



PORT OF TAIPEI

ENVIRONMENTAL REPORT

TAIWAN
INTERNATIONAL
PORTS
CORPORATION,
LTD.





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01



Message from Port of Keelung, TIPC

Major ports worldwide have gradually integrated environmental sustainability into port management owing to the rising environmental awareness. Accordingly, the Taiwan International Ports Corporation also endeavours to build the Port of Taipei into a Green Port by implementing various sustainable practices. Located in the south-west bank of the Tamsui River, the Port of Taipei is an artificial harbor constructed through land reclamation and is still expanding to this date. In this regard, we strive to vigorously uphold our self-imposed, stringent requirements in environmental assessment while the port continues to develop.

The Port of Taipei obtained the EcoPorts Certification in 2016, 2018 and 2020 and has been striving to protect the marine ecosystem and to maintain the quality of life surrounding the harbor. This requires a variety of actions such as doing cyclical modifications to our environmental policies and action plans, implementing energy-efficient equipment, conducting environmental monitoring and executing environmental management plans. The Taiwan International Ports Corporation believes that port development is a mutually beneficial strategy for both economic development and environmental protection. Therefore, besides implementing the Green Port Strategies, we also aim at providing a hydrophilic space for residents to make the Port of Taipei an international harbor of excellent quality.



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





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

Chairman of TIPC

Date: 2020/03/26

Shao-Liang Chen

President of TIPC

Date: 2020/03/26

Port of Keelung, Taiwan International Ports Corporation Environmental Policy (Including Keelung Port, Taipei Port, Suao Port)

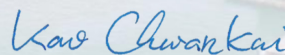
In charge of port operation and developments, Port of Keelung, Taiwan International Ports Corporation (hereinafter referred to as Port of Keelung) recognizes its obligations towards protecting the environment as its corporate social responsibility. Aiming at being an eco-friendly and sustainable port with continuous advancement, we consider environmental protection as a part of port operation and work proactively to prevent the pollution of the environmental impacts.

In order to minimize the potential and actual environmental impacts from port operations, Port of Keelung has identified the scope of its environment protection. With autonomous management, periodic inspection and evaluation, we will keep continuously improving our environment performance.

We commit to:

- Regularly evaluate port environmental impacts and any pollution generated from port operation.
- Set environmental objectives to continuously lower environment impacts.
- Comply with all relevant environmental regulations and aim at pollution prevention.
- Provide environmental education to build environmental awareness in all staff to completely implement our environment policy.

The full understanding and mutual consent to this environmental policy have been reached by the relevant parties, including employees, suppliers and tenants of Port of Keelung. This policy is open to the public on our website.



President of Port of Keelung, TIPC

Date : 2020.10.16



Environmental Objectives

Port of Taipei

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

Improve port air quality

Improve continuous environmental monitoring in the port area to grasp the quality of air and manage it effectively.

Enhance cargo management

Strengthen cargo handling management, port inspection and supervision to enhance port security.

Reduce wastes in the port area

Avoid waste of resources to implement recycling in the port area and effectively manage wastes in the port area.

Intensify hazardous cargo management in the port area

Enhance the frequency of drills and implement dangerous goods management and inspection to strengthen the emergency response mechanism.

Lower vessel exhaust emission

Continuously promote speed reduction of vessels and use of shore power by public vessels to reduce emissions.

Control vehicle emission in the port area

Increase the number of automated door posts to control vehicle emissions in conjunction with air quality maintenance areas.

Manage wastes of vessels in a proper manner

Mandatory separation of garbage from ships and implementation of resource recycling

Optimize land planning in the port area

Adjust the land use pattern of the port area to enhance its integrity.

Advance water quality in the port area

Continuously monitor water quality in the port area to maintain water quality and the ecology of the port waters

Develop friendly relationships between communities

Expand citizen-friendly spaces in the port area, optimize public participation, and enhance interaction with local communities.

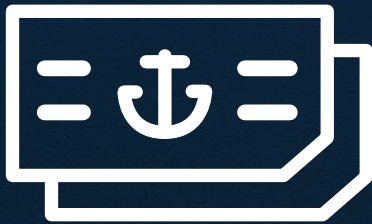
President of Port of Keelung, TIPC

Date

Kao, Chuan-Kai
2022/09/22



01



Port Profile



1.1 Port Geographic Information

Taipei Port is located on the southwestern bank of the estuary of Tamsui River and is situated between Mount Guanyin and the Taiwan Strait, 34 nautical miles (nm) west of Keelung Port, 87 nm north of Taichung Port, and 115 and 92 nm east of Fuzhou Port and Pingtan Port, respectively. It covers a coastal area where meteorological conditions such as wind force, ocean current, ocean waves, and tidal range are stable. The center of Taipei Port is located at Northern Longitude 25°09' 49" and Eastern Latitude 121°21'29". The total area of the port is approximately 3,091 hectares.

Currently, the port positions itself as a northern cargo in bound and outbound port, green energy industrial port, industrial logistics port. It features an average tidal about 1.93 m, a total of 27 wharves (22 operational wharves, 2 port service wharves, and 3 coast guard wharves), water channel depth of 16–17.5 m, and coastal landforms consisting of intertidal zones, sandy beaches, pebble beaches, and sand dunes. The port is in proximity to Wuku Industrial Zone, Linkou Industrial Zone, and Taoyuan International Airport, thus providing convenient air-sea transport services.



Geographical Map of Taipei Port

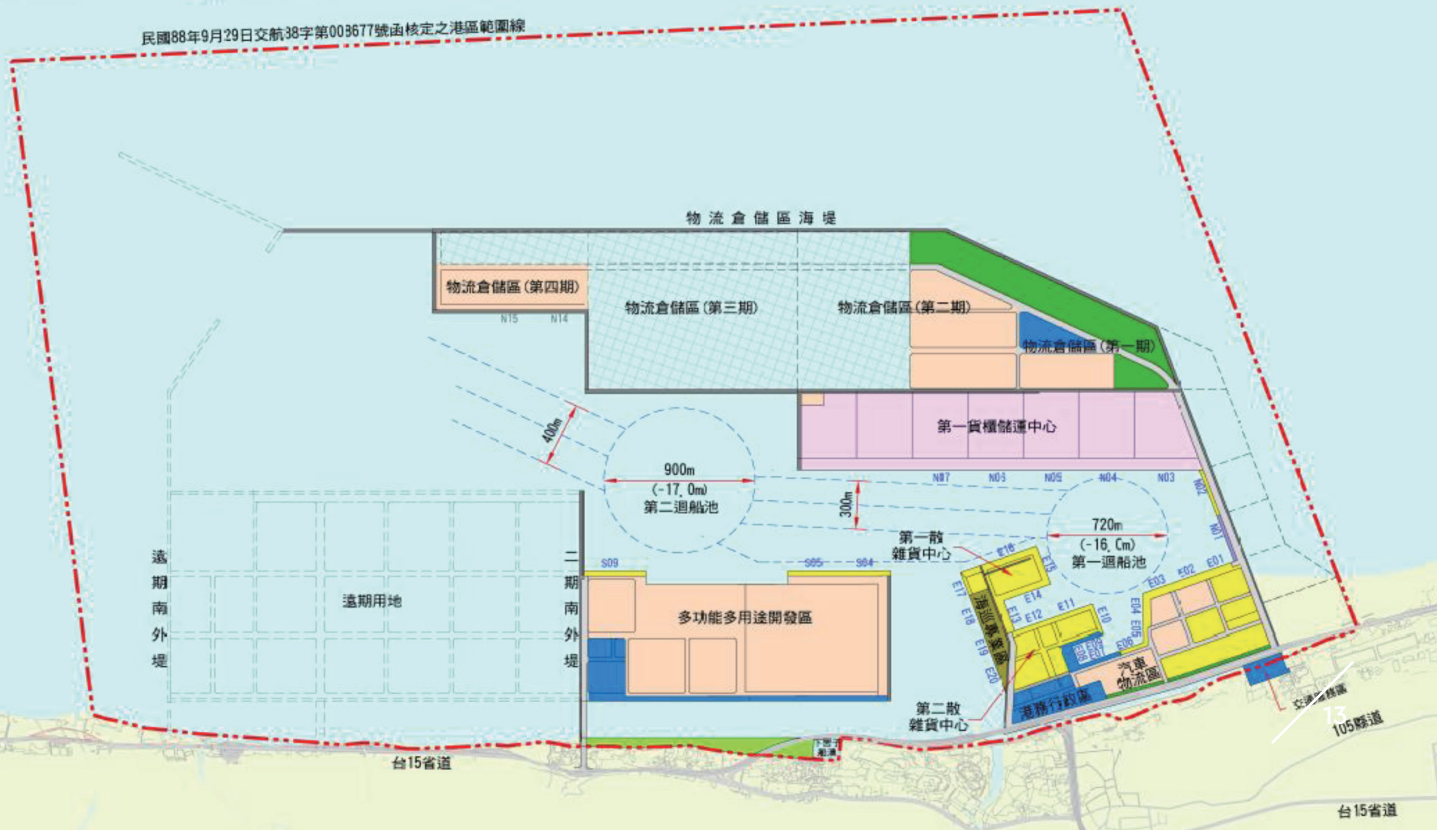
1.2 Legal Status and Port Operators

To modernize the management of commercial ports in Taiwan. The Taiwan International Ports Corporation, Ltd. Establishment Act was promulgated on November 9, 2011, and the country passed the amendment of Commercial Port Law on December 28, 2011. It was then decided in March 2012 that the government should be separated from the enterprise for management of the ports. Public entities that used to manage the ports, including Kaohsiung Harbor Bureau, Taichung Harbor Bureau, Keelung Harbor Bureau, and Hualien Harbor Bureau, are integrated into one corporation (Taiwan International Ports

Corporation, TIPC) to reduce legal and institutional restrictions on commercial port operations, enhance the ability of ports to respond to market changes, and increase their competitiveness. After the Keelung Harbor Bureau underwent institutional changes, the operation of Taipei Port was delegated to the Taipei Port Branch Office under Port of Keelung TIPC, and the port administration and management of Taipei Port was governed by the Taipei Port Branch of the North Taiwan Maritime Affairs Center of the Maritime and Port Bureau (MPB) under the Ministry of Transportation and Communications (MOTC).

圖例：

- | | |
|------------|----------|
| 貨櫃碼頭區 | 觀光遊憩商業區 |
| 散雜貨/多功能碼頭區 | 國防設備專業區 |
| 客運/客貨碼頭區 | 填方區(建造中) |
| 港埠行政區 | 綠帶 |
| 物流倉儲區 | 港區範圍線 |





1.3 Commercial Activities

Taipei Port currently (June, 2022) has 22 docks providing cargo containers, bulk and general cargo, and liquid bulk cargo services. Bulk and general cargo is the main service target, consisting of oil refining products, cement, coal, chemicals, and iron scrap. Taipei Port mainly features ocean-

going and crossstrait (direct) shipping lines, and the port's commercial activities revolve around vehicles and automotive component distribution, finished product and chemical product tanks, and load, discharge, and storage of bulk cargo, such as coal, sand, gravel, slag, and cement.

2020–2021 Main Cargoes of Taipei

Commercial Activities	
Aggregates (Sand, gravel)	Storage and packaging
Refrigerated cargo	
Cargo Handling	
Dry bulk	Liquid bulk (non-oil)
Ro-Ro Trade cars / Vehicles	General cargo



1.4 Main Cargoes

The main inbound cargoes to Taipei Port in 2020 were mineral products (67.34%) and chemical or related industrial products (14.37%). Outbound cargoes were mainly Plastics, Rubber and the Products thereof (27.70%) and chemical or related industrial products (26.32%). In 2021 were mineral products (62.33%) and chemical or related industrial products (14.50%). Outbound cargoes were mainly Plastics, Rubber and the Products thereof (27.64%) and chemical or related industrial products (22.79%)

Business statistics 2020-2021

Service Category		2020	2021	Comparison between 2020 and 2021	
				Actual number	%
Incoming and Outgoing Ships	Vessels	8,943	9,416	473	5.29%
	Gross (ton)	182,091,559	175,023,692	-7,067,867	-3.88%
Volume of Cargo Handled	Cargo (R/T)	57,790,737	71,887,401	14,096,664	24.39%
	Dry bulk and groceries(R/T)	12,677,649	15,065,804	2,388,155	18.84%
	Pipeline cargo(R/T)	2,589,847	2,712,193	122,346	4.72%
	Total(R/T)	73,058,233	89,665,398	16,607,165	22.73%
Number of Cargo Handled	Incoming cargo (TEU)	784,408	982,302	197,894	25.23%
	Outgoing cargo (TEU)	833,723	1,026,830	193,107	23.16%
	Total (TEU)	1,618,131	2,009,132	391,001	24.16%
Volume of Imports & Exports	Imports (ton)	12,324,837	12,769,215	444,378	3.61%
	Exports (ton)	3,545,851	3,901,738	355,887	10.04%
	Domestic(ton)	2,019,418	4,062,321	2,042,903	101.16%
	Total(ton)	17,890,106	20,733,274	2,843,168	15.89%
Incoming and Outgoing Passenger	Total(number)	6,899	0	-6,899	-100%



02



Environmental Management



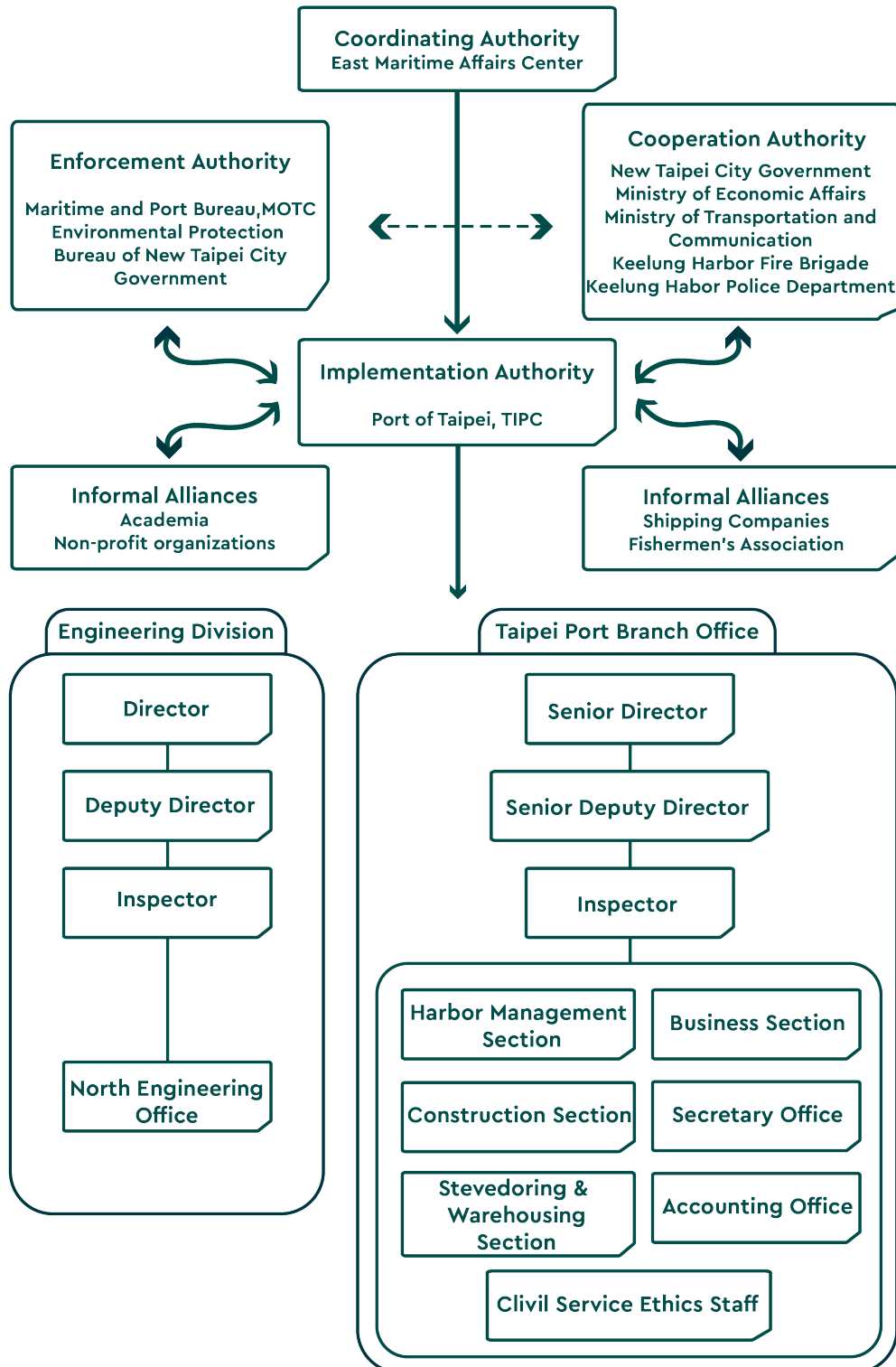


2.1 Organization Structure

The Taipei Port Branch Office is in charge of managing the environment of the Port of Taipei. However, environmental aspects involve the division of responsibilities among different agencies. In addition to the Taipei Port Branch Office, agencies responsible for environmental aspects include the Taipei Port Division of the Northern Maritime Affairs Center of Maritime and Port Bureau of MOTC, Environmental Protection Department of New Taipei City Government, Environmental Protection Administration of Executive Yuan (EPA), Offshore Flotilla8, the Northern Branch of Coast Guard Administration, Ocean Affairs

Council, Executive Yuan, Keelung Harbor Police Department Taipei Unit of National Police Agency, Ministry of The Interior, Taipei Harbor Subsection of Keelung Harbor Fire Brigade of National Fire Agency, Ministry of The Interior. The Taipei Port Branch Office is consists of the Business Section, Harbor Management Section, Stevedoring and Warehousing Section, Construction Section, Personnel and Administration Affairs Office, Civil Service Ethics Office, Accounting Office, etc. Descriptions of the sections/offices of Taipei Port are listed in the following table.

Department	Functions of the divisions at Taipei Port
Business Section	Customer service operation and management, investment attraction, and port service and profit development
Harbor Management Section	Berth allocation, in-port ship traffic management, environmental
Stevedoring & Warehousing Section	Stevedoring and weighing, passenger liner service, labor safety, and health, and port service maintenance and management
Construction Section	Port construction planning, design, commission, procurement, and supervision, and commercial port service maintenance
Secretary Office	Branch office human resources and property management, public relations, cashiers, personnel affairs, and employee benefits
Civil Service Ethics staff	Service ethics formulation and promotion, corruption prevention and investigation, service ethics examination and reward, confidential information protection, and security system maintenance
Accounting Office	Budget, income, and expenditure administration, income and expenditure auditing, and annual and monthly report examinations
Engineering Division, North Engineering Office	Project-based (including civil, architectural, and electrical and mechanical) construction budgeting, construction supervision and management, prevention of environmental pollution at construction sites, and supervision of labor safety and health



Authorization of environmental management units



2.2 Relevant International Regulations

The Taipei Port Branch Office follows relevant international specifications, such as International Convention for the Prevention of Pollution From Ships (MARPOL 73 /78), London Dumping Convention, International Convention on the Control of Harmful Anti-fouling Systems on Ships etc.

In addition to the international environmental specifications and conventions, the Taipei Port Branch Office collaborates with local authorities to manage the environment in the Port in compliance with relevant environmental laws and regulations in Taiwan. The following table lists the relevant environmental laws and regulations related to ports in Taiwan.

Competent Authority	
Sectors in the Ministry of transportation and communications	
Sectors in the Ministry of the Interior	
Sectors related to agricultural	
Sectors related to environmental protection	
Intersectoral	

	Laws Title	Central Competent Authority	Local Law Enforcement Agencies
	<div>The Commercial Port Law 2021/04/28</div> <div>The Law Of Ships 2018/11/28</div> <div>Shipping Act 2014/01/22</div> <div>Act for the Establishment and Management of Free trade zones 2019/01/16</div>	Ministry of Transportation and Communications	Taipei Port Division of North Maritime Affairs Center, Maritime and Port Bureau, MOTC
	Fire Services Act 2022/05/11	Ministry of the Interior National Police Agency	<div>New Taipei City Fire Bureau</div> <div>Keelung Harbor Fire Brigade</div>
	Wildlife Conservation Act 2013/01/23	Council of Agriculture	New Taipei City Agriculture Department
	<div>Marine Pollution Control Act 2014/06/04</div> <div>Basic Environment Act 2002/12/11</div> <div>Air Pollution Control Act 2018/08/01</div> <div>Water Pollution Control Act 2018/06/13</div> <div>Waste Disposal Act 2017/06/14</div> <div>Environmental Impact Assessment Act 2003/01/08</div> <div>Environmental Education Act 2017/11/29</div> <div>Noise Control Act 2021/01/20</div> <div>Indoor Air Quality Management Act 2011/11/23</div> <div>Toxic and Concerned Chemical Substances Control Act 2019/01/16</div> <div>Soil and Groundwater Pollution Remediation Act 2010/02/03</div> <div>Greenhouse Gas Reduction and Management Act 2015/07/01</div> <div>Environmental Agents Control Act 2016/12/07</div> <div>Public Nuisance Dispute Mediation Act 2009/06/17</div>	<div>Ocean Affairs Council</div> <div>Environmental Protection Administration</div>	<div>Ocean Conservation Administration</div> <div>Environmental Protection Bureau, New Taipei City Government</div> <div>Public nuisance in New Taipei City Government Dispute Mediation Committee</div>
	Disaster Prevention and Protection Act 2022/06/15	Ministry of Interior	New Taipei City Government



03

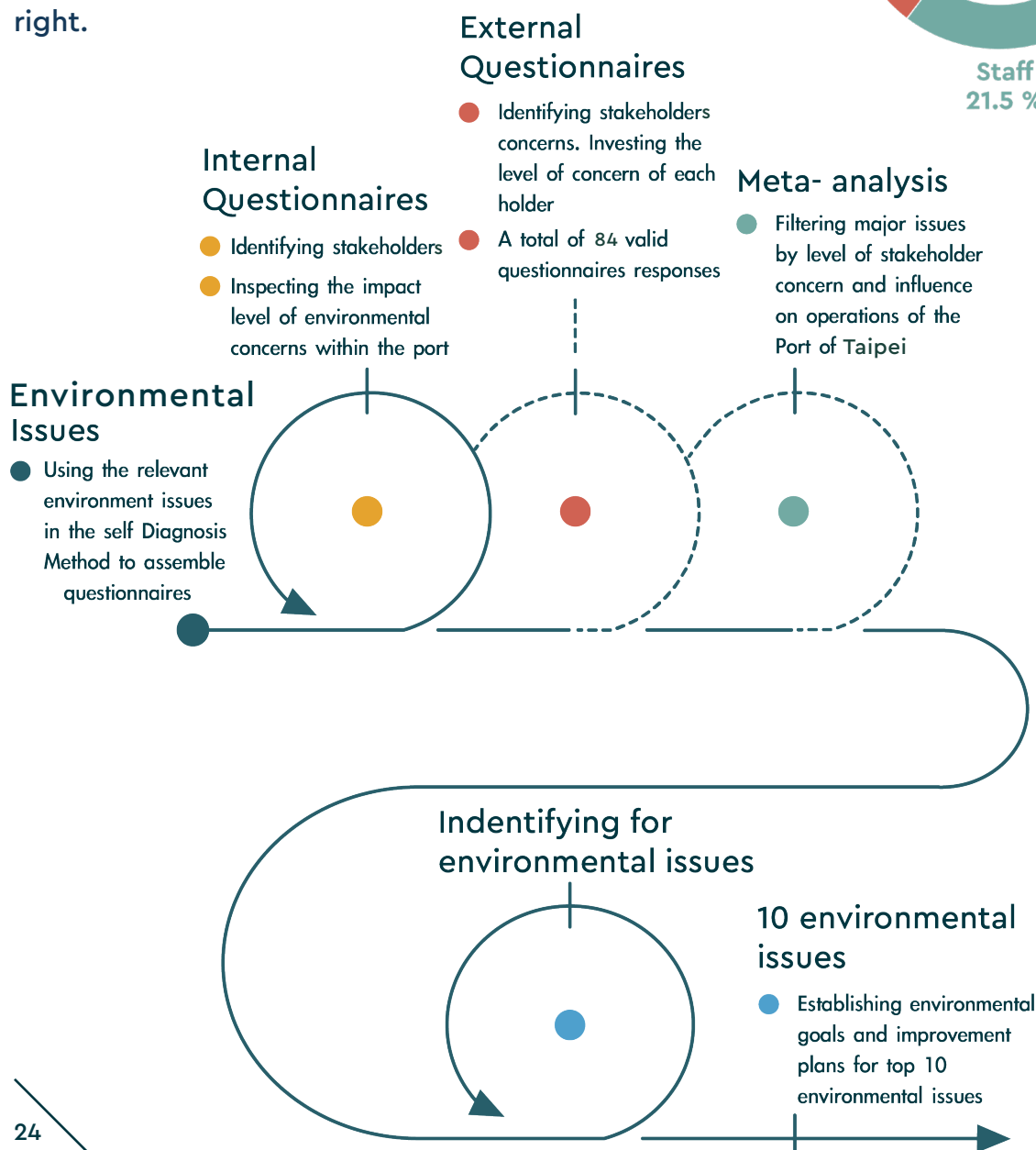
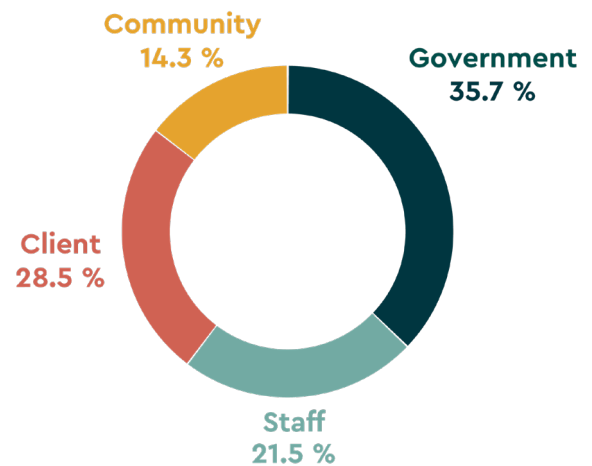


State of the Environment



3.1 Analysis of major environmental issues

To fully understand the opinion of each stakeholder and adapt Port of Taipei distributed internal questionnaires as an opinion poll among relevant stakeholders, including employees, the government, clients, and the community. The information obtained was used to evaluate the level of concern each stakeholder held. The data are plotted on the table to the right.



1. Air quality

Indicator

- Air quality pass rate (PM_{2.5}, PM₁₀, SO₂, NO₂)

Top 10

2. Cargo Spillage

Indicator

- Number of harbor inspections, cargo spillage emergency response drills, and jointly supervised harbor safety drills

3. Port waste

Indicator

- Recycling rate (Iron, paper, glass, metal, plastic)

4. Hazardous Cargo Handling/ Storage

Indicator

- Number of drills and exercises
- Number of joint inspections
- Number of inspections and cases sent to authority

5. Vehicle exhaust gas emissions

Indicator

- Proportion of low-polluting fuels used by port vessels
- The proportion of shore power used by port ships
- Ship deceleration achievement rate
- Ship deceleration propaganda

6. Vehicle exhaust gas emissions

Indicator

- Automated door sentry to reduce vehicle downtime and reduce truck emissions and paper usage through automated door sentry system

7. Vessel waste

Indicator

- General waste removed rate in vessels.

8. Port development (land area)

Indicator

- Maintain or increase port green area
- Area of reclaimed land for logistics and storage

9. Port development (water area)

Indicator

- Marine water quality pass rate (pH, DO, BOD5, mineral oils, cyanide, phenols)
- Maintaining port recreational spaces and facilities

10. Relationship with Local Communities

Indicator

- Neighborhood and community service activities
- Opening to public fishing activities
- Handling beach cleaning activities

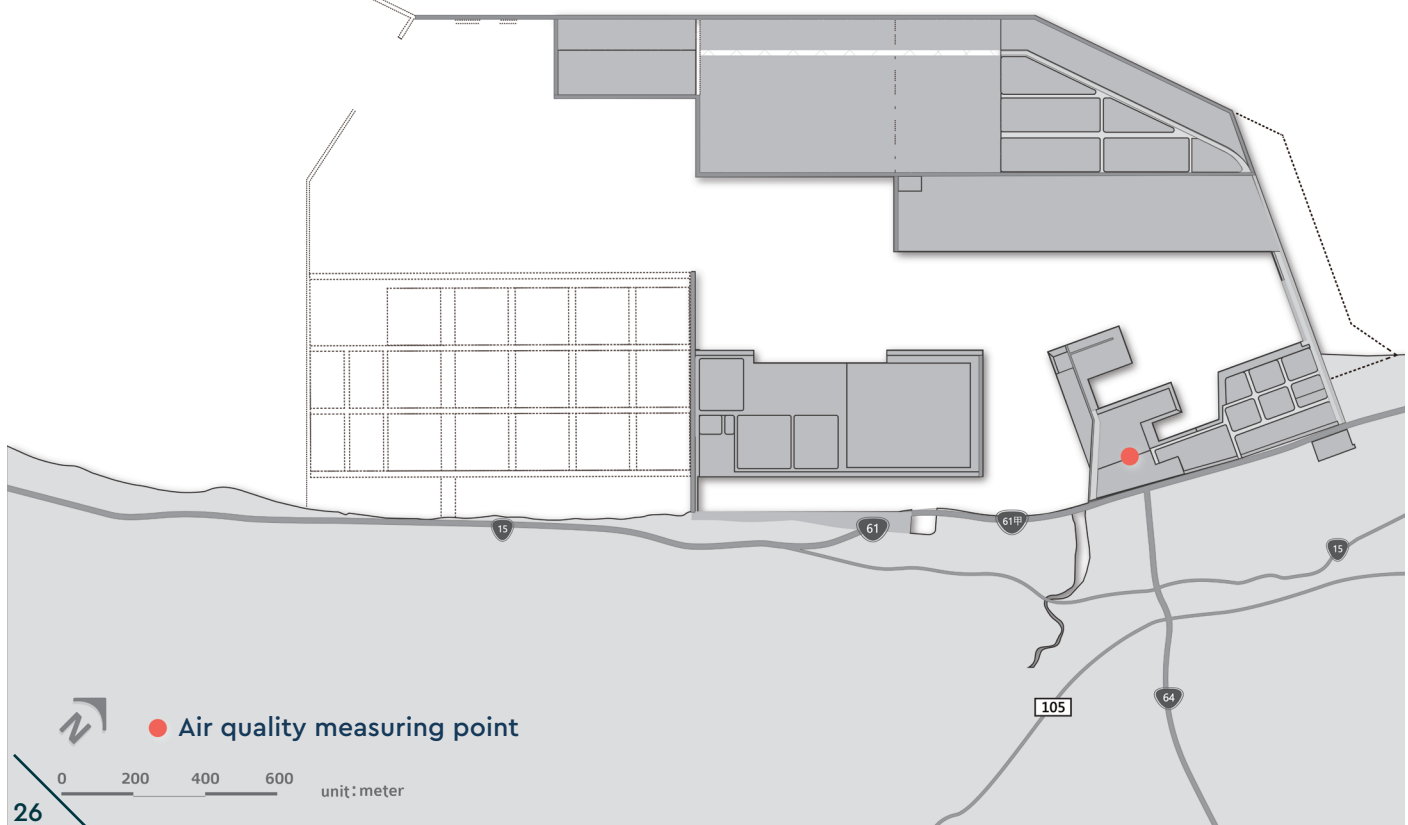


Since 2015, air pollution has been listed as one of the top ten environmental issues. The main sources of air pollution at the Port of Taipei include dust and suspended particulates generated during cargo handling and construction at the terminals, as well as gases generated by burning oil from ships and vehicles in the port area. In order to improve the air quality in the port area, in addition to developing improvement strategies, the Port of Taipei also conducts continuous environmental monitoring to track and understand the air quality in the port.

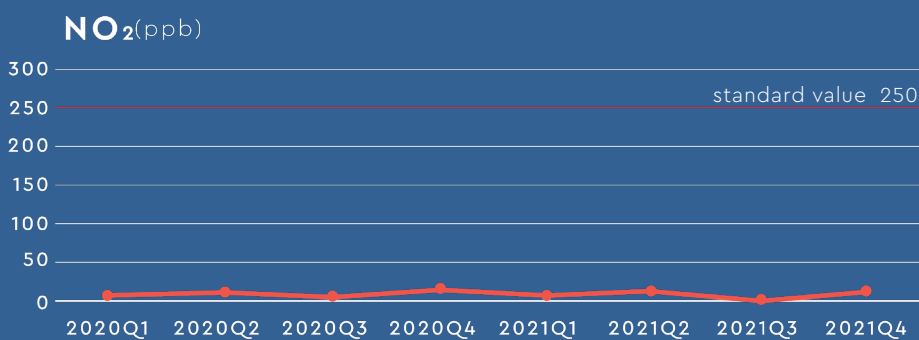
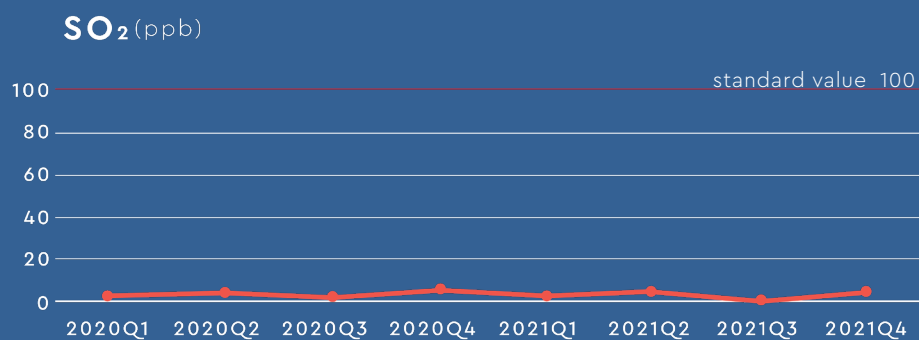
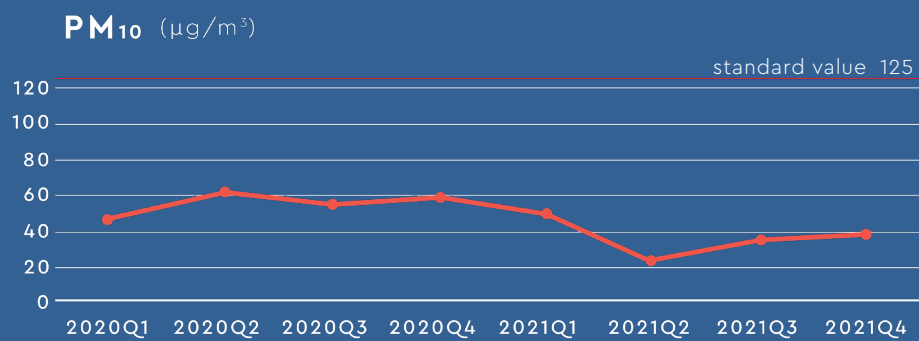
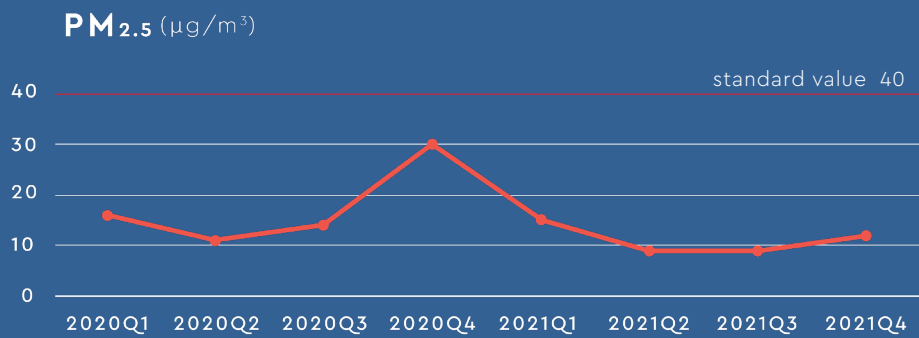
The monitoring points are the port gates, and the monitoring items include suspended particulates ($PM_{2.5}$, PM_{10}), sulfur dioxide (SO_2), carbon monoxide (CO), ozone (O_3), nitric oxide (NO), nitrogen dioxide (NO_2), total hydrocarbons (THC), non-methane

hydrocarbons (NMHC), wind speed, salinity, and other monitoring items. The following monitoring results show that the air quality in 2020 and 2021 are in compliance with the regulatory standards.

In recent years, the Taipei Port Branch Office has been actively maintaining the air quality in the port area, and dust is the second important environmental issue (next to air quality) from 2015 to 2019. However, dust is not included in the top 10 environmental issues for 2020 and 2021. This shows that the stakeholders in the port think that the dust problem has been improved in recent years.



Air quality monitoring measurements





3.3 Control of vehicle pollution in the port area

There are more than 1.2 million vehicles entering and leaving the Port of Taipei each year, of which 18.3% are first- and second-phase diesel vehicles. Only 40% of the vehicles have passed the smoke inspection within one year. A comparison of nearby air quality testing stations shows that there is a correlation between the traffic flow and air pollutant emissions in the Port of Taipei, and the pollutant emissions from Phase I and II diesel vehicles are two to six times higher than those from Phase III, IV and V vehicles. Therefore, in September 2020, the Environmental Protection Bureau of the Taipei City Government declared the Port of Taipei as an "Air Quality Maintenance Area", the first air quality maintenance area in Taiwan. Diesel vehicles entering and exiting Port of Taipei from the date of the announcement should have a record of passing the smoke emission inspection within one year. If the vehicle does not pass the smoke inspection within one year, the vehicle will be banned from entering the air product maintenance area. If the vehicle fails to pass the inspection and is caught, the owner will be fined up to NT\$60,000 in accordance with the Air Pollution Prevention Law and will be fined until improved. Up to now, 541 cases of non-compliant vehicles have been fined. In the past 1 year since the Port of Taipei implemented the Air Cargo Zone, $PM_{2.5}$ has been reduced by 131 tons and NO_x by 2,533 tons per year. The New Taipei City Environmental Protection Bureau plans to expand the air quality zone to include the West

Coast Expressway, Taiwan Highway No. 15 and the Bali Incineration Plant, and to expand the control targets to include all types of diesel vehicles and, for the first time, ships.

In order to effectively manage personnel, vehicles, and containers entering and leaving the port area, and to reduce idling time and emissions, the Port of Taipei has adopted an automated gate post system with OCR and RFID systems, which automatically identifies and verifies the database for quick comparison, and improves the efficiency of gate post passage in the port area. Total construction and maintenance cost of the automated gate sentry system at the Port of Taipei was approximately \$49 million dollars. In addition, the Port of Taipei also actively promotes the use of automated lanes by port operators to reduce idling time and exhaust emissions. Also, the Port of Taipei also provides information on vehicles entering and exiting the port through the vehicle identification system to the New Taipei City Environmental Protection Bureau, so that the Bureau can check whether the vehicles have smoke inspection records and control diesel vehicles. At present, more than 70% of the lanes in the Port of Taipei are automated, with 4 automated lanes at Post 1, 2 at Post 2, and 2 at Post 3 and 5. There is another automated lane for earthmoving in the Port of Taipei, and 2 automated lanes in the South Pier are, for a total of 13 lanes.



3.4 Strengthening Dangerous Goods and Cargo Spill Management

In accordance with the "Keelung Port Branch Chemical Spill Contingency Plan", in response to the occurrence of a chemical spill disaster in the commercial port area or in case of emergency response, and in cooperation with the Ministry of Transportation and the Environmental Protection Agency, to reduce the damage and to protect the environment and personal safety, to maintain the normal operation of the port and to reduce the risk to the environment and human life in the event of a chemical disaster, we will also strengthen coordination with other related support units to establish a joint prevention and response system and effectively utilize existing manpower and contingency equipment resources.

The petrochemical and chemical storage and transportation industries are potential environmental hazards in the Port of Taipei. In the event of an emergency, leaked materials will cause harm to the ecology and nearby residents. Therefore, the implementation of cargo management and the strengthening of port security is one of the key environmental issues for the Port of Taipei. On the business side, each business unit has a corresponding emergency response plan, and

regularly conducts disaster drills and joint drills with the port area to enhance emergency response capabilities in the event of an accident.

For loading and unloading operations in the port area, the Taipei Port Branch Office conducts more than 20 inspections per month, and conducts random inspections once every three months on average to ensure that the management of dangerous goods in the port area is maintained. In addition, for emergency response to cargo spills, the Taipei Port Branch Office communicates with all units on a regular basis and conducts joint disaster prevention drills and various disaster drills every year to improve the response capability of relevant units to cargo spills.

project/year	2020	2021
Disaster prevention drill	1	1
Joint audit	3	4



Disaster prevention drill



Disaster prevention drill



Disaster prevention drill



3.5 Reduce port land and ship waste

With the expansion of port scale, the quantity of port waste is increasing year by year, and the treatment of waste is getting more and more attention. The Taipei Port Branch Office has made it mandatory to enforce general waste separation and resource recovery for waste in the port area to improve the efficiency of waste disposal. In recent years, the Port of Taipei has been actively promoting waste reduction and resource recovery, and has implemented "mandatory waste separation" in accordance with its policies and regulations, stipulating that waste is divided into three categories: resources, food waste and garbage while plastic is the most important resource recycling item, followed by paper.

The port area waste and ship waste are collected and handled by a company commissioned by the Taipei Port Branch Office. Vessel waste and port area waste are regularly transported by external removal plants. The general waste and business waste (including waste oil and water) of terminal lessees, shipping companies and stevedoring companies are removed by the owners themselves through the contractors who are qualified for waste removal and treatment. In 2020 and 2021, the implementation rate of ship waste

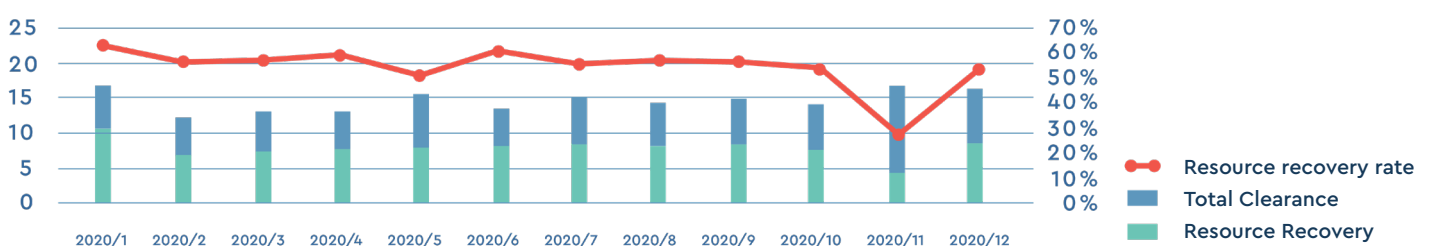
removal will be 100%, so as to properly handle ship waste and reduce the environmental impact caused by ships calling at the port area.

In 2020, the waste treatment statistics of the Port of Taipei are 175.509 tons of general waste, 94.3 tons of resource recovery, and 53.7% of resource recovery rate; in 2021, the waste treatment statistics are 174.715 tons, 88.4 tons of resource recovery, and 50.6% of resource recovery rate, reducing the amount of waste removal and increase the amount of resource recovery, avoid unnecessary waste of resources, properly handle waste and implement resource recovery and reuse.

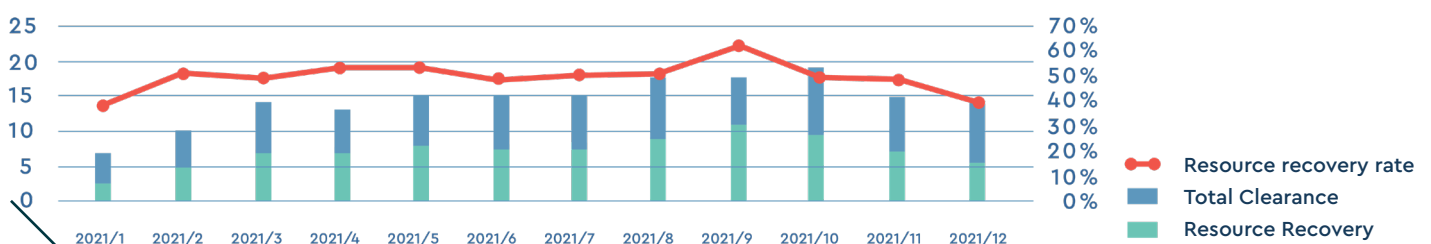
Year	2020	2021
Total waste generated (metric tons)	175.509	174.715
General waste removal volume(metric tons)	81.209	86.315
Resource recovery (metric tons)	94.3	88.4
Resource recovery rate (%)	53.7	50.6

Waste Recycling Rate (%)

2020



2021



3.6 Land Use Optimization

The Port of Taipei is an artificially developed port on reclaimed land. In line with national development priorities, the Port of Taipei continues to expand its scale, adding 45 hectares of reclaimed land in 2020 and 64 hectares in 2021. In addition to expanding the port and improving operational performance, the Port of Taipei also places emphasis on the development of green space planting in the port area to reduce the environmental impact caused by the reclamation project.

Since the Port of Taipei is a newly built port, there are not many protective measures along the original

shoreline, and the land reclamation project is continuing, therefore, the Taipei Port Operation Office has planned to set aside a 150m wide windbreak forest area with an area of 91 hectares. At present, the planting section of Taipei Port has been completed with preliminary statistics of about 28.29 hectares, including the A4 landscape area of the second phase of the project with an area of 1.1 hectares, the 20m buffer green zone along the harbor road with an area of about 2 hectares, and the central separating island and planting on roads with a width of 25m or more (A1, A9, A11, B3). Taipei Port added 0.4 hectares green area in the South Wharf area in 2021.



photography by LIU, JUNJIE



photography by LIU, JUNJIE



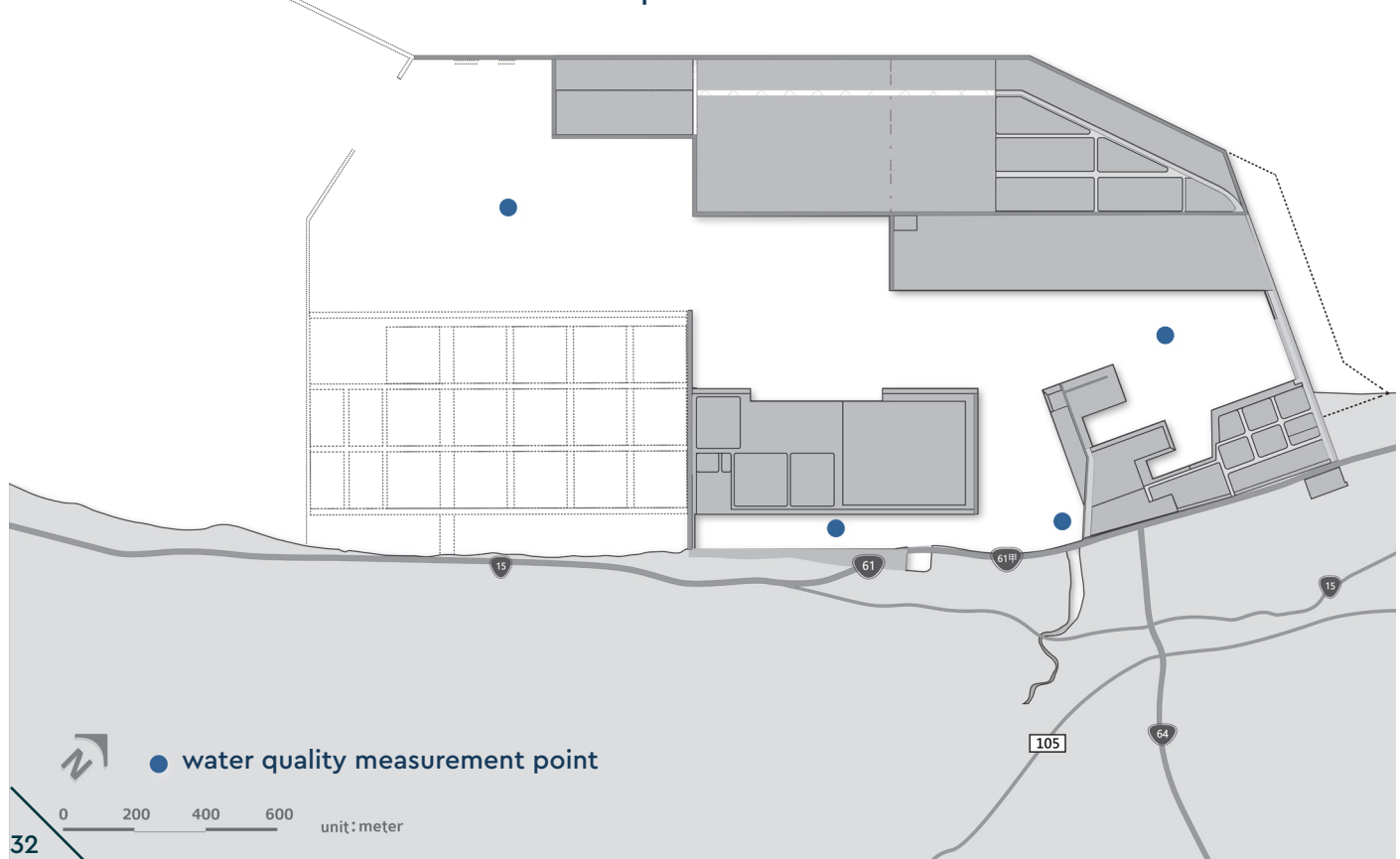
3.7 Improve the quality of water environment

The Taipei Port Branch Office continuously monitors the quality of the harbor waters to control and maintain the pH, DO, BOD₅, cyanide, phenols, and mineral oil content of the harbor water. Samples are taken quarterly for testing eased on Class B marine environmental quality standards.

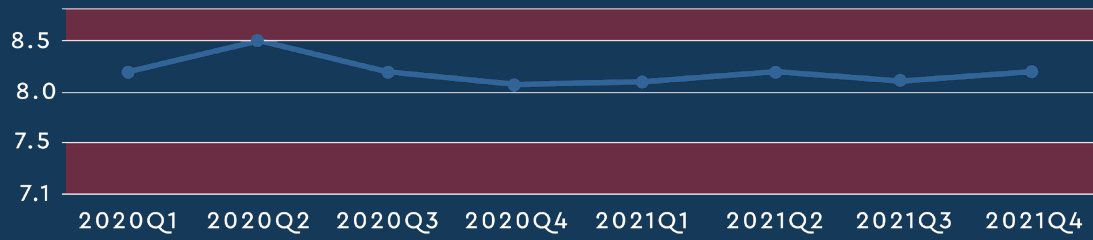
In 2003, the Port of Taipei became the first commercial port in Taiwan to achieve full domestic sewage treatment, and can properly treat sewage in the port area. In 2013, the electrical and mechanical maintenance project of the sewage booster station was completed, and sewage sewerage management work continues, treating an average of 120,000 tons of sewage per year. The construction of the South Pier Water Reclamation Center of the Port of Taipei

began in 2019 and had completed in 2021. It can centralize the treatment of domestic sewage and business wastewater in the South Pier area of approximately 1,500 tons per day and release them after three-stage treatment. In addition to sewerage, the Port of Taipei continues to monitor the water quality in the port area to control and maintain the water quality of the port.

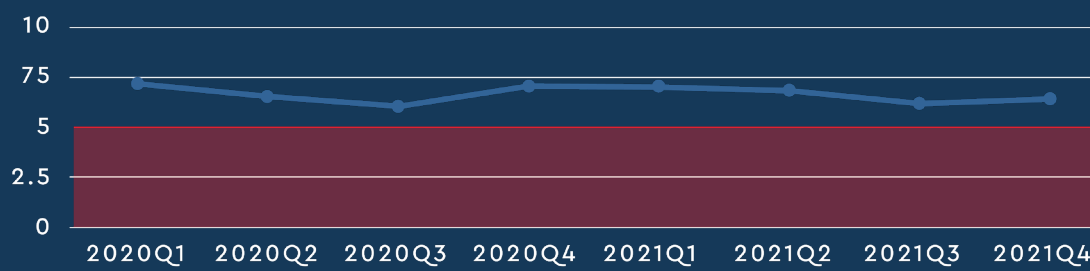
In order to reduce the environmental hazards brought about by land reclamation projects, the Taipei Port Branch Office has been actively maintaining the waterfront and friendly space in the port area in recent years, and promoting the water-friendly shoreline project, 0.8 hectares of waterfront protection in 2020; 1.3 hectares of waterfront protection in 2021.



pH



DO (mg/L)





3.8 Expand community friendly relationships

Every year, the Taipei Port Branch Office calls on its employees, port operators and local residents to carry out beach cleanup activities to remove litter from the beaches near the port so that the participants can realize the importance of marine environmental protection. In 2020, the number of participants in the beach cleanup campaign reached 50, removing a total of 0.4 tons of marine litter; in 2021, the number of participants reached 40, removing a total of 0.3 tons of marine litter.

The Port of Taipei held several community outreach and charity events. In 2020, it held 2 blood donation events and 2 material donation events; in 2021, it held 1 blood donation event, 4 material donation events and 1 tree planting event. While pursuing the growth of the company's operations, the Taipei Port Branch Office also takes into

consideration the sustainable development of the environment and the corporate social responsibility of giving back to the society.

In addition, the Port of Taipei is open to nearby residents and visitors for fishing activities in specific areas. 14,415 fishing trips had been made in 2020 and about 2,000 fewer than in 2020 in 2021, but more than 10,000 people will participate in the activities each year. Through these activities, the Port of Taipei will realize the spirit of giving back to the community, and will strengthen the relationship with the nearby residents, maintaining the public's identification with the Port and interaction with the surrounding community.







3.9 Environmental Performance Indicators

Ten Significant environmental issues		Index item	Calculation method	Index target	
1	Air Quality	Air quality pass rate(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	<ul style="list-style-type: none"> $PM_{2.5}$ of the daily mean measurements satisfy the standard ($<35\mu g/m^3$):100% PM_{10} of the daily mean measurements satisfy the standard ($<125\mu g/m^3$): 100% SO_2 of the daily mean measurements satisfy the standard (<0.1 ppm):100% NO_2 of the hourly mean measurements satisfy the standard (<0.25ppm):100% 	
2	Cargo spillage (handle)	Port inspections	Number of port inspections	500 harbor inspections	
		Port area security joint supervision	Number of security joint supervision	4 Joint supervision a year	
3	Waste/ Port and harbor waste	Resource recovery rate in the port area	<ul style="list-style-type: none"> Amount of resources recycled \div Amount of waste generated \times 100% 	Annual resource recovery rate more than 40 %	

		Description of calculation	
		2020	2021
	<ul style="list-style-type: none"> Goal 13 Climate change: Take urgent action to combat climate change and its impacts. (SDGs 13.3:STRENGTHEN RESILIENCE AND ADAPTIVE CAPACITY TO CLIMATE RELATED DISASTERS Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.) 	<p>Qualified percentage of daily average</p> <ul style="list-style-type: none"> PM_{2.5}: 100% PM₁₀: 100% SO₂: 100% NO₂: 100% 	<p>Qualified percentage of daily average</p> <ul style="list-style-type: none"> PM_{2.5}: 100% PM₁₀: 100% SO₂: 100% NO₂: 100%
	<ul style="list-style-type: none"> Goal 8 Decent work and economic-growth: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. (SDGs 8.8:PROTECT LABOUR RIGHTS AND PROMOTE SAFE WORKING ENVIRONMENTS Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.) 	<ul style="list-style-type: none"> Port inspection 657 times 	<ul style="list-style-type: none"> Port road inspections 640 times + port terminal inspections 114 times = 784 times in total
		<ul style="list-style-type: none"> Joint supervision 6 times 	<ul style="list-style-type: none"> Joint supervision 8 times
	<ul style="list-style-type: none"> Goal 12 Responsible consumption and production: Ensure sustainable consumption and production patterns. (SDGs 12.5:SUBSTANTIALLY REDUCE WASTE GENERATION By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.) 	<ul style="list-style-type: none"> Resource recovery volume: Total waste removal. 94.3 tons ÷ 175.5 tons = 54% Annual recycling rate of 54% 	<ul style="list-style-type: none"> Resource recovery volume: Total waste removal. 88.4 tons ÷ 174.7 tons = 51% Annual recycling rate of 51%



Environmental Performance Indicators

Ten Significant environmental issues		Index item	Calculation method	Index target	
4	Hazardous Cargo Handling/ Storage	Number of drills and exercises	Number of drills and exercises	2 drills a year	
		Joint inspections	Number of joint inspections	2 joint inspection a year	
		Inspections	Number of inspections	Daily inspection	
5	Vessel Emissions	Proportion of harbor service vessels using low-polluting fuels in port	$\times 100\%$ Number of harbor service vessel using low-polluting fuels in port operations \div Number of vessels in total port operations $\times 100\%$	Proportion of port service vessels using low-pollution fuels reached 100%.	
		Proportion of harbor service vessel using shore power	Number of harbor service vessel using shore power (vessels) \div Total number of harbor service vessel (vessels) $\times 100\%$	100%The proportion of harbor service vessel using shore power	
		Vessel speed reduction achievement rate	Speed reduction check system according to AIS to control the speed reduction of sailing ships within 3-5 NM near the port	Vessel speed reduction rate within 3-5 miles of the port area of Taipei Port reached 100%.	
		Vessel speed reduction promotion	Number of speed reduction announcements for incoming vessels	Maintain at least 8,000 times per year	

		Description of calculation	
		2020	2021
	<ul style="list-style-type: none"> Goal 8 Decent work and economic-growth: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. (SDGs 8.8:PROTECT LABOUR RIGHTS AND PROMOTE SAFE WORKING ENVIRONMENTS Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.) 	<ul style="list-style-type: none"> 4 Disaster prevention drills 1 Typhoon Emergency drills 	<ul style="list-style-type: none"> 4 Disaster prevention drills 1 Typhoon Emergency drills
		<ul style="list-style-type: none"> 3 joint inspection 	<ul style="list-style-type: none"> 4 joint inspection
		<ul style="list-style-type: none"> Scheduled inspection once a day and unscheduled inspection 	<ul style="list-style-type: none"> Scheduled inspection once a day and unscheduled inspection
	<ul style="list-style-type: none"> Goal 13 Climate change: Take urgent action to combat climate change and its impacts. (SDGs 13.3:STRENGTHEN RESILIENCE AND ADAPTIVE CAPACITY TO CLIMATE RELATED DISASTERS Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.) 	<ul style="list-style-type: none"> $1 \div 1 \times 100\% = 100\%$ 1 harbor service vessel, 1 harbor service vessel using low-pollution fuel 	<ul style="list-style-type: none"> $1 \div 1 \times 100\% = 100\%$ 1 harbor service vessel, 1 harbor service vessel using low-pollution fuel
		<ul style="list-style-type: none"> $1 \div 1 \times 100\% = 100\%$ 1 vessel for harbor service, 1 vessel for using shore power at the berth 	<ul style="list-style-type: none"> $1 \div 1 \times 100\% = 100\%$ 1 vessel for harbor service, 1 vessel for using shore power at the berth
		<ul style="list-style-type: none"> A total of 4,551 incoming and outgoing vessels, with 100% achievement rate of 3-5 NM speed reduction 	<ul style="list-style-type: none"> A total of 4,766 incoming and outgoing vessels, with 100% achievement rate of 3-5 NM speed reduction
		<ul style="list-style-type: none"> Set the system to automatically send out speed reduction announcements for incoming vessels every hour, for a total of 8,760 times in 2020 	<ul style="list-style-type: none"> Set the system to automatically send out speed reduction announcements for incoming vessels every hour, for a total of 8,760 times in 2021



Environmental Performance Indicators

Ten Significant environmental issues		Index item	Calculation method	Index target	
6	Vehicle Emissions (including cargo loading and unloading)	Number and proportion of lanes with automated door posts in and out of the port area	<ul style="list-style-type: none">The number of inbound lanes with automatic door posts and the total number of lanes in the port areaAutomated door posts in and out of the port area ÷ total lanes × 100% = ratio of automated door posts	Number of lanes with automatic gate posts, ratio 50%	
7	Vessels waste	General waste removed rate in vessels.	Number of cleanups conducted by relevant vessels ÷ number of vessels that collected waste × 100%	100% ratio of waste removed from vessels	
8	Port development (land area)	Maintain or increase port green area	Calculate annual port green area	Maintain or increase port green area	

		Description of calculation	
		2020	2021
	<ul style="list-style-type: none"> Goal 13 Climate change: Take urgent action to combat climate change and its impacts. (SDGs 13.3:STRENGTHEN RESILIENCE AND ADAPTIVE CAPACITY TO CLIMATE RELATED DISASTERS Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.) 	<ul style="list-style-type: none"> 17 lanes and 12 automated door posts 12 Automated Door Posts ÷ 17 lanes = 70.6% In 2020, 1,905,414 vehicles entered and exit the port area using the automated gate post lanes. 	<ul style="list-style-type: none"> 17 lanes and 12 automated door posts 12 Automated Door Posts ÷ 17 lanes = 70.6% In 2021, 3,468,793 vehicles entered and exit the port area using the automated gate post lanes.
	<ul style="list-style-type: none"> Goal 12 Responsible consumption and production: Ensure sustainable consumption and production patterns. (SDGs12.5:SUBSTANTIALLY REDUCE WASTE GENERATION By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.) 	<ul style="list-style-type: none"> Ratio of Waste removed from vessels: 100% 	<ul style="list-style-type: none"> Ratio of Waste removed from vessels: 100%
	<ul style="list-style-type: none"> Goal 9 Industry innovation and infrastructure: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.(DEVELOP SUSTAINABLE, RESILIENT AND INCLUSIVE INFRASTRUCTURES Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.) 	<ul style="list-style-type: none"> Total port green area in 2020: 28.29 hectare 	<ul style="list-style-type: none"> Total port green area in 2021: 28.69 hectare



Environmental Performance Indicators

Ten Significant environmental issues		Index item	Calculation method	Index target	
8	Port development (land area)	Area of reclaimed land	Area of reclaimed land	Maintain or expand the area of reclaimed land in the port area.	
9	Port development (water area)	Marine water quality pass rate (pH, DO, BOD5, mineral oils, cyanide, phenols)	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.	Marine water quality: 100% of the quarterly pH, DO, BOD5, mineral oils, cyanide, and phenols measurements satisfy the criteria.	
		Maintain port recreational spaces and facilities.	Area of port recreational related space.	Maintain area of port recreational related space.	

		Description of calculation	
		2020	2021
	<ul style="list-style-type: none"> Goal 13 Climate change: Take urgent action to combat climate change and its impacts. (SDGs 13.3:STRENGTHEN RESILIENCE AND ADAPTIVE CAPACITY TO CLIMATE RELATED DISASTERS Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.) Goal 15 Life on land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.(Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.   	<ul style="list-style-type: none"> The area for additional land reclamation established in 2020 measures approximately 45 hectares 	<ul style="list-style-type: none"> The area for additional land reclamation established in 2021 measures approximately 64 hectares Filling volume: 4.2 million m³
	<ul style="list-style-type: none"> Goal 14 Life below water: Conserve and sustainably use the oceans, seas and marine resources for sustainable development. (SDGs 14.1 REDUCE MARINE POLLUTION By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. SDGs 14.2 PROTECT AND RESTORE ECOSYSTEMS By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.) 	<ul style="list-style-type: none"> Class B marine water quality standard: pH 100% DO 100% BOD5 100% mineral oils 100% Cyanide 100% Phenols 100% 	<ul style="list-style-type: none"> Class B marine water quality standard: pH 100% DO 100% BOD5 100% mineral oils 100% Cyanide 100% Phenols 100%
		<ul style="list-style-type: none"> Total area of recreational space in 2020 : 0.8 hectares 	<ul style="list-style-type: none"> Total area of recreational space in 2021 : 1.3 hectares



Ten Significant environmental issues		Index item	Calculation method	Index target	
10	Relationship with the local community	Neighborhood and Community Service Activities	Number of events	2 events per year	
		Public fishing activities	Number of participants	1,000 participants	
		Organizing Beach Cleanups	Number of events Number of participants	At least one event per year 20 Participants	

			Description of calculation	
			2020	2021
		<ul style="list-style-type: none"> Goal 1 No poverty :End poverty in all its forms everywhere. (SDGs1.5 BUILD RESILIENCE TO ENVIRONMENTAL, ECONOMIC AND SOCIAL DISASTERS By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters. Goal 14 Life below water: Conserve and sustainably use the oceans, seas and marine resources for sustainable development. (SDGs 14.1REDUCE MARINE POLLUTION By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. 	<ul style="list-style-type: none"> In 2020, we held 4 events for the ben-efit of our neighbors and the commu-nity. 	<ul style="list-style-type: none"> In 2021, we held 6 events for the benefit of our neighbors and the community.
			<ul style="list-style-type: none"> A total of 14,415 people participated in fishing activities in 2020. 	<ul style="list-style-type: none"> A total of 12,666 people participated in fishing activities in 2021.
			<ul style="list-style-type: none"> One beach cleanup event in 2020 50 people participated in the event Removed 0.4 tons of marine litter 	<ul style="list-style-type: none"> One beach cleanup event in 2021 40 people participated in the event Removed 0.3 tons of marine litter





04



Emergency Response



4.1 Port Emergency Notification and Drill

Most of the major accidents in 2020 and 2021 in the Taipei Port area were construction site accidents, as detailed in the table below.

For pollution and disaster incidents in the port area, the Taipei Port Branch Office, the Environmental Protection Bureau of the Taipei City Government, and the Taipei Shipping and Port Division of the Northern Shipping Center of the Bureau of Shipping and Port Affairs, Ministry of Transportation and Communications have established a reporting channel to provide notification and contact with relevant units. The Taipei Port Branch Office has also set up emergency response procedures for disasters in the port area, such as ship, fire and explosion accidents, and major incidents in the port area, in order to deal with crises in the event of disasters.

The Port of Taipei controls bulk cargo loading and unloading operations, strengthens cargo loading and unloading management, avoids overloading or leakage, and strengthens the communication and coordination mechanism of relevant units for emergency response. In 2020, there were 101 environmental inspections in the port area (the online port inspection record system was set up in November 2020, so only data for November and December were available in 2020); in 2021, there were 784 environmental

inspections in the port area. The online port inspection record system was established by the Taipei Port Branch Office in November 2020, and the daily port environmental inspections was recorded in the system in detail.



Facility Security Drill

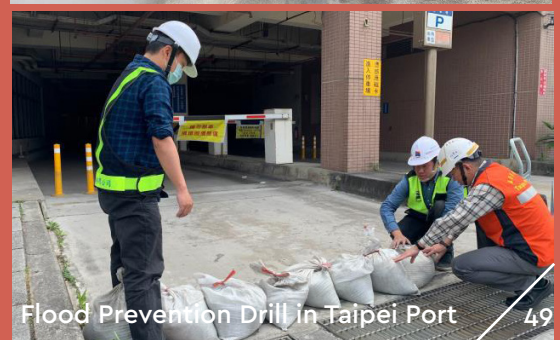
Year	Name of the Drill	Dates
2020	Facility Security Drill	March, June, September, December
	Flood Prevention Drill in Taipei Port	April
	Fire Drill and Training	June and December
2021	Facility Security Drill	March, June, September, December
	Flood Prevention Drill in Taipei Port	April
	Fire Drill and Training	June

2020–2021 Port Accident Statistics Table

Accident unit (company name)	Date	Location	Type of accident	Cause overview
CHIA PEI INTERNATIONAL CORPORATION	2020/03/01	East Pier 16	Pinch	The injured employee broke his right upper arm when he used a forklift as a riding device.
International Vessel	2020/03/09	Port Area	Vessel Collision	The ship (Godspeed) entered the port of Taipei, the pilot boat to take the pilot on board, by the captain Yang, crew, Li, will pilot boat away, but the pilot boarded from the port side, the pilot boat is still on the left side, but the captain ordered the speed of the ship's third mate, helmsman, the left direction of travel and speed up, did not pay attention to the pilot boat, resulting in the cargo ship hit the pilot boat accident.
CENTURY IRON AND STEEL INDUSTRIAL CO., LTD	2020/12/22	The new construction project Phase III at South Pier	Fallen	Steel structure installation operation, personnel climbed out of the work platform and did not hook up the safety belt.
DONG PI CO., LTD.	2021/01/26	External Dock	Drown	Engineering vessel equipment abnormalities, the hull into the water unilateral tilt, resulting in the ship caisson footing crashed through the dock wall, seawater into the cabin, Thai workers retreat too late
TONGLIT LOGISTICS CO.,LTD.	2021/03/26	East Dock	Fire	The point of fire was the warehouse into the storage of empty cars, the warehouse site was the tin degree house, the port fire agents arrived at the scene, found the scene of the fire has been from the warehouse, immediately put out high-pressure water line irrigation, the fire in about half an hour that control, and at 2:25 a.m. to put out the fire, there was no one at the scene, did not cause a major problem.



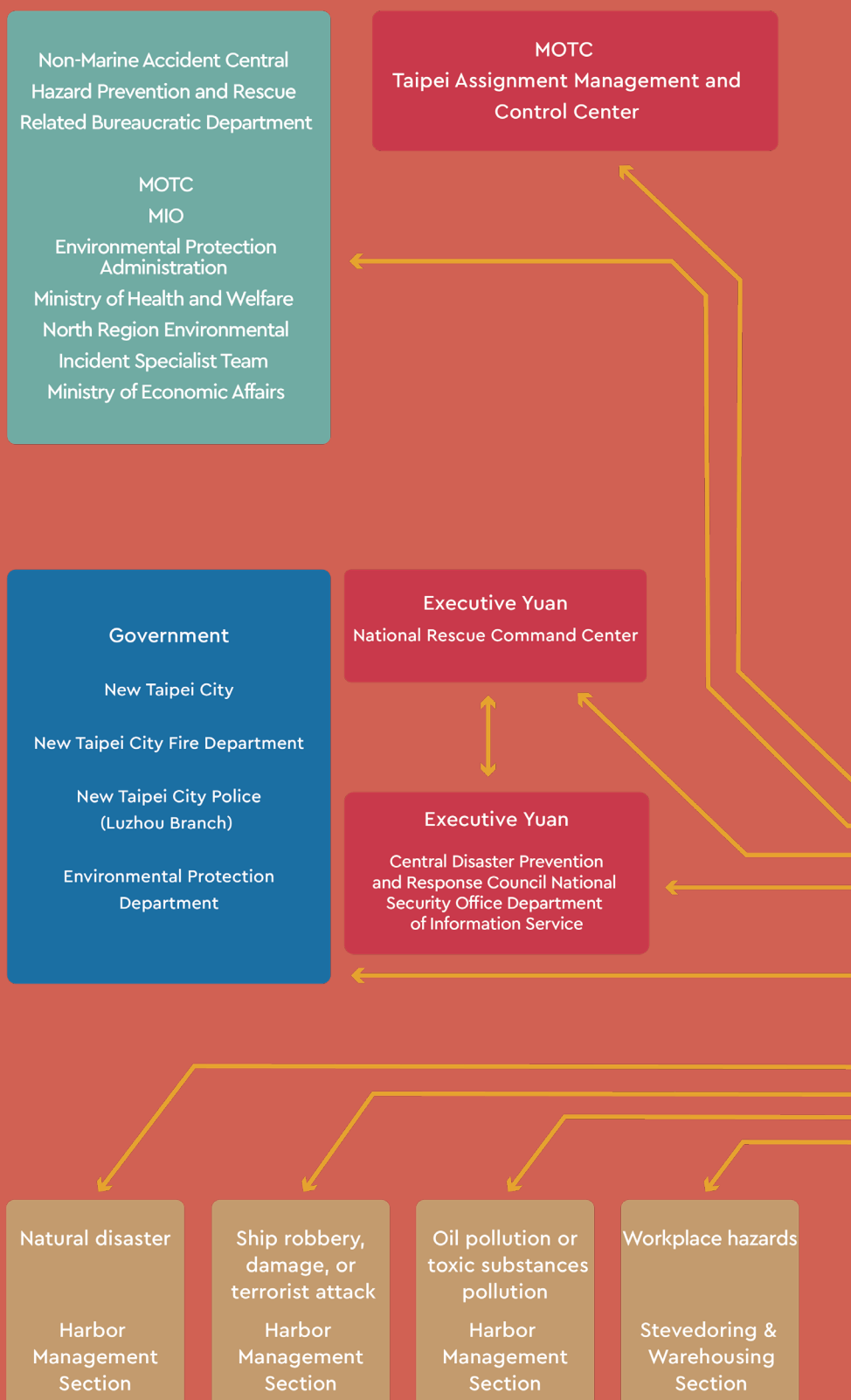
Fire Drill and Training

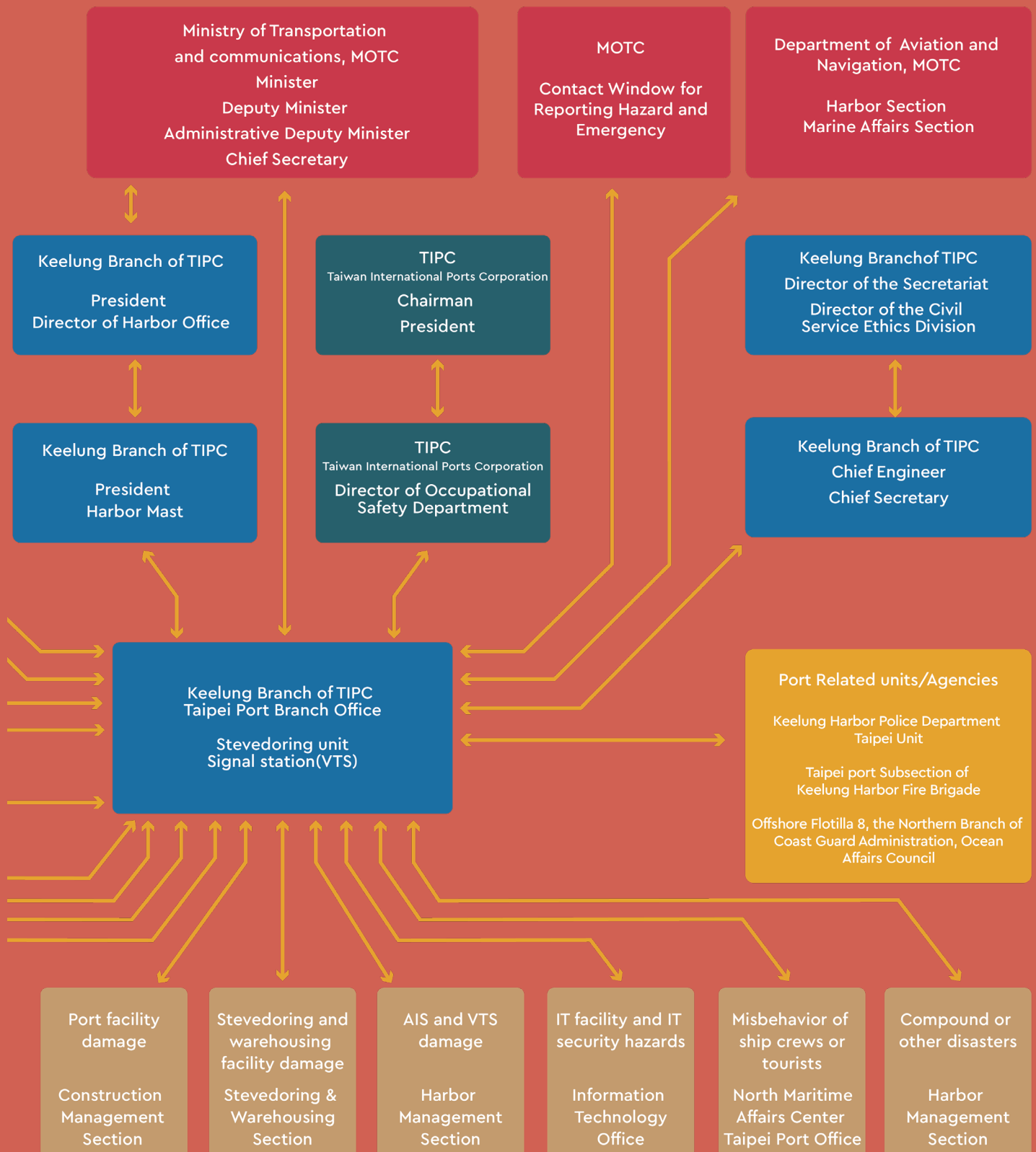


Flood Prevention Drill in Taipei Port



Port of Taipei Emergency Response







05



Involvement and Cooperation



5.1 Century Offshore Wind Power Administration Building Green Building and Green Energy Equipment

- Strategies : Engaging 、 Enabling
- Environmental Issue : Energy consumption, near-zero carbon buildings

Attention/Motives

Greenhouse gas emissions from the Port of Taipei, with electricity consumption as the main source, are equivalent to more than 95% of the ports' carbon dioxide emissions. In recent years, buildings have emphasized the concepts of coexistence with ecology, energy saving and waste reduction, and green buildings refer to buildings that emphasize "ecology, energy saving, waste reduction, and health. In addition, in response to the global trend of green port development, we aim to achieve a low-carbon sustainable port with green energy.

Structure/Investment

Century Offshore Wind Power has been committed to sustainable development of the environment, from the overall planning and design of the administration building, to the completion of construction and subsequent operation and maintenance, in order to achieve the goal of "energy and water conservation". In terms of energy saving, the building is equipped with a high-performance heat-insulating roof, glass with excellent shading coefficient, and high-efficiency LED light sources; in terms of water conservation, water-saving equipment and rainwater recycling ponds are used, and permeable material paving and a large number of plantings are used around the base. In addition, the unused space on the roof of the Century Offshore Wind Power Plant is used to install solar power generation equipment to achieve energy saving and carbon reduction through the clean, non-polluting and safe features of solar power.





2018 to 2020, September 2021 to obtain the Green Building Label

SDGs

SDGs: Ensuring Access to Affordable, Reliable, Sustainable and Modern Energy for All

Effect/Benefit

- Large green areas around the base and roof to maintain water retention around the base.
- Energy saving in the base and energy saving equipment.
- Solar panels are estimated to generate up to 4.58 million kilowatts of electricity per year.
- Create a stable source of income for power generation.
- Extend the life of the roof by avoiding direct sunlight on the roof.
- Beautify the roof of the plant and revitalize the asset value at the same time.

Participating Units

- Port of Taipei
- Century Offshore Wind Power Equipment Co., Ltd.

Stakeholders

- Port of Taipei
- Century Offshore Wind Power Equipment Co., Ltd.
- Taiwan Power Company
- New Taipei City Government Environmental Protection Bureau
- Environmental Protection Agency, Executive Yuan

Contact Name: Luo Lishan
 Unit: Century Offshore Wind Power Equipment Co., Ltd.
 Job Title: Head of Class
 Contact Number: 02-89798698#1033
 E-mail: shanlo@cwptw.com



5.2 Logistics warehousing area ecological tide pool

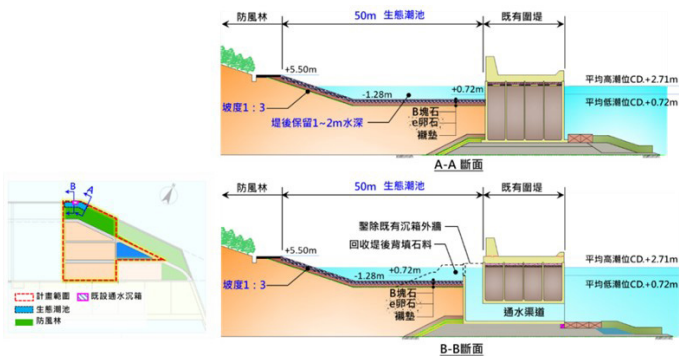
- Strategies : Exemplifying 、Enforcing
- Environmental Issue : conservation area, near-zero carbon buildings

Attention/Motives

The Port of Taipei is an artificial port built on reclaimed land, and its scale is expanding. The operation and development of the port, the reclaimed land project, and the business of the port will have an impact on the ecology of the port. Therefore, in October 2004, the "Environmental Impact Assessment Report for the Taipei Commercial Port Logistics and Storage Area Reclamation Project" (final version) promised to build an ecological tide pool in the logistics and storage area.

Structure/Investment

Ecological tide pools are formed in the windbreak forest outside the storage area by natural means without any artificial stocking or placement. Four outfalls are reserved for seawater exchange using the caissons of the embankment. The design of the tide pool elevation will take into account the average daily difference between the high and low tides of the Port of Taipei about 2m, so that creatures can stay or feed in the tide pool at high tide and remain in the tide pool at low tide, creating a diverse ecological effect in the tide pool when there is still seawater at low tide, and making good use of the interrelationship between marine characteristics and structures to create a variety of ecological effects and make good use of the interrelationship between marine characteristics and structures to create a basic environment for living organisms to gather in the ecological tide pool.





Implementation/Timeline

Construction expected in September 2022; completion in December 2025

Investment amount

From September 2022 to December 2025 71,532 thousand NT\$ (direct engineering cost, excluding tax)

SDGs

SDGs: Marine ecological conservation: protect and sustainably utilize oceans and marine resources for sustainable development

Effect/Benefit

- Create a harmonious coexistence with the ecology of the sea, and at the same time provides a water-friendly recreation for the public.
- Maintain biodiversity and create a diverse ecological effect.
- Reduce the ecological impact caused by land reclamation.

Participating Units

- Port of Taipei

Stakeholders

- Port of Taipei
- Port tenants
- Port stevedores
- Bali residents

Contact Name: Zhang Boquan
Unit: North Engineering Office of the Engineering Office
Job Title: Supervisor and Manager
Contact Number: 02-2619-6081
E-mail: bochung@twport.com.tw



6.3 Involvement and Collaboration

The Taipei Port Branch Office actively collaborates with both domestic and international organizations, including governmental agencies, academics, and industries.



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 (IAPH)

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



Xiamen Port Holding Group Co.

To cultivate human resources, exchange visits and academic exchange activities are irregularly organized for employees between Xiamen and Taipei Port, allowing them to share successful working experiences and advanced port management concepts, thus enhancing both sides' container, transshipment, and logistics services.



Pingtan Comprehensive Pilot Zone Administration Committee in Fujian

After two years of negotiation, a direct ship line was established between Taipei Port and Fujian Province's Pingtan Island on October 9, 2013, leading to a mutual partnership.



交通部航港局北部航務中心

North Maritime Affairs Center, Maritime and Port Bureau, MOTC

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



Institute of Transportation, MOTC

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 network for industrial, governmental, and academic transportation organizations.



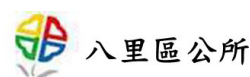
Environmental Protection Administration

The EPA, Executive Yuan collaborates with the US EPA in accordance with 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)," and this partnership has led to the development of a series of strategies relating to port environmental issues.



New Taipei City Environmental Protection Department

Taipei Port works closely with the New Taipei City Environmental Protection Department. Conducts joint spot check and pollution prevention drills.



Bali District Hall

Port of Taipei and the Bali District share the responsibility to maintain the port surrounding environment.



Century Wind Power Co. Ltd

Since 2019, Century Iron Group has leased 21 hectares of land in Taipei Port to build an underwater basic manufacturing plant. The company not only provides related facilities of offshore wind power (manufacturing, assembling, and storing), but engages in wind turbine import and export. In the future, the 1,000-unit marineland electromechanical project will further promote the development of related industries and promote local employment opportunities



Chia Hsin Int'l Corp.

In 2006, Chia Hsin rented Wharf No. 13-15 of the east bank and rented Wharf No. 16 of the east bank to build and operate facilities. In 2009, Chia Hsin built an enclosed warehouse at Bulk and General Cargo Terminal No. 1. Thus, Chia Hsin is an excellent example of an environmental Chia Hsin Int'l Corp. manager for Taipei Port



Goldsun Building Materials Co., Ltd.

In 2009, the Goldsun Building Materials Co., Ltd. obtained the 50-year management right of the second bulk general cargo storage and transportation center in Taipei Port. The total investment in development and construction is 4.5 billion yuan. The operation of the enterprise includes cargohandling, warehousing, and shipping



ORIENTAL FREIGHT SERVICES

東方超捷國際物流股份有限公司

Oriental Freight Services

Oriental Logistics Group, a subsidiary of Chaojie Group, was opened on March 6, 2020. The center is located in the Taipei Free Trade Port Zone, with a total storage area of 9,520 square meters and 6,800 shelf spaces, which can store bonded warehouses. Goods and domestic goods, and meet the storage needs of bonded and non-bonded goods at the same time.



Tonglit Logistics Corp.

In October 2005, Tonglit Logistics Co., Ltd. was officially approved as a free trade enterprise in Taipei. Tonglit's main business is in automobile and automobile parts trading, featuring the integration of shipping and packaging services.



Taipei Port Container Terminal Corp.

Taipei Port Container Terminal Corp. (TPCT) is the first privately funded container terminal build-operate-transfer project in Taipei Port. Established on March 9, 2009, TPCT features highly efficient stevedoring services and automated entry procedures through its highly advanced wharves and has aimed to increase port operation effectiveness and achieve energy conservation and carbon reduction.



台塑石化(股)公司



淳品實業(股)公司



友亦企業(股)公司

Formosa Petrochemical Corporation | Chun Pin Enterprise Co., Ltd. | BOM AMI ENTERPRISE Co., Ltd.

There are 47 chemical tanks in the Taipei Port, which are managed by Formosa Petrochemical Corporation, CPE, and BOA. These facilities mainly store gasoline, diesel, any organic chemicals such as toluene, vinyl chloride, and p-xylene. To avoid large scale chemical accidents, Port of Taipei mostly stores non-explosive chemicals. Furthermore, the pipelines are mostly buried underground along the Binhai provincial highway, which is sparsely populated areas.



國立臺灣海洋大學



國立中山大學



國立成功大學

National Taiwan Ocean Univ. | National Sun Yet-Sen Univ | National Cheng Kung Univ.

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 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 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.



06



Training and Communica- tion



6.1 Employee Education

In compliance with its environmental policies, the Taipei Port Branch Office provides suitable environmental education and training programs to raise environmental awareness, and improve the competitiveness of the Port of Taipei.

In 2020 and 2021, the Taipei Port Branch Office organized in total 5 environmental education and occupational safety courses for its staff members. Course topics cover pollution prevention, natural disaster, contagious disease control, environmental impact assessment, etc.

Taipei Port 2020–2021 Occupational Safety and Health Training

Year	Course Title	Course Dates
2020	Environmental education visit to the second bulk cargo center	12/10、12/11、12/17
	2 Fire Drills Education Seminars	6/22、12/18
2021	Environmental Education and Training-Environmental Protection Video Watch	12/17-12/24
	Fire Drills Education Seminar	12/24





Fire drills education seminars



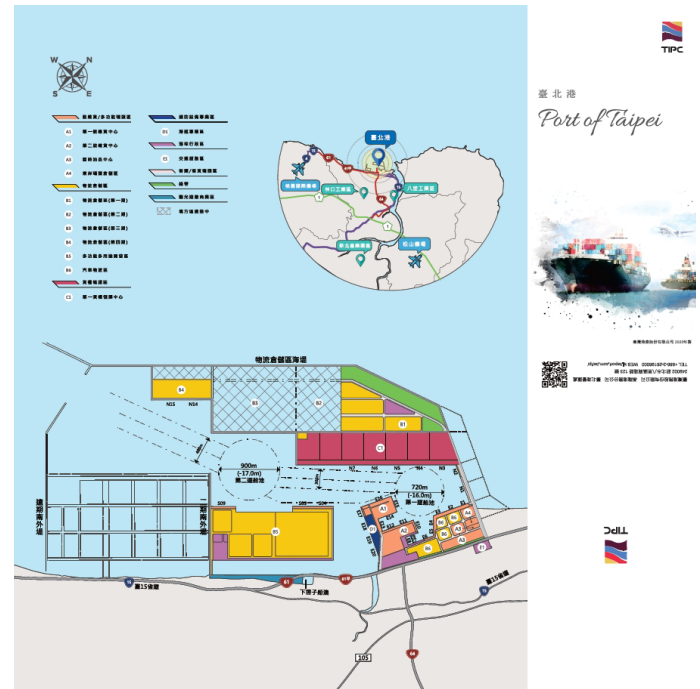
Fire drills education seminars



6.2 Communication and Publication



Taipei Port Brochure



Academic

To enable the Port of Taipei to communicate with the industry and the outside world, the Port of Taipei has held many events, seminars and workshops. Besides, the information on the Port of Taipei is available to the general public, businesses, academic institutions.

Year	Unit	Date
2021	National Defense University Visit	11/24
	Normal University EMBA Operations and Supply Chain Management Course	12/17
	Department of Civil Engineering, National Taiwan University Visit	12/17



64 National Defense University Visit



Normal University Education Visit



National Taiwan University Education Visit

Neighorly

The Taipei Port Branch Office held several public welfare activities for the people and the community. In 2020, we held 2 blood donation events and 2 material donation events; in 2021, we held 1 blood donation event, 4 material donation events and 1 tree

planting event. While pursuing the growth of the company's operations, the Taipei Port Branch Office also takes into account the sustainable development of the environment and the corporate social responsibility of giving back to the society.



Donate Supplies



Donate Supplies



Blood Donation



Blood Donation



07



Green Accounting



7.1 Environmental Investment and Cost

In order to improve the awareness among staff, environmental maintenance, environmental quality, emergency response abilities, and public understanding of the port, Taipei Port Branch Office invested in the following categories.

The Summation of Costs invested by the Investments of the Taipei Port Branch Office in the Environmental Aspects is €6,387,845.6 in 2020 and €8,733,540.6 in 2021.

Costs related to Environmental Issues at Taipei (Unit: EUR)

Items of Expenses	2020	2021
Employees(Environmental Education)	621,138.9	661,800.1
Environmental Maintenance & Management	482,978.0	655,879.7
Environmental Monitoring	944,473.9	977,604.5
Emergency Response	20,065.1	9,621.8
Communication & Publication	4,319,189.8	6,428,634.6
Total	6,387,845.6	8,733,540.6

7.2 Environmental Assets

To develop the Port of Taipei into an ocean-going container port, air-sea port, and distribution port for automotive and other industries, the Keelung Branch of TIPC has launched a series of port development projects (divided into continuing and new projects) and projects for general buildings

and equipment. A portion of these projects are concerned with environmental aspects. For example, land reclamation and barrier repair. The Keelung Branch of TIPC invested in fixed assets for € 56,104,147 and €16,581,951 in 2020 and 2021, respectively. (Rate of exchange 30.14)


Assets invested in Environmental Issues (Unit: EUR)

Year	Project	Amount
2020	2020 Taipei Port Road and Plaza Minor Renovation Project (Open-end Contract)	156,934.31
	Investigation of Coastal Drifting Sand and Monitoring of Meteorological and Topographic Changes in the Port of Taipei (2020)	530,856.01
	The First Change of Land Reclaim Project of S09 Pier and Backline Dike at South Terminal of Taipei Port	4,835,865.96
	Environmental Quality Monitoring During the Construction Period of the Taipei Port (2020-2022)	1,844,061.05
	Commissioning of Labor Services for Emergency Response to Water Pollution Incidents in the Port of Taipei in 2020	31,519.58
	The Port of Taipei South Pier S07 and S08 Shore Protection and Backline Dike Construction Project	21,433,311.21
	2020 Port of Taipei Dredging Project – (2019 expansion)	1,625,746.52
	Design and Supervision Technical Services for the Landfill C Public Facilities and Permanent Shore Protection Project at the Southern Port of the Port of Taipei	4,844,127.41
	2020 Flood Control Preparation and Coastal Cleanup in the Taipei Port Area	32,149.97
	The Land Reclamation Project of S09 Pier and Backline Dike at South Terminal of Taipei Port	2,834,771.20
	The New Construction of Public Buildings in the Southern Pier of the Port of Taipei	17,869,940.28
	Environmental Cleaning Work for the Port Area and Administration Building of the Port of Taipei in 2020	64,731.25
2021	2021 Taipei Port Environmental Cleaning Labor Outsourcing	393,198.41
	Taipei Port South Pier A Landfill Public Facilities Project	923,324.49
	Investigation of Coastal Drifting Sand and Monitoring of Meteorological and Topographic Changes in the Port of Taipei (2021)	530,856.01
	2021 Labor Contract for Emergency Response to Water Pollution Incidents in the Port of Taipei	31,519.58
	2021 Annual Environmental Quality Monitoring System Maintenance Project for the Port of Taipei	44,094.23
	2021-2023 Port of Taipei Dredging Project (Open-end Contract)	6,502,322.50
	The First Change of Design for the S07 and S08 Shore Protection and Backline Dike Construction Project at the South Pier of the Port of Taipei	560,716.66
	Taipei Port Fenders Maintenance Project	28,367.62
	Design and Supervision Technical Service for Taipei Port Overall Development Detail Planning and Logistics Storage Area Phase II-1 Public Works	5,549,104.18
	Taipei Port Waterfront Recreation Area Debris Removal Project Design and Supervision Technical Service 1st Contract Modification	875,547.45
	The Third Change of Land Reclamation Project of S09 Pier and Backline Dike at South Terminal of Taipei Port	84,505.64
	The First Contract Modification for the Design and Supervision of Public Facilities and Permanent Shoreline Construction at the Landfill of Southern Pier C of the Port of Taipei	637,425.35
	The First Contract Modification for the Second Phase of the Land Reclamation Project for the Taipei Commercial Port Logistics and Storage Area (second bid)	27,770.40
	2021 Outsourcing of Environmental Cleaning Services in Taipei Port area	393,198.40

08



Improvement Recommendations



Taipei Port began with two aggregate terminals built by transporting sand from eastern Taiwan to northern Taiwan, until June 2022, there have been 22 operation docks and also continue to increase various port facilities. To cooperate with port development trends and national economic policies, Taipei Port is positioned as a port in the northern part of Taiwan with main cargo in bound and outbound, green energy industrial development and value-added logistics center.

In response to the trend of international green ports and in line with relevant government environmental policies, Taipei Port continues to build various environmental protection and green energy facilities, including 24-hour environmental monitoring systems, closed storage, sewage sewers, solar power generation systems, and water recycling centers.

With the goal of sustainability, Taipei Port hope to become an international high-quality green port and fulfill corporate social responsibilities.



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



Port of Taipei

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