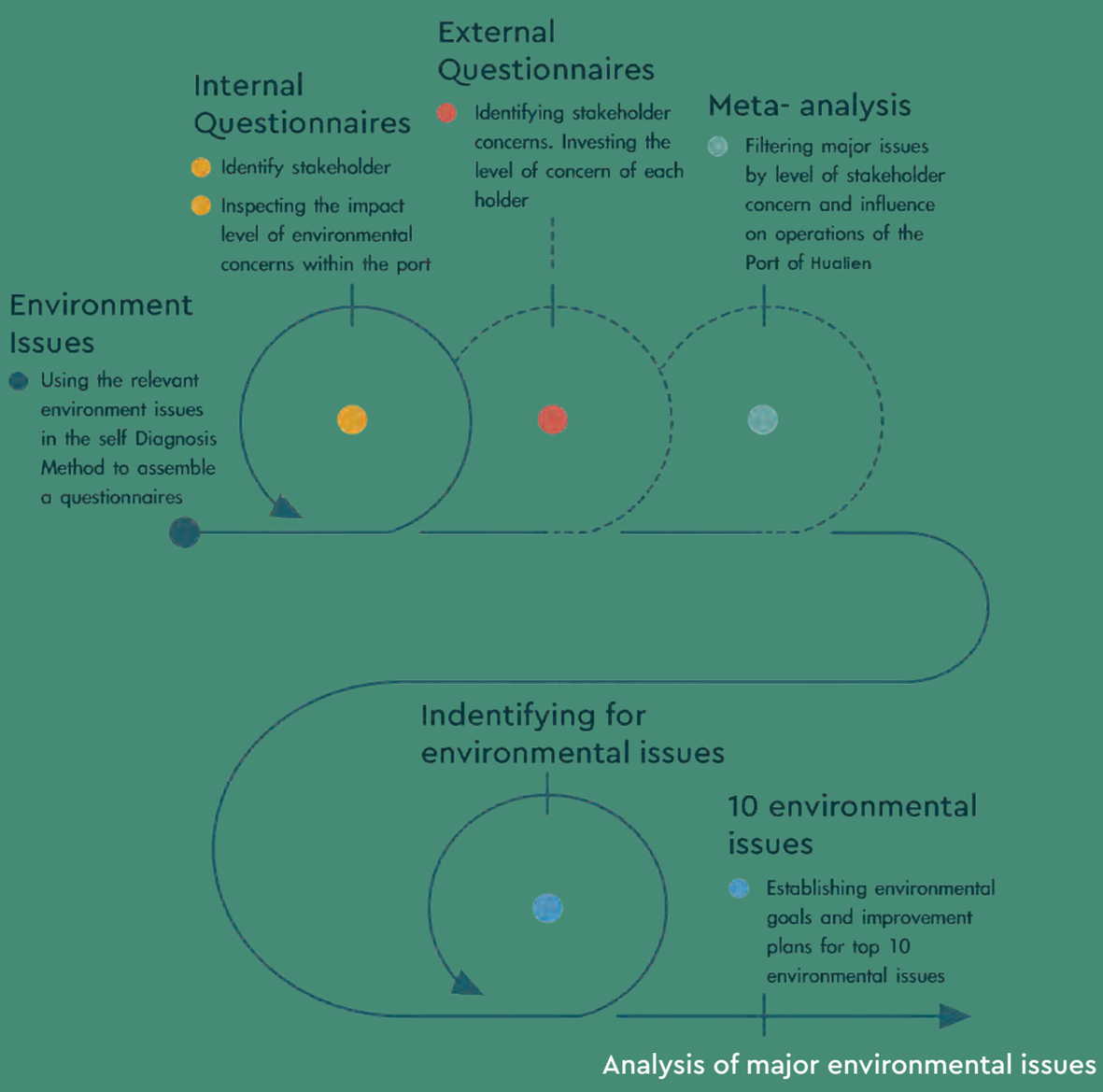
2.3 StakeholderAnalysis

The Hualien Branch of TIPC believes that good communications with stakeholder help identify key environmental issues and create value Therefore, the Hualien Branch of TIPC uses a variety of methods to communicate with stakeholder,including surveys and interviews Their needs and expectations are gathered and incorporated into operation and environmental management

Issues of interest to stakeholders

Sector	Focus on issues	Corresponding top 10 environmental issues in Hualien Port
Government agencies	Dust; Air quality;Water resources; Hazardous Cargo	• Abate port fugitive dust emissions • ReduceShip Emissions • Transportation Vehicles Control • Improve air quality • Reclaim and Preserve Water Resources • Enforce Bulk Cargo Management
Employee	Environmental quality of life near the port area; Port area environment; Resource use	• Abate port fugitive dust emissions • Reduce Noise Impact • Maintain Water Quality within the Port Area • Enhance Interactions with Local Communities
Client	Air quality; Vehicle emissions ;Goods spill; Port area safety maintenance; waste ; Water quality;	• Abate port fugitive dust emissions • Transportation Vehicles Control • Improve air quality • Reducing port waste • Enforce Bulk Cargo Management • Maintain Water Quality within the Port Area
Community	Air quality;Noise; Vehicle emissions;Environmental quality of life near the port area	• Reduce Noise Impact • Transportation Vehicles Control • Improve air quality • Enhance Interactions with Local Communities

Stakeholder	Importance
Government	34 %
Employee	22 %
Client	29 %
Community	15 %



Port of Hualien

Environmental Issues

Top 10

1. Air Quality

indicator

-Air quality pass rate (TSP、PM_{10}、$PM_{2.5}$、SO_2、NO_2)
-Number of air pollution patrols

2. Dust

indicator

-Road sprinkler for dust suppression
-Water bank usage.

3. Port and harbor waste

indicator

-General waste removed and recycling rate in the harbor land area

4. Noise

indicator

-Quarterly ratio of noise levels satisfying related regulations
-Total number of received petitions.

5. Ship exhaust gas emissions

indicator

-The ratio of using low-sufer fuel or biodiesel and the consumption of low-sufer fuel among harbor crafts
- Percentage of harbor crafts using shower power.
- Shore power usage

-Ships deceleration target completion rate

6. Cargo spillage

indicator

- Inspections of hazardous cargo.
- Number of cargo spill emergency response drills performed
- Percentage of oil tanker ships using containment booms.

7. port development (land related)

indicator

-Ratio of intelligence in port
-Coastal protection measures implemented

8. Climate change

indicator

-Area of the buffering green space(the ecological pool and the bicycle path)
-Amount of solar power generated.

9. Water Quality

indicator

-Marine water quality pass rate
(pH, DO, BOD5, cyanide, phenols, mineral oils)

10. Relationship with Local Communities

indicator

-Number of activities and participants

03

State of the Environment

3.1 State of Environment

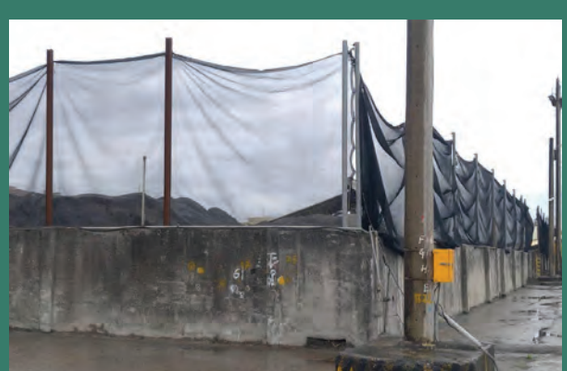
Environmental Monitoring：

The most significant environmental issues affecting the Port of Hualien are air pollution, noise pollution, and sewage runoff, as well as waste management and resource conservation Importantly these challenges also create the need for a strong public relations strategy To understand the environmental changes in the port and surrounding areas over the years, the Hualien Branch of TIPC launched the Hualien Harbor Environmental Quality Monitoring Integration Program in 2015 For the program, the Environmental Protection Administration (commissioned certain environmental testing organizations to gather data on important indicators in the area surrounding the port, including air quality, noise levels, water quality, sediment composition, and biodiversity Environmental monitoring is conducted to determine the effects of various pollution sources, providing crucial information for environmental management and pollution prevention and mitigation The harbor close to Hualien City presents potential noise generated by vehicular traffic To monitor this traffic, the Hualien Branch of TIPC has set up around the clock surveillance cameras on the main road and along restricted areas, as well as noise monitoring stations at Sentry Posts N 17 and 24 The Hualien Branch of TIPC has invited environmental professionals and researchers to review the project and provide suggestions As part of its ongoing commitment to transparency, TIPC publishes its annual environmental monitoring report on its website

	Monitoring item	Monitoring frequency
Air Quality	TSP(Total suspended particulates),PM_{10} , $PM_{2.5}$ SO_2 , CO , O_3 , No_x, NO , NO_2 , temperature , humidity , wind speed , wind direction , rainfall	Monthly , 24 hr duration
Noise	Environmental sound volume criteria (Daytime L eq , , Evening L eq ,Nighttime L eq , Full Range L eq Low frequency noise *Equivalent Energy Sound Level (L eq It refers to a specific period within the measured volume of the average energy	Monthly , 24 hr duration (weekday and weekend) Using 2 sets of 24 hr automated and continuous monitoring systems
Water Quality	<General item> Velocity of flow, Flow direction , Water temperature ,pH DO,BOD,E coli , NH 3 N,TP, cyanide, Phenols, Mineral oils ,SS ,salinity, Nitrite , Nitrate , Detergents Anionic surfactant interface Etc. <Heavy meatal item> Cd ,Pb ,Cr 6+6+,As , Hg , Se , Cu , Zn , Mn , etc .	Quarterly
Sediment	<General item> Particle size analysis、 Water Content 、 specific weight 、 Fixity solids ,Volatile solids 、 pH 、 TN 、 TP 、 Total lipid 、 Phenols, Total organic Etc. <Heavy meatal item> Cu , Cd , Pb , Cr , Zn , As , Hg , Se, Mn , Ag , Al	Quarterly
Ecology	Concentrations of heavy metal in phytoplankton, zooplankton, zooplankton,benthos Cu Pb , Cd , Zn ,Ni , Cr , Hg , As	Quarterly

3.2 Improvement Strategy of Air Quality

A series of pollution control measures have been introduced to improve air quality in the Port These measures include a campaign to reduce vessel speeds, a shore side electric power supply system, the use of low sulfur fuels, and an automatic gate control system To prevent suspended particles emissions, the port now requires all operators to use dust control meshes, dust suppression sprinklers, car washing stations, water lanes, enclosed conveyors, and unloading facilities The Port offers its full cooperation with other government agencies at both the local and national level such as Ministry of Transportation's Maritime Port Bureau or the Hualien County Environmental Protection Bureau (especially with regard to pollution prevention and auditing measures The Port also collaborates with the EPA in evaluating the efficacy of air and marine pollution control programs.



3.2.1 Vessel Speed Reduction

To reduce air pollution and greenhouse gas emissions from ships, the Port of Hualien has been actively promoting its Vessel Speed Reduction to record the speed of inbound and outbound ships With the AIS system, the Port of Hualien can receive real time data to monitor the speed of ships that are approaching the port's 20 nm radius and notify the ships for speed reduction through either text messages or port's broadcasting system The Port of Hualien also makes use of the Port Affairs Meetings and Berth Allocation Meetings to promote the VSR Policy The Port of Hualien VSR Policy requires ships within 20 nm radius to reduce speed to under 12 knots The achievement rate of ship deceleration is 78.58% in 2020 and 71.34% in 2021.

	(A)	(B)	(C)	(D)	(E)
y	Meet The deceleration conditions	The average speed of all vessel	Total vessels	Reduct ion rate(%) (D=A/B)	Carbon reduction
2020	1185	1506	171	78.70%	3627
2021	988	1385	171	71.30%	3247

Results of vessel speed reduction program

3.2.2 Low sulfur Fuel and Shore Power

The air pollutants emitted by vehicles come from the exhaust gas produced by fuel combustion or evaporation. From 2020 to 2021, about 850,000 vehicles will enter and exit Hualien Port. Automatic gates will be set up in the inbound and outbound lanes, and each vehicle will be cleared by 70 seconds. , a total of about 16,500 hours can be saved in two years, and the fuel cost can be saved by about 2.72 million yuan if the truck stops idling at 6 liters/hour and diesel is 27.5 yuan/liter. It reduces the use of 0.1167 liters of gasoline and 304.4 grams of carbon dioxide emissions for each vehicle entering and leaving the post, and a total of about 259 metric tons of carbon dioxide emissions are reduced. In addition to greatly shortening the idling time of operators entering and leaving the port area, it also reduces the pollution of vehicles in the port area to the environment.

3.2.3 The use of low-polluting fuel and shore power for port handling ships

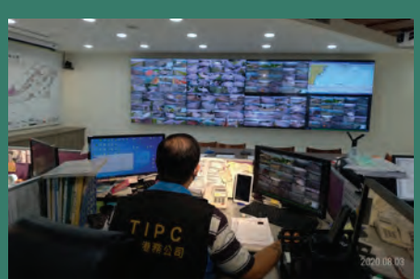
Shore power is to install power supply equipment on the shore after the ship docks to provide the power required for the maintenance or routine maintenance of the berthing ship through the ship cable, replacing the diesel used by the internal combustion engine of the ship, thereby greatly reducing air pollution. In addition to the full use of ultra-low-sulfur low-pollution fuel super diesel as fuel for ships, shore power facilities have been set up for all port handling vessels at Piers 1 to 4, 15 and 16, and Piers 5–7 cooperate with sea patrols The department was relocated, and shore power facilities were newly set up for the full use of shore power by the official ships of the Coast Guard, reducing pollution emissions from ships. At present, there are 6 shore power terminals from 1 to 4, 7 from 5 to 7, 5 from 15 and 16, a total of 18.

3.2.4 Reducing Leakage of Cargo Stevedoring

The Hualien Branch of TIPC takes a number of steps to ensure safety on port grounds and support its environmental management efforts, including monitoring surveillance cameras were placed throughout the Port assigning personnel to conduct regular environmental inspections and require and enforcing written agreements with tenants to observe all environmental laws and regulations To control dust emissions and reduce air pollution, grab operators shall not open the grabs highly Conveyor operators shall install a cover at the output opening The output opening shall be within 1 meter above the upper edge of the truck beds Dust covers should be firmly wrapped and fastened to the vehicle, with a margin of at least 15 cm extending down below the upper edge of the carton In addition to the loading and unloading operations anti blanking separator shall be installed to avoid the discharge of contaminated waters from entering the basin

* Inspection and Jointly Supervised Safety Drills

Item	2020	2021
Number of harbor inspections	246	246
Number of joint safety supervision	12	12



3.2.5 Dust Reduction

The operators in the Hualien port area have set up closed storage and transportation facilities for loading and unloading operations, including closed ship loaders at Asia Cement Piers 8, 10, and 18;The closed conveyor belt and closed ship loader in the rear line of China Steel Pier 11, as well as the closed ship loader installed by the sand and gravel industry at Pier 17, 20 and 21, can effectively reduce the environmental pollution caused by loading, unloading and transportation. question. In order to reduce the dust in the sand and gravel storage yard and transportation in Hualien Port, mobile sprinkler dust-proof devices are installed in the sand and gravel storage area to sprinkle water regularly to keep the materials moist. Automatic sprinklers and water curtains are also required for the materials to be transported on site. To keep the materials moist, the sand and gravel yard in the port area has its own car washing facilities. Vehicles leaving the port must pass through the water passage, and the wheels can be washed for the second time before leaving the port.

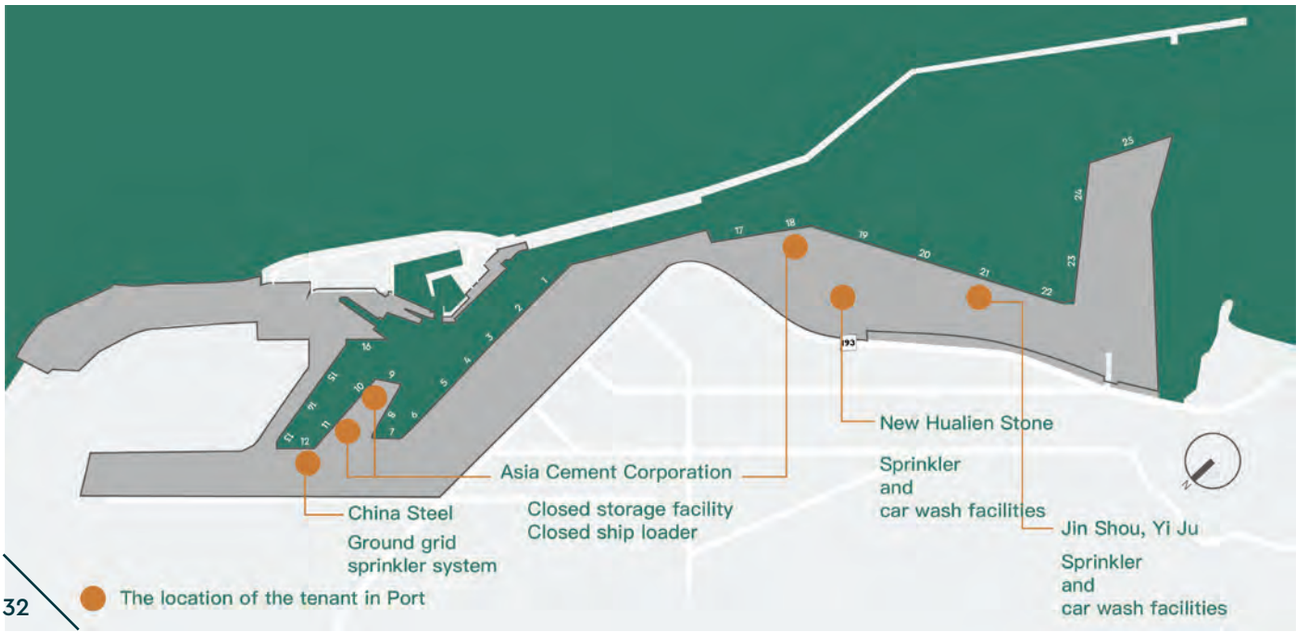
According to statistics, in 2020 and 2021, the sand and gravel accumulation in the port area will be 2.81 million metric tons and 2.78 million metric tons respectively, reducing the discharge of granular pollutants by about 134.16 metric tons in total. In addition, China Steel Hualien Quarry will transport about 780,000 and 710,000 tons of stone in 2020 and 2021. The ground mesh sprinkler system will be installed on the ground to keep the ground moist, reducing the discharge of granular pollutants by about 35.76 tons in total.

*Dust Control Efficiency of Sand and Grave*Dust (2020-2021) Unit: Tonne / year

Type	Amount of sand	Amount of suspended particles emissions	Amount of suspended particles controlled **
Sand industries	5,590,000	335.4	134.16
Hualien sand site of China Steel	1,490,000	89.4	35.76
Total	7,080,000	424.8	169.92

*Emission factor(0.06kg/ tonne) : EPA gravel acquisition and processing industry suspended particles pollutants Prevention Technical Manual (P9)
**Dust proof efficiency40 %%:Large exposed to suspended particles matter emissioncharacteristics and technical feasibility study of control

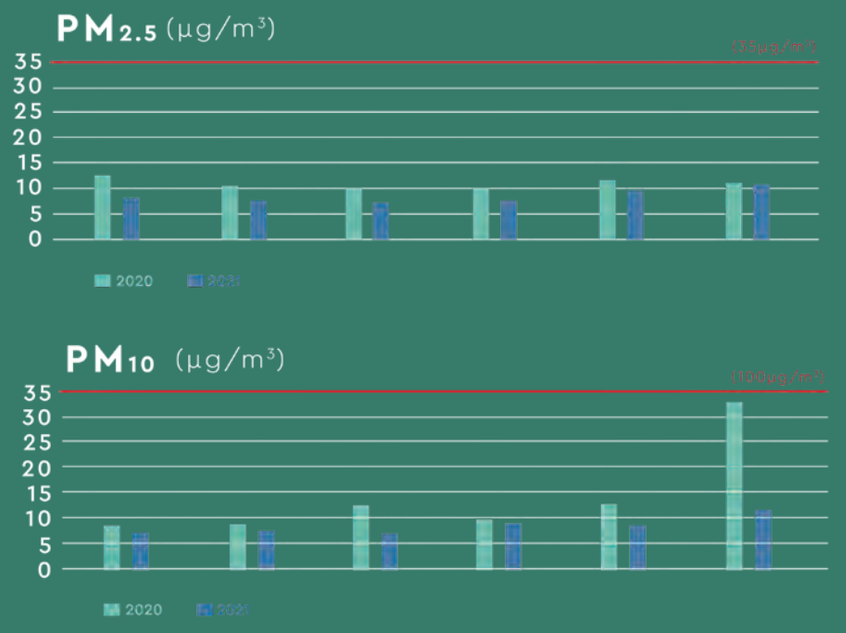
Tenants

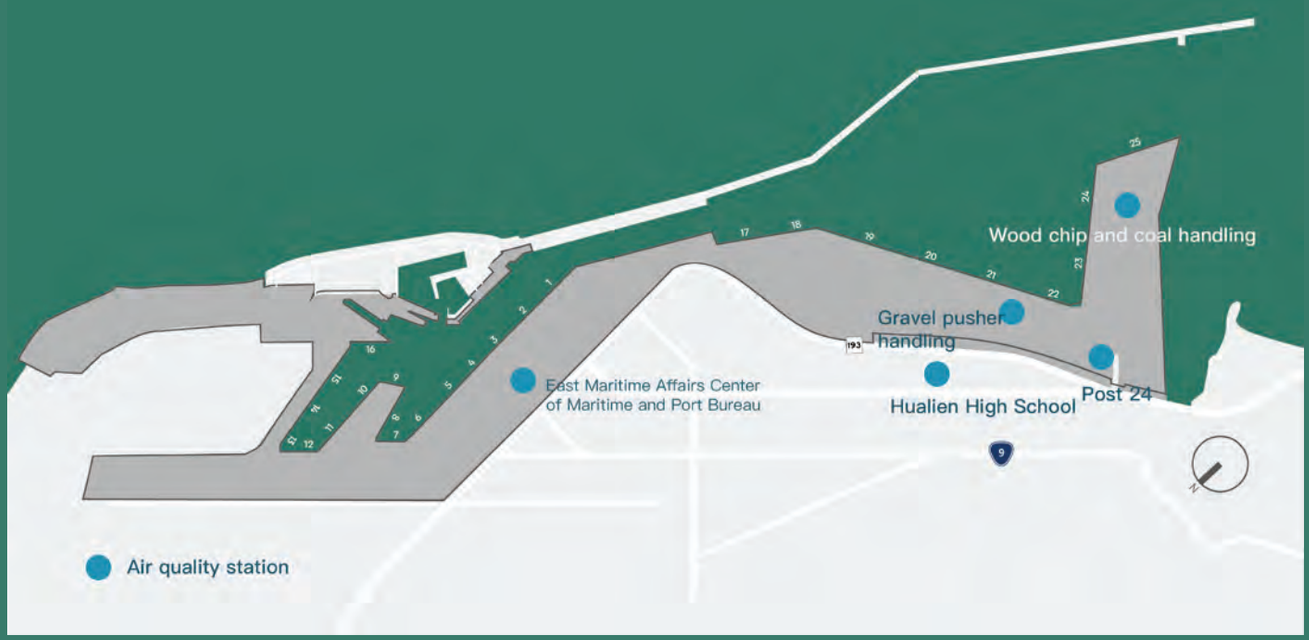


3.2.6 Air Quality Monitoring

The air pollution in the Port of Hualien mainly derives from vessel, as well as exhaust discharge and suspendedbparticles from vehicles used by port operators Longterm scientific environmental monitoring data should be established to examine and maintain local air quality The Hualien Branch of TIPC monitors air quality to review the improvement of pollution reduction From 2015 Hualien has been set up 3 monitoring station at Sentry Post 24 Hualien High School, and East Taiwan Maritime Affairs Center to monitor items of TSP 、 PM_{10} 、PM_{25} 、SO_2 、NO_2 、CO and O_3 It shows that all results are in compliance with air quality standards · According to the air quality monitoring results in 2020–2021, all meet the air quality standards.

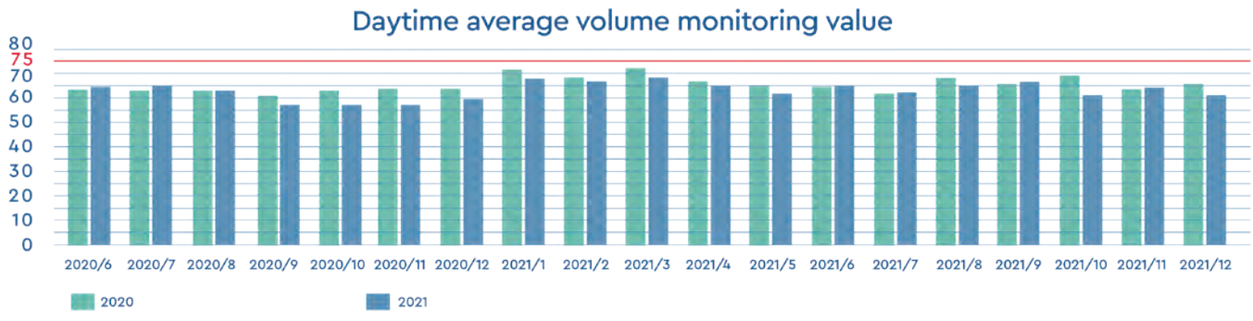
Air quality monitoring station

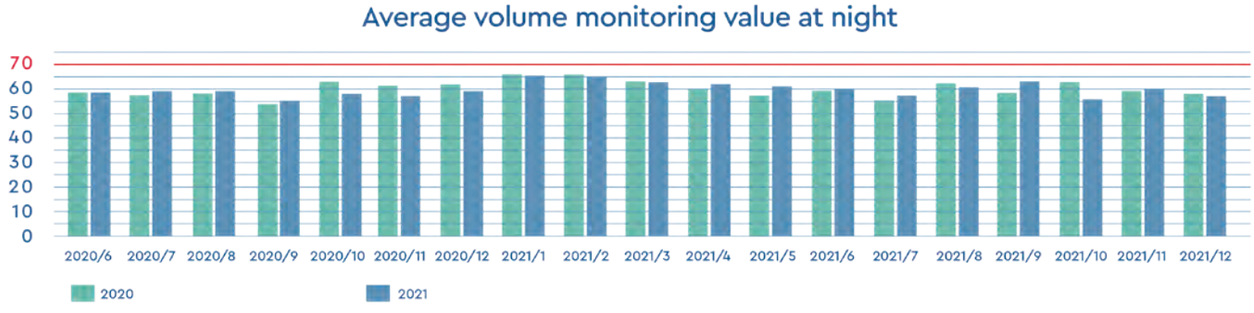




3.3 Noise Reduction Improvement Strategy

After the outer ring road along the northern coast was built,vehicles change their route to the underground road, thus reducing the air and noise pollution suffered by communities along the northern coast, ensuring the safety of people and vehicles, and quality of life of the community In addition, access roads to the Port of Hualien have been built to separate port traffic from the commuting routes of nearby residents A green belt, railings, bicycle pathway,promenade, and jogging trail have been built upon the box culvert road In addition to its extensive, ongoing environmental monitoring and management work, the Port is also deeply invested in the surrounding community To mitigate the impact of the commercial and industrial activity it generates, the Port has constructed an 11 acre green belt between it and the neighboring residential community.This green belt serves as a noise barrier and, more importantly, as a green buffer zone between the Port and





3.3.1 Noise Monitoring

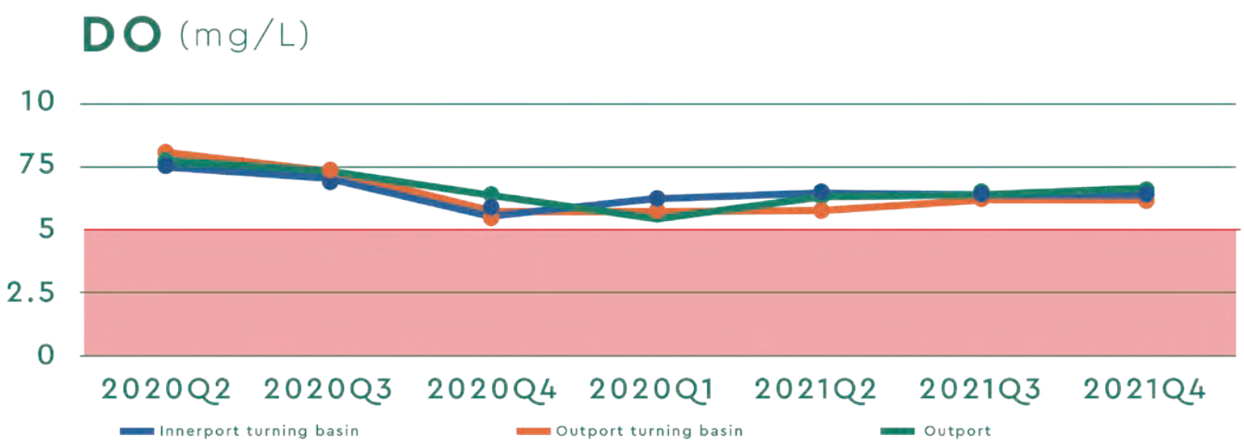
The Port of Hualien is adjacent to Hualien City, consequently the noise generated by cargo transportation tends to affect the living quality of nearby residents In addition, public grievances from neighboring residents about noise pollution have been frequent The Port of Hualien is classified into the Regulated Area of Category D, and two monitoring stations have been established around the port All results of the Port of Hualien in 2020 2021 met the noise control standards as well

Location map of noise (including low frequency) stations

3.4 Water Quality Improvement Strategy

The water pollution in the port area may come from the discharge of ships and the pollution of upstream household wastewater. The Hualien Port Branch will continue to cooperate with the Hualien County Government's sewage takeover plan to properly handle the domestic sewage discharged into the port area.

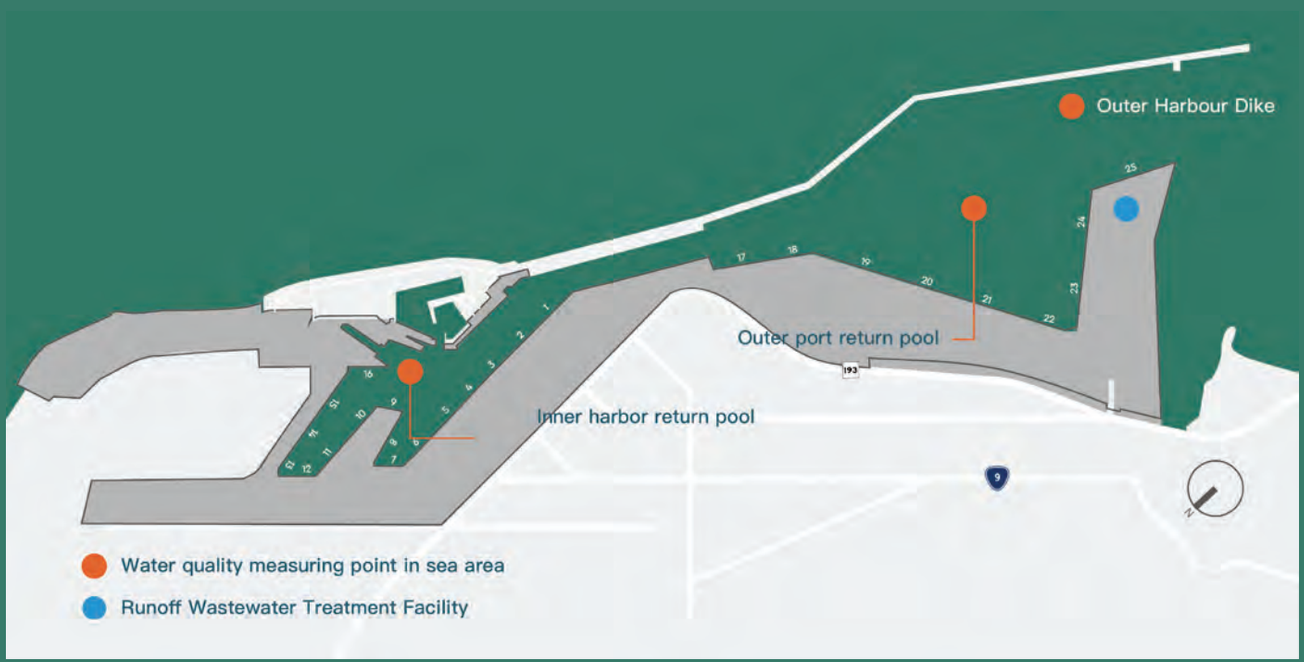
In accordance with the Environmental Protection Agency's "Port Area Pollution Prevention and Reduction Measures Plan", Hualien Port Branch has built the Outer Harbor Wharf's runoff wastewater interception and treatment system year by year to reduce the pollution of stormwater runoff wastewater. In 2015, the Outer Harbor Pier 25 runoff wastewater collection system was completed, with a water treatment capacity of 500CMD, reducing the discharge of suspended solids by 90%. In 2016, the 23-24 Pier runoff wastewater collection system was completed. When a ship is unloading oil in Hualien Port area, protective equipment must be placed around the ship to prevent oil leakage and pollution, which can effectively prevent the spread of oil spillage. There has been no oil spill from ships in Hualien Port in the past five years, ensuring that the water surface of the port area is clean. Hualien Port Branch regularly holds marine pollution emergency response drills every year, and continues to promote the outsourced treatment of waste oil and sewage, strengthen the control of ship waste cleaning and waste oil sewage treatment business, and entrust qualified operators to clean up the proportion of ship waste and waste oil sewage 100%.



3.4.1 Water quality Monitoring

in order to monitor the discharge of runoff wastewater in the port area and changes in the water quality of the port area, the Hualien Port Branch implements the monitoring of the discharge water from the runoff wastewater discharge outlet and the monitoring of the water quality and bottom quality of the sea area. ", and submit monitoring reports for review every six months. There are 3 sampling locations for water quality in the harbor area. The monitoring results of the Hualien harbor area in 2020 and 2021 all meet the marine environmental quality standards for Class B sea areas.

Locations of water quality monitoring sites and runoff wastewater interception and treatment system



3.5 Climate Change Mitigation Measures

Taiwan has scarce water resources The Hualien Branch of TIPC adjacent to the Meilun Mountain is favorable for collecting and filtering surface runoff because it is low lying and has gravel at the surface layer and mudstone at the bottom layer According to the concept of water resource banks, the Branch built 12 water storage facilities in the port to provide nondomestic water in replacement of tap water for flushing toilets in the administrative building, greening, containing dust at the sand and gravel storage site, and washing vehicles. In 2018 Hualien Port salvaged approximately 4000m 3 of concrete blocks after disasters and screened for concrete blocks that were viable for use in the creation of concrete breakwater foot protection blocks.

Though this process, Hualien Port reduced processing costs of soil and stone resource processing and protected the port from ocean wave erosion With the increase in environmental protection awareness and the rise in prevalence of adopting renewable energy, Hualien Port began installing solar panels on the rooftops of its buildings in 2018 This led to an increase in the port's income and reduction in its CO 2 emissions › At the end of 2020, a total of 2,407 kilowatts of capacitors will be completed. According to statistics, a total of 1,283,841 kWh of electricity will be produced in 2020, reducing carbon dioxide emissions by approximately 684 metric tons.

3.6 Reducing port waste

For the waste in Hualien Port area, garbage and recycling bins are set up in the frequent activities of the port area, and garbage trucks are dispatched to collect and transport them at regular intervals. The recycling rate is about 13%. In 2021, the amount of waste generated is 156.3 metric tons, and the recycling volume is 35 metric tons. The resource recovery rate is about 18%.

Solid waste disposal (2020–2021)

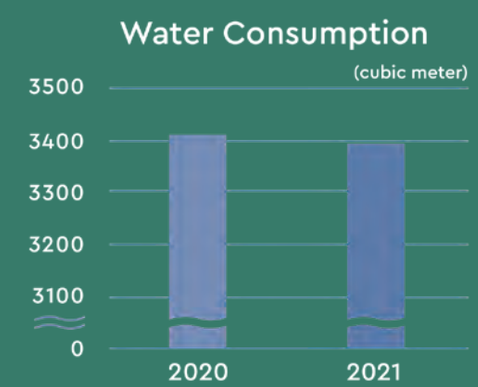
Item /Year	2020	2021
Total waste generation(ton)	132.5	191.3
General waste clearance volume(ton)	114.1	156.3
Recycle (ton)	18.4	35
Recycle Rate (%)	13	18

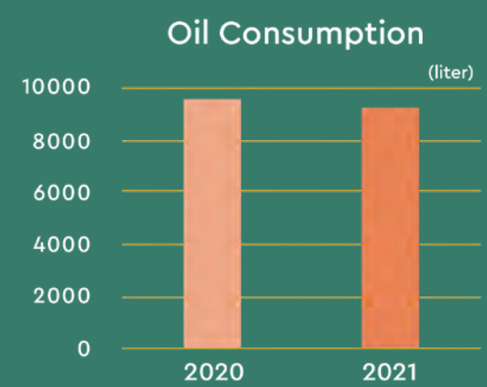
3.6.1 Reduce resource usage / reduce carbon emissions

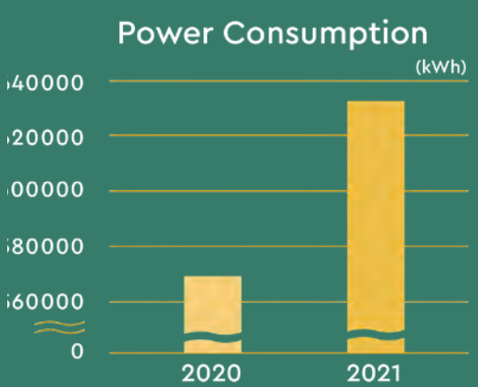
In order to achieve the goal of energy saving and carbon reduction, Hualien Port Branch actively cooperates with the government to promote the project in the four provinces, and often promotes colleagues to cherish and save resources. By monitoring the consumption of electricity, water, oil and paper in the office and operating areas, we can understand the use of resources. and improve.

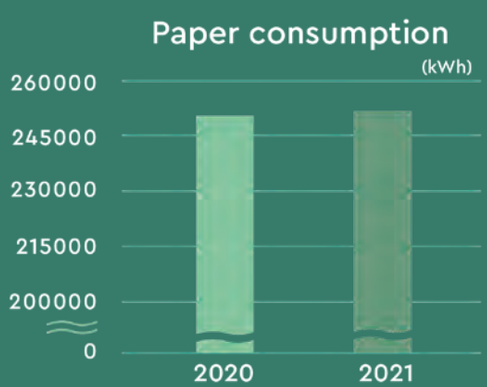
In 2019 and 2020, due to the lease of some previously unused office providers, the electricity consumption increased significantly, and the consumption of water, oil and paper remained stable.

Focus	Implementation plan
Water	• Regular pipeline inspections, monthly control of water consumption
Electric	• Intelligent light control, automatically turn off lights in sensing long-term unmanned areas, and gradually replace traditional lights with power-saving lamps. • Remote control, using the smart grid system, using the mobile phone to control the switch of horse stealing lamps. • Set the opening time of the air conditioner, only use the air conditioner when the temperature is above 28°C, and the indoor temperature is not lower than 26°C
Fule	• Promote shared public vehicles • Parking and idling time shall not exceed 3 minutes • Regularly record and control the mileage of official vehicles to manage vehicle fuel consumption • Set up a smart grid system and use remote control and monitoring to reduce the fuel consumption of vehicles.
Paper	• Promote the electronicization of administration and services, and increase the ratio of E-services such as online document approval operations Print on both sides as much as possible or reuse the reverse side









3.7 Improving the Port's Relationship with Local Communities

Every year, the Port of Hualien Taiwan International Ports Corporation calls on its employees and related divisions in the harbor area to undertake a beach cleaning activity and to collect beach trash in the harbor area This activity helps participating units and employees understand the importance of protecting the marine environment It is hoped that the beach cleaning activity can help the Port of Hualien and related units collaboratively maintain their working environment and keep the harbor comfortable and beautiful By building team and community cohesion in the Port of Hualien, a healthy, quality, and sustainable environment in the region can be developed

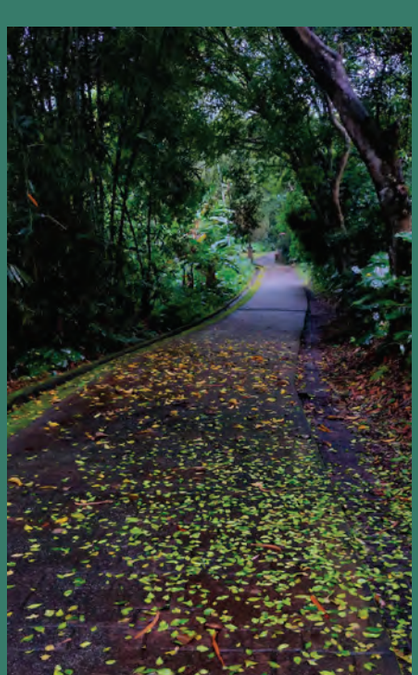
Hualien Port Branch organized a series of activities to celebrate the 90th anniversary of the establishment of Hualien Port, allowing people from all over Taiwan to have the opportunity to learn about the port area, including a review of historical changes, demonstration of port functions, port area tours, creative activities, and environmental beach clean-up activities Taking into account the rights and interests of relevant stakeholders around the port area, and implementing social corporate responsibility, the "Hualien Port 90th Anniversary Series Celebration Activities" has been organized in 2020, and a total of 10,000 people participated in the grand event. The public welfare activities in 2020–2021 include warm-care in winter, care for the disadvantaged and other activities to support relatives and neighbors, with 17 and 23 sessions respectively.

3.8 Port Landscaping

The Port of Hualien is adjacent to the Meilun community A 46 ha leisure park was established between the port and the community as a green belt to prevent dust, noise, and wind ,Meanwhile, the park also creates a positive image for the port for providing recreational space This project is estimated to reduce 437 tonnes of carbon emission annually

Planting area	Total tree planted	Shaded area per arbor tree	Ratio of arbor tree*	carbon reduction**
46,000m^2	5,806 plants	0.1256m^2/plant	1.59%	437,460kg-CO_{2e}/yr

*The proportion of arbor species: 0.1256m2/plant X 5806 plants/46000m2 X 100% =1.59%
**Carbon reduction = 600kg-CO2/m2 X 46000m2X1.59%
Source of data: Estimated according to the calculation method of arbor-like open space greening and beautification proposed by the Architecture Research Institute of the Ministry of the Interior.



3.9 Environmental Performance Indicators of Hualien Port

Significant environmental issues of Hualien Port		Index item	Calculation method	
1	Air Quality	Air quality pass rate (TSP、PM_{10}、$PM_{2.5}$、SO_2、NO_2)	The ratio of the measurements in the air quality monitoring station of the port that meet the "Air Quality Standards"	
		Number of air pollution patrols	Frequency of land patrol	
2	Dust	Road sprinkler for dust suppression	Streetwash attendance Daily sweeping kilometers (annual mileage ÷ 2 ÷ working days)	
		Water bank usage.	• Water usage at sand and gravel disposal plants. • The amount of water for road sweeping • Water usage for loading and unloading water spraying of woodchip carriers.	
3	Port and harbor waste	General waste removed and recycling rate in the harbor land area	Amount of recycled waste ÷ Waste generation×100%	

	Target value	Indicator presentation (calculation details)	
		2020	2021
	• PM_{10} of the daily mean measurem- ents satisfy the standard (<125μg / m^3): 100% • $PM_{2.5}$ of the daily mean measurem- ents satisfy the standard (<35μg / m^3): 100% • SO_2 of the daily mean measurem- ents satisfy the standard: 100% • NO_2 of the daily mean measurem- ents satisfy the standard: 100%	• PM_{10} of the daily mean measurem- ents satisfy the standard (<125μg / m^3): 100% • $PM_{2.5}$ of the daily mean measurem- ents satisfy the standard (<35μg / m^3): 60% • SO_2 of the daily mean measurem- ents satisfy the standard: 100% • NO_2 of the daily mean measurem- ents satisfy the standard: 100%	• PM_{10} of the daily mean measurem- ents satisfy the standard (<125μg / m^3): 100% • $PM_{2.5}$ of the daily mean measurem- ents satisfy the standard (<35μg / m^3): 60% • SO_2 of the daily mean measurem- ents satisfy the standard: 100% • NO_2 of the daily mean measurem- ents satisfy the standard: 100%
	240 inspections per year	• Number of port area inspections:246	• Number of port area inspections:246
	240 attendances of street washing vehicles per year 10 kilometers per day	• Attendance 246 times • 5082÷2÷246=10.3km	• Attendance 246 times • 7302÷2÷246=14.8kms
	Conserve up to 100,000 tons of tap water.	• sand and gravel disposal plants: 111,564 tons • Sprinkler: 41,472 tons • woodchip carriers:1,366 ton • Total:154,402 tons	• sand and gravel disposal plants: 8,644 tons • Sprinkler: 40,128tons • woodchip carriers: 8.061 ton • Total:106,833 tons
	• 10% general waste recycling rate in the harbor land area based on general waste removed	18.4÷114.1×100%=16%	35÷156.3×100%=22%

Significant environmental issues of Hualien Port		Index item	Calculation method	
4	Noise	Quarterly ratio of noise levels satisfying related regulations	Daily ratio of noise levels (measured at the noise monitoring station in the port) that satisfy related regulations The port is classified into the Regulated Areas of Category D in general area Noise Control Criteria: Detailed regulations: 75 dB during the day (7 am–8 pm); 70 dB during the evening (8–11 pm); 65 dB during the night (11 pm to 7 am of the following day)	
		Total number of received petitions.	The number of received petitions.	
5	Ship exhaust gas emissions	The ratio of using low-sufer fuel or biodiesel and the consumption of low-sufer fuel among harbor crafts	• Number of harbor crafts using low-sufer fuel (marine diesel oil or super diesel) ÷ Total number of harbor crafts × 100% • Consumption of low-sufer fuel among harbor crafts	
		• Percentage of harbor crafts using shower power. • Shore power usage	• Number of service vessels using shore power ÷ total number of service vessels × 100% • Shore power usage (kWh)	
		Ships deceleration target completion rate	The automatic identification system for ship deceleration is applied to determine the deceleration of ships within 20 sea miles from the port	

	Target value	Indicator presentation (calculation details)	
		2020	2021
	• Daytime equivalent energy sound levels: quarterly achievement rate of 100% • Evening Leq: quarterly achievement rate of 100 • Nighttime Leq: quarterly achievement rate of 100%	• Daytime Leq 100% • Evening Leq 100% • Nighttime Leq 100%	• Daytime Leq 100% • Evening Leq 100% • Nighttime Leq 100%
	Decrease the number of petitions	0	0
	The ratio of using low-sufer fuel or biodiesel reaches 100% among harbor crafts	• 3÷3×100%=100% • Percentage of harbor crafts that use low-pollution fue:. 100% • The total amount of low-pollution fuel used.: 235.7 KL	• 3÷3×100%=100% • Percentage of harbor crafts that use low-pollution fue:. 100% The total amount of low-pollution fuel used.: 230.49 KL
	All service vessels using shore power	• 3÷3×100%=100% • Number of service vessels: 3; number of service vessels using shore power: 3 • 82,852(kWh)	• 3÷3×100%=100% • Number of service vessels: 3; number of service vessels using shore power: 3 • 77,291(kWh)
	The achieved speed reduction rate:50%	78.58%	71.34%

Significant environmental issues of Hualien Port		Index item	Calculation method	
6	Cargo spillage	• Inspections of hazardous cargo. • Number of cargo spill emergency response drills performed	• The number of inspections • Number of cargo spill emergency response drills performed	
		Percentage of oil tanker ships using containment booms.	• Percentage of oil tanker ships using containment booms (number of ships using oil containment booms ÷ number of ships that entered the port within a given period × 100% = percentage of oil tankers using oil containment booms).	
7	port development (land related)	Ratio of intelligence in port	The total number of water transfer motors connected to the smart grid in the port area (remote controllable motors + induction motors for car washing equipment) ÷ total number of transfer motors × 100%	
			Total number of wharf lighting automation (number of wharfs with automatic lighting at night + number of wharf lighting horses that can be remotely transferred) ÷ total number of wharfs × 100%	
		Coastal protection measures implemented	The number of coastal protection measures released	

	Target value	Indicator presentation (calculation details)	
		2020	2021
	• Six inspections/year • At least one cargo spillage emeency response drill per year	• Number of inspections of hazardous cargo/the port performed: 7 • One cargo spillage emergency response drill	• Number of inspections of hazardous cargo/the port performed: 8 • One cargo spillage emergency response drill
	Deployment oil booms of ship Bunkering is 100%	• Deployment oil booms of ship Bunkering is 100% • (198÷198)×100%=100%	• Deployment oil booms of ship Bunkering is 100% • (165÷165)×100%=100%
	intelligent proportion of water resources allocation 50%	((10+6)÷27)×100%=59%	((10+6)÷27)×100%=59%
	Terminal lighting intelligent proportion 80%	((6+19)÷25)×100%=100%	((6+19)÷25)×100%=100%
	Use the post-disaster renovation to remove the concrete blocks to make the base blocks of the breakwater embankment and the number of wave-absorbing blocks.	• Quantity of double T blocks: 350 • Number of foundation blocks placed: 112	Quantity of double T blocks: 350

Significant environmental issues of Hualien Port		Index item	Calculation method	
8	change	Area of the buffering green space(the ecological pool and the bicycle path)	• Area of the buffering green space	
		Amount of solar power generated.	• Power generated • Level of carbon reduction • Capacity	
9	Water Quality	Marine water quality pass rate (pH, DO, BOD_5, cyanide, phenols, mineral oils)	The ratio of port water quality measurements (obtained at the water quality monitoring station in the port) satisfying the Marine Environment Classification and Quality Criteria	
10	Relationship with Local Communities	Number of activities and participants	Calculate the actual number of occurrence	

	Target value	Indicator presentation (calculation details)	
		2020	2021
	• Increasing and maintenance the area of buffering green space	Area of the buffering green space: 4.6 ha	Area of the buffering green space: 4.6 ha
	• Amount of solar power generated. • Level of carbon reduction	• 1,283,841 kwh • 684,350 kgCO2 • 2,407.01 kWp	• 2,679,805 kwh • 1,428,467 kg CO2 • 2,407.01 kWp
	Marine water quality: 100% of the quarterly pH, DO, BOD_5, cyanide, phenols, mineral and oils measurements satisfy the criteria.	Marine water quality criteria for Category B pH 100% DO 100% BOD_5 100% Cyanide 100% Phenols 100% mineral oils 100%	Marine water quality criteria for Category B pH 100% DO 100% BOD_5 100% Cyanide 100% Phenols 100% mineral oils 100%
	• Number of activities and events	Held 17 charitable activities.	Held 23 charitable activities.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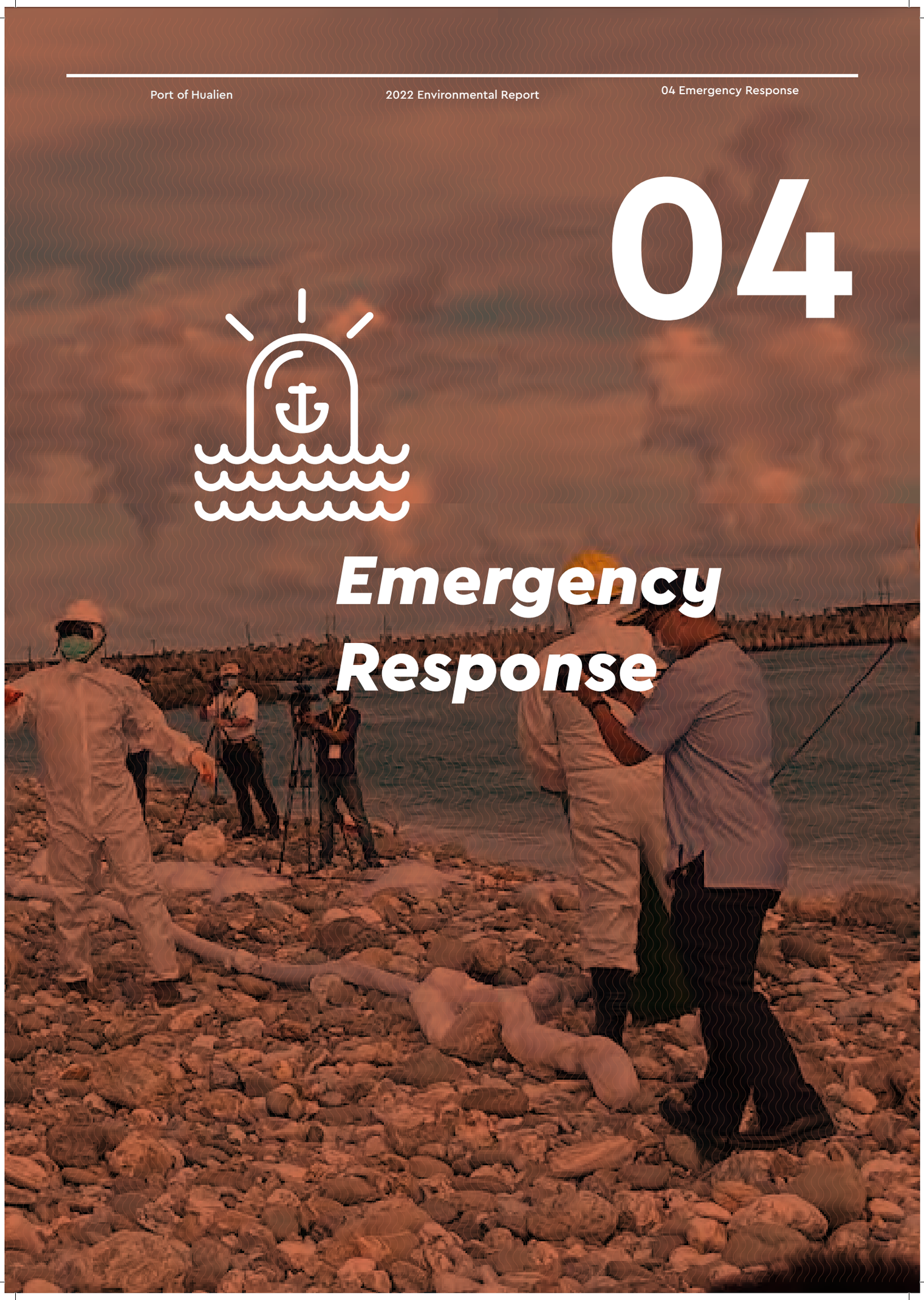
Emergency Response



4.1 Port Emergency Notification and Drills

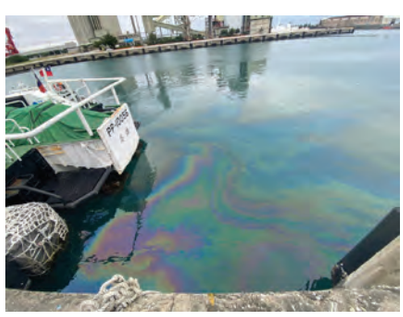
Because of Hualien port's geographical position, its land and sea areas are exposed to various disasters such as earthquake, wind storms, floods, tsunami, general shipwrecks, marine oil pollution, air pollution, leaks of toxic and nontoxic materials, severe traffic events and industrial safety accidents, etc We have stipulated 21 notification and response procedures to mitigate the impact, ensuring the emergency events can be informed and response in the fastest time Meanwhile, we cooperate with harbor police and harbor fire brigade for periodical drills to practice and improve emergency operation skills As far as the port pollution and disaster events are concerned,general public, ship owners or port business units can liaise with Hualien Branch of TIPC via our communication channels or mail box Every year, Hualien Branch of TIPC works with EPA of Hualien County Government for non prewarning drill of pollution and chemicals and other hazardous substances spill response This drill includes preventing the spill from reaching shore, removing spilled oil from the water and clean up residual oil from sea surface, event investigation and pollution claim, etc In all cases, the Hualien Branch of TIPC tries to cooperate and work closely with all parties involved in an incident and ensure the cross department emergency response center can be set up promptly and run smoothly In case the event arises, prompt notifications and appropriate emergency measures are taken to mitigate the impact on the environment and minimize loss

4.1 Port emergency notification and drill

On December 20, 2021, the monitoring center found that oil pollution was discharged from the port basin of Hualien Port. After receiving the notification, the Occupational Safety Office immediately activated the response mechanism and notified the relevant industry. Arranged oil blocking cables and mobilized more than 10 people (including contractors) to clean up the sea surface and drainage pipes. Use the oil-absorbing cotton sheet and the oil-retaining cable to surround the oil to remove the oil.

Hualien Port Environmental Inspection and Joint Inspection Statistics

Inspection items	2020	2021
Port Environmental Inspection	246	246
Port area joint inspection	12	12



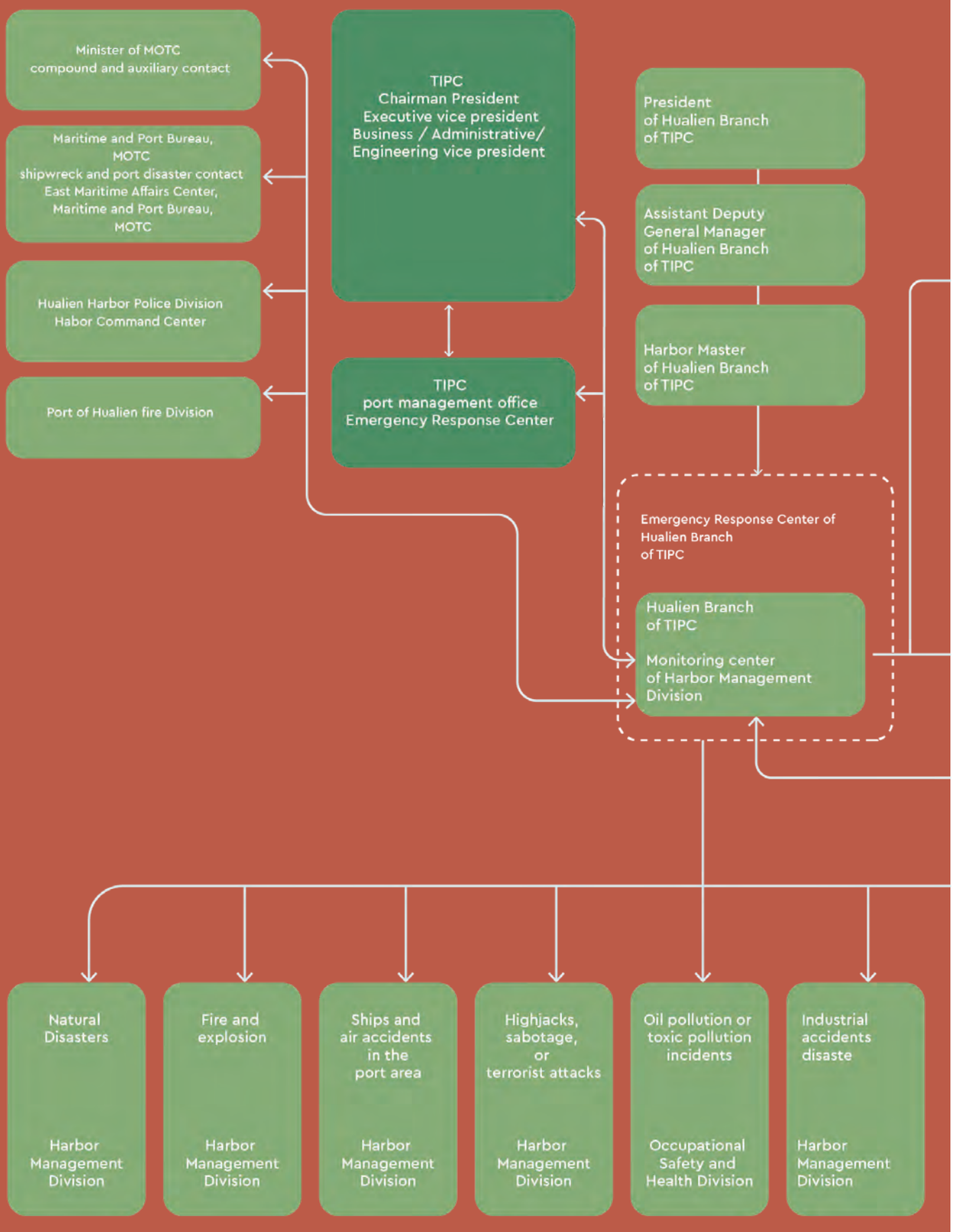
Number of accidents in Port of Hualien

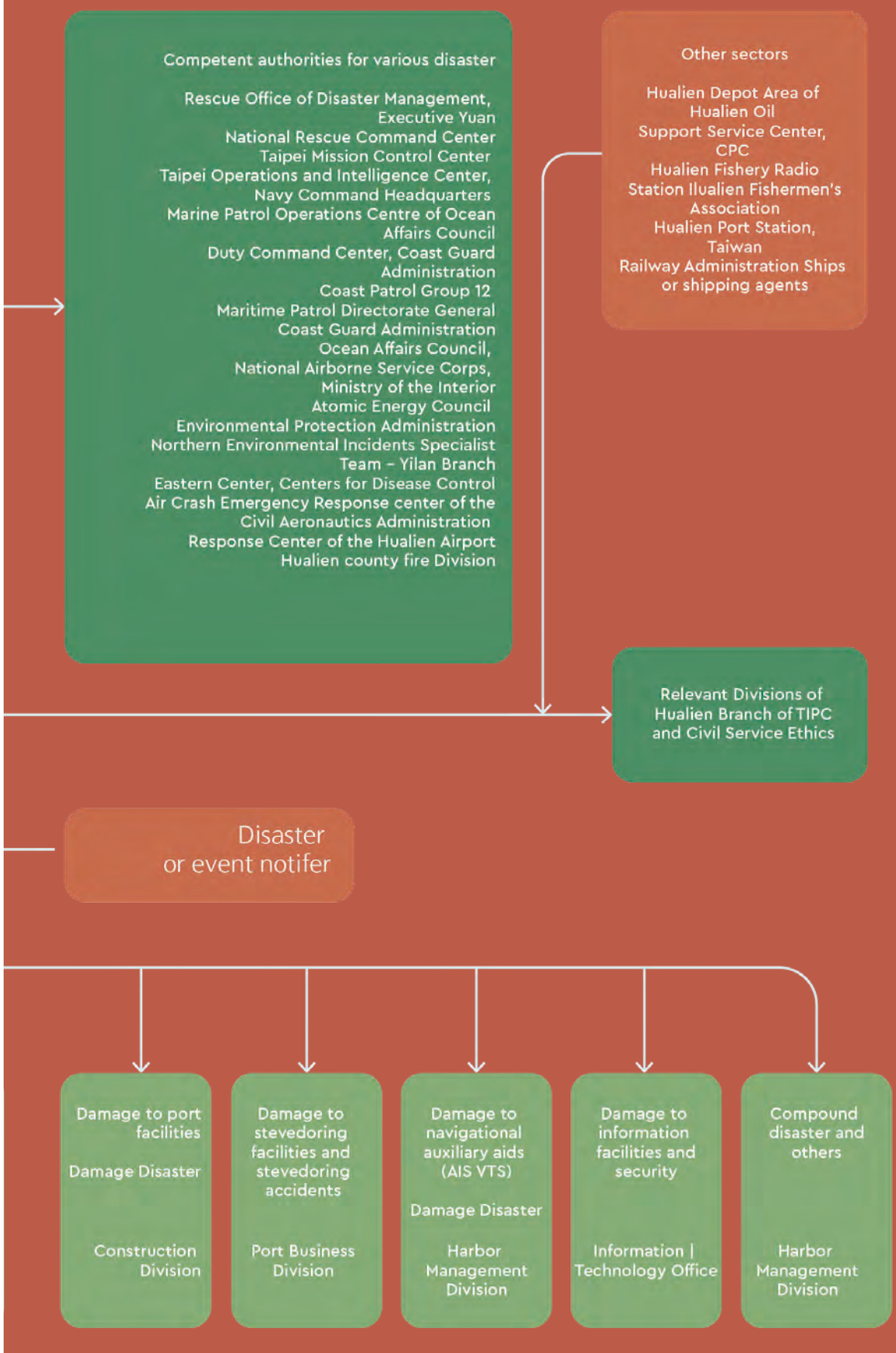
accidents type / year	2020	2021
Ship collision, sinking, capsizing, fire, oil pollution, and other chemical spills	0	1
Ship mechanical failure, operational failure, tilting, grounding	1	2
Fires and explosions in major warehouses and storage tanks	0	0
Minor pollution, fires, chemical spills in the port area	1	1
Persons falling into the water, industrial safety accidents, drifting objects at sea, others	1	1

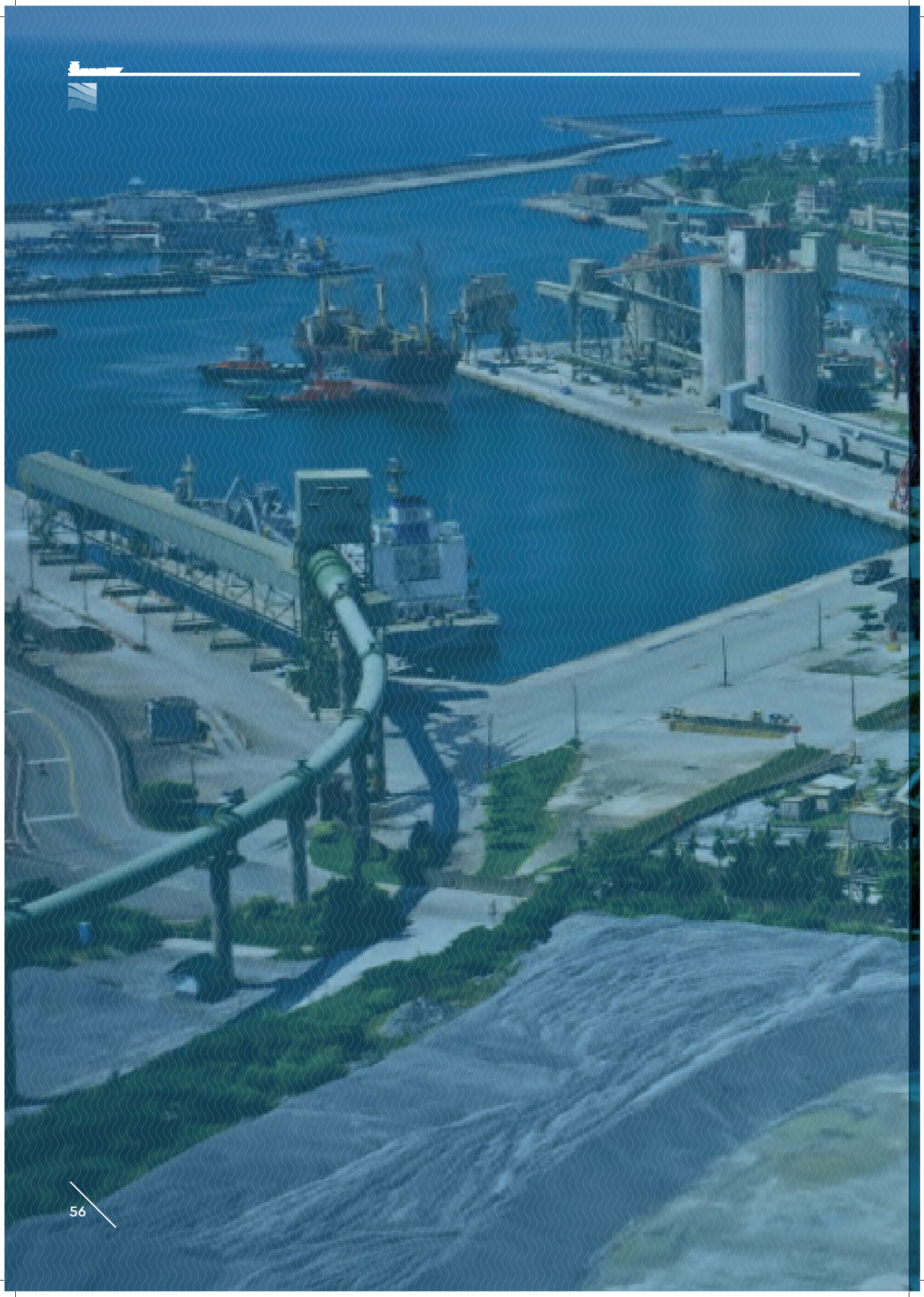
4.1.2 2020–2021 Joint Exercise Record of Hualien Port Branch

year	Name of the drill	content	date
2020	International Ship and Port Facility Preservation and Disaster Prevention and Rescue Exercise	"Hijacking Prevention (Passenger Clearance Service Station Randomly Attacks Responses)", "Sabotage Prevention (Explosives Disposal)", "Evacuation and Disposal of Suspected New Coronary Pneumonia Cases of Arriving Ships" and "Disaster Prevention and Rescue (Oil Pollution Prevention)"	2020/11/26
2020	Intershore Joint Life Saving and Rescue Exercise – The First Second Coast Patrol	When the passenger ship left the port with passengers, a mechanical failure occurred as soon as it left the shore. During the emergency repair, a fire was accidentally caused by the electric wire, and the relevant rescue units dealt with it later.	2020/11/18
2021	International Ship and Port Facility Preservation and Disaster Prevention and Rescue Exercise	"Consequences of Incoming Ship Crew Infected with Epidemic, Ship Response Response", "Explosives Response", and "#3 Warehouse Solar Photovoltaic Equipment Fire Response Response"	2021/10/08

4.2 Port of Hualien Emergency Disaster Prevention and Response Notification Plan




Competent authorities for various disaster
Rescue Office of Disaster Management, Executive Yuan
National Rescue Command Center
Taipei Mission Control Center
Taipei Operations and Intelligence Center, Navy Command Headquarters
Marine Patrol Operations Centre of Ocean Affairs Council
Duty Command Center, Coast Guard Administration
Coast Patrol Group 12
Maritime Patrol Directorate General Coast Guard Administration
Ocean Affairs Council,
National Airborne Service Corps, Ministry of the Interior
Atomic Energy Council
Environmental Protection Administration
Northern Environmental Incidents Specialist Team – Yilan Branch
Eastern Center, Centers for Disease Control
Air Crash Emergency Response center of the Civil Aeronautics Administration
Response Center of the Hualien Airport
Hualien county fire Division
Other sectors
Hualien Depot Area of Hualien Oil Support Service Center, CPC
Hualien Fishery Radio Station Ilualien Fishermen's Association
Hualien Port Station, Taiwan Railway Administration Ships or shipping agents
Relevant Divisions of Hualien Branch of TIPC and Civil Service Ethics
Disaster or event notifer
Damage to port facilities
Damage Disaster
Construction Division
Damage to stevedoring facilities and stevedoring accidents
Port Business Division
Damage to navigational auxiliary aids (AIS VTS)
Damage Disaster
Harbor Management Division
Damage to information facilities and security
Information | Technology Office
Compound disaster and others
Harbor Management Division



05

Involvement and Cooperation

5.1 Smart allocation of water resources improvement plan

Environmental management strategy: Exemplifying, Enabling

A. Concern/Motivation

In order to improve the use of surface runoff water and fully meet the needs of the port operators and clean use, the Hualien Port Branch has handled the "Preliminary Planning and Design Supervision Technical Services for the Demand Application Integration of the Fourth Phase of the Smart Grid in Hualien Port" through the 2010 calculation. Efficient water resource allocation system

B. Program Objectives

With the goal of intelligence, visualization and improvement of operation efficiency, it will fully integrate the management information of various industries in Hualien Port, expand the application of water resources in Hualien Port, and prepare for the hardware expansion in the next 3–5 years. With a solid foundation for the sustainable development of the business port.

C. Execution/time course

- Announcement of tenders in January 2020
- Completion by the end of November 2020
- Completion of acceptance before the end of December 2020
- Official launch in February 2021
- In December 2021, it was awarded the "110 Annual Water
- Conservation Outstanding Unit-Organization Group Special Award"
- by the Ministry of Economic Affairs of the People's Republic of my
- country Master the relevant data and continue to operate from
- 2021 to the present

D. investment amount

Investment Amount Total investment amount: 1.2 million NTD for planning and design, 25 million NTD for project contracting and 800,000 NTD for equipment maintenance each year, totaling NT$28.4 million.

E. Effect/benefit

(a) Improve the operational efficiency of port management.

(b) Reservation and utilization of surface water: Port operators sprinkle water for dust suppression, plant watering, car washing and road watering.

(c) Water level monitoring: including surface water level monitoring and dispatch use.

(d) Strengthen information integration, monitoring center monitoring capabilities, and active feedback alarms from equipment systems.

(e) Smart Electricity/Water Meter: Establishment of electricity/water zoning statistics and pricing management in the whole Hong Kong area

(f) Smarter motors: resource allocation between reservoirs, smart switch of rain gauges and abnormal returns

Use of surface water instead of tap water (ton)	2020	2021
Sand and gravel stacking for dust suppression	111,564	58,644
Loading and unloading dust control	1,366	8,061
road cleaning	41,472	40,128
Door whistle sprinkler to suppress dust	3,840	3,352
car wash water	12,600	15,600
Port greening watering	6,792	7,582
People use toilet water	2,257	2,520
total	179,891	135,887

※The dust suppression amount of sand and gravel storage decreased, because the lease of some storage yards was terminated, and the dust prevention control of loading and unloading was the branch to expand the use of surface water (such as adding water supply facilities for water supply)

Involving environmental issues

Energy consumption, port development (land related),rainwater treatment

Participating units

Hualien Port Branch, Chunghwa Telecom Co., Ltd.

Stakeholders

Hualien Port Branch, port stevedores, lessees, the public

Port Name: Hualien Port
Contact Name: Wei Shaolun
Organizer: Occupational Safety and Health Office of Hualien Port Branch
Contact number: 03-8325131 ext. 2525
Fax: 03- 8352813
E-mail: shaoun@twport.com.tw

5.2 Hualien Port Salute to the Sea Project

Environmental management strategy: Exemplifying, Enabling

A. Concern/Motivation

In 2020, R.O.C announced the policy of "Salute to the Sea – Sea Area Development and Development", and put forward the goals of "cleaning the sea, knowing the sea, near the sea, and entering the sea"

B. Program Objectives

Clean the sea: proper division of labor, so that every inch of land on the coast should be clean.

Knowing the Sea: Handle coastal-related activities and promote marine
education.

Offshore: Provide integrated and complete information and build a friendly recreational environment.

Entering the sea: Open the control area to improve the life-saving and rescue efficiency.

C. Execution/time course

- Plans to be announced in July 2020
- The relevant assessment mechanism will be established in October
- 2020
- In November 2020, the construction of the toilets for fishermen in the
- port area was completed
- In December 2020, Establish a sea weather information network to
- provide real-time observation information of relevant walruses
- Participate in local plan implementation and sharing meetings every
- six months
- In April 2021, the concept verification and testing of the unmanned
- ship to clean up the oil slick technology will be contracted
- July 2021 Tender for "Salute to the Sea for Coastal Clearance of Hualien
- Port"
- In November 2021, the "2020 regional joint life-saving rescue and
- marine pollution response drill" and "Salute to the Sea" Hualien Port
- Clean Sea Static Display Activity will be held
- In December 2021, the beach cleaning activity of "Salute to the Sea and Protect the Coast" will be held Continued implementation of the planned coastal cleanup

D. investment amount

Total investment amount: 3.5 million NTW in 2020, 4 million yuan in 2021.

E. Effect/benefit

The branch under the jurisdiction of sea area and coastal garbage cleanup: 68 metric tons in 2020, 156 metric tons in 2021.Build a marine weather information network, fisher-friendly toilets and a complete security system to ensure a cheap and safe leisure activity area for the public.The number of participants in fishing activities in the port area: 3,809 people in 23 events in 2010, and 2,328 people in 13 events in 2011 (affected by the epidemic), an increase of 10% over the average number of participants over the years.

Involving environmental issues

Garbage/port waste, port development (water related), relationship with local communities.

Participating units

Hualien Port Branch

Stakeholders

Hualien Port Branch, people

Port Name: Hualien Port
Contact Name: Lin Chulun
Organizer: Occupational Safety and Health Office of Hualien Port Branch
Contact number: 03-8325131 ext. 2522
Fax: 03-8343700
E-mail: louk43@twport.com.tw

5.3 Waste concrete reuse plan

Environmental management strategy: Exemplifying, Enabling

A. Concern/Motivation

A magnitude 6.0 earthquake occurred on February 6, 2018, with a magnitude of 7 in Hualien City, causing damage to some pavement structures in the port area. The displacement of the foundation structure caused by the scouring of the feet, in order to effectively utilize the residual value of waste resources and reduce the temporary space, and ensure the safety of the breakwater structure, the branch company removed the waste mixed soil and stone and poured it together with the ready-mixed cement mortar to make the protective foundation. The base block is placed on the foot berm.

B. Program Objectives

Effectively deal with and utilize about 4,000 cubic meters of waste concrete stones caused by earthquake damage, and make them into foundation blocks and fills.

C. Execution/time course

- Completed design planning in September 2019
- In December 2019, the production of 160 foundation blocks was
- completed
- In September 2020, the release of 160 foundation blocks and the
- production of 190 blocks were completed
- In December 2020, a total of 3,150 cubic meters of abandoned concrete
- blocks were used, and the remaining 850 cubic meters were used for
- partial soil filling operations.

D. investment amount

Total investment amount: 8 million yuan in 2019, 10 million yuan in 2020.

E. Effect/benefit

Reduce the transportation and disposal fee of waste concrete: 3 million

Create this branch's revenue: 3.08 million

Involving environmental issues

Garbage/port waste, port development (water related), relationship with local communities.

Participating units

Hualien Port Branch

Stakeholders

Hualien Port Branch, people

Port Name: Hualien Port
Contact Name: Xu Jiarong
Organizer: Occupational Safety and Health Office of Hualien Port Branch
Contact number: 03-8325131 ext. 2471
Fax: 03-8340995
E-mail: niss0607@twport.com.tw

5.4 Involvement and Collaborating O rganizations

Hualien Port Branch actively cooperates with domestic and foreign industrial, government, and academic institutions on environmental-related issues. In addition to understanding foreign environmental development trends, it also achieves the goal of a green and sustainable port through technical cooperation, joint inspections, lectures and internships.

Association of Pacific Ports (APP)

The APP is aimed to gather the authorities of ports along the Pacific coast to discuss the development of Pacific marine transportation, seek solutions for problems. The Kaohsiung Branch regularly attends APP conferences and served as the organizer in 2015, adopting the theme of "Ecology, LOHAS, and Greening in the Port of Kaohsiung" to exchange innovative technology, knowledge, and professional management experiences with other members.

Taiwan Port Association

Integrate the knowledge platform of domestic production, officials and academia. Through this platform, Taiwan's shipping-related industries can coordinate and integrate internally, and externally can play cooperative marketing, investment promotion, seeking to join international organizations, hosting important conferences, and promoting cross-strait cooperation.
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Taiwan Marble Association

The Quarry Products Association regularly sends members to participate in the Taiwan Quarry Products Industry Association Member Congress.

China steel

An automatic material transporting device has been installed at Wharf No 11 in the Port of Hualien In addition, the Hualien Branch of TIPC provided land for the CSC to invest in improving related transportation equipment, changing the means of gravel transportation in Hualien from highways to railways

Taiwan port co., ltd.

Sign a cooperation agreement Carry out tugboat and ship repair yard maintenance business

ASIA CEMENT CORPORATION

Set up automated transportation facilities at Pier 10 and Pier 18 in Hualien Port.

National Taiwan Ocean University

National Taiwan Ocean University and Taiwan Port Co., Ltd. signed a memorandum of cooperation to conduct research on marine meteorology, marine drifting sand deposition, etc., and jointly strive for the development of international ports and academics, and improve international competitiveness and shipping business quality.

National Cheng Kung University

National Cheng Kung University and Taiwan Port Co., Ltd. signed a memorandum of cooperation to jointly enhance the competitiveness of international port services in talent training and port development.

National Sun Yat-sen University

NSYSU signs a memorandum of cooperation with the TIPC to cooperate in terms of personnel training, student internships, and the management of seminars and lectures.

Hualien County Government Environmental Protection Bureau

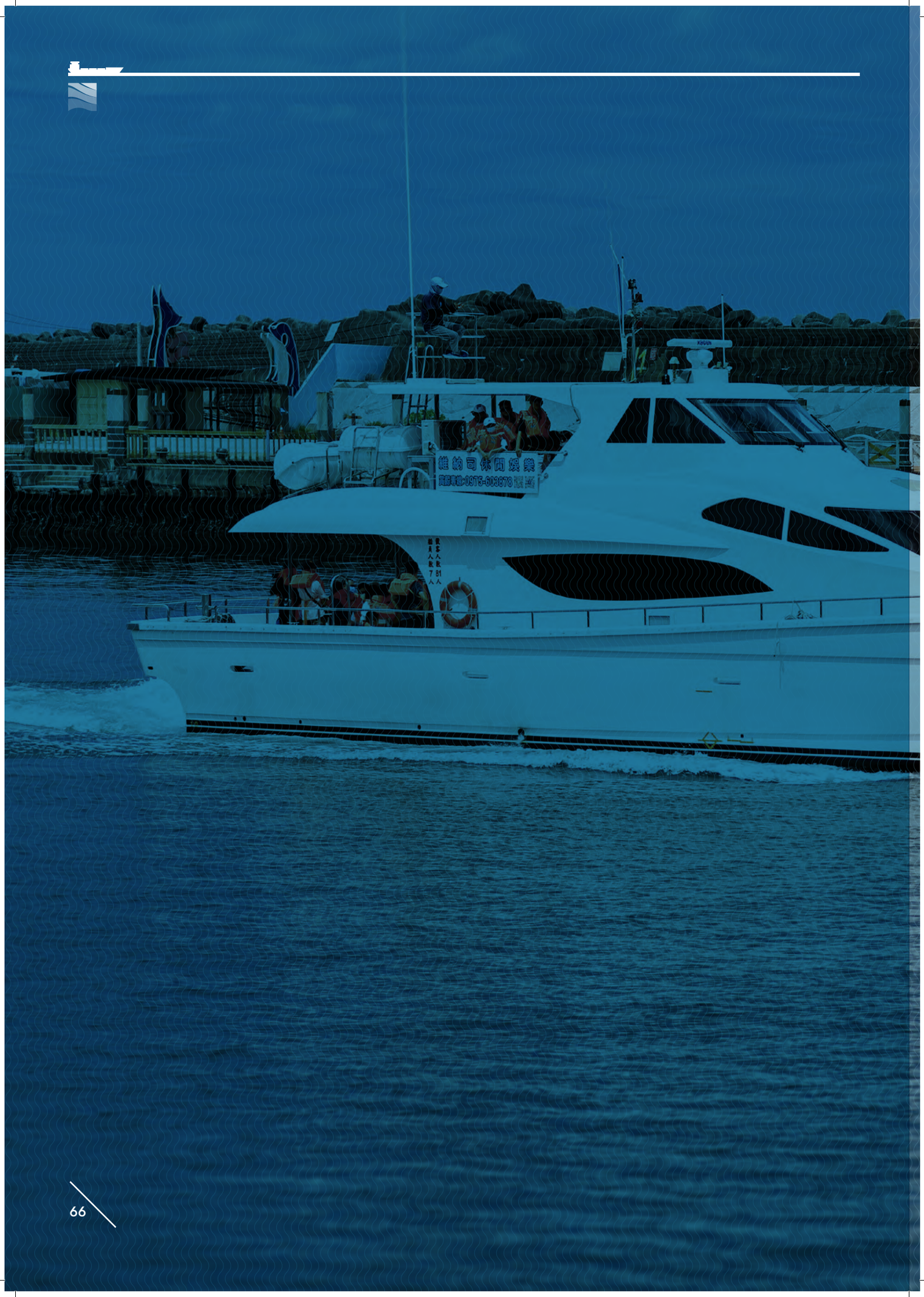
Hualien Port Branch cooperates with Hualien County Environmental Protection Bureau to conduct irregular joint inspections of the port area and conduct marine pollution prevention and control drills.

East Maritime Affairs Center of MPB, MOTC

The South Taiwan Maritime Affairs Center of the MPB under the MOTC is in charge of the affairs related to port security, disaster relief, and pollution control in the Port of Kaohsiung, as well as the implementation of laws and regulations, gathering of evidence, and penalty consideration The Kaohsiung Branch of TIPC cooperates with the South Taiwan Maritime Affairs Center to conduct land water inspection in the port

Hualien City Office

Hualien Port Branch cooperated with Hualien City Office to carry out green port promotion activities.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06

Training

6.1 Training

The "Environmental Education Law" was promulgated and implemented in 2011, which stipulates that public enterprises should formulate an environmental education plan every year, and each employee must participate in an environmental education course of more than four hours. In accordance with the content of the environmental education policy, Hualien Port Branch provides appropriate environmental education and training, which not only cultivates employees' environmental awareness and enhances environmental protection knowledge, but also enhances the competitiveness of Hualien Port Branch. Hualien Port Branch will hold 10 and 7 environmental education courses in 2018 and 2021 respectively for internal employees, with a total of about 500 participants. Curriculum methods include courses, video viewing, practice, experience, outdoor learning, speeches and other activities. The content areas include disaster prevention and rescue, nature conservation, environmental and resource management, school and social environmental education.

In order to prevent oil pollution from international ships, Hualien Port Branch has equipped the port area with equipment to prevent oil pollution from spreading (such as oil blocking cables, oil drainers, oil absorbing cotton, etc.) in accordance with the marine oil pollution emergency response plan; If it can be used normally, the Hualien Port Branch also regularly maintains, maintains, and inspects the relevant equipment every year, and handles the use of oil pollution response equipment and field operation training. In addition, in order to enhance the knowledge of environmental protection personnel, professionals are invited to conduct marine pollution lectures every year, or cooperate with the relevant training and drills of the Environmental Protection Department and the Hualien County Environmental Protection Bureau, so as to effectively achieve the purpose of training.

Hualien Port Branch is to serve the port operators and strengthen pollution prevention and control. Every year, according to the characteristics of different operators, environmental protection symposiums are held regularly, including sand and gravel operators; loading and unloading operators, project contractors and shipping companies. The industry introduces the requirements of environmental protection laws and improvement cases on site, and communicates with the industry in two ways, and guides the industry to comply with the current environmental protection regulations, in order to create a win-win situation with the industry. The Hualien Port Branch is committed to improving on-site supervision of environmental inspectors. It also participates in the Environmental Protection Administration of the Executive Yuan, the Environmental Protection Personnel Training Institute, the Environmental Protection Bureau of Hualien County, the Harbor Technology Research Institute of the Ministry of Communications, Sun Yat-sen University and Taiwan Port Co., Ltd. Various professional trainings in environmental protection. Currently, the Occupational Safety Office has professional licenses for visual judgment of smoke, Class A air pollution and waste water treatment.


環境教育訓練
臺灣港務股份有限公司花蓮港務分公司


臺灣港務公司花蓮港務分公司企業工會
110年度勞工教育訓練


臺灣港務公司花蓮港務分公司企業工會
109年度勞工教育訓練


不安全施工環境

6.2 Communications and Publications

1. Brochure of Port of Hualien

2. Publications of the 90th Anniversary of Hualien Port

It has been 90 years since Hualien Port was planned to build a port, carrying the memories of the past and present of Hualien people. In the 109th year of special planning series of celebration activities, following the "Hualien Port in Memory" call for papers, "Embrace Hualien Port" sketch competition, "Walking Reading White Lighthouse" "After the event, a celebration of "Flowers and Ports Moves Your Heart" will be held around the administrative building.

3. Exhibition space

Hualien Port History Museum: Introduces the growth trajectory of Hualien Port and records of major events over the years, with immersive interactive displays to deepen visitors' understanding of the environment of Hualien Port and strengthen connections.

Rising Sun Hualien Port Retrospective Exhibition: In order to let the public better understand the historical evolution and development of Hualien Port, the Hualien Port Branch specially selected old photos from the collection combined with the port history and environment, and arranged a "Retrospective Exhibition of Past Feelings"

4. Internet Media Marketing and Communication

Taiwan Port Group Green Port Promotion Plan (http://www.twport.com.tw/GP/): Taiwan Port Co., Ltd. has established "Taiwan Port Co., Ltd. The company's green policy website in both Chinese and English", establishes a channel for communication between Taiwan and other countries, and publishes real-time information on the environment of the port area.

Hualien Port Branch Global Information Website-Expression of Opinions (http://hl.twport.com.tw/chinese/): Hualien Port Branch has a public opinion contact mailbox on its global information website, providing a channel for the general public and consumers to express their opinions online.

Port Videos for Marketing ：
(https://www.youtube.com/watch?v=9jH0yjS0G3I&feature=player_embedded)

Through the marketing port videos of "Taiwan Port Group", let the public experience the characteristics of each port through real scenes

Fan Page:
(https://www.facebook.com/hualientwport)
Various units will release information from time to time, such as: public investment promotion, cruise schedule, various publicity activities, etc., so that the public can better understand the business of Hualien Port Branch.

6.3 Charity/neighborly Activities

Charity blood donation activities

In order to give full play to the spirit of donating blood to save people, Hualien Port Branch will not regularly organize blood donation activities with Chunghwa Post, Hualien Port Police Corps, Hualien Port Fire Brigade, and the East Maritime Affairs Center of Maritime and Port Bureau, and implement the company's commitment to caring for the society with practical actions. The idea is to appeal to the enthusiastic people in Hualien to donate blood.

Donate used computers to remote villages

Hualien Port Affairs Branch came to Pianxiang Academy: Tongmen Elementary School and donated 18 sets of second-hand computers. We promise to continue to help every primary school child to have a better learning environment and resources, and to develop a better future.

New year condolences

In order to welcome the Lunar New Year, the Hualien Port Affairs Branch especially expected to share love and care with the disadvantaged groups. The deputy general manager led a team to visit 6 social welfare groups, gather the power of happiness through actions, and invite everyone to serve the society together.

Beach cleaning activities

Hualien Port Branch and community volunteers gathered in the surrounding communities, each with different cleaning tools, worked together to beautify the environment, and refreshed the entire port area and the surrounding environment of the community.

Elementary school visits:

In order to promote marine education, Hualien Port Branch led teachers and students from elementary and middle schools in Hualien to visit signal stations, monitoring centers, tugboats and port police operations, hoping to let more people know about our oceans and protect marine ecology.

Embrace ecological beach cleaning activities:

Hualien Port Branch is committed to coastal protection and environmental quality assurance in the Hualien area, and continues to manage and maintain the coastal environment of the sea area under its jurisdiction. It is hoped that the beach cleaning activities will arouse the society's reflection on the marine environment. Protecting the marine environment is very important. Responsibility.

Promote Traffic Safety Month: :

East Maritime Affairs Center of Maritime and Port Bureau and the Hualien Port Police Corps of the Police Department of the Ministry of the Interior conducted relevant publicity activities at the Hualien Port Control Point.

Train Arrival Ceremony:

Hualien Port Branch and Taiwan Railway Administration, in order to smoothly promote the "Taiwan Railway Overall Purchase and Vehicle Replacement Plan", have selected Hualien Port Pier 8 as the most suitable unloading terminal for 600 intercity trains after many on-site surveys and negotiations. Witness the new progress of Taiwan's transportation and an important page in the history of Hualien Port.

07

Green Accounting

7.1 Environmental Resource Allocation

The cost that have been invested by the Hualien Branch of TIPC in the environmental aspects are mainly divided into the categories of staff, environmental maintenance and management, environmental monitoring, and emergency responses and communication. The purpose of these investments is to improve the environmental awareness among staff, environmental maintenance, environmental quality, emergency response abilities, and public understanding of the port. The cost in each category are as follows

- Staff: Cost for environment-related staff and training.
- Environmental maintenance and management: Port greening and beautification, waste disposal, and dredging.
- Environmental monitoring: Environmental monitoring and inspection of air, noise, water quality, sediments, and dredging.
- Emergency response: Charges for handling accidents, materials for pollution in the port, and charges for testing dangerous goods.
- Communication and publications: Website maintenance, promotional activities, and environmental publications.

The costs of Hualien Port Branch in 2020 and 2021 for environmental issues are NT$14,645,000 and NT$14,681,000, respectively, about 459,956 euros and 466,740 euros (Taiwan Bank advertised a cash selling rate of 31.84 on June 27, 2022). Table 7 is the detailed data.

Cost invested by the Investments of the Hualien Branch of TIPC in the Environmental Aspects in 2020–2021

(Unit: Thousand in NTD)

Cost items	2020	2021
Staff(environment training)	6,423	6,793
Environmental maintenance and management	4,304	4,195
Environmental monitoring	2,500	2,500
Emergency response	250	250
Communication and publications	1,168	1,123
Total	14,645	14,861

The Hualien Branch of TIPC has launched a series of port development projects to improve the efficient use of property by the Port of Hualien, promote local economic prosperity, and develop the port into an eco-friendly green port capable of energy conservation and carbon reduction. Several projects concern environmental aspects. For example, the infrastructure of the terminal in the Port of Hualien has been built to increase public access to the port. Moreover, a monitoring system has been established at the security check point and harbor power, lighting, and water supply equipment has been installed, and updated to increase operational effectiveness and reduce possible pollution caused by construction projects. The total amount of fixed assets invested by Hualien Port Branch in environmental issues in 2020 and 2021 is NT$155,934,000 and NT$94,041,000, respectively, approximately EUR 4,926,825 and EUR 2,971,280 (Taiwan Bank Announces Cash Selling on June 15, 2020) The exchange rate is 31.65), and Table 8 is the detailed data.

Environmentally-related fixed asset expenditures in 2020–2021 (Unit: Thousand in NTD)

Items	2020	2021
Land improvement	144,200	68,000
Houses and Buildings	0	0
Machinery and Equipment	3,661	1,380
TransportationEquipment	4,009	24,045
other equipment	4,064	616
Total	155,934	94,041

8

Improvement Recommendations

In order to protect the marine environment and sustainable development, the Hualien Port Branch Co., Ltd. cooperates with the Environmental Protection Department of the Executive Yuan and the Ministry of Communications with relevant environmental protection policies, and is committed to environmental protection, Resource conservation and ecological preservation, and continuous on-site inspections to ensure high-quality air quality in the port area.

The Hualien Port Branch will actively develop the cruise economy and landscape recreation, and obtain the international certification update of the Eco Port of the European Seaport Organization to become a "green port" in eastern Taiwan with both tourism and recreation ports, in order to achieve "economic development" and "Environmental protection" creates a win-win goal.

TIPC

Port of Hualian

Environmental Report

花蓮港 環境報告書

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

Port of Hualian
Taiwan International Ports Corporation, Ltd.

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Website: https://hl.twport.com.tw/en/

TIPC 2022