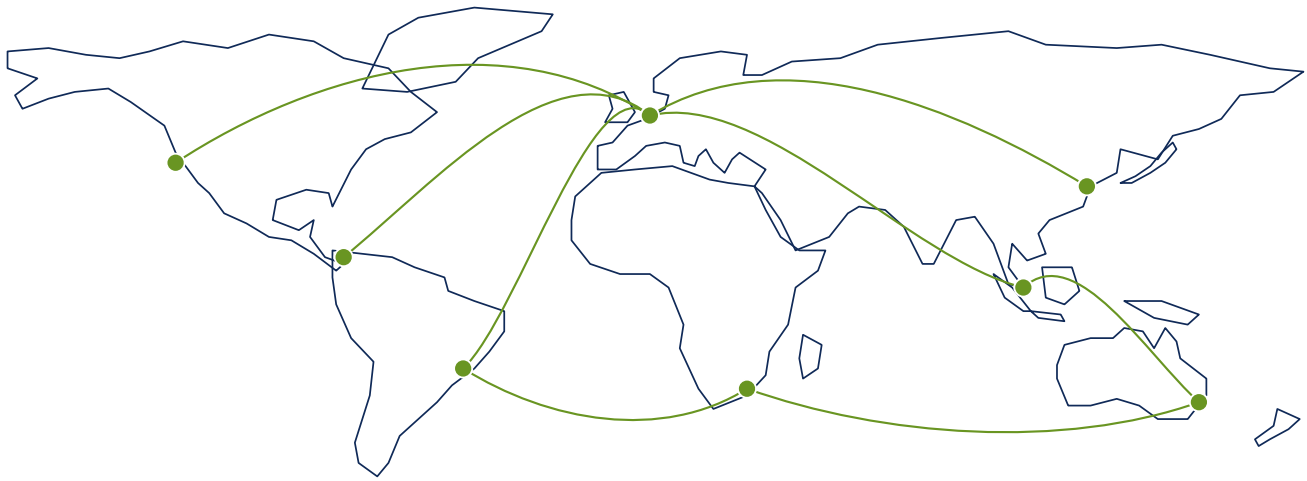
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Sustainability Report 2026

Advancing sustainable ports and terminals



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Prepared by

Dr Martí Puig (Universitat Politècnica de Catalunya)

Dr Chris Wooldridge (Science Coordinator, EcoPorts)

Professor Rosa Mari Darbra (Universitat Politècnica de Catalunya)

Prepared for

EcoSLC Board, October 2026

Acknowledgements

The authors acknowledge with grateful thanks the support of Mr. Stavros Kokosioulis for his assistance with data extraction. Tribute is also paid to the ports and terminals that are members of the EcoSLC network for their ongoing efforts through effective environmental management programmes to deliver both environmental protection and sustainable commercial activities as part of their business plans.

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Executive Summary

This report presents the results of the 2026 EcoSLC assessment of environmental management and sustainability practices, based on information provided through the EcoPorts Self Diagnosis Method (SDM) by 41 ports and terminals located in 19 non-European countries. The analysis provides a benchmark of current practice and examines developments in environmental management, monitoring, climate change, sustainability and green services to shipping. The key findings are presented below.

The assessment takes place within a growing international EcoPorts framework. As of September 2026, the global EcoPorts network comprises 122 members across 43 countries, with 63 PERS-certified ports and 73 ISO-certified ports, illustrating the continued international uptake of the EcoPorts approach.

- **Environmental management remains highly consolidated.** In 2026, 95% of participating ports report a certified Environmental Management System.
- **Transparency and stakeholder communication remain strong.** 98% of ports communicate their Environmental Policy to relevant stakeholders.
- **Sustainability is becoming more firmly embedded in port management.** The proportion of ports undertaking a materiality assessment increased to 85%.
- **Climate Action is increasingly reflected in port policy.** References to SDG 13 – Climate Action increased from 76% to 88%.
- **Environmental monitoring is broadening.**
- **Climate-related operational challenges are being reported more frequently, while adaptation is becoming increasingly integrated into infrastructure planning.** 63% of ports report climate-related operational challenges.
- **Sea-level rise and infrastructure vulnerability dominate climate concerns.** Sea-level rise is identified by 83% of ports and damage to infrastructure by 80%.
- **Air quality remains the leading environmental priority, while climate change continues to gain prominence.**
- **OPS deployment presents a mixed picture.** Onshore Power Supply is reported as available at one or more berths by 51% of participating ports.
- **The marine alternative-fuel landscape remains diverse and at an early stage of deployment.** LNG bunkering is still not operational among participating ports, but 7% report ongoing LNG infrastructure projects. Biofuels remain the most frequently reported alternative-fuel infrastructure project.
- **Environmentally differentiated port dues remain in a period of consolidation.**
- **Of the two clean-mobility options considered, electrification is currently the more mature for land transport.** Electric charging stations for cars and/or trucks are available at 37% of participating ports.

Overall, the 2026 results show a mature environmental management base combined with an expanding sustainability agenda. Within this context, the EcoPorts SDM and PERS continue to provide a common framework for benchmarking, continuous improvement, transparency and the progressive integration of emerging sustainability priorities.

Foreword

Ports are operating at the forefront of the sustainability transition. They must continue to manage the immediate environmental impact of port activities while preparing their infrastructure, services and partnerships for the longer-term challenges of climate change, decarbonisation, biodiversity and changing expectations from society, regulators and markets.

This report offers an encouraging picture of the progress being made world-wide. Environmental management is now firmly embedded across the participating ports: 95% report a certified Environmental Management System. And the core elements of effective environmental governance, including policy, legal inventories, monitoring programmes and documented responsibilities, are almost universally in place. This provides a strong platform for continuous improvement, transparency and collective learning.

Two findings stand out in particular. First, climate change has risen to second place among ports' environmental priorities, while air quality remains the leading concern. This demonstrates that ports are maintaining attention to their immediate operational and community impacts while recognising climate change as a strategic issue for infrastructure, investment and future competitiveness. Second, climate resilience is increasingly being integrated into practice: 80% of participating ports report adapting existing infrastructure, and 83% take climate adaptation into account when developing new infrastructure.

The next stage is to build on these strong management foundations. Environmental Management Systems remain essential for identifying risks, monitoring performance and ensuring accountability. At the same time, the transition towards net-zero port ecosystems requires these systems to connect with strategic decision-making, investment planning, clean-energy infrastructure, stakeholder coordination and commercial incentives.

I warmly acknowledge the researchers who collected, structured and analysed the data underpinning this report. Their rigorous work enables the EcoPorts community, supported by ESPO in Europe and EcoSLC beyond Europe, to turn the practical experience of individual ports into shared evidence, benchmarking and actionable insight. Such collaborative knowledge-building is indispensable as ports navigate a transition that no organisation can deliver alone.

Dr. Mark van der Veen

University of Amsterdam

1. Introduction

The development and implementation of Environmental Management Systems by ports and terminals are essential.

Ports and terminals are increasingly faced with a wide range of environmental impacts, including emissions to air and water, noise, energy consumption, waste streams, soil risks and damage to biodiversity. **An Environmental Management System (EMS) provides a structured approach to identifying these impacts**, managing legal obligations, improving environmental performance and reporting transparently to public authorities, customers and other stakeholders.

EcoPorts provides a port-specific environmental management framework covering the range of activities taking place within a port. Its structured approach supports ports in addressing environmental challenges while balancing environmental objectives with the longer-term operational and commercial continuity of the port or terminal. Innovation in port processes can contribute both to reducing environmental impacts and to improving efficiency and reducing costs. This broader integration of environmental and business considerations is further examined in Chapter 2.

The **EcoPorts PERS certificate** confirms that the relevant port authority or terminal has correctly and effectively implemented EcoPorts.

A two-year validity period has been deliberately chosen for the EcoPorts PERS certificate. For recertification, the port authority or terminal must demonstrate the progress made towards achieving the long-term objectives. These objectives can be broken down into short-term targets with associated KPIs, which can be achieved within the two-year period. This makes EcoPorts a practical management system for improving the sustainability of the port or terminal, and thus ensures it is not merely a 'paper exercise'.

In the EcoPorts concept, the (re-)certification process begins with an 'assessment' of the current state of affairs regarding the relevant challenges facing the port authority or terminal from an environmental and sustainability perspective. EcoPorts has developed the **Self Diagnosis Method (SDM)** for this purpose. The SDM consists of a targeted online questionnaire covering common environmental and sustainability aspects, how the related challenges are being addressed and whether sufficient resources are available.

Key trends in making ports and terminals more sustainable

1. **Alternative fuels:** More types of alternative fuels for shipping are becoming available. However, uncertainty remains regarding the global scale-up of production, the availability of bunker infrastructure in ports and future regulatory requirements. As a result, shipping lines are increasingly choosing dual or even triple fuel engines. This provides flexibility over time as the different fuel pathway evolves. It also means that port authorities are aiming for multi-fuel availability and are developing the necessary infrastructure in their ports.

2. **Electrification of port and terminal operations:** Terminals are electrifying cranes, terminal tractors, AGVs and internal transport. Batteries, smart charging control and energy storage are growing and improving, but grid congestion makes phasing and energy management crucial. In addition, the supply of electricity is increasingly provided by offshore wind farms and onshore solar panel parks.

3. **Green and digital corridors.** Ports, shipping companies, terminals, shippers and fuel suppliers are implementing sustainability measures per trade route. Digital port-call optimisation systems, just-in-time arrivals, optimising use of empty capacities in the chain and provision of reliable emissions data reduce fuel consumption and minimise waiting times, making the entire transport chain more efficient and hence reducing costs as well.

4. **OPS becomes basic infrastructure**, at least for certain vessel types. In certain EU ports, regulations concerning OPS or comparable zero-emission technologies will become applicable from 2030 for container and passenger vessels.
   Developing OPS creates an investment dilemma: The port or terminal invests in onshore infrastructure, the network administrator must create sufficient capacity in the electricity grid, and the shipowner must adapt the vessel. The financial outcome of each investment depends on the utilisation rate and electricity prices over time.

5. **Ports become essential hubs for industrial energy transition and circularity:** The import, storage and distribution of hydrogen carriers and clean (bio) fuels, re-use of available CO_2 and heat, as well as the landing, conversion and distribution of renewable electricity are becoming new value chains. CO_2 infrastructure and circular raw material flows are also set to play a greater role and create new value chains.

6. **Greater focus on supply chain emissions:** The focus is broadening from the port's own carbon footprint to emissions from shipping, cargo handling, hinterland transport and industry within the port area. This requires common measurement methods, data sharing and clear 'well-to-wake' performance.

7. **Climate adaptation alongside mitigation:** Rising sea levels, heatwaves, droughts, storms and extreme high tides affect infrastructure and business continuity. Ports are therefore increasingly incorporating adaptation into their maintenance, area development and new investment plans.

8. **Environmental quality and circularity are becoming key topics:** Air quality, nitrogen, noise, water quality, biodiversity and material reuse are gaining importance in port planning and public support. Currently we see worldwide uncertainty around the future of global trade flows and industrial developments in port areas, partly due to ongoing geopolitical tensions in different parts of the world. This uncertainty may lead shipping companies, terminals and port-related industries to place greater focus on shorter-term economic and commercial interests, rather than on longer-term sustainability objectives and targets**.**

This has also led to discussions with governments to allow more time to meet strict legal requirements and deadlines for achieving results in reducing the environmental impact of port operations, industry, transport and logistics.

Recent political debates on regulations concerning the reduction of environmental impact and investments in such reductions have, in some instances, introduced uncertainty into the investment decision-making process.

Similar uncertainty can also be seen in the development of renewable energy projects, including offshore wind. Economic conditions, investment uncertainties, grid capacity and changing regulatory frameworks can all influence the pace at which such projects are developed and implemented.

At the same time, we observe growing interest in independently assessed environmental reports and improvement standards, such as EcoPorts.

To help address this development, EcoSLC is currently working on an improved and more user-friendly version of the SDM Questionnaire as well as a restructuring of the PERS documents which are required for achieving the EcoPorts PERS (re-)certification. These “upgrades” are expected to lead to a more efficient and effective process of (re-)certification and will become available early 2027.

The new versions of both SDM and PERS will underline the unique value of the EcoPorts concept in particular for the port and terminal sector.



Port of Devonport, Tasmanian Ports Corporation, Australia

2. Strategic integration of sustainability in port management

Before presenting the broader annual assessment in Chapter 3, this chapter provides a focused analysis of how environmental and sustainability priorities are being integrated into strategic and organisational decision-making across the 2026 EcoSLC sample. Drawing on selected questions from the EcoPorts Self Diagnosis Method (SDM), it examines aspects of sustainability integration that are not explored in the same level of detail in the general results section, including planning, resource allocation, stakeholder governance and emerging transition priorities.

The analysis is organised around five dimensions: i) strategic implementation, ii) port-community governance, iii) effective utilisation of transition infrastructure, iv) climate governance, and v) nature-related governance. These five dimensions are addressed in the following subsections in the same order. Together, they provide a complementary perspective on the extent to which sustainability considerations are becoming embedded in the strategic and organisational foundations of port management. Chapter 3 subsequently presents the broader annual assessment of environmental management, monitoring, climate adaptation, sustainability and green services across the 2026 EcoSLC sample.

2.1. From environmental commitments to strategic implementation

The integration of sustainability into port management requires environmental commitments to be translated into measurable objectives, resources, planning mechanisms and performance monitoring. Selected SDM indicators provide insight into the extent to which these elements are present across the 2026 EcoSLC sample.

Table 1: Selected indicators of strategic implementation and resource allocation

Indicator	2026 (%)
Roadmap for greening in place	78
Quantitative objectives defined for selected climate- and emission-related areas	73
Targets defined for environmental objectives	90
Specific budget for Environmental Management	100
Environmental Management budget allocated to clean maritime fuel infrastructure	24
Environmental Management budget allocated to environmentally differentiated port fees	27
Costs and benefits considered in the review of the Environmental Management Programme*	79
Environmental sustainability KPIs in place	83

* The percentage for this indicator is calculated on the basis of the 38 ports (93% of the sample) reporting a procedure to review their Environmental Management Programme, not out of the total of participating ports.

The results indicate a high level of formal integration of environmental management into organisational planning. All participating ports report having a specific Environmental Management budget, while 90% have defined environmental targets, 83% report environmental

sustainability KPIs and 78% have a roadmap for greening covering port operations and/or activities of other port stakeholders. Quantitative objectives for the selected climate and emission-related areas covered by the SDM are reported by 73% of the sample.

A clearer distinction emerges when considering the allocation of resources to specific transition measures. Although every participating port reports having an Environmental Management budget, only 24% indicate that funding is allocated to clean maritime fuel infrastructure and 27% to environmentally differentiated port fee schemes. These figures do not indicate the proportion of total expenditure devoted to these measures, but show that specific financial support for selected decarbonisation and incentive instruments is considerably less widespread than general environmental budgeting.

Business considerations are also incorporated into environmental management. Among the 38 ports with a formal procedure for reviewing their Environmental Management Programme, 30 (79%) report that costs and benefits are considered as part of the review. Overall, the findings indicate that planning, budgeting and performance mechanisms are widely established, while more specific transition-oriented funding and implementation mechanisms remain less uniformly embedded.

2.2. Extending environmental governance beyond the Port Authority

Ports operate through networks of terminal operators, logistics companies, shipping lines, contractors, industries and public authorities. Environmental performance therefore depends not only on activities controlled directly by the Port Authority, but also on how environmental considerations are extended to the wider port community.

Table 2: Selected indicators of stakeholder and value-chain integration

Indicator	2026 (%)
Environmental Policy considers stakeholder needs and expectations	83
Significant Environmental Aspects inventory considers suppliers	88
Significant Environmental Aspects inventory considers logistics operators	80
Significant Environmental Aspects inventory considers shipping companies	71
Significant Environmental Aspects inventory considers industry	63
Carbon footprint includes Port Authority and port stakeholders	56
Carbon footprint includes Port Authority, stakeholders and third parties, including ships	51
External stakeholders involved in materiality assessment*	80
Environmental Policy reflects identified material issues*	91

* The percentages for these indicators are calculated on the basis of the 35 ports (85% of the sample) that had undertaken a materiality assessment, not out of the total of participating ports.

Stakeholder considerations are widely incorporated into environmental management. 83% of participating ports report that their Environmental Policy takes account of stakeholder needs and expectations. Third-party activities are also frequently considered when identifying Significant Environmental Aspects, although coverage varies between stakeholder groups: suppliers are included by 88% of ports, logistics operators by 80%, shipping companies by 71% and industry by 63%.

A more differentiated pattern appears in carbon accounting. While the annual assessment shows that 83% of participating ports calculate a carbon footprint for Port Authority activities, only 56% extend the footprint to port stakeholders such as terminals, tenants and contractors, and 51% extend it further to third parties, including ships. This indicates that quantitative greenhouse gas accounting across the wider port ecosystem is less widespread than the incorporation of stakeholders into environmental management processes.

Materiality assessment provides further evidence of this broader governance perspective. Of the 35 ports undertaking a materiality assessment, 80% involve external stakeholders and 91% report that identified material issues are reflected in their Environmental Policy. Taken together, the results show that port-community considerations are widely incorporated into policy and environmental assessment, while whole-port or value-chain carbon accounting remains less widespread.

2.3. From infrastructure provision to effective utilisation

Infrastructure availability alone does not indicate whether low-emission technologies are actually used. OPS provides a useful example because the main annual assessment already measures infrastructure availability, while additional SDM questions address utilisation and factors influencing uptake.

Table 3: Selected indicators of OPS utilisation and uptake

Indicator	2026 (%)
OPS available at one or more berths	51
OPS used by ships when available*	76
Voluntary agreements with shipping companies influence OPS uptake**	63
Electricity tax exemption influences OPS uptake**	13
Pressure from local authorities/community influences OPS uptake**	56
Obligation from local authorities influences OPS uptake**	56

* The percentage for this indicator is calculated on the basis of the 21 ports (51% of the sample) offering OPS, not out of the total of participating ports.

** The percentages for these indicators are calculated on the basis of the 16 ports reporting that ships use OPS when available, not out of the total of participating ports. Multiple responses were permitted.

Among the 21 ports reporting OPS availability, 16 (76%) indicate that ships use the infrastructure when it is available. Among these ports, voluntary agreements with shipping companies are the most frequently reported factor influencing uptake (63%), while pressure from local authorities or communities and obligations from local authorities are each reported by 56%. Electricity tax exemptions are reported much less frequently (13%).

These findings illustrate that port decarbonisation cannot be assessed solely through infrastructure availability. Effective deployment also depends on actual utilisation, vessel demand and institutional conditions. The distinction between infrastructure provision and actual uptake is therefore important when assessing progress towards lower-emission port services.

2.4. From climate adaptation to climate governance

The main annual assessment shows increasing attention to climate-related operational impacts and infrastructure adaptation. Additional SDM indicators make it possible to examine whether climate change is also becoming embedded in organisational responsibility, risk assessment and disclosure.

Table 4: Selected indicators of climate resilience and governance

Indicator	2026 (%)
Action taken to strengthen operational resilience	93
Climate change risk/opportunity assessment conducted	63
Climate risk assessment aligned with TCFD recommendations*	58
Climate risks/opportunities disclosed to stakeholders*	69
Personnel nominated to manage climate change	78

* The percentages for these indicators are calculated on the basis of the 26 ports (63% of the sample) that had undertaken a climate change risk/opportunity assessment, not out of the total of participating ports.

Operational resilience is widely incorporated into port management, with 93% of participating ports reporting action to strengthen the resilience of port operations. Institutional responsibility is also relatively widespread, with 78% having nominated personnel responsible for managing climate change.

More specialised climate-governance practices show lower levels of implementation. 26 ports (63%) have undertaken a climate risk/opportunity assessment. Among these ports, 58% report alignment with Task Force on Climate-related Financial Disclosures (TCFD) recommendations and 69% disclose climate-related risks or opportunities to stakeholders.

The results therefore suggest that climate change is being addressed beyond infrastructure adaptation through broader organisational governance. Operational resilience and institutional responsibility are widely reported, while structured risk assessment and disclosure frameworks are less consistently established.



Mailiao Industrial Harbour / Mailiao Harbour Administration Corp, Taiwan
Photo courtesy of Mailiao Harbor Administration Corp.

2.5. Emerging nature-positive governance

Beyond traditional environmental monitoring, the SDM also provides insight into the emerging incorporation of biodiversity and nature-related considerations into port sustainability management.

Table 5: Selected indicators of nature-related governance

Indicator	2026 (%)
Nature-related risks identified	90
Port reports on biodiversity	78
Nature-positive targets in place	59

Nature-related risks are identified by 90% of participating ports, biodiversity reporting is undertaken by 78%, and 59% report having nature-positive targets. Although these figures should not be interpreted as a sequential pathway followed by the same individual ports, they show that recognition and communication of nature-related issues are more widespread than their translation into explicit targets. Nature-related governance therefore represents an emerging extension of port environmental management towards broader ecosystem-related objectives.

3. Results of the analysis

3.1. Summary

This report presents the results of the 2026 EcoSLC assessment of environmental management and sustainability practices, based on information provided through the EcoPorts Self Diagnosis Method (SDM) by 41 ports and terminals located in 19 non-European countries. The analysis provides a benchmark of current practice and examines developments in environmental management, monitoring, climate change, sustainability and green services to shipping. As the composition of the participating sample may vary between assessment years, year-on-year changes should be interpreted with appropriate caution.

The assessment takes place within a growing international EcoPorts framework. As of September 2026, the global EcoPorts network comprises 122 members across 43 countries, with 63 PERS-certified ports and 73 ISO-certified ports, illustrating the continued international uptake of the EcoPorts approach. The key findings are as follows:

- **Environmental management remains highly consolidated.** Five core indicators reach 100% in 2026: Environmental Policy, inventories of relevant legislation and Significant Environmental Aspects, environmental monitoring programmes, and documented environmental responsibilities. In addition, 95% of participating ports report a certified Environmental Management System. The Environmental Management Index remains very high at 9.51 out of 10, compared with 9.57 in 2025.
- **Transparency and stakeholder communication remain strong.** 98% of ports communicate their Environmental Policy to relevant stakeholders, 95% make it publicly available online, and the proportion publishing a publicly available environmental report increased from 83% to 88%.
- **Sustainability is becoming more firmly embedded in port management.** The proportion of ports undertaking a materiality assessment increased to 85%, while the same proportion report that environmental sustainability is incorporated into their Environmental Policy. Climate change risk/opportunity assessments remain less widespread, at 63%.
- **Climate Action is increasingly reflected in port policy.** References to SDG 13 – Climate Action increased from 76% to 88%, making it the most frequently referenced SDG in 2026. Strong increases are also observed for Good Health and Well-being, Affordable and Clean Energy, Decent Work and Economic Growth, Industry, Innovation and Infrastructure, and Sustainable Cities and Communities.
- **Environmental monitoring is broadening.** Water quality is monitored by 98% of ports, while port waste and noise reach 95%. Carbon footprint monitoring increased to 83%, waste recycling to 88%, ship waste to 83%, and marine ecosystem monitoring rose markedly from 63% to 80%. Soil quality (59%) and terrestrial habitats (56%) remain the least widely monitored areas.
- **Climate-related operational challenges are being reported more frequently, while adaptation is becoming increasingly integrated into infrastructure planning.** The proportion of ports reporting climate-related operational challenges increased from 44% to 63%, the highest level recorded in the series. At the same time, 80% report adapting existing infrastructure to increase resilience and 83% consider climate adaptation when developing new infrastructure, also the highest values recorded.
- **Sea-level rise and infrastructure vulnerability dominate climate concerns.** Sea-level rise is identified by 83% of ports and damage to infrastructure by 80%, followed by

changes in hydrography at 73%. Climate mitigation shows a more stable picture: 71% of ports have their own GHG reduction target, 66% an air-emissions reduction target, and 51% a zero-emission target for port activities and operations.

- **Air quality remains the leading environmental priority, while climate change continues to gain prominence.** Air quality retains first position for the sixth consecutive assessment year, while climate change rises from third to second position, its highest ranking in the series. The composition of the Top 10 remains unchanged from 2025, indicating stability in the main issues receiving attention but a shift in their relative importance.
- **OPS deployment presents a mixed picture.** Onshore Power Supply is reported as available at one or more berths by 51% of participating ports, slightly below than in 2025 (54%). However, the proportion planning to offer OPS within the next two years recovered from 27% to 32%, while grid infrastructure, capacity and frequency-conversion barriers were reported less frequently.
- **The marine alternative-fuel landscape remains diverse and at an early stage of deployment.** LNG bunkering is still not operational among participating ports, but 7% report ongoing LNG infrastructure projects and 12% report plans to develop LNG bunkering facilities within the next two years, representing renewed activity compared with 2025. Biofuels remain the most frequently reported alternative-fuel infrastructure project at 15%, while hydrogen and ammonia each stand at 10%.
- **Environmentally differentiated port dues remain in a period of consolidation.** 22% of ports offer differentiated dues for greener vessels, unchanged from 2025. Among ports applying these schemes, GHG emissions reduction (77%) and air emissions reduction (66%) remain the most frequently reported criteria, while the proportion planning to introduce differentiated dues within the next two years stands at 24%.
- **Of the two clean-mobility options considered, electrification is currently the more mature for land transport.** Electric charging stations for cars and/or trucks are available at 37% of participating ports, unchanged from 2025, whereas no ports report hydrogen fuelling stations for trucks.

Overall, the 2026 results show a mature environmental management base combined with an expanding sustainability agenda. Traditional EMS components remain firmly established, while climate resilience, biodiversity, carbon monitoring, sustainability integration and alternative-energy infrastructure are becoming increasingly relevant to port management. Progress is particularly visible in adaptation and infrastructure resilience, whereas the transition towards operational decarbonisation, alternative fuels and economic incentives remains more gradual and uneven. The findings therefore suggest that the next phase of environmental management will increasingly depend on connecting established EMS practices with climate adaptation, decarbonisation, biodiversity, infrastructure planning and strategic business decision-making. Within this context, the EcoPorts SDM and PERS continue to provide a common framework for benchmarking, continuous improvement, transparency and the progressive integration of emerging sustainability priorities.

This 2026 assessment is based on information provided by 41 ports and terminals located in 19 non-European countries within the EcoSLC Network through completion of the EcoPorts Self Diagnosis Method (SDM). As in previous years, the information has been analysed in strict confidence to provide an overview of current environmental management practices and to identify developments and trends that may support continuous improvement across the network.

The following sections present the results for a range of environmental management, monitoring, climate, sustainability and green service indicators. Where historical data are available, results from previous assessment years are included to provide a basis for comparison and to illustrate the evolution of environmental management practices over time.

The figures presented correspond to the percentage of positive responses to individual questions or topics within the SDM questionnaire. Percentages are calculated relative to the ports responding to the corresponding question. As the number and composition of participating ports may vary between assessment years, year-on-year differences should be interpreted with appropriate caution and should not necessarily be regarded as changes within the same group of ports.

3.2. Environmental Management Indicators

A structured Environmental Management System (EMS) provides ports and terminals with a systematic framework for identifying environmental aspects, complying with applicable legal requirements, defining responsibilities and objectives, monitoring performance and pursuing continuous improvement. These elements support the integration of environmental considerations into organisational and operational decision-making and provide the basis for effective long-term environmental management.

A set of Environmental Management Indicators (EMIs) is used within this report to assess the implementation of key components associated with effective environmental management. These indicators cover areas including environmental policy, legal compliance, identification of significant environmental aspects, environmental objectives, employee training, monitoring, allocation of responsibilities, certification and public environmental reporting.

Table 6: Percentage of positive responses to the environmental management indicators

	Indicators	2018	2020	2023	2024	2025	2026
A	Existence of a certified Environmental Management System (EMS) – ISO, EMAS or PERS	92	100	94	95	100	95
B	Existence of an Environmental Policy	100	100	100	100	100	100
C	Environmental Policy makes reference to international and/or national port environmental policy guidelines	75	84	76	78	71	68
D	Existence of an inventory of relevant environmental legislation	100	100	100	100	100	100
E	Existence of an inventory of Significant Environmental Aspects (SEA)	100	100	97	100	100	100
F	Definition of objectives for environmental improvement	92	95	91	98	95	93
G	Existence of an environmental training programme for port employees	100	100	100	98	95	98
H	Existence of an environmental monitoring programme	100	100	100	100	100	100
I	Environmental responsibilities of key personnel are documented	100	100	100	100	100	100

	Indicators	2018	2020	2023	2024	2025	2026
J	Publication of a publicly available environmental report	100	95	79	83	83	88

The 2026 results continue to demonstrate a very high level of environmental management implementation among participating ports. Most of the core indicators remain at or close to full implementation, confirming that structured environmental management practices are firmly established across the EcoSLC sample.

Five indicators are at 100% in 2026: the existence of an Environmental Policy (B), an inventory of relevant environmental legislation (D), an inventory of Significant Environmental Aspects (E), an environmental monitoring programme (H), and documented environmental responsibilities for key personnel (I). The sustained performance of these indicators over several consecutive years reflects the consolidation of the fundamental organisational and operational components of Environmental Management Systems.

The proportion of ports reporting a certified Environmental Management System (A) decreased from 100% in 2025 to 95% in 2026, returning to the level recorded in 2024. Similarly, the proportion of ports whose Environmental Policy refers to international and/or national port environmental policy guidelines (C) declined slightly from 71% to 68%, continuing the gradual decrease observed since 2024. The definition of objectives for environmental improvement (F) also recorded a modest reduction, from 95% to 93%. These variations remain relatively small and should be interpreted with some caution, particularly as the composition of the participating sample may vary from year to year.

Conversely, two indicators show positive developments in 2026. The proportion of ports with an environmental training programme for employees (G) increased from 95% to 98%, partially reversing the decline observed in the previous two years. A more notable improvement is observed in environmental reporting (J), with the proportion of ports publishing a publicly available environmental report rising from 83% in 2025 to 88% in 2026. This represents the highest value recorded since 2020 and suggests renewed attention to transparency and the communication of environmental performance to external stakeholders.

Beyond the existence and content of an Environmental Policy, its effective communication to relevant stakeholders is an important component of environmental management. Making environmental commitments known to employees, port users, operators, authorities and other interested parties helps reinforce transparency and stakeholder engagement. Table 7 shows the proportion of participating ports reporting that their Environmental Policy is communicated to relevant stakeholders.

Table 7: Communication of Environmental Policy to relevant stakeholders

2018 (%)	2020 (%)	2023 (%)	2024 (%)	2025 (%)	2026 (%)
100	100	94	98	98	98

The 2026 results confirm the continued high level of communication of the Environmental Policy to relevant stakeholders. A total of 98% of participating ports report communicating their Environmental Policy to stakeholders, the same proportion recorded in both 2024 and 2025.

Following the temporary decline observed in 2023, when the indicator fell to 94%, the proportion recovered to 98% in 2024 and has remained stable at this level for three consecutive years. This sustained performance indicates that stakeholder communication continues to be a

well-established component of environmental management practice across the EcoSLC sample, with only a very small proportion of responding ports not reporting such communication.

In addition to communicating the Environmental Policy directly to relevant stakeholders, making it publicly accessible online provides a further indication of transparency and openness in environmental management. Online publication allows a wider range of interested parties to access the port's environmental commitments and priorities. Table 8 presents the proportion of participating ports whose Environmental Policy is publicly available on their website.

Table 8: Online availability of the Environmental Policy

2018 (%)	2020 (%)	2023 (%)	2024 (%)	2025 (%)	2026 (%)
100	100	100	98	95	95

The 2026 results show that the online availability of ports' Environmental Policy remains high and stable. A total of 95% of participating ports make their Environmental Policy publicly available on their website, unchanged from 2025.

After maintaining full coverage between 2018 and 2023, the indicator declined slightly to 98% in 2024 and to 95% in 2025, where it has remained in 2026. Although this represents a modest reduction compared with earlier years, the overall level continues to demonstrate a strong commitment to transparency and public accessibility of environmental information among participating ports.

Environmental Management System certification provides an external reference for assessing the extent to which ports have formalised their environmental management practices. Within the EcoSLC sample, the most commonly reported certification schemes are the EcoPorts Port Environmental Review System (PERS) and ISO 14001, either individually or in combination.

Table 9 presents the distribution of these certifications among certified ports participating in the 2026 assessment.

Table 9: Breakdown of the EMS certificates

EMS Certificate	2025 (%)	2026 (%)
EcoPorts' PERS	37.2	38.5
ISO	20.9	33.3
ISO & EcoPorts' PERS	41.9	28.2

The 2026 results show a change in the distribution of EMS certifications among participating ports. 38.5% of certified ports hold EcoPorts PERS certification only, 33.3% report ISO 14001 certification only, and 28.2% report holding both ISO 14001 and EcoPorts PERS certifications.

Overall, the 2026 results confirm a high level of environmental management implementation across the ports included in the analysis. The core components of an EMS remain widely established, while the communication and public availability of the Environmental Policy continue to show consistently high levels. At the same time, the certification profile shows some variation, with a lower proportion of ports holding both ISO 14001 and PERS compared with 2025. Taken together, the results point to a mature environmental management framework across the EcoSLC sample, characterised by strong organisational foundations, transparency and continued use of recognised certification schemes.

3.3. Environmental Management Index

The Environmental Management Index (EMI) provides a concise measure of the level of environmental management implementation across the ports included in the analysis. It combines the ten core Environmental Management Indicators presented in Table 6 into a single weighted score, allowing changes in overall environmental management implementation to be tracked over time.

The indicators are assigned different weights according to their relative importance within the environmental management framework. The EMI is calculated using the following formula:

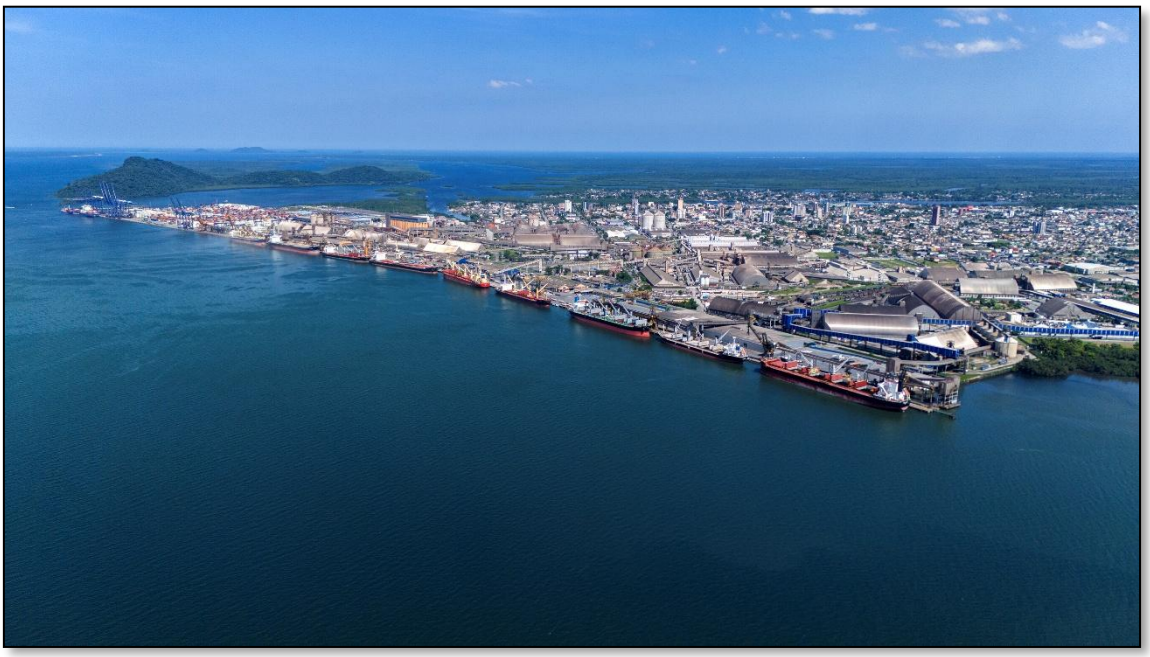
Environmental Management Index = A*1.5 + B*1.25 + C*0.75 + D*1 + E*1 + F*1 + G*0.75 + H*1 + I*1 + J*0.75.

For the calculation, the percentage of positive responses for each indicator is expressed as a value between 0 and 1. As the sum of the indicator weights equals 10, the EMI ranges from 0 to 10, with higher values indicating a more comprehensive implementation of the core environmental management practices considered in the index. Table 10 presents the evolution of the EMI from 2018 to 2026.

Table 10: Evolution of the Environmental Management Index over the years

EMI	2018	2020	2023	2024	2025	2026
Environmental Management Index	9.61	9.79	9.45	9.60	9.57	9.51

The 2026 EMI score of 9.51 confirms that environmental management practices remain highly developed across the participating ports. Although the index has declined slightly from 9.57 in 2025, it remains above the 2023 value and within the relatively narrow range observed throughout the assessment period.



Port of Paranaguá, Brazil
Claudio Neves/Portos do Paraná

The modest reduction in 2026 is mainly associated with lower values for the proportion of ports reporting a certified EMS, references to international and/or national port environmental policy guidelines, and the definition of environmental improvement objectives. These decreases were partly offset by improvements in environmental training programmes and the publication of publicly available environmental reports.

Overall, the evolution of the EMI since 2018 shows a high degree of stability, with all annual scores remaining above 9.4. This suggests that the fundamental components of structured environmental management are firmly established across ports included in the analysis. Nevertheless, as the composition and number of participating ports may vary between assessment years, relatively small year-on-year changes in the index should be interpreted with appropriate caution.

3.4. Port Environmental Policy and SDGs

The Environmental Policy provides the strategic framework through which ports define their environmental commitments, priorities and management objectives. As environmental and sustainability challenges have become increasingly interconnected with operational, economic and social considerations, its scope has progressively expanded beyond traditional environmental compliance to incorporate broader issues such as climate action, energy transition, resource efficiency, resilience and stakeholder engagement.

This broader perspective reflects the increasing integration of sustainability considerations into port environmental management. Environmental Management Systems can support this process by translating strategic commitments into defined objectives, actions, responsibilities and measurable performance, thereby linking environmental policy with operational implementation and continuous improvement.

The United Nations Sustainable Development Goals (SDGs) provide a useful international reference framework for examining this wider sustainability perspective. Ports occupy a strategic position within global transport and logistics networks and interact with several dimensions of the SDGs, including climate action, clean energy, infrastructure, economic development, sustainable cities, responsible consumption and marine protection. The extent to which individual SDGs are referenced in the Environmental Policy therefore provides an indication of the sustainability issues receiving attention within port strategies.

Table 11 presents the proportion of participating ports whose Environmental Policy makes reference to each of the 17 Sustainable Development Goals between 2024 and 2026.

Table 11: Policy reference to UN Sustainable Development Goals

Goal	Indicator	2024 (%)	2025 (%)	2026 (%)
1	No Poverty	35	27	24
2	Zero Hunger	29	24	27
3	Good Health and Well-being	59	65	78
4	Quality Education	41	49	51
5	Gender Equality	71	70	76
6	Clean Water and Sanitation	71	65	59
7	Affordable and Clean Energy	71	70	78

Goal	Indicator	2024 (%)	2025 (%)	2026 (%)
8	Decent Work and Economic Growth	47	62	76
9	Industry, Innovation and Infrastructure	59	62	76
10	Reduced Inequalities	59	54	59
11	Sustainable Cities and Communities	53	59	71
12	Responsible Consumption and Production	65	59	68
13	Climate Action	65	76	88
14	Life Below Water	59	65	68
15	Life on Land	53	54	56
16	Peace, Justice and Strong Institutions	53	41	32
17	Partnerships for the Goals	53	57	68

The 2026 results show a strengthening of references to several SDGs that are closely connected to port operations, infrastructure and broader sustainability objectives. The most prominent development is observed for Climate Action (Goal 13), which increased from 76% in 2025 to 88% in 2026, making it the most frequently referenced SDG among participating ports. Other notable increases are observed for Good Health and Well-being (Goal 3), which rose from 65% to 78%; Decent Work and Economic Growth (Goal 8) and Industry, Innovation and Infrastructure (Goal 9), both of which increased from 62% to 76%; Sustainable Cities and Communities (Goal 11), which increased from 59% to 71%; and Affordable and Clean Energy (Goal 7), which rose from 70% to 78%.

Not all goals show the same tendency. References to Clean Water and Sanitation (Goal 6) declined from 65% to 59%, continuing the decrease observed since 2024. Peace, Justice and Strong Institutions (Goal 16) also fell further, from 41% to 32%, while No Poverty (Goal 1) decreased slightly from 27% to 24%. By contrast, Zero Hunger (Goal 2) recovered marginally to 27% after the decline recorded in 2025. These variations may reflect differences in the perceived relevance of individual SDGs to port environmental responsibilities and local operating contexts, while changes in the composition of the participating sample should also be considered when interpreting year-on-year differences.

Overall, the 2026 results show an increasingly pronounced concentration on SDGs related to climate action, health, energy, infrastructure, economic activity and sustainable urban development. Climate Action now clearly stands out as the leading SDG, while the growth of Goals 3, 7, 8, 9 and 11 indicates that participating ports are giving greater prominence to issues associated with health and well-being, energy transition, economic development, infrastructure and their wider territorial role. At the same time, the distribution of responses continues to reflect the diversity of local, regional and national contexts in which EcoSLC ports operate, as well as possible changes in the composition of the participating sample from one assessment year to another.

3.5. Environmental Monitoring Indicators

Environmental monitoring is a fundamental component of effective port environmental management, providing the evidence required to identify changes in environmental conditions, assess the effectiveness of management measures and support informed decision-making. Regular monitoring also enables ports to demonstrate compliance with regulatory requirements, evaluate progress towards environmental objectives and communicate performance to stakeholders in a transparent and verifiable manner.

The scope of monitoring programmes may evolve as environmental priorities, regulatory requirements and stakeholder expectations change. In addition to long-established parameters such as air quality, water quality, waste and noise, increasing attention is being given to climate-related indicators, resource efficiency and ecosystem condition. Table 12 presents the proportion of participating ports monitoring each environmental parameter between 2018 and 2026, allowing both long-term patterns and more recent changes to be identified.

Table 12: Percentage of positive responses to environmental monitoring indicators

Indicators	2018 (%)	2020 (%)	2023 (%)	2024 (%)	2025 (%)	2026 (%)
Water quality	100	100	97	93	95	98
Port waste	100	100	100	95	93	95
Noise	100	100	88	93	93	95
Air quality	100	100	97	98	98	93
Water consumption	100	95	94	95	93	93
Waste recycling	91	100	85	73	78	88
Energy efficiency	100	89	88	90	83	85
Ship waste	91	84	85	73	71	83
Carbon Footprint	67	68	73	73	80	83
Sediment quality	100	84	79	73	78	80
Marine ecosystems	75	74	76	63	63	80
Soil quality	67	68	67	63	59	59
Terrestrial habitats	58	63	58	55	56	56

The 2026 results show generally strong and, in several areas, improving levels of environmental monitoring across the participating ports. Water quality is now the most widely monitored parameter, increasing from 95% in 2025 to 98% in 2026. Monitoring of port waste and noise also increased, both reaching 95%, while water consumption remained stable at 93%.

Air quality continues to be monitored by a very high proportion of ports, although the figure decreased from 98% in 2025 to 93% in 2026. Given the consistently high values observed throughout the assessment period, this change should be interpreted cautiously, particularly in view of possible variations in the composition of the annual sample.

Several indicators show particularly positive developments in 2026. Waste recycling monitoring increased from 78% to 88%, continuing the recovery observed since 2024. Monitoring of ship waste rose markedly from 71% to 83%, while sediment quality increased slightly from 78% to

80%. Energy efficiency also recovered modestly, from 83% to 85%, although it remains below the levels reported in the earlier years of the series.

A notable development is observed in monitoring related to climate change and ecosystems. Carbon footprint monitoring increased from 80% to 83%, continuing the sustained upward trend observed over recent years and reaching the highest value recorded in the series. Even more pronounced is the increase in monitoring of marine ecosystems, which rose from 63% in 2025 to 80% in 2026. This represents the largest year-on-year increase among the indicators considered and the highest level recorded for this parameter since 2018. The result may indicate growing attention to biodiversity, ecosystem condition and the environmental implications of port activities in marine areas.

By contrast, monitoring of soil quality and terrestrial habitats remains comparatively limited. Soil quality remained unchanged at 59%, while terrestrial habitat monitoring also remained stable at 56%. These continue to be the least frequently monitored parameters in the dataset, suggesting that terrestrial environmental components remain less systematically incorporated into port monitoring programmes than more traditional operational indicators such as water, waste, air and noise.

Overall, the 2026 results indicate a broadening of environmental monitoring practices across the EcoSLC sample. Traditional parameters continue to show high levels of coverage, while improvements in carbon footprint, waste recycling, ship waste and particularly marine ecosystem monitoring suggest increasing attention to climate, circular economy and biodiversity-related issues. At the same time, the persistently lower figures for soil quality and terrestrial habitats indicate areas where monitoring could be further strengthened in future assessments. As in previous years, relatively small year-on-year variations should be interpreted with consideration of possible changes in the number and profile of participating ports.

3.6. Climate Change: operational impacts and adaptation

Climate-related risks are becoming increasingly relevant to the operational, infrastructural and strategic context in which ports and terminals operate. The diversity of locations represented within the EcoSLC network means that exposure to climate-related hazards varies considerably, depending on geography, local climate conditions, infrastructure characteristics and operational profiles. Nevertheless, the SDM results provide a useful indication of how widely climate-related impacts are being experienced and how ports are responding through adaptation and resilience measures.

The 2026 results show a marked increase in the proportion of ports reporting operational challenges that may be related to climate change. As presented in Table 13, positive responses increased from 44% in 2025 to 63% in 2026, the highest value recorded in the series and slightly above the 58% reported in 2018.

Table 13: Share of ports experiencing operational challenges related to climate change

2018 (%)	2020 (%)	2023 (%)	2024 (%)	2025 (%)	2026 (%)
58	42	45	30	44	63

This increase suggests that climate-related operational effects are becoming more widely recognised among participating ports. Such challenges may include more frequent or intense storms, flooding, changes in wind or wave conditions and other disruptions affecting port operations.

The increase in reported operational impacts is accompanied by stronger adaptation responses. As shown in Table 14, the proportion of ports reporting actions to strengthen the resilience of

existing infrastructure increased from 71% in 2025 to 80% in 2026. This is the highest value recorded since the beginning of the series and represents a substantial recovery from the lower levels observed in 2023 and 2024.

Table 14: Share of ports adapting existing infrastructure to increase resilience

2018 (%)	2020 (%)	2023 (%)	2024 (%)	2025 (%)	2026 (%)
75	68	58	58	71	80

The result indicates that a growing proportion of ports are taking practical measures to reduce vulnerability and protect existing assets against climate-related risks. Depending on local circumstances, such actions may include structural reinforcement, flood protection, drainage improvements, changes in maintenance practices or other resilience measures.

A similar upward trend is observed in the consideration of climate adaptation in new infrastructure development. Table 15 shows that the proportion of ports incorporating climate adaptation into new infrastructure projects increased from 78% in 2025 to 83% in 2026, again reaching the highest level recorded in the series.

Table 15: Share of ports considering climate adaptation for new infrastructure

2018 (%)	2020 (%)	2023 (%)	2024 (%)	2025 (%)	2026 (%)
75	74	70	73	78	83

The continued increase in this indicator is particularly relevant because incorporating climate considerations at the planning and design stages can help reduce future exposure and avoid the need for more costly retrofitting. The 2026 results therefore suggest that climate resilience is becoming increasingly integrated into long-term infrastructure planning among participating ports.

The SDM also asks ports to identify the climate-related impacts that are currently of concern to them. These responses provide insight into the types of risks that are most prominent among participating ports, although the relevance of individual impacts will necessarily depend on local environmental and operational conditions.

Table 16: Major concerns related to the impacts of climate change

Indicators	2024 (%)	2025 (%)	2026 (%)
Sea-level rise	76	78	83
Damage to marine ecosystems	82	70	71
Damage to infrastructure	71	70	80
Localised flooding	76	65	59
Changes in hydrography (including currents)	59	62	73
Coastal erosion	65	62	66
Biodiversity loss	59	57	66
Water supply	59	54	51
Fires	59	51	54
Drought	65	43	27
Disease and pests	41	41	37

Indicators	2024 (%)	2025 (%)	2026 (%)
Heat waves/stress	35	32	41
Saltwater intrusion	29	24	27
Acidification	29	24	24
Fisheries failing	24	22	29
Coral reef bleaching	12	8	12

The 2026 results show that sea-level rise remains the most frequently identified concern, increasing from 78% in 2025 to 83% in 2026. This reinforces its importance as a long-term risk for coastal infrastructure, port operations and future development planning.

Concern about damage to infrastructure also increased substantially, from 70% to 80%, becoming the second most frequently reported issue. This development is consistent with the simultaneous increase in the number of ports reporting operational climate challenges and taking measures to strengthen the resilience of existing infrastructure.

Other climate-related concerns also gained importance. Changes in hydrography, including currents, increased from 62% to 73%, while biodiversity loss rose from 57% to 66%. Concern about coastal erosion increased moderately from 62% to 66%, while damage to marine ecosystems remained relatively stable at a high level, increasing slightly from 70% to 71%.

By contrast, some impacts were reported less frequently in 2026. Localised flooding declined from 65% to 59%, while concern about water supply decreased slightly from 54% to 51%. The most pronounced decline is observed for drought, which fell from 43% in 2025 to 27% in 2026, continuing the substantial reduction observed since 2024. Given the strong geographical dependence of drought and water-related risks, this variation may reflect changes in the composition and location of participating ports rather than a general reduction in exposure.

Several other indicators remain less widespread but show some increases. Concern about heat waves/stress rose from 32% to 41%, while fisheries failing increased from 22% to 29%. Saltwater intrusion increased slightly to 27%, while acidification remained unchanged at 24%. Coral reef bleaching also increased from 8% to 12%, although it remains one of the least frequently reported concerns and is relevant only to ports located in particular climatic and ecological regions.

Alongside adaptation, climate mitigation remains an important element of port environmental strategy. Indicators introduced in 2025 provide information on whether ports have established greenhouse gas and air-emission reduction targets, aligned their objectives with local authorities, introduced low-emission operational measures, or adopted longer-term zero-emission ambitions. The 2026 results, presented in Table 17, show a relatively stable but mixed picture.

Table 17: Adoption of emission reduction and zero-emission targets by port authorities

Indicator	2025 (%)	2026 (%)
Has the Port Authority set up its own GHG reduction target?	73	71
Has the Port Authority set up its own air emissions reduction target?	63	66
Is the Port Authority aligned with any local authority GHG and air emissions reduction targets?	68	63

Indicator	2025 (%)	2026 (%)
Have low emissions zones and/or emission berth standards been introduced in the port area?	34	29
Does the Port Authority have a zero-emission target for the emissions related to port activities and operations?	51	51

The proportion of ports reporting their own GHG reduction target decreased slightly from 73% in 2025 to 71% in 2026, while the share with a specific air-emissions reduction target increased from 63% to 66%. These figures indicate that formal emissions-reduction objectives remain common among participating ports, although no clear overall upward trend is yet evident over the two years for which data are available.

Alignment with local authority GHG and air-emission reduction targets decreased from 68% to 63%, suggesting some variation in the degree of coordination between port and local or regional climate objectives. Similarly, the proportion of ports reporting low-emission zones and/or emission berth standards fell from 34% to 29%. These measures therefore remain less widespread than the establishment of broader emissions-reduction targets.

The proportion of ports reporting a zero-emission target remained unchanged at 51%. The stability of this indicator suggests that approximately half of the participating ports have adopted a longer-term ambition to eliminate emissions associated with port activities and operations, while the other half have not yet formalised such a target.



NLNG Terminal, Nigeria

Taken together, the 2026 results show that climate change is becoming increasingly integrated into both the operational and strategic management of participating ports. A larger proportion of ports report climate-related operational challenges, while adaptation measures for both existing and new infrastructure have reached their highest levels in the series. At the same time, the pattern of reported concerns highlights the growing importance of risks with direct implications for port infrastructure and coastal conditions, particularly sea-level rise, damage to infrastructure and changes in hydrography. Mitigation indicators present a more stable and mixed picture: GHG and air-emission reduction targets remain relatively widespread, while alignment with local authorities, low-emission operational measures and zero-emission commitments show limited year-on-year change. Overall, the findings suggest that progress in 2026 is particularly evident in climate resilience, infrastructure planning and operational preparedness, while the development of formal decarbonisation commitments is proceeding more gradually. Given the geographical diversity of the EcoSLC network and possible changes in the composition of the annual sample, year-on-year variations should continue to be interpreted with appropriate caution.

3.7. Top 10 environmental priorities

The identification of the Top 10 environmental priorities provides an overview of the issues receiving greatest attention among ports included in the analysis. These priorities reflect the environmental concerns that may influence management decisions, resource allocation, operational planning and stakeholder engagement. Tracking their evolution over time also helps to identify areas of continuity as well as emerging or changing concerns within the port sector. Table 18 presents the Top 10 environmental priorities reported by participating ports in 2026, together with the corresponding results from previous assessment years where available.

Table 18: Top 10 environmental priorities reported by participating ports

	2018	2020	2023	2024	2025	2026
1	Air quality	Air quality	Air quality	Air quality	Air quality	Air quality
2	Dust	Dust	Garbage/port waste	Garbage/port waste	Garbage/port waste	Climate change
3	Garbage/Port waste	Climate change	Dust	Dust	Climate change	Garbage/port waste
4	Energy consumption	Garbage/Port waste	Climate change	Energy consumption	Energy consumption	Energy consumption
5	Hazardous cargo	Local community	Energy consumption	Climate change	Dust	Dust
6	Local community	Energy consumption	Water quality	Water quality	Water quality	Water quality
7	Climate change	Ship exhausts	Local community	Local community	Cargo spillage	Hazardous cargo
8	Water quality	Hazardous cargo	Cargo spillage	Cargo spillage	Hazardous cargo	Cargo spillage
9	Port development Land	Cargo spillage	Hazardous cargo	Noise	Local community	Noise
10	Port development Water	Water quality	Noise	Hazardous cargo	Noise	Local community

The 2026 ranking shows a high degree of continuity in the environmental priorities identified by participating ports. Air quality remains the leading environmental priority, retaining first position for the sixth consecutive assessment year. This long-standing position confirms the continued importance attached to emissions and their potential effects within and around port areas.

The most notable change in 2026 is the rise of climate change from third to second position, its highest ranking in the series. Although its position has fluctuated over time, climate change has gained considerable prominence compared with 2018, when it ranked seventh. Garbage/port waste, which occupied second position between 2023 and 2025, moves to third place in 2026, while remaining one of the most consistently important environmental concerns.

The middle of the ranking remains particularly stable. Energy consumption retains fourth position, dust remains fifth and water quality remains sixth, exactly as in 2025. Viewed over the longer term, energy consumption and water quality have maintained a relatively stable presence among the main environmental priorities, whereas dust has gradually moved down the ranking from second position in 2018 and 2020 to fifth in the two most recent assessment years.

Changes in the lower part of the Top 10 are relatively limited. Hazardous cargo rises from eighth to seventh position, overtaking cargo spillage, which moves from seventh to eighth. Noise increases from tenth to ninth position, while local community falls from ninth to tenth. Despite these changes in order, all four issues remain within the Top 10.

Overall, the composition of the 2026 Top 10 is identical to that of 2025, indicating considerable stability in the environmental issues receiving greatest attention across the EcoSLC sample. The main development is therefore not the emergence of new priorities, but a change in their relative importance, most notably the rise of climate change to second position. Together with the continued dominance of air quality and the stable presence of waste, energy consumption, dust and water quality, the results indicate that participating ports continue to balance traditional operational environmental concerns with the growing importance of climate-related issues.

3.8. Green services to Shipping

Ports can play an important role in supporting the environmental transition of maritime transport by providing infrastructure, services and incentives that enable or encourage cleaner vessel operations. These measures can contribute to reducing greenhouse gas emissions, air pollutants and noise in port areas, while also supporting the wider decarbonisation of shipping. The extent to which such services are available or under development provides an indication of how ports are responding to changing technological, regulatory and market conditions. This section examines three areas within the EcoSLC sample: Onshore Power Supply (OPS), Liquefied Natural Gas (LNG) and other alternative marine fuels, and environmentally differentiated port fees.

Onshore Power Supply (OPS)

Onshore Power Supply (OPS) is one of the main infrastructure-based measures available to ports to reduce emissions from ships while at berth. By allowing vessels to connect to the shore-side electricity grid and switch off their auxiliary engines, OPS can contribute to reducing greenhouse gas emissions, air pollutants, noise and vibrations in port areas. Table 19 presents the evolution of the main OPS-related indicators reported through the SDM between 2018 and 2026.

Table 19: Percentage of positive responses to Onshore Power Supply (OPS) indicators

Indicator	2018	2020	2023	2024	2025	2026
Is Onshore Power Supply (OPS) available at one or more berths?	83	63	55	55	54	51
If yes, what type of OPS is available?						
High voltage*	70	50	56	32	43	43
Low voltage*	70	83	78	82	90	90
If YES, is OPS provided through:						
By fixed installation*	100	100	100	100	100	100
By mobile installation*	20	8	17	14	24	19
Does the port plan to offer OPS during the next two years?	33	32	39	35	27	32
If NO, Has the port faced any technical challenges with regard to:						
Unavailable or insufficient grid infrastructure in or surrounding the port	--	--	--	35	37	22
Issue with frequency conversion due to the OPS onboard the vessel(s) using a different frequency than what is available on the national grid	--	--	--	30	24	12
Insufficient or unavailable grid capacity	--	--	--	23	27	17

* The percentages of these indicators are calculated on the basis of the ports offering OPS, not out of the total of participating ports.

The 2026 results show a further slight decrease in the proportion of participating ports reporting OPS availability at one or more berths, from 54% in 2025 to 51% in 2026. This continues the longer-term decline observed in the series, from 83% in 2018. Given that the composition of the participating sample may vary between years, however, these figures should not necessarily be interpreted as indicating the removal of existing OPS infrastructure.

Among ports offering OPS, the distribution by voltage type remained unchanged between 2025 and 2026. High-voltage OPS was reported by 43% of ports providing OPS, while low-voltage OPS was reported by 90%. Low-voltage systems therefore continue to be considerably more widespread than high-voltage systems among the participating ports offering OPS.

Fixed installations remain the dominant form of OPS provision, being reported by 100% of ports offering OPS in both 2025 and 2026. By contrast, the proportion reporting mobile installations decreased from 24% to 19%.

A more positive development is observed in future deployment plans. The proportion of participating ports reporting plans to offer OPS within the next two years increased from 27% in 2025 to 32% in 2026. Although this remains below the 35–39% levels observed between 2023 and 2024, the increase reverses the decline recorded in the previous year and suggests renewed interest in future OPS implementation among part of the participating sample.

The reported prevalence of technical challenges also decreased substantially in 2026. The proportion identifying unavailable or insufficient grid infrastructure fell from 37% to 22%, while

reported problems related to frequency conversion decreased from 24% to 12%. Similarly, the proportion citing insufficient or unavailable grid capacity declined from 27% to 17%.

These results suggest a mixed picture for OPS deployment in 2026. Current availability remains slightly lower than in previous years, but the recovery in short-term deployment plans indicates continued interest in expanding the service. At the same time, the lower frequency with which grid infrastructure, grid capacity and frequency-conversion problems are reported may indicate that these technical constraints are less prominent within the 2026 sample than in the previous two years. Nevertheless, differences in the participating ports from year to year should be considered when interpreting these changes.

Overall, OPS remains an important component of green port services and maritime decarbonisation, but the results continue to show substantial differences in its level of deployment across ports. The combination of relatively limited current availability and renewed interest in future implementation highlights the continuing transition from planning towards wider operational deployment.

Liquefied Natural Gas (LNG)

LNG has been considered an alternative marine fuel capable of reducing certain local air pollutants compared with conventional marine fuels. The SDM therefore monitors not only the current availability of LNG bunkering services, but also infrastructure projects and short-term development plans. In parallel, the questionnaire tracks projects involving other alternative fuels, providing an indication of how the energy transition is evolving among participating ports. The results are summarised in Table 20.

Table 20: Percentage of positive responses to LNG and alternative marine fuel indicators

Indicator	2018	2020	2023	2024	2025	2026
Is Liquefied Natural Gas (LNG) bunkering available in the port today?	0	0	0	0	0	0
If YES, how is LNG bunkered in the port?						
By non-mobile installation*	N/A	N/A	N/A	N/A	N/A	N/A
By truck*	N/A	N/A	N/A	N/A	N/A	N/A
By barge*	N/A	N/A	N/A	N/A	N/A	N/A
Are there currently ongoing LNG bunkering infrastructure projects in the port?	0	5	3	0	0	7
Do plans exist for the development of LNG bunkering facilities during the next two years?	0	11	9	5	0	12
If NO, Are there any projects under development for infrastructure of other clean fuels?						
Hydrogen	--	--	--	15	12	10
Ammonia	--	--	--	15	12	10
Biofuels	--	--	--	13	15	15
Synthetic fuels	--	--	--	10	10	7
Methanol/methane	--	--	--	3	7	5

* These indicators apply only to ports offering LNG bunkering. As no participating ports reported LNG bunkering availability, the values are shown as N/A.

The 2026 results confirm that LNG bunkering is still not operational among the participating EcoSLC ports outside Europe. As in all previous assessment years, none of the responding ports reported currently providing LNG bunkering through fixed installations, trucks or barges.

However, the results for future development show a notable change compared with 2025. In 2026, 7% of participating ports reported ongoing LNG bunkering infrastructure projects, after no such projects were reported in either 2024 or 2025. Similarly, the proportion of ports indicating plans to develop LNG bunkering facilities within the next two years increased from 0% in 2025 to 12% in 2026, the highest value recorded in the series and slightly above the 11% reported in 2020.

These results indicate that, although LNG bunkering has yet to become operational within the participating sample, interest in LNG infrastructure has re-emerged in 2026. This contrasts with the previous year, when neither ongoing projects nor future development plans were reported. As with other year-on-year comparisons, however, changes in the composition of participating ports should be considered when interpreting this apparent renewed interest.

At the same time, projects involving other alternative fuels continue to be reported. Biofuels remain the most frequently identified option, with 15% of ports reporting related infrastructure projects, unchanged from 2025. Projects involving hydrogen and ammonia each decreased slightly from 12% to 10%, while synthetic fuels declined from 10% to 7% and methanol/methane from 7% to 5%.

Overall, the 2026 results suggest a diversified and still evolving alternative-fuel landscape. No single fuel pathway has yet achieved widespread infrastructure deployment among the participating ports. While biofuels continue to attract the highest level of reported project activity, hydrogen, ammonia, synthetic fuels and methanol/methane also remain present within port development plans. At the same time, the reappearance of LNG infrastructure projects and short-term development plans indicates that LNG continues to form part of the energy transition strategies of some ports rather than being fully displaced by emerging alternatives. Taken together, these findings highlight the continuing uncertainty surrounding future marine fuel pathways and suggest that participating ports are exploring multiple alternatives simultaneously, with infrastructure development still at a relatively early stage and strongly influenced by local conditions, market demand and the strategic priorities of individual ports.



Porto do Açu, Brazil

Environmentally Differentiated Port Fees

Environmentally differentiated port fees provide ports with an economic instrument to encourage improved environmental performance by vessels. By linking port charges to environmental criteria, port authorities can reward cleaner operational practices and technologies, including lower air and greenhouse gas emissions, improved waste management, environmental certification and other measures that reduce the environmental footprint of shipping. Table 21 presents the evolution of these incentive schemes among participating ports.

Table 21: Percentage of positive responses to environmentally differentiated port dues indicators

Indicator	2018	2020	2023	2024	2025	2026
Does the port offer differentiated dues for "Greener vessels"?	8	11	6	13	22	22
If YES, Does the incentive scheme take into account the following?						
Waste management/segregation*	0	0	50	0	13	22
Air emissions (NO_x, SO_x, PM) reduction*	100	100	100	80	75	66
GHG emissions reduction*	100	50	50	40	75	77
Noise reduction*	0	0	50	20	13	11
Environmental certification*	0	0	50	40	38	33
Ships with wind-assisted propulsion*	0	0	0	0	13	11
Does the port plan to introduce environmentally differentiated port dues during the next two years?	8	11	21	28	27	24

* The percentages for the different initiatives are calculated on the basis of the ports offering differentiated dues for "Greener Vessels", not out of the total of participating ports.

The 2026 results show that the proportion of ports offering environmentally differentiated dues for greener vessels remained unchanged at 22%, following the substantial increase recorded between 2024 and 2025. This suggests that the expansion observed in the previous year has consolidated, although differentiated charging schemes are still implemented by only around one fifth of participating ports.

Within the ports applying such schemes, the environmental criteria used show a mixed pattern in 2026. GHG emissions reduction remains the most frequently reported criterion, increasing slightly from 75% to 77%, while waste management and segregation rose from 13% to 22%. By contrast, the proportion taking air emissions reduction (NOx, SOx and PM) into account decreased from 75% to 66%, while environmental certification declined from 38% to 33%. Noise reduction and incentives related to wind-assisted ships both decreased slightly, from 13% to 11%.

These results indicate that the criteria incorporated into differentiated charging schemes are evolving, but do not show a uniform broadening between 2025 and 2026. GHG and air-emission performance remain the two most frequently reported criteria, while the use of other environmental considerations varies considerably among the ports applying such schemes.

Looking ahead, the proportion of ports planning to introduce environmentally differentiated port dues within the next two years declined slightly from 27% in 2025 to 24% in 2026. This remains considerably higher than the levels observed in the earlier years of the series, but the reduction suggests that the momentum towards further uptake has moderated somewhat.

Overall, the 2026 results indicate a period of consolidation rather than further expansion in the use of environmentally differentiated port dues. Current adoption remains stable at 22%, while the environmental criteria applied within existing schemes show a mixed pattern of change. At the same time, the slight decline in short-term implementation plans suggests that further uptake among participating ports may continue at a relatively gradual pace.

3.9. Low emission mobility infrastructure for cars and trucks

Ports are not only gateways for maritime transport but also important nodes for land-based freight and passenger mobility. Supporting cleaner road transport within and around port areas can therefore contribute to reducing local air emissions, improving energy efficiency and facilitating the broader transition towards lower-emission logistics systems. The SDM monitors the availability of electric charging infrastructure and hydrogen fuelling stations for road vehicles as indicators of this transition. The results are presented in Table 22.

Table 22: Percentage of positive responses to low-emission mobility infrastructure indicators

Indicator	2024 (%)	2025 (%)	2026 (%)
Are electricity charging stations for cars and/or trucks available at the port?	30	37	37
Are hydrogen fuelling stations for trucks available at the port?	0	0	0

The 2026 results show that the availability of electric charging stations for cars and/or trucks remained stable at 37%, unchanged from 2025 and above the 30% recorded in 2024. This suggests that the increase observed between 2024 and 2025 has been maintained, although further expansion was not evident in the 2026 sample.

Electric charging infrastructure is therefore present in more than one third of participating ports, indicating that electrification has become an established component of land-side sustainability strategies for part of the EcoSLC sample. Nevertheless, the fact that almost two thirds of participating ports still do not report such infrastructure shows that deployment remains uneven.

In contrast, no participating ports reported hydrogen fuelling stations for trucks in 2026, unchanged from both 2024 and 2025. This continued absence indicates that, within the current EcoSLC sample, hydrogen-based road transport infrastructure remains at a very early stage of deployment.

Overall, the results point to a clear difference between the two clean-mobility pathways considered. Electric charging infrastructure has achieved a measurable level of implementation and has stabilised at 37%, whereas hydrogen fuelling infrastructure has not yet materialised among participating ports. The findings therefore suggest that electrification currently represents the more mature of the two land-side clean transport options considered.

3.10. Continuous improvement and sustainability

Continuous improvement is a fundamental principle of Environmental Management Systems and an important mechanism for ensuring that environmental management evolves in response to changing risks, stakeholder expectations and sustainability priorities. Beyond compliance with environmental requirements, ports are increasingly expected to identify the issues that are most significant to their activities, integrate sustainability considerations into policy and assess emerging risks and opportunities that may affect long-term performance.

The SDM includes several indicators that provide insight into this broader integration of sustainability into environmental management. These include the use of materiality assessments, the incorporation of sustainability issues into the Environmental Policy, and the evaluation of climate-related risks and opportunities. Table 23 presents the evolution of these indicators between 2024 and 2026.

Table 23: Percentage of positive responses to sustainability-related indicators

Indicator	2024 (%)	2025 (%)	2026 (%)
Has the port undertaken a materiality assessment to identify its material environmental issues?	76	81	85
Does the port's Environmental Policy consider environmental sustainability issues?	76	81	85
Has the port undertaken a climate change risk/opportunity assessment?	65	62	63

The 2026 results show a further strengthening of the strategic integration of sustainability among participating ports. The proportion of ports that have undertaken a materiality assessment increased from 81% in 2025 to 85% in 2026, continuing the upward trend observed since 2024. This suggests that a growing share of ports are systematically identifying the environmental and sustainability issues considered most relevant to their activities and stakeholders.

A parallel increase is observed in the proportion of ports whose Environmental Policy explicitly considers environmental sustainability issues, which also rose from 81% to 85%. The identical progression of these two indicators over the three-year period suggests that materiality assessment and policy integration are increasingly becoming established components of sustainability management within the ports included in the analysis.

By contrast, the proportion of ports reporting a climate change risk/opportunity assessment remained comparatively stable, increasing only slightly from 62% in 2025 to 63% in 2026. This remains close to the 65% recorded in 2024 and indicates that, while climate-related risk assessment is undertaken by a majority of participating ports, its level of implementation is still lower than that observed for materiality assessment and the integration of sustainability into Environmental Policy.

Overall, the 2026 results indicate continued progress in embedding sustainability within the strategic foundations of port environmental management. Materiality assessment and policy integration have both reached their highest levels in the three-year series, while climate risk and opportunity assessment appears to have stabilised at around two thirds of participating ports. This suggests that the formal incorporation of sustainability into policy is becoming increasingly widespread, while the more specific assessment of climate-related risks and opportunities remains an area with scope for further development.

4. Ongoing challenges and positive opportunities

The 2026 results confirm that environmental management remains firmly established across the EcoSLC sample. Core Environmental Management System components continue to show consistently high levels of implementation, while the Environmental Management Index remains above 9.5. At the same time, sustainability considerations are becoming more deeply integrated into port management, particularly through materiality assessment, Environmental Policy, public reporting and broader monitoring practices.

Climate change stands out as an increasingly prominent challenge. A higher proportion of participating ports reported operational impacts in 2026, while adaptation measures for both existing and new infrastructure reached their highest levels in the assessment series. Sea-level rise, damage to infrastructure and changes in hydrography are among the most frequently identified concerns, and climate change has risen to second position in the ranking of environmental priorities. These findings indicate that climate resilience is increasingly becoming an operational, investment and planning issue rather than solely a long-term environmental concern.

Progress in climate mitigation and decarbonisation is more gradual. GHG and air-emission reduction targets are relatively widespread, and around half of the participating ports report a zero-emission target for port activities and operations. However, the limited year-on-year changes in mitigation targets, alignment with local authorities and low-emission operational measures suggest that the transition from strategic ambition to implementation remains uneven.

A similar pattern is evident in green services and cleaner transport infrastructure. OPS remains available at around half of participating ports, while future deployment plans show some recovery. Alternative-fuel infrastructure is still at an early stage, with LNG projects re-emerging and ports continuing to explore biofuels, hydrogen, ammonia, synthetic fuels and methanol/methane. Environmentally differentiated port dues and electric charging infrastructure are also present across part of the EcoSLC sample, although their deployment remains uneven and strongly influenced by local infrastructure, market conditions and technological maturity.

Overall, the 2026 findings show that the main challenge is no longer the establishment of basic environmental management structures, but their continued evolution in response to climate change, decarbonisation, biodiversity, infrastructure planning and wider sustainability objectives. Traditional environmental priorities such as air quality, waste, energy consumption, dust and water quality remain central, while climate-related issues are becoming increasingly prominent.

Within this evolving context, the EcoPorts framework provides a common structure through which ports can assess current practice, identify areas for improvement and progressively integrate emerging environmental and sustainability priorities into their management systems. The combination of the SDM as a self-assessment and benchmarking tool and PERS as a port-specific, independently assessed environmental management standard supports both consistency across the network and adaptation to the circumstances of individual ports and terminals.

The principal opportunity for future progress therefore lies in building on the strong environmental management foundations already in place. Strengthening the links between

environmental management, climate resilience, decarbonisation, biodiversity, infrastructure investment and strategic decision-making can support ports in responding to a rapidly changing operational environment while maintaining the principles of continuous improvement, transparency and accountability that underpin the EcoPorts approach.

ANNEX I. Ports and Terminals included in the 2026 sample

The 41 ports and terminals included in the 2026 EcoSLC sample, representing 19 non-European countries, are listed below.

Country	**Port / terminal / organisation**
Argentina	Consorcio de Gestión del Puerto de Bahía Blanca
Australia	Port of Burnie, Tasmanian Ports Corporation
	Port of Devonport, Tasmanian Ports Corporation
	Port of Bell Bay, Tasmanian Ports Corporation
	Port of Hobart, Tasmanian Ports Corporation
Benin	Port Autonome de Cotonou
Brazil	Port of Paranaguá
	Porto do Açu
Chile	Puerto Ventanas S.A.
	Puerto de Tocopilla SQM
	Antofagasta Terminal Internacional
	Terminal Pacífico Sur Valparaíso
	Terminal Marítimo de Quintero / OXIQUIM
Colombia	Terminal de Contenedores de Cartagena S.A.
	Sociedad Portuaria Regional de Cartagena S.A.
	Sociedad Portuaria Regional de Barranquilla S.A.
	Riverport S.A.
Ecuador	Andipuerto Terminal – Andipuerto Guayaquil S.A.
Georgia	Batumi Sea Port LLC
Guatemala	Empresa Portuaria Nacional Santo Tomás de Castilla
Jordan	Jordan Industrial Ports Company
	Jordan Phosphate Mines Company / Phosphate Export Port – Aqaba
Kazakhstan	JSC NC Aktau International Commercial Seaport
Malaysia	Bintulu Port Authority
Mexico	Administración del Sistema Portuario Nacional Dos Bocas S.A. de C.V.
Nigeria	NLNG Terminal
Peru	Terminal Internacional del Sur
	Terminal Portuario Paracas S.A.
Qatar	Hamad Port
Taiwan	TIPC-Kaohsiung

Country	Port / terminal / organisation
	TIPC-Taichung
	TIPC-Taipei Port
	TIPC-Hualien
	TIPC-Keelung
	TIPC-Suao
	Port of Anping TIPC
	Mailiao Industrial Harbor / Mailiao Harbor Administration Corp.
	Ho-Ping Industrial Port Corporation
Trinidad and Tobago	Port of Brighton, LABIDCO
	Port of Galeota
Türkiye	Ortadoğu Antalya Liman İşletmeleri A.Ş.

ANNEX II. EcoPorts Network

The EcoPorts Network was established in 1997 by a group of environmentally proactive ports working in collaboration with academia. Since its creation, the initiative has promoted environmental awareness, knowledge exchange and the implementation of good environmental management practices across the port sector. Its underlying principle remains one of cooperation and continuous improvement, providing ports with practical tools to assess, benchmark and strengthen their environmental management performance.

Today, the EcoPorts Network operates through two organisations working within a common framework of tools and methodologies. The European Sea Ports Organisation (ESPO) manages EcoPorts for ports in Europe, while the ECO Sustainable Logistics Chain (EcoSLC) Foundation acts as the contact organisation for ports outside Europe and for port terminals worldwide. Both organisations use the EcoPorts Self Diagnosis Method (SDM) and the Port Environmental Review System (PERS) as the principal tools supporting environmental management and continuous improvement.

Within Europe, EcoPorts is recognised as the main environmental initiative of the port sector. Developed by ports for ports, it has been fully integrated into ESPO since 2011. Its approach is based on voluntary self-regulation, cooperation and knowledge sharing, enabling ports to assess environmental risks, benchmark their performance and progressively improve their environmental management. As of September 2026, the European EcoPorts network comprises 77 member ports from 23 countries, of which 32 are PERS-certified and 46 hold ISO certification.

The ECO Sustainable Logistics Chain (EcoSLC) Foundation was established in the Netherlands in 2010 to extend the EcoPorts approach beyond Europe. Since then, EcoSLC has supported ports and terminals outside Europe in implementing the EcoPorts tools, including the SDM and PERS certification process. EcoSLC operates as a neutral, independent and non-profit foundation and provides administration, review and audit support, as well as training and opportunities for cooperation and knowledge exchange.

The global EcoPorts network continues to expand. As of September 2026, it includes 122 members across 43 countries, with 63 PERS-certified ports and 73 ISO-certified ports. Recent certifications and renewals in countries such as Nigeria, Taiwan, Brazil, Australia and Peru illustrate the continued uptake of the EcoPorts methodology outside Europe and its application across a wide range of geographical and operational contexts.

Through this global network, EcoPorts provides ports and terminals with a common framework for environmental management while facilitating the exchange of practical experience across regions. The continued use of SDM and PERS supports ports in responding to evolving environmental and sustainability challenges, strengthening management practices and demonstrating continuous improvement over time.

ANNEX III. The EcoPorts Environmental Management System for ports and terminals

The EcoPorts environmental management framework was developed through long-standing cooperation between ports, academia and environmental specialists within a series of European initiatives. Its purpose is to provide ports and terminals with practical tools to assess their environmental management practices, identify opportunities for improvement and progressively strengthen their Environmental Management Systems (EMS).

Two tools form the core of this approach: the Self Diagnosis Method (SDM) and the Port Environmental Review System (PERS). The SDM provides a structured self-assessment of environmental management practices and performance, while PERS provides a port-specific environmental management standard and certification framework. Together, they support benchmarking, continuous improvement and the progressive integration of environmental and sustainability considerations into port management.

SDM

The Self Diagnosis Method (SDM) was originally developed within the EcoPorts initiative by port professionals working in collaboration with academics and environmental specialists. It was conceived as a practical self-assessment tool covering the main components that may reasonably be expected within an effective Environmental Management System (EMS).

The SDM enables port authorities, port corporations and terminal operators to systematically review their environmental management practices, identify strengths and areas for improvement, and assess the extent to which environmental responsibilities are integrated into their organisation and operations. Its approach reflects the Precautionary Principle and supports ports in demonstrating that reasonable measures are being taken to identify, prevent and manage environmental risks and to comply with relevant environmental liabilities and responsibilities.

Rather than remaining a static checklist, the SDM has been progressively updated to reflect developments in environmental legislation, port operations, stakeholder expectations and emerging sustainability priorities. Its scope has consequently expanded beyond traditional environmental management components to include issues such as greenhouse gas reduction, climate change adaptation and resilience, resource and energy efficiency, alternative fuels, environmental performance indicators, materiality assessment, and climate-related risks and opportunities.

Through this evolution, the SDM has developed from a primarily environmental self-assessment tool into a broader framework supporting ports in reviewing environmental performance, climate resilience and sustainability within their management systems.

PERS

The Port Environmental Review System (PERS) is the environmental management standard developed within the EcoPorts framework specifically for ports and terminals. Developed by ports, for ports, it reflects the particular operational, organisational and environmental characteristics of port areas and provides a structured set of requirements against which a port's Environmental Management System can be independently assessed and certified.

Its sector-specific approach distinguishes PERS from more generic environmental management frameworks such as ISO 14001 and the EU Eco-Management and Audit Scheme (EMAS), while remaining compatible with the environmental management principles and practices promoted by these systems.

Over time, the EcoPorts approach and PERS have been referenced and supported within the international port and sustainability community, including organisations and initiatives such as:

- American Association of Port Authorities (AAPA)
- African Ports Association
- Arab Sea Ports Federation
- European Sea Ports Organisation (ESPO)
- Inter-American Committee on Ports of the Organization of American States
- International Association of Ports and Harbors (IAPH)
- Taiwan International Ports Corporation (TIPC)
- United Nations Environment Programme (UNEP)
- international and regional development institutions
- World Ports Sustainability Program (WPSP)

Ports seeking PERS certification implement the requirements of the standard and compile the supporting documentation required to demonstrate conformity with its different sections. The application is subsequently subject to an independent assessment, during which the submitted documentation and the implementation of the Environmental Management System are reviewed against the PERS requirements. Successful applicants receive the PERS Certificate of Verification, together with a feedback report identifying the principal findings of the assessment. PERS certification is valid for a period of two years, after which the port must undergo re-certification to demonstrate continued conformity and improvement.

Through this structured and independently assessed framework, PERS supports ports in translating environmental commitments into defined responsibilities, actions, monitoring and continuous improvement, while providing a port-specific mechanism for demonstrating systematic environmental management.