# Environmental Statement

European EMAS Regulation

EMAS
VERIFIED
ENVIRONMENTAL
MANAGEMENT
ES-CAT-000430

Port de Barcelona

Port de Barcelona

The Port Authority of Barcelona (APB) is the public institution responsible for the management of the Port of Barcelona, a port of general interest integrated into the state-owned port system.

EMAS
VERIFIED ENVIRONMENTAL MANAGEMENT
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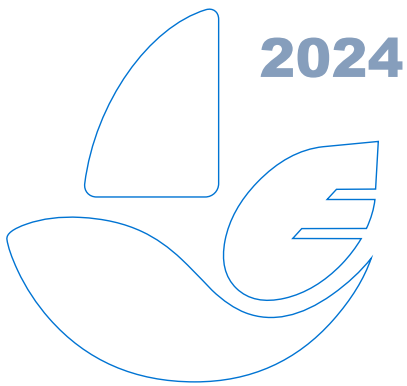


# 2024 European EMAS Regulation

This document has been prepared taking into account the validated contents established by REGULATION (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organizations in a Community eco-management and audit scheme (EMAS), Regulation 2017/1505/EU, as well as its amendments laid down by Decision 2017/2285/EU.

The contents referred to in Commission Regulation (EU) 2018/2026 of 19 December 2018, amending Annex IV to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organizations in a Community eco-management and audit scheme (EMAS), have also been incorporated.

Period that includes the Declaration: In 2024, including environmental performance indicators for a minimum period of 3 years in accordance with the previous regulations and provided that data is available**. This statement corresponds to the first follow-up audit conducted by the verifying agency following the renewal of the European Registry.**

# INDEX

# Presentation

## Sustainability drives our vision for the future: creating value for the community through a balanced development model that combines economic efficiency, environmental commitment, and positive social impact.

I am pleased to introduce this new edition of the Environmental Declaration, which we present as a reflection of the Port of Barcelona's strong commitment to the environment and the strategic role it plays in the transition to a more sustainable economy.

Within the framework of our IV Strategic Plan 2021-2025, we have aligned our actions with international and European climate objectives, committing to reduce our $CO_2$ emissions by 50% by 2030 and to achieve climate neutrality by 2050. We are walking this path together with the entire Port Community, understanding that sustainability is not an option, but a structural necessity.

One of our flagship projects, Nexigen, is transforming our docks thanks to an investment of over 200 million euros for its electrification. This measure will allow a drastic reduction in emissions from docked vessels, using 100% renewable energy. Ferries and container ships have already been connected, and by 2026, cruise ships will also be able to do so.

On a global scale, we proudly highlight that Barcelona was chosen by UNESCO to host the world center for sustainable ocean economy, thus recognizing our international leadership and concern for the environment in our sector.

The Port Authority of Barcelona also makes a great effort in the environmental management of its operations and daily activities.

That is why we publish our Environmental Declaration verified under the excellence requirements established by the European EMAS Regulation. An annual report, a testimony of transparency and accountability in our environmental performance that we offer to all stakeholders.

The whole team that is part of this great infrastructure, together with the port community, works every day to make the Port of Barcelona a more environmentally sustainable port.

**José Alberto Carbonell**
President of the Port of Barcelona

## Sustainability, innovation, and environmental responsibility are part of the same strategy: building an efficient, resilient port aligned with the challenges of climate change.

The EMAS 2024 Environmental Declaration that we are sharing today as a technical document is a reflection of an organizational culture based on rigor in the analysis of information, oriented towards continuous improvement in the field of environmental protection and prevention of pollution derived from our activities and operations as the Port Authority of Barcelona.

Our environmental management is deployed at all levels: from the optimization of natural resources, management and efficiency in water and energy consumption, and the reduction of waste, discharges, and emissions, to the promotion of other actions such as cleaner mobility in our vehicle fleet.

Regarding energy, the Port Authority has resumed the hiring of electricity from renewable sources and is moving forward with the self-consumption model, with new installations planned for the coming years. We also remain steadfast in our commitments to address the climate emergency, with measures such as bunkering new fuels and the future biogas plant using organic waste.

We have implemented a comprehensive environmental monitoring strategy, with verifiable indicators and ambitious goals, integrated into our Goals Program 2024-2026, such as a 30% improvement in energy efficiency compared to 2008 or a 50% reduction in NOx and particles by 2030.

This Declaration is an exercise in verified transparency and a clear message: environmental sustainability and competitiveness are inseparable today.

Let’s continue building together a port that is increasingly resilient, responsible, and connected to its surroundings.

**Àlex Garcia i Formatjé**

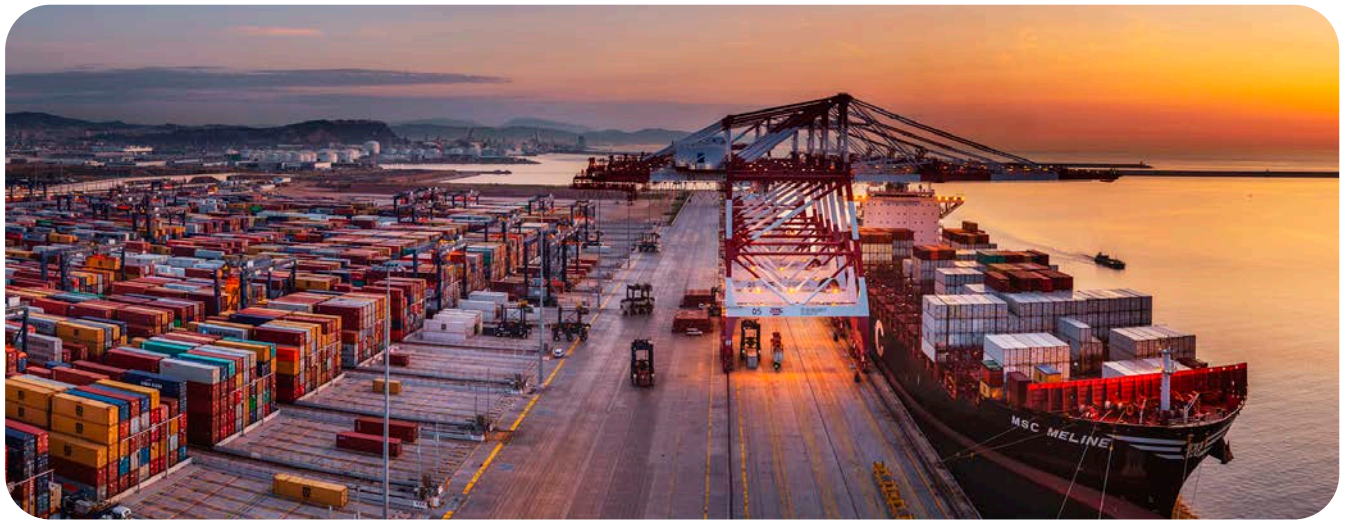
Managing Director of the Port of Barcelona

# THE PORT AUTHORITY



# Activity and competences of the Port Authority of Barcelona

The mission of the Port Authority of Barcelona is to generate prosperity in the community, increasing the competitiveness of our clients through the efficient and sustainable provision of logistics and transportation services.




As public bodies, Port Authorities depend on the Ministry of Public Works, through Ports of the State; and from a legal point of view, we are governed by specific legislation, mainly by Royal Legislative Decree 2/2011 of September 5, approving the Consolidated Text of the Ports of the State and Merchant Marine Law (Ports Law).

The Port Authority of Barcelona is responsible for the administration, control, management, and operation of the Port of Barcelona. Under the *"Land Lord Port"* model, Port Authorities provide port space and infrastructure and regulate operations carried out in the port, but do not provide port or commercial services, such as technical-nautical services (pilotage, towing, and mooring), cargo handling, or passenger-related services, among others.

In general, these services are provided by private operators, with technical and human resources that do not belong to the Port Authority.

**The basic functions of the Port Authority are:** planning, design, construction, conservation, and operation of the port's works and services, collaboration with official bodies, coordination of private port companies, and management of the port's public domain.

**To fulfill our mission, we have set the goal of becoming the smartest logistics hub in the Mediterranean.**

The acronym SMART stands for the five attributes we want to consolidate to achieve our vision: (S)ustainable, (M)ultimodal, (A)gile, (R)esilient, and (T)ransparent.

**SURFACE**
**1,042 ha**

**DOCKS AND BERTHS**
**23.28 km**

**STAFF**
**537**
**DIRECT WORKERS**

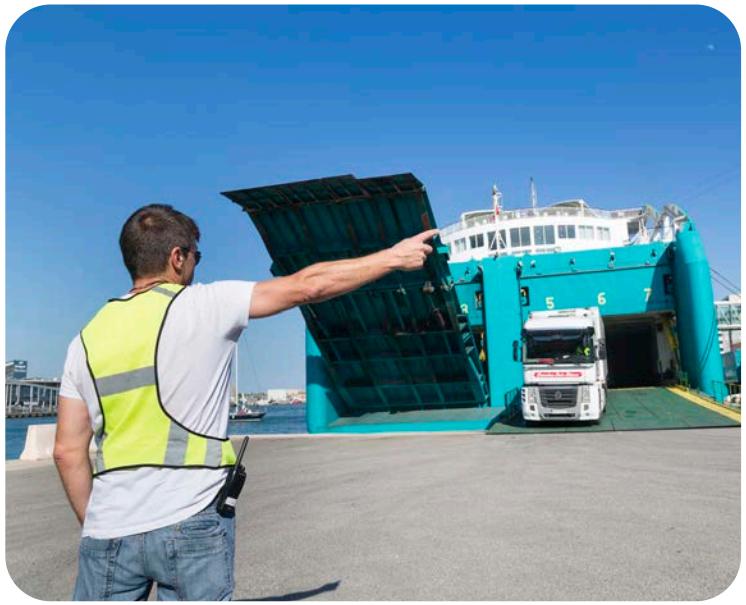
**TRAFFIC**
**69.7**
**MILLIONS OF T**

## Functions and competencies of the Port Authority

1. Manage and control port and commercial services.
2. Provide general port services.
3. Organizing the service area of the port and port uses.
4. Promote, maintain, and exploit port infrastructures.
5. Manage the port public domain.
6. Optimize the economic management and profitability of your assets and resources.
7. Promote commercial, logistics, and, where appropiate, industrial activities related to maritime or port traffic.
8. Coordinate the operations of the different modes of transportation at the port.
9. To manage and coordinate port traffic, both maritime and land-based.

| Type of traffic | Traffic units |
|---|---|
| TOTAL TONS MOVED | 69.7 millions of t |
| TOTAL NUMBER OF SHIP STOPS | 8,383 units |
| PASSENGERS | 5.3 million |
| CARS | 682,082 units |
| CONTAINERS (TEU) | 3.9 million of units |
| ROAD FREIGHT TRANSPORT (UTI) | 158,097 units* |

*Trailers, flatbeds, flatbeds, trucks, vans...



# Commitment to sustainability

## Environmental Policy

The Barcelona Port Authority (APB in the Spanish acronym) is aware of the environmental impact of the activities of the Port of Barcelona and, therefore, contributes to sustainable development, environmental protection, and pollution prevention, minimizing impacts on air, water, and soil quality in all its operations, as well as optimizing the use of resources. The port's activities and services include the management of the port's public domain, maritime transport activities, infrastructure works and maintenance, as well as the management and supervision of port services and commercial activities related to maritime, land, and rail freight transport of the port. To minimize the effects of environmental impacts, our commitment includes:

1. Having an adequate environmental management program that guides and improves our environmental performance, that drives decarbonization to address climate change, energy transition, circular economy, and biodiversity protection.
2. To keep ourselves informed and comply with current environmental legislation and other environmental requirements to which we are subscribed.
3. To work to prevent environmental accidents and maintain a high level of preparedness to reduce the effects of any incident or accident that may occur.
4. To use resources in the most efficient way possible, aiming to reduce the consumption of non-renewable resources, energy consumption, $CO_2$ emissions, and other pollutants such as particles.
5. To influence, receive requests, and cooperate with clients, suppliers, authorities, and other participants to comply with our environmental policy and effectively communicate with the local community and relevant organizations in their environmental programs.
6. Buy products and services that, in their production, use, and disposal, minimize negative environmental impact.
7. Provide all employees with training on environmental issues so that they can become active agents in protecting the environment and promoting sustainability in their daily work.
8. To ensure that the necessary resources are implemented to meet these objectives, the maintenance of our environmental management system and its certification.
9. To provide stakeholders with validated information in these areas, annually publishing an environmental statement.
10. Ensure that all our actions are carried out within the framework of the Port's Strategic Plan and the Sustainable Development Goals of the 2030 Agenda.

Signed and dated
Reviewed April 2021

PORT AUTHORITY OF BARCELONA
José Alberto Carbonell
Chief Executive Officer

# Context

The Port Authority has approved the new Strategic Plan 2021-2025. This plan analyzes the environment and the organization's context, and sets out specific lines of action that should guide all departments.

There is also a Sustainability Plan at the level of the Port Community that has analyzed the context and the relationship with stakeholders. Based on these analyses, the Port has reviewed the context for the purpose of analyzing its impact on environmental aspects within the framework of the Port of Barcelona's Management System.

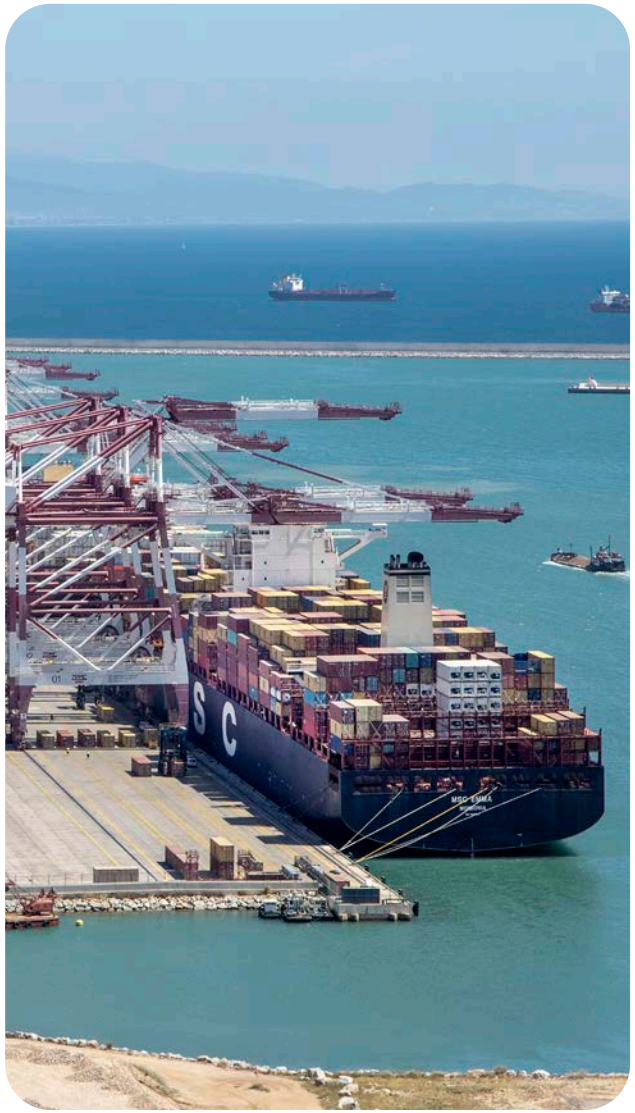
# Stakeholders

The sustainable action of the Port of Barcelona takes into account the expectations and demands of its stakeholders.

These stakeholders have been grouped into five levels in order to facilitate a more detailed analysis of their needs and expectations.

In this way, we can establish the best possible relationships and determine which communication channels are most suitable in each case.

1. **LEVEL 1**
   WORKERS AND EMPLOYEES OF THE PORT AUTHORITY
2. **LEVEL 2**
   PORT COMMUNITY COMPANIES (CONCESSIONAIRES, SERVICE PROVIDERS, SHIPOWNERS AND SHIPPING LINES / COMPANIES, ETC.)
3. **LEVEL 3**
   TRANSPORT OPERATORS AND CARGO CLIENTS
4. **LEVEL 4**
   GOVERNMENT AGENCIES AND PUBLIC AUTHORITIES
5. **LEVEL 5**
   CITY OF BARCELONA
   CITY OF EL PRAT DE LLOBREGAT (CONCESSIONAIRES, SERVICE PROVIDERS, SHIPOWNERS, AND SHIPPING COMPANIES, ETC.)



# MANAGEMENT AND PLANNING



# Organization and scope

The commitment to sustainable development at the Port of Barcelona is shared by all the workers who are part of the organization. All areas and departments of the Port Authority of Barcelona participate directly or indirectly in environmental management.

## Team and functions

The Department of Environmental Sustainability is integrated into the Deputy Directorate General of Port Operation and Planning.

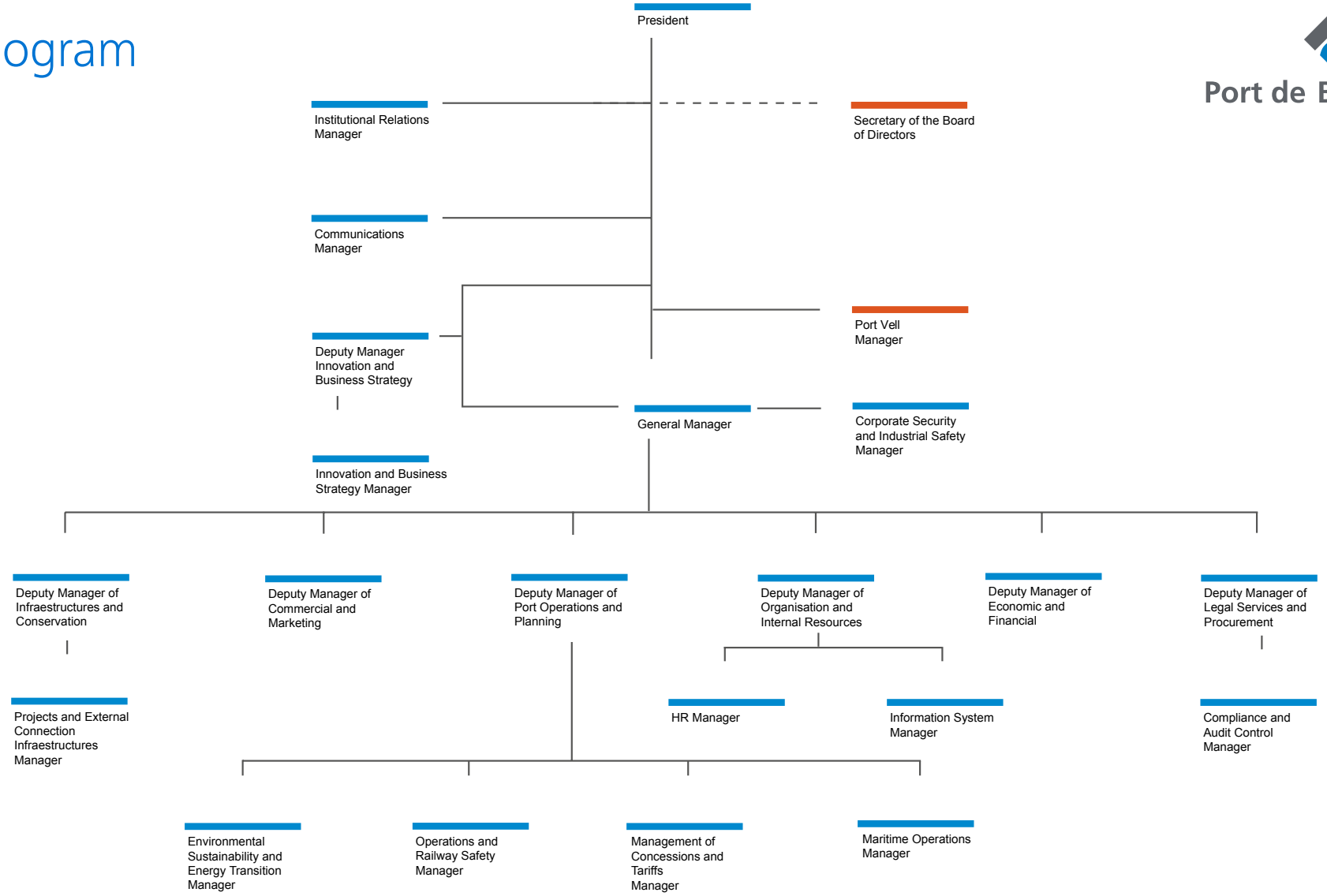
However, this system is cross-functional and interacts with the functions of various departments.

As an example, environmental action also involves the following stakeholders and operations:

- Infrastructure/facicity construction
- Dredging operations
- Maritime operations
- Terminals and concessions
- Cargo Handling
- Vehicle traffic management
- Port operations
- Strategic planning
- Suppliers and subcontractors
- Quality management
- Emergency plan
- Waste management
- Human Resources
- Information technology
- Research and development
- Innovation
- Internal and external communication
- Port services

# Organogram

Port de Barcelona



## Scope of the EMS

The scope of the system covers all those facilities and activities carried out by the Port Authority of Barcelona in the fulfillment of its functions related to the facilitation and organization of the passage of goods through the port by maritime, railway, and road modes.

Specifically, the activities that fall within the scope include the management of the port public domain, the construction of infrastructure works and their maintenance, and the management and supervision of port services and commercial activities related to the transportation of goods.

The port-city area, Port Vell, is excluded from its scope. The commercial and logistics area excludes the sports area and other facilities not directly related to port activities. The coastal lighthouses of Barcelona and Girona, which depend on the APB, are also not included in the system's scope. CNAE 52.22 Auxiliary activities for maritime and inland waterway transport NACE Rev.2.1 (52.22)

The environmental management of the Port of Barcelona complies with current legislation, with **ISO 14001:2015 standard,** and with the **EMAS**[1] **Regulation**, as well as with the sectoral standard **Port Environmental Review System (PERS)** promoted by the European Sea Ports Organisation (ESPO).

## Information and control

The EMS is documented through manuals, procedures, and controlled records, as well as through plans and programs.

- Environmental objectives program
- Environmental training plan
- Internal and external environmental communication plan
- Environmental emergency plan
- Environmental audit plan

**CERTIFICATION / VALIDATION SCOPE:**

Management of the port public domain, maritime transport activities, infrastructure works and their maintenance, as well as the management and supervision of port services and commercial activities related to maritime, land, and rail freight transport of the port.

[1] REGULATION (EC) Nº 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation of organisations in a Community eco-management and audit scheme (EMAS), Regulation (EU) 2017/1505, as amended by Decision 2017/2285/EU and Regulation 2018/2026/EU.

# Activities and processes

## INFRASTRUCTURE AND FACILITIES - CONSTRUCTION

New-building projects; maritime and landside works; dredging; works execution and environmental monitoring; soil remediation projects..

## PORT PUBLIC DOMAIN MANAGEMENT: TERMINALS AND CONCESSIONS

Territorial planning, authorizations for occupation by third parties; authorization of activities involving handling of goods; regulation of port services; emergency plans for terminals.

## LAND AND RAIL TRANSPORT

Regulation of activity; atmospheric emissions; accident rate.

## ADMINISTRATIVE MANAGEMENT

Generation of waste; electricity, water consumption, and office supplies consumption.

## CONSERVATION AND MAINTENANCE OF INFRASTRUCTURES AND FACILITIES

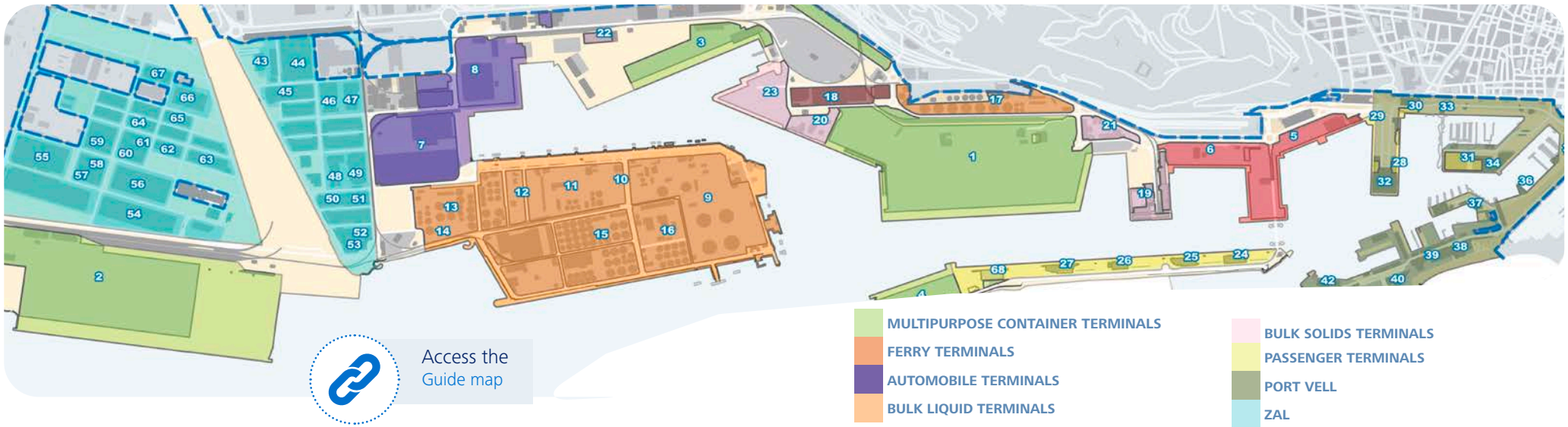
Maintenance and conservation of infrastructures; waste collection and street cleaning services in public and common areas; cleaning of water surfaces; maintenance of green areas and gardening; workshop waste management; water, electricity, and fuel consumption; office supplies and other goods and services consumption; fleet management; port sanitation network management.

## ENVIRONMENTAL MANAGEMENT

Monitoring and improvement of the environmental management system of the Port of Barcelona: Monitoring of water and air quality in the port area. Prevention and remediation of soil contamination. Prevention of accidental pollution from spills of hydrocarbons and other chemicals into port waters. Protection of the port environment through actions by third parties.

## SHIPS AND MARITIME NAVIGATION

Regulation of maritime operations; regulation of nautical port services; atmospheric emissions; ballast water discharge; accidental spills; vessel repairs.



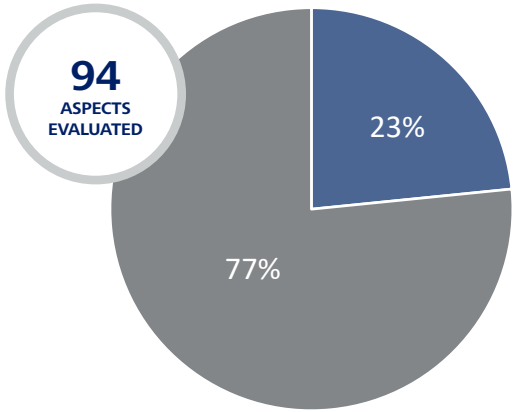

Access the Guide map

# Analysis and impact assessment

## Methodology of analysis

The Port of Barcelona annually identifies the direct and indirect aspects and impacts of port activities within the scope of the system, both for normal and abnormal conditions as well as emergencies.

### Environmental aspects




Impact averages: IU. D: 4.5 IU IU. I: 12.4 IU

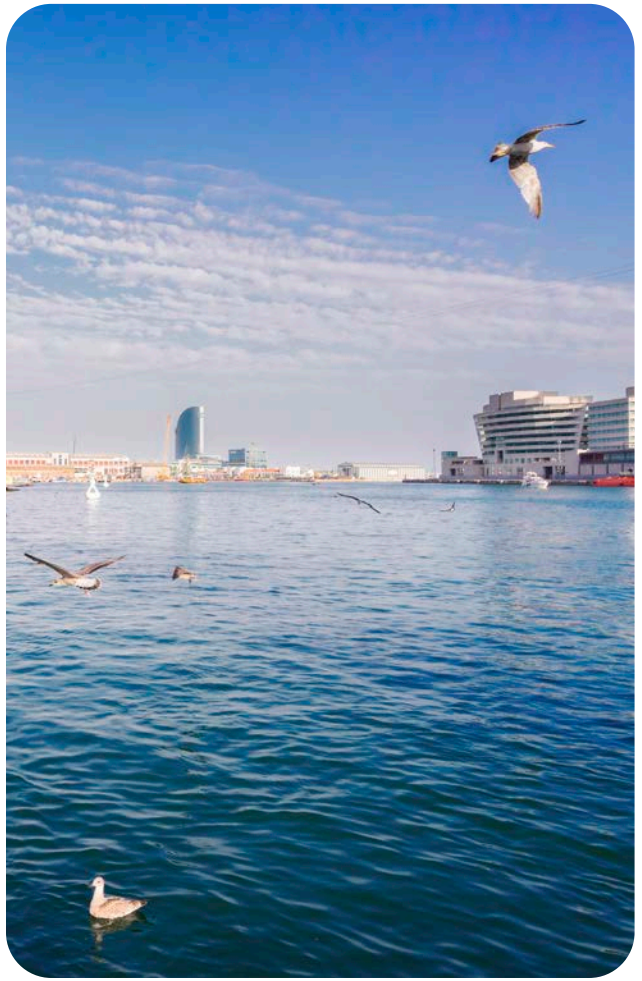
■ Direct ■ Indirect

The assessment of the significance of each of the direct and indirect aspects is determined taking into account 4 criteria of analysis:

- Frequency of occurrence (F)
  1 Sporadic / 2 Regular / 3 Very common
- Magnitude or quantity (M)
  1 A little important in relation to total / 2 Somewhat important/ 3 Very significant
- Gravity for the environment and surroundings (G)
  1 No significant consequences / 2 Some consequences / 3 Serious consequences
- Capacity of control or influence by the Port Authority to prevent or reduce the environmental impact generated by aspect (C) 1 Poor ability to influence / 2 Some ability to influence / 3 Notable ability to influence

The final assessment of each aspect (IU: Impact Units) is obtained by multiplying the points assigned to each criteria (F x M x G x C), considering as significant those aspects whose score is higher than the average points of all aspects.

In 2024, the most significant direct environmental aspects were those associated with the consumption of the APB. However, the environmental aspects with the greatest impact are those indirectly related to port activity in terms of air pollution, generation of port wastewater and waste, as well as the consumption of materials and energy.



| | | |
|---|---|---|
| **SIGNIFICANT DIRECT ENVIRONMENTAL ASPECTS UNDER NORMAL OPERATING CONDITIONS** | **CONSUMPTIONS** | |
| | 1. Consumption of tap water in common areas<br>2. Electric consumption in offices and common areas<br>3. Fuel consumption for own vehicles and vessels | Consumption of non-renewable resources |
| | **ATMOSPHERIC EMISSIONS** | |
| | 4. Fleet and own vessel emissions | Air pollution |
| | 5. Noise and vibrations | Noise pollution |
| | **CLIMATE CHANGE** | |
| | 6. Greenhouse Gas Emissions from fuel and electricity consumption | Air pollution |
| **SIGNIFICANT INDIRECT ENVIRONMENTAL ASPECTS UNDER NORMAL OPERATING CONDITIONS** | **WASTE** | |
| | 7. Generation of solid waste from ships (Marpol V)<br>8. Generation of oily waters from ships (Marpol I) and tank washings (Marpol II)<br>9. Generation of waste in terminal and concession workshops | Risk of soil and water contamination |
| | **CONSUMPTIONS** | |
| | 10. Electricity consumption at terminals | Consumption of non-renewable resources |
| | **ATMOSPHERIC EMISSIONS** | |
| | 11. Emission of suspended and settleable particles due to earth movement in construction works.<br>12. Emission of suspended and settleable particles by vehicles and machinery<br>13. Emissions of gases and particles from ships and vessels during navigation<br>14. Emissions of gases and particles from ships during their stay in port<br>15. Emissions of gases and particles from land transport<br>16. Vehicle and machinery combustion emissions (concessions)<br>17. Emission of suspended and settleable particles in operations with solid bulk materials (terminals and concessions) | Health and well-being damages |
| | **CLIMATE CHANGE** | |
| | 18. Greenhouse Gas Emissions from ships<br>19. Greenhouse Gas Emissions from land freight transport<br>20. Greenhouse Gas Emissions from fuel and electricity consumption (terminals and concessions) | Climate change |
| | **BIODIVERSITY** | |
| | 21. Deposition of hull fouling and ballast water discharge | Risk of introduction of invasive species |

| | | |
|---|---|---|
| **SIGNIFICANT INDIRECT ENVIRONMENTAL ASPECTS IN EMERGENCY CONDITIONS** | **DISCHARGE OF PORT WASTEWATER** | |
| | 22. Accidental spills during bunkering operations<br>23. Accidental spills of liquid products from a vessel during operations<br>24. Spills of products or fuels due to a maritime accident or ship fire<br>25. Accidental spills of liquids and solids on docks (Terminals and concessions) | Risk of damage to ecosystems |
| | **INCIDENCE ON SOIL** | |
| | 26. Accidental spills or leaks in tanks that contaminate the soil | Risk of soil and water contamination |

| Typology | 2022 | 2023 | 2024 |
|---|---|---|---|
| Activation of the environmental emergency plan PIM (Maritime Interior Plan) | 5 | 3* | 6* |
| Deviations from environmental audits | 1 | 0 | 3 |
| Legislative non-compliance - sanctions | 0 | 0 | 0 |
| Typified environmental incidents | 214 | 173 | 206 |

* PIM activations

Three emergency scenarios of marine pollution that have required the activation of the PIM in the Alert phase and three scenarios that have required activation in "situation 0".

Environmental incidents are classified into different categories based on their nature and/or severity, as indicated in the table above. The main incidents are:

| | |
|---|---|
| Liquid spills on roadway | 12% |
| Pollution spills | 24% |
| Solid spills on roadway | 24% |
| Large floats | 12% |
| Waste in bus bays | 12% |

# Environmental planning

The Port of Barcelona ensures the necessary investments to become a sustainable and innovative hub.

The Port of Barcelona has an environmental program for 2024 within the framework of its environmental management system, which establishes objectives and goals for significant aspects, both direct and indirect, as well as for certain important issues identified in the context analysis and in the analysis of risks and opportunities. The progress and degree of compliance are monitored through the Environmental Committee.

In a broader framework of sustainability, Positive Impact Port is an initiative of the Port of Barcelona, unique at an international level, which aims to gather, systematize, and enhance sustainable practices among the different organizations of the Port Community.

## A decade of environmental improvements

On the following page, some of the main milestones achieved by the APB in terms of environment and sustainability are shown.

## Plans and sustainability programs

It is worth mentioning that the Port of Barcelona has other specific plans aimed at controlling pollution and improving the environment.

- Water quality monitoring program
- Air Quality Improvement Plan
- Maritime Interior Plan
- Emergency Plans and Self-Protection
- Ship waste reception plan
- Environmental Communication Plan

POSITIVE IMPACT PORT DE BARCELONA

# Environmental milestones

## 1995

**1996**. First weather station.

**1997**. Incorporation of material for the fight against marine pollution from accidental spills.

**1998**. Start of monitoring benthic populations as bioindicators.

**2000**. Automatic mobile unit for air quality control.

**2001**. Commissioning of the new sanitation network at the port, with 36 km of sewers and 16 pumping stations.

**2001**. In the context of the introduction of the peregrine falcon in Barcelona, a reintroduction point is established at the Contradique Dock.

**2003**. Opening of the new inlet.

**2003**. Start-up of the Llobregat WWTP.

**2004**. Procedures for notifications and actions by the control center in the event of environmental incidents.

**2005**. Automatic $SO_2$ atmospheric control station in Section IV.

**2005**. First Interior Contingency Plan for maritime pollution.

**2008**. First inventory of emissions of polluting gases and suspended particles.

**2010**. Initiation of monitoring of port water quality in compliance with the Directive.

## 2010

**2011**. Automatic $NO_2$ atmospheric control station at ZAL

**2012**. Adhesion to VOLUNTARY AGREEMENTS to reduce $CO_2$ emissions

**2012**. Implementation of bonuses for terminals for good environmental practices.

**2014**. Commitment agreement of the Port of Barcelona to promote natural gas as a cleaner alternative fuel.
**2014**. Obtaining ISO 14001 certification and EMAS registration.

**2016**. Completion of the Environmental Noise Map.

**2016**. Breeding colony of Audouin's gulls at Muelle Adosado.

**2016**. Port control implementation of ship waste collection service (MARPOL).

**2017**. First gas supply to a passenger ferry in Spain for its auxiliary engine.

**2017**. Electric connection pilot to docked ship from natural gas engine generator at pier.

**2017**. Obtaining the PERS certification.

**2018**. First gas supply to a BALEARIA ferry sailing with natural gas.

**2018**. Opening of a gas station for the supply of natural gas for trucks and vehicles.

**2018**.First environmental communication plan.

## 2020

**2019**. First LNG supply by barge to the AIDA NOVA cruise ship in the Mediterranean, on a continuous basis every fifteen days.

**2019**. APB agreement for the port dock electrification project. Request to Red Eléctrica de España for a high-voltage electrical connection to supply electricity to the ships.

**2019**. European EMAS Award in the category of Medium-Large Public Company.

**2019**. First ferry powered by natural gas HYPATIA ALEXANDRIA (BALEARIA) and with batteries while in port (GRIMALDI).

**2020**. First experiences for the creation of energy communities with shared consumption and photovoltaic generation.

**2020**. Approval by the Government of Catalonia of the own methodology for inventorying emissions on ships.

**2020**. Creation of the contaminated soil database in the port area.

**2021**. Approval of the electrification plan for the port docks.

**2021**. Completion of the European projects for gasification of mobility in the port and start of a new project for the construction of a port LNG barge.

**2022**. First LNG supply barge for ships for the Port of Barcelona.

**2022**.Initial implementation of the Energy Community at Dock de Pescadors, as part of the CREATORS Project.

## 2025

**2022**.Starting the development of the Energy Transition Plan for the Port of Barcelona.

**2023**. New advances in the electrification of the docks at the Port of Barcelona.

**2023**. New sustainability section on the portdebarcelona.com website.

**2023**. Promotion of the Council for Cruise Sustainability.

**2023**. Agreement with the Metropolitan Area of Barcelona to improve mobility for citizens and businesses.

**2023**. First edition of Tech Tour Blue Economy.

**2024**. Regulatory ordinance governing ship operations that may affect the quality of port waters and air quality in the port of Barcelona.

**2024**. Port Community: the BlueTechPort, a new innovation space for companies focused on the blue economy.

**2024**. The BCN Port Innovation Foundation facilitates the transformation of the port logistics sector by developing technological solutions.

**2024**. NEXIGEN 1+2: First Onshore Power Supply (OPS) system for container ships in southern Europe, operational in the summer, and another for ferries at the GRIMALDI terminal, both using renewable energy.

# KEEPING TRACK OF THE PROGRAM'S OBJECTIVES 2024-2026

| 1. PATH TOWARDS ENERGY TRANSITION | RESULT |
|---|---|
| **Improve energy efficiency in APB by 30% by 2030 compared to 2008.** | |
| • Improving the energy efficiency of our facilities. (ref. AA:2) | |
| Remodeling of the ASTA building (2022-2026) | IN EXECUTION |
| Pending adaptation and improvements in public lighting (2022-2024) | IN EXECUTION |
| 20% improvement in interior lighting in different APB buildings (2024) | IN EXECUTION |
| **Renewable generation. By 2030, 50 MWp installed.** | |
| • Legal framework for the Energy transition Plan of the Port (ref. AA:5) | |
| Preparation of Technical Specifications Sheet (2024) | IN EXECUTION |
| Start of contract (2024) | IN EXECUTION |
| • Shared consumption model in port area | |
| Development of a shared consumption model in port area (2024) | COMPLETED |
| Energy community in Moll Pescadors (2024) | COMPLETED |

| 2. RESPONSE TO THE CLIMATE EMERGENCY | |
|---|---|
| **Reduce greenhouse gas emissions by more than 50% by 2030 compared to 2017.** | |
| • Promotion of alternative fuels: $H_2$, methanol, ammonia, biomethane, synthetics. (ref. AA:12-13, 17-18) | |
| H2 pilot plants for mobility (2025) | IN EXECUTION |
| Bunkering Regulations for new fuels (2024) | IN EXECUTION |
| • Use of waste in the generation of biofuel at the Port (ref. AA:12-13, 17-18) | |
| Biogas plant from organic matter (2025) | IN PROGRESS |
| Biomethane plant from organic matter (2026) | IN PROGRESS |
| • Inventory of greenhouse gas emissions from port activity | COMPLETED |
| Inventory of emissions from ships, concessions, and land-based activities (2024) | COMPLETED |

| 3. IMPROVEMENT OF AIR QUALITY IN THE PORT ENVIRONMENT | RESULT |
|---|---|
| **Reduce NOx and PM emissions by more than 50% by 2030 compared to 2017.** | |
| • Ship electrification plan. (ref. AA:12-13) | |
| Pilots development in BEST (2022-2024) | COMPLETED |
| • Inventory of emissions from port activity. | |
| Vessel emissions inventory. Concessions and onshore activities emissions inventory (2024) | COMPLETED |
| • Promotion of LNG as a mobility fuel. (ref. AA:12-13) | |
| Approval of the Technical Specifications for the port service for the supply of LNG (2024) | IN PROGRESS |
| LNG supply to other types of vessels (car carriers, tankers, and container ships) (2024) | COMPLETED |

| 4. IMPROVEMENT OF PORT WATER QUALITY | |
|---|---|
| **Achieving good quality in the monitoring plan. 2025.** | |
| • Marine litter. | |
| New characterization of port marine litter (2024) | IN PROGRESS |
| • Biodiversity distribution map at the Port. | |
| Report on the current status of monitorable and comparable parameters over time. Classification by sectors and potential (2024) | IN PROGRESS |

| 5. CONTINUOUS TRAINING | |
|---|---|
| **Training on topics according to the 2022 vectors.** | |
| • New sustainability training initiatives for the APB. | |
| Presentation development (2024) | COMPLETED |
| • Participation in webinars and sector expos. | |
| Identification of opportunities and registration according to the topic (2024) | COMPLETED |

# PROGRAM OF OBJECTIVES 2025 - 2026

## 1. PATH TOWARDS ENERGY TRANSITION

**Improve energy efficiency in APB by 30% by 2030 compared to 2008.**

- Improve the energy efficiency of our own facilities.

  Remodeling of the ASTA building (2022-2026)
  Pending adaptation and improvements in public lighting (2022-2026)
  20% improvement in interior lighting in various APB buildings

**Renewables generation. In 2030, 50 MWp installed.**

- Legal framework for the Port's Energy transition Plan

  Preparation of RFP (Request for Proposal) Document (2026)

  Contract commencement (2026)
- Shared consumption model in port area.

  Develop a shared consumption model in the port area

## 2. RESPONSE TO THE CLIMATE EMERGENCY

**Reduce greenhouse gas emissions by more than 50% by 2030 compared to 2017.**

- Promotion of alternative fuels: $H_2$, methanol, ammonia, biomethane, synthetics.

  Pilot plant $H_2$ for mobility (2025)

  Bunkering Regulations for new fuels (2026)
- Use of residue in biofuel generation at the Port

  Biogas plant from organic matter (2026)
- Greenhouse Gas emissions inventory of port Aativity

  Vessel emissions inventory. Concessions and onshore activities emissions inventory. (2025)

## 3. IMPROVEMENT OF AIR QUALITY IN THE PORT ENVIRONMENT

**Reduce NOx and PM emissions by more than 50% in 2030 compared to 2017.**

- Ship electrification plan.

  Development of pilots in ADOSADO (2026)
- Emissions inventory of port activity.

  Ship emissions inventory. Concessions and onshore activities emissions inventory (2025)
- Promotion of LNG as a mobility fuel. (ref. AA:12-13)

  Approval of the technical specifications document for the port service of LNG supply (2025)

  LNG supply to other types of vessels (car carriers, tankers, and container ships) (2025)

## 4. IMPROVEMENT OF PORT WATER QUALITY

**Achieving good quality in the 2025 monitoring plan.**

- Marine litter.

  New characterization of port marine litter (2025)
- Biodiversity distribution map at the Port.

  Report on the current status of monitorable and comparable parameters over time. Classification by sectors and potential (2025).

## 5. CONTINUING EDUCATION

**Training on topics according to the 2022 vectors.**

- New sustainability training initiatives for the APB

  Completion of presentations (2026)
- Participation in webinars, sector expositions.

  Identification of opportunities and registration by topic (2025)

# AGENDA 2030

The 2030 Agenda for Sustainable Development represents the global commitment to address the social, economic, and environmental challenges of globalization, placing people, the planet, prosperity, and peace at the center, under the motto of "leaving no one behind."

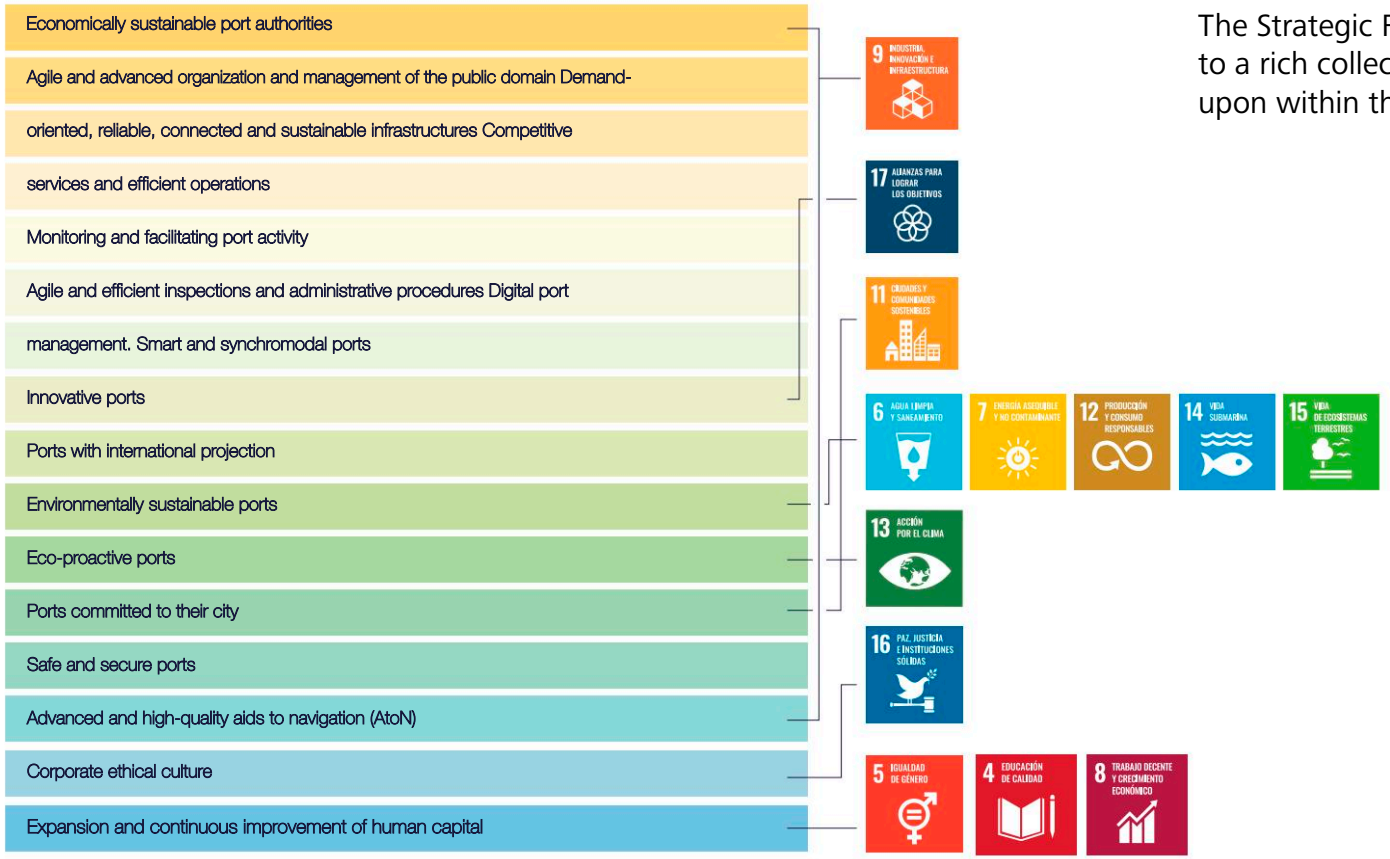
The Agenda aims to advance towards societies with inclusive economic growth and greater social cohesion and justice, in peace and with a sustainable environmental horizon, for which it defines 17 strategic objectives with specific targets to be achieved by the year 2030.

**Ports of the State and the entire State-owned Port System, within their scope of action and competences, have committed to contributing to the achievement of these objectives through the following initiatives.**

The Port Authority of Barcelona identifies in this Environmental Declaration, as well as in its Sectoral Sustainability Plan, those Sustainable Development Goals that it complies with and for which it is developing control and improvement actions.

SUSTAINABLE DEVELOPMENT GOALS

## STRATEGIC LINES




The Strategic Framework of the port system is directly linked to a rich collection of sustainable development goals agreed upon within the United Nations on September 25, 2015.

Puertos del Estado

# PERFORMANCE AND CONTROL



# Natural resources

The environmental performance analysis of the Port Authority of Barcelona is calculated based on its relationship with the total surface area of the port and its personnel. However, overall, this environmental performance is directly related to the increase in port activity; whether it is due to an increase in freight traffic or ongoing expansions and construction works.

In the following sections, the basic environmental indicators related to the most significant direct and indirect environmental aspects of resource consumption are shown.

On the other hand, the commitment of the Port of Barcelona also extends to the knowledge, control, and monitoring of other impacts and aspects of port activity that may affect the environment and surroundings.

The importance of analyzing aspects associated with the circular economy in the logistics chain of the Port will mean that in successive statements, information related to the tons or resources moved will also be taken into account, thanks to the data provided both from maritime traffic control and from the port's own terminals and concessions.

# Water consumption

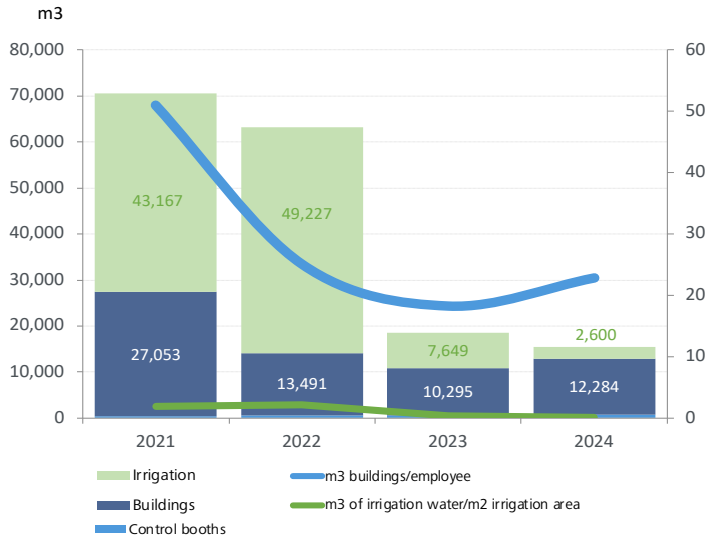
The water supply for the Port of Barcelona comes from the public companies "Aguas de Barcelona" and "Aigües del Prat".

In 2024, a total water consumption of 15,524 m³ has been recorded, 16% less than in the previous year. The trend in reducing consumption is maintained thanks to the implementation of strict water-saving measures, implemented in 2023 in response to the situation of extreme drought in Catalonia (declared in March 2023 and ended in April 2024).

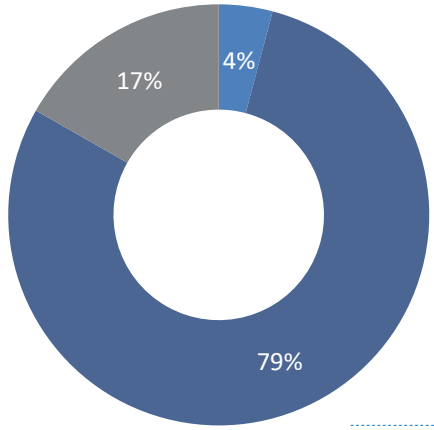
The water consumption of the Port Authority of Barcelona refers only to the consumption in its own facilities and common services, the water supplied to third parties is not taken into account. The decrease has occurred in the water consumed for irrigation. In this regard, the following measures have been taken:

- Prioritizing native and xerophytic ornamental plant species, with easy rooting and low watering requirements.
- Drip irrigation system for tree or shrub bases.
- Drought-resistant grass species with low watering requirements.
- Irrigation system with partial meters and progressive implementation of remote control to detect leaks by setting maximum flow thresholds per time period.

## Evolution of water consumption by uses




## Water consumption by uses




15,524 m³

- Control booths
- Buildings
- Irrigation

| Consumption ratios | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|
| m³ of water buildings /employee | 38.7 | 51.0 | 25.1 | 18.3 | 22.9 |
| m³ of irrigation water /m² | 1.4 | 1.8 | 2.1 | 0.3 | 0.1 |
| m³ of water control booths /employee | 0.90 | 0.65 | 1.01 | 1.01 | 1.19 |

# Energy consumption

The main energy consumption of the Port Authority of Barcelona is related to the electrical supply of buildings and lighting for roads and facilities, followed by the consumption of diesel and gasoline.

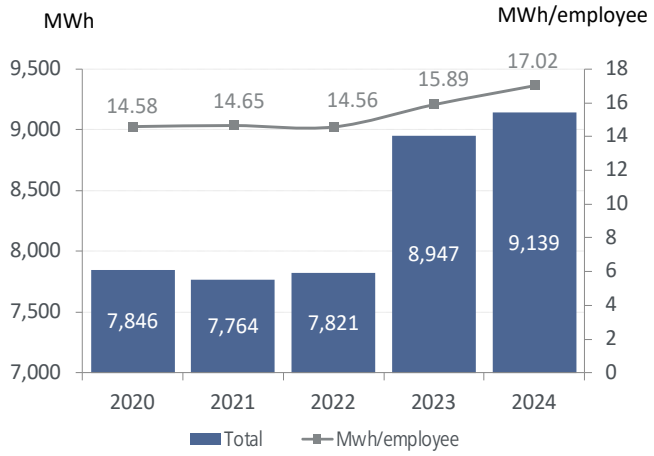
# Electricity consumption

The electricity consumption associated with the Environmental Management System of the Port Authority is allocated to public lighting of the roads and common areas of the port area, as well as for lighting, powering equipment, and air conditioning in the buildings. **In 2024, the total electricity consumption increases slightly (8.8%), due to new supplies for the Shed Docks Pier and those associated with the sports event Copa América 2024 of the Sailing Championship.**

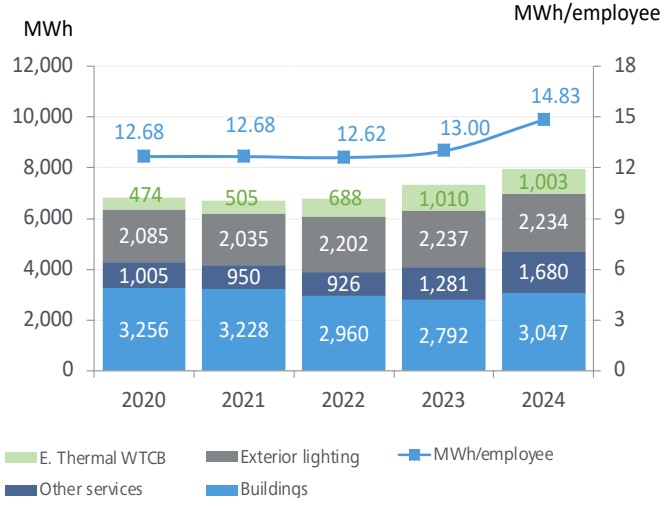
To achieve the goal of progressively reducing electricity consumption, the APB applies the following criteria:

- Modernization of the public lighting network.
- Change of luminaires to LED technology for those luminaires with continuous consumption or exceeding 10 hours per day.
- Incorporation of measures and actions to increase the energy efficiency of air conditioning in buildings.

## Evolution of energy consumption

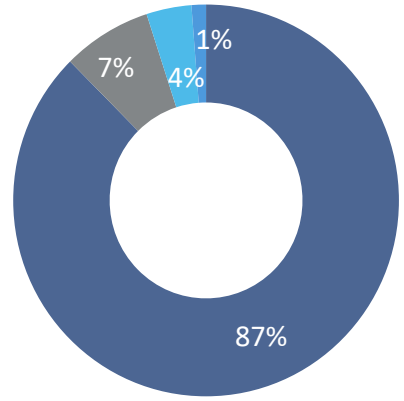



## Evolution of electricity consumption




[1]In the thermal energy consumption at the WTCB, the consumption of the Estació Marítima Nord has been added for the years 2023 and 2024.

## Energy source




Total consumption

**9,139 MWh**

- Electricity
- Gasoil
- Gasoline
- Natural Gas

Photovoltaic power installed in APB and concessionaire buildings

**7.6 MWp**

100% of the electricity supplied to the APB and its subsidiaries (WTCB, Cilsa, Port Vell) was of renewable origin from January 2017 until the end of 2021 when the contract with the supplier ended. Starting on May 1, 2022, the procurement of electricity from renewable sources has been resumed for the supplies contracted within the free market.

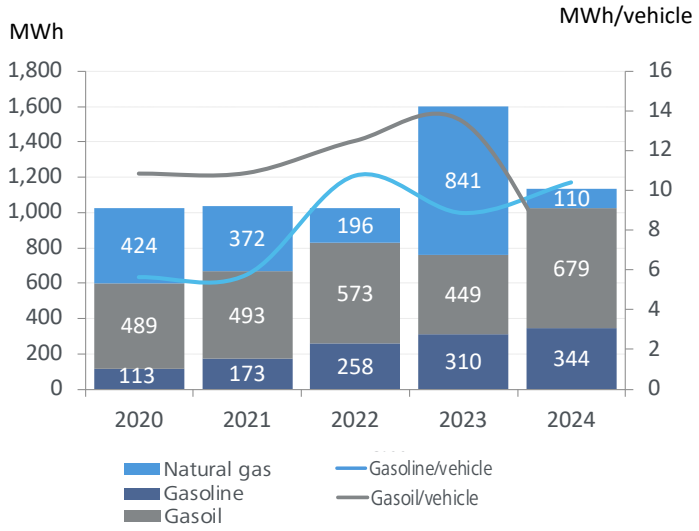
# Fuel consumption

Fuel consumption such as diesel and gasoline is mainly allocated to the fleet of vehicles (cars and motorcycles of the port police, inspection vehicles, assigned vehicles, maintenance vans and trucks, and two own vessels). The consumption of diesel (not used in transportation) is becoming less relevant as it is used to operate temporary electric generators that are gradually being replaced by electrical connections.

LNG is consumed in the generators of building ZIS and its variability depends on the use that can be given to the building.

The consumption of CNG and LPG for vans is not shown on the graph as it is a small consumption.

## Evolution of fuel consumption




| Consumption rates | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|
| MWh diesel / vehicle | 13.8 | 10.0 | 10.8 | 10.9 | 12.5 | 13.5 | 5.4 |
| MWh gasoline / vehicle | 5.1 | 3.9 | 5.6 | 5.8 | 10.7 | 8.9 | 10.4 |

# Electric mobility

The Port Authority has 37 electric vehicles out of its total fleet of 92 units.

- 37 electric vehicles.
- 14 plug-in hybrid vehicles.
- 7 gasoline vehicles.
- 8 MHEV vehicles (ECO label).
- 4 gasoline/LPG hybrid vehicles.
- 3 hybrid vehicles diesel/CNG.
- 19 diesel vehicles.

To supply energy to the new vehicles in the fleet, the Port of Barcelona installed 44 charging points for its own use at various locations within its facilities. 28 of them are located in the parking lot of the World Trade Center Barcelona building, where the port's corporate headquarters are situated, 14 have been built in the ASTA services building (Ronda del Port), and 2 additional chargers for the Port Police motorcycles at the Drassanes Maritime Station (Barcelona pier).

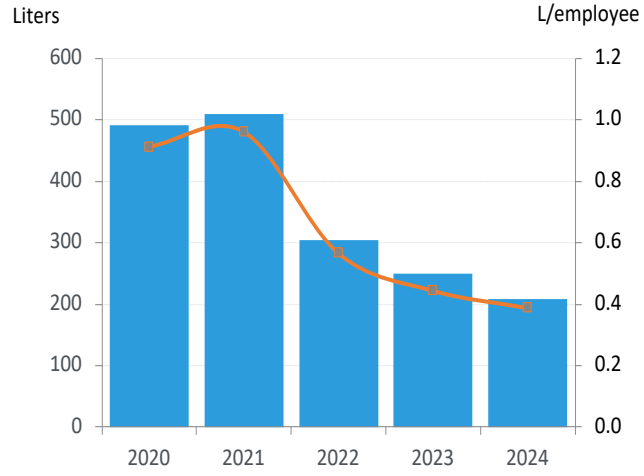
# Consumption of materials

## Products and workshop materials

In the workshop, products are used whose empty containers give rise to waste considered hazardous. Such is the case of containers of paints, enamels, turpentine, solvents, sprays, lubricants, greases, cutting fluids, degreasers, and drain cleaners.

The quantity of these products and materials largely depends on the maintenance actions required, and therefore their consumption varies according to the conservation and repair needs in each period.

### Hazardous materials consumption



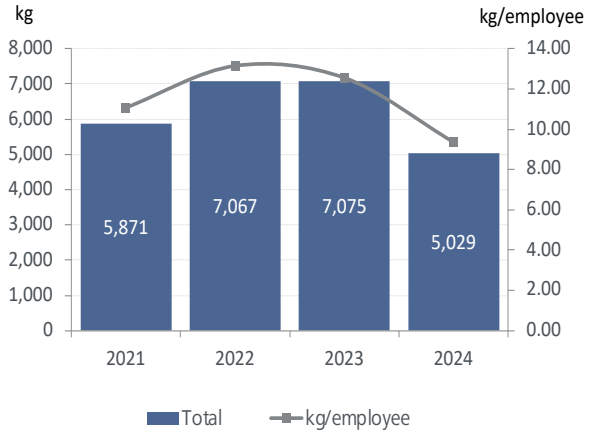
# Paper consumption

In 2009, the APB launched the "**Green Office**" program, an initiative aimed at carrying out actions to reduce the environmental impacts caused by office activity.

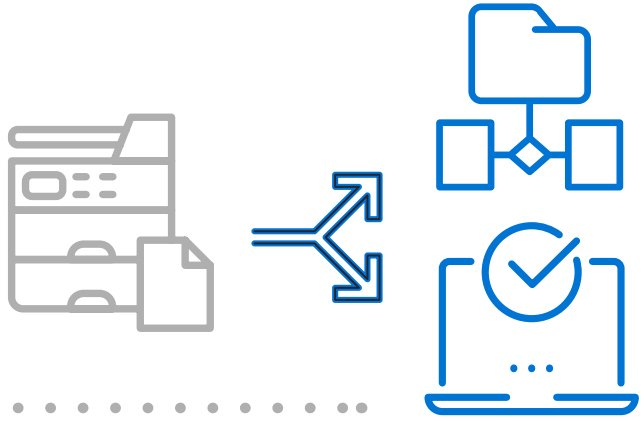
The project involved the development of a **Good Practices Guide** by a group of employees who voluntarily dedicated time and effort to gather a set of initiatives, proposals, and recommendations to save office supplies and adopt a responsible consumption model.

In 2024, paper consumption (as kgs of paper purchased) has been 5,029 kg, decreasing significantly compared to the previous year both in consumption and in the indicator relative to the number of workers.

## Paper consumption




We are committed to reducing paper usage by avoiding printing documents that can be accessed and formatted digitally.

# Water quality




**In terms of the environment, improving the quality of port waters is one of the main concerns for ports.**

In general, port waters tend to receive discharges of wastewater from nearby urban and industrial areas, as well as spills from port facilities themselves.

In Barcelona, the development of the city port (Port Vell) has led to a greater demand to improve the appearance and quality of the waters in the docks.

## Port sanitation network

One of the main actions aimed at improving the quality of port waters was the construction of the new sewage network at the port. With a total length of over 30 km of sewers and 16 pumping stations.

The network collects the wastewater generated by the activities located in the service area of the port and connects through 14 points to the metropolitan interceptor sewer that leads them to the **Llobregat and Besós Treatment Plants.** The network management is carried out by remote control through thermal and hydrocarbon sensors, level buoys in the pumping stations, and actuators in the pumps.

## Sewage network of the city

On the other hand, another factor contributing to the improvement of the quality of port waters has been the progressive reduction of discharges from the combined sewer system of the city of Barcelona during rain events.

The organic matter contributions to the docks from those discharges of the city's sanitation system have decreased by 75% since 1995 thanks to the containment and flood control actions and the interconnection between sanitation basins that the city has been carrying out during these years.

# Port waters cleaning service

The Port of Barcelona provides **the service of collecting and removing floating waste** from the water surface using specialized boats, every day of the year and during daytime hours.

The highest percentage of collected waste corresponds to plastics along with wood residues.

Access more information
Marine environment

# Quality parameters

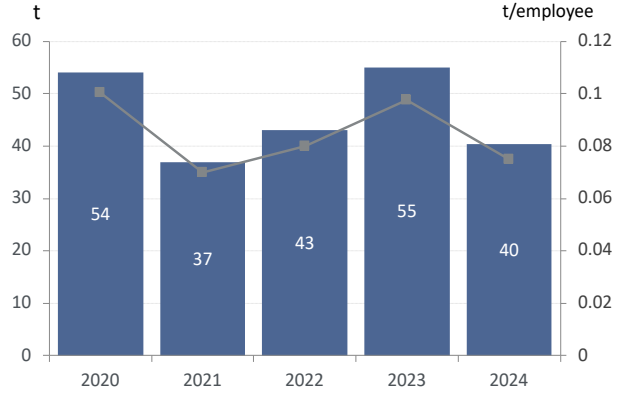
During 2024, the Port of Barcelona has continued to monitor the quality of port waters in collaboration with the Catalan Water Agency in compliance with the Water Framework Directive. This monitoring is integrated into the Surveillance Plan for the Coastal Water Bodies of Catalonia.

**The Port of Barcelona is responsible for monitoring the quality of the marine environment through periodic sampling campaigns of water and sediment** inside and outside the port, where the main pollutants such as heavy metals and organic compounds (PCBs, polycyclic aromatic hydrocarbons, organochlorines, pesticides, and others) are analyzed.

A summary of the results of the physicochemical parameters and main pollutants in inland and coastal waters from 2020 to 2024 are shown in the table on the following page.

The main pollutants found are derived from nautical-port activity and urban anthropic pressure, with some factors being beyond the scope of port management. Overall, there is a stabilization or improvement in its quality despite the increase in port operations and ship calls in recent years.

## Waste collected from the water surface



| Physical-chemical parameters | 2021 | | 2022 | | 2023 | | 2024 | |
|---|---|---|---|---|---|---|---|---|
| **Inner Harbour Waters / Outer Harbour Waters** | Outer Harbour Zone II | Inner Harbour | Outer Harbour Zone II | Inner Harbour | Outer Harbour Zone II | Inner Harbour | Outer Harbour Zone II | Inner Harbour |
| Average temperature (ºC) | 17.94 | 17.96 | 15.46 | 15.27 | 18.78 | 19.04 | 18.77 | 19.25 |
| Average salinity (PSU) | 38.045 | 37.822 | 38.24 | 38.19 | 38.176 | 38.187 | 37.880 | 37.792 |
| Average turbidity (FTU) | 1.06 | 3.79 | 2.51 | 10.25 | 1.87 | 4.11 | 6.91 | 7.56 |
| Average density (kg/m$^3$) | 1,027.53 | 1,027.35 | 1,028.41 | 1,028,42 | 1,027.49 | 1,027.38 | 1,027.286 | 1,027.044 |
| Average chlorophyl (µg/l) | 0.87 | 1.5 | 0.51 | 1.07 | 0.54 | 2.12 | 0.88 | 4.20 |
| Average of suspended solids (SS) (mg/l) | 0.83 | 3.39 | 1.42 | 7.26 | 1.68 | 4.58 | 6.49 | 7.59 |
| Average dissolved oxygen (mg/l) | 6.18 | 5.68 | 8.19 | 7.73 | 7.48 | 7.18 | 7.05 | 6.44 |
| Average $O_X$ saturation (% saturation) | 81.21 | 74.34 | 103.65 | 97.47 | 100.07 | 96.20 | 95.15 | 87.45 |
| **Pollutants** | | | | | | | | |
| Average of benzo[a]pyrene (ng/l) | 0.00003 | 0.00026 | 0.00003 | 0.00044 | 0.00025 | 0.0048 | 0.00017 | 0.00036 |
| Average sum of the 16 PAH (EPA) (ng/l) | 0.00821 | 0.01747 | 0.2593 | 0.2246 | 0.00816 | 0.01321 | 0.01073 | 0.02012 |
| Average cybutryne (ng/l) | 0.00050 | 0.00056 | 0.0005 | 0.0005 | 0.0006 | 0.00077 | 0.00050 | 0.00050 |
| Average of Zn (µg/l) | 6.767 | 2.900 | 0.615 | 2.420 | 9.240 | 6.518 | 1.637 | 1.777 |
| Average of Cd (µg/l) | 0.025 | 0.025 | 0.025 | 0.035 | 0.055 | 0.056 | 0.027 | 0.025 |
| Average of Ni (µg/l) | 4.633 | 4.833 | 0.246 | 0.271 | 1.990 | 1.958 | 0.769 | 0.798 |
| Average of Hg (µg/l) | 0.005 | 0.005 | 0.005 | 0.005 | 0.007 | 0.007 | 0.005 | 0.005 |
| **Nutrient concentration** | | | | | | | | |
| Average of inorganic nitrogen $NO_3$ (µmol/litre) | 0.53 | 1.34 | 2.03 | 2.22 | 0.81 | 1.26 | 0.51 | 1.25 |
| Average of inorganic nitrogen $NO_2$ (µmol/litre) | 0.21 | 0.27 | 0.31 | 0.43 | 0.10 | 0.16 | 0.09 | 0.19 |
| Average inorganic phosphorus (µmol/litre) | 0.07 | 0.27 | 0.05 | 0.25 | 0.06 | 0.13 | 0.04 | 0.15 |
| Average inorganic silicon (µmol/litre) | 0.65 | 0.95 | 0.84 | 1.94 | 0.66 | 0.91 | 0.86 | 1.26 |
| Average of ammonia (µmol/litre) | 1.15 | 2.27 | 2.04 | 2.98 | 0.58 | 1.22 | 0.51 | 1.79 |

# Quality of sediments

The port seabed receives and accumulates some of the pressures resulting from port activity and from nearby industrial and urban areas, as well as being a reservoir of historical pollution from past activities.

The typical mesotrophic conditions of the harbor, which limit the concentration of dissolved oxygen in the vicinity of the seabed, facilitate reducing environments that cause the mobilization of metals and organic contaminants from the sediments themselves in a dynamic equilibrium with the water column.

In general, and similarly to the waters, the environmental conditions of the sediments have been maintained or improved in recent years, with historical pressures still noticeable in the oldest area of the port.

In the case of dredging of port bottoms carried out to maintain or increase depths or for the construction of maritime works, great care is taken in the characterization of the sediments to be removed in order to give them an appropriate destination in accordance with the guidelines for the characterization of dredging materials published by the Ministry of Transport and Sustainable Mobility.

All works involving dredging of the seabed are subject to strict and independent environmental monitoring that ensures the proper management of dredged sediments based on their level of contamination.

# Bioindicators

Benthic communities, or the set of living beings that inhabit the seabed sediments, are used as indicators of the health and environmental quality of the seabed since they are organisms that accumulate a certain history of what happens in the sediment where they live. The composition and structure of the communities present in the waters of the Port are also affected by environmental pollution.

**The monitoring of benthic communities has been carried out since 1998,** and the results reflect an improvement in the water and sediment quality of the Port of Barcelona.

In the attached table, the results of the main parameters defining the composition of benthic communities in the inner and outer stations of the port over the past years are shown.

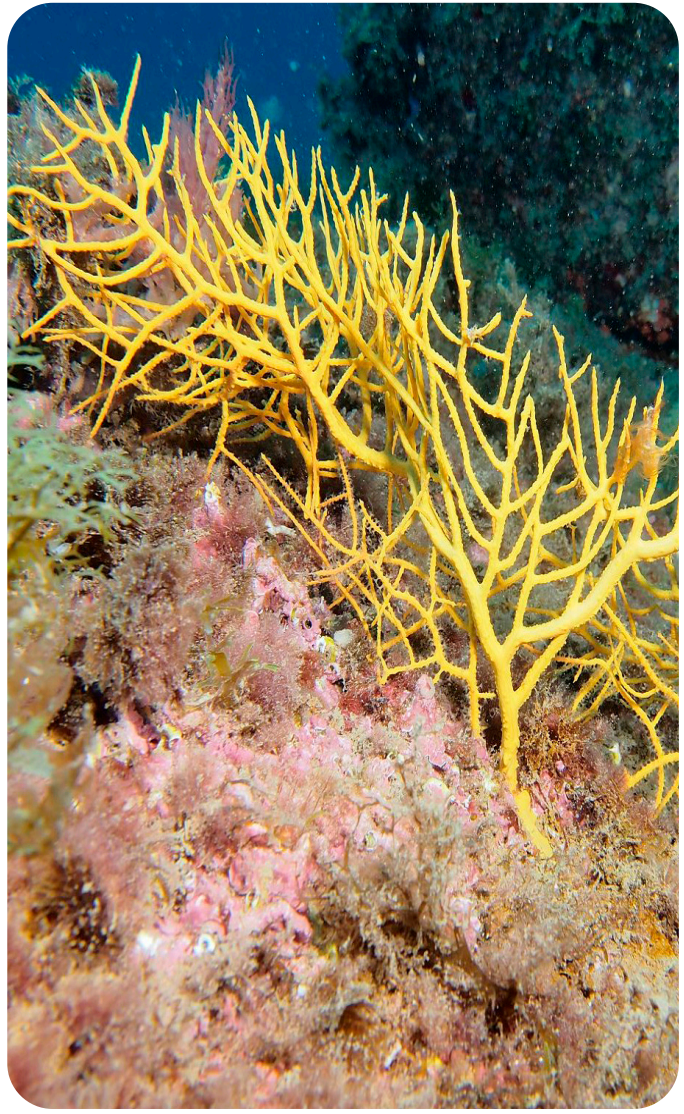
| Benthic communities | 2022 | | 2023 | | 2024 | |
|---|---|---|---|---|---|---|
| **Inner Harbour Waters**<br>**Outer Harbour Waters** | Outer Harbour Zone II | Inner Harbour | Outer Harbour Zone II | Inner Harbour | Outer Harbour Zone II | Inner Harbour |
| Average Wealth (Taxons/800cm²) | 62 | 36 | 56 | 27.8 | 79 | 46 |
| Average Abundance (Individuals/800cm²) | 195 | 196 | 240 | 144 | 297 | 266.3 |
| Average Margalef Diversity d | 11.6 | 6.9 | 10 | 5.4 | -- | -- |
| *Average of H_log_ e_Shannon | -- | -- | -- | -- | 3.8 | 2.725 |

* Up to 2023, we used the Margalef index to evaluate diversity, which focused on species' richness. In 2024, we have adopted the Shannon index instead, which also incorporates the evenness in the distribution of individuals.

## Control of risk operations for water quality

Water quality is a key factor in ensuring the health and well-being of populations. Contaminated water can lead to a variety of health issues, ranging from mild gastrointestinal problems to more serious conditions such as cholera and typhoid fever. Therefore, it is essential to have effective risk management strategies in place to ensure the quality of water sources.

One of the main aspects of controlling risk operations for water quality is monitoring. Regular monitoring of water sources allows authorities to detect any potential contaminants and take action before they pose a threat to public health. This can involve testing water samples for a range of pollutants, including bacteria, chemicals, and heavy metals.



# Air quality



Access the Port of Barcelona website
Atmospheric Environment

**Monitoring, evaluating, and implementing actions to improve air quality in the port environment are priority activities for the Barcelona Port Authority.**

## Air Quality Improvement Plan in the Port of Barcelona

Since 2016, the Port Authority has been implementing the Air Quality Improvement Plan for its surroundings, which includes various actions aimed at reducing emissions of polluting gases and suspended particles.

This plan, which was approved by the Board of Directors at its meeting in July 2016, includes a total of 53 specific actions, grouped into nine lines of work:

- Ship emissions.
- Road traffic emissions.
- Terminal machinery emissions (off-road vehicles).
- Strengthening rail transport and short sea shipping.
- Emissions from handling solid bulk.
- New road and rail access.
- Emissions from port works.
- Sustainable mobility for all companies located in the port.
- Adaptation and updating of the port's air quality monitoring networks.

For each of these lines of action, specific and feasible actions have been proposed to be implemented in three phases: immediate phase, short-term phase, and medium-term phase.

This plan is constantly updated and is aligned with the action plans of the Generalitat de Catalunya (Catalan Government) and Barcelona City Council for the Special Protection Zone of the Atmospheric Environment for $NO_x$ and $PM_{10}$. A new, second phase of the Plan is expected to be drawn up in 2025, contemplating new actions aimed at achieving the regulatory objectives for air quality and decarbonization by 2030.

# Atmospheric monitoring stations

For the monitoring of the meteorological conditions and air quality in the port environment, the Port Authority of Barcelona (APB) has a network of automatic weather stations, as well as a network of manual weather stations and a network of automatic air quality monitoring stations.

**The Port's meteorological network consists of a total of 6 stations** equipped with wind speed and direction sensors; 3 of them also equipped with rain, temperature, relative humidity, atmospheric pressure, and solar radiation sensors.

**The manual air quality network consists of 5 stations:** 5 samplers that collect samples of $PM_{10}$ suspended particles and 3 samplers for $PM_{2.5}$. The $PM_{10}$ particle sampler of the station located in Port Vell is part of the Surveillance and Forecasting Network for Atmospheric Pollution (XVPCA) of the Generalitat de Catalunya and, therefore, its immission values are official. The rest of the stations are for reference purposes, for indicative measurements.

**The automatic air quality network consists of 2 stations** equipped with automatic analyzers that measure the concentration of gaseous pollutants in the ambient air, specifically nitrogen oxides and sulfur dioxide.

Currently, work is underway to complete the equipment of existing stations and expand the network to a total of five stations, which will also incorporate analyzers for measuring suspended particles, such as $PM_{10}$ and $PM_{2.5}$. One of the new stations will be located near the Palace of the Sea and will become the new reference station of the Port integrated into the XVPCA, in compliance with the new Directive (EU) 2024/2881.

- Automatic weather station
- Automatic air quality station
- Air quality manual station

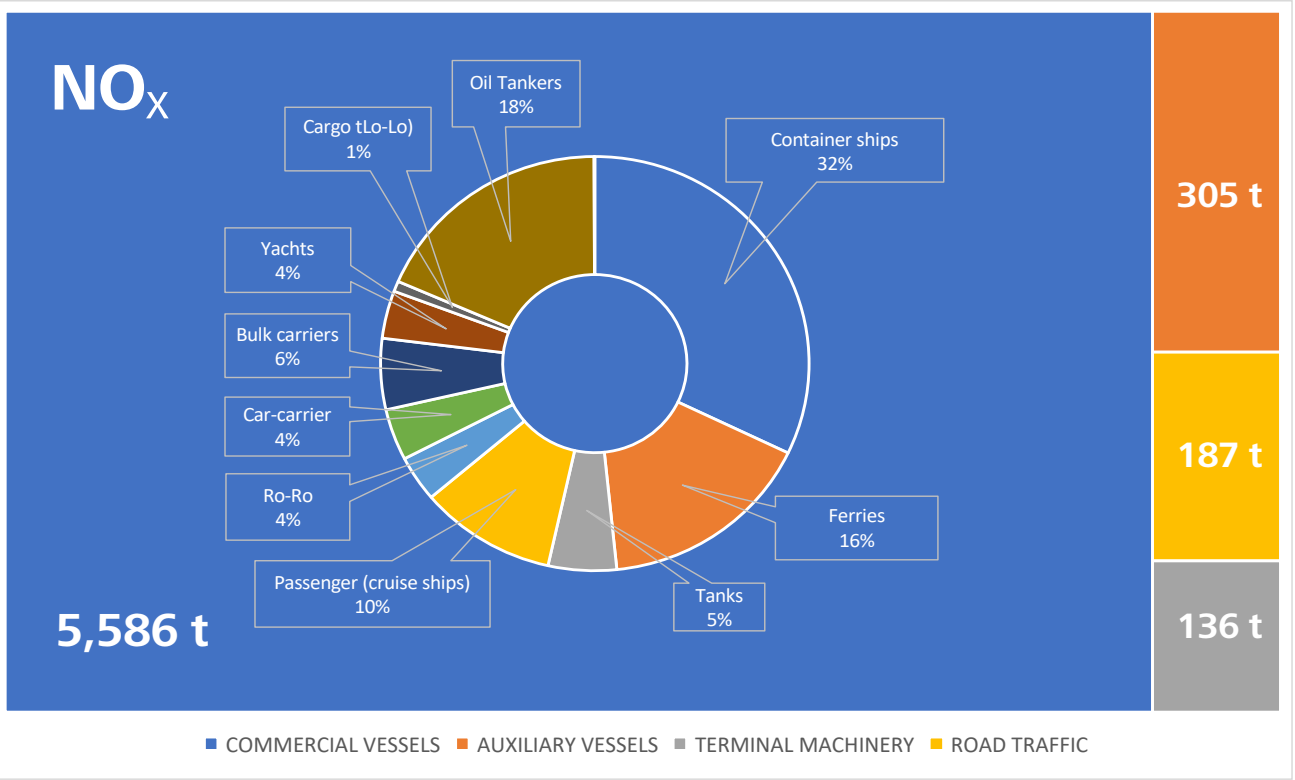
# Port activity emissions

In 2020, the estimation of emissions to the atmosphere of polluting gases from port activities showed that ship emissions are the most significant, representing over 95% of the total emissions of nitrogen oxide and suspended particles.

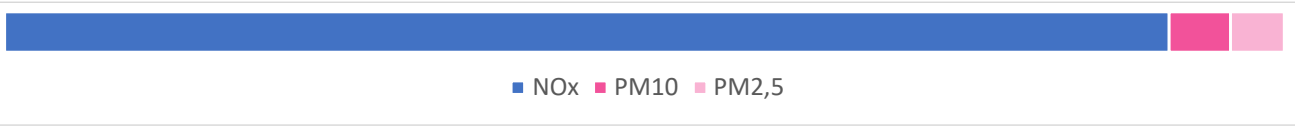
Every few years, the APB reviews these estimates and updates them using a calculation methodology that has been agreed upon with the Barcelona City Council and the Government of Catalonia. During 2024, work is being done on a new automated calculation platform that will improve the obtained calculations. These emissions from the Port represent 7.6% of the city's air pollution from NOx and 1.5% from $PM_{10}$.

Taking as reference the mass emissions inventory generated at the port in 2020 for the parameters NOx, $PM_{10}$, and $PM_{2.5}$, we observe that the first pollutant is the most representative (91%). That is why the distribution of the main emitting agents for this parameter is shown below.

The NOx data from 2021 to 2024 is not verifiable as a new calculation platform is being worked on.

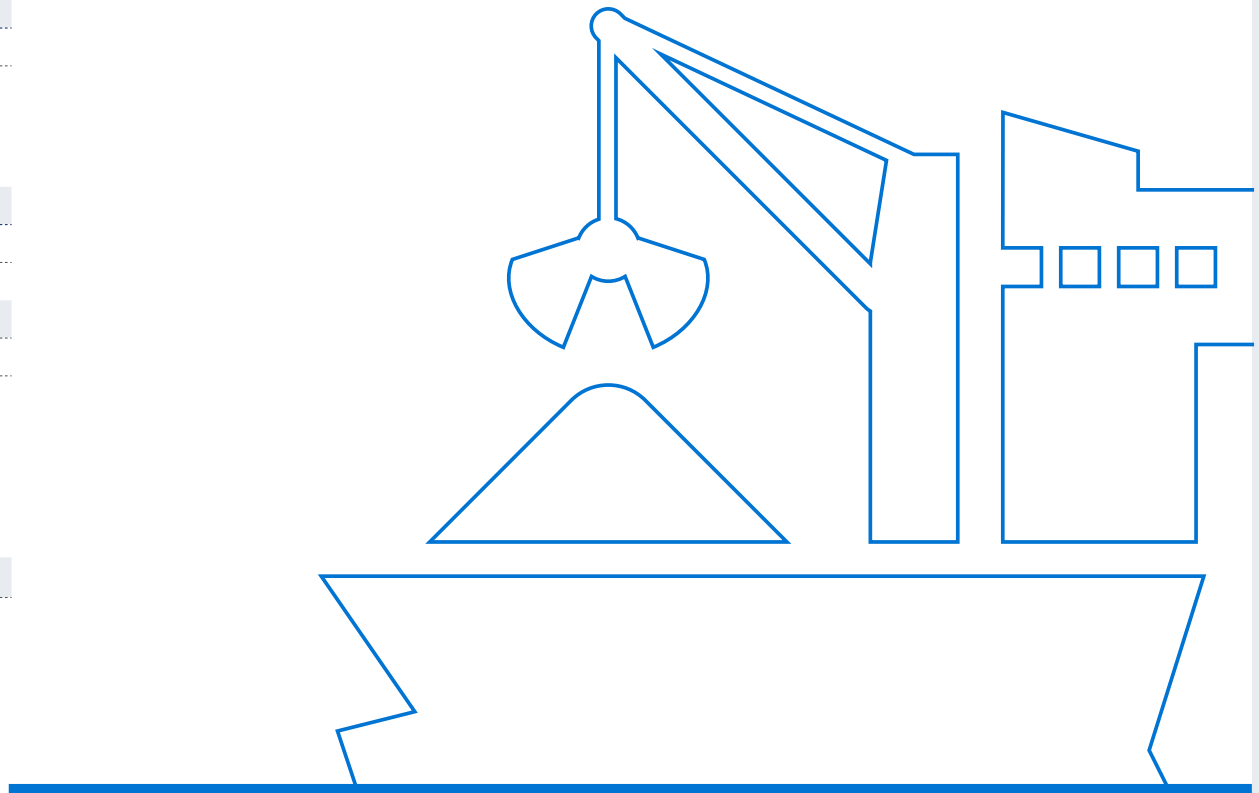



6,212.91 t (91%) 611.57 t (9%)




| | NOx (t) | $PM_{10}$ (t) | $PM_{2,5}$ (t) |
|---|---|---|---|
| TOTAL EMISSIONS | 6,212.91 | 322.74 | 288.73 |

| Commercial vessels | NOx (t) | $PM_{10}$ (t) | $PM_{2,5}$ (t) |
|---|---|---|---|
| Container ship | 1,793.22 | 101.03 | 90.17 |
| Ferries | 908.04 | 51.55 | 45.72 |
| Tanks | 287.89 | 15.93 | 14.27 |
| Cruise ships | 576.69 | 29.76 | 26.38 |
| Ro-Ro vessels | 199.55 | 12.49 | 11.14 |
| Car-carriers | 223.98 | 11.1 | 9.88 |
| Bulk carriers | 309.81 | 12.45 | 11.02 |
| Yachts | 207.85 | 7.06 | 6.13 |
| General cargo (Lo-Lo) | 45.31 | 1.96 | 1.72 |
| Oil tankers | 1,030.56 | 56.92 | 51.39 |
| Others | 3.07 | 0.29 | 0.26 |
| TOTAL | 5,585.97 | 300.54 | 268.08 |
| **Port service vessels** | | | |
| Tugboats | 235.95 | 4.51 | 4.21 |
| Pilot boats | 25.51 | 0.49 | 0.45 |
| Mooring ropes | 3.69 | 0.07 | 0.07 |
| Bunker barges | 39.69 | 3.54 | 3.51 |
| TOTAL | 304.84 | 8.61 | 8.24 |
| **Terminal machinery** | | | |
| Auxiliary earthmoving machinery | 135.52 | 8.62 | 8.62 |
| TOTAL | 135.52 | 8.62 | 8.62 |
| **Road traffic** | | | |
| Cars | 8.67 | 0.56 | 0.38 |
| Vans (LDV) | 4.67 | 0.25 | 0.17 |
| Trucks (MDV) | 10.65 | 0.32 | 0.23 |
| Trucks (HDV) | 153.71 | 3.53 | 2.75 |
| Coaches | 8.22 | 0.25 | 0.21 |
| Motorcycles | 0.66 | 0.06 | 0.05 |
| TOTAL | 186.58 | 4.97 | 3.79 |



# Actions to improve the atmospheric environment

## Intermodality

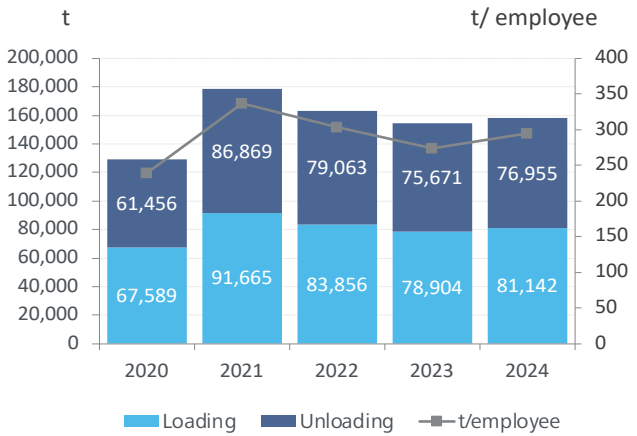
Promoting maritime and rail transport for the movement of goods to and from the port is a way to reduce emissions of pollutants and greenhouse gases generated by road transport.

For years, the port has been committed to enhancing the transportation of goods by rail, short sea shipping (SSS), and Motorways of the Sea (MoS) as a strategy to retain and expand its hinterland or area of influence, which in turn results in the reduction of emissions of polluting gases and particles compared to land transportation.

Coastal units are the ITUs (Intermodal Transport Unit), which are equivalent to a truck or a flatbed (platform) loaded on a ferry. Each ITU moved by ship, therefore, is equivalent to taking a truck off the road.

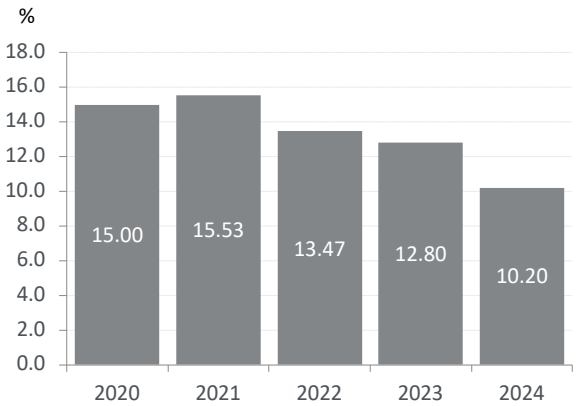
The following graph shows the ITUs moved, which replace road transport, at the Port of Barcelona in recent years.

### ITU'S movement



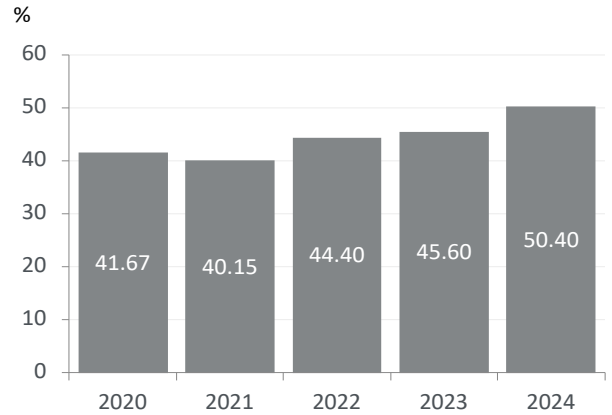

Most of the general cargo is handled in containers, whose unit is the TEU which is equivalent to a 20-foot container. In general, it can be stated that each TEU moved by rail is equivalent to taking 1 truck off the road.

### Percentage of TEUs moved by railroads




As can be seen in the previous graph, the TEUs moved by railways at the Port of Barcelona represent more than 12% of the total TEUs moved in the last year, slightly decreasing compared to the previous two years, whose increase was attributed to the reduction in TEU traffic due to the pandemic

### Percentage of cars powered by railways



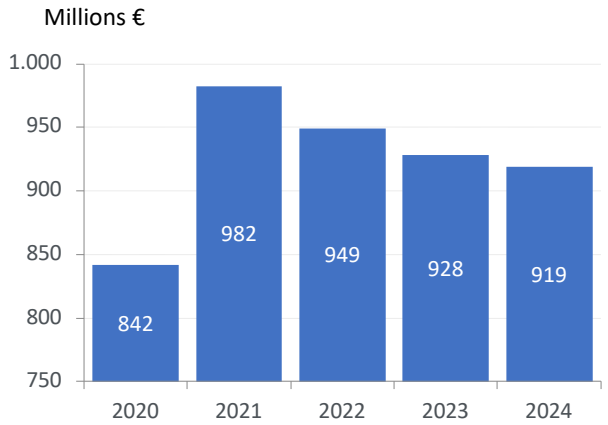

The percentage of vehicles transported by rail has decreased slightly in 2024, but it remains above 40%.

## Economic savings in externalities associated with the use of rail and short sea shipping in port traffic.

The shift of freight transport from road to modes of transport with lower unit emissions also enables savings in other externalities that are not considered in the cost of road transport, such as health costs from accidents, health costs from respiratory diseases caused by pollution, infrastructure investment and amortization costs, and maintenance costs.

The economic contribution of the Port of Barcelona due to the intermodal offer is very relevant and can be evaluated thanks to a calculation methodology proposed by the European Commission in 2019. This methodology takes into account the monetization of impacts associated with pollution, climate change, noise, accidents, traffic congestion, and infrastructure use. As a result, below we show a graph of the associated economic savings.

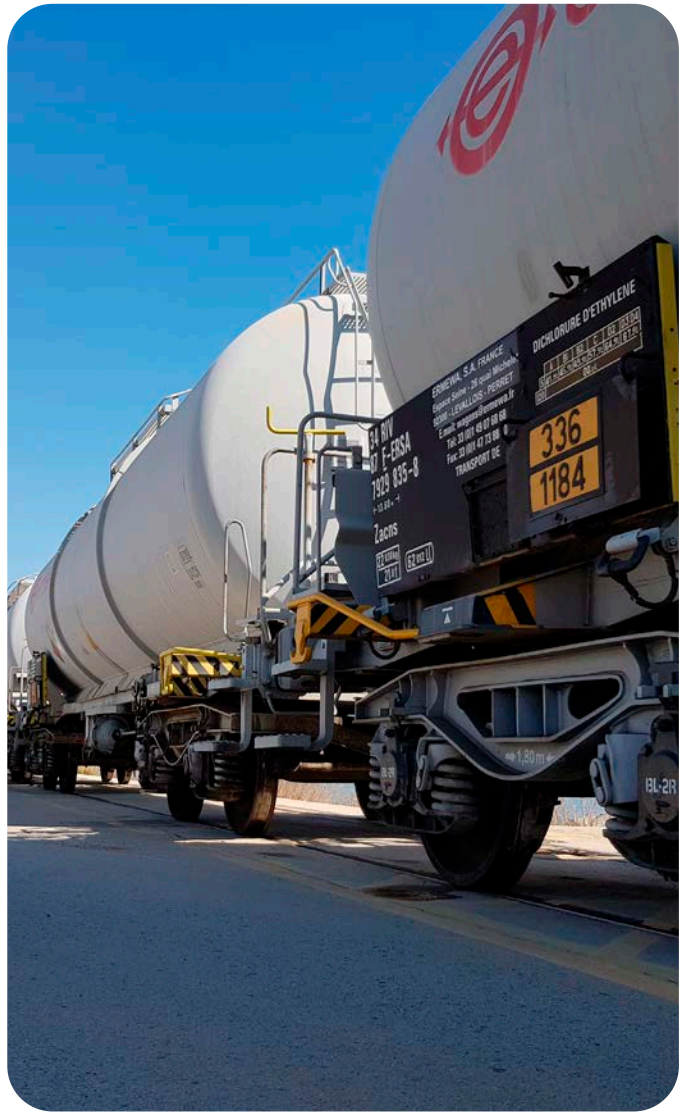
### Evolution of savings in externalities. Use of the Railroad and SSS




The decrease in savings this year has been driven by the decline in railway traffic (-18 M€) despite the increase in savings from the SSS (+9 M€).

Railway traffic has been affected by railway works, which will continue in 2025, making it difficult to achieve the 2025 target.

Note: Corrections to the numbers from previous years are due to corrections in railway statistics.



## Promotion of gasification

Among the actions included in the **Air Quality Improvement Plan** are those aimed at promoting the use of natural gas as an alternative fuel for the transportation of goods by sea and land.

This facilitates the effective reduction of polluting emissions, the increase in the competitiveness of the transport activity, and, by extension, that of the industry and other activities intensive in transport and distribution.

The availability of liquefied natural gas (LNG) at the ENAGAS terminal located in the port is an opportunity to promote this cleaner fuel. To boost the introduction of LNG, the Port of Barcelona is working on 4 lines of action:

- It has natural gas supply infrastructures for ships and trucks, which means having docks at ENAGAS ready to supply barges and, in turn, having barges to provide the service at the port.
- Regulate the supply operations of the new LNG fuel to ships, prioritizing safety and harmonization with other existing regulations to provide legal certainty to operators.
- Carry out pilot and demonstration projects that demonstrate the feasibility of using this fuel as an alternative to traditional fuels in all mobility sectors of the port.
- To grant a bonus to ships that use these new fuels in order to incentivize their adoption in the initial implementation phase.

The introduction of natural gas policy has allowed the **Port of Barcelona to become a hub for LNG bunkering in the Mediterranean.** In 2017, the first ferry with a natural gas auxiliary engine, the ABEL MATUTES of the company BALEARIA, called at the port and received LNG supply from a tanker truck (truck-to-ship or TTS mode).

**In 2019, the Port of Barcelona became the first port in the Mediterranean to supply LNG to a ship from a barge,** to the Aida Nova cruise ship of the CARNIVAL group (ship-to-ship or STS mode).

**It is worth mentioning that since 2020 LNG has been supplied in the multitruck-to-ship** mode, that is, between 2 and 3 tanker trucks at the same time. Through this mode, the necessary LNG is supplied during the short stops of BALEARIA ferries, without interfering with the usual operation of the vessel.

Currently, 7 ferries from BALEARIA are authorized to receive supply in TST mode and 5 cruise ships from CARNIVAL can receive supply in STS mode. In 2023, the Port has permanently allocated a new LNG supply barge to provide service to cruise ships, ferries, and other vessels powered by this cleaner fuel.

In 2024 alone, the Port of Barcelona supplied around 229,751 $m^3$ of LNG to ships, 45,427 $m^3$ from tanker trucks (TTS mode) and 184,324 $m^3$ from barges (STS mode). After the high price of this fuel caused a significant decrease in consumption volume in 2022, the supply activity of this energy source has recovered notably.

## Services and volume of LNG supplied to a vessel at the Port of Barcelona

| From tanker trucks | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Nº of operations | 218 | 18 | 133 | 402 |
| Ships | Abel Matutes, Nápoles, Eleanor Roosvelt, Sicilia, Martín i Soler | Sicilia, Nápoles, Abel Matutes, Martín i Soler, Hypatia de Alejandria | Abel Matutes, Eleanor Roosvelt, Hypatia de Alejandria, Martín i Soler, Bahama Mama, Sicilia | Abel Matutes, Margarita Salas, Hypatia de Alejandria, Martín i Soler, Bahama Mama, Sicilia |
| Supply en $m^3$ | 27,079.59 | 821.42 | 15,501.40 | 45,427 |
| **From barge** | | | | |
| Nº of operations | 18 | 14 | 66 | 89 |
| Ships | Mardi Gras, Costa Smeralda, Iona, Costa Toscana | Aida Nova, Costa Smeralda, Iona, Costa Toscana, Aida Cosma | Aida Cosma, Arvia, Costa Smeralda, Iona, Costa Toscana, Lake Herman | Aida Cosma, Arvia, Costa Smeralda, Iona, Costa Toscana, Lake Herman, Sun Princess, Lake Annecy, Cerulean Ace, Turquoise Ace, Celeste Ace |
| Supply in $m^3$ | 37,971 | 25,576 | 127,668 | 184,324 |

| Total operations | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Nº of operations | 236 | 32 | 199 | 494 |
| Supply in $m^3$ | 65,050.59 | 26,397.42 | 143,169.4 | 229,751 |

**From a land transport perspective, since 2018 the Port has had a LNG (Liquefied Natural Gas) and CNG (Compressed Natural Gas) supply station for both trucks and light vehicles.**

### Reducing emissions from ships

Reducing ship emissions is a significant challenge for ports as it represents the main source of emissions from port activities.

However, port authorities have few tools to achieve the goal of reducing these emissions since ship emissions are regulated internationally through conventions sponsored by the IMO (International Maritime Organization).

The main actions we are taking to reduce ship emissions in order to decrease the impact on public health and contribute to the decarbonization of port activities are:

1. Promote natural gas as a cleaner mobility fuel.
2. To incentivize through bonuses in port fees for those vessels with better performance, such as the bonus for those using natural gas or electric batteries during their calls.
3. Technological developments in ships to reduce pollutant emissions in port.

Since 2019, 6 ferries from the GRIMALDI company regularly make a stopover that incorporate storage batteries with a capacity of more than 5,000 kWh. These batteries are charged during the navigation journey and supply the stored electricity to the ship while it is in port, replacing the auxiliary diesel engines.

In 2024, 8,383 calls were initiated, with an average tonnage of 43,450 tons (+2%). In 2023, 606 calls were made using electric batteries (7 ships) and 618 calls were made using LNG (26 ships).

4. Progressively electrify the docks to allow ships to connect electrically to the dock and thus avoid emissions from auxiliary engines during the ship's stay in port.

Within the **Nexigen** project, the Port of Barcelona approved an investment of over 110 million euros until 2030 to electrify docks and avoid the use of auxiliary engines that generate emissions during the stay of ships in the Port.

The electrical connection of ships to the dock, known as on-power supply (OPS), requires an estimated power of around 78 MW that will come from the high-voltage grid. Its implementation is expected to achieve a reduction of 60,000 tons of carbon dioxide ($CO_2$) and 1,264 tons of nitrogen oxide ($NO_x$); a decarbonization that represents 22% of the annual polluting emissions from port activity and brings the Port closer to the goal of achieving emission neutrality by 2050.

The IV Strategic Plan sets the goal for 50% of the container docks and ferries at the Port to be electrified by 2025. In 2024, progress has been made towards this goal with the following actions:

- The works for the OPS connection pilot to the BEST container terminal (Hutchinson Ports) with three connection points per ship have been completed.
- The pilot project for the Barcelona Ferry Terminal with two Transmed connections for a ferry boat has been awarded and will be ready by 2025.

5. The promotion of new fuels with very low or zero pollutant emissions and greenhouse gases for ships, heavy vehicles, and machinery used in terminals.

The Port of Barcelona is working on various ways to promote zero or near-zero emission alternative fuels, including hydrogen, ammonia, methanol, synthetic hydrocarbons, as well as some biofuels or biomethane.

Promoting these new fuels involves following similar guidelines to those that have been followed to implement natural gas, such as: providing information and raising awareness about their necessity and viability; conducting pilot projects to demonstrate their feasibility in different mobility sectors; establishing appropriate infrastructures for their supply to ships; and finally, regulating port activities related to these new fuels.

Within this strategy, the Port of Barcelona participates in the European Project Pioneers for the production and supply of clean energy, sustainable port design, modal shift, and flow optimization; and digital transformation along with the ports of Antwerp, Venlo, and Constanta.


## Bulk solids operations control

Most of the solid bulk traffic, which may generate particle emissions into the atmosphere at the Port of Barcelona, is handled in enclosed facilities equipped with wind protection systems and, in some cases, air suction and filtering.

For this reason, the issues arising from bulk handling in open docks are very limited in our port and are confined to the South and West Contradique docks.

Since 2005, the Port has maintained a regulation of these activities that includes good practices required of operators for unloading/loading and handling solid bulk materials (Regulation of operations and mooring at the South Contradique Dock and West Dock, approved on April 12, 2005 by the Director General of the Port Authority). Among the conditions of the regulation is the requirement to stop operations when the wind exceeds a certain speed threshold.

## Environmental control of works

On the other hand, all works promoted by the Port Authority are subject to external environmental monitoring, independent of the contractor, which is responsible for verifying that the contractor complies with the pollution prevention and minimization conditions established in the project, as well as monitoring the impacts that the execution of the works has on the environment, especially the emission of particles and noise. Later on, this report delves further into this environmental control of port works.

## New road and railway accesses to the port

The new road and railway accesses planned from the South to the Port of Barcelona have made progress in their processing. Once executed and in operation, the new accesses will allow the traffic of goods to be moved away from the urban center, reducing congestion and, therefore, the contribution of these emissions to the city's air quality.

# Air quality indicators

The air quality in the port environment has shown an improvement since the early 2000s, when monitoring of the levels of emission of the main pollutants gases began.

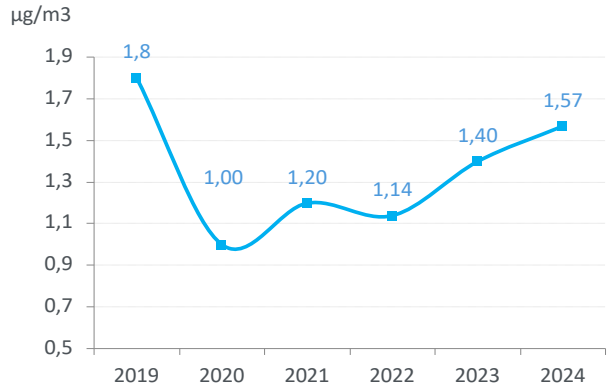
In the following graphs, the air quality levels measured between 2019 and 2024 for different pollutants in the port area are shown.

Sulfur dioxide concentration levels are low. Current regulations in Europe set a maximum threshold of 125 µg/m³ for daily average that cannot be exceeded more than 3 days per year. Measurements were only taken from January to July 2024 due to equipment failure (Miracell Explorer application). Specifically, 53% of the days had data capture from January 1st to July 15th.

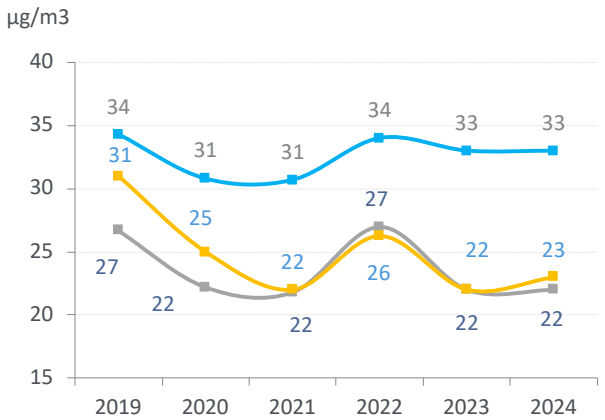
Since 2020, the emission values of this pollutant have been reduced, partly due to the entry into force of the obligation for ships to use fuels with lower sulfur content during navigation, decreasing from 3.5% to 0.5% sulfur content by mass.

NOx values have experienced an increase in recent years due to the recovery of activity after the pandemic, but they remain below pre-pandemic levels and the reference value established by regulations, set at 40 µg/m³.

## Average concentration of $SO_2$

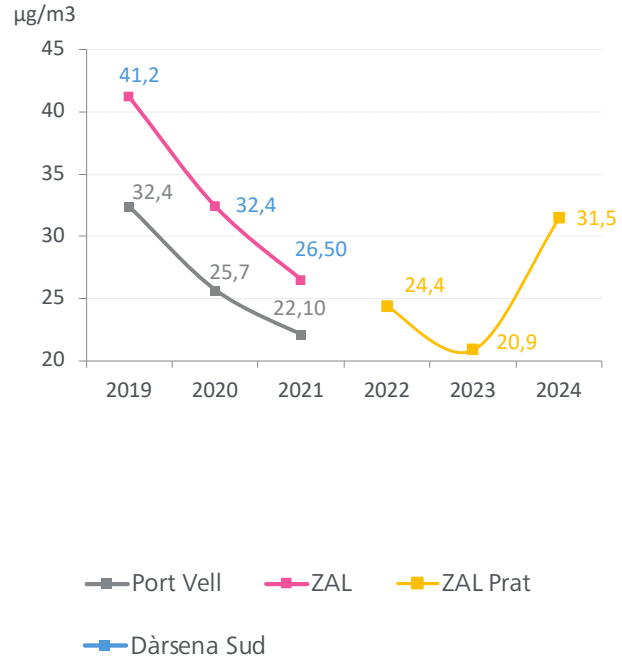



## Average concentration of $PM_{10}$




The average of $PM_{10}$ in the air has been calculated this year from 3 stations. The average concentrations show a general downward trend, except at Dàrsena Sud -located in an area close to traffic- where they remain fairly stable, with a value of 33 µg/m³, below the established limit of 40 µg/m³.

## Average concentration of $NO_2$



However, the Dàrsena Sud station exceeds the 35 maximum exceedances allowed for the Daily Limit Value of 50 µg/m³ with 43 exceedances.

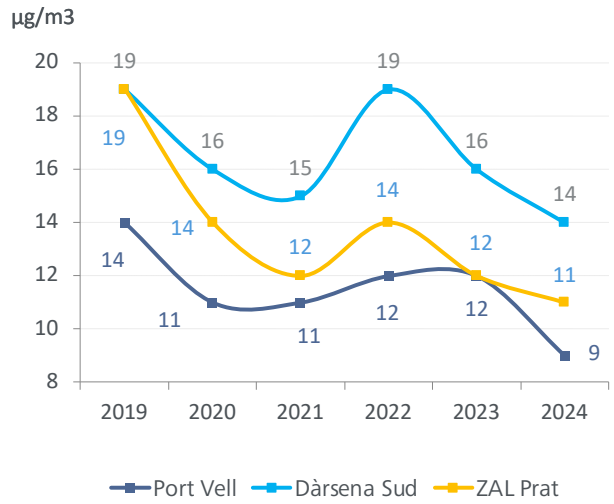
## Average $PM_{2.5}$ exceedance

| Station/Year | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|
| Port Vell | 15 | 12 | 4 | 7 | 2 | 2 |
| Darsena Sur | 47 | 28 | 34 | 32 | 42 | 43 |
| Zal Prat | 19 | 15 | 2 | 5 | 4 | 6 |

[1] The mobile unit of Port Vell ceased to be operational as of 2024.2.
The "ZAL" station was relocated on 11/30/2021 to ZAL Prat (the station currently in operation).

Regarding the average concentration of $PM_{2.5}$, except for the spot measurement at Dàrsena Sud on 12/8/2024, all stations show concentrations below the threshold of 25 µg/m³ established by the regulations and decrease throughout the analyzed period.

## $PM_{2.5}$ concentration



# Climate strategy


Adherence to the Voluntary Agreements of the OCCC

Renewable Energy Supply

BCN Zero Carbon Project

Eco-calculator

Short Sea Shipping promotion

Access the Port of Barcelona website
Climate Strategy

**Ports are called to play an important role in the decarbonization of maritime transport and of their own activity as agents of change.**

According to the preliminary calculations carried out by the Port Authority of Barcelona to quantify the carbon footprint of the overall activity taking place in the port area, around 485,000 tons of $CO_2$eq were emitted in 2022.

Approximately 300,000 tons come from ships (whether at anchor, maneuvering, or during their stay in the port); around 135,000 tons correspond to the energy consumption, both fossil fuels and non-renewable electricity, of all the facilities in the port area; 20,000 tons of $CO_2$eq come from emissions of vehicles transporting people, goods, and machinery; 10,000 tons are due to MARPOL waste, and 5,000 tons of $CO_2$eq correspond to the port expansion works.

The Port of Barcelona is determined and committed to meeting the objectives set by the European Union and the International Maritime Organization (IMO). Thus, the IV Strategic Plan of the Port of Barcelona 2021-2025 includes the strategy for decarbonizing port activities, aiming to reduce greenhouse gas emissions by 50% by 2030 and become a climate-neutral port by 2050.

To achieve this, the Port is preparing an Energy Transition Plan that will allow minimizing emissions at three levels:

- Emissions from all port activity
- Emissions of the Authority Port organisation
- Emissions from concessionaires and Port Community operators

# Commitments at the port level

## Energy transition

Nexigen, the Electrification Plan for the docks of the Port of Barcelona, is the key instrument for the energy transition of the Port towards decarbonization. Its main objective is to improve the air quality of the port and the city of Barcelona through the implementation of OPS technology (Onshore Power Supply), which allows supplying renewable energy to ships during their stay in the port, avoiding the use of their auxiliary engines.

In 2024, the OPS pilot at the BEST terminal was completed, with the system being operationalized and the first real connection of a container ship. This is the first electrical supply system for ships at a container terminal in a Mediterranean port. In parallel, the OPS pilot at the ferry terminal was also completed, and the necessary actions were taken for its commissioning. The first ferry connection is scheduled for early 2025.

During this year, significant progress was made for the construction of the new Port Substation (SE Port) and an internal distribution network that will efficiently and safely deliver energy to the different docks. The bidding process for its construction was awarded at the end of the year.

The year also closed with the award of the tender for the installation of the first OPS system for MSC cruises at the Adosado dock.

It is estimated that the impact of Nexigen will result in a reduction of around 47% of $CO_2$ and NOx emissions in the port environment, thus decisively approaching decarbonization goals.

Next developments:

- BEST Terminal
- Dàrsena Sud
- Adosado Cruceros
- Adosado Ferrys
- APM Terminal
- GTBG Terminal
- TFB Terminal
- Energy Dock

## Promotion of new fuels

The promotion of new zero-carbon emission fuels for ships, heavy vehicles, and terminal machinery will be a key focus in advancing the decarbonization process and meeting the emission reduction targets set by the European Union and the International Maritime Organization for 2030 and 2050. For example, through the study of renewable hydrogen use, the purchase of green electricity, the production of photovoltaic energy, the promotion of LNG and bioLNG, and the promotion of green methanol as a maritime fuel.

## World Ports Climate Action Program (WPCAP)

In 2018, the Port of Barcelona joined an initiative promoted by the world's leading ports aimed at laying the foundations to accelerate the decarbonization of port activities and maritime transport, in line with the IMO's (International Maritime Organization) commitment to reduce greenhouse gas emissions by 50% by 2050 compared to 2008.

The initiative, in which the ports of Vancouver, Los Angeles, Long Beach, New York, Hamburg, Antwerp, Rotterdam, Gothenburg, and Busan participate, is organized into 5 working groups focused on specific actions. The Port of Barcelona leads the group dedicated to supplying electricity to ships from the dock, while also participating as a partner in the sustainable fuels for ships group.

In the field of innovation, and hand in hand with the Catalonia Institute for Energy Research, the Port has begun to study the role of hydrogen and other clean fuel derivatives as possible zero-emission fuels for land and maritime freight transport, free of pollutants and greenhouse gases.

## Electrical connection of ships

Together with the goal of reducing polluting emissions, the Port of Barcelona made public in 2019 its commitment to electrify the docks where cruise ships, container ships, vehicle carriers, and ferries make stops so that during their stay in port they can connect and thus avoid emissions from their auxiliary engines.

By 2030, the goal is to have the electrical infrastructure in place for connecting ships at cruise ship terminals, the container terminal at Moll Prat, and ferry maritime stations. This will result in a reduction of approximately 40% in $CO_2$ and NOx emissions.

The task calendar being worked on foresees that this electrical infrastructure will be progressively deployed through transformer stations and command centers to help branch out until reaching the docks where the ships will be connected.

# Port Authority commitments

## Energy efficiency and renewables in buildings and facilities

The Port Authority is taking steps to ensure energy savings and maximum energy efficiency in its buildings and facilities, as well as the generation of renewable energy. Among these actions, the following are worth mentioning:

- Actions to improve the energy management of the WTC building occupied by the APB include replacing compact lamps with LEDs and implementing zoning for turning on and off the lights.
- Installation of renewable energy at the Fishermen's Wharf: new buildings for the Fishermen's market, old net shed, and net yard.
- Installation of renewables in PIF building.
- The installation of renewable energy sources in all buildings of the APB and its affiliated companies.

## Street lighting

The APB is progressively improving its public lighting network, incorporating LED technology lamps and enhancing lighting management by establishing different intensity lighting periods.

## Own fleet

Out of the approximately 100 units in the fleet (including motorcycles, light vehicles, and trucks), today 41 units are electric (mainly vehicles and motorcycles). Gradually, the rest of the vehicles will be replaced by new electric ones.

## Adherence to the OCCC's Voluntary Agreements

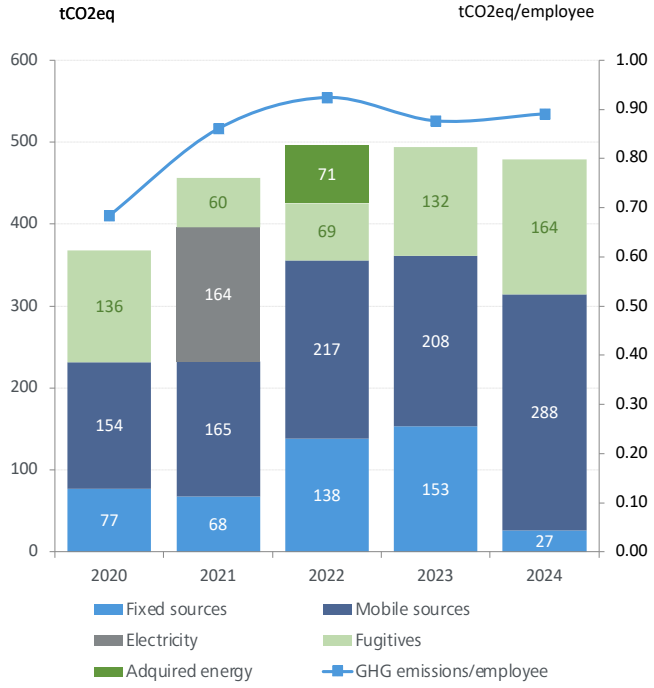
**The Port of Barcelona has been attached for over 10 years to the Voluntary Agreements for the reduction of greenhouse gas emissions (GHG) promoted by the Catalan Office for Climate Change (OCCC) of the Government of Catalonia.**

By signing this agreement in 2012, the organization commits to gradually reduce its direct and indirect (Scope II) emissions due to the fuel consumption of its fleet of 92 vehicles, 2 boats, and some generators, as well as to reduce its electricity consumption. As shown in the attached graph, in 2024, the $CO_2$eq emissions attributable to the APB were 315 tons of which 288 tons were related to fuel consumption for mobility and generators, and 27 tons for air conditioning.

Emissions Calculator
Catalan Office for Climate Change

ACO2RDS VOLUNTARIS
Compromís amb la reducció de CO2
Generalitat de Catalunya

### GHG Emissions



## Electricity with renewable generation certification

Since 2017, all the electricity consumed by the APB and its affiliated companies (Port 2000, WTC Barcelona, and CILSA) has a renewable generation guarantee certificate, so the associated emissions do not count as greenhouse gas emissions. At the end of 2021, the contract with the distribution company is terminated, so temporarily electricity is acquired without certification.

This circumstance leads to greenhouse gas emissions from electricity consumption associated with the first 4 months of the year being accounted for in 2022.

## Sustainable mobility

In 2021, the **Mobility Plan was created for the workers of the Port Authority of Barcelona.** To achieve this, the Mobility Board was established, composed of workers from different departments of the APB along with the employee committee.

People from the APB who use the public transport card (T-usual + T-casual)

| Evolution | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|
| People | 224 | 226 | 240 | 242 | 259 |

The objective of this Board is to define the Displacement Plan, establishing a diagnosis of the current scenario through an analysis of the current situation and the development of surveys to the workers to know their mobility habits. Once the information has been analyzed, an action plan for the coming years will be established.

To promote the use of public transportation, the APB also provides **integrated public transport cards (T-usuals and T-casual)** to employees who choose this option to commute to work. In 2024, a total of 259 employees of the Port Authority have benefited from this initiative.

# Commitments at the level of the port community

## Extension of the Electric vehicle charging points plan to concession facilities

In concession contracts, the expansion of electric charging points in facilities is promoted to enable workers to have charging facilities for their electric vehicles.

### Promotion of the voluntary agreements of the OCCC

The Port promotes among concessionaires the adherence to the voluntary agreements of the Catalan Office for Climate Change, in order to reduce GHG emissions.

## Promotion of clean fuels in terminal machinery

Through environmental bonuses and concession clauses, it is also encouraged that concessions renew their machinery to incorporate units that operate fully or partially with electricity (if possible) or other clean fuels.

### Teams and resources of port service providers companies

Under the licensing conditions to provide the service, there is a progressive obligation to adapt to best practices and to incorporate more efficient equipment from the emissions point of view.

## Promotion of energy efficiency and renewable generation in buildings and facilities

Through the environmental bonuses for concessions provided by the Ports Law and in the new concession contracts, it is promoted that facilities and buildings have efficient energy development and that renewable energy is generated on roofs and flat surfaces.

Our goal is to reach 50 MWp installed by the year 2030. Although we are currently at a capacity of 7.6 kWp, the current projection could even reach 75 MWp. In the following plan, the projected installation potential is highlighted in red.


Map of photovoltaic potential on roofs in the port area (in kW peak)

## Ecocalculator

**Customers of goods and logistics chain agents are increasingly interested in knowing the environmental externalities in order to integrate them into the decision-making process regarding transport routes.** In response to this concern, the Port of Barcelona has made available to cargo owners and logistics operators a tool that calculates the $CO_2$ emissions of their transport routes and the most environmentally efficient alternative routes.

## Carbon footprint assessment of the port community

**Barcelona becomes the first port in the Mediterranean to certify the carbon footprint of the entire Port Community.** Certified by DNV under the ISO 14064 standard, this analysis includes activities such as industry, port works, or ship waste. The total carbon footprint of activities carried out in the Port for the year 2022 was 495,356 $tCO_2eq$, of which 145,957 $tCO_2eq$ correspond to the new activities considered.

## Short Sea Shipping Promotion

The European Intermodal Transport School is the European reference center for training in logistics and intermodal transport. Its objective is to promote intermodal transport as a basis for the development of sustainable logistics in Europe.

The School began its activities in 2006 as a training center for European professionals and students in the fields of logistics, transport management, and international trade. Years later, it has gained experience and knowledge in national and international project management, communication, content development in collaboration with renowned European institutions, and the promotion of logistics clusters.

Since its creation, the School has worked closely with the European Shortsea Network and, more specifically, with the Short Sea Shipping Promotion Centers, which promote short sea shipping and the School's work in each EU country.

Article
World Ports
Sustainability Program

# Prevention of soil pollution

**The Port of Barcelona aims to prevent soil and groundwater pollution as the owner and ultimate responsible for its environmental condition.** For this reason, it continuously monitors the state of the subsoil in the port area that is under concession of terminals and operators, as well as in those areas not under concession.

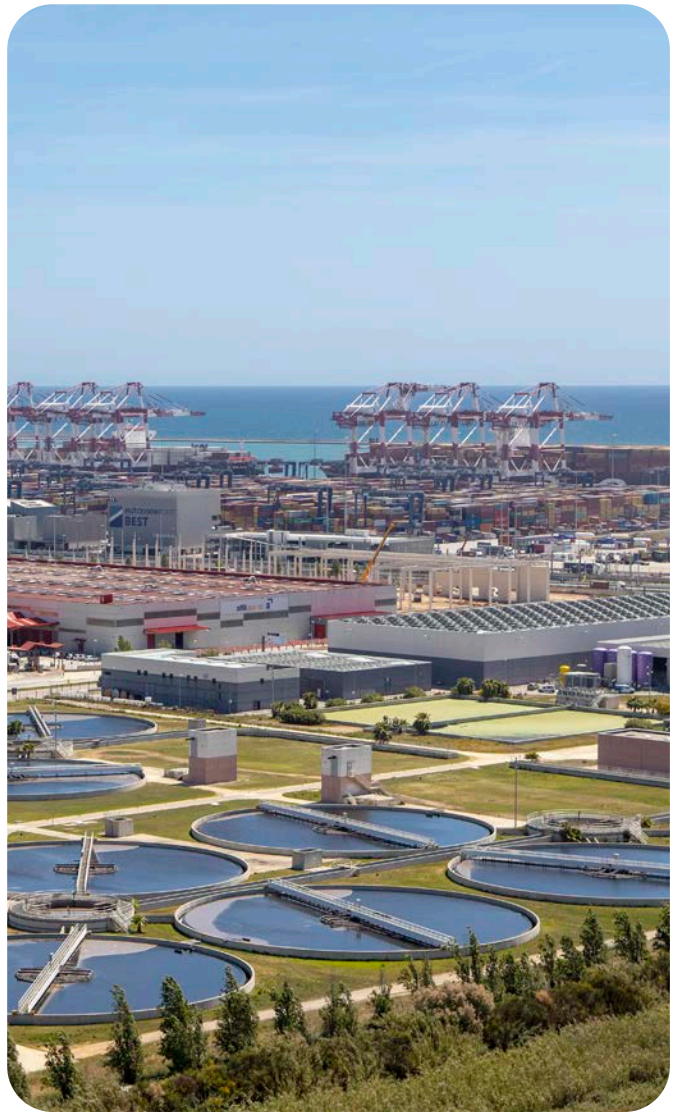
When necessary, remediation actions are carried out on contaminated soils in the port area, either by the Port Authority itself or by the terminals and concessions.

In the Port of Barcelona, there are a total of 40 sites where soil or groundwater characterization interventions have been carried out; of these, remediation has been carried out in 16 until 2023.

Since 2020, the Port of Barcelona has had a database of contaminated soils with over 1,400 records corresponding to the installation of 564 piezometers and 195 boreholes carried out in the port area.

The database allows for a quick linkage of concessioned areas with soil contamination values to foresee in advance whether it is necessary to take action to characterize or remediate a plot.

Likewise, the database provides us with information on background pollution levels and values for some specific pollutants found in various locations.



Access the Port of Barcelona website
Soil

# Port works

Dredging

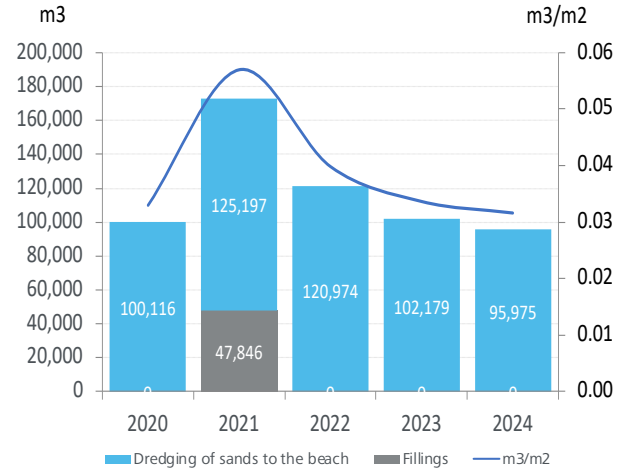
Material consumption, riprap, and aggregates

**All works promoted by the Port of Barcelona Authority are subject to environmental monitoring carried out by an independent technical assistance, hired directly by the APB.** This way, it ensures that the execution of the works complies at all times with the conditions set out in the project and minimizes their impacts on the environment.

## Dredging

Any maritime work involving dredging of marine sediments or dredging works carried out to maintain or improve depths strictly follow the guidelines for the characterization of dredged material and its relocation in the maritime public domain on land.

### Dredging volumes in construction sites




Outer waters next to Dique Sur. Torpedo ocellata

### Evolution of dredging and land reclamation

| Total volumes | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|
| Dredging in m³ | 100,116 | 125,197 | 120,974 | 102,179 | 95,975 |
| Filling in m³ | 0 | 47,846 | 0 | 0 | 0 |

Access the Port of Barcelona website
Works

# Material consumption, riprap, and aggregates

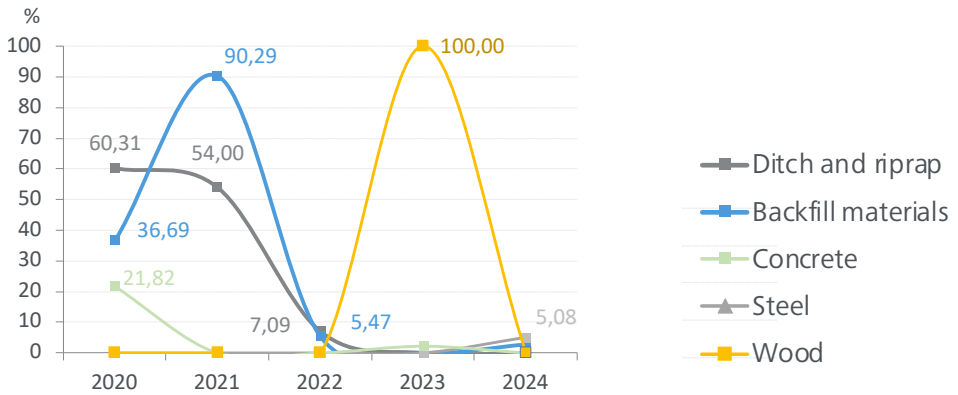
The consumption of materials for port works is one of the environmental aspects to consider. Below is the table of materials used in recent years in the works promoted by the Port Authority that have been carried out in the Port of Barcelona.

The recycled materials that have been used in the executed works and the percentage they represent of the total of each material type are as follows:

## Evolution of material consumption

| Material type | Unit | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|
| Riprap (armourstone) | t | 90,956 | 49,491 | 101,206 | 4,763 | 6,434 |
| Concrete | m³ | 13,632 | 3,450 | 14,226 | 2,083 | 16,460 |
| Steel | t | 218 | 142 | 2,720 | 11,026 | 2,414 |
| Dredged sediments | m³ | 100,116 | - | - | - | - |
| Backfill materials | m³ | 1,149,183 | 316,776 | 476,599 | 12,349 | 30,036 |
| Pavements | m³ | 2,205 | 962 | - | 142 | 17,042 |
| Wood | m³ | - | - | - | - | 117 |
| Aggregates | t | 6,756 | 2,684 | 7,666 | - | 17,775 |

## Recycled materials consumption



# Waste management



Access the Port of Barcelona website
Ship waste

**The Port of Barcelona is responsible for the collection and management of the different types of waste generated in its own buildings, facilities, and common port areas, as well as waste from street cleaning.**

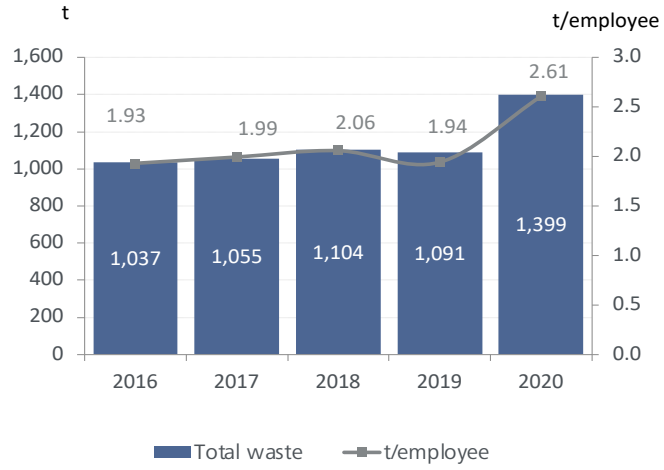
Waste generated by bars and restaurants located within the port is also included in the scope of garbage collection.

The only building whose waste is not managed by the APB is the offices and spaces occupied on the floors of the East building of the WTC. In this case, the management of cleaning and office waste is provided directly by the building services manager that the APB occupies.

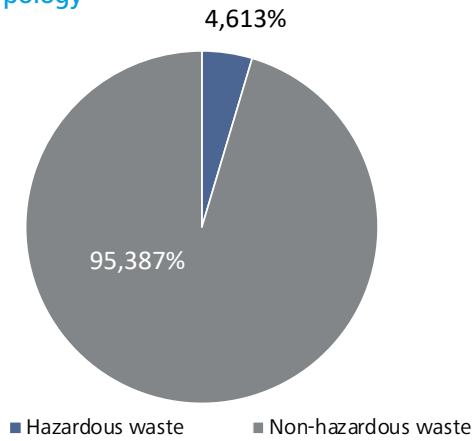
The APB practices selective collection of recyclable waste fractions from containers located outside for paper, glass, and packaging, and from bins and containers located inside APB buildings for paper, packaging, toner, and used batteries.

Finally, waste generated by the activity of the APB itself and those from specific cleanings are managed.

## Total waste generation




## Waste typology

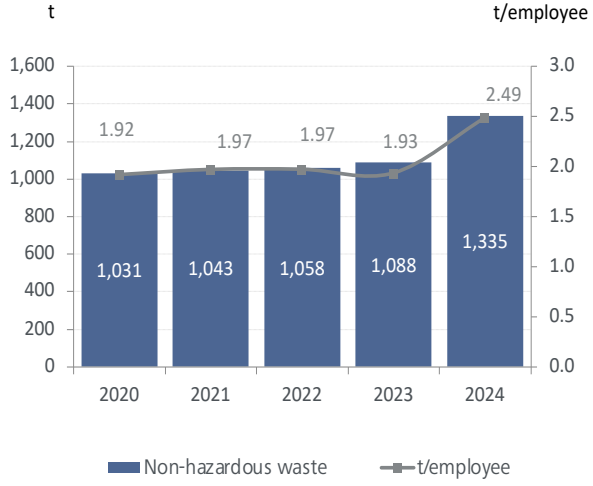



* Including those generated by the entity itself and those not generated by the APB (taking care of their management).

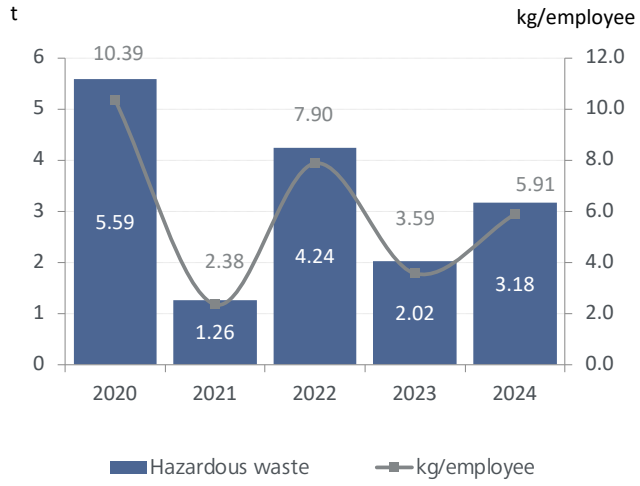
## Waste collection services

- General waste in common areas, bars, and restaurants.
- Selective collection in buildings.
- Warehouse and workshop waste.
- Removal of waste from punctual or shock cleanings.

### Generation of non-hazardous waste




### Generation of hazardous waste



## Hazardous waste generated by the APB

| TYPOLOGY (tons) | LER | 2024 | 2023 | 2022 | 2021 | 2020 |
|---|---|---|---|---|---|---|
| Non-chlorinated mineral oils for engines, mechanical transmission, and lubricants | 130205 | 0.559 | 0.011 | 0.313 | 0 | 0 |
| Gases in pressure vessels (including halons) containing hazardous substances | 160504 | 0.028 | 0 | 0.235 | 0.18 | 0.01 |
| Containers that contain residues of hazardous substances or are contaminated by them | 150110 | 0.32 | 0.169 | 0.968 | 0.115 | 0.26 |
| Metallic mercury | 160307 | 0 | 0 | 0.395 | 0 | 0 |
| Materials containing asbestos cement | 170605 | 0 | 0 | 0 | 0.6 | 0 |
| Organic waste containing hazardous substances | 160305 | 0.18 | 0 | 0 | 0 | 0 |
| Lamps | 200136 | 0 | 0.053 | 0 | 0 | 0 |
| Fluorescent lamps | 200121 | 0 | 0 | 0 | 0.107 | 0.02 |
| WEEE | 200123 | 0 | 0.16 | 0 | 0 | 0 |
| Emulsions and halogen-free machining solutions | 120109 | 0.058 | 0 | 0.133 | 0 | 0.16 |
| Toilets | 180103 | 0.0758 | 0.0655 | 0 | 200 l* | 0 |
| Other solvents and solvent mixtures | 140603 | 0.132 | 0.132 | 0.079 | 0 | 0.76 |
| Absorbents, filtration materials | 150202 | 0.143 | 0.356 | 1.315 | 0.075 | 4.12 |
| Sentina oils collected at docks | 130402 | 0 | 0 | 0 | 0.18 | 0.25 |
| Lead-acid batteries | 160601 | 1.34 | 1.074 | 0.799 | 0 | 0 |
| Discarded equipment containing hazardous components | 160213 | 0.34 | 0 | 0 | 0 | 0.02 |
| TOTAL (t) | | 3.18 | 2.02 | 4.24 | 1.26 | 5.59 |

* Quantity not totaled in the summing

## Hazardous waste generated externally (non-APB)

| TYPOLOGY (tons) | LER | 2024 | 2023 | 2022 | 2021 | 2020 |
|---|---|---|---|---|---|---|
| Toilets | 180103 | 0 | 0 | 0 | 0.12 | 0 |
| Bilge oils collected at docks | 130402 | 14.5 | 0 | 0 | 9.62 | 0 |
| Oily water from oil/water separators | 130507 | 0 | 0 | 0 | 0.74 | 0 |
| Absorbents | 150202 | 1.09 | 0.13 | 2.51 | 0 | 0 |
| Aqueous liquid waste containing hazardous substances | 161001/151001 | 45.64 | 0 | 39.02 | 0 | 0 |
| Hazardous waste generators | 160506 | 0 | 0.5 | 0 | 0 | 0 |
| Devices with CFC, HFC, HCFC, HC, $NH_3$ | 16021111 | 0.14 | 0 | 0 | 0 | 0 |
| TOTAL (t) | | 61.37 | 0.63 | 41.53 | 10.48 | 0 |

# Waste management in concessions

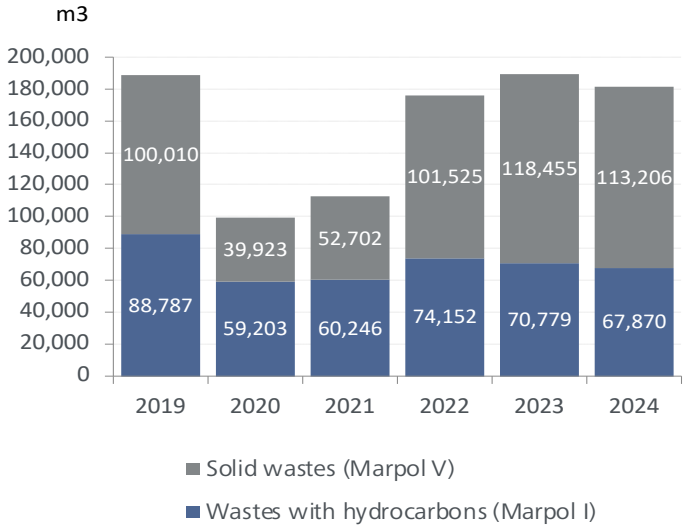
The concessions and facilities operating within the port area manage their waste and, if applicable, are registered as waste producers, complying with their waste management obligations..

# Ship waste management

According to the International Convention for the Prevention of Pollution from Ships of 1973 (known as the MARPOL Convention 1973/78), ports must have adequate facilities for receiving ship waste through a port service.

In the table below, the residues delivered to port in recent years for the categories included in Annex I.1 of the Convention (oily residues from oil-water separators and oil filtering equipment), Annex I.2 (oily residues from oil cargo tanks), Annex I.3 (oily residues from the cleaning of tanks) and Annex V (garbage residues) are shown. With the increase in ship traffic in recent years following the COVID-19 pandemic, the volumes of received residues have recovered, reaching pre-pandemic levels.

## MARPOL waste management





## MARPOL waste delivered by vessels

| Typology (m3) | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Oily bilge and engine fluids (1.1) | 53,414 | 69,262 | 65,956 | 66,030 |
| Oily sludge waste (1.2) | 5,608 | 1,390 | 426 | 84 |
| Oily cleaning liquids tanks (1.3) | 1,223 | 3,499 | 4,396 | 1,757 |
| Solid waste (V) | 52,847 | 101,525 | 118,455 | 113,206 |
| TOTALS | 113,092 | 175,676 | 189,233 | 181,077 |

# Ecology and biodiversity



The port covers a land area of 1,042 hectares and is located near the Integral Reserve of the Llobregat Delta.

Starting from the 2025 exercise, we will establish new criteria for calculating the surfaces, reviewing the corresponding historical indicators.

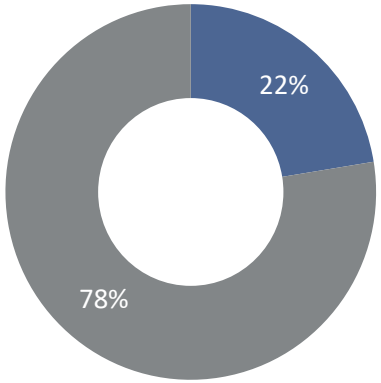
## Interaction with natural spaces and protected species

The presence of the Integral Reserve of the Llobregat Delta, adjacent to the port area, requires taking precautions so that port activity and construction interfere as little as possible with the ecosystems and populations of birds and other species. It is noteworthy that since 2016, a significant breeding colony of Audouin's gull (Larus audouinii) has established itself on the East Breakwater. Since then, about 1,200 pairs breed each year, making this colony one of the most important in the Western Mediterranean.

Another innovative and proactive action carried out for the preservation of animal species is the one that has been implemented in the last ten years with the cormorant population, which has involved providing them with a new habitat.

In this sense, a total of 8,000 $m^2$ located within the port facilities can be considered destined for the conservation and promotion of biodiversity.

**EMAS indicator**




| | |
|---|---|
| Unsealed surface: | 2,337,219 $m^2$ |
| Sealed surface: | 8,084,042 $m^2$ |
| Total area in the east-facing center oriented according to nature: | 8,000 $m^2$ |

## Invasive species introduction control

Ports are points of risk for the introduction of non-native species that can, under certain circumstances, become invasive species.

The introduction pathways that occur in a port are numerous, ranging from the discharge of ballast water from ships or the release of fouling from vessel hulls, to the introduction through the packaging of goods (such as containers) or within the goods themselves.

The Port of Barcelona has conducted studies and monitored animal and plant species to detect allochthonous species that may become invasive. So far, the monitoring has not detected any species recognized as invasive. The phytoplankton control carried out for several years focused on the search for introduced allochthonous species.

Of all the species and genera detected and identified, there is no record of the presence of introduced species, although there is mention in the scientific literature of the presence in the 90s of Alexandrium catanella in phytoplankton blooms.

The control of benthic species, which live fixed on the substrate, has been extended not only to the sedimentary bottoms of port waters as indicators of water quality, but it has also included species identified in vertical transects of the dock. None of the studies mention the presence of introduced invasive species.

In this sense, in 2003 and 2004 the University of Barcelona conducted a study on fouling organisms and their succession to colonize new substrates. The report mentions the sporadic and isolated presence of an unidentified bryozoan individual that could correspond to a possible introduced species.

Regarding ballast water, a taxonomic and viability study of organisms present in the ballast water of some ships docked at the Port of Barcelona was conducted in 2004. The study identified up to 40 species of phytoplankton and 42 species of zooplankton in a single tank. The study concluded that the viability of these organisms depends mainly on their residence time in the tank water.

Another study carried out in 2004 on terrestrial arthropods in the port area detected the presence of the Argentine ant Linepithema humile and the fly Bradysia, two introduced species but already present in the territory for years.

## Bird control

The presence of seagulls and pigeons in port facilities and docks is seen as a problem due to the disturbances, dirt, and damages they can cause to the installations. Since the year 2000, the Port of Barcelona has been carrying out a dissuasive control in the cruise terminals' docks using speakers that continuously emit distress calls.

In 2001 and 2002, the Port of Barcelona participated in the reintroduction of the Peregrine falcon (Falco peregrinus) in the city of Barcelona, breeding 3 chicks in an artificial nest installed in a grain silo. As a result of the initiative, the falcon population in Barcelona is consolidating, and in 2023, the port had 4 pairs out of the 9 in Barcelona. The continued presence of the falcons has a deterrent effect on the pigeon population that daily descends from the city to feed at the Contradique dock and other port areas.


Mediterranean red starfish (Echinaster sepositus)


Orange gorgonian (Leptogorgia sarmentosa)


Peregrine falcon (Falco peregrinus)

# Enivronmental noise



**The port as a territory must manage environmental noise pollution through the Noise Map; a management tool that allows visualizing the current sound reality in a graphical way.**

## Port Vell

In 2014, the Port of Barcelona carried out the Noise Map of the Port Vell sector, the area where the interaction between port activities and residential use can generate more areas of noise impact.

The Map has separately considered the levels of noise exposure from different emitting sources (road traffic, maritime traffic, industrial activities, and aircraft noise).

The main conclusion of the study is that the noise levels obtained are influenced by road traffic, and to a lesser extent by the ferries docked at the Port Vell docks.

In 2022, a noise impact study of ferry operations on residential areas was conducted to assess their impact.

## Commercial port

Unlike the case of Port Vell, the study has separately considered two sources of noise: land traffic noise and maritime traffic noise, creating maps for daytime, evening, and nighttime periods. The study has established the Acoustic Servitude Zone that would be affected by the activity and development of the port infrastructure.

# Environmental emergency plans



**The Port of Barcelona has organized and systematized the response to environmental emergencies through 4 operational instruments.**

## Internal Maritime Plan

The Port of Barcelona implements an active policy for preventing incidents and accidents that result in spills of hydrocarbons and any other chemical products into the port waters.

**The prevention and response instrument for these incidents is the Internal Maritime Emergency Plan (PIM) of the Port of Barcelona,** carried out by the Port Authority of Barcelona and approved by the General Directorate of the Merchant Marine, which details the organization of the response and the resources to be used.

The PIM, integrated into the National System for Response to Marine Pollution, aims to organize the response to accidents or incidents of spillage of harmful chemicals and hydrocarbons into the marine environment that may cause damage to the marine ecosystem, property, or human health.
The port PIM is coordinated with the PIMs of the port terminals that handle chemicals and hydrocarbons.

The PIM address corresponds to the Port Authority, duly coordinated with the Maritime Authority.

In 2024, there were 49 reports of spills of hydrocarbons and other substances in port waters, of which only 3 episodes required the activation of the PIM in an alert situation and 3 more in a “0” situation.

# Self-Protection Plan

**Another response instrument in case of environmental emergency is the Port Self-Protection Plan (SPP)** that is activated in case of accidents or incidents of any kind that may pose a risk to people.

The Port Emergency Response Plan (ERP) is divided into 11 sectors and encompasses, in turn, the SPPs of all terminals and port concessions. The SPP has 3 levels of activation: an initial alert level, a level 1 corresponding to an emergency in a terminal, a level 2 responding to a port sector emergency, and level 3 referring to an emergency involving more than one port sector.

The intervention group defined in the SPP corresponds to the Barcelona firefighters according to the collaboration agreement between the Barcelona City Council and the Port Authority of Barcelona. They are specialized in port-related actions.

# Meteorological and Oceanographic Alert System

**The Port of Barcelona has enabled a procedure for alerts in Meteorological and Oceanographic Alert Situations (MOAS)**, which consists of a response procedure to predictions of surges and wind intensity provided by the State Ports.

In the face of storm or wind alerts, the response involves distributing the alarms to the potential stakeholders of the port (Port Authority, Maritime Authority, terminals, and users), and activating prevention measures and activity restrictions according to the predicted risk threshold.

# Control Centre action procedures

**One of the main management tools available to the Port Authority for controlling environmental incidents is the activation of procedures by the Port Police Control Center when they receive a report of an incident.**

These procedures for action by the Control Center in the face of environmental incidents (PPC) include 19 response and notification procedures for the most common incidents related to: dust emissions, ship emissions, marine animals in the dock, land animals, water pollution, spills on roads and ramps, noise, odors, and other similar incidents.

The procedures consist of a system for receiving notifications and calls to the parties involved and for actions by the Harbor Control Center.

The departments involved are responsible for each PCC, and the responsibility for keeping them up to date lies with the Department of Environment.

## Environmental Incidents

| Incidence | 2024 |
|---|---|
| Polluting spilled in maritime service area | 49 |
| Large floating debris at docks | 23 |
| Waste at docks | 25 |
| Marine animals in docks | 5 |
| Liquid spillages on roadways | 25 |
| Solid spillages on roadways | 50 |
| Live land animals | 7 |
| Risk of tree falling | 4 |
| Dust from bulk solids operations | 1 |
| Black smoke from a ship's funnel | 3 |
| Soybeans terminal computer system failure | 8 |
| Incidents detected in the port's sewage network | 6 |
| TOTAL GENERAL | 206 |

## Environment budget in 2024

| Budget executed for the Environment | 2024 |
|---|---|
| Contaminated soil: characterisation | 102,308.00 € |
| Water Framework Directive | 141,557.36 € |
| Air Quality Plan Studies | 14,000.00 € |
| Certification ISO 14001 | 8,230.00 € |
| Core-Clean Port | 137,062.50 € |
| Automatic air quality network maintenance | 11,097.00 € |
| Weather network maintenance | 36,841.80 € |
| Soybean Agreement - Air monitoring network maintenance | 144,415.55 € |
| Visits and institutional care | 5,353.46 € |
| Energy transition plan | 74,795.00 € |
| Biodiversity studies. Blue economy | 20,250.00 € |
| Social responsibility - Community cats | 7,296.00 € |
| Biodiversity | 1,160.00 € |
| Environmental prescriptions concessions | 0.00 € |
| Generic travel department | 3,583.30 € |
| TOTAL | 707,949.97 € |

# STAKEHOLDERS



# Active participation




**The Port of Barcelona promotes a Sectoral Sustainability Plan that arises as an initiative of the Sustainability Working Group of the Steering Council for the Promotion of the Port of Barcelona with the aim of responding to the demands and expectations of the stakeholders of the Port Community.**

This plan expresses the will to act collectively beyond the individual responses of each of the organizations that make up the Port Community; that is, to do so jointly as a port enclave.

It started in 2016 and, within the framework of the Plan, actions have been defined taking into account the expectations of the stakeholders of the Port Community.

In this sense, the Sustainability Report is a key tool that measures the satisfaction of these expectations, including those of an environmental nature.

In 2024, new organizations and companies from the Port Community joined the Port Sustainability Plan, bringing the total number to 146.

POSITIVE IMPACT: https://www.portdebarcelona.cat/es/conoce-el-puerto/comunidad-portuaria/positive-impact-port

Based on the data provided by the affiliated organizations, indicators of environmental, social, and economic performance have been developed to more accurately explain how the Port Community responds to the needs of its stakeholders.

Strategic lines of the Sectorial Sustainability Plan:

- Raise awareness and disseminate the Sectoral Sustainability Plan of the Port of Barcelona.
- Create community to develop the Sectorial Sustainability Plan of the Port of Barcelona (ambassador role).
- Manage stakeholders' expectations.
- Promote environmental sustainability.
- Promote social sustainability.
- Promote economic sustainability.

### Environment Intranet Section

The APB permanently updates the Environment section of the corporate intranet, including news and videos of interest on its blog, as well as direct access to environmental operational procedures and internal documents.

### Strategic lines of the Sectoral Sustainability Plan:

**The Community Port Participation Tool for environmental issues is part of the Environmental Quality Working Group of the Port Community Steering Council, which also includes the Social** Responsibility and Occupational Risk Prevention Groups.

The Environmental Quality Working Group was established in 2004, and its members are representatives from companies within the port community representing various companies in the port sector.

The Working Group, among others, carries out two prominent initiatives, which are:

- The creation of an electricity purchasing group exclusively for private companies in the port sector that voluntarily join.

  The auction is held annually and is conducted jointly with the one carried out by the Port Authority to award its electricity supply contract.

  Private companies in the purchasing group participate in the auction in different lots than the Port Authority, and once the best price has been auctioned, they may or may not contract with the awarded company.

  The purchasing group was established in 2010 with each auction, and the number of companies joining the group each year is around 20.

- The design and organization of technical and awareness-raising workshops for members of the Port Community.

  In order to raise awareness and inform members of the Port Community, technical sessions on current topics or issues of interest to port activities are organized every four months. The objective of these sessions is to provide support to companies and activities that carry out their functions within the port environment. To achieve this, subjects that are of common interest to the majority are selected, and efforts are made to present them clearly and always from a practical perspective, applying the port environment.

The following are the workshops held during the period 2019-2024:

| | |
|---|---|
| 28/02/2019 | Seminar "El hidrógeno en una Europa sin emisiones" |
| 29/03/2019 | Seminar "Requisitos y herramientas de comunicación en materia de sostenibilidad" |
| 25/04/2019 | Seminar "Presentación de resultados del proyecto CLEANPORT (incorporación de motor auxiliar de gas en ferri)" |
| 30/10/2019 | Seminar "Movilidad sostenible en el puerto" |
| 06/03/2020 | Seminar "Calidad de las aguas y saneamiento" |
| 17/06/2021 | Seminar "La descarbonización de la actividad portuaria" |
| 06/10/2021 | Seminar "Hacia la transición energética" |
| 18/05/2022 | Seminar "La mejora de la calidad del aire" |
| 20/07/2022 | Colloquium on the situation of the electricity market |
| 29/09/2022 | Seminar "La gestión de la contaminación de suelos en la zona portuaria" |
| 07/11/2022 | First edition of the Sustainability Conference organized by the Sustainability Working Group of the Governing Council to promote the Port Community. |
| 22/09/2023 | Seminar "LogisPort. Rumbo a la eficiencia y sostenibilidad portuaria", dedicada a promover las prácticas sostenibles y la implantación de las nuevas tecnologías en el ámbito portuario |
| 16/11/2023 | Seminar "Tendencias en la gestión ambiental de la actividad portuaria", en la que participaron especialistas ambientales y representantes de la Comunidad Portuaria de Barcelona |
| 18/04/2024 | Seminar "Financiación de actuaciones sostenibles" |
| 25/06/2024 | Seminar "Implementación de la normativa para descarbonizar el transporte marítimo" |
| 28/06/2024 | Seminar "Financiación de la descarbonización de las empresas del puerto" |
| 15/07/2024 | Seminar "Financiación de vehículos de transporte de mercancías de bajas emisiones" |
| 23/10/2024 | Seminar "Nuevas obligaciones en sostenibilidad corporativa" |


## European projects to promote natural gas as a fuel for freight mobility.

The port of Barcelona is located next to a large city, and there is a growing concern about the impact of port activity on the city's air quality, especially regarding the concentration of NOx and suspended particles.

The most important sources of emissions of pollutants into the atmosphere are those generated by ships during their entry, maneuvering, and while staying in port.

The port has few tools to effectively regulate those emissions, as its regulation falls under the IMO.

In the case of maritime transport, many shipowners are starting to opt for this change, and the new vessels they commission consider the possibility of being powered by natural gas.

**Another effective action to take alongside promoting the use of natural gas as an alternative fuel for goods mobility by sea is also extending the use of this fuel in land transportation.**

The Port of Barcelona pursues a triple objective:

- Promote the infrastructures that allow the supply of natural gas to ships and trucks.
- Carrying out demonstration actions of the use of natural gas in different modes of transportation and vehicles as a measure to demonstrate that its use as an alternative fuel is feasible.
- Safely regulate the supply operations of this new fuel, as well as the management of the infrastructure.

The APB participates in various projects, sometimes as a leader or coordinator and other times as a partner. Efforts have been made to ensure that the demonstrative actions cover the widest range of sectors and ways in which natural gas can be used as an alternative fuel.

With a budget of 17.5 million euros, 27 organizations are directly involved in collaborating on its development in the period 2017-2020.

Many countries and regions around the world are already promoting the introduction of natural gas trucks due to pollution concerns, fuel economy, and supply security reasons.

### CORE LNGas hive project. Sub-activity EPT1: Pilot of mobile generator with natural gas engine at dock to supply ro-ro vessel. 2014-2022

The port acts as coordinator and the project consists of building a mobile gas generator on the dock to supply electricity to the ship L'AUDACE (ro-ro ship) during its stay in port.

### CORE LNGas hive project. Sub-activity EPM1: Construction of loading arm from regasification terminal. 2014-2022

The port acts as a partner and the action involves building a flexible and cryogenic loading arm from one of the two berths of the LNG regasification terminal located in the port to allow LNG loading to barges.

### CORE LNGas hive project. Sub-activity EPM2: Modification of fuel supply barge to be able to supply LNG additionally. 2014-2022

The port acts as the coordinator and the action consists of modifying a barge so that it can accommodate LNG tanks and other equipment required to supply this fuel to ships.

### CORE LNGas hive Project. Sub-activity EV4: Design of a gas-powered tugboat. 2014-2022

The port acts as a coordinator and the action consists of designing a port tugboat powered by natural gas in compressed natural gas tanks..

### CORE LNGas hive project. Sub-activity EPM3: Transformation of the diesel engines of two straddle carrier machines to run on natural gas. 2014-2022

The port acts as coordinator and the action consists of replacing two diesel engines of two machines at the container terminal with natural gas engines.

### CREATORS Project. HORIZON 2020 Program: Energy communities and local energy service providers in Europe. 2020-2023

The port acts as a project partner and the action involves implementing energy communities in 10 locations.

### EALING Project. CEF Program: Transition to Alternative Fuels. 2020-2023

The port acts as a project partner and the action involves implementing measures for the construction of ship-to-shore electrical connection infrastructures (OPS).

### LNGHIVE2 Barcelona Project. CEF Program: Construction of a barge to supply LNG. 2020-2023

The port acts as a project partner and the action consists of building a barge to supply liquefied natural gas (LNG) as maritime fuel in the Port of Barcelona and adjacent areas.

### Project PIONEERS. HORIZON 2020 Program: Open network of portable innovation for Solutions and Emission Reduction. 2021-2026

The port acts as a partner and the action consists of implementing innovation actions in four fundamental pillars: production and supply of clean energy, design of sustainable ports, modal shift, and digital transformation.

# Best Practices agreements with Concessionaire Companies

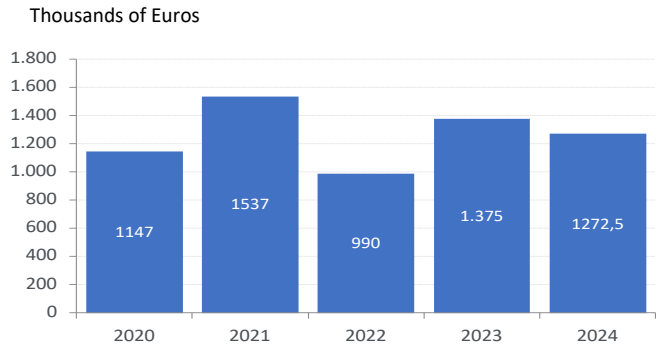
The Ports of the State and Merchant Marine Law contemplates the establishment of a discount on the activity fee of port facilities that have a concession or authorization, or a license for handling goods.

This bonus aims to incentivize good environmental practices and requires the facility to have implemented an environmental management system and to have signed an agreement with the Port Authority itself on environmental best practices, following the model of the Good Environmental Practices Guide of the Port of Barcelona, approved by the Port Authority on November 20, 2011, and revised on November 28, 2012.

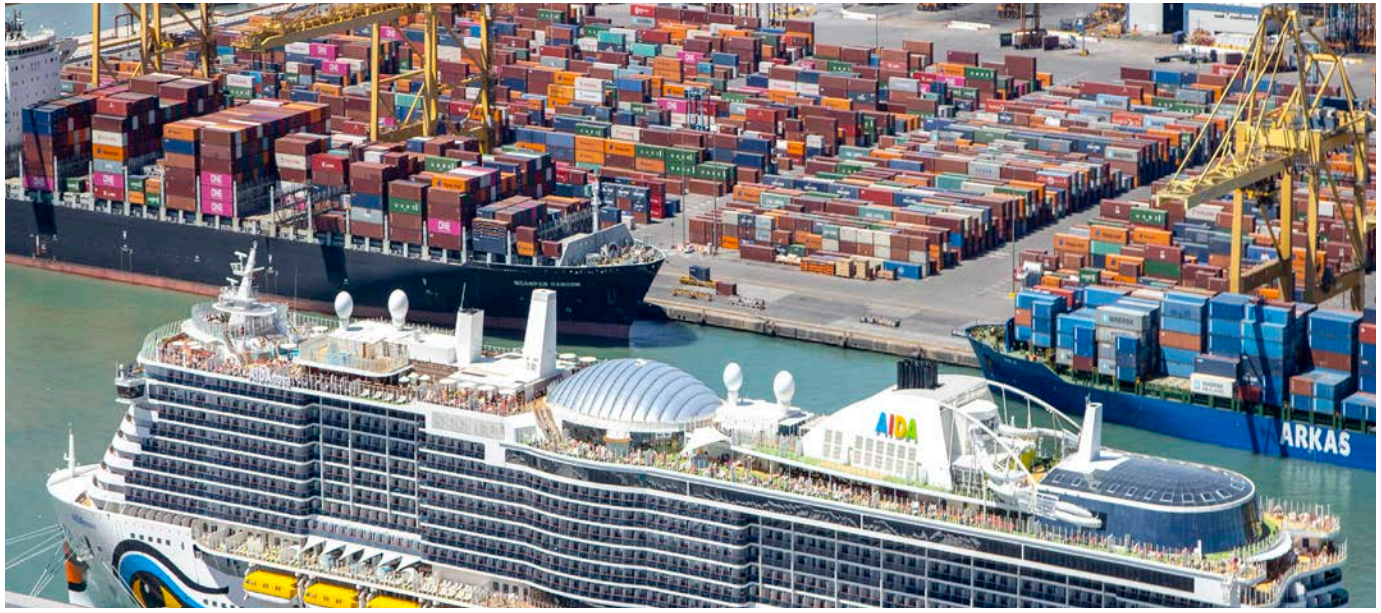
**In the agreement, the facilities commit to developing a program of improvements that involves economic investment in new equipment, systems, and supplies.**

In the year 2025, new content will be established to update these agreements, including new criteria.

## Evolution of subsidized environmental investment




Since 2020, the companies that have signed this agreement with the APB have made investments eligible for a bonus in the amount shown in the following graph, where we can see a slight reduction in the last year.



# ENVIRONMENTAL COMPLIANCE



# Competencies



## Port Authority Competencies

From an environmental point of view, the competences of the APB contemplated in the Ports Law are the following:

- Fight against pollution.
- Maintain and improve water quality.
- Ship waste collection service.
- Preventing soil pollution.
- Prevention and control of environmental risks (SPP and other instruments).
- Bonuses for ships and concessions for environmental performance.
- Environmental control of concessions and activities through ordinances, instructions, specifications, and concession agreements.

From a broad perspective, the environmental actions of the Port Authority also encompass the following competencies and management areas:

- Monitor air quality and ensure its improvement.
- Manage the wastewater generated by the facilities in the port service area.
- Manage environmental noise.
- Manage hazardous and non-hazardous waste.

**The Port Authority of Barcelona complies with the legal requirements applicable to it.**

## Basic applicable legal requirements

**The main legislation that the Port Authority of Barcelona must comply with derives from:**

1. International agreements for the protection of the sea
2. Sectorial legislation of the European Union on the environment
3. State and regional environmental legislation
4. Municipal ordinances and regulations

## International agreements

Among the main international agreements that condition port activity, the International Convention for the Prevention of Pollution from Ships 1973/78 stands out. The convention requires ports to have adequate and sufficient facilities for ships to dispose of their waste on land.

**The Port of Barcelona has granted 3 licenses for the provision of port services for the reception of oily liquid waste from ships, and 2 licenses for the reception of solid waste.**

## Air quality

The main regulation that applies to the port is the one that refers to air quality and atmospheric protection.

**The Port of Barcelona is subject to key legislation derived from the following sources:**

- Law 34/2007, of November 15, on air quality and atmospheric protection, defines and establishes the air quality objectives and serves as a regulatory framework for the development of national, regional, and local plans to improve air quality.
- Royal Decree 102/2011, of January 28, concerning the improvement of air quality, transposes into the Spanish legal system the content of Directive 2008/50/EC, of May 21, 2008, and Directive 2004/107/EC, of December 15, 2004.
- Royal Decree 34/2023, of January 24, amending Royal Decree 102/2011, of January 28, concerning the improvement of air quality; the Regulation on industrial emissions and the development of Law 16/2002, of July 1, on integrated pollution prevention and control, approved by Royal Decree 208/2022, of March 22, on financial guarantees in waste matters.

## Water quality

The main regulations that apply to the port are those related to the monitoring and evaluation of surface waters and environmental quality standards, as well as those referring to discharges from unitary sanitation systems into port waters.

- Royal Decree 817/2015, of September 11, establishing the monitoring and evaluation criteria for the state of surface waters and environmental quality standards.
- Royal Decree 509/1996, of March 15, developing the Royal Decree-Law 11/1995, of December 28, establishing the rules applicable to the treatment of urban wastewater, and subsequent modifications.

## Soil contamination

The main regulations that apply to the port are those related to potentially polluting activities and the criteria and thresholds for soil pollution levels.

- Law 7/2022 of April 8, on waste and contaminated soils for a circular economy.
- Royal Decree 9/2005, of January 14, establishing the list of potentially soil-polluting activities and the criteria and standards for the declaration of contaminated soils.

## Energy transition and climate change

The main regulation that applies to the port in terms of climate change is the one that promotes the installation of renewable energy sources and allows opening the electrical grids to new uses.

- Royal Decree-Law 17/2019, of November 22, adopting urgent measures for the necessary adaptation of remuneration parameters affecting the electrical system and responding to the process of cessation of activity of thermal power generation plants.
- Royal Decree 244/2019, of April 5, regulating the administrative, technical, and economic conditions of self-consumption of electrical energy.
- Royal Decree-Law 15/2018, of October 5, on urgent measures for energy transition and consumer protection.
- Law 7/2021, of May 20, on climate change and energy transition.
- DECREE LAW 24/2021, of October 26, on the acceleration of the deployment of distributed and participatory renewable energies.

## Most relevant legal provisions in 2024

**The main environmental legislation that specifically applies to the activity is quoted below:**

1. REGULATION (EU) 2024/573 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 February 2024 on fluorinated greenhouse gases, amending Directive (EU) 2019/1937, and repealing Regulation (EU) No 517/2014.
2. REGULATION (EU) 2024/590 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 February 2024 on substances that deplete the ozone layer and repealing Regulation (EC) No 1005/2009
3. REGULATION (EU) 2024/1157 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 April 2024 on waste shipments, amending Regulations (EU) No 1257/2013 and (EU) 2020/1056, and repealing Regulation (EC) No 1013/2006.
4. DECREE LAW 4/2024, of April 16, adopting urgent measures to alleviate the effects of drought in the river basin district of Catalonia.
5. Royal Decree 614/2024, of July 2, amending Royal Decree 487/2022, of June 21, establishing the health requirements for the prevention and control of legionellosis.
6. EDICT of his excellency Mr. Mayor dated February 2, 2024, by which, considering the declaration of a state of emergency due to hydrological drought, it is informed about the measures taken to minimize the effects.
7. Implementing Regulation (EU) 2024/2174 of 2 September 2024 laying down provisions for the implementation of Regulation (EU) 2024/573 of the European Parliament and of the Council as regards the format of labels for certain products and equipment containing fluorinated greenhouse gases and repealing Implementing Regulation (EU) 2015/2068 of the Commission. (OJ L, 03/09/2024)
8. Decree 132/2024, of 30/07/2024, approving the Air Quality Plan, horizon 2027, the Short-Term Action Plan for high levels of air pollution, and the regulatory determinations to achieve air quality objectives. (Official Gazette of Catalonia No. 9223, of 09/08/2024)
9. Royal Decree 164/2025, of March 4, approving the Regulation on fire safety in industrial establishments. (Official State Gazette No. 87, dated 10/04/2025)
10. Regulation (EU) 2025/40 of 19 December 2024 on packaging and packaging waste, amending Regulation (EU) 2019/1020 and Directive (EU) 2019/904 and repealing Directive 94/62/EC. (OJ L, 22/01/2025)

# REFERENCE DOCUMENTS



## Sectoral EMAS reference documents and guides

**On 18 May 2019, the applicability of Commission Decision (EU) 2019/61 of 19 December 2018** on the sectoral reference document on best environmental management practices, sectoral environmental performance indicators, and comparative parameters of excellence for the public administration sector within the framework of Regulation (EC) No 1221/2009 on the voluntary participation by organizations in a Community eco-management and audit scheme (EMAS) entered into force.

The APB, as an entity within the public administration sector, takes into account this sectoral reference document (SRD) when implementing and maintaining its management system and evaluating its performance through its environmental declaration.

To this end, this EMS describes a set of best environmental management practices (BEMP), behavioral indicators, and parameters of excellence that should be considered for those environmental aspects assessed as significant or having a major impact.

Given the characteristics of the activity carried out by the APB within the public administration sector, they are significantly applicable to the following sections:

- 3.1 Best environmental management practices for sustainable offices.
- 3.11 Best practices in environmental management in green public procurement.
- 3.12 Best practices in environmental management in environmental education and information dissemination.

This is why the APB has taken into account the MPGA included in these sections for the planning of measures and actions to improve its environmental performance, as well as identified others that were already being carried out and others that, even though not directly related to its significant environmental aspects, have been considered. All actions carried out, as well as those planned, are described in each of the chapters of this environmental statement.

Similarly, specific sectoral indicators for significant environmental aspects have been included in the EMAS indicators table attached at the end of this document.

## Benchmarks of excellence

The comparative parameters of excellence aim to measure the level of environmental performance by taking as a reference the results obtained by those organizations in the sector that have the highest levels of environmental performance.

The degree of compliance of the APB for those comparative parameters included in the sections that are applicable to it and that present favorable results after their evaluation is presented below. The section of the DRS where they are referenced is indicated in parentheses.

### Generation of waste in offices (3.1.3)

- No waste generated in office buildings is sent to landfills.

100% of the waste generated in offices is selectively collected for final valorization by authorized managers.

- The total waste generated in office buildings is less than 200 kg/full-time equivalent employee/year.

In 2024, the waste generation indicator in offices was 42.84 kg/full-time equivalent employee/year, well below the value of the comparative parameter.

### Office supplies consumption (3.1.4)

- The office paper used is 100% recycled or certified in accordance with an ISO type I eco-label (2) (for example, the EU eco-label).

Currently, all purchased paper is PEFC certified, which attests to the sourcing of raw materials from sustainable forests.

### Worker mobility (3.1.5)

- Tools are applied and promoted to encourage sustainable commuting between workers' homes and workplaces.

The APB provides its employees with free integrated public transportation cards.

- Video conferencing facilities are available for all staff, and their use is monitored and encouraged.

All office staff and port police have access to online platforms for video conferencing. Although in 2019 there was a low percentage of usage, a significant increase was already perceived in 2020 and 2021 due to the implementation of the state of alarm because of the COVID-19 pandemic, which has boosted the habit of using these platforms in the following years.

On the other hand, the port has implemented "flexiwork" which allows workers to telecommute from their homes one to two days a week.

## Reference documents

The information and data contained in this Environmental Declaration have been obtained or calculated from our own sources, and many of them are officially communicated to different environmental agencies and authorities.

The images and graphics included are either self-produced or acquired directly or indirectly from their authors for use in this Environmental Declaration.

**Additionally, the International Organization for Standardization (ISO) introduced amendments on climate change on February 22, 2024, modifying clauses 4.1 (Understanding the organization and its context) and 4.2 (Understanding the needs and expectations of interested parties).**

## Extracts derived from this Declaration

The Port Authority of Barcelona may edit and publish excerpts or summaries based on the information contained in this verified statement, in order to better disseminate and communicate environmental management information.

To do this, you will collect data and content accurately, without modifying the ones already validated, being able to indicate or refer to them in case of using other units and equivalences that are more understandable for the recipient of such information.

The digital version of these excerpts will be available to the public on the APB website in a grouped format for easier location.

In any case, any modification of this Environmental Declaration will be communicated and transmitted in writing to the certifying body for review and verification purposes so that such changes do not alter what has already been verified and established in accordance with the European EMAS Regulation.

## Basic environmental indicators

The following table shows basic environmental indicators related to the number of workers and the surface area of the APB.

# Indicators

| INDICATOR | VALUE OF ENVIRONMENTAL MAGNITUDE | | | | RATIOS R / EMPLOYEE | | | | RATIOS R / SURFACE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Magnitude B | 2022 | 2023 | 2024 | Unit A | 2022 | 2023 | 2024 | Unit R | 2022 | 2023 | 2024 | Unit R |
| | | | | | 537 emplo. | 563 emplo. | 537 emplo. | | 24,354 m² | 24,354 m² | 24,354 m² | |
| **MATERIALS CONSUMPTION** | | | | | | | | | | | | |
| Paper | 7 | 7 | 5 | t | 0.01 | 0.01 | 0.01 | t/emplo. | 0.0003 | 0.0003 | 0.0002 | t/m² |
| Maintenance auxiliary materials | 304 | 250 | 208 | l | 0.57 | 0.44 | 0.39 | l/emplo. | 0.01 | 0.0103 | 0.0085 | l/m² |
| Ditch and riprap | 101,206 | 4,763 | 6,433 | t | 188.47 | 8.46 | 11.98 | t/emplo. | 4.16 | 0.1956 | 0.2642 | t/m² |
| Concrete | 14,226 | 2,083 | 16,460 | m³ | 26.49 | 3.70 | 30.65 | m³/emplo. | 0.58 | 0.0855 | 0.6759 | m³/m² |
| Steel | 2,720 | 11,026 | 2,413 | t | 5.06 | 19.58 | 4.49 | t/emplo. | 0.11 | 0.4527 | 0.0991 | t/m² |
| Dredged materials | 0 | 0 | 0 | m³ | 0.00 | 0.00 | 0.00 | m³/emplo. | 0.00 | 0.0000 | 0.0000 | m³/m² |
| Backfill materials | 476,599 | 12,348 | 30,035 | m³ | 887.52 | 21.93 | 55.93 | m³/emplo. | 19.57 | 0.5070 | 1.2333 | m³/m² |
| Pavements | 0 | 142 | 17,041 | m³ | 0.00 | 0.25 | 31.73 | m³/emplo. | 0.00 | 0.0058 | 0.6997 | m³/m² |
| Wood | 0 | 0 | 116 | m³ | 0.00 | 0.00 | 0.22 | m³/emplo. | 0.00 | 0.0000 | 0.0048 | m³/m² |
| Particleboard | 7,666 | 0 | 17,774 | t | 14.28 | 0.00 | 33.10 | t/emplo. | 0.31 | 0.0000 | 0.7298 | t/m² |
| **ENERGY CONSUMPTION** | | | | | | | | | | | | |
| Total energy consumption | 7,821 | 8,729 | 9,139 | MWh | 14.56 | 15.89 | 17.02 | MWh/emplo. | 0.0026 | 0.0029 | 0.0030 | MWh/m² |
| Electricity consumption | 6,776.99 | 7,319.27 | 7,964.46 | MWh | 12.62 | 13.00 | 14.83 | MWh/emplo. | 0.0022 | 0.0024 | 0.0026 | MWh/m² |
| Fossil fuels consumption | 1,043.82 | 1,627.90 | 1,174.94 | MWh | 1.94 | 2.89 | 2.19 | MWh/emplo. | 0.04 | 0.0668 | 0.0482 | MWh/m² |
| Total renewable energy consumption | 4,778.09 | 7,319.27 | 7,964.46 | MWh | 8.90 | 13.00 | 14.83 | MWh/emplo. | 0.0016 | 0.0024 | 0.0026 | MWh/m² |
| Energy consumption in heating[PE] **** | 1.31 | 0.00 | 0.00 | MWh | 2.49 | 0.00 | 0.00 | kWh/FTE | 0.05 | 0.0000 | 0.0000 | kWh/m² |
| Electricity consumption in buildings **** | 3,648.69 | 3,801.26 | 4,050.16 | MWh | 6,949.89 | 6,911.38 | 7,718.85 | kWh/FTE | 149.82 | 156.08 | 166.30 | kWh/m² |
| Total energy consumption in buildings | 3,845.07 | 4,642.54 | 4,160.35 | MWh | 7,323.94 | 8,440.98 | 7,928.85 | kWh/FTE | 157.88 | 190.63 | 170.83 | kWh/m² |
| **WATER CONSUMPTION** | | | | | | | | | | | | |
| Irrigation water** | 49,227 | 7,649 | 2,600 | m³ | 91.67 | 13.59 | 4.84 | m³/emplo. | 2.09 | 0.3253 | 0.1106 | m³/m² |
| Water buildings | 13,491 | 10,295 | 12,284 | m³ | 25.12 | 18.29 | 22.88 | m³/emplo. | 0.55 | 0.4227 | 0.5044 | m³/m² |
| Water control booths | 540 | 568 | 640 | m³ | 1.01 | 1.01 | 1.19 | m³/emplo. | 0.02 | 0.02 | 0.03 | m³/m² |
| Total water*** | 63,258 | 18,512 | 15,524 | m³ | 117.80 | 32.88 | 28.91 | m³/emplo. | 1.32 | 0.3867 | 0.3243 | m³/m² |

| INDICATOR | VALUE OF ENVIRONMENTAL MAGNITUDE | | | | RATIOS R / EMPLOYEE | | | | RATIOS R / SURFACE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Magnitude B | 2022 | 2023 | 2024 | Unit A | 2022 | 2023 | 2024 | Unit R | 2022 | 2023 | 2024 | Unit R |
| | | | | | 537 emplo. | 563 emplo. | 537 emplo. | | 24,354 m² | 24,354 m² | 24,354 m² | |
| WASTE GENERATION | | | | | | | | | | | | |
| Total waste | 1,104 | 1,091 | 1,399 | t | 2.06 | 1.94 | 2.61 | t/emplo. | 0.05 | 0.0448 | 0.0575 | t/m² |
| Total hazardous waste | 46 | 3 | 65 | t | 0.09 | 0.005 | 0.120 | t/emplo. | 0.00188 | 0.00011 | 0.0027 | t/m² |
| Gases in pressurized vessels (including halons) containing hazardous substances | 0.2345 | 0 | 0.028 | t | 0.0004 | 0.0000 | 0.0001 | t/emplo. | 0.000010 | 0.00000 | 0.0000 | t/m² |
| Containers that contain residues of hazardous substances or are contaminated by them | 0.968 | 0 | 0.32 | t | 0.0018 | 0.0000 | 0.0006 | t/emplo. | 0.000040 | 0.00000 | 0.0000 | t/m² |
| Lead-acid batteries | 0.799 | 1.07 | 1.34 | t | 0.0015 | 0.0019 | 0.0025 | t/emplo. | 0.000033 | 0.00004 | 0.0001 | t/m² |
| Batteries | 0.128 | 0.06 | 0.04 | t | 0.0002 | 0.0001 | 0.0001 | t/emplo. | 0.000005 | 0.00000 | 0.0000 | t/m² |
| Fluorescent lamps | 0 | 0.05 | 0 | t | 0.0000 | 0.0001 | 0.0000 | t/emplo. | 0.000000 | 0.00000 | 0.0000 | t/m² |
| Electronic waste | 0 | 15.6 | 0 | t | 0.0000 | 0.0277 | 0.0000 | t/emplo. | 0.000000 | 0.00064 | 0.0000 | t/m² |
| Toner | 0.2655 | 0.34 | 0 | t | 0.0005 | 0.0006 | 0.0000 | t/emplo. | 0.000011 | 0.00001 | 0.0000 | t/m² |
| Emulsions and Halogen-Free Machining Solutions | 0.133 | 0 | 0.06 | t | 0.0002 | 0.0000 | 0.0001 | t/emplo. | 0.000005 | 0.00000 | 0.0000 | t/m² |
| Toilets | 0 | 0.07 | 0.08 | t | 0.0000 | 0.0001 | 0.0001 | t/emplo. | 0.000000 | 0.00000 | 0.0000 | t/m² |
| Oils from sentina collected at docks | 0 | 0 | 14.5 | t | 0.0000 | 0.0000 | 0.0270 | t/emplo. | 0.000000 | 0.00000 | 0.0006 | t/m² |
| Absorbents | 3.825 | 0.49 | 1.233 | t | 0.0071 | 0.0009 | 0.0023 | t/emplo. | 0.000157 | 0.00002 | 0.0001 | t/m² |
| Other solvents | 0.079 | 0.13 | 0.132 | t | 0.0001 | 0.0002 | 0.0002 | t/emplo. | 0.000003 | 0.00001 | 0.0000 | t/m² |
| Used oils | 0.313 | 0.01 | 0.559 | t | 0.0006 | 0.0000 | 0.0010 | t/emplo. | 0.000013 | 0.00000 | 0.0000 | t/m² |
| Paper and cardboard | 36.21 | 35.53 | 37.90 | t | 0.0674 | 0.0631 | 0.0706 | t/emplo. | 0.001487 | 0.00146 | 0.0016 | t/m² |
| Light packaging | 3.26 | 7.37 | 7 | t | 0.0061 | 0.0131 | 0.0130 | t/emplo. | 0.000134 | 0.00030 | 0.0003 | t/m² |
| Glass | 3.38 | 4.67 | 3.38 | t | 0.0063 | 0.0083 | 0.0063 | t/emplo. | 0.000139 | 0.00019 | 0.0001 | t/m² |
| Scrap | 7.53 | 0 | 28.19 | t | 0.0140 | 0.0000 | 0.0525 | t/emplo. | 0.000309 | 0.00000 | 0.0012 | t/m² |
| Debris from minor construction work | 276.98 | 381.83 | 513.16 | t | 0.5158 | 0.6782 | 0.9556 | t/emplo. | 0.011373 | 0.01568 | 0.0211 | t/m² |
| Tires and fenders | 46.56 | 35.37 | 42.16 | t | 0,0867 | 0.0628 | 0.0785 | t/emplo. | 0.001912 | 0.00145 | 0.0017 | t/m² |
| Banal | 458.857 | 507.22 | 583.66 | t | 0,8545 | 0.9009 | 1.0869 | t/emplo. | 0.018841 | 0.02083 | 0.0240 | t/m² |
| Plastic Packaging | 3.0545 | 0 | 4.47 | t | 0,0057 | 0.0000 | 0.0083 | t/emplo. | 0.000125 | 0.00000 | 0.0002 | t/m² |
| Sewer cleaning waste | 70.28 | 90.54 | 59.72 | t | 0,1309 | 0.1608 | 0.1112 | t/emplo. | 0.002886 | 0.00372 | 0.0025 | t/m² |
| Clothing | 0.127 | 0 | 0.38 | t | 0,0002 | 0.0000 | 0.0007 | t/emplo. | 0.000005 | 0.00000 | 0.0000 | t/m² |
| Hygienic | 0.0617 | 0.22 | 0.00 | t | 0,0001 | 0.0004 | 0.0000 | t/emplo. | 0.000003 | 0.00001 | 0.0000 | t/m² |
| Gardening | 0 | 1.72 | 0.00 | t | 0,0000 | 0.0031 | 0.0000 | t/emplo. | 0.000000 | 0.00007 | 0.0000 | t/m² |
| Rejected equipment containing hazardous components | 0 | 0 | 0.34 | t | 0,0000 | 0.0000 | 0.0006 | t/emplo. | 0.000000 | 0.00000 | 1.4E-5 | t/m² |

| INDICATOR | VALUE OF ENVIRONMENTAL MAGNITUDE | | | | RATIOS R / EMPLOYEE | | | | RATIOS R / SURFACE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2022 | 2023 | 2024 | Unit A | 2022 | 2023 | 2024 | Unit R | 2022 | 2023 | 2024 | Unit R |
| Magnitude B | | | | | 537 emplo. | 563 emplo. | 537 emplo. | | 24,354 $m^2$ | 24,354 $m^2$ | 24,354 $m^2$ | |
| Rejected equipment that DOES NOT contain hazardous components | 9.022 | 0 | 2.41 | t | 0.0168 | 0.0043 | 0.0045 | t/emplo. | 3.7E-4 | 0.00010 | 0.0001 | $t/m^2$ |
| Concrete mixes, bricks, tiles, and ceramic materials | 139.89 | 0 | 37.98 | t | 0.2605 | 0.0000 | 0.0707 | t/emplo. | 5.744E-3 | 0.00000 | 0.0016 | $t/m^2$ |
| Biodegradable waste | 2.4 | 0 | 2.32 | t | 0.0045 | 0.0000 | 0.0043 | t/emplo. | 9.9E-5 | 0.00000 | 0.0001 | $t/m^2$ |
| Aqueous liquid waste containing hazardous substances | 39.02 | 0 | 45.64 | t | 0.0727 | 0.0000 | 0.0850 | t/emplo. | 1.602E-3 | 0.00000 | 0.0019 | $t/m^2$ |
| Metallic mercury | 0.395 | 0 | 0 | t | 0.0007 | 0.0000 | 0.0000 | t/emplo. | 1.6E-5 | 0.00000 | 0.0000 | $t/m^2$ |
| Waste generated on a one-off basis | 0 | 8.64 | 0 | t | 0.0000 | 0.0153 | 0.0000 | t/emplo. | 0.00000 | 0.00035 | 0.0000 | $t/m^2$ |
| Sludge cleaning, peeling, centrifugation, and separation | 0 | 0 | 6 | t | 0.0000 | 0.0000 | 0.0112 | t/emplo. | 0.00000 | 0.00000 | 0.0002 | $t/m^2$ |
| Waste from collection and disposal for which no special requirements apply | 0 | 0 | 0.14 | t | 0.0000 | 0.0000 | 0.0003 | t/emplo. | 0.00000 | 0.00000 | 6.0E-6 | $t/m^2$ |
| Wood | 0 | 0 | 5.68 | t | 0.0000 | 0.0000 | 0.0106 | t/emplo. | 0.00000 | 0.00000 | 0.0002 | $t/m^2$ |
| Rejected equipment containing chlorofluorocarbons | 0 | 0 | 0.14 | t | 0.0000 | 0.0000 | 0.0003 | t/emplo. | 0.00000 | 0.00000 | 1.0E-5 | $t/m^2$ |
| Organic waste containing hazardous substances | 0 | 0 | 0.18 | t | 0.0000 | 0.0000 | 0.0003 | t/emplo. | 0.00000 | 0.00000 | 1.0E-5 | $t/m^2$ |
| BIODIVERSITY | | | | | | | | | | | | |
| Total land use | 10,421,261 | 10,421,261 | 10,421,261 | $m^2$ | 19,406 | 18,510.23 | 19,406.44 | $m^2$/emplo. | - | - | - | - |
| Total sealed area | 8,084,042 | 8,084,042 | 8,084,042 | $m^2$ | 15,054 | 14,358.87 | 15,054.08 | $m^2$/emplo. | - | - | - | - |
| Total surface in the east-facing center oriented according to nature | 8,000 | 8,000 | 8,000 | $m^2$ | 15 | 14.21 | 14.90 | $m^2$/emplo. | - | - | - | - |
| EMISSIONS | | | | | | | | | | | | |
| $CO_2$eq emissions | 496 | 494 | In calculus | $teqCO_2$ | 0.92 | 0.88 | In calculus | $tCO_2$eq/emplo. | 0.0204 | 0.0203 | In calculus | $tCO_2eq/m^2$ |
| $CO_2$eq emissions from buildings | 279 | 286 | In calculus | $teqCO_2$ | 531.03 | 519.13 | In calculus | $kgCO_2$eq/FTE. | 11.4474 | 0.0117 | In calculus | $kgCO_2eq/m^2$ |

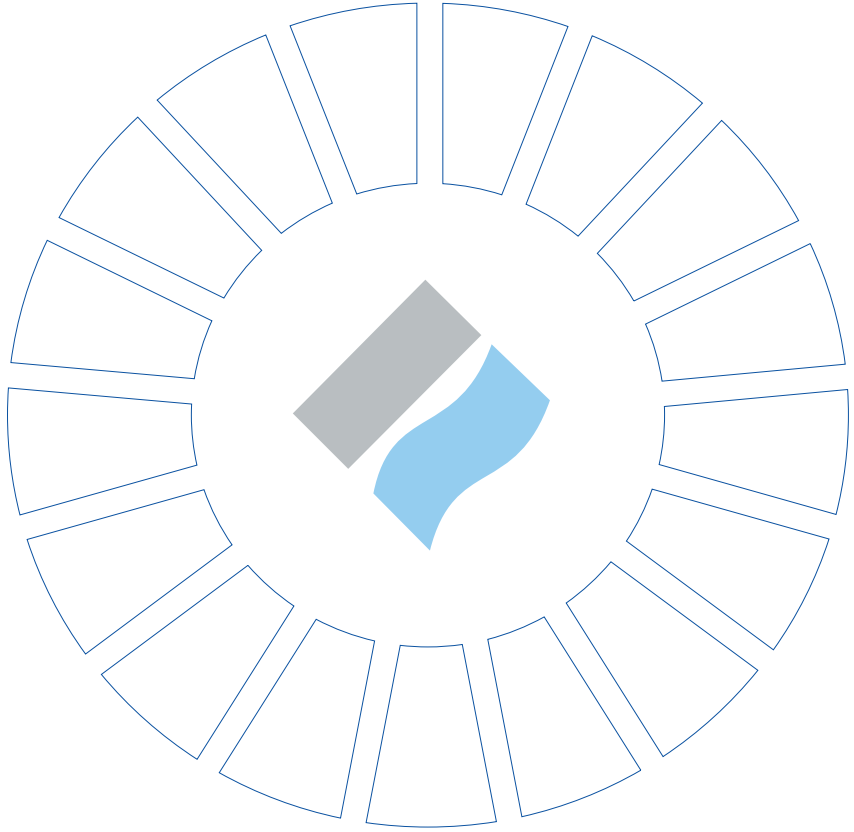
Notes:
* Surface area of illuminated indoor and outdoor facilities: 3,041,743 $m^2$.

** Irrigated green area: 23,512 $m^2$.
*** Irrigated green area + facilities: 47,866 $m^2$.
**** Sectorial indicator for public administration associated with significant environmental aspects

PE - Primary energy
FTE (Full-time equivalent employee): 525

# Agenda 2030

SUSTAINABLE DEVELOPMENT GOALS



# Statement Validation

## ENVIRONMENTAL STATEMENT VALIDATED BY:

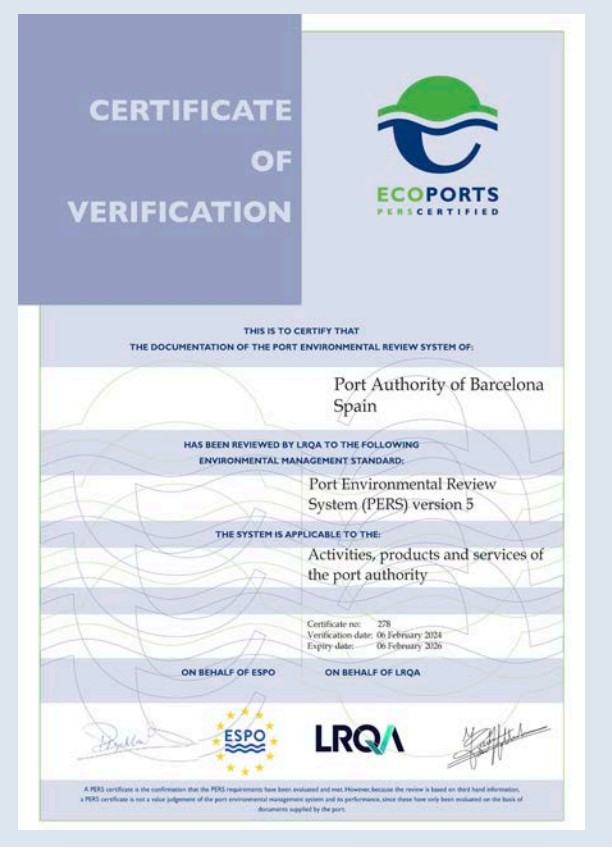
**ENVIRONMENTAL VERIFIER:** Cámara Certifica

**NUMBER: ES-V-0017**

**VERIFIER:** Alfredo Sanchis Pérez

EMAS
VERIFIED ENVIRONMENTAL MANAGEMENT
**ES-CAT-000430**

# Environmental management certificates



CERTIFICATE OF VERIFICATION

ECOPORTS PERS CERTIFIED

THIS IS TO CERTIFY THAT
THE DOCUMENTATION OF THE PORT ENVIRONMENTAL REVIEW SYSTEM OF:

Port Authority of Barcelona
Spain

HAS BEEN REVIEWED BY LRQA TO THE FOLLOWING
ENVIRONMENTAL MANAGEMENT STANDARD:

Port Environmental Review System (PERS) version 5

THE SYSTEM IS APPLICABLE TO THE:

Activities, products and services of the port authority

Certificate no: 278
Verification date: 06 February 2024
Expiry date: 06 February 2026

ON BEHALF OF ESPO | ON BEHALF OF LRQA

ESPO | LRQA

A PERS certificate is the confirmation that the PERS requirements have been evaluated and met. However, because the review is based on third hand information, a PERS certificate is not a value judgement of the port environmental management system and its performance, since these have only been evaluated on the basis of documents supplied by the port.

EMAS

CERTIFICAT DE REGISTRE

El Departament de Territori, Habitatge i Transició Ecològica
certifica que el centre de l'organització

AUTORITAT PORTUÀRIA DE BARCELONA
amb seu a Moll de Barcelona, Edifici WTCB Est, s/n de Barcelona

ha estat inscrit al registre EMAS amb el número

ES-CAT-000430

D'acord amb la Resolució de 4 d'octubre de 2024 del director general de Qualitat Ambiental i Canvi Climàtic i amb el que preveuen els articles 13 i 14 del Reglament 1221/2009, del Parlament Europeu i del Consell, de 25 de novembre de 2009, relatiu a la participació voluntària d'organitzacions en un sistema comunitari de gestió i auditoria ambiental (EMAS). Els requisits del sistema de gestió ambiental EMAS són els mateixos que estableix la norma EN ISO 14001:2015.

Data d'inscripció: 07/10/2014
Data 2ª renovació: 04/10/2024
Validesa del certificat: 08/07/2027

Silvia Paneque i Sureda,
Consellera de Territori, Habitatge i Transició Ecològica

Generalitat de Catalunya
**Departament de Territori, Habitatge i Transició Ecològica**

Document signat digitalment per: Silvia Paneque I Sureda (05/10/2024 07:50 CEST)

LRQA

Certificado de Aprobación

Certificamos que el Sistema de Gestión de :

AUTORITAT PORTUARIA DE BARCELONA

Wold Trade Center Barcelona, Edificio Este, Muelle de Barcelona s.n., 08039 Barcelona, España

ha sido aprobado por LRQA de acuerdo con las siguientes normas:

ISO 14001:2015

Números de Aprobación: ISO 14001 – 00015846

El alcance de esta aprobación es aplicable a:

Gestión de dominio público portuario y de las actividades asociadas al transporte marítimo y obras de infraestructura y mantenimiento, en las terminales de contenedores y polivalentes, de ferries, de automóviles, de líquidos a granel, de café y cacao, sólidos a granel, pasajeros y la Zona de Actividades Logísticas del Puerto de Barcelona.

18023690Q OLGA RIVAS (R: B86612140)

Marta Escudero

Regional Director, Europe

Emitido por: LRQA Limited

UKAS

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