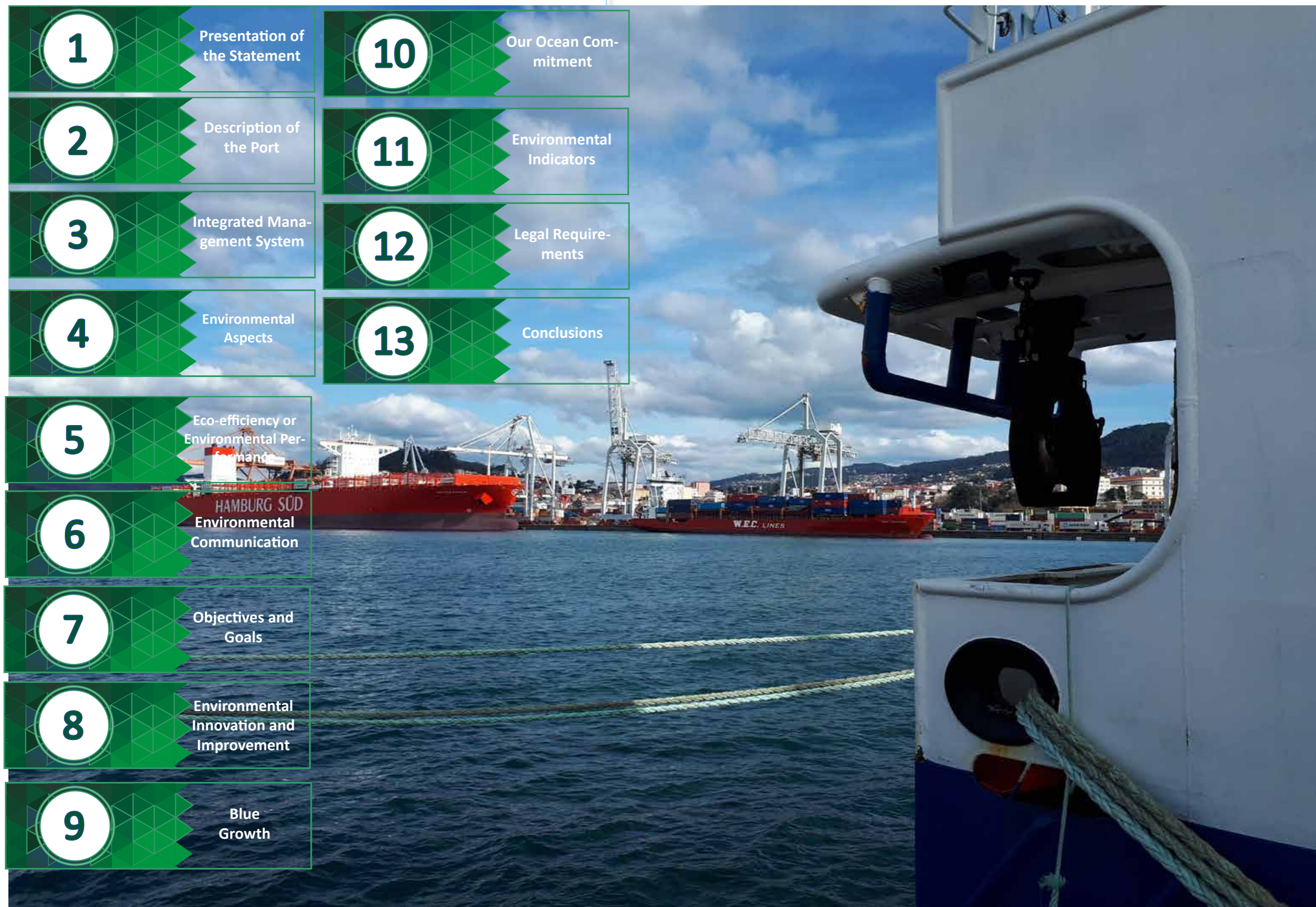


Environmental Report

2020



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Conclusions

During the current fiscal year, the Blue Growth strategy of the Port of Vigo addresses a new stage towards the consolidation of its achievements so far, but reinforcing itself in a context of economic recovery generated by the current health situation as a consequence of the COVID-19 pandemic. This new period is also promoted by the new Agenda 2030 and by the new strategy of the European Commission based on the Green Deal.

Therefore, a new plan is established for the 2021-2027 period, which includes the challenges and opportunities for the different stakeholders, constituting a roadmap aimed at being a great boost for the sustainable development of Vigo and the area of influence of the Port. All this is supported by the new "Next Generation" European funds.

Thus, the Blue Growth Plan 2021-2027 is focused on three main axes that show the way towards compliance with the European Green Pact, digitisation and humanisation of sectoral activities. All this is aligned with the sustainable development goals of the United Nations and the Global Pact. Likewise, "Our Oceans" commitment of the Port Authority is reflected in search of the path of energy self-sufficiency and the total decarbonisation of the Port, with the improvement of energy efficiency, the implementation of renewable energies and the use of alternative energies such as Liquefied Natural Gas (LNG) or Hydrogen.

This new strategy includes some of the projects already included in the previous Plan, but which to date have not been executed yet. It also adds new tractor projects which can boost the growth of the blue economy of Vigo, its metropolitan area and, by extension, of Galicia, providing employment and wealth in a sustainable way and with a strong positive impact. The Blue Growth Plan 2021-2027 includes 47 projects, of which 22 are already underway with European or public-private funds, with a budget of 246 million euros.



Among them, we can highlight the following:

Among them, we can highlight the following:

- Improvement of the intermodality and competitiveness of the Port: with the "Plan of Bouzas" at the forefront, which is intended to increase the berthing lines and the provision of clean energy supply systems to ships such as the "Cold Ironing" or Liquefied Natural Gas (LNG); or the importance of promoting rail connections with Plisan, seeking greater integration of the Logistics Platform of Salvaterra-As Neves in port infrastructures, supporting the lack of land of the Port.
- Environmental and biodiversity improvement projects, such as the environmental Oscar winner "Peiraos do Solpor" and the use of seaweeds to capture CO2 or other projects related to the capture or sink of carbon with chestnut plantations in the green areas of La Plisan or in the sustainable eco-circuit of Ctag.
- Projects to promote renewable energies, hydrogen production or the initiative recently presented for the electrification of maritime transport in the Ría of Vigo "Green Bay", led by Aclunaga and with a budget of 40 million euros.
- Another important pillar of this new Plan is related to the humanisation of the port activity. Along these lines there are projects such as the "Safe and Healthy Port", with the installation of external defibrillators in different areas and the adaptation of protocols and facilities in relation to the COVID-19 pandemic.
- Projects based on the digitisation of port activities, such as the "Smart Viport" or the "one-stop shop", whose aim is to achieve an agile port, with the inclusion of Industry 4.0 in all port terminals. On the other hand, we continue with our inescapable objective of being the Green Port of reference in Southern Europe, and proof of this are our environmental certifications, such as ISO 14001, the EMAS

III registration or the ECOPORTS PERS certificate, which make the Port of Vigo one of the four European ports that hold these three certifications. As already mentioned, the Port Authority of Vigo continues to work intensely to fulfil the commitment of "Our Oceans", signed in October 2017, which includes the reduction of emissions of polluting gases by 30% (CO2, SOX, NOX), as well as achieving energy self-sufficiency of 3%, all by 2022. For this, a series of initiatives have been launched, such as the contracting of electricity supply for the Port, 100% from renewable sources, the installation of photovoltaic solar panels in the central offices of the Port Authority for self-consumption, or the "Auction Hall 4.0" project, with the future installation of more than 146kw/h of photovoltaic panels in the Auction Hall. These initiatives have allowed us to achieve a degree of compliance, to date, of 75% of the objectives set in this commitment. For all this, we want to show our most sincere gratitude to the Port Community, the University of Vigo, the research centres and the workers of the Port Authority, without whose collaboration and participation it would be impossible to achieve compliance with the environmental objectives and goals, which also allows us to position ourselves as one of the green ports of reference in Europe.

The President

The General Manager





Port of Vigo

Port Authority of Vigo

2.1 Location and Main Features

The Port of Vigo is an excellent natural port located northwest of the Iberian peninsula, 45 miles south from the north Atlantic line, exerting its influence in this area as well as in northern Portugal and its surrounding Autonomous Communities.

With more than 14,000 hectares of harboured sea, the Port of Vigo provides a magnificent shelter against storms due to the natural protection of Cies Islands and Morrazo Peninsula. Therefore, it is operational the 365 days of the year and it is regarded as a highly safe port.

The total traffic of cargo processed in the Port of Vigo throughout 2020 amounted to 4,496,206 tons. 91.72% of this amount corresponds to general merchandise, fundamental axis of the Port of Vigo, and only 6.93% to solid bulk and 1.33% to liquid bulk.

In 2020, the health emergency situation caused a sharp decline in cruise traffic, which led to a reduction of up to 9,425 passengers, 93% less than in 2019.

We must also highlight Fishing, which as a whole (frozen, salted, fresh and processed or preserved) amounted to 748,858 tons in 2020.

As for automobile traffic, in 2020 the movement of 512,047 units was registered, 6% less than the previous year.

The importance of our Port lies in the quality and economic value of the moved goods with destination to and origin in the Port of Vigo to supply its industrial sector. The port is specialised in high value merchandise, which involves a great number of jobs and is the driving force of the local economy

Type of Tráfico (Tons)	Year	Year
	2019	2020
Liquid Bulk	46.770	57.744
Solid Bulk	297.778	300.986
Containers	2.659.344	2.780.308
Ro-Ro	1.116.655	1.017.641
General Cargo	3.817.779	3.977.953
Provisioning	139.914	120.997
Fresh Fishing	78.169	36.797
Interios Traffic	0	0
Total Traffic	4.382.044	4.494.477

2.2 Biodiversity

The Port Authority is located in a highly ecological value enclave that is made of areas of special protection:



Natura 2000 network: Ecological network of biodiversity conservation areas in the European Union.

ZEPA: Special area for bird protection.

ZEC: Special area of conservation.

OPSAR: Areas Protected by the Convention for the Protection of the Marine Environment of the Northeast Atlantic.

2.3 The Port Authority of Vigo

The Port Authority of Vigo is a public entity with its own legal personality and patrimony, which is in charge of the administration, management and operation of the Port of Vigo, and is included in code 52.22 of the national classification of business activities (CNAE). It falls under The Ministry of Public Works and Transport (Ministerio de Fomento), through Puertos del Estado (Ports of Vigo); and from a legal perspective it is ruled by legislative Royal Decree 2/2011, which, among others, establishes the following competencies (all certified according to UNE-EN ISO 14001 standards of environmental management, EMAS III and PERS - port environmental review system):

- The planning of the service area and uses of the port, in coordination with the competent administrations.
- The planning, project, construction, conservation

and exploitation of the works and services of the port, and maritime signals entrusted.

- The management of the port public domain and maritime signals.
- The optimisation of economic management and the profitability of the assets and resources assigned.
- The promotion of industrial and commercial activities related to maritime or port traffic.
- The coordination of the operation of different means of transport in the port.
- The management and coordination of both maritime and land port traffic.

The Port of Vigo gives service to the most developed industrial area of Galicia and extends its influence area to Northern Portugal and Castilian Plateau, all of which being supported with the launch of the Motorway of the Sea. Likewise, the Port of Vigo also

has competencies and functions in five municipalities: Vigo, Redondela, Vilaboa, Moaña and Cangas.

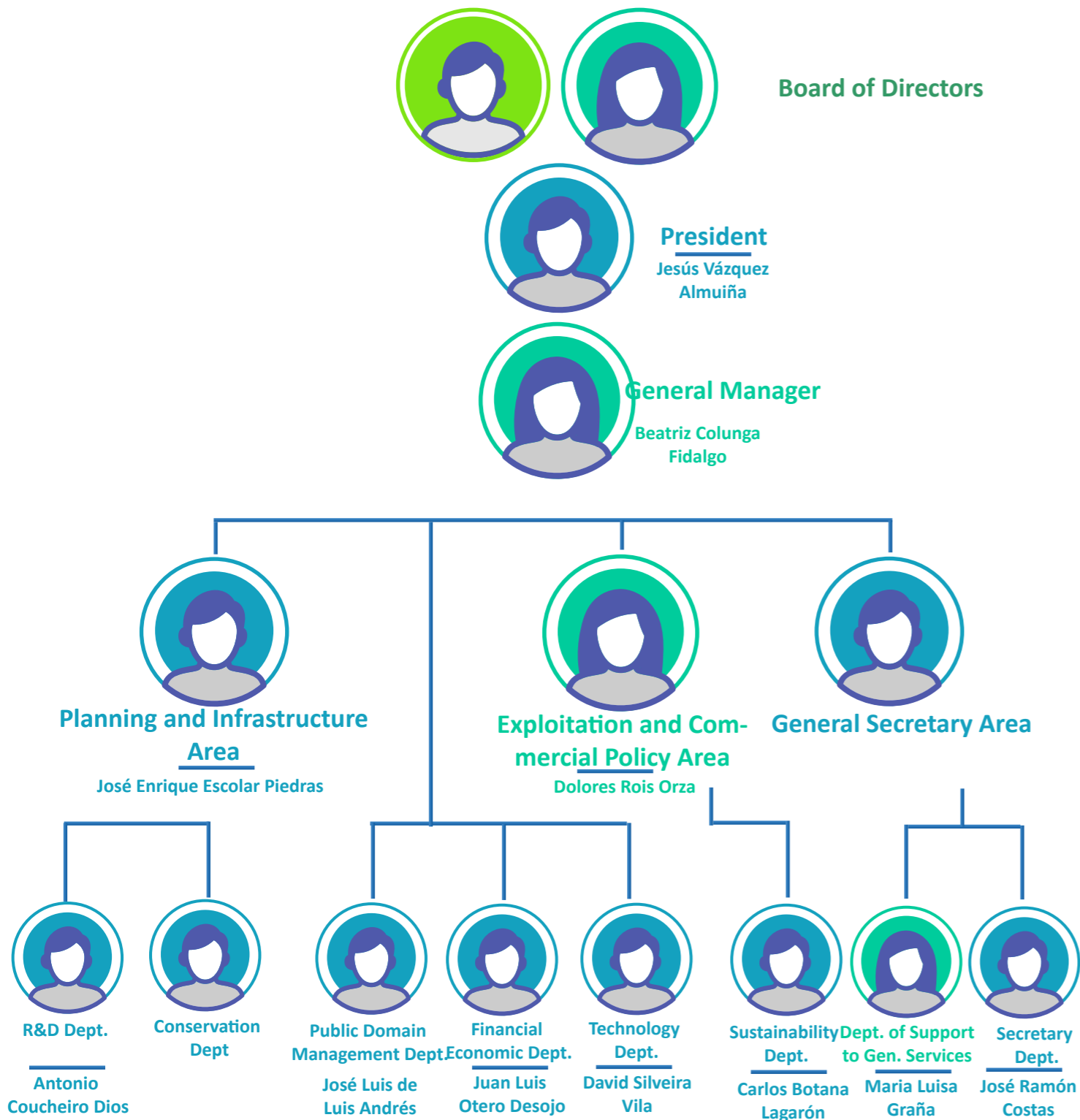
The Port Authorities are financed with their own resources, generated mainly by the application of occupation, activity and utilisation fees.

In 2020, the Port Authority of Vigo obtained a turnover of 25.5 million euros and losses of 17.7 million euros.

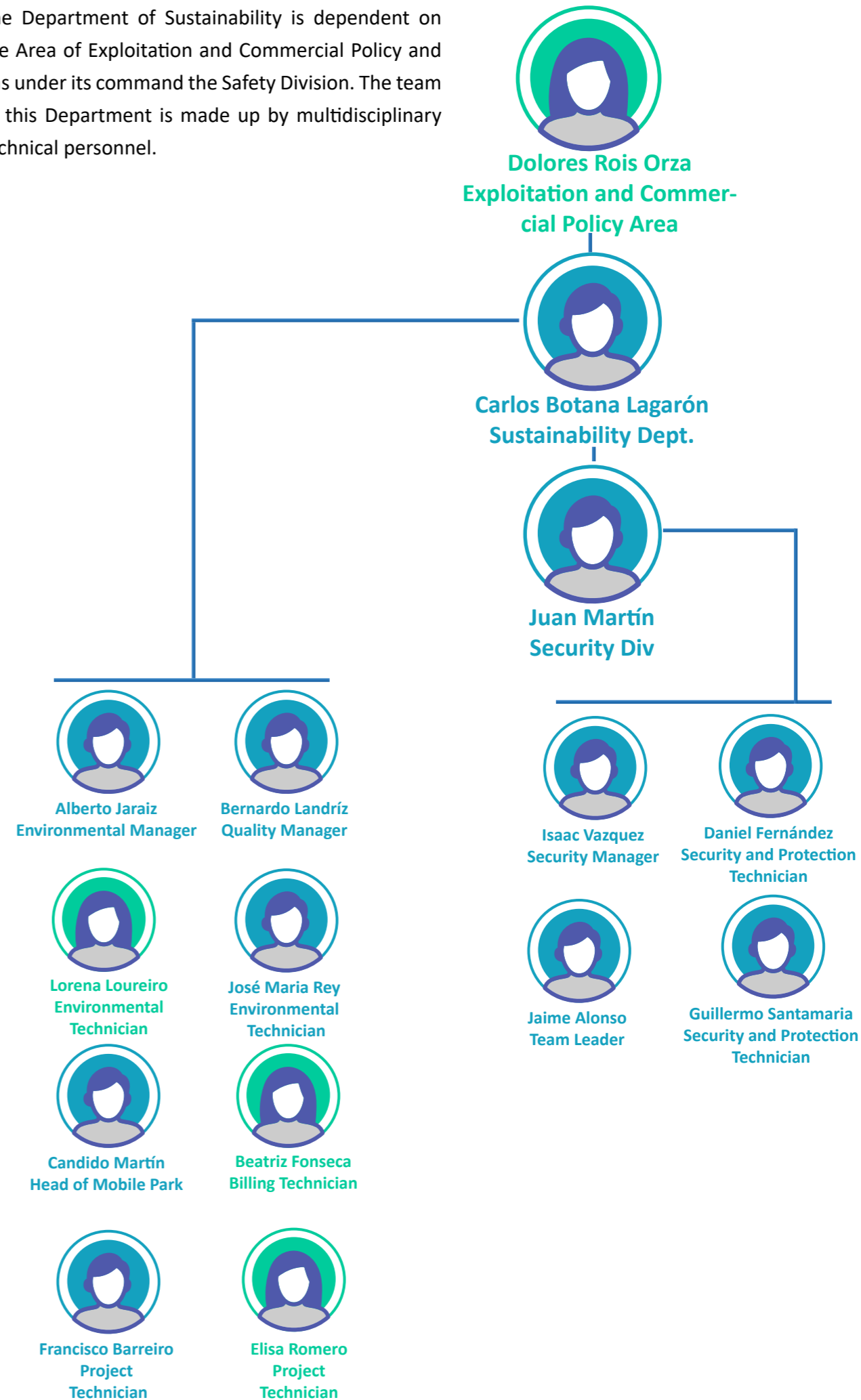


2.4 Organisation chart and Responsibilities

The Port Authority of Vigo is managed by its Board of Directors, whose composition and functions are set out in Legislative Royal Decree 2/2011, of September 5, which approves the Revised Text of the Law on Puertos del Estado (State Ports) and Merchant Navy.



The Department of Sustainability is dependent on the Area of Exploitation and Commercial Policy and has under its command the Safety Division. The team of this Department is made up by multidisciplinary technical personnel.





3.1 Documentation

The Port Authority of Vigo renews the environmental certification UNE-EN ISO 14001 every year since obtaining it in 2007, as well as quality ISO 9001 and OHSAS

Occupational Health and Safety certifications.

This management system has been adapted in order to comply with the provisions of regulation CE 1221/2009 (EMAS III). The documentation that makes up the integrated management system consists of a Manual, which is Unique for the environmental, quality and occupational health and safety management system, 10 general procedures, 13 occupational health and safety procedures, 14 quality procedures and 9 environmental procedures, which make it be eminently practical and focused on the control of processes and services carried out in the Port of Vigo:

- Integrated management manual.
- Identification and assessment of environmental aspects.
- Waste management.
- Sewage management.
- Emissions and noise control.
- Consumption control.
- Environmental control of suppliers and contractors.
- Environmental control of authorisations and concessions.
- Environmental control of port operations.
- Environmental control of works.

This documentation is complemented with various safety (SI) and environment instructions (EI), approved by the Board of Directors of the Port Authority of Vigo, as well as various guides to good practices:

- Guide to Good Environmental Practices of Puertos del Estado (State Ports)
- IS 01 Loading, unloading, stowage and transfer port service.
- IS 02 Circulation and special pieces.

- IS 03 Admission of Hazardous Goods (HG).
- IS 04 Repair afloat.
- IS 05 Hazardous goods and fire protection.
- IS 06 Coordination of activities in concessions and authorisations.
- IS 07 Stay of ship in port.
- IS 08 Fishing operations.
- IMA 01 Fuel supply to ships.
- IMA 02 Oil supply.
- IMA 03 Construction, repair, scrapping and recycling of ships in tier and afloat.
- IMA 04 MARPOL Service.

All this documentation is available on intranet and on the website www.apvigo.es

3.2 Integrated management policy



INTEGRATED MANAGEMENT POLICY

The Port of Vigo is undoubtedly one of the most important economic and service provision units in the Autonomous Community, whose vision is to be a model of competitiveness, efficiency and sustainability in all its activities, facilities and services.

Therefore, our projects and actions are aimed at being:

- A connected port, not only in relation to the means and infrastructures of intermodal maritime transport, but also through digitised industrial and logistic processes, information and communication technologies and efficiency in administration, a key link with the end user .
- An innovative port, integrated into an ecosystem of knowledge, transfer, R + D + I, entrepreneurship and differentiating commercial actions.
- A green port, promoting the protection and conservation of the maritime and coastal environment, which makes responsible use of natural resources and practises sustainability and energy efficiency.
- An inclusive port, focused on people and committed to the creation of new professions, the productive cohesion of sectors linked to the sea and social innovation actions.

Our mission is to manage infrastructures and ensure the reliability of services in order to contribute to the competitiveness of its customers and create value for society, within a blue growth framework.

The fundamental values of the Port Authority of Vigo are the quality of all its services, safety and health at work, respect for the environment, integrity and honesty in professional performance and in its relations with stakeholders, and the continuous improvement of the integration of the port in the city of Vigo and other surrounding communities.

The Port Authority of Vigo, as manager of the port, has marked as a priority objective within its strategic business framework, the sustainable port management, aimed at achieving full satisfaction of port users and with the firm intention of complying with responsibilities to its workers and the society.

The Management and Presidency of the Port Authority of Vigo consider their workers' safety and health a priority, and are aware of the great social impact of port activities. People are the most important value that guarantees our future and therefore must be qualified and they must identify with the objectives of our organisation.

From the full knowledge of their responsibility in protecting workers' health and the environment in which port activities are carried out, and always keeping in mind the commitment and need to offer competitive and adequate services to its customers, the Port Authority of Vigo has developed an Integrated System of Quality Management, Environment and Health and Safety in the Workplace, in which the following commitments are established:

- Provide users with adequate infrastructure, subject to a level of conservation and cleanliness that enables the proper performance of the activities carried out in the port.



- Provide users with services of the highest quality, at the lowest possible cost and in accordance with the requirements and specifications established in the regulations and legislation in force, always seeking excellence in the provision of public services and using the new available technologies.
- Integrate occupational health and safety in the company's policies as a whole, in such a way that the managers, technicians, directors and workers assume the responsibilities they have in the matter, understanding that to be carried out correctly, work must be done safely.
- Provide safe and healthy working conditions for the prevention of work-related injuries and health deterioration, also eliminating dangers and reducing risks regarding safety and health at work.
- Apply the principle of continuous improvement and innovation in all the processes carried out by the port.
- Promote motivation, participation, training and development of all members of the organisation, so as to achieve the success of our Entity. The consultation and participation of workers, and all interested parties in the management of occupational health and safety, and through the Prevention Delegates, is essential for the establishment of a preventive culture, which is why they are present in decision-making regarding Occupational Health and Safety matters.
- Cooperate with the companies in the Port and other Public Administrations in the prevention and fight against pollution of the port environment and respect for the environment, while integrating environmental considerations in the ordering, planning and management processes of the public port domain.
- Promote studies and research related to environmental protection, energy efficiency and sustainable development, collaborating, for this, with other entities, organisations or national and international companies, according to their competencies.
- With the firm intention of fulfilling its responsibilities to its workers and society, of subscribing and complying with the regulations imposed by Law 31/1995 of November 8 on Occupational Health and Safety, its subsequent modifications and the regulations included in it, as well as all the legal regulations that are applicable and all other requirements in terms of occupational health and safety.
- Reach the status of an inclusive, safe and healthy Port, through innovation initiatives in the improvement of the safety and health of thousands of workers who operate in it, a cardiosafe and healthy Port with more responsible facilities with our community, ensuring a safe environment that minimizes health risks for both port workers and the rest of the inhabitants of the city who use the port area.

GENERAL MANAGER

PRESIDENT

VIGO, MARZO 2021



Certificación

Concedida a

AUTORIDAD PORTUARIA DE VIGO

PZ DE LA ESTRELLA, 1 – 36201 – VIGO – PONTEVEDRA –
ESPAÑA

Bureau Veritas Certification certifica que el Sistema de Gestión ha sido auditado y
encontrado conforme con los requisitos de la norma:

NORMA

ISO 14001:2015

El Sistema de Gestión se aplica a:

LA GESTIÓN DIRECTA DE LOS SERVICIOS PORTUARIOS: EL SERVICIO DE
ORDENACIÓN, COORDINACIÓN Y CONTROL DE TRÁFICO PORTUARIO, TANTO
MARÍTIMO COMO TERRESTRE; LA COORDINACIÓN Y VIGILANCIA DE LAS
OPERACIONES DESARROLLADAS EN LAS LONJAS DE ALTURA, GRANDES PECES Y
BAJURA; LOS SERVICIOS DE SEÑALIZACIÓN Y BALIZAMIENTO MARÍTIMOS, LOS
SERVICIOS DE VIGILANCIA, SEGURIDAD Y POLICÍA EN LAS ZONAS COMUNES; EL
SERVICIO DE ALUMBRADO EN LAS ZONAS COMUNES; EL SERVICIO DE LIMPIEZA
EN LAS ZONAS DE TIERRA Y AGUA; LOS SERVICIOS DE PREVENCIÓN Y CONTROL
DE EMERGENCIA. LA GESTIÓN DE LA EJECUCIÓN DE LAS OBRAS EN EL ÁMBITO
PORTUARIO. LA GESTIÓN DE USO DEL DOMINIO PÚBLICO PORTUARIO:
CONCESIONES Y AUTORIZACIONES. LA GESTIÓN DIRECTA DE LOS SERVICIOS
PORTUARIOS BÁSICOS: PRACTICAJE, TÉCNICO-NÁUTICOS, SERVICIOS AL PASAJE,
SERVICIOS DE MANIPULACIÓN Y TRANSPORTE DE MERCANCÍAS, SERVICIO
MARPOL.

Número del certificado:	ES120284-1
Fecha de certificación inicial con otra Entidad de Certificación:	03-04-2014
Aprobación original:	23-04-2021
Certificado en vigor:	23-04-2021
Caducidad del certificado:	03-07-2023

*Este certificado está sujeto a los términos y condiciones generales y particulares de los servicios de
certificación*



Certificación

Concedida a

AUTORIDAD PORTUARIA DE VIGO

PZ DE LA ESTRELLA, 1 – 36201 – VIGO – PONTEVEDRA –
ESPAÑA

Bureau Veritas Certification certifica que el Sistema de Gestión ha sido auditado y
encontrado conforme con los requisitos de la norma:

NORMA

ISO 9001:2015

El Sistema de Gestión se aplica a:

LA GESTIÓN DIRECTA DE LOS SERVICIOS PORTUARIOS: EL SERVICIO DE
ORDENACIÓN, COORDINACIÓN Y CONTROL DE TRÁFICO PORTUARIO, TANTO
MARÍTIMO COMO TERRESTRE; LA COORDINACIÓN Y VIGILANCIA DE LAS
OPERACIONES DESARROLLADAS EN LAS LONJAS DE ALTURA, GRANDES PECES Y
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SERVICIOS DE VIGILANCIA, SEGURIDAD Y POLICÍA EN LAS ZONAS COMUNES; EL
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DE EMERGENCIA. LA GESTIÓN DE LA EJECUCIÓN DE LAS OBRAS EN EL ÁMBITO
PORTUARIO. LA GESTIÓN DE USO DEL DOMINIO PÚBLICO PORTUARIO:
CONCESIONES Y AUTORIZACIONES. LA GESTIÓN DIRECTA DE LOS SERVICIOS
PORTUARIOS BÁSICOS: PRACTICAJE, TÉCNICO-NÁUTICOS, SERVICIOS AL PASAJE,
SERVICIOS DE MANIPULACIÓN Y TRANSPORTE DE MERCANCÍAS, SERVICIO
MARPOL.

Número del certificado:	ES120285-1
Fecha de certificación inicial con otra Entidad de Certificación:	03-04-2014
Aprobación original:	23-04-2021
Certificado en vigor:	23-04-2021
Caducidad del certificado:	03-07-2023

*Este certificado está sujeto a los términos y condiciones generales y particulares de los servicios de
certificación*



Certificación

Concedida a

AUTORIDAD PORTUARIA DE VIGO

PZ DE LA ESTRELLA, 1 – 36201 – VIGO – PONTEVEDRA – ESPAÑA

Bureau Veritas Certification certifica que el Sistema de Gestión ha sido auditado y encontrado conforme con los requisitos de la norma:

NORMA

ISO 45001:2018

El Sistema de Gestión se aplica a:

LA GESTIÓN DIRECTA DE LOS SERVICIOS PORTUARIOS: EL SERVICIO DE ORDENACIÓN, COORDINACIÓN Y CONTROL DE TRÁFICO PORTUARIO, TANTO MARÍTIMO COMO TERRESTRE; LA COORDINACIÓN Y VIGILANCIA DE LAS OPERACIONES DESARROLLADAS EN LAS LONJAS DE ALTURA, GRANDES PECES Y BAJURA; LOS SERVICIOS DE SEÑALIZACIÓN Y BALIZAMIENTO MARÍTIMOS, LOS SERVICIOS DE VIGILANCIA, SEGURIDAD Y POLICÍA EN LAS ZONAS COMUNES; EL SERVICIO DE ALUMBRADO EN LAS ZONAS COMUNES; EL SERVICIO DE LIMPIEZA EN LAS ZONAS DE TIERRA Y AGUA; LOS SERVICIOS DE PREVENCIÓN Y CONTROL DE EMERGENCIA. LA GESTIÓN DE LA EJECUCIÓN DE LAS OBRAS EN EL ÁMBITO PORTUARIO. LA GESTIÓN DE USO DEL DOMINIO PÚBLICO PORTUARIO: CONCESIONES Y AUTORIZACIONES. LA GESTIÓN DIRECTA DE LOS SERVICIOS PORTUARIOS BÁSICOS: PRACTICAJE, TÉCNICO-NÁUTICOS, SERVICIOS AL PASAJE, SERVICIOS DE MANIPULACIÓN Y TRANSPORTE DE MERCANCÍAS, SERVICIO MARPOL.

Número del certificado:	ES120283-1
Fecha de certificación inicial con otra Entidad de Certificación:	03-04-2014
Aprobación original:	23-04-2021
Certificado en vigor:	23-04-2021
Caducidad del certificado:	03-07-2023

Este certificado está sujeto a los términos y condiciones generales y particulares de los servicios de certificación



Bureau Veritas Iberia S.L.
C/ Valportillo Primera 22-24, Edificio Caoba, 28108 Alcobendas - Madrid, España
1/1



3.4 EMAS III



CERTIFICADO DE INSCRIPCIÓN NO REXISTRO CERTIFICADO DE INSCRIPCIÓN EN EL REGISTRO

O Secretario Xeral de Calidade e Avaliación Ambiental da Consellería de Medio Ambiente, Territorio e Infraestruturas da Xunta de Galicia certifica que:
El Secretario General de Calidad y Evaluación Ambiental de la Consellería de Medio Ambiente, Territorio e Infraestruturas da Xunta de Galicia certifica que:

AUTORIDAD PORTUARIA DE VIGO

Para o centro de / Para el centro de:
PLAZA DE LA ESTRELLA, 1 36201 VIGO
Foi rexistrada co número / Ha sido registrada con el número

ES-GA-000303

De acordo co Regulamento (CE) N° 1221/2009 do Parlamento Europeo e do Consello de 25 de novembro de 2009, relativo á participación voluntaria de organizacións nun sistema comunitario de xestión e auditoría medioambientais (EMAS), e polo que se derogan o Regulamento (CE) n° 761/2001 e as Decisións 2001/681/CE e 2006/193/CE da Comisión, para as actividades de:
De acuerdo al Reglamento (CE) N° 1221/2009 del Parlamento Europeo y del Consejo, de 25 de noviembre de 2009, relativo a la participación voluntaria de organizaciones en un sistema comunitario de gestión y auditoría medioambientales (EMAS), y por el que se derogan el Reglamento (CE) n° 761/2001 y las Decisiones 2001/681/CE y 2006/193/CE de la Comisión, para las actividades de

XESTIÓN DO DOMINIO PÚBLICO PORTUARIO* GESTIÓN DEL DOMINIO PÚBLICO PORTUARIO*

Santiago de Compostela, a 2 de decembro de 2010.

Data de rexistro: 06/10/2010
Fecha de registro: 06/10/2010

O secretario Xeral
El secretario General

XUNTA DE GALICIA
CONSELLERÍA DE MEDIO AMBIENTE,
TERRITORIO E INFRAESTRUTURAS
Secretaría Xeral de Calidade e Avaliación Ambiental



(*) A validez do presente Certificado de inscrición no Rexistro EMAS está condicionada ao mantemento da organización no citado rexistro, mediante resolución expresa otorgada polo organismo competente. No caso de cancelación, débese entregar o presente Certificado ao organismo competente.
(**) A validez do presente Certificado de inscrición en el Registro EMAS está condicionada ao mantemento da organización en el citado rexistro, mediante resolución expresa otorgada polo organismo competente. En caso de cancelación, se debe entregar o presente Certificado ante dicho organismo competente.



XUNTA DE GALICIA
CONSELLERÍA DE MEDIO AMBIENTE,
TERRITORIO E VIVENDA
Dirección Xeral de Calidade Ambiental,
Sostibilidade e Cambio Climático

San Lázaro, s/n
15781 Santiago de Compostela

AA/IDSE/ES-GA-000303

galicia

AUTORIDAD PORTUARIA DE VIGO
PLAZA DE LA ESTRELLA, 1
36201 VIGO
(PONTEVEDRA)

ASUNTO: RENOVACIÓN DA ADHESIÓN Ó SISTEMA DE XESTIÓN E AUDITORÍA MEDIOAMBIENTAL

AUTORIDAD PORTUARIA DE VIGO, inscrita no sistema comunitario de xestión e auditoría medioambiental, co n.º ES-GA-000303 con data 06.10.10, presenta a nova declaración medioambiental validada por DNV GL BUSINESS ASSURANCE ESPAÑA, S.L. (Unipersonal) dentro do prazo previsto. A dita declaración medioambiental foi validada segundo o Regulamento (CE) n.º 1221/2009 do Parlamento Europeo e do Consello de data 25 de novembro de 2009, relativo á participación voluntaria de organizacións nun sistema comunitario de xestión e auditoría medio ambientais EMAS modificado segundo os Regulamentos (UE) 2017/1505 e (UE) 2018/2026.

Trala verificación da non existencia de non conformidades coa lexislación vixente, esta Dirección Xeral considera renovada a adhesión ao sistema de xestión e auditoría medioambiental, procedendo á actualización do rexistro.

A devandita renovación levouse a cabo segundo o indicado no Regulamento (CE) n.º 1221/2009 do Parlamento Europeo e do Consello, de data 25 de novembro de 2009, relativo á participación voluntaria de organizacións nun sistema comunitario de xestión e auditoría medio ambientais EMAS, e no Decreto 185/1999, do 17 de xuño, polo que se establece o procedemento para a aplicación na Comunidade Autónoma galega, dun sistema voluntario de xestión e auditoría ambiental.

Este documento ten validez ata o 17.01.2022, data límite para a presentación, por parte da entidade, da seguinte declaración ambiental validada, agás a súa anulación ou suspensión temporal.

Santiago de Compostela, na data da sinatura electrónica
Manuel Díaz Cano
Xefe de Servizo de Avaliación Ambiental de Proxectos
(asinado electronicamente)

Asinado por: DIAZ CANO, MANUEL
Corpor: Xefe do Servizo de Avaliación Ambiental de
Proxectos
Data e hora: 22/01/2021 11:15:39

CVE: 01000303v1
Verificación: https://sede.xunta.gal/ov



Xacobeo 2021

Páxina 1 de 1

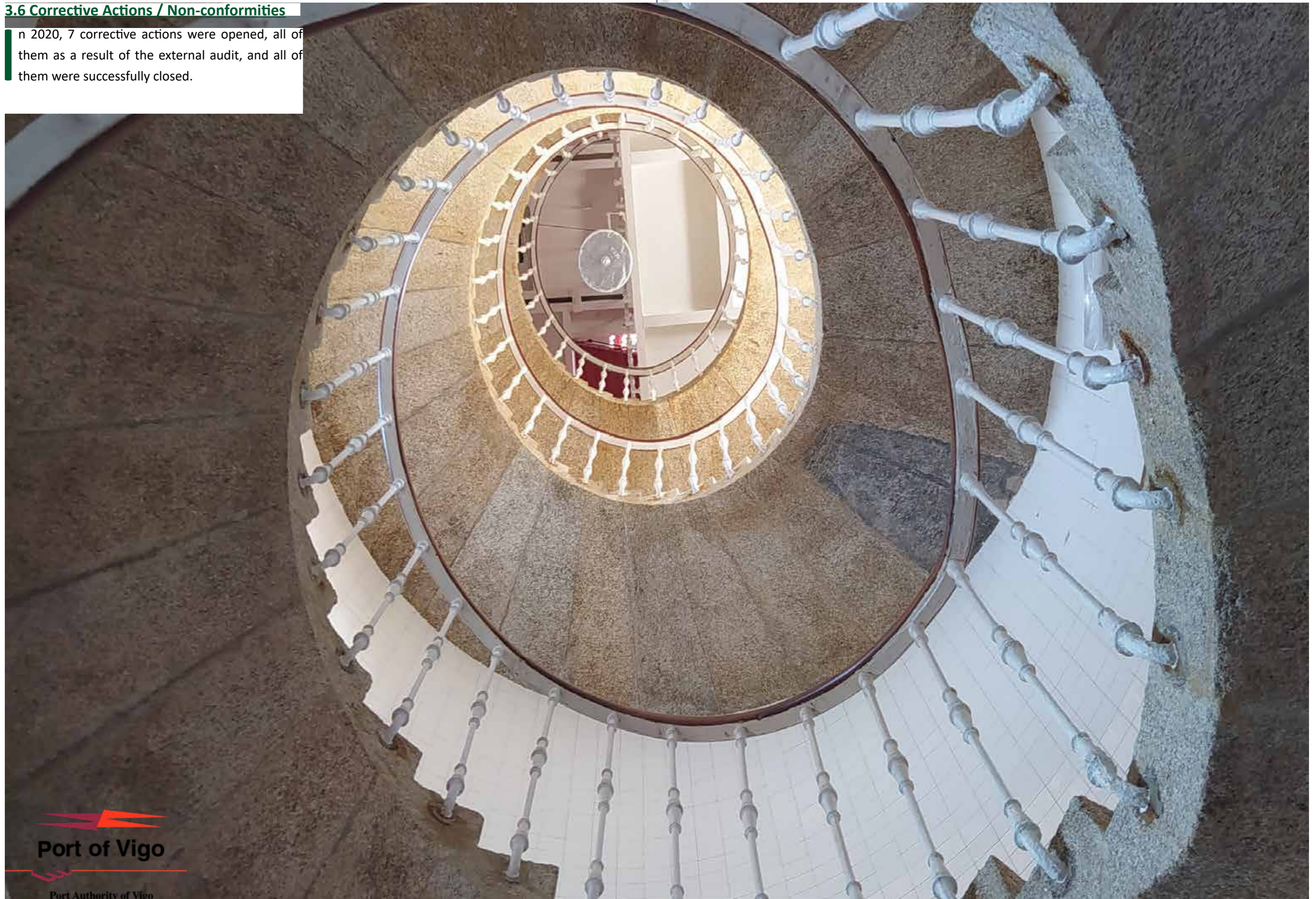
3.5 PERS (Port Environmental Review Sistem)

CERTIFICATE OF VERIFICATION			
THIS IS TO CERTIFY THAT THE DOCUMENTATION OF THE PORT ENVIRONMENTAL REVIEW SYSTEM OF:			
Autoridade Portuaria de Vigo Spain			
HAS BEEN REVIEWED BY LLOYD'S REGISTER TO THE FOLLOWING ENVIRONMENTAL MANAGEMENT STANDARD:			
Port Environmental Review System (PERS) version 4			
THE SYSTEM IS APPLICABLE TO THE:			
Activities, products and services of the port authority			
Certificate no: 128		Verification date: 2 May 2017	
ON BEHALF OF ESPO		ON BEHALF OF LLOYD'S REGISTER ROTTERDAM	
A PERS certificate is the confirmation that the PERS requirements have been evaluated and met. However, because the review is based on third hand information, a PERS certificate is not a value judgement of the port environmental management system and its performance, since these have only been evaluated on the basis of documents supplied by the port.			

Revisión 0

3.6 Corrective Actions / Non-conformities

In 2020, 7 corrective actions were opened, all of them as a result of the external audit, and all of them were successfully closed.





4 Criteria for assessing Environmental Aspects

Every year there is an assessment of direct environmental aspects, which are the ones managed by the Port Authority; indirect aspects, which are managed by users and concessionaires; potential environmental aspects, which are the ones associated with emergency situations for activities and services carried out in the port of Vigo; and finally the environmental aspects of a new project, which are the ones that are assessed during the planning phase of new works, taking into account the activities and operations that will be performed both in the construction phase and in the operation phase.

Criteria for assessing direct and indirect environmental aspects:

Different criteria are used for the assessment of these aspects: the "frequency" criterion, which is determined by the continuity with which the aspect is generated; the "dangerousness" criterion, which refers to the intrinsic characteristics of the aspect that confer capacity to cause damage; and finally the "extension" criterion, which refers to the amount or space of influence of the aspect.

Depending on the degree of intensity of each of these criteria, a score is established. If the sum of the scores exceeds a specific value, it is determined that the assessed aspect is significant. On the contrary, if the sum of the scores does not exceed that value, the aspect is not significant.

Criteria for assessing potential environmental aspects:

The same criteria are used for the assessment of the potential environmental aspects and the emergency situations defined in the internal emergency plans as well as the internal maritime plan of the port of Vigo.

Criteria for assessing environmental aspects of a new project:

The environmental aspects of new projects use the same assessment criteria and are identified and evaluated in the planning phase, taking into account the works and activities/ operations that will be carried out both in the construction and operation phase.

Only the projects that require environmental impact assessment or have sufficient entity to generate some type of potential impact on the environment are assessed.



4.1 Direct Environmental Aspects

Activity / Service	Environmental aspects	Significant	Potential associated impact
General port activity	Generation of noise	Yes	Potential pollution of soil, groundwater / marine environment and air
	Chemical products (foam)	Yes	
Lighthouses	Water consumption	Yes	Consumption of natural resources
	Discharge of sewage	Yes	Potential pollution of soil, groundwater / marine environment and air
Cleaning and waste collection	Batteries at Green Points	Yes	Potential pollution of soil, groundwater / marine environment and air
	Generación de residuos MARPOL anexo IV	Si	

The direct environmental Aspects are the ones managed by the Port Authority of Vigo. Only those that have been significant are reflected in the table:

General Port Activity

- Generation of noise derived from port activity: This year there were several complaints derived from noise at night generated by various ships during their stay in port and refrigeration facilities, as well as due to the greater sensitivity of the public. At this point, the Port Authority of Vigo is immersed in various OPS (On Power Supply) and LNG projects for the supply of electricity to ships, which would allow their engines to be switched off during their stay in port.

Lighthouses

- Water consumption: This year there was a small increase in water consumption in Estai Lighthouse, which implies a greater volume of discharge of sewage to the sewage system.

Cleaning service

- Batteries at Green Points: During financial year 2020, 4,794 kg of batteries were collected, compared to the 840 kg the previous year, all of them from fishing vessels, which reaffirms the greater awareness of the sector with the care of our seas, their livelihood.

Generation of MARPOL waste:

During financial year 2020 an increase in MARPOL Annex IV waste was recorded, which meant two consecutive years of growth.

Both the batteries at green points and the MARPOL waste lead to their identification as significant environmental aspects from a positive point of view since it derives from a greater environmental awareness of users, preventing this type of waste from ending up in the sea.



4.2 Indirect Environmental Aspects

For the assessment of Indirect Environmental Aspects, an environmental survey is carried out annually to the companies operating in the port of Vigo, differentiating them by sectors (shipyards, refrigerators, fuel supply, etc.)

As a result of this survey, data are obtained on the

consumption of energy, water, fuel, waste generation, etc., with which indirect environmental aspects are assessed. Likewise, these visits also serve to advise companies and users on the best environmental practices as well as the legal requirements regarding environmental issues.

Activity / Service	Environmental aspects	Significant	Potential associated impact
Shipyards	Generation of hazardous waste	Yes	Potential pollution of soil and ground-water / marine environment
	Generation of waste assimilable to urban waste	Yes	
MARPOL Service	Water consumption	Yes	Consumption of natural resources
	Fuel consumption	Yes	
	Electrical energy consumption	Yes	
	Discharge of sewage	Yes	Potential pollution of soil and ground-water / marine environment
Water and Energy	Electrical energy consumption	yes	Consumption of natural resources
	Salt water consumption	yes	
Refrigerators	Fuel-Oil/ Gasoil consumption	Yes	Potential pollution of soil and ground-water / marine environment
	Generation of hazardous waste	Yes	
	Generation of non-hazardous waste	Yes	
Organic waste management	Water consumption	Yes	Consumption of natural resources
	Electrical energy consumption	Yes	
	Fuel consumption	Yes	
	Generation of hazardous non-waste	Yes	Potential pollution of soil and ground-water / marine environment
	Discharge of sewage	Yes	
Fuel supply	Water consumption	Yes	Consumption of natural resources
	Electrical energy consumption	Yes	
	Fuel consumption	Yes	
	Discharge of sewage	Yes	Potential pollution of soil and ground-water / marine environment
Container Terminal	Water consumption	Yes	Consumption of natural resources
	Electrical energy consumption	Yes	
	Discharge of sewage	Yes	Potential pollution of soil and ground-water / marine environment
Pest control	Water consumption	Yes	Consumption of natural resources
	Electrical energy consumption	Yes	
	Fuel consumption	Yes	
	Discharge of sewage	Yes	Potential pollution of soil and ground-water / marine environment
Fight against pollution	Water consumption	Yes	Consumption of natural resources
	Electrical energy consumption	Yes	
	Fuel consumption	Yes	
	Generation of hazardous waste	Yes	Potential pollution of soil and ground-water / marine environment
	Generation of non-hazardous waste	Yes	
	Discharge of sewage	Yes	

4.3 Potential Environmental Aspects

Activity / Service	Environmental aspects	Significant	Potential associated impact
Fire/ Explosion on ship / Explosion or fire during ship repair	Discharge of water and substances to extinguish fire	Yes	Potential pollution of marine environment
Fire in flammable liquid tank / Fire of flammable liquid on land	Emission of combustion gases	Yes	Potential pollution of air
	Emission of polluting substances	Yes	Potential pollution of soil, groundwater / marine environment and air
	Discharge of hazardous substances	Yes	
Fire of flammable liquid in the sea	Discharge of hazardous substances	Yes	Potential pollution of marine environment
Fire in offices	Discharge of water and substances used to extinguish fire	Yes	Potential pollution of soil, groundwater / marine environment and air
Collision or crash / Shipwreck Evacuation / Waterway or flood / Accident with passenger ship on Ría	Discharge of hazardous substances	Yes	Potential pollution of marine environment
Ship or vessel adrift	Discharge of hazardous substances	Yes	
Discharge of hydrocarbons to the sea (PIM)	Discharge of hazardous substances	Yes	
Emergency with hazardous goods involved. / Explosion of cloud with flammable gas in flammable liquefied gas tank	Emission of combustion gases	Yes	Potential pollution of air
	Emission of polluting substances	Yes	Potential pollution of soil, groundwater / marine environment and air
	Discharge of hazardous substances	Yes	
Spill of hazardous non-flammable materials on land	Discharge of hazardous substances	Yes	Potential pollution of soil and groundwater / marine environment
Spill of combustible or flammable liquid on land	Discharge of hazardous substances	Yes	Potential pollution of soil and groundwater / marine environment
Large fire which affects one or more units	Emission of combustion gases	Yes	Potential pollution of air
	Discharge of hazardous substances	Yes	Potential pollution of soil and groundwater / marine environment
	Discharge of water and substances used to extinguish fire	Yes	
	Discharge of cooling water	Yes	
	Remains of hazardous substances	Yes	
Spill to the sea of liquid asphalt because of tank leakage, breakage of joints or similar and during loading / unloading of vessel	Remains of liquid asphalt	Yes	Potential pollution of soil and groundwater / marine environment
Railway accidents	Remains of hazardous substances	Yes	
	Discharge of hazardous substances	Yes	

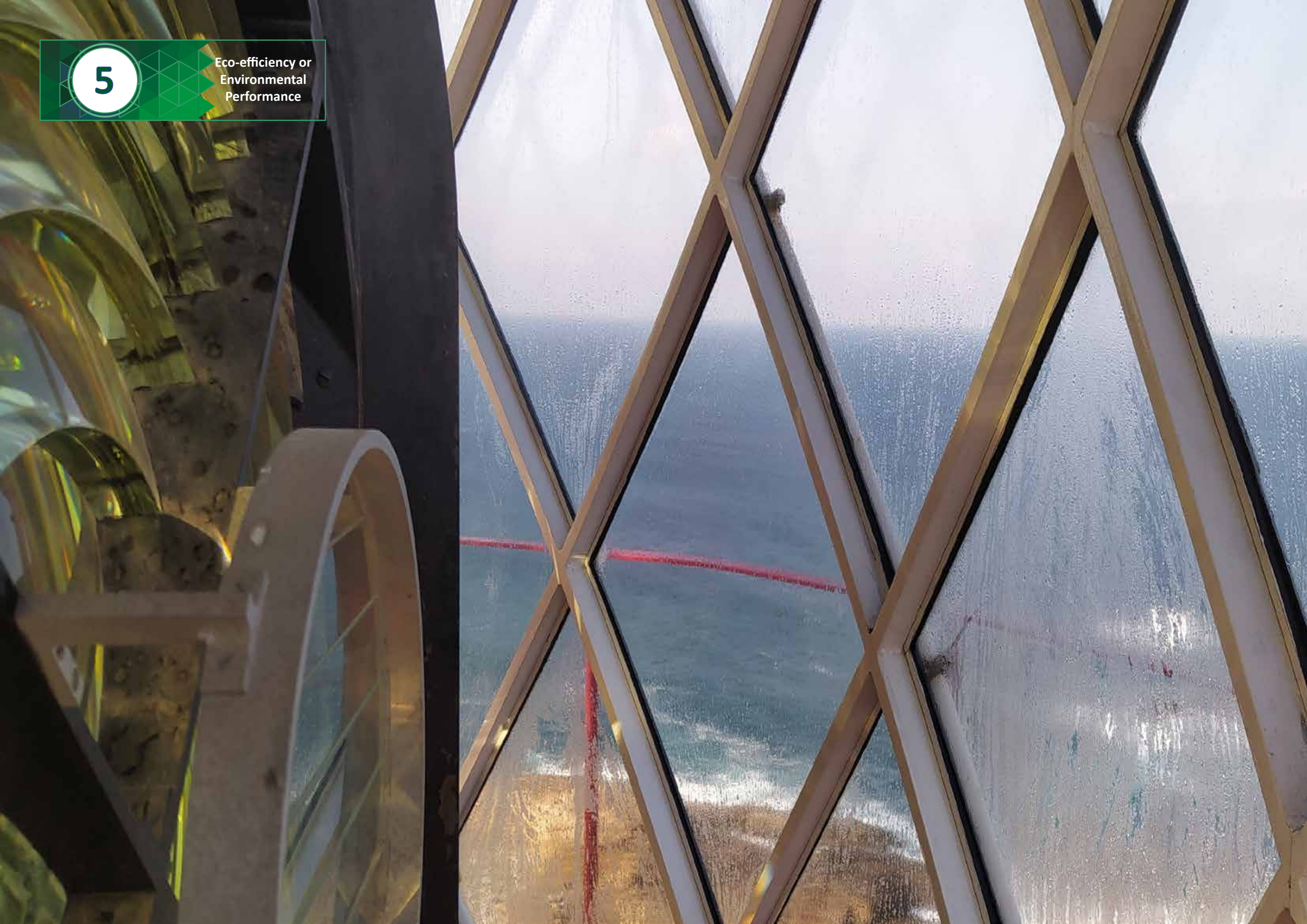
4.4 Environmental Aspects New project

Activity / Service	Environmental aspects	Significant	Potential associated impact
Improvement of the energy efficiency of the Auction Hall	Generation of non-hazardous waste	yes	Potential pollution of soil, groundwater / marine environment and air.
	Generation of construction and demolition waste	yes	
Orillamar road conditioning	Generation of non-hazardous waste	yes	Potential pollution of soil, groundwater / marine environment and air.
	Generation of construction and demolition waste	yes	



5

Eco-efficiency or
Environmental
Performance

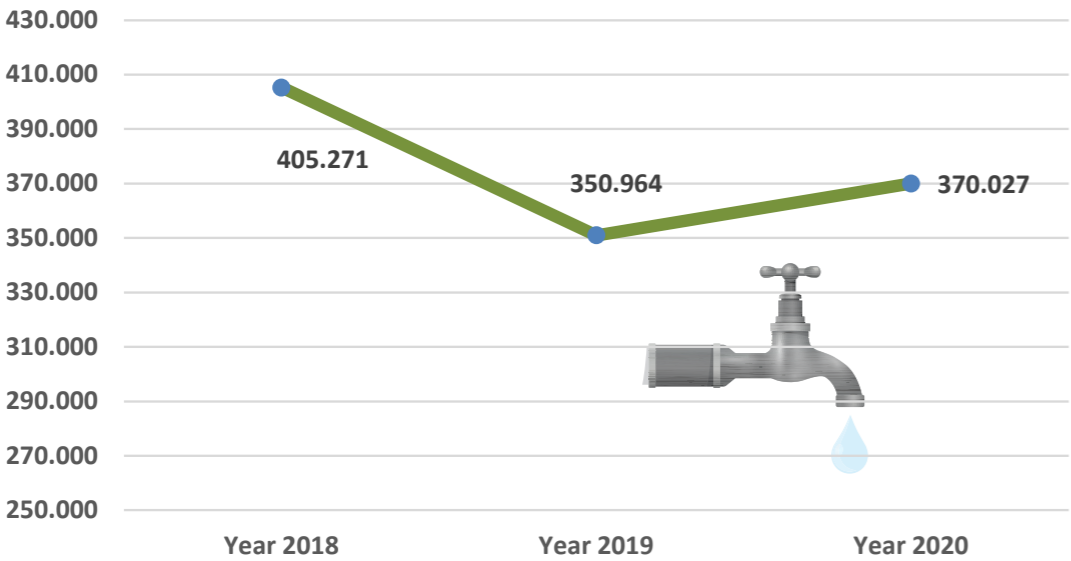


5.1 Consumption of Resources

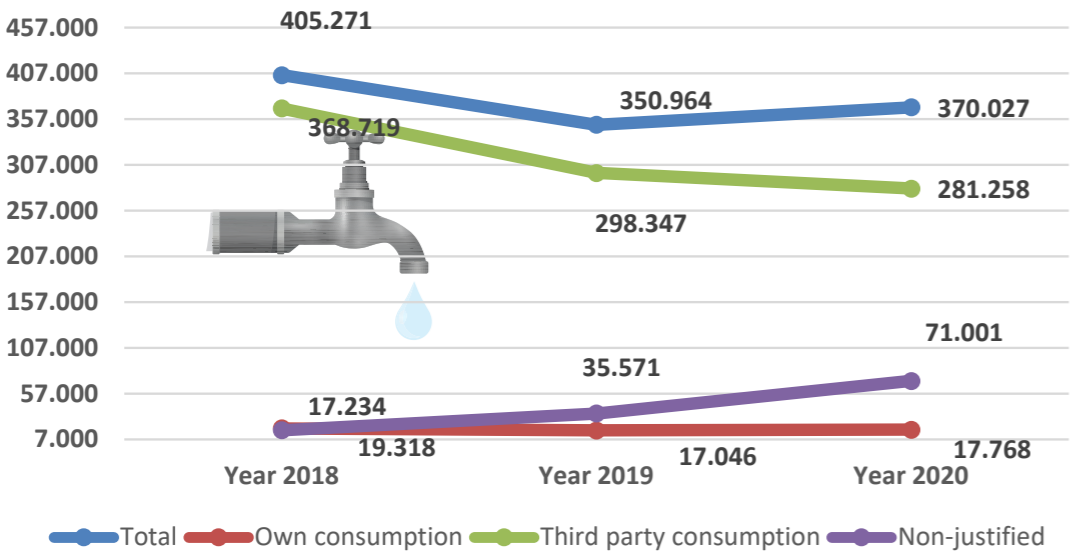
Water Consumption

In 2020 the trend in own water consumption continued, registering only a slight increase of 4%. At the same time, there is a decrease in users' consumption, from 298,347 m3 in 2019 to 281,258 m3 in 2020. Regarding the percentage of water use, this stands at 80%, which represents 20% of losses and errors in its accounting. These data indicate that the Port Authority must influence and increase its efforts regarding the control of leaks and consumption of the supply network.

Evolution of global water consumption (m³/ year)



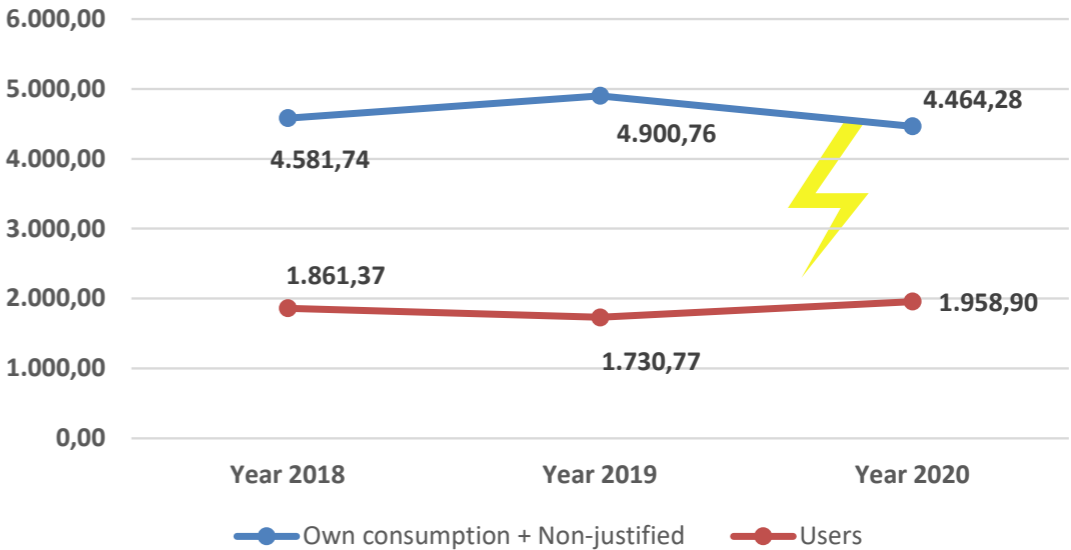
Evolution of water consumption (m³/ year)



Electrical energy consumption

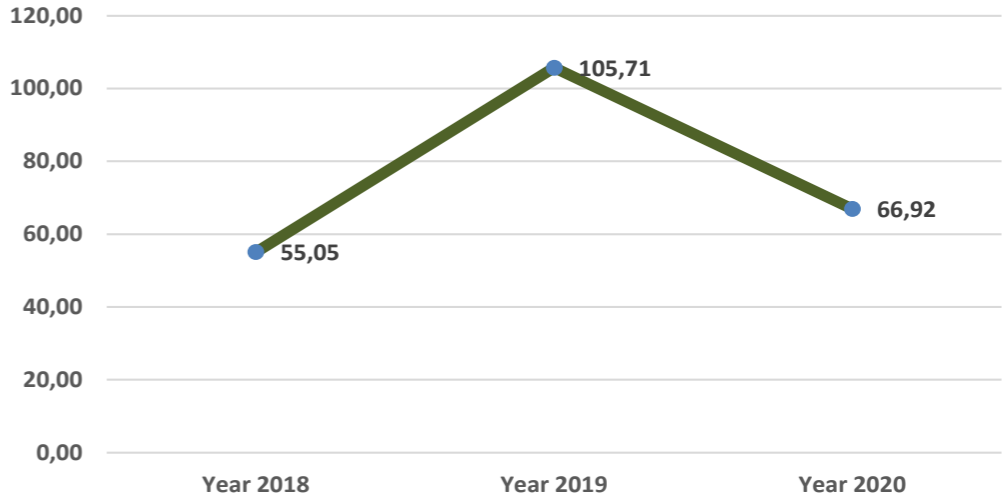
In 2020, there was a reduction of 8.89% in own consumption, derived from energy saving policies and the use of renewable energies (photovoltaic). On the other hand, the consumption of third parties suffered a slight increase of 11% compared to the previous year. All this implies a reduction of 3.14% in global consumption, greatly improving the data obtained in the previous year (+ 2.84%).

Evolution of electrical energy consumption Mw/year



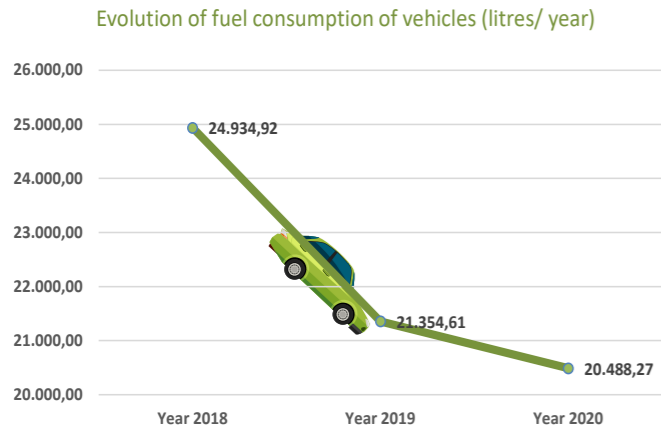
With regard to the production of electrical energy, in 2020 there was a decrease in production due to a fault, currently solved, in the photovoltaic panels of Plaza de la Estrella, and because of the lower number of sunlight hours recorded throughout the year, which meant a 36% decrease in the energy produced. Even so, the Port of Vigo reached an energy production ratio of 1.49% with respect to the total consumed. Part of this energy was sent to the network and another small part was used for self-consumption. It is expected that next year the Auction Hall 4.0 projects, the planned installation of photovoltaic energy systems in the Maritime Station and the Shed, as well as the project for the implementation of a mini-wind system, will notably increase energy production.

Evolution of electrical energy production (Mw/year)(Mw/año)

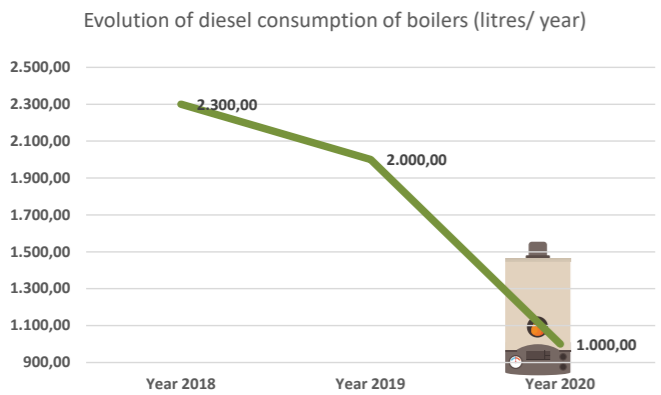


Fuel Consumption

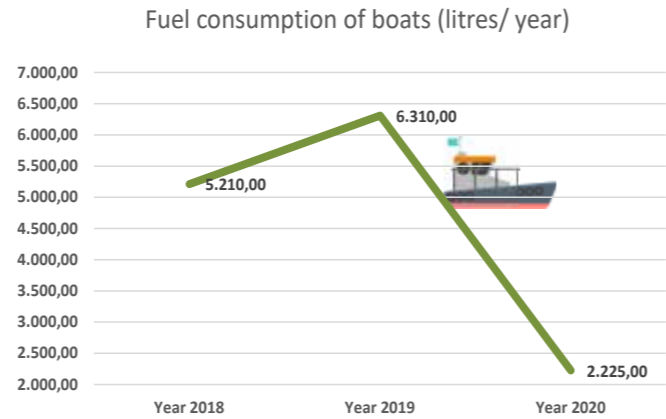
The development of conservation services, offices, fleet and vessels of the Port Authority of Vigo generates consumption of diesel, petrol, natural gas and propane gas, of vehicles, boats, boilers and various machinery. In 2020, there was a decrease in vehicle fuel consumption of 4%, derived from the efficient use of the fleet and the savings that hybrid and electric vehicles represent. This meant three consecutive years of decrease.



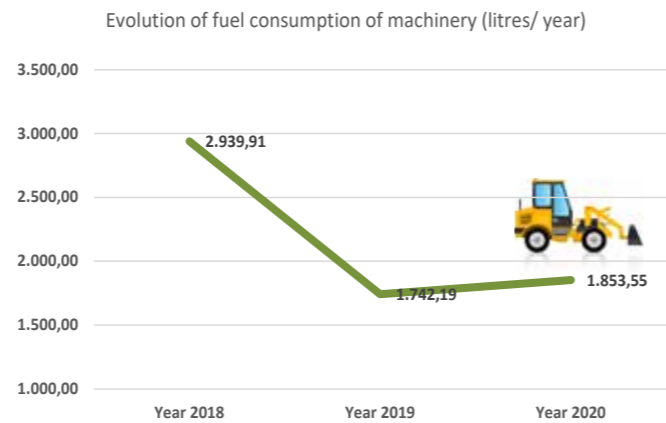
Regarding the fuel consumption of port vessels, in 2020 there was a decrease of 64%, due to the reduction of the activity caused by the health emergency.



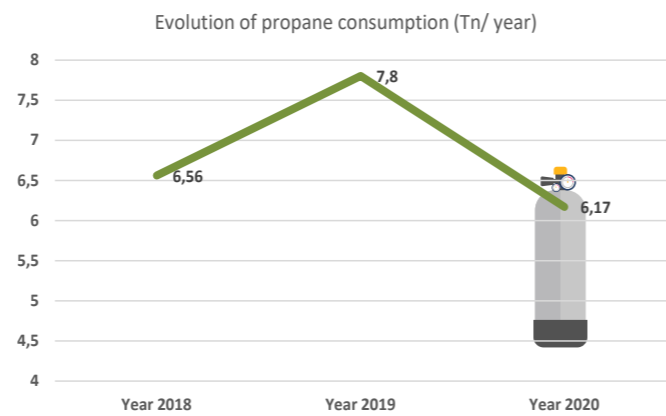
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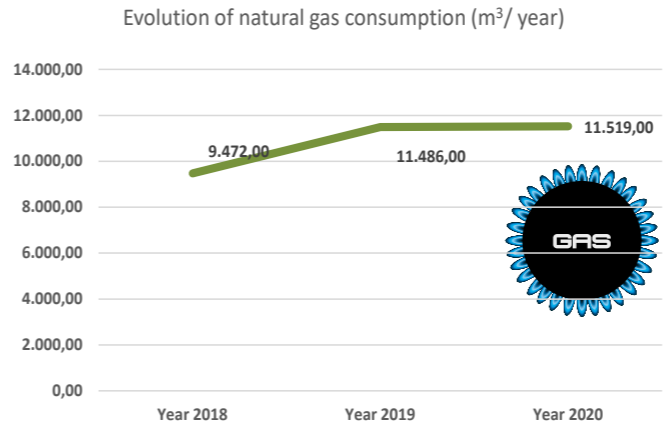
Fuel consumption of machinery also registered an increase of 6%. This consumption depends on the conservation activity, which is highly variable over the years.



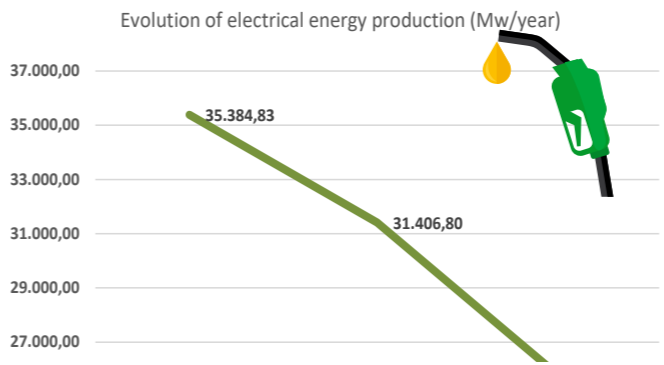
The consumption of propane registered a decrease of 20%. This value depends directly on the use of the Social Building, so the direct influence of the health emergency situation can be appreciated.



The consumption of Natural Gas remained stable with respect to the previous year, increasing only by 0.28%.



The global consumption of fuels (Diesel and Petrol) for the year 2020 registered a decrease of 18.5%. This meant three planned installation of photovoltaic energy systems in the Maritime Station and the Shed, as well as the project for the implementation of a mini-wind system, will notably increase energy production.



Other consumption and purchases

In 2020, the following materials were acquired:

Materials	Year 2018	Year 2019	Year 2020
Batteries (Units)	193	211	135
Rechargeable batteries (units)	0	0	2
Paper(Tn)	3,2	2,7	1,8

In 2020, there was a decrease of 33% in paper consumption, derived from the digitization of the processes and operations of the Port Authority "Smart Viport" and the health situation this year. On the other hand, there was also a decrease of 36% in battery consumption.

5.2 Water Quality and Discharge Control

The Port Authority of Vigo continues to work hand in hand with Aguas de Galicia, in the sectoral table of Ports and Coasts and for the application of the Water Framework Directive (Directive 2000/60/CE). Its aim is to protect continental, transitional, coastal and underground waters, combining port development with the sustainable development of Rías in Galicia. Once again, the Port Authority of Vigo carries out a sampling campaign on the quality of the water of the port docks, taking as reference the provisions of Law 9/2010 on Aguas de Galicia.

Reference values Law 9/2010	
Total Coliforms	500 ufc/100 ml
Faecal Coliforms	100 ufc/100 ml
Total Hydrocarbons	15 mg/l
pH	7-9

Fishing Port	2019	2020
Total Coliforms	<10 ufc/100 ml	4.6E1 ufc/100 ml
Faecal Coliforms	0 ufc/100 ml	4.6E1 ufc/100 ml
Total Hydrocarbons	<0.50 mg/l	<0.50 mg/l
Suspended solids	9 mg/l	157 mg/l
Sedimentable solids	<0.1 ml/l	<0.1 ml/l
pH	8.4	7.4
Turbidity	<0.1 unf	0.93 unf
Dissolved oxygen	7.75 %O2	5.74 %O2
Phosphates	<0.84 mg/l	<0.1 mg/l
Chlorophyll	16.6 µg/l	<1 µg/l
Kjeldahl Nitrogen	---	27.44 mg/ml
Total organic carbon	---	<0.50 mg/ml

Guixar	2019	2020
Total Coliforms	<10 ufc/100 ml	0 ufc/100 ml
Faecal Coliforms	0 ufc/100 ml	0 ufc/100 ml
Total Hydrocarbons	<0.50 mg/l	<0.50 mg/l
Suspended solids	8 mg/l	23 mg/l
Sedimentable solids	<0.1 ml/l	<0.1 ml/l
pH	8.4	7.8
Turbidity	<0.1 unf	0.52 unf
Dissolved oxygen	7.58 %O2	5.32 %O2
Phosphates	<0.29 mg/l	<0.1 mg/l
Chlorophyll	3.1 µg/l	<1 µg/l
Kjeldahl Nitrogen	---	24.45 mg/ml
Total organic carbon	---	<0.50 mg/ml

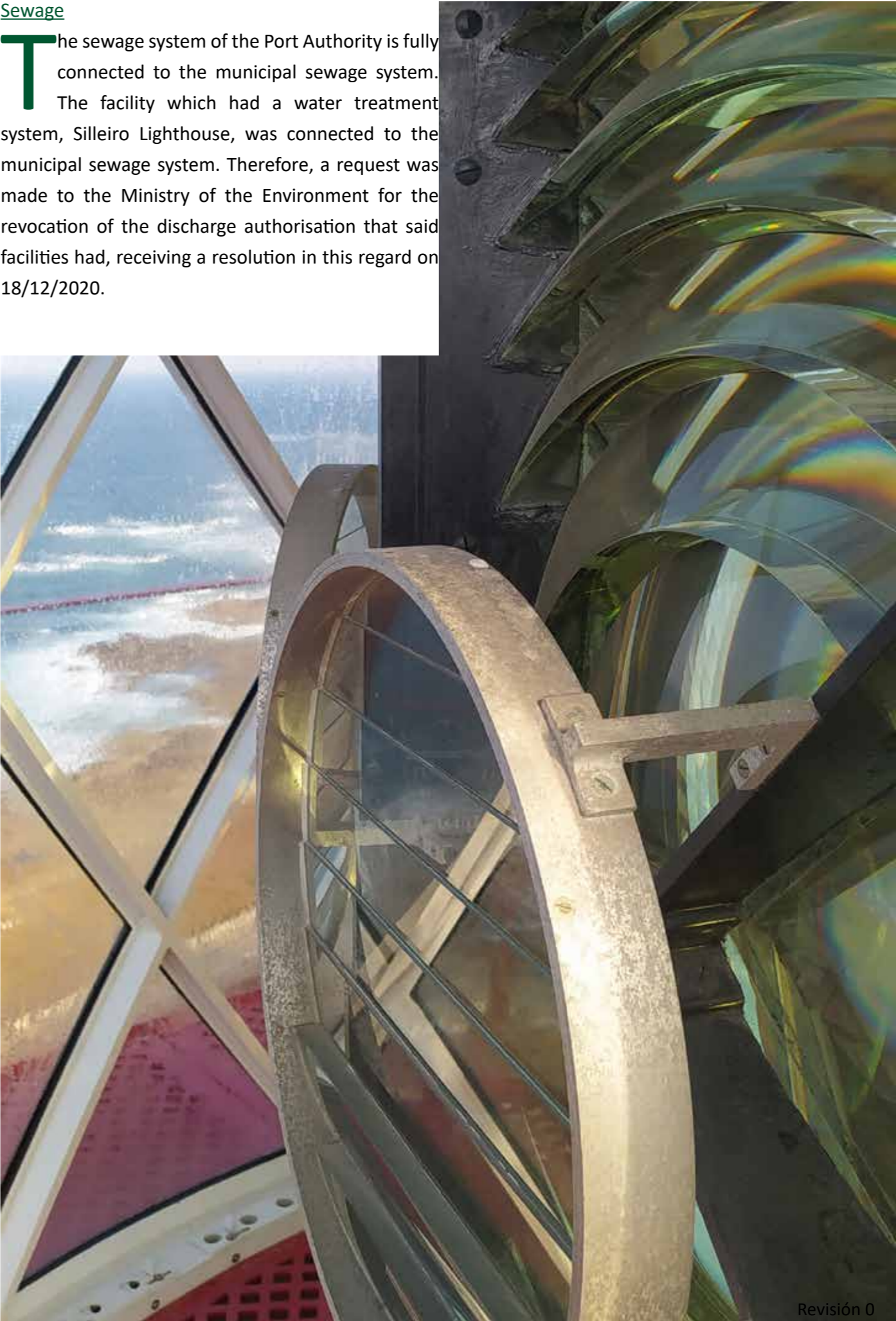
A Laxe	2019	2020
Total Coliforms	<10 ufc/100 ml	2.8E1 ufc/100 ml
Faecal Coliforms	0 ufc/100 ml	2.8E1 ufc/100 ml
Total Hydrocarbons	<0.50 mg/l	<0.50 mg/l
Suspended solids	9 mg/l	130 mg/l
Sedimentable solids	<0.1 ml/l	<0.1 ml/l
pH	8.3	7.9
Turbidity	<0.1 unf	0.38 unf
Dissolved oxygen	7.8 %O2	5.29 %O2
Phosphates	<0.53 mg/l	<0,. mg/l
Chlorophyll	6.3 µg/l	<1 µg/l
Kjeldahl Nitrogen	---	47.75 mg/ml
Total organic carbon	---	<0.50 mg/ml

Orillamar	2019	2020
Total Coliforms	<10 ufc/100 ml	3 ufc/100 ml
Faecal Coliforms	0 ufc/100 ml	3 ufc/100 ml
Total Hydrocarbons	<0.50 mg/l	<0.50 mg/l
Suspended solids	8 mg/l	18 mg/l
Sedimentable solids	<0.1 ml/l	<0.1 ml/l
pH	8.3	7.2
Turbidity	<0.1 unf	0.72 unf
Dissolved oxygen	7.65 %O2	5.42 %O2
Phosphates	0.32 mg/l	<0.1 mg/l
Chlorophyll	7.9 µg/l	<1 µg/l
Kjeldahl Nitrogen	---	18.6 mg/ml
Total organic carbon	---	<0.50 mg/ml

Bouzas	2019	2020
Total Coliforms	<10 ufc/100 ml	3.1E2 ufc/100 ml
Faecal Coliforms	0 ufc/100 ml	3 ufc/100 ml
Total Hydrocarbons	<0.50 mg/l	<0.50 mg/l
Suspended solids	10 mg/l	29 mg/l
Sedimentable solids	<0.1 ml/l	<0.1 ml/l
pH	8.1	7.8
Turbidity	<0.1 unf	0.50 unf
Dissolved oxygen	7.8 %O2	5.46 %O2
Phosphates	<0.42 mg/l	<0.1 mg/l
Chlorophyll	6.8 µg/l	<1 µg/l
Kjeldahl Nitrogen	---	31.44 mg/ml
Total organic carbon	---	<0.50 mg/ml

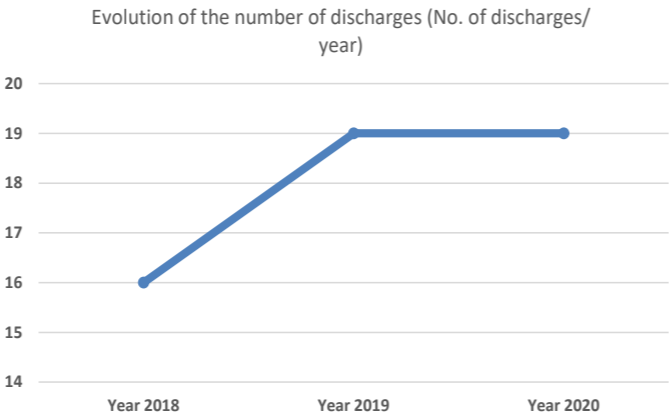
Sewage

The sewage system of the Port Authority is fully connected to the municipal sewage system. The facility which had a water treatment system, Silleiro Lighthouse, was connected to the municipal sewage system. Therefore, a request was made to the Ministry of the Environment for the revocation of the discharge authorisation that said facilities had, receiving a resolution in this regard on 18/12/2020.



Hydrocarbons

On a daily basis, the personnel of the Sustainability Department carry out an inspection of activities susceptible to causing any type of environmental impact. As a result of these controls, 19 discharges to the ría were recorded throughout 2020, a trend that was maintained since the previous year. However, most of them were incidents of minimum impact and did not involve an important environmental risk in any case.



Actual exercise for the Fight against level III pollution

In January 2020, an actual level 3 pollution control exercise was carried out by Salvamento Marítimo (Sea Rescue), the Port Authority of Vigo, Xunta de Galicia and Capitanía Marítima (Maritime Captancy). The incident is due to the sinking of the ship called Baffin Bay.

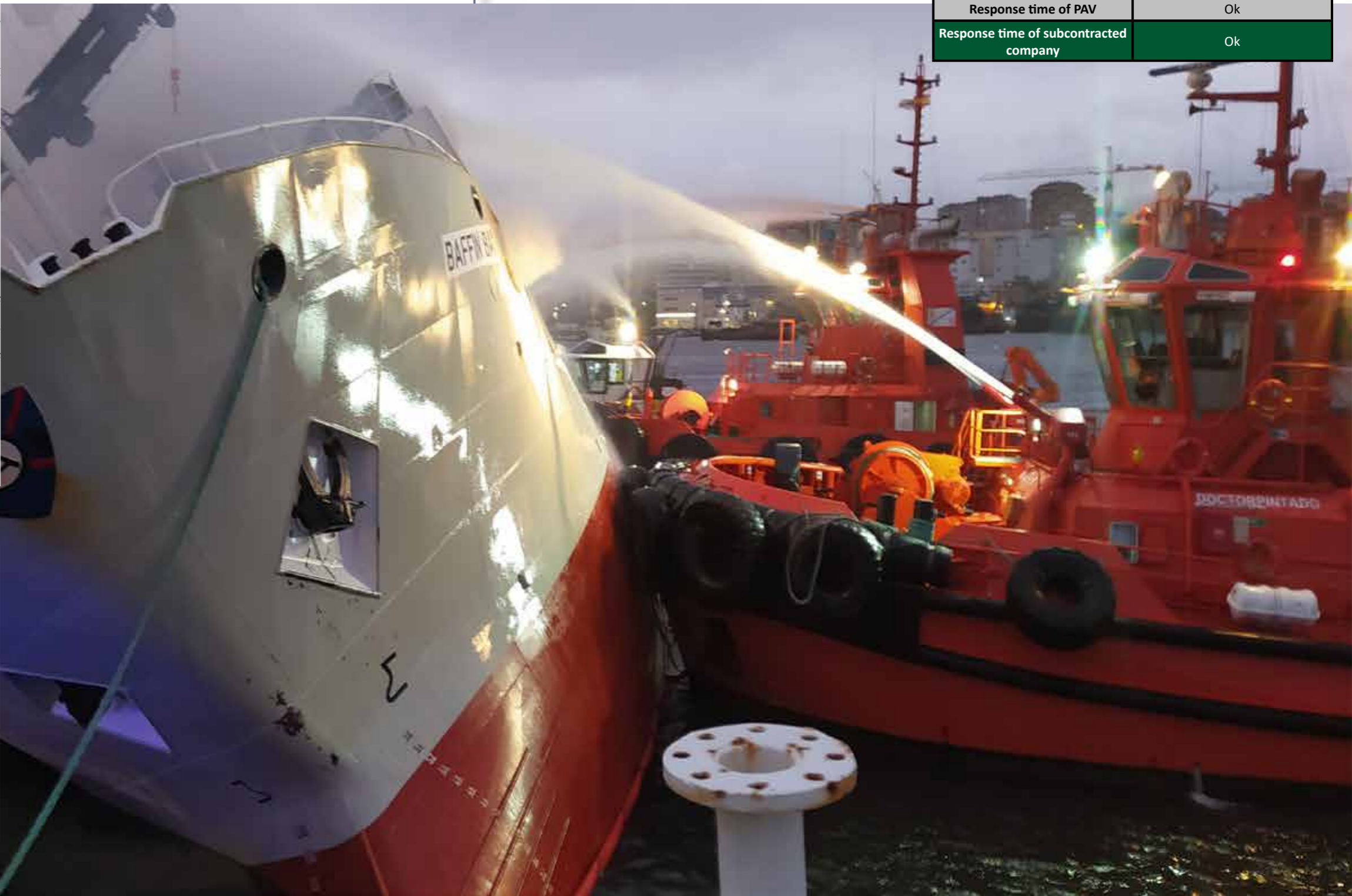
Data regarding the exercise	
Causes	Sinking of the ship
Emergency level	Level 3
Response time	20 min
Start time	8:50 AM, 3/12/2020
End time	2:45 AM, 5/12/2020
Duration of the emergency	2 days and a half
Product	hydrocarbon / diesel
Assessment	
Containment with means belonging to the Port Authority, the sub-contracted company, Xunta de Galicia and Salvamento Marítimo (Sea Rescue)	
Response level	3
Response time of PAV	Ok
Response time of subcontracted company	Ok

5.3 Response to Environmental Contingencies

The Port Authority of Vigo has an Interior Maritime Plan (IMP) in accordance with the provisions of Royal Decree 1695/2012 of December 21, which approves the National Response System to Marine Pollution, approved in 2019.

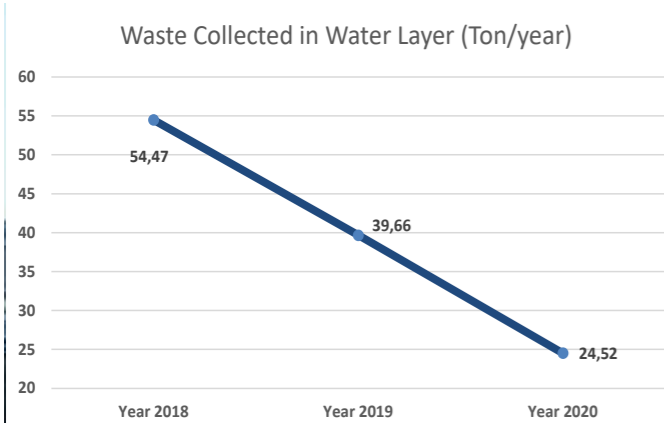
This document presents the procedures regarding the actions to be taken against a discharge of hydrocarbons or chemical substances to the water layer. Besides, the “IMP” integrates all the plans of companies and concessions located in the port area in order to give an effective joint response in the event of an environmental incident.

Companies with the new IMP (Interior Maritime Plan)	
Astilleros Vulcano	MARPOLGAL
Astilleros Armada	Marina a Lagoa
Astilleros Metalships	Frioya
Aucosa	Cepsa
Elnosa	TERMAVI
Toysal	Astilleros Barreras
Atolvic Morrazo	Rodman
Astilleros Armon	Montajes Cancelas
Astilleros Cardama	Frigoríficos del Morrazo
Pescanova	Astilleros Freire
Reintegra	



Waste in water layer

The Port Authority continues with the daily works of water layer cleaning, for which there is a "Pelican" type boat, specialised in cleaning solids and hydrocarbons.



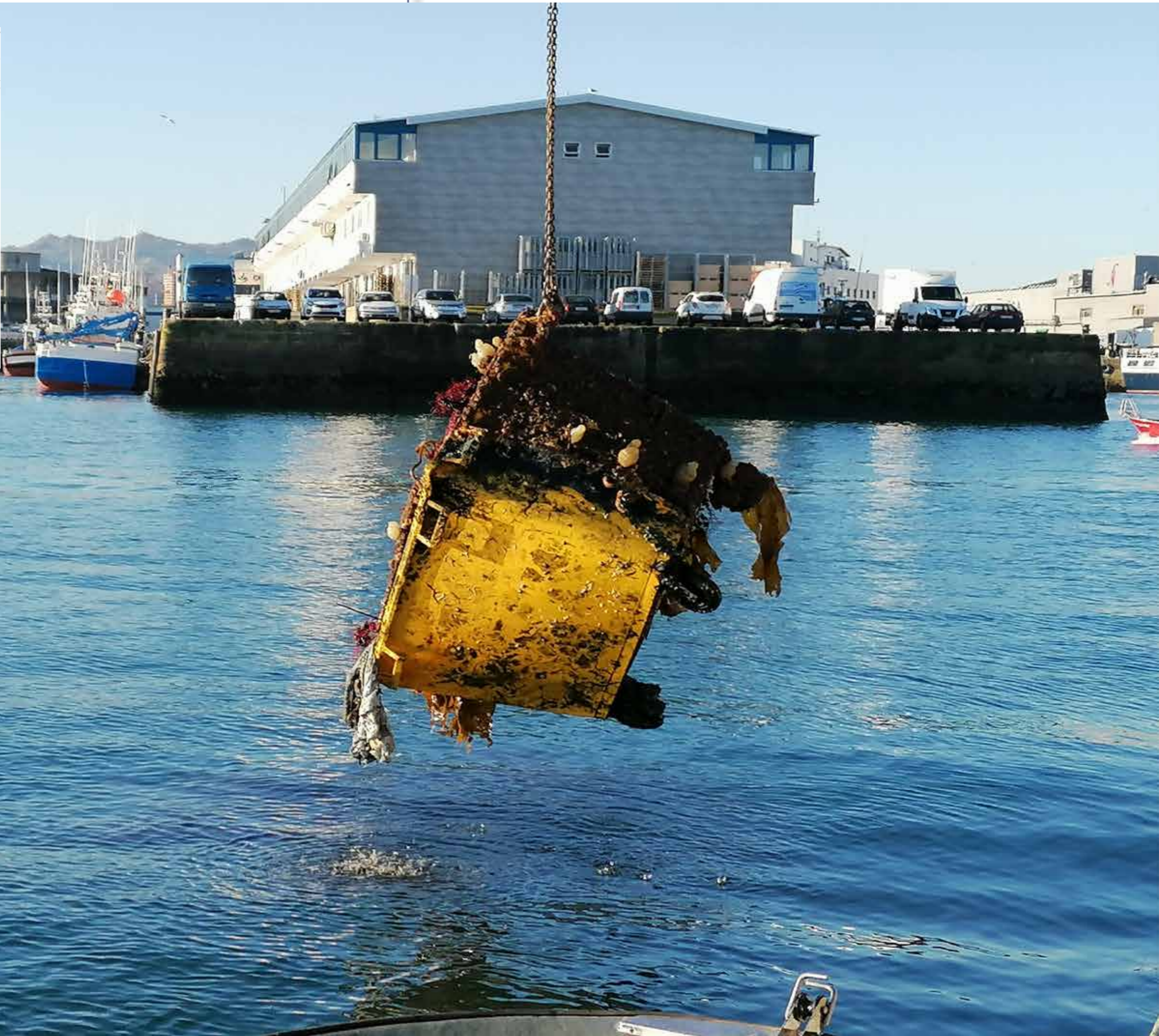
MLSTYLE project

On the other hand, the Port Authority is still immersed in the MLSTYLE project, whose objectives include, among others, the use of waste collected by the fishing fleet during the fishing seasons. Since the beginning of the project, a total of 12,486 Kg of waste from our seas has been collected in the Port of Vigo and has been managed by the Port Authority of Vigo.

Dock cleaning campaign 2020

In 2020, within the ML STYLE project (project for the recovery and recycling of waste collected in fishing campaigns), a cleaning campaign of the docks of the Port of Vigo was carried out by a team of divers, yielding the following data :

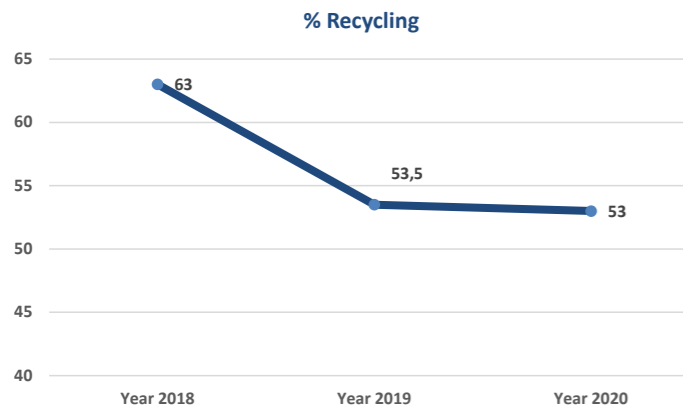
A Laxe and Jules Verne Dock: 19,400 Kg
Repairs and dock 2 of Bouzas: 22,660 Kg
TOTAL: 42,060 Kg



5.4 Waste and by-product management

The Port Authority continues with its policy of waste recycling, achieving during this year increases in the recycling of polystyrene (+2,98%), paper and cardboard (+ 21.71%), wood (28.40%). However, due to a change in organic waste management, the total percentage of recycled waste is still significantly low with respect to previous years.

Waste and by-products (Tn)	Year 2018	Year 2019	Year 2020
Polystyrene	28.86	31.28	32.24
Paper and cardboard	62.36	38.65	49.37
Wood	167.77	134.26	164.53
Plastic	244.5	256.96	228.46
Packaging	75.85	56.44	63.33
Nets	60.5	71.34	18.84
Scrap	6.78	5.32	4.56
Glass	7.66	4.86	1
Tyres	0	6.62	0
Segregated organic waste	1,061.72	454.16	430.75
Total recycled waste and by-products	1,716.00	1,055.68	993.0619
Total not recycled solid urban waste	970.99	915.18	865.56
% recycled waste and by-products	63	53.5	53



Other Waste

In addition to this waste, others are also collected, such as sludge from treatment systems and portable toilets or toner cartridges, some of which are generated by the users of the port of Vigo.



Other Non-hazardous Waste	Year 2018	Year 2019	Year 2020
Sludge from the sewage system (m3)	8.9	10.48	7.92
Sludge from water treatment (m3)	2.2	2.5	0
Toner cartridges (Tn)	0	0.01	0
Non-hazardous electrical and electronic equipment waste (EEEW) (Tn)	8.1	1.84	0.3
Other non-hazardous waste (Tn)	0.13	0.03	0.28

During this year, a disused compressor was eliminated, with a total weight of 280 kg. We should also highlight the disappearance of the "sewage treatment sludge", due to the elimination of the treatment system of Silleiro Lighthouse.

Hazardous waste

The Port Authority is registered as a small producer of hazardous waste with the registration number PO-RP-P-PP-00609, due to the necessary management of small amounts of hazardous waste generated mainly from the activities in conservation workshops and maritime signals.

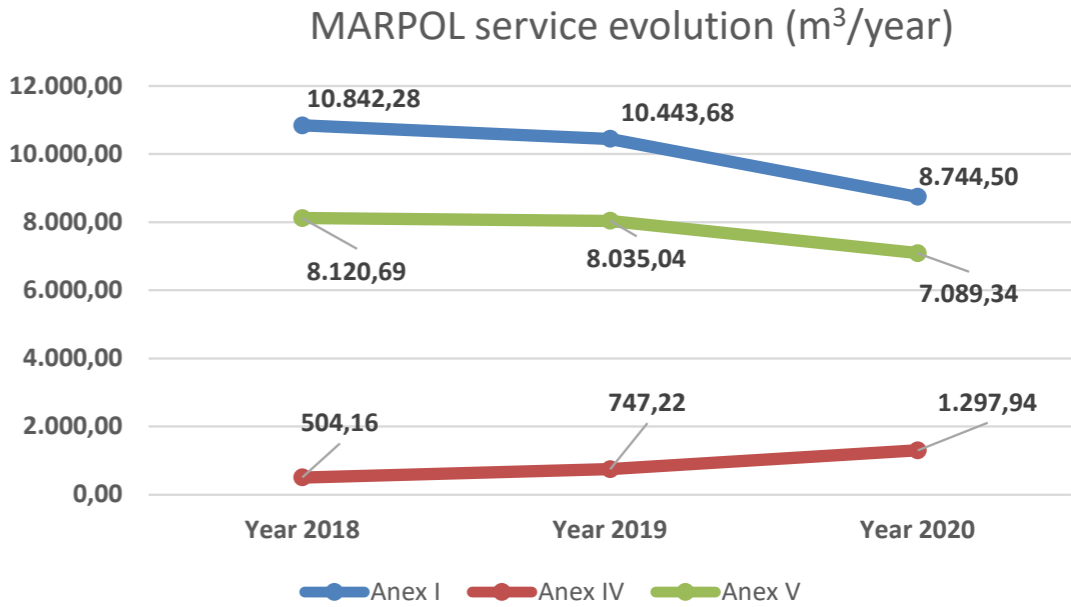
Hazardous waste (Kg)		
Year 2018	Year 2019	Year 2020
3,556.79	783.62	929.86

During this year, fluorescent tubes, foam out of its life cycle and nursing waste were managed.

MARPOL waste

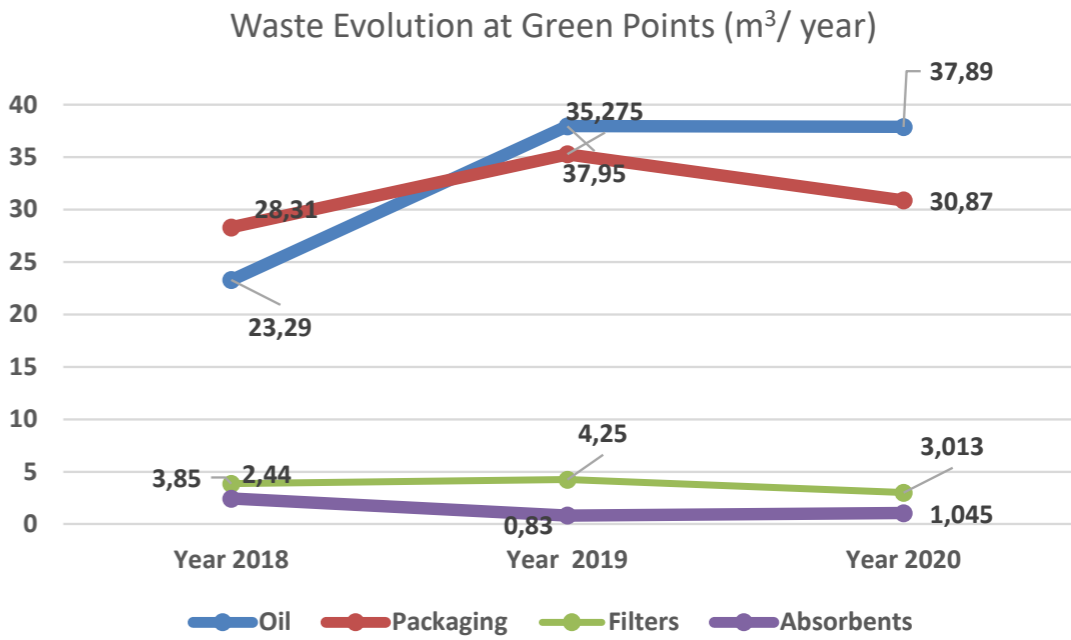
The service for receiving waste from ships (MARPOL) is regulated through the "Plan for the reception and handling of waste generated by ships", whose last revision was approved on November 29, 2019.

Below is the graph for the evolution of the volumes of MARPOL waste Annex I (used oils), Annex IV (dirty water) and Annex V (solid waste) collected since 2018.



The Port Authority keeps in operation the MARPOL waste reception green point through which MARPOL service is provided to fishing vessels, obtaining the following data:

In 2020, 4.794 kg of batteries were also collected at the green point, 84% more than the previous year (840 kg), all of them from fishing vessels through the collaboration agreement between the Port Authority and the integrated management system "Ecobatteries".



5.5 Air Emissions and Air Quality

Facilities of the Port Authority

The Port Authority only has diffuse emissions, from boilers and vehicles.

The vehicles are subject to the corresponding technical inspections (VTI) and the heating boilers, due to their low power, are excluded from their registration in REGADE-CAPCA.



5.6 Environmental Noise

Like every year, there was a campaign to measure environmental noise in the port.

The campaign is carried out as part of the environmental monitoring performed by the Port Authority, without involving a legal requirement from the competent Administration.

It should be noted that due to the health emergency

situation, noise measurements were made only in the morning and at night.

Time slots	
Ld	7,00-19,00
Le	19,00-23,00
Ln	23,00-7,00

Point	Location	Ld (DB)	Le (DB)	Ln (DB)
1	Guixar Dock 1	57,27	--	64,53
2	Guixar dock 2	65,13	--	57,03
3	Arenal Dock	64,67	--	47,40
4	Transversal Dock	56,53	--	55,70
5	Arenal Roundabout	66,00	--	53,93
6	Transatlantic Dock	60,87	--	50,17
7	Auction Hall	69,43	--	58,77
8	Green Point	66,07	--	60,43
9	Calle Coruña Roundabout	65,23	--	68,17
10	Armada Shipyard	67,87	--	66,80
11	Orillamar Road	63,77	--	59,50
12	Repair dock	64,37	--	64,83
13	Zona Franca	60,93	--	61,83
14	Eduardo Cabello Breakwater	61,63	--	64,03

DB: Decibels
Limits are occasionally exceeded at night in:
- Orillamar Road and Calle Coruña roundabout: Derived from the road traffic

Objectives of acoustic quality Royal Decree 1367/2007				
Type of acoustic area		Noise Rate		
		Ld (DB)	Le(DB)	Ln(DB)
e	Sectors from the region with land mainly for sanitary, educational and cultural use that requires special protection against noise pollution.	60	60	50
a	Sectors from the region with land mainly for residential use	65	65	55
d	Sectors from the region with land mainly for tertiary use other than the one included in c)	70	70	65
c	Sectors from the region with land mainly for recreational use and shows	73	73	63
b	Sectors from the region with land mainly for industrial use	75	75	65
f	Sectors from the region involving general systems of transport infrastructures, or other public facilities that claim them (1)	(2)	(2)	(2)

(1) In these sectors from the region, adequate measures for the prevention of noise pollution will be taken, in particular through the application of technologies with a lower acoustic incidence among the best available techniques, in accordance with paragraph a) of Article 18.2 of Law 37/2003, of November 17.

(2) The acoustic quality objectives for noise applicable to the rest of the acoustic adjacent areas must not be exceeded in the perimeter of these sectors from the region.



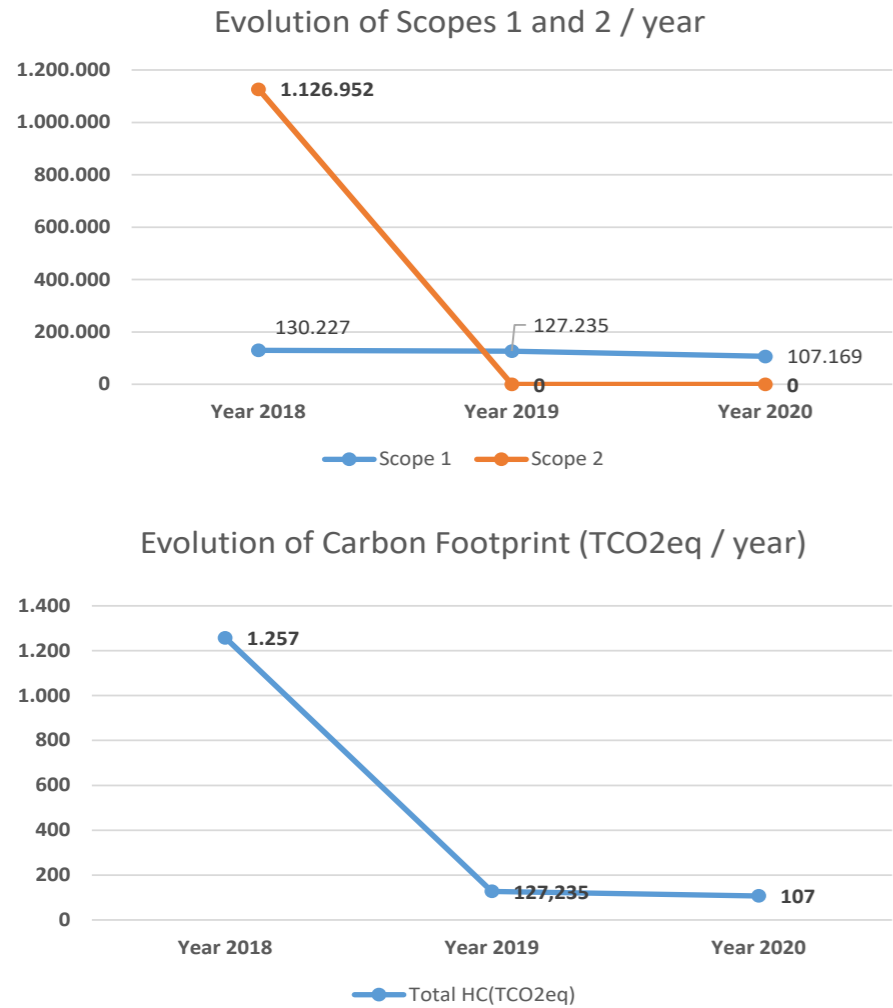
5.7 Carbon footprint

One more year, the carbon footprint study of the Port Authority of Vigo was carried out with the following results:

Scope	Year 2015	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020
Scope 1	104.212	125.712	154.944	130.227	127.235	107.169
Scope 2	926.741	611.192	1.306.134	1.126.792	0	0
Total HC(KgCO ₂ eq)	1.030.954	736.904	1.461.078	1.257.179	127.235	107.169

Scope 1 Emissions, also known as Direct Emissions: They are greenhouse gases emitted directly by the organisation, for example by the use of fossil fuels in machinery or vehicles owned by the organisation, by refrigerant gases leaks, or by chemical reactions during the production processes of the organisation.

Scope 2 Emissions or Indirect Emissions from Energy: These are greenhouse gases emitted by the producer of the energy required by the organisation. They depend on both the amount of energy required by the organisation and the energy mix of the network that provides the organisation.



Results obtained: As can be seen in the graph, in 2020 the carbon footprint decreased by 15.77% in scope 1, due to a decrease in fuel consumption (diesel, petrol, natural gas, propane, etc.). Regarding scope 2, a footprint of 0 is maintained, because all the electrical energy purchased by the Port Authority of Vigo comes from renewable sources, and therefore has an associated conversion factor equal to 0.





6.1 Training and awareness

Once again, this year the Port Authority of Vigo continues with the training and awareness of all its workers.

In 2020, there were a total of 34 courses with 7,081 teaching hours, attended by 494 students.

The subjects taught range from "Fight against fires", "Geographical information systems", "Port management and planning", "Protection officer", "General accounting", "English", "Identification and classification of marine fish", to "Autocad", or all those training actions included in the Skill Management system.

Likewise, the website of the Port Authority contains the guides to good practices that aim to raise awareness about a way of operating which must be respectful and sustainable with the environment and citizens.

All of them are available on the website of the Port Authority of Vigo, www.apvigo.es



6.2 External communication

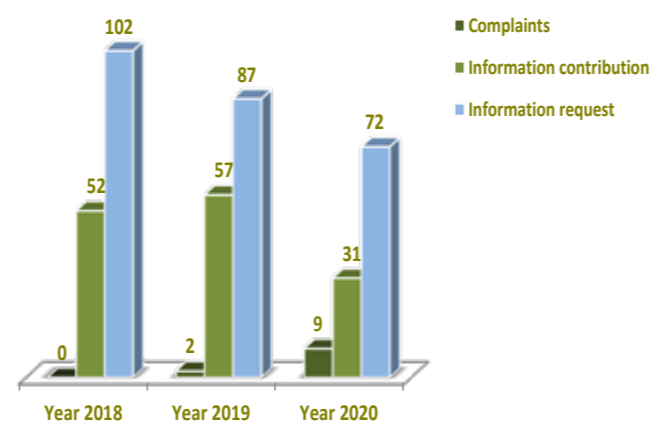
The Customer Service of the Port Authority deals with requests for information, suggestions, complaints or claims.

Communications can be made through:

- General Registry of the Port Authority.
- Website of the Port Authority.
- Customer Service Office.
- Port Police Service.
- Email.
- Telephone/fax.
- Direct contact with the Area / Department / Division.

On the other hand, environmental communications are recorded in the management system. In 2020 a total of 112 were collected, most of them to request information.

In 2020 there were 9 complaints concerning the noise derived from the port operations of concessions and authorizations.



6.3 Relationship with other institutions

The sustainable growth of the Port of Vigo comes hand in hand with the recognition as a fundamental means of the cooperation with the different public and private actors in its environment.

That is why one of the fundamental pillars of the Blue Growth Plan is the process of collaboration of actors (more than 300 actors) through working groups that lead to joint innovation projects and / or the sharing of joint challenges that require the design of strategies and concrete actions.

The Port Authority of Vigo has extensive knowledge of the actors and that is why it divides them according to their nature and takes into account the interests of each when collaborating in joint initiatives. Thus, the actors with whom it collaborates are classified according to their role such as academy, administration, companies and business organisations and civil society. At the same time, the geographical scope of the actors is local and regional, although it transcends the national, community and international scope. The positioning of the Port of Vigo as a dynamic element of the territory with a direct influence from different geographical scopes favours and enriches cooperation between actors.

Here are some examples of relationships with other institutions:

Civil society

The role of the Port of Vigo as a catalyst for the development of the territory makes it focus on those groups at risk of exclusion, on the well-being of the people who operate in port activities and, from an environmental perspective, on the protection of fauna.

• Animal Protection Associations

The Port Authority provides support to animal protection associations, such as Cemma (Coordinadora para o estudo dos mamíferos mariños - Coordinator for the study of marine mammals), with which the former has carried out numerous activities of study and recovery of marine mammals.

• Rosa dos Ventos

The Port Authority collaborates in the identification of initiatives to support immigrants, in the fishing environment, in the framework of the Pandemic.

• Red Cross

In 2020, different cooperation meetings were held within the framework of promoting a Healthy and Cardio Safe Port.

Administration

Collaboration with institutions of the local, regional, national and community Administration. Regarding the environmental control of the ría and its surroundings, the Port Authority actively collaborates with the administrations directly involved, so that it contributes to the development and compliance with regulations, as well as to the implementation of initiatives of interest. Thus, specifically at regional level we should mention: the Conselleria do Mar, Consellería de Medioambiente, Parques Nacionales das Illas Atlánticas, INEGA; at national level, with institutions in Galicia: Capitanía Marítima (Maritime Captainty), Salvamento Marítimo (Sea Rescue), Seprona, and the Ministry of Ecological Transformation; at community level, mainly through innovation projects: DG Environment of the European Commission.

Research and training

The Port of Vigo grows under a knowledge management approach in which the active participation of the University and research and training centres is essential. Thus, joint initiatives related to dissemination are promoted and developed, in terms of bringing science and the environment closer to society; to innovation, promoting joint environmental research projects; to training, collaborating in the preparation of presentations to future professionals. Below are some of the entities with which a fluid cooperative relationship is maintained in terms of joint activities and projects:

- Campus do Mar, University of Vigo, IEO, IIM - CSIC; Cetmar; CEAGA, Instituto marítimo Pesquero (IMPA, Xunta de Galicia - Maritime Fisheries Institute).

In addition to the entities mentioned at local/ regional level, reference is also made to others in different

regions of the European Union with whom joint projects were developed (i.e. Univ. La Rochelle, IMDO, others)

Business sector

The role of the business sector in the environmental management is fundamental beyond compliance with regulations. This refers to collaboration with the business sector, through individual companies and/or business organisations, which promotes the implementation of joint initiatives and projects with a measurable environmental impact. Some of the reference topics: renewable energy management, application of fishing waste, others. Some examples are: ACLUNAGA, ASIME, CONXEMAR, ANFACO CECOPESCA, INDITEX, others.

Finally, we should also highlight the effort made by the Port of Vigo to strengthen its relationship in the international environmental sphere with multilateral entities/ administrations. This relationship favours greater knowledge regarding tools and initiatives of interest whose transfer to the Port of Vigo is and can be of high impact. Likewise, the experience of the Port of Vigo and the success of its initiatives lead to its international ranking as a Green Port which deserves to be highlighted. Below are some of them:

- UNESCO. In 2020, the Port of Vigo continued its relationship with this entity within the framework of the Marine Spatial Regulation. It is crucial to apply the Maritime Spatial Planning (MSP) approach led by UNESCO and DGMARE (European Commission) through which the interaction between economic activities and their impact in the economic, social and environmental spheres is analysed.

- FAO. Since 2019, and actively in 2020, the Port of Vigo has collaborated and promoted the creation of an "International Network of Blue Ports", which currently involves 19 ports at an international level, to promote joint work in favour of sustainable port activity, promoting the concept of Green Port.

- ESPO. Beyond and regarding the positioning the Port of Vigo at European level, a further step is taken by being appointed "Chairman" of the ESPO Blue

Ports network. Within this framework, work continues between small and medium-sized ports on the constitution of a European Network of Blue Ports whose main objective is to exchange best practices for the application of a blue growth strategy. This aims at promoting the competitiveness of European ports through initiatives with an impact on the social, economic and environmental spheres.

- IAPH. In 2020, the Port of Vigo got the recognition of the International Association of Ports for the best green project for the initiative of Peiraos do Solpor.







7. Objectives and Goals

7.1 Objectives 2020

The strategic environmental objectives are included annually both in the environmental management system and in the company's business plan, which is then sent to Puertos del Estado (State Ports) for validation and monitoring.

Objective	Goal	Fulfilment
2014-2022 Green Port/ Our Ocean Commitment	Turn the Port of Vigo into a Green Port benchmark in southern Europe (30% reduction in emissions (CO2, SOx and NOx) and 3% in energy self-sufficiency by 2022)	Yes
	Monitoring of LNG / OPS projects	
	Monitoring of energy efficiency projects	
	Monitoring of Greening projects	
Self-sufficient Auction Hall 4.0	Preparation of the Project / Specifications	Yes
	Tender and Execution of works	
Monitoring of the Blue Growth Plan	Compliance with Indicators	Yes
	Blue Growth projects	

7.2 Fulfilment assessment

Objective 1, 2014-2022 Green Port/ Our Ocean Commitment

Goal 1, Turn the Port of Vigo into a Green Port benchmark in southern Europe (30% reduction in emissions (CO2, SOx and NOx) and 3% in energy self-sufficiency by 2022): The aid requested from IDAE for the execution of the Self-Sufficient Auction Hall 4.0 project was processed throughout 2020. The Port Authority has achieved a reduction of 99.55% in emissions since 2018, and continues working on Auction Hall 4.0 project which will ensure the fulfilment of the self-sufficiency commitment.

Goal 2, Monitoring of LNG / OPS projects: The Core LnGas Hive project continued throughout the year, already on its home straight, and a report on global results is expected to be made by the middle of next year.

Goal 3, Monitoring of energy efficiency projects: Lonja 4.0 works were awarded in September 2020 and they are expected to begin in 2021.

Goal 4, Monitoring of Greening projects: The "Puertalmar" project began in 2020: Design, installation, monitoring and analysis of structures aimed at enhancing the increase in biodiversity and carbon sequestration, already yielding the first results.

With regard to air emissions, in 2020 there was an emission reduction of 15.77% compared to

2019. This reduction was due to a decrease in fuel consumption (diesel, petrol, natural gas, propane, etc.). Regarding scope 2, a footprint of 0 is maintained, because all the electrical energy purchased by the Port Authority of Vigo comes from renewable sources, and therefore has an associated conversion factor equal to 0. Thus, it is considered that the objective is to work properly for its complete fulfilment in 2022, as planned.

Objective 2, Self-sufficient Auction Hall 4.0:

Goal 1, Preparation of the Project / Specifications: The technical project was written and presented in April 2020.

Goal 2, Tender and Execution of works: In September 2020, the works were awarded to Dmain Obras y Servicios Frimarte UTE (Temporary Union of Companies).

Objective 3, annual: Monitoring of the Blue Growth Plan

Goal 1, Compliance with Indicators: In 2020, the Plan indicators are monitored through the website www.bluegrowthvigo.eu

Goal 2, Review and monitoring of the Blue Growth Plan projects and working groups: In 2020 the working groups held their regular meetings and throughout the year they were convened on the following dates:

- Shipbuilding: 14/ 07

- Merchandise and maritime transport: 20/07
- Biotechnology and blue energy: 17/ 07 and 25/11
- History and Training: 17/ 07 and 25/11
- Cruise tourism: 14/07

The proposed objective is achieved, as the Blue Growth Plan is still carried on normally.

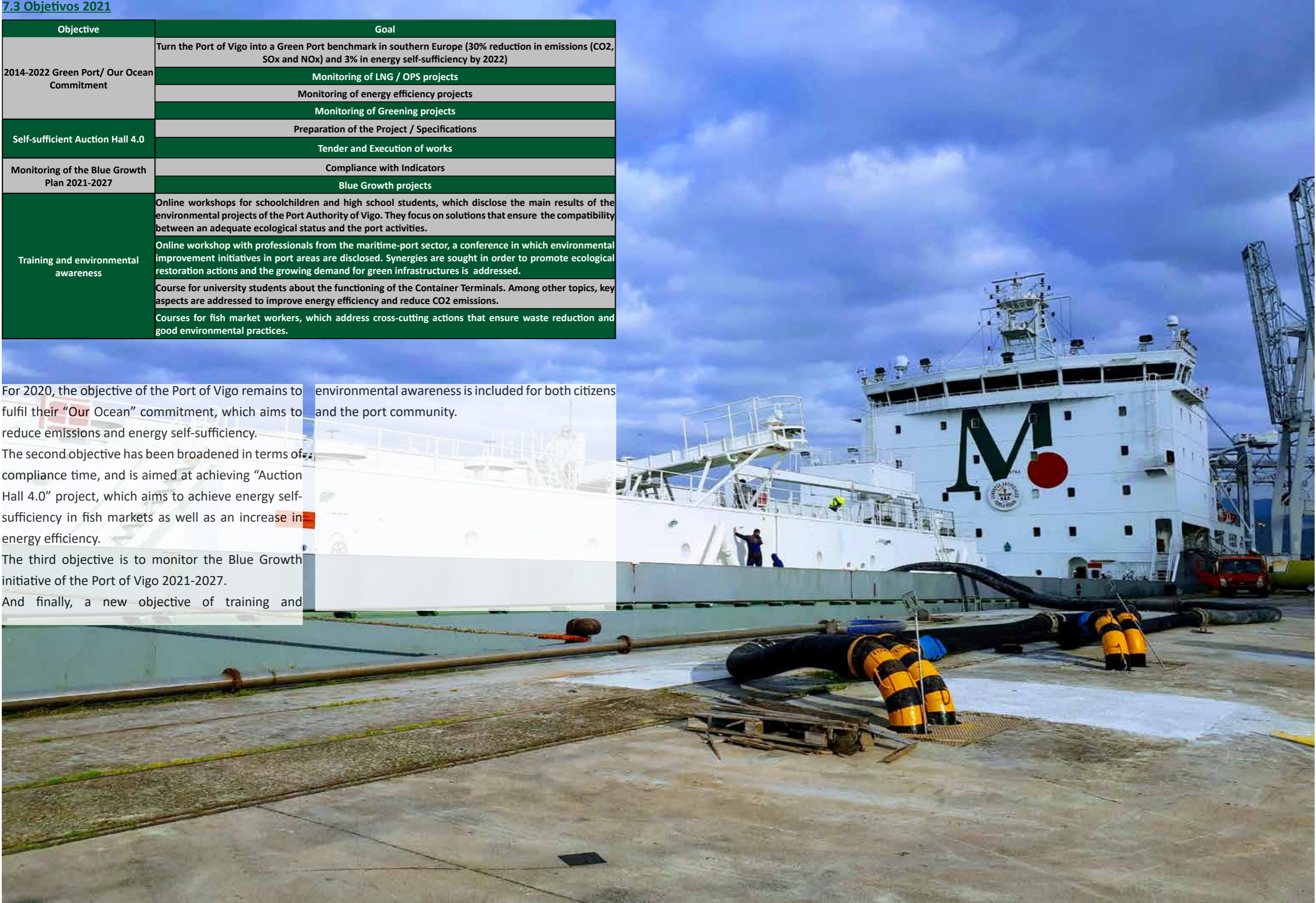


7.3 Objetivos 2021

Objective	Goal
2014-2022 Green Port/ Our Ocean Commitment	Turn the Port of Vigo into a Green Port benchmark in southern Europe (30% reduction in emissions (CO2, SOx and NOx) and 3% in energy self-sufficiency by 2022)
	Monitoring of LNG / OPS projects
	Monitoring of energy efficiency projects
	Monitoring of Greening projects
Self-sufficient Auction Hall 4.0	Preparation of the Project / Specifications
	Tender and Execution of works
Monitoring of the Blue Growth Plan 2021-2027	Compliance with Indicators
	Blue Growth projects
Training and environmental awareness	Online workshops for schoolchildren and high school students, which disclose the main results of the environmental projects of the Port Authority of Vigo. They focus on solutions that ensure the compatibility between an adequate ecological status and the port activities.
	Online workshop with professionals from the maritime-port sector, a conference in which environmental improvement initiatives in port areas are disclosed. Synergies are sought in order to promote ecological restoration actions and the growing demand for green infrastructures is addressed.
	Course for university students about the functioning of the Container Terminals. Among other topics, key aspects are addressed to improve energy efficiency and reduce CO2 emissions.
	Courses for fish market workers, which address cross-cutting actions that ensure waste reduction and good environmental practices.

For 2020, the objective of the Port of Vigo remains to fulfil their “Our Ocean” commitment, which aims to reduce emissions and energy self-sufficiency. The second objective has been broadened in terms of compliance time, and is aimed at achieving “Auction Hall 4.0” project, which aims to achieve energy self-sufficiency in fish markets as well as an increase in energy efficiency. The third objective is to monitor the Blue Growth initiative of the Port of Vigo 2021-2027. And finally, a new objective of training and

environmental awareness is included for both citizens and the port community.





8. Innovation and Environmental Improvement

8.1 Research Projects (R + D + I)

The Port Authority continues immersed in various R+D projects, in the field of sustainability, use of clean energy, environmental improvement and protection.

Among these projects, we should highlight the following:

Lonja 4.0 Autosuficiente

Self-sufficient Auction Hall 4.0

On November 27, 2019, the IDAE (Instituto para la diversificación y ahorro de energía - Institute for Energy Diversification and Saving) proceeded to approve the request for aid for the “Auction Hall 4.0, Self-sufficient Auction Hall” project. This project focuses on improving the energy efficiency of the deep-sea fishing Auction Hall of the Port Authority.

This project, which is financed through the European Regional Development Fund (ERDF), has a budget of 2,437,667.77 Euros financed at 80%, which represents a financing of 1,950,134.22 Euros.

In September 2020, the works were awarded to Demain Obras y Servicios Frimarte UTE (Temporary Union of Companies). The purpose of these works is to improve the energy efficiency of the building of the deep-sea fishing Auction Hall of the Port Authority, including to renew the air conditioning installations and take actions that allow reducing the energy demand of this area of the building. The lighting system will also be renewed and the project will be complemented with the implementation of a self-consumption photovoltaic solar installation, which will allow generating a large part of the energy consumed in the building.

The start of the works is scheduled for year 2021.



MLSTYLE

The ML-Style project aims to protect the sea and its resources and promote the circular economy by reducing marine litter, as well as to design a comprehensive management system for inorganic waste from fishing ports (food plastics, disused nets and gear and marine litter collected by fishermen and shellfish catchers), and to study the possibilities of valorisation and use of said materials as raw materials.

The project began in the ports of Vigo and Marín, then it was joined by OPROMAR, Federación Provincial de Cofradías de Pontevedra (the Provincial Federation of Associations of Pontevedra) and the Associations of A Garda, Baiona, Vigo, Redondela, Cangas, Cambados, O Grove, Portonovo, a Illa de Arousa and Vilanova de Arousa, and Portos de Galicia, through the Galician ports where the fishermen belonging to the aforementioned associations unload. All this in order to achieve a significant reduction in marine litter and a greater supply of materials that make its recovery economically viable.

In addition to the coordination and management tasks, there were 7 Activities or Task Packs:

- Seabed cleaning and removal of waste and nets
- Study of the waste generated in the fish market activity and by the companies operating in the port environment
- Characterisation of waste
- Selective collection point for marine litter and port waste
- Study of alternatives for the recycling of recovered materials
- Design of pilot samples
- Impact study

The project continues normally in 2021.

MLSTYLE marine litter		
Origin	Port	(Kg)
shellfish	Vilanova de Arousa	2.703
	O Grove	2.126
	Illa de Arousa	514
	A Guarda	276
	Baiona	92
Total marisqueo a pie		5.711
minor arts	Vilanova de Arousa	303
	Portonovo	184
	Cambados	3.047
	Illa de Arousa	3.920
	Canido	7
	Cangas	33
	Vigo	3
	O Grove	70
	Redondela	393
Total artes menores		7.960
Ports	Vigo	12.343
	Marin	13.625
Total Ports		25.968
Total marine litter		39.639



CoLogistics

CoLogistics, which is funded by the European Interreg POPTEC programme and has a budget of € 2,574,125, aims to promote logistics activity in the Galicia-North of Portugal territory.

CoLogistics proposes the implementation of measures that comprehensively improve the organisational and technological capacities of the industrial and logistics sector of the Euroregion, in order to increase competitiveness and technological and non-technological innovation.

The activities defined in the proposal emphasize the promotion of a strategic business vision, the technical improvement of processes, the design and implementation of Smart-logistics tools and 4.0 solutions.

Led by the Confederation of Entrepreneurs of Pontevedra, CoLogistics is made up of 8 partner entities from Spain and Portugal: IGAPE, Dirección Xeral de Mobilidade da Xunta de Galicia, the Port Authority of Vigo, Associação Empresarial de Portugal - AEP, Ad-

ministração dos Portos do Douro, Leixões e Viana do Castelo, SA - APDL, Câmara Municipal de Famalição.

The Port of Vigo will be in charge of defining and implementing the Green Logistics programme, identifying the processes with the greatest environmental impact on companies and activities related to logistics activity. This programme will propose improvement actions that make it possible to reduce the carbon footprint and logistics costs in such a way that they constitute an improvement both in the environmental impact of activities carried out by companies and in their competitiveness.

Actions taken in 2020 and planning for 2021

The project, which seeks to improve collaboration between all the components of the logistics function, as well as the optimisation of the use of the extensive existing infrastructures, was presented on January 15, 2020.

This year, in addition to participating in various project meetings, the first actions of the GREEN LOGISTICS programme were implemented, which included carrying out an initial diagnosis of the business network of the Port of Vigo. This allowed identifying opportunities to improve the reduction of the carbon footprint and logistics costs.

A total of nineteen companies provided their data for this diagnosis. This first phase closed with an in-depth analysis of 5 companies chosen from the total number of participants. Through visits to its facilities, the data collected were validated in situ and its daily operations and the environmental impact of its processes were analysed in detail. The results of this first phase will be presented during the first quarter of 2021 and will lead to the design of the second phase of the programme.

Next year, progress will also be made in the feasibility analysis of infrastructure projects that improve connectivity and intermodality in the Port of Vigo, an international acceleration service and support for

the globalisation of the supply chain of companies in the port community, and in the design of the Smart Logistics programme that promotes the implementation of ICT tools in the sector, among others.

2 high-level meetings between actors in the sector are also scheduled, the first of them in March 2021.



Portforward

This project, which was funded by the European H2020 programme, seeks to address the technological challenges of today's ports to take a substantial step towards what the EU calls Ports of the Future.

Its intention is to improve the operational and strategic capacity of ports in line with European purposes: smart port, connected port and green port. PortForward, with a budget of € 4,994,311.25, aims to provide 4.0 solutions to:

- Improve efficiency in port operations with heterogeneous freights (ro-ro cargo and containers) both in the use of space and the scheduling of berths, resource allocation, storage configuration, etc.
- Create real-time monitoring tools for port cargo flows.
- Implement a remote operating system for the management of important port operations such as passenger cargo traffic, especially short-distance sea shipping.
- Improve interconnection with inland transport, paying special attention to inland navigable waters.
- Develop an information exchange interface with the urban environment surrounding the ports.
- Reduce the impact of port operations on the environment through the use of green technologies and energy saving solutions.
- Improve the exchange of experiences and transferability to other intermodal transport centres.

The project, which is led by the Fraunhofer Institute for Factory Operation and Automation IFF, is made up of a consortium of 13 entities from 7 countries, including: Germany, Belgium, Spain, Greece, Italy, Norway and the United Kingdom.

In Vigo the Portforward project is carried out with the collaboration of Termvavi. It focuses on the development of a tool called "Green Scheduling" which, by increasing the efficiency in the use of resources, will allow the optimisation of port activities that are usually carried out in the Container Terminal. At the same time, it is expected to achieve a significant reduction in the ecological footprint.

The algorithm of this tool will be evaluated in the port operations simulator created by Transglobal, which will later be implemented in the terminal.

Actions taken in 2020

Following the line of previous years, PortForward continues its evolution with the definition and design of the case studies. Specifically, and for the Port of Vigo, the information gathering phase on the movement of containers in the terminal was closed, to make way for the mathematical modelling of this operation, the basis of the Green Yard Scheduler (GYS) computer module, which will be included in the PortForward Platform. The year ended with the completion of the design of the beta version of this module by the University of Brunel. In addition to these activities, LEI-TAT continued with the environmental and life cycle analysis of TERMAVI's operations.

The work carried out was presented at various international events, specifically the use of the Port of Vigo was presented at the Annual Conference of the Operational Research Society which promotes the sustainability of maritime operations among other topics, as well as at the INFORMS2020 Conference organised by the Institute for Operations Research and the Management Sciences, in the Transport Research Arena TRA2020, among others.

Actions planned for 2021

Year 2021 constitutes the home straight of the project. During this year, implementation and testing of the beta version of the GYS module in TERMAVI will be carried out, as well as other activities planned in the project. Among them, there will be a Workshop to present the platform and the GYS module to various stakeholders in the sector.



PortForward

Towards a green
and sustainable
ecosystem for
the EU Port of
the Future



Atlantic Maritime Ecosystem Network - MarEnet

This project, which is funded by the European Blue Economy programme, aims to strengthen the competitiveness of our maritime port and fishing industry through specific training and support actions for innovative and sustainable entrepreneurship.

MarEnet, which has a budget of € 867,922.61 and a duration of two years, aims to adapt academic training to the requirements and demands of the labour market in order to strengthen the competitiveness of the maritime - fishing - port sectors on the Atlantic façade and under a blue growth approach.

A digital platform will be designed and made available which, in addition to making available to citizens all the relevant information about the project activities and their progress, will also provide tools to facilitate the search for degrees, training courses and workshops, as well as job offers and professional profiles in the blue economy sector.

MarEnet is led by the Campus do Mar and it arises from the collaboration of entities within the framework of the Blue Growth Plan Vigo and has an interdisciplinary consortium made up of 8 entities - Campus del Mar, Port of Vigo, La Rochelle University, CIT, IMDO, ICSEM, Aclunaga and Cepesca - from the private and academic sectors of 3 European countries that make up the so-called Atlantic façade: Spain, Ireland and France.

The Port of Vigo, besides being responsible for the communication actions of the project, also plays a role both in cataloguing training related to the maritime port field and in identifying the current training demands of the sector.

Actions taken in 2020 and planning for 2021

In 2020 the project website (<http://www.marenet.Org/home/>) was put into operation, a platform which, in addition to disseminating its activities, includes various tools to facilitate the search for careers, courses and training workshops, as well as job offers and professional profiles in the blue economy sector. All these functionalities are expected to be operational in the first quarter of 2021.

Moreover, throughout the year work was done on the cataloguing of training activities related to the field of blue economy and on the identification and design of new training programmes demanded by the different sectors that comprise it (maritime transport, shipbuilding and ship repair, maritime transport, blue biotechnology, fishing and aquaculture).

The result of the report "Analysis of the training and labour market mismatch in the Atlantic Basin" was presented on September 16, during the celebration of the "Training and Labour Market Matching Workshop". The event, organised by the Port of Vigo and Campus do Mar, was attended by representatives of DG MARE and EASME, as well as speakers from France, Ireland and Spain. The event registered more than 150 attendees connected during its broadcast.



With the contribution of the European Maritime and Fisheries Fund of the European Union

Atlantic Maritime Ecosystem Network

The EU Blue Growth Strategy (2015) identified a group of maritime activities of interest with high potential for a sustainable growth and jobs creation in the framework of the so-called Blue Economy.

Among those, we can find the MarEnet's target activities, which are considered of great interest for innovation, economic growth and employment increase perspectives.

These productive activities taking place in or around maritime ports have been gathered in 6 groups in order to study and propose related training options:

- Aquaculture, Blue Biotech & Fisheries
- Coastal and Maritime Tourism
- Maritime Monitoring, Security and Surveillance
- Maritime Transport, Shipping and Services
- Port Logistics & Services
- Shipbuilding, Repair & Renewable Energy

THE PROJECT

MarEnet seeks to strengthen the cooperation between maritime business and academia, designing and implementing a Northwest European Atlantic Maritime Network made up by training centres and industry, meeting the needs of the port maritime market and maritime curricula, whilst enhancing the visibility and opportunities of blue economy and therefore, attractiveness of blue careers.

This Network, operating through an online platform, will be the framework where sharing human capital, best practices and tools in the Atlantic maritime environment, driving new collaborative training actions to integrate strengths and innovative proposals of each region.



Portos

This project, which is funded by the European Interreg Atlantic Area programme, aims to explore, develop and promote the implementation of Marine Renewable Energies in the ports of the Atlantic Area. PORTOS, which has a budget of € 2,625,180.56 and a duration of three years, aims to influence two major environmental priorities for European ports:

- Reduce greenhouse gas emissions and air pollution by providing solutions based on renewable marine energy.
- Improve the competitiveness of the Atlantic Area regions through the development, transfer and dissemination of innovative technologies and tools for decision-making in the implementation of sustainable energy systems.

The specific actions of the project are the following:

- Diagnose energy efficiency in the ports which participate in the project.
- Evaluate the potential of marine renewable energies in the target ports.
- Develop technologies that facilitate the use of marine energy.
- Design tools for the selection of adequate marine energies.
- Establish guidelines to apply the principles of energy self-sufficiency.
- Define strategies to adapt port infrastructures to the future needs of the marine energy sector.

The Port of Vigo, as the target port of the project, constitutes one of the case studies in which the energy resources available for the implementation and exploitation of marine renewable energies are evaluated within its area.

The Port of Vigo will carry out various actions within the project:

- Carrying out a study of the legal framework for the production and use of marine renewable energies at regional, state and European level.
- The design and start-up of the BLUE-PORTOS Energetic Observatory, a tool that must offer updated information on renewable energies.

Actions taken in 2020 and forecast for 2021:

Among the activities carried out in 2020 we should mention is the organisation of the 2nd project coordination meeting and the Thematic Seminar on Marine Renewable Energies, both organised in the Port of Vigo in February.

The Seminar, in which more than 15 speakers participated, constituted a meeting forum for stakeholders of the Marine Renewable Energy sector in which the progress of the project as well as the current state and future perspectives of the sector were exposed. Among the technical actions carried out this year, it is worth highlighting the presentation of technical reports on the evaluation of wind, solar, wave and tidal resources available for the exploitation of marine renewable energies in the water layer managed by the Port Authority of Vigo. These studies allow exploring new ways of using renewable energies to comply with the energy self-sufficiency and zero emissions objectives assumed by the entity. In addition, progress was made in defining the Marine Energy Observatory included among the actions of the project, which will continue to be specified throughout 2021 and 2022.

Among the actions planned for 2021 we should mention the celebration of the Open Ports 2020 event, cancelled due to COVID-19 restrictions, and its 2021 edition. Technical actions will continue with the definition of an energy mix that combines the available resources in the area with the best technologies for its use and the use of energy storage within the port, among others.



Peiraos do Solpor

This project encompasses a set of actions for the development of innovative practices that allow achieving sustainable ports. As part of this, the possibility of creating a natural marine ecosystem in port docks is analysed. This experience tries to conserve and increase biodiversity in port areas as well as to create a CO2 fixation system.

Peiraos do Solpor establishes synergies between companies, research institutions and technology centres in order to generate knowledge and create new technologies that promote the best sustainable practices in port areas. Due to its size and complexity, the project is divided into four sequential phases:

PHASE I. PuertAlMar (pilot study)

The first action in this phase is to create systems that support marine life. The purpose is the recolonisation of coastal areas that have been affected by industrial activities in the port environment.

A pilot study was launched that includes the installation of hanging structures located under the floating docks of the Port and designed to maximize the fixation of marine organisms (fauna and flora). This action is monitored a year in order to characterize the attached biological community. An assessment of the CO2 capture by the system is also carried out.

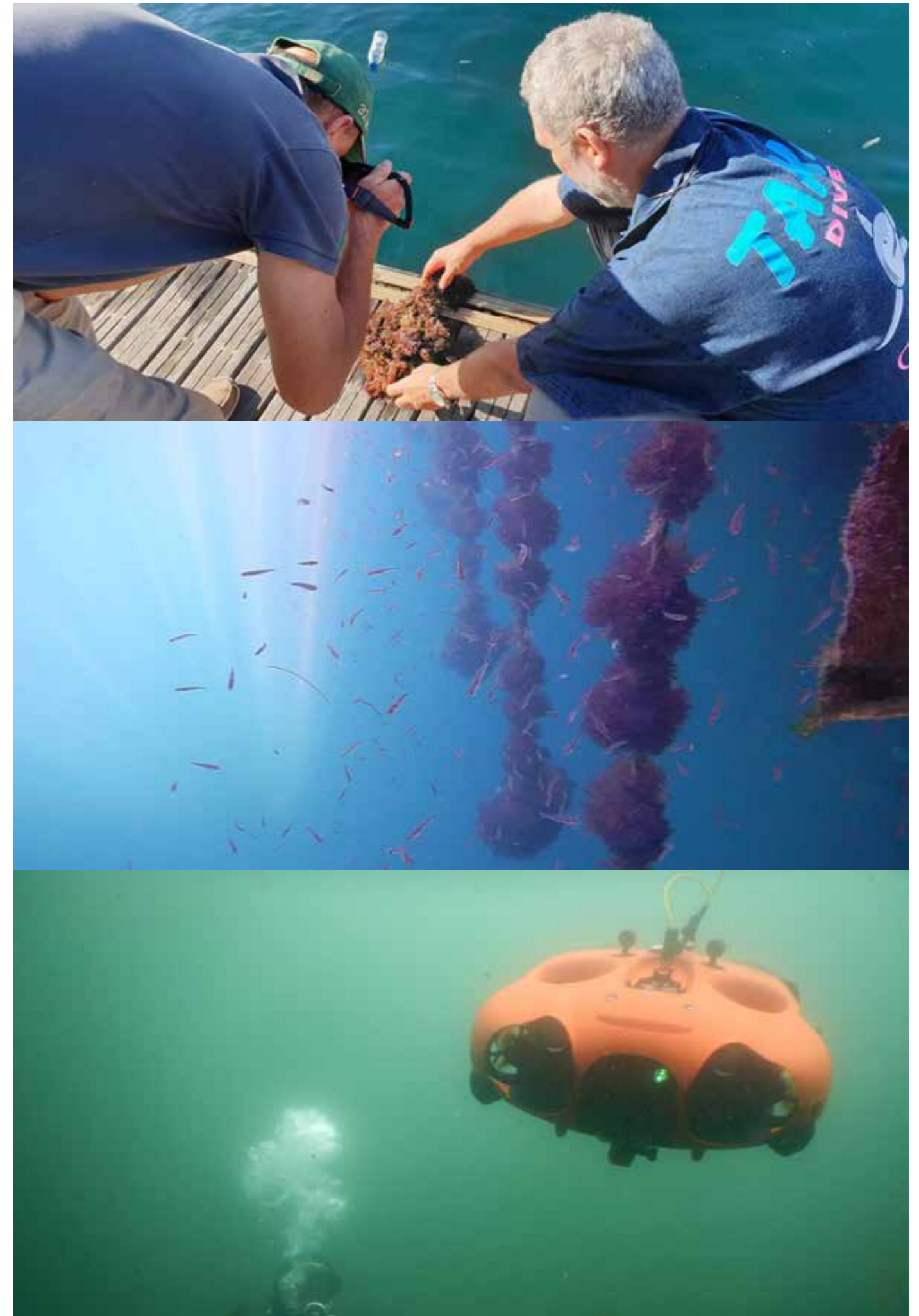
The results of this phase are used to disseminate the ecological values of the Ría to the society. For this, informational material, posters and panels, as well as awareness workshops, were designed.

Actions taken in 2020 and forecast for 2021 project Phase 1: Puertalmar

The activities carried out in 2020 were focused on the monitoring process of hanging structures. The biological diversity, the pattern of succession and abundance of species, among others, were analysed. The functions of the new ecosystem created around these structures and its impact as a mechanism for mitigating climate change by acting as a sink for CO2 and

being a source of replacement of species of fishing interest were also evaluated.

All this information forms the basis of the design of the informative activities that will take place in 2021. Workshops will be organised for schoolchildren and for the local fishing sector focused on disseminating the importance of the conservation of coastal ecosystems and its role in mitigating climate change through the experience carried out.



Phase II: Living Ports Project

Objective of the project

The “Living Port” project, approved in December 2020 and financed by the European programme “Fast Track to Innovation (FTI)”, aims to improve the integration of ports with the coastal environment, promoting the increase of biodiversity in port infrastructures and reducing their environmental impact. The execution of the project is aimed at making port activities compatible with the adequate ecological state of the intertidal zone.

The actions, which will be implemented in the Port of Vigo, will improve the port-city relationship in the central area of the Port (Dock for Ocean liners) and on the Bouzas breakwater pedestrian promenade. The total project budget is 3.1 million, where the Port Authority has a budget of € 545,797 entirely financed by Europe.

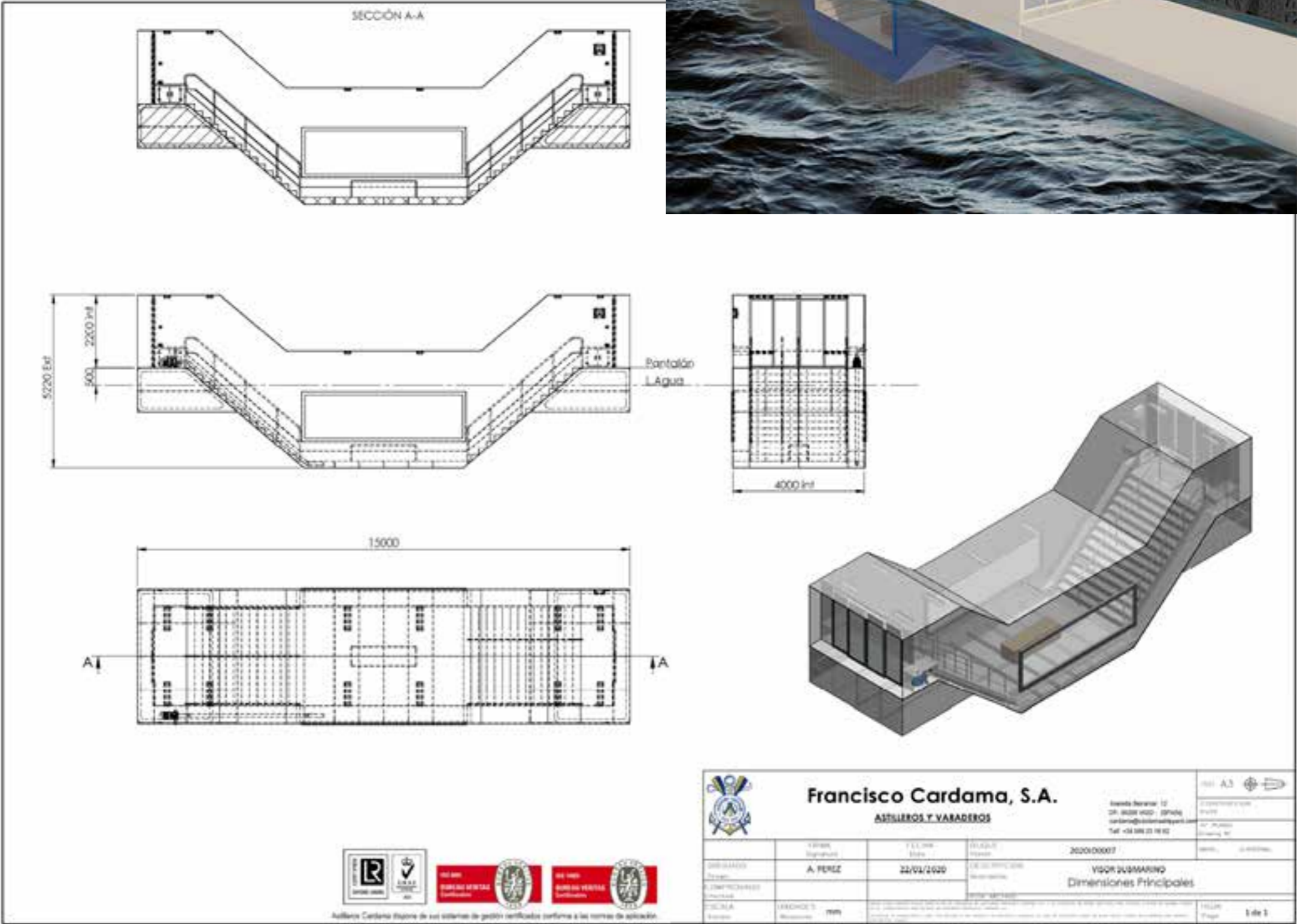
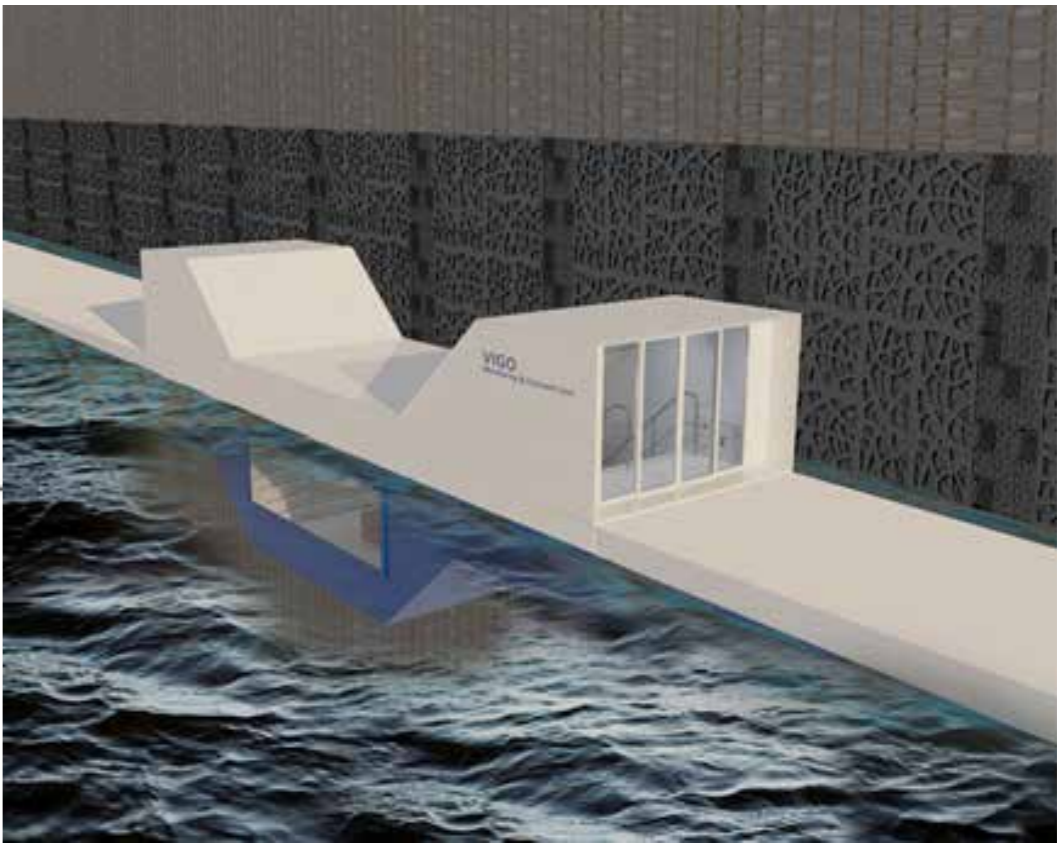
Participants

The project partnership includes the participation of the Israeli company Econcrete, the Danish Technical University of Denmark (DTU), the Vigo shipyard Cardama and the Port Authority of Vigo.

Actions forecast for 2021

The three-year project will begin in the first months of 2021, during which the launch meeting will take place.

The actions planned in A Laxe basin include the installation of vertical panels for the colonisation of fauna and flora as well as several artificial reefs designed by the Israeli company. All this can be seen by the public through an underwater observatory. The design will be tailored in order to optimise the visibility of the ecosystem and its relationship with port infrastructures. At Bouzas breakwater, armour units and tide pools will be installed. These structures are also designed by the same company to promote biodiversity.



Phase III. Peiraos do Solpor

In the last stage, the construction of a dock for recreational use is proposed and it integrates the technologies and designs created in the previous phases. This large-scale implementation of all phases and their monitoring will demonstrate the important carbon offset in port infrastructure and the compatibility of port activity with a good quality of the marine ecosystem.

Therefore, the final goal is to create an ecological reserve for the Port of Vigo. For this, a walk will be enabled on the docks with elements that combine the structures created in the previous phases, which favour biodiversity. Besides, an area of the seafloor will also be regenerated with seagrass beds.



ATIN-BLUECO

Objective of the project:

The ATIN-BLUECO project, implemented through the Atlantic Regional initiative of the European Space Agency, aims to develop and demonstrate solutions based on Earth observation (EO) data, which provide processable information to entities, organisations, companies and associations of the coastal area.

Participants and role of the Port Authority of Vigo

The project, with a total budget of € 200,000, is led by GMV, with the participation of the National Oceanography Centre (NOC) from UK and the collaboration of the Port Authority of Vigo. The latter will participate in the implementation of demonstration actions which allow creating tools to monitor hydrocarbons and marine litter.

Activities carried out in 2020

The execution of the project began in June 2020 and will last for the next 24 months. In these first months, several meetings were held, in which the Port of Vigo provided information on its experience in previous marine litter projects such as ML Style, as well as the management of hydrocarbon discharge.

The results of the project will contribute to the definition of the roadmap which is developed by the European Space Agency for the Atlantic Region and to promote the creation of an innovation cluster in maritime EO technology for the Atlantic, focused on the development of EO solutions to address the Framework Directive on Marine Strategy and Marine Spatial Planning.



GNL en el Puerto de Vigo

LNG in the Port of Vigo

In 2019, an evaluation study was carried out on the potential demand for LNG as a fuel in the Port of Vigo. This document constitutes, therefore, the first step for the analysis of the logistics of supply, storage and distribution of LNG and CNG in the port.

At the same time, there was also a study on Sizing and logistical considerations for the implementation of LNG in the Port of Vigo.

These studies show that Ro-Ro vessels represent more than 60% of the potential demand for the next 10 years that could rise to an average of 73 GWh/

year during the 2020-2029 period, mainly due to their recurring calls. (500 in 2016, 60% of them being carried out by only 10 vessels).

Besides, Ro-Ro vessels also have a considerable technical advantage, as they have a delimited docking area with 5 loading positions, which thus allows a service through fixed means from land, contemplating possible extensions to cover increases in the demand.

The idea that arises is to provide the Port of Vigo with a LNG supply service as maritime fuel, so as to increase the competitiveness of the Port within its Blue

Growth strategy.

For this, the idea of implementing the following infrastructure in the short-medium term is proposed:

- Two cylindrical tanks of 300 m3 each
- Two pumps, one to supply LNG to the ship and the other to maintain cold recirculation in the distribution pipes.
- Transfer system to ship by means of cryogenic flexible hoses.
- LNG dispenser for tankers.
- Transfer system for fishing vessels
- LNG dispenser for heavy vehicles.



The Blue Growth initiative of the Port of Vigo continues with the implementation and development of numerous projects and initiatives that translate into R&D projects in the field of sustainability, improvement and environmental protection. In the design of the entire Blue Growth Plan, the estimated budget for the achievement of all projects, actions and objectives was calculated in a mobilization of: 293 million euros, combining public and private funds (2021-2027) adhered to the new Next Generation recovery plan.

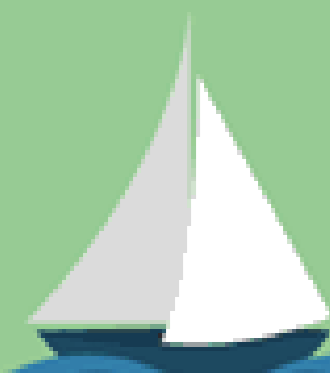
Currently, more than € 34 million of public funds and € 5.9 million of private funds have been mobilized for the execution of projects and actions, resulting in a total of almost € 45 million.

Besides, more than € 16 million of public subsidies from mostly European funds have been received.

Currently, 25 projects are in execution. Through these projects, it contributes to the achievement of impact objectives in terms of environment, innovation and

inclusion. Regarding the "Green Port" objective, it is possible to consult at <http://bluegrowthvigo.eu/> impact the status of achievement of the established goals, defined according to the most relevant aspects regarding port activities: reduction of energy consumption, reduction of gas emissions, regenerated marine surface or the elimination of plastics from the sea. As part of Our Ocean commitment of the Port of Vigo, it is expected in 2022 to reduce its emissions by 30% and achieve a 3% energy self-sufficiency, having already achieved a 1,49% self-sufficiency with clean energy and a 13,96% reduction in energy emissions. In this regard, we should highlight the actions to improve energy efficiency and the installation of renewable energy production systems.

BLUE GROWTH



Compromiso Our Ocean

The Port Authority of Vigo has taken on Our Oceans commitment, which implies achieving an energy self-sufficiency of 3% and a reduction of 30% in emissions (CO₂, SOX, NOX).

Electricity is currently available from 100% renewable sources, which implies a direct reduction of the Port Authority's carbon footprint, so much so that it has gone from an emission of 24,565 TCO₂eq in 2018 to 128 TCO₂eq in 2019 and 109 TCO₂eq, that is, a reduction in CO₂ emissions of 99.55% since 2018.

On the other hand, with the execution of Auction Hall 4.0 project and the new photovoltaic systems already installed in the administrative building of Plaza de la Estrella, it is expected to reach, in 2022, the commitment of energy self-sufficiency acquired.

These actions lead to a compliance of 75% today.

Currently we are working on the certification of the Carbon footprint of the Port of Vigo, another step in reducing emissions and environmental protection of our surroundings



11 Environmental Indicators

Once again, indicators are established and updated to reflect the environmental management of the Port of Vigo in all areas.


finied in the standard as "Environmental performance indicators for the Public Administrations sector" were also included.

All the graphs presented below reflect the data of the indicators obtained, which in no case are absolute values, as they always depend on other factors such as the number of workers, the global consumption, etc.

All the indicators that were not fulfilled are marked with (*) and have their corresponding explanation on page no. 114.

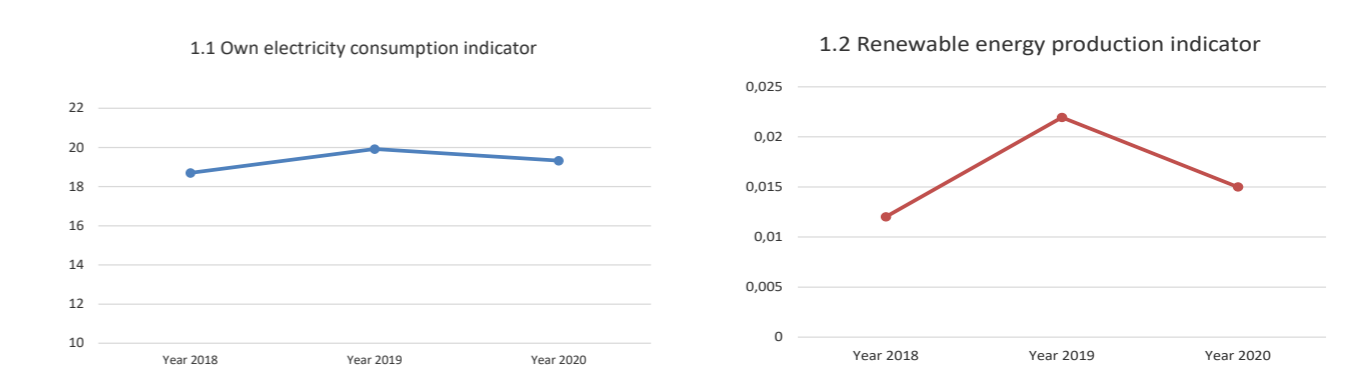
We should mention that this year the indicators defined on page 112 of this Statement.

Environmental aspect	Indicator	Formula	Value 2020	Planned Value(1)	Fulfilment
1. Energy Efficiency(2)					
1.1 a) Own and non-justified electrical consumption	Own and non-justified MW consumed/ No. of workers	4,464.27/ 231	19.32	19.45	✓
1.2 Production of renewable energy	Total MW produced from renewable energy (photovoltaic) / Total MW consumed	66.92/ 4,464.27	1.49	2.14	(*)



Environmental aspect	Indicator	Formula	Value 2020	Planned Value(1)	Fulfilment
1. Energy Efficiency					
1.3 Fuel consumption vehicles	GJ consumed (diesel) /	748,84/231	3,24	3,61	✓
1.4 Fuel consumption vehicles	Litres consumed (diesel) / Km	20,488.27/ 265,481	0.077	0.076	✓
1.5 Fuel consumption boilers	GJ consumed (diesel) / No. of workers	36,04/231	0,15	0,38	✓
1.6 Fuel consumption boilers (Natural Gas)	GJ consumed (natural gas) / No. of workers	8,41E-17/231	3,64*10 ⁻¹⁹	3,13*10 ⁻¹⁹	(*)
1.7 Fuel consumption boilers (Propane gas)	GJ consumed (Propane gas) / No. of workers	2,97E-20/231	1,28*10 ⁻²²	1,35*10 ⁻²²	✓
1.8 Fuel consumption vessels	GJ consumed (diesel) / No. of workers	80,18/231	0,34	1,16	✓
1.9 Fuel consumption machinery	GJ consumed / No. of workers	66,80/231	0,28	0,30	✓
	Litres/ No. of workers	1.853,55/231	8,02	8,55	✓

1. Energy efficiency, electrical power

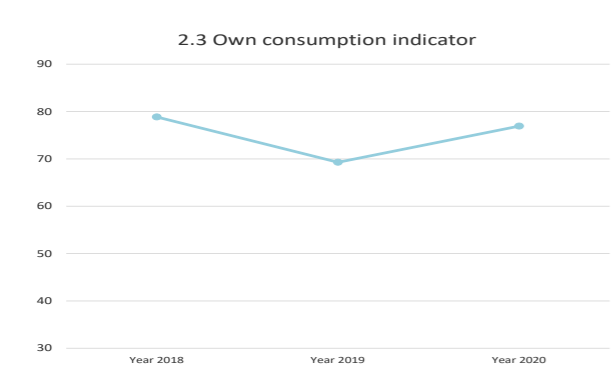
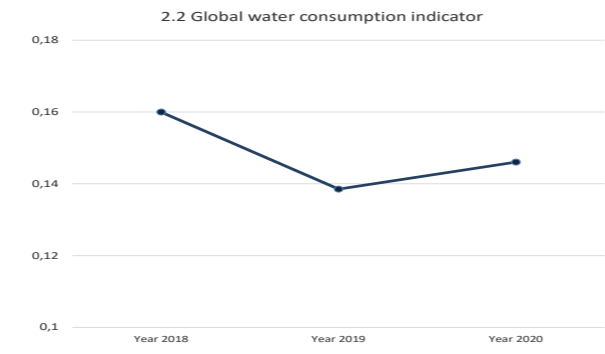
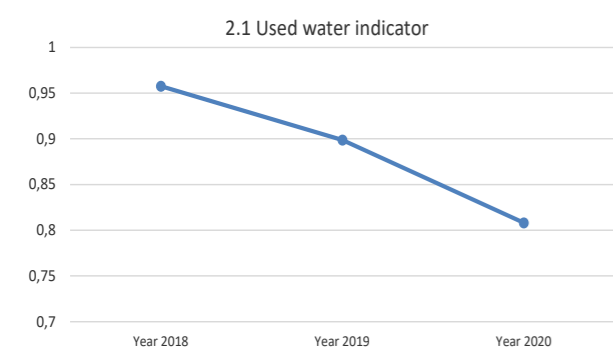


1. Energy efficiency, fuels



* Analysis of graphs on page 114

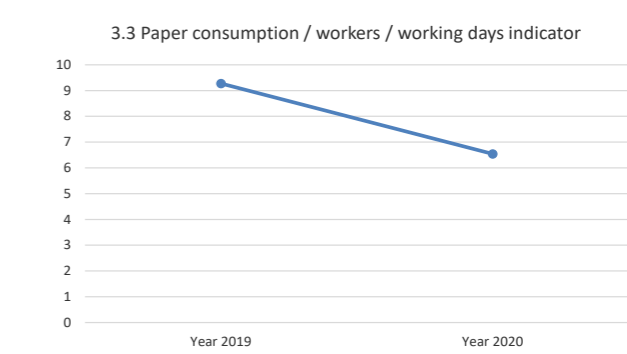
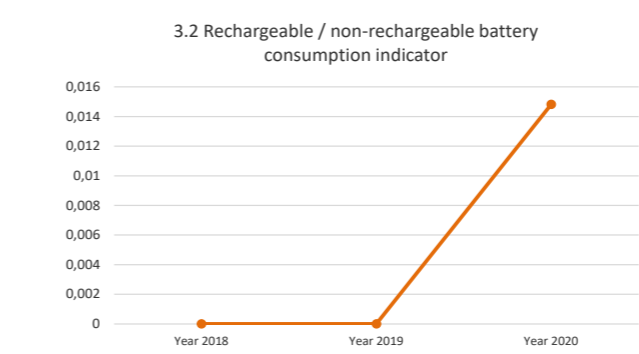
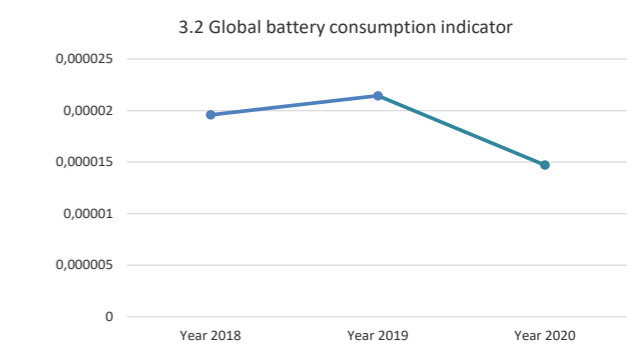
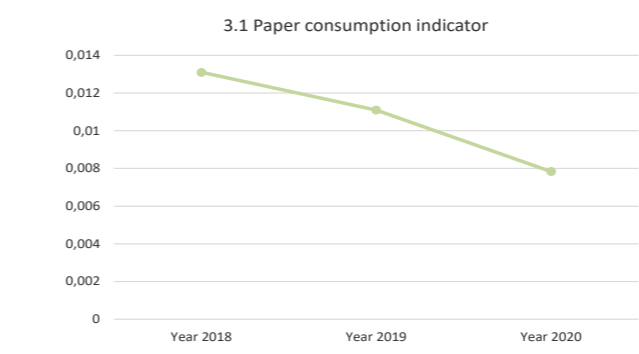
Environmental aspect	Indicator	Formula	Value 2020	Planned Value(1)	Fulfilment
2. Water					
2.1 Water used	m3 water used / m3 drinking water supplied	299,026/ 370,027	0.80	0.88	(*)
2.2 Water consumption	m3 drinking water supplied / m2 service area	370,027/ 2,533,647.6	0.14	0.14	✓
2.3 Own consumption	m3 drinking water consumed / no. of workers	17,768/ 231	76.91	64.40	(*)



* Analysis of graphs on page 114

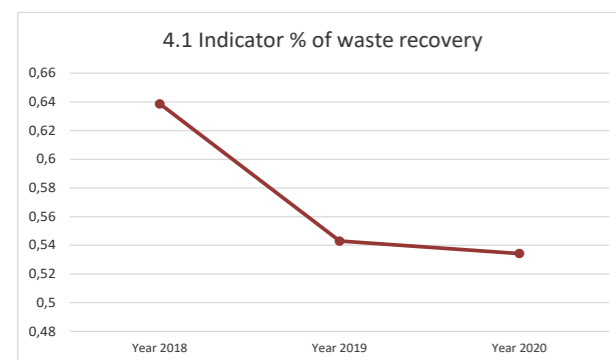
Environmental aspect	Indicator	Formula	Value 2020	Planned Value(1)	Fulfilment
3. Consumption of Products					
3.1 Paper consumption	Tn of sheets/ no. of workers	1.8/ 231	0.007	0.012	✓
3.2 Consumption of batteries	No. of rechargeable batteries / no. of non-rechargeable batteries	2/ 135	0.014	0.006	✓
	Tn Batteries used / no. of workers	0.0034/ 231	1.47*10-5	2.48*10-5	✓
3.3 Paper consumption / workers / working days	Paper consumption/ worker / day (Environmental behaviour of Public Administrations)	362,500/231/ 240	6.53	9.97 (Value 2019)	✓

3. Product consumption



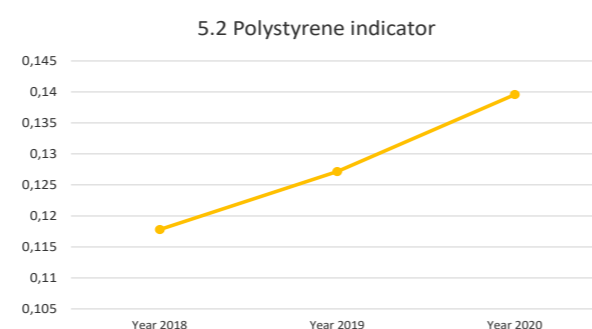
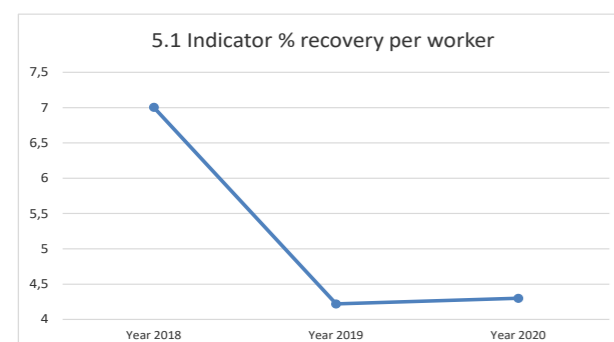
Environmental aspect	Indicator	Formula	Value 2020	Planned Value(1)	Fulfilment
4. Recoverable Waste					
4.1 Non-hazardous recoverable waste with respect to total waste.	Total annual generation of recoverable waste (in tn)/tn total (%)	993,091/ 1,858.65	0.53	0.65	(*)

4. Recoverable waste

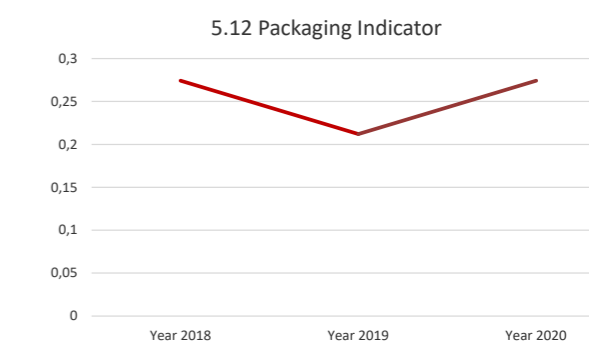
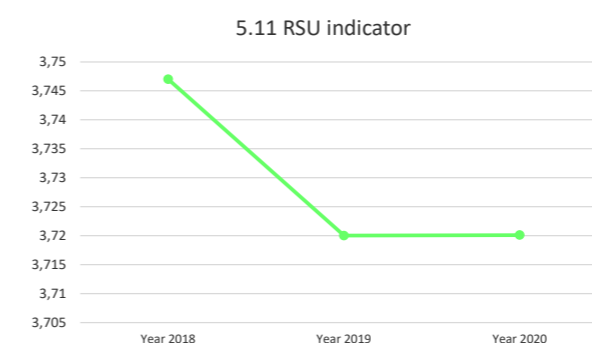
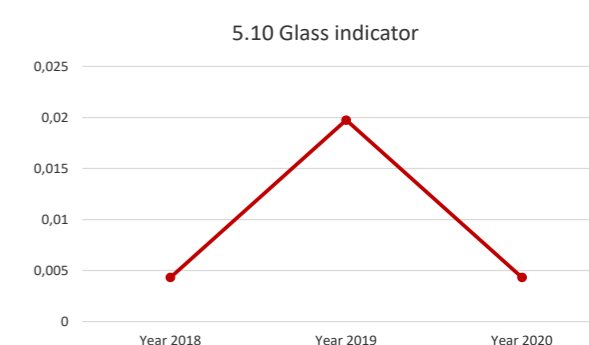
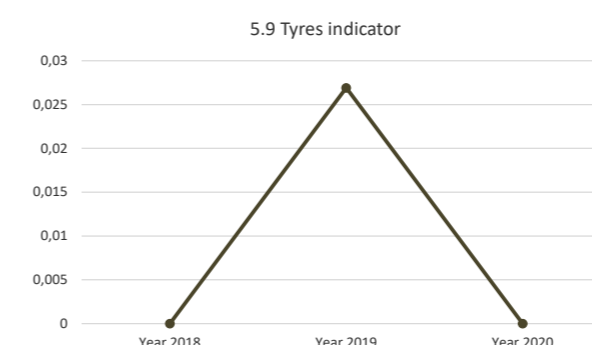
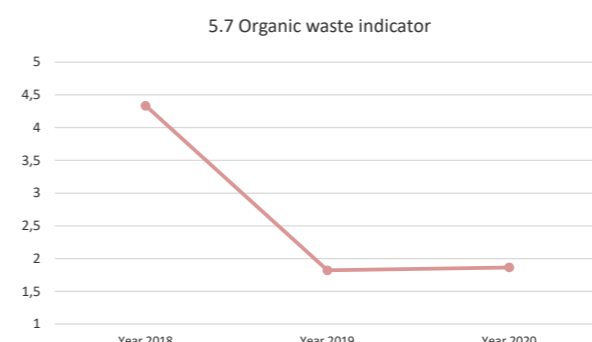
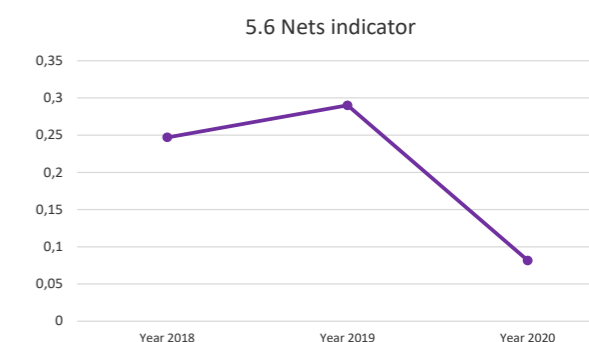
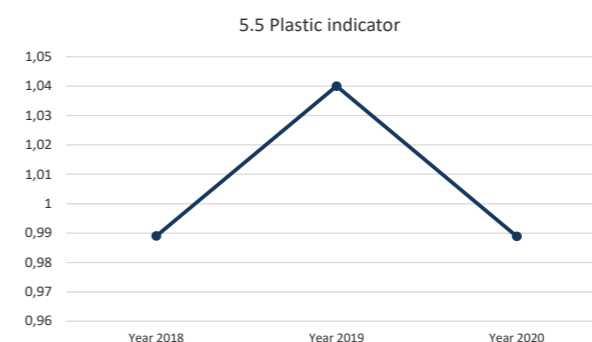
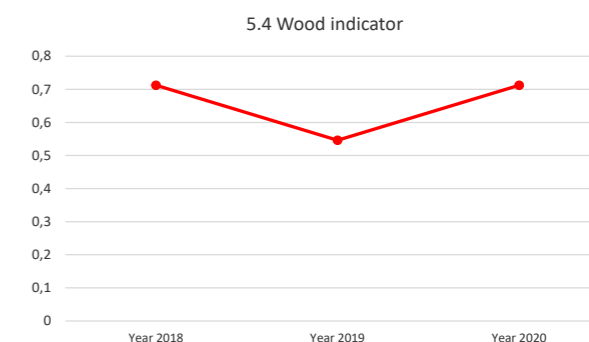
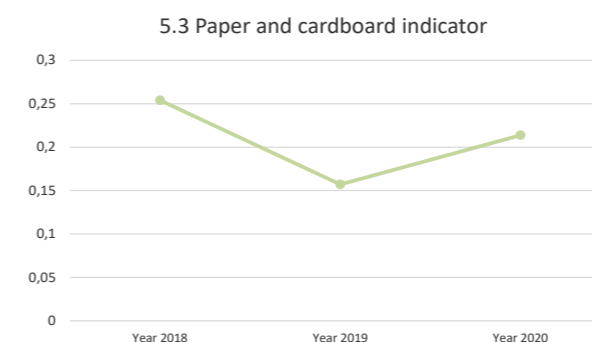


* Analysis of graphs on page 114

Environmental aspect	Indicator	Formula	Value 2020	Planned Value(1)	Fulfilment
5. Waste with respect to number of workers (3)					
5.1 Non-hazardous recoverable waste with respect to no. of workers	Total annual waste generation (in tn)/ no. of workers	1,858.65/ 231	4.29	10.34	(*)
5.2 Polystyrene	Total annual Polystyrene generation (tn) / no. of workers	32.24/ 231	0.139	0.128	✓
5.3 Paper/ cardboard	Annual Paper and Cardboard generation (tn) / no. of workers	49.37/ 231	0.21	0.22	✓
5.4 Wood	Annual Wood generation (tn) / no. of workers	164.53/ 231	0.71	0.74	(*)
5.5 Plastic	Annual Plastic generation (tn) / no. of workers	228.46/ 231	0.98	0.88	✓
5.6 Nets	Annual Nets generation (tn) / no. of workers	18.84/ 231	0.08	0.20	✓
5.7 Organic waste	Annual Organic Waste generation (tn) / no. of workers	430.75/ 231	1.86	7.83	(*)
5.8 Scrap	Annual Scrap generation (Tn)/ no. of workers	4.56/ 231	0.019	0.025	✓
5.9 Tyres	Annual Tyres generation (Tn)/ no. of workers	0/ 231	0	0.008	(*)
5.10 Glass	Annual Glass generation (Tn)/ no. of workers	1/ 231	0.004	0.01	(*)
5.11 Solid urban waste (SUW)	Annual SUW generation (tn) / no. of workers	865.56/ 231	3.72	4.15	✓
5.12 Plastic packaging (Ecoembes)	Annual Plastic packaging generation (tn)/ no. of workers	63.33/ 231	0.27	0.27	✓

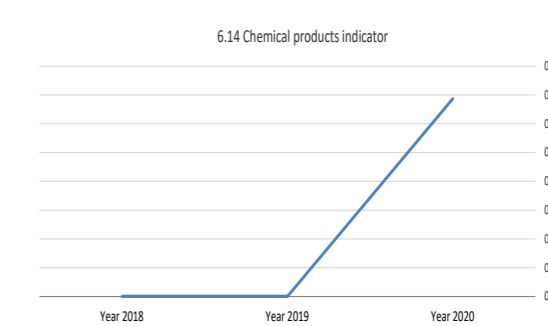
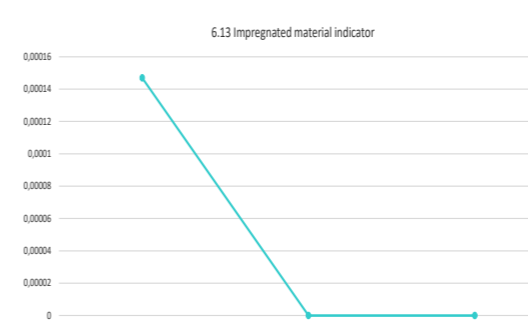
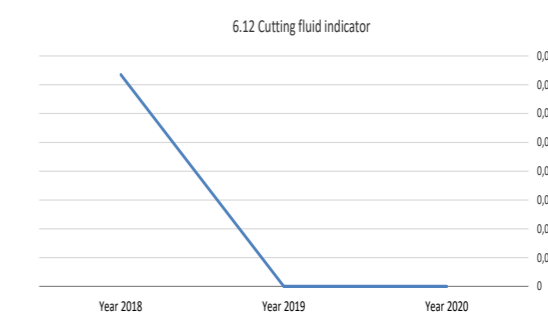
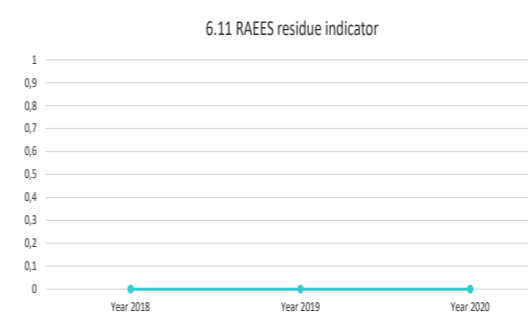
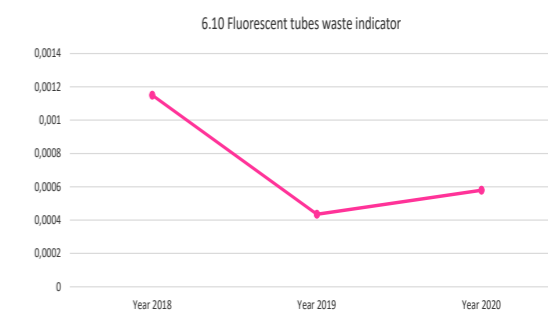
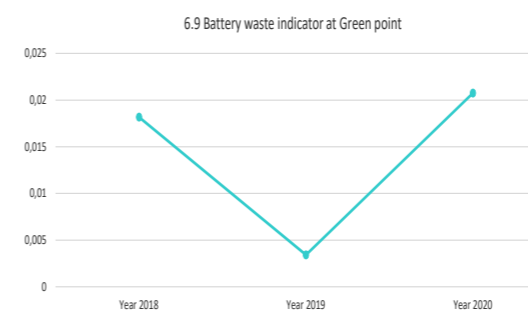
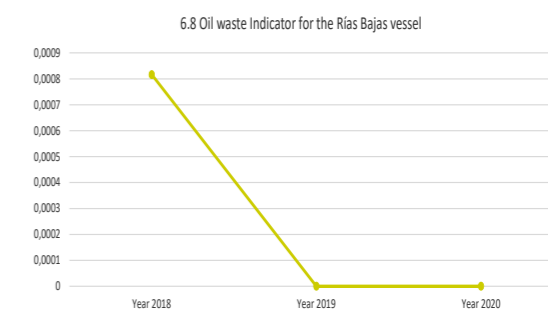
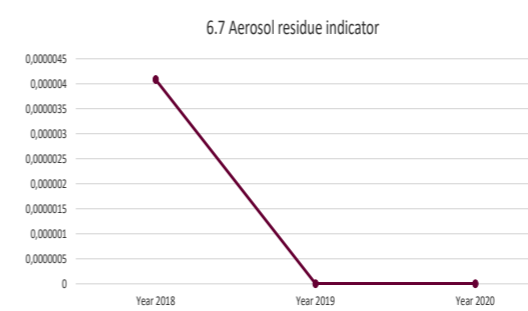
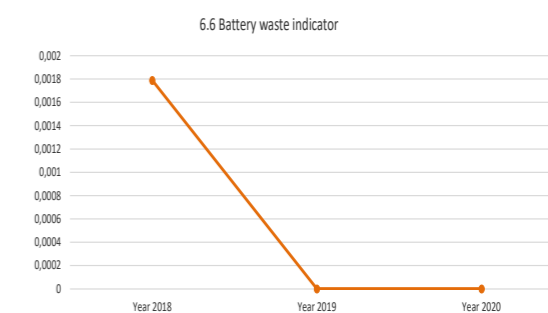
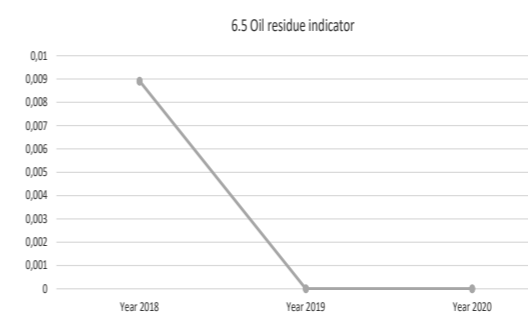
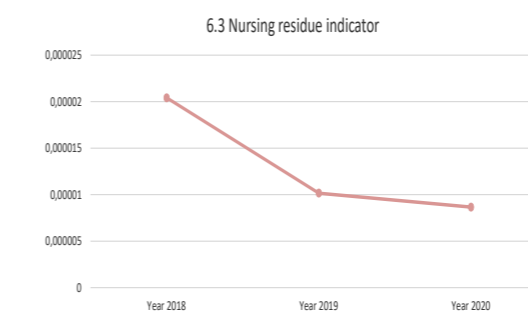
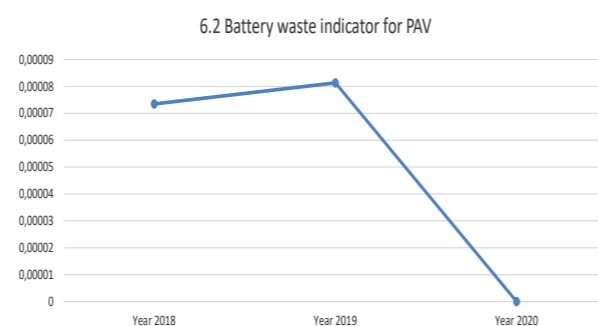


5. Waste with respect to the number of workers



Environmental aspect	Indicator	Formula	Value 2020	Planned Value(1)	Fulfilment
6. Generation of hazardous waste with respect to number of workers					
6.1 Total generation of hazardous waste by PAV and users: (batteries, aerosols, packaging, nursing waste, Green P. batteries, etc.)	Total annual generation of hazardous waste (in Tn)/ no. of workers	5,723/ 231	0.024	0.016	✓
6.2 Hazardous waste generated only by PAV: Batteries	Total annual generation of hazardous waste (in Tn)/ no. of workers	0/ 231	0	7.5 *10-5	✓
6.3 Hazardous waste generated only by PAV (Nursing waste)	Total annual generation of hazardous waste (in Tn)/ no. of workers	2/ 231	8.6 *10-6	1.15*10-5	✓
6.4 Hazardous waste generated only by PAV (Contaminated Packaging)	Total annual generation of Contaminated Packaging (in Tn)/ no. of workers	0/ 231	0	0.0003	✓
6.5 Hazardous waste generated only by PAV (Used Oil)	Total annual generation of Used Oil (in Tn)/ no. of workers	0/ 231	0	0.0003	✓
6.6 Hazardous waste generated only by PAV (Batteries)	Total annual generation of Battery (in Tn)/ no. of workers	0/ 231	0	0.0007	✓
6.7 Hazardous waste generated only by PAV (Aerosols)	Total annual generation of Pressure Bottles (in Tn)/ no. of workers	0/ 231	0	5.5*10-6	✓
6.8 Hazardous waste generated by PAV (Oil waste Rías Bajas)	Total annual generation of Oil Waste in Rías Bajas (tn)/ no. of workers	0/ 231	0	0.0002	✓
6.9 Hazardous waste generated by users of the Port (Green P. batteries(3))	Total annual generation of Green P. Batteries (tn)/ no. of workers	4.79/ 231	0.020	0.0083	✓
6.10 Fluorescent tubes generated by PAV and users of the Port	Total annual generation of Fluorescent tubes (tn)/ no. of workers	0.133/231	0.005	0.007	✓
6.11 Hazardous waste generated only by PAV (EEEW)	Total annual generation of EEEW (in Tn)/ no. of workers	0/ 231	0	0	✓
6.12 Cutting fluid generated by PAV	Total annual generation of hazardous cutting fluid waste (Tn)/ no. of workers	0/ 231	0	2.44*10-5	✓
6.13 Impregnated material generated by PAV	Total annual generation of hazardous waste resulted from impregnated material (Tn)/ no. of workers	0/ 231	0	4.89*10-5	✓
6.14 Chemical products generated by the PAV and users of the Port.	Total annual generation of hazardous waste from chemical products (Tn) / no. of workers		0,003	0	(*)

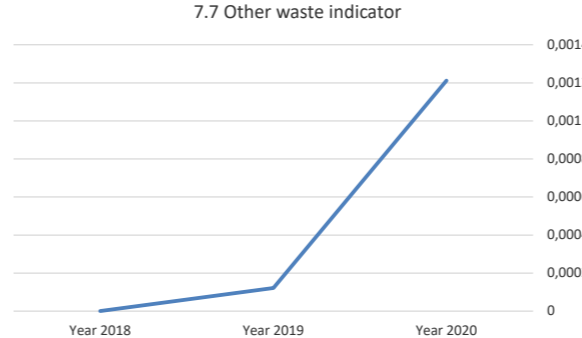
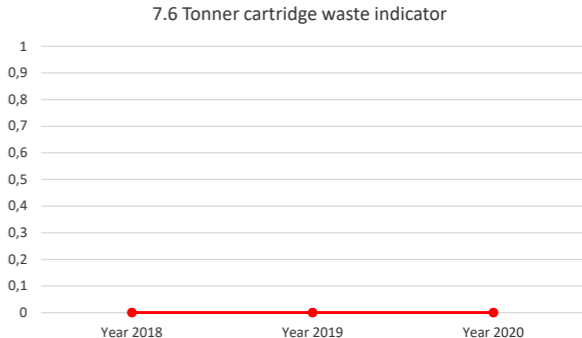
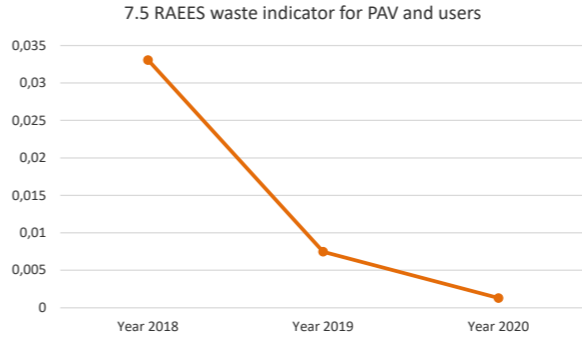
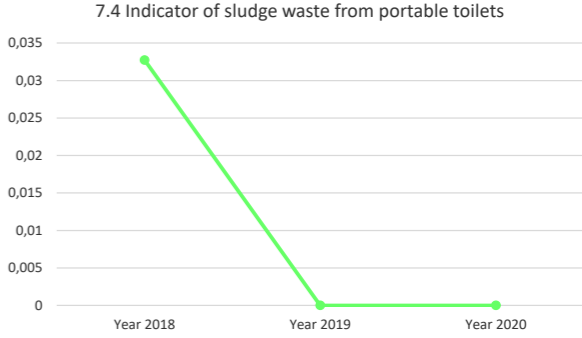
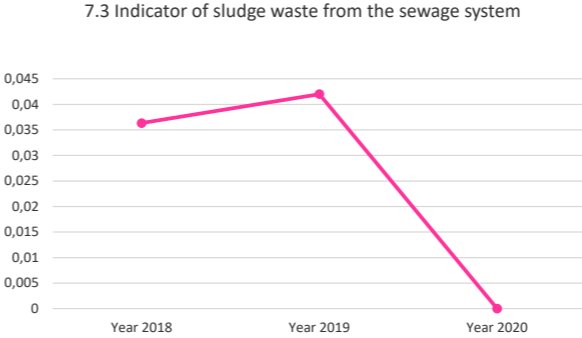
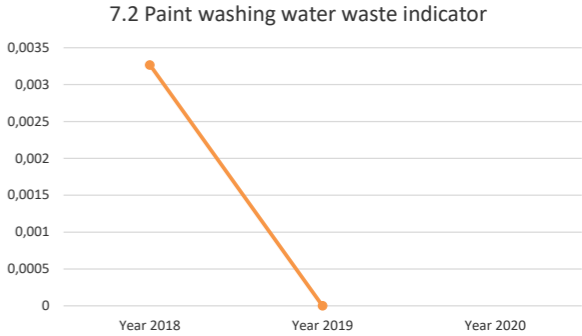
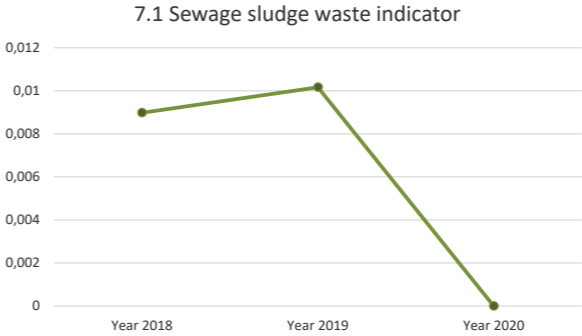
6. Hazardous waste



* Analysis of graphs on page 114

Environmental aspect	Indicator	Formula	Value 2020	Planned Value(1)	Fulfilment
7. Other waste					
7.1 Sewage sludge (Generated only by PAV)	Total annual generation of sewage sludge (tn)/ no. of workers	0/ 231	0	0.009	√
7.2 Paint Washing Water generated only by PAV	Total annual generation of paint washing water (Tn)/ no. of workers	0/ 231	0	0.001	√
7.3 Sludge from the sewage system generated by users of the port(2)	Total annual generation of Sludge from the sewage system (Tn)/ no. of workers	7.92/ 231	0.034	0.026	(*)
7.4 Sludge from portable toilets generated by users of the port(2)	Total annual generation of Sludge from portable toilets (Tn)/ no. of workers	0/ 231	0	0.022	√
7.5 EEEW generated by PAV and users of the Port	Total annual generation of EEEW (Tn)/ no. of workers	0.3/ 231	0.001	0.014	√
7.6 Toner cartridges generated only by PAV	Total annual generation of toner cartridges (Tn)/ no. of workers	0/ 231	0	0.00012	√
7.7 Other waste generated by PAV and users of the Port	Total annual generation of other waste (Tn)/ no. of workers	0.28/ 231	0.0001	0.0055	√

7. Other waste



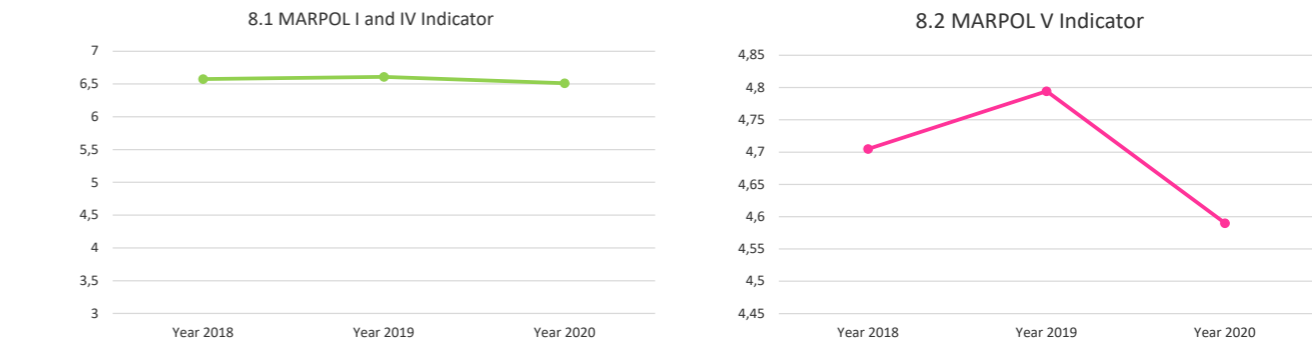
* Analysis of graphs on page 114



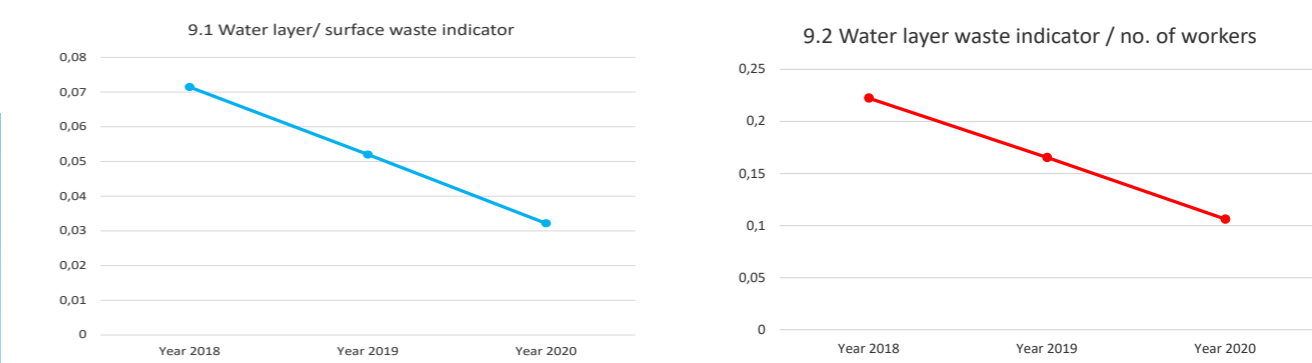
Environmental aspect	Indicator	Formula	Value 2020	Planned Value(1)	Fulfilment
8. MARPOL waste(4)					
8.1 MARPOL waste I, IV	Total annual generation of MARPOL waste (m3)/ no. of vessels	10,042/ 1,542	6.51	6.62	(*)
8.2 MARPOL waste V	Total annual generation of MARPOL waste (m3)/ no. of vessels	7,089/ 1,542	4.59	4.72	(*)
9. Water layer waste					
9.1 Water layer waste	Waste collected (Tn)/ Area 1 (ha)	24.52/ 762.4	0.031	0.05	✓
9.2 Water layer waste with respect to number of workers(3)	Waste collected (Tn)/ No. of workers	24.52/ 231	0.10	0.18	✓
10. Noise Pollution					
10.1 Noise Pollution	No. of complaints about noise	No. complaints noise	9	1.33	(*)



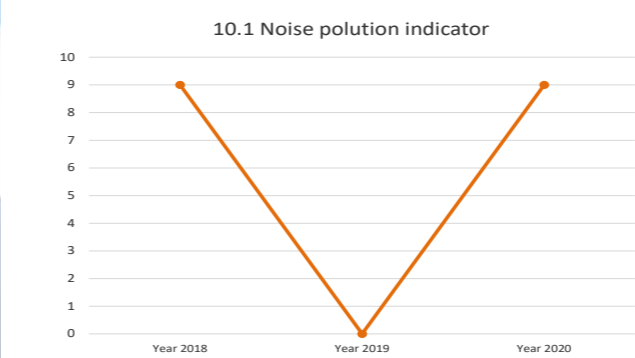
8. MARPOL waste



9. Water layer waste



10. Noise pollution



Environmental aspect	Indicator	Formula	Value 2020	Planned Value(1)	Fulfilment
11. Air Emissions					
11.1 CO2 Emissions(5)	CO2 emissions (Tn)/ No. of workers	107/ 231	0.46	4.019	√
11.2 Air emissions	Number of cases of air pollution / total incidents	0/ 111	0	0.025	√
11.3 Air emissions from business trips / year (Environmental Behaviour of Public Administrations)	Tons of CO2 generated by professional vehicles/ Year	52.49/ año	52.49	52.68 (Value 2019)	√
11.4 Air emissions from business trips / year/ worker	Tons of CO2 generated by professional vehicles/ Year/ Worker	52.49/ 231/ año	0.21 (valor 2019)	0.22	√
12. General Environmental Management					
12.1 Resources used in Environmental management	Economic resources used in Environmental management/ Total expenses (Euro)	2,539,533.82/ 53,199,295.94	0.047	0.08	(*)
13. Biodiversity					
13.1 Biodiversity	m2 total built area of Port / m2 protected area (adjacent)	2,533,647.60/ 75,670,000	0.033	0.033	√
	m2 total built area of Port / no. of workers	2,533,647.60/ 231	10,968.17	10,399.22	(*)
13.2 Green surface / Total surface (Environmental Behaviour of Public Administrations)	m2 green area (adjacent) / m2 total built area of the Port	46,176/ 2,533,647.60	0.018	0.018 (Value 2019)	√

(1) The planned values are obtained from the average of the data of the last three years (2016, 2017 and 2018).

(2) For the conversion to Giga joules, the units and conversion factors published by the INEGA (Instituto Enerxetico de Galicia - Energy Institute of Galicia) of the Department of Economy and Industry of Xunta de Galicia (the Autonomous Government of Galicia) are used.

(3) Due to EMAS requirements, the number of workers of PAV is taken as a reference, although the waste managed is due to the activity of users and companies in the Port of Vigo.

(4) MARPOL waste is measured in m3, and its density prevents direct equivalence in Tons.

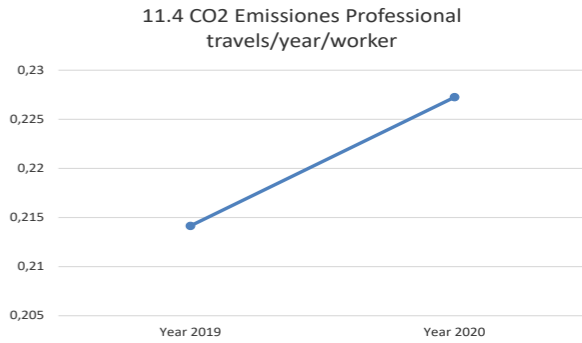
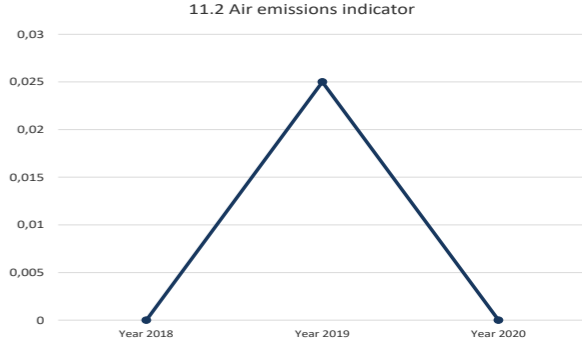
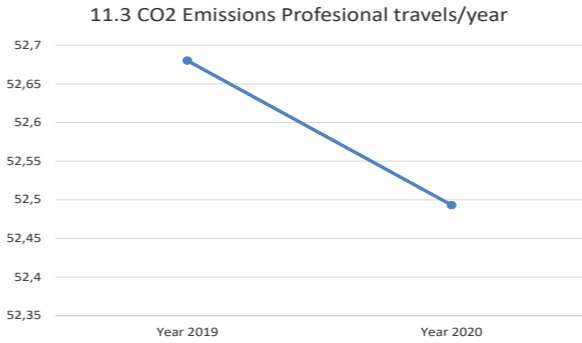
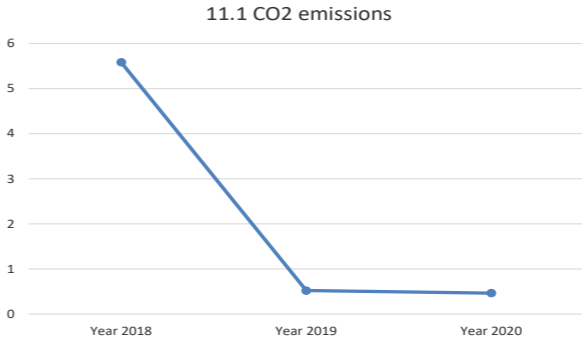
(5) For the calculation of CO2 emissions, the Puertos de Estado (State Ports) methodology and the conversion factors of the Ministry of Transition are used.

(6) This section refers to the emissions associated with the consumption of electrical energy and fuels, as there are no other types of emissions derived from the activity of the PAV.

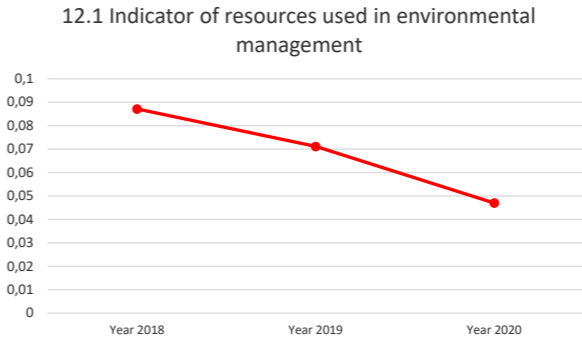
INEGA conversion factors	
1 J	2.34 * 10-11 tep
1 kWh	0.86 * 10-4 tep
1 BTU	0.25 * 10-7 tep
1 tec	0.70 tep
1 MWh	0.086 tep



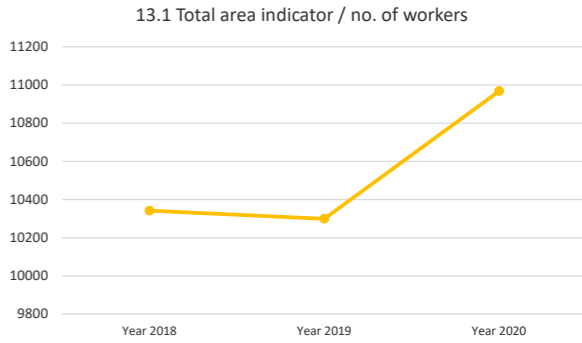
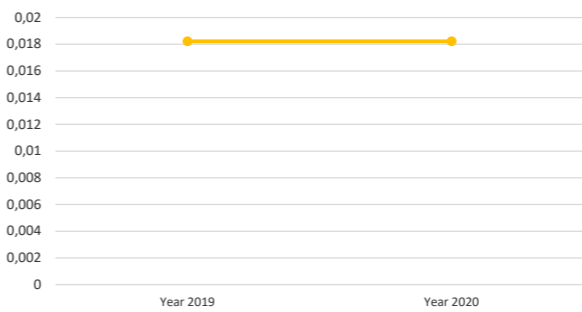
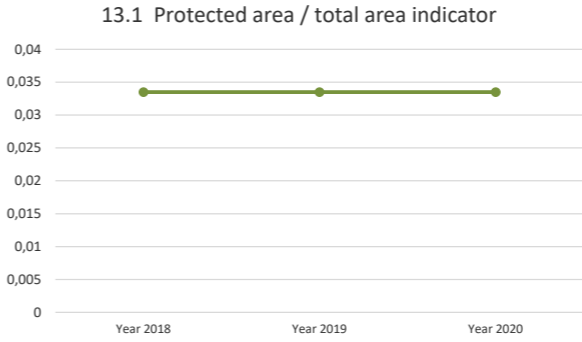
11. Air emissions



12. General environmental management



13. Biodiversity



* Analysis of graphs on page 114



Analysis of Results Obtained

In 2020, electricity consumption was reduced by 8.89%, vehicle fuel by 6.59%, boat fuel by 64%, diesel boilers fuel by 50 % and propane by 20.8%.

Regarding the recovery of waste, there was an increase of 2.97% in polystyrene, 21.7% in paper and cardboard, 18.39% in wood and 17.64% in packaging.

The reduction in paper consumption is also noteworthy, as it reached a level of 33% less than last year, largely due to the continuous digitisation of administrative procedures and acts of the Port Authority of Vigo.

Finally, the cases in which the planned value was not achieved are the following:

- 1.2 Production of renewable energies: The planned value is not reached since there was a breakdown in the panels of Plaza de la Estrella and in the other two facilities (Bouzas and Arenal) there was a lower production due to the adverse weather conditions of the year.
- 1.6 Fuel consumption of natural gas boilers: In 2020 there was a slight increase in the consumption of natural gas (+0.8%), but it exceeds the average of the last three years.
- 2.1 Used water: In 2020, the use of drinking water achieved was 80%, which is slightly lower than the average of the last three years.
- 2.2 Own consumption: In 2020, own consumption was slightly higher than the previous year, going from 17,045 m3 in 2019 to 17,768 m3 in 2020.
- 4.1 Waste recovery: In 2020, a waste recovery of 53% was recorded, the same value as in 2019, but lower than the average of the last three years, hence this indicator was not met.
- 5.1 Recoverable non-hazardous waste in relation to the number of workers: The same value as in 2019 is reached, but lower than the average of the last three years.
- 5.4 Wood Waste: Although 18% more wood is managed this year than in 2019, the value is lower than the average of the last three years.
- 5.7 Organic waste: There is a slight decrease in the management of organic waste from the fishing

sector, largely due to the health emergency.

- 5.9 Tire Waste: In 2020 no tires were managed. The amount of this type of waste varies depending on the port defenses discarded, so it is not possible to have a forecast of this.
- 5.10 Glass waste: Only one ton of glass waste was collected compared to 4.86 the previous year. This waste fundamentally depends on user activity, which was minimised last year by the health emergency.
- 6.14 Waste of chemical products generated by the Port Authority and users of the Port: This year 794 kg of foam out of its life cycle was managed, which meant exceeding the planned value.
- 7.4 User-generated sludge from the sewage network: In 2020, there was a significant blockage of the sewage system, which implies an increase in the generation of this waste.
- 8.1 and 8.2 MARPOL waste: This year a lower volume of this type of waste was collected, since it depends directly on the activity of the vessels, reduced by the health emergency situation.
- 10.1 Noise pollution: This year there were various complaints derived from noise at night generated by various ships during their stay in port and refrigeration installations.
- 12.1 Resources used in environmental matters: This year the economic resources used in environmental matters increased, however PAV's expenses also increased due to an accounting issue, which leads to non-compliance with this indicator.
- 13.1 Biodiversity (m2 of total constructed area of the Port/ number of workers: Although the port area did not change, due to the decrease in the number of workers, the planned value was not achieved.



12. Legal Requirements

The following legislative references must be highlighted for 2020:

Preventive tools
The Port Authority has an Interior Maritime Plan in accordance with RD 1695/2012
Water
The Port Authority has all its sewage connected to the municipal sewage system
Waste
Registration as a small producer of hazardous waste PO-RP-P-PP-00609
Air
The Port Authority does not have sources of emission to the air registered in REGADE- CAPCA
Noise
The Port Authority voluntarily carries out an annual measurement of noise
Soil
The Port Authority oversees the management of contaminated soils derived from the activity of concessionaires in accordance with Law 11/2012, of December 19, on urgent measures regarding the environment, which partially modifies Law 22/2011, of December 28 July, on waste and contaminated soil.
EMASIII
The Port Authority has EMAS III registration number ES-GA-000303
The Port Authority voluntarily included the evaluation of the sectoral indicators of environmental behaviour based on DECISION (EU) 2019/61 OF THE COMMISSION of December 19, 2018.

Conclusions

After a year of health emergency, the Port of Vigo managed to maintain its innovation and environmental protection ratios, as well as a clear and firm commitment to sustainable development through participation in numerous projects and initiatives such as the Peiraos do Solpor, Portos, MLSTYLE, Marenet, Portforward, Cologistics, among others, all of them aimed at obtaining environmental excellence in our field, always trying to combine port activity with the protection of the environment.

An example of this is "Our Oceans" commitment to reduce emissions by 30% in 2022. This year a reduction of 99.5% in the Carbon Footprint of the Port Authority was achieved, thanks to reductions in the consumption of electrical energy (-8.89%) and fuels used by the vehicle fleet, boats, boilers and machinery (-18.5%), or propane (-20%). With regard to photovoltaic production, this year there was a decrease of 36% derived from a fault, already repaired, in the photovoltaic panels of Plaza de la Estrella.

On the other hand, in January 2021, the work to replace the luminaires in Orillamar, Arenal and in Bouzas Ferry terminal was completed, with a total of 584 luminaires and projectors replaced by equipments with Led technology. This, together with the implementation of an intelligent energy management system, is expected to result in a decrease of 750,000 kWh / year, as well as a decrease in the emission of CO₂ to the air of 268 tons per year.

With regard to water consumption, this year the trend of the previous year was maintained, registering only a slight increase of 4% in own consumption and reaching a utilisation ratio of 80%.

Regarding waste management, there was an increase in the recovery of waste such as polystyrene (+ 3%), paper and cardboard (+ 22%), wood (+ 18%) or packaging waste (+18 %) with respect to 2019. It is also worth highlighting the cleaning of marine litter with the support of the sector and the ML Style project.





Port of Vigo



Port Authority of Vigo