Port of Vigo

Port Authority of Vigo

Environmental Report 2021

1 Presentation

Two thousand and twenty-one was a year marked by the difficulties derived from the pandemic in the world economy. Possibly, this last year was more unstable than 2020, because the lack of raw materials, the microchip crisis or energy costs, among others, added to the health situation. However, despite these difficulties, the Port of Vigo achieved good results, by taking on these challenges as an opportunity to come out stronger. In fact, the Port of Vigo was one of the few Ports of General Interest in Spain that grew, both in 2020 and 2021. Within the Blue Growth Plan we presented a second phase (Blue Growth Plan 2021-2027) with a total of 51 projects worth 181 million euros, related to four axes with which we want it to be a strong investment and an inspiring design for the Port of the year 2030, hand in hand with the Port Community, the technology centres and the University. This new Blue Growth Plan is aligned with the Next Generation funds and has three very clear axes: the digitization of all processes; to be a green port with a strong investment in energy transition, in addition to improving biodiversity; and, thirdly, to be an inclusive port centred on people. The projects included in this Blue Growth Plan 2021-2027 are related to environmental improvement and biodiversity, intermodality and the competitiveness of the Port, inclusion and humanization, and digitization and new technologies. An ambitious Plan that aims to design what the port of the future should be like from a blue and green perspective and that can be extrapolated to the whole world. The Port of Vigo has set itself the goal of achieving zero emissions by 2030, with a strong commitment to the electrification of the docks, investment in renewables and the promotion of alternative and clean energies such as Liquefied Natural Gas (LNG) and hydrogen. In this line, we can highlight large projects such as the self-sufficient "Auction Hall 4.0", or the projects to introduce renewables in all the facilities of the Port Authority. Likewise, there are large-scale projects that include the Port Community, such as the "Green Bay Vigo" project for the construction of electric and hybrid boats for traffic in the Ria, port and fishing vessels, which will involve a transformation of the Ría and will give workload to the shipyards; the implementation of hydrogen in local companies and sectors, with associations, companies and technology centres such as Anfaco-Cecopesca, Aclunaga and Ctag; the electrification of the docks, through OPS (Onshore Power Supply) systems to supply electricity to ships; and, at the same time, we are working on several projects with the Israeli company EConcrete and the University of Vigo to make the docks and breakwaters friendlier with the environment and biodiversity and support the capture of CO2 and the fight against climate change. To them, as well as to all the teams from the rest of the institutions and public administrations, whose collaboration and coordination is so necessary, we would like to express our absolute willingness to continue building together in the Port of Vigo, with the aim of placing it and maintaining it as one of the referents of the Atlantic façade.

2

Description of the Port

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.

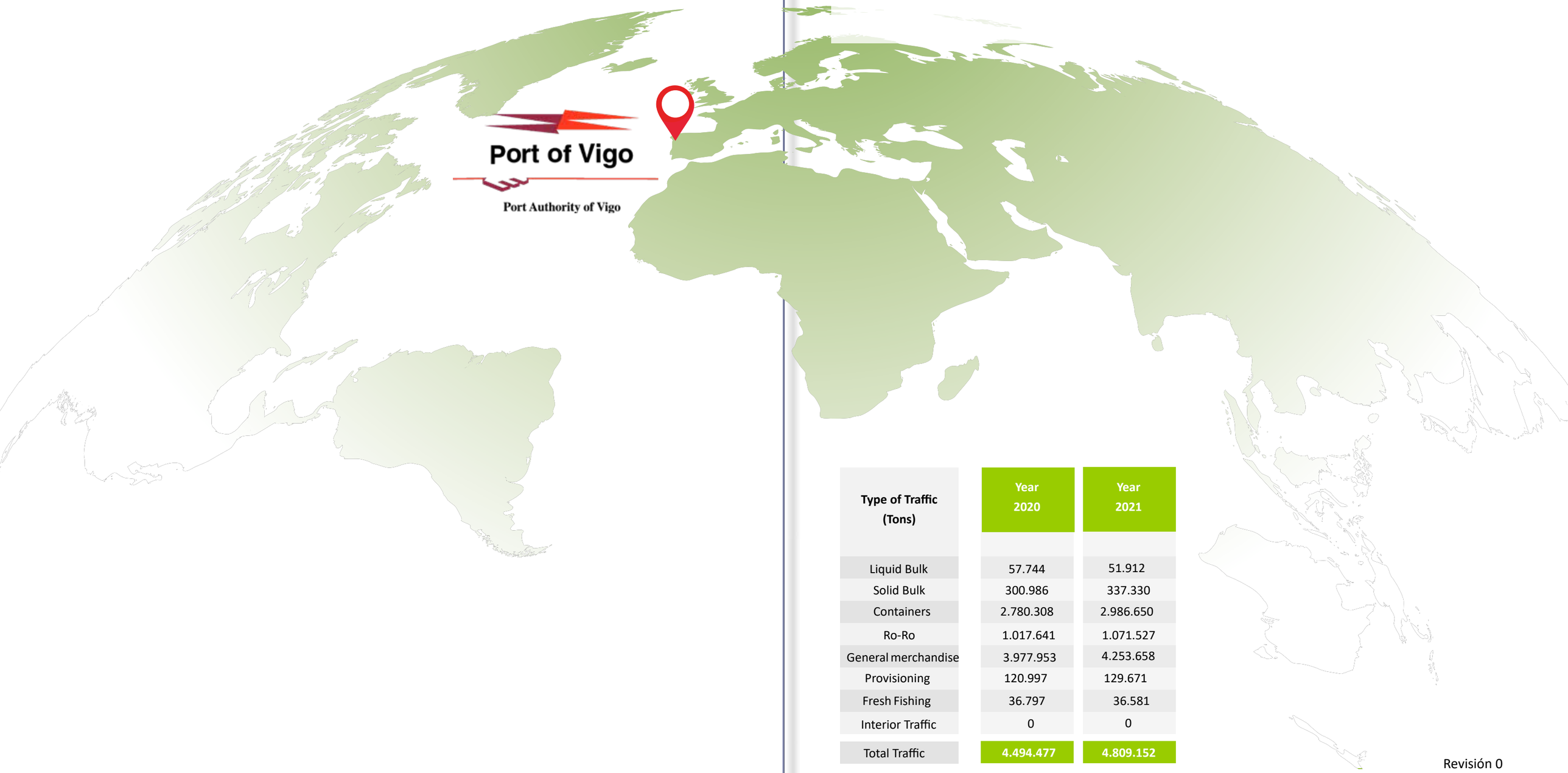
The total traffic of cargo processed in the Port of Vigo throughout 2021 amounted to 4,811,414 tons. 88.44% of this amount corresponds to general merchandise, fundamental axis of the Port of Vigo, and only 7% to solid bulk and 1.07% to liquid bulk.

In 2021, the health emergency situation caused a sharp decline in cruise traffic. Even so, we can already see the recovery compared to 2020, with a growth of 267% in the number of passengers in 2021, this is 34,656 passengers.

We must also highlight Fishing, which as a whole (frozen, salted, fresh and processed or preserved) amounted to 812,432 tons in 2021, 8% more than the previous year.

As for automobile traffic, in 2021 the movement of 503,447 units was registered.

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 Traffic (Tons)	Year 2020	Year 2021
Liquid Bulk	57.744	51.912
Solid Bulk	300.986	337.330
Containers	2.780.308	2.986.650
Ro-Ro	1.017.641	1.071.527
General merchandise	3.977.953	4.253.658
Provisioning	120.997	129.671
Fresh Fishing	36.797	36.581
Interior Traffic	0	0
Total Traffic	**4.494.477**	**4.809.152**

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 [State Ports]; 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):

- Planning of the service area and uses of the port, in coordination with the competent administrations.
- Planning, project, construction, conservation and exploitation of the works and services of the port, and maritime signals entrusted.
- Management of the port public domain and maritime signals.
- Optimisation of economic management and the profitability of the assets and resources assigned.
- Promotion of industrial and commercial activities related to maritime or port traffic.
- Coordination of the operation of different means of transport in the port.
- 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 Castillian 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.

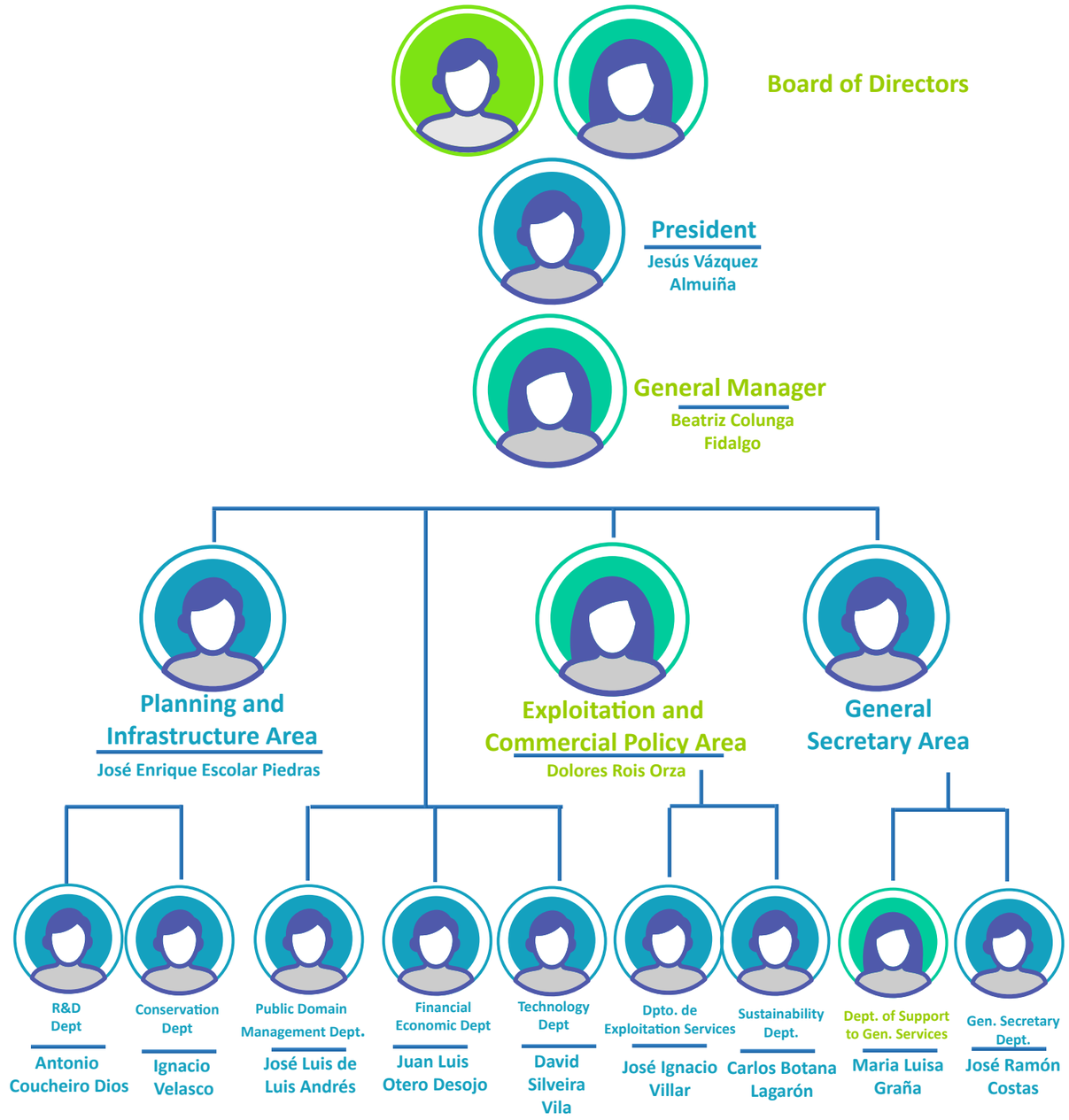
In 2021, the Port Authority of Vigo obtained a turnover of 27.5 million euros.

Port of Vigo

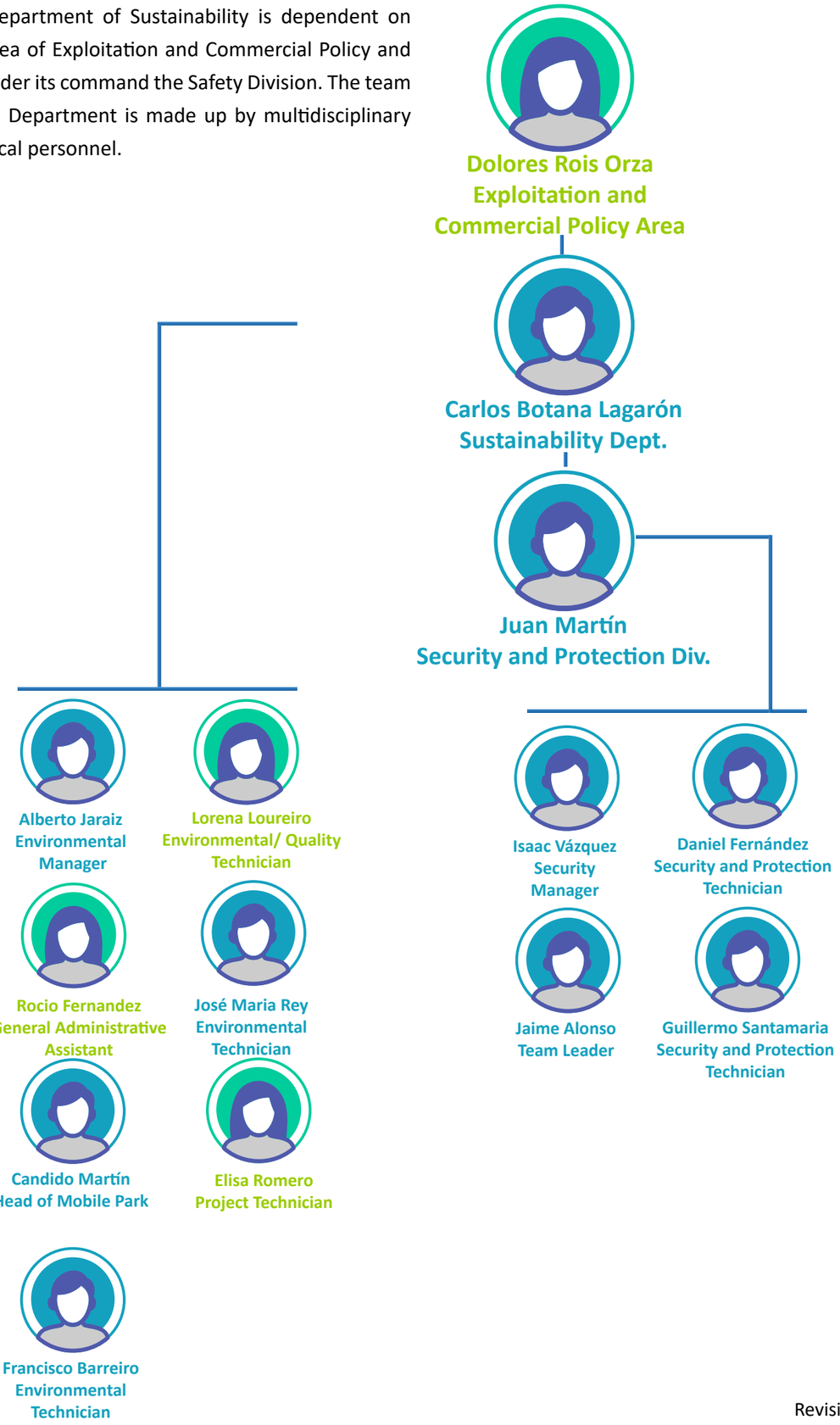
Port Authority of Vigo

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

Integrated Management System

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 protection against fire.
- IS 06 Coordination of activities in concessions and authorisations.
- IS 07 Stay of ships 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

Port of Vigo

Port Authority of Vigo

Revisión 0

3.2 Integrated management policy

Puerto de Vigo
Autoridad Portuaria de Vigo

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

Bureau Veritas Certification

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

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

ENAC CERTIFICACIÓN Nº 04/C-SG029

Bureau Veritas Certification

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:

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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

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

ENAC CERTIFICACIÓN Nº 04/C-SG029

Bureau Veritas Certification

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

ENAC CERTIFICACIÓN
Nº 04/C-SG029

EMAS

CERTIFICADO DE INSCRICIÓN NO REXISTRO
CERTIFICADO DE INSCRIPCIÓN EN EL REGISTRO

O Secretario Xeral de Calidade e Avaliación Ambiental da Consellería de Medio Ambiente, Territorio e Infraestruturas de la Xunta de Galicia certifica que:
El Secretario General de Calidad y Evaluación Ambiental de la Consellería de Medio Ambiente, Territorio e Infraestructuras de la 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) Nº 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) nº 761/2001 e as Decisións 2001/681/CE e 2006/193/CE da Comisión, para as actividades de:
De acuerdo al Reglamento (CE)Nº 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) nº 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

Justo de Benito Basanta

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, debese entregar o presente Certificado no organismo competente.
(*) *La validez del presente Certificado de inscripción en el Registro EMAS está condicionada al mantenimiento de la organización en el citado registro, mediante resolución expresa otorgada por el organismo competente. En caso de cancelación, se debe entregar el presente Certificado ante dicho organismo competente.*

AA/IDSE/ES-GA-000303

XUNTA DE GALICIA

Xacobeo 21-22

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

ASUNTO: **RENOVACIÓN DE LA ADHESIÓN AL SISTEMA DE GESTIÓN Y AUDITORÍA MEDIOAMBIENTAL EMAS**

AUTORIDAD PORTUARIA DE VIGOinscrita en el sistema comunitario de gestión y auditoría medioambiental, con el nº ES-GA-000303 con fecha 06.10.2010, presenta la nueva declaración medioambiental validada por BUREAU VERITAS IBERIA, S.L. dentro del plazo previsto. La citada declaración medioambiental ha sido validada según el Reglamento (CE) n.º 1221/2009 del Parlamento Europeo y del Consejo de fecha 25 de noviembre de 2009, relativo a la participación voluntaria de organizaciones en un sistema comunitario de gestión y auditoría medio ambiental EMAS, modificado según los Reglamentos (UE) 2017/1505 y (UE) 2018/2026.

Tras la verificación de la no existencia de no conformidades con la legislación vigente, esta Dirección General considera renovada la adhesión al sistema de gestión y auditoría medioambiental, procediendo a la actualización del registro.

La citada renovación se ha llevado a cabo según lo indicado en el Reglamento (CE) n. º 1221/2009 del Parlamento Europeo y del Consejo, de fecha 25 de noviembre de 2009, relativo a la participación voluntaria de organizaciones en un sistema comunitario de gestión y auditoría medio ambiental EMAS, y en el Decreto 185/1999, del 17 de junio, por el que se establece el procedimiento para la aplicación en la Comunidad Autónoma gallega, de un sistema voluntario de gestión y auditoría ambiental.

Este documento tiene validez hasta el 16.12.2022, fecha límite para la presentación, por parte de la entidad, de la siguiente declaración ambiental validada, excepto anulación o suspensión temporal.

Santiago de Compostela, en la fecha de la firma electrónica

Manuel Díaz Cano
Jefe de Servicio de Evaluación Ambiental de Proyectos
(firmado electrónicamente)

Asinado por: DIAZ CANO, MANUEL
Cargo: Xefe do Servizo de Avaliación Ambiental de Proxectos
Data e hora: 22/12/2021 14:29:58

CVE: K0se9vA-r1
Verificación: https://sede.xunta.gal/crve

DIRECCIÓN XERAL DE CALIDADE AMBIENTAL, SOSTIBILIDADE E CAMBIO CLIMÁTICO
CONSELLERÍA DE MEDIO AMBIENTE, TERRITORIO E VIVENDA

Edificio Administrativo de San Lázaro
San Lázaro, s/n, 15781 Santiago de Compostela
T. 981 541 705
dxcalidadeambiental.cmot@xunta.gal
www.xunta.gal

3.5 PERS Certificate (Port Environmental Review Sistem)

CERTIFICATE OF VERIFICATION

ECOPORTS
PERS CERTIFIED

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

Port of Vigo
Spain

HAS BEEN REVIEWED BY LLOYD'S REGISTER TO THE FOLLOWING ENVIRONMENTAL MANAGEMENT STANDARD:

Port Environmental Review System (PERS) version 5

THE SYSTEM IS APPLICABLE TO THE:

Activities, products and services of the port authority

Certificate no: 213
Verification date: 10 November 2021
Expiry date: 09 November 2023

ON BEHALF OF ESPO

ON BEHALF OF LRQA

ESPO

LRQA

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

Revisión 0

3.6 Corrective Actions / Non-conformities

In 2021, 3 corrective actions were opened, one of them derived from the poor condition of the Green Point, another derived from the Internal Audit and the last one derived from the External Audit.

The first two were solved in time and the third and last one is currently open, waiting for the solution of a series of deficiencies detected by ACO [Authorized Control Organizations] in various facilities in the Port of Vigo.

4

Environmental Aspects

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 "hazard" 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 extent 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.

Port of Vigo
Port Authority of Vigo

4.1 Direct Environmental Aspects

Activity / Service	Environmental aspects	Significant	Potential associated impact
Cleaning service	Generation of mixed urban solids	Yes	Potential pollution of soil, groundwater/ marine environment and air
	Generation of wood waste	Yes	
	Waste in water layer	Yes	
	Generation of glass waste	Yes	
	Batteries at Green Point	Yes	
	MARPOL waste Annex I	Yes	
	MARPOL waste Annex IV	Yes	
	MARPOL waste Annex V	Yes	
General Port	Electrical energy consumption	Yes	Consumption of natural resources
	Water consumption	Yes	
	Fuel consumption vehicles	Yes	
	Fuel consumption boilers (diesel)	Yes	
	Fuel consumption boilers (propane)	Yes	
	Battery consumption	Si	Potential pollution of soil, groundwater/ marine environment and air
	Generation of battery waste	Yes	
	Generation of empty contaminated packaging	Yes	
	Generation of EEEW	Yes	
	Generation of aerosol waste	Yes	
	Generation of noise	Yes	
	Discharge of sewage	Yes	
Lighthouses	Water consumption	Yes	Consumption of natural resources
	Electrical energy consumption	Yes	
	Discharge of sewage	Yes	Potential pollution of soil, groundwater/ marine environment and air

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

Cleaning Service Activity

Generation of mixed urban solids, wood waste, waste in water layer, glass, batteries at green points and MARPOL waste: There is an increase in the management of these wastes due to the increase in activity in 2021.

General Port Activity

- Consumption of water, energy, fuel and batteries: There is an increase in consumption due to the gradual return to normality after the pandemic and therefore the values obtained are higher than the average of the last two years.
- 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, as well as due to the greater sensitivity of the public.
- Generation of battery, contaminated packaging, EEEW and aerosol waste: This year there was an increase in the management of this waste due to a greater activity in the PAV workshop.
- Discharge of sewage: Derived from the increased consumption of water.

Lighthouses Activity

- Consumption of water and energy: Derived from the return to normality after the pandemic period.
- Discharge of sewage: Derived from the increased consumption of water.

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
Water and energy supply	Water consumption	Yes	Consumption of natural resources
Refrigerators	Water consumption	Yes	Consumption of natural resources
	Fuel consumption	Yes	
	Electrical energy consumption	Yes	
	Natural gas consumption	Yes	
	Discharge of sewage	Yes	
	Generation of hazardous waste	Si	
	Generation of non-hazardous waste	Yes	
MARPOL Service	Fuel-Oil/ Gasoil consumption	Yes	Consumption of natural resources
	Generación de residuos no peligrosos	Si	Generation of non-hazardous waste
Organic waste management	Water consumption	Yes	Consumption of natural resources
	Electrical energy consumption	Yes	
	Fuel consumption	Yes	
	Discharge of sewage	Yes	Potential pollution of soil and groundwater / marine environment
Fuel supply	Generation of hazardous waste	Yes	Potential pollution of soil and groundwater / marine environment
	Generation of non-hazardous waste	Yes	
	Discharge of sewage	Yes	
Container Terminal	Water consumption	Yes	Consumption of natural resources
	Electrical energy consumption	Yes	
	Generation of hazardous waste	Yes	Potential pollution of soil and groundwater / marine environment
	Discharge of sewage	Yes	
Pest control	Electrical energy consumption	Yes	Consumption of natural resources
	Fuel consumption	Yes	
Maintenance	Electrical energy consumption	Yes	Consumption of natural resources
	Fuel consumption	Yes	
	Generation of waste assimilable to urban waste	Yes	
Fight against pollution	Water consumption	Yes	Consumption of natural resources
	Discharge of sewage	Yes	Potential pollution of soil and groundwater / marine environment

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
Cycling path	Generation of non-hazardous waste	yes	Potential pollution of soil, groundwater / marine environment and air.
	Generation of construction and demolition waste	yes	
Bouzas walk conditioning	Generation of non-hazardous waste	yes	**Potential pollution of soil, groundwater / marine environment and air.**
	Generation of construction and demolition waste	yes	

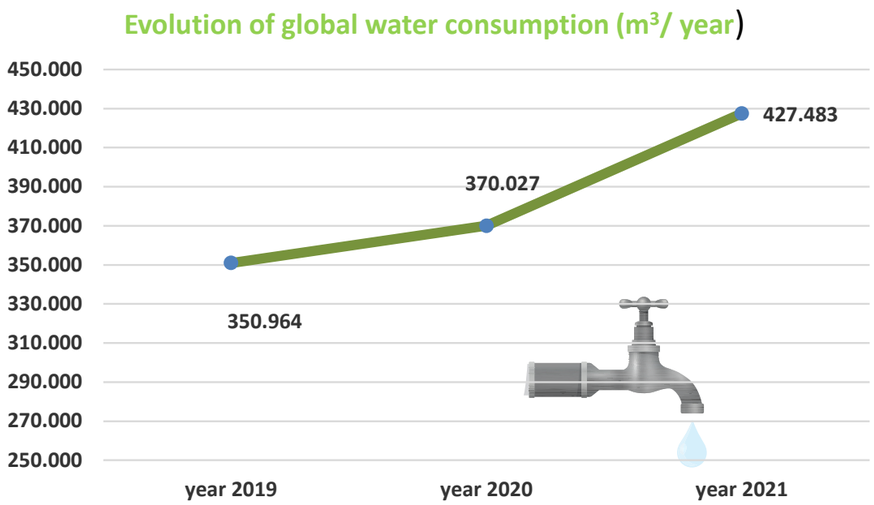
5

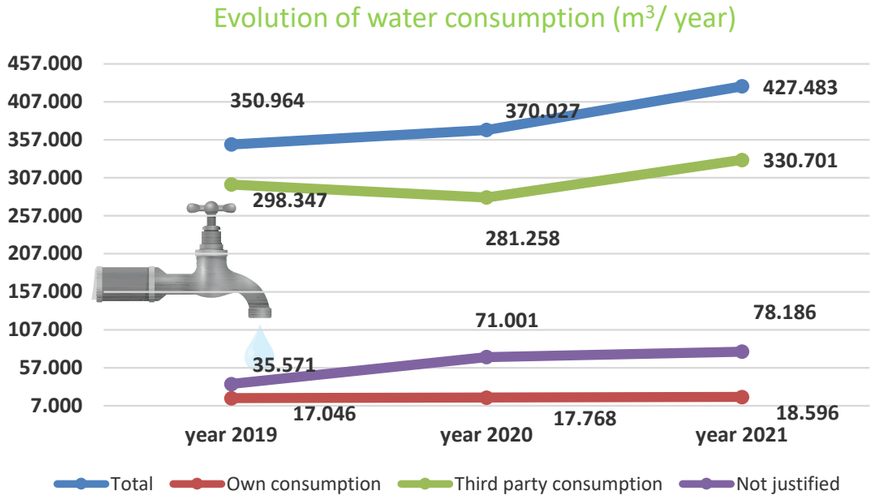
Eco-efficiency or Environmental Performance

5.1 Consumption of Resources

Water Consumption

In 2021, there was an increase of 13% in global water consumption, mainly due to higher user consumption. The ratios of own consumption and losses remain stable, reaching a percentage of use of water of 81%, 1% higher than that achieved in the previous year and which qualifies the supply network of the Port of Vigo, with a length of around 32 km, as a network with hydraulic performance rated as "very good".

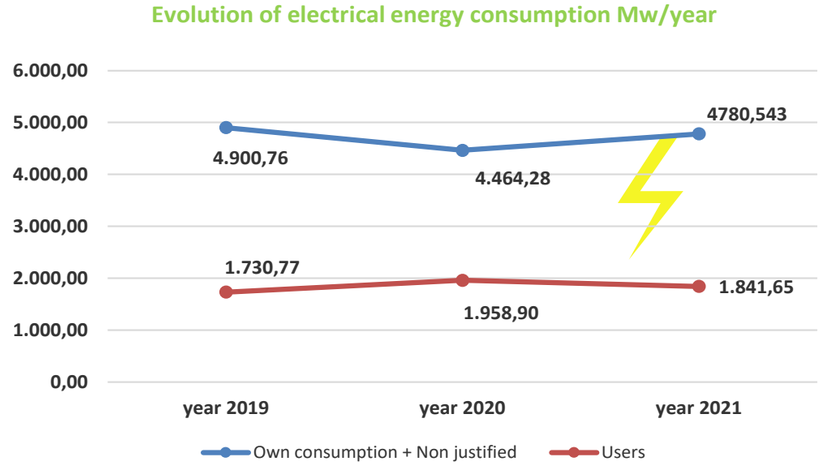




Electrical energy consumption

In 2021, there was an increase of 7% in own consumption compared to 2020, derived from greater activity compared to the previous year, influenced by the health emergency. By 2022, a notable reduction is expected, as a result of the implementation of the energy efficiency systems associated with Auction Hall 4.0 project.

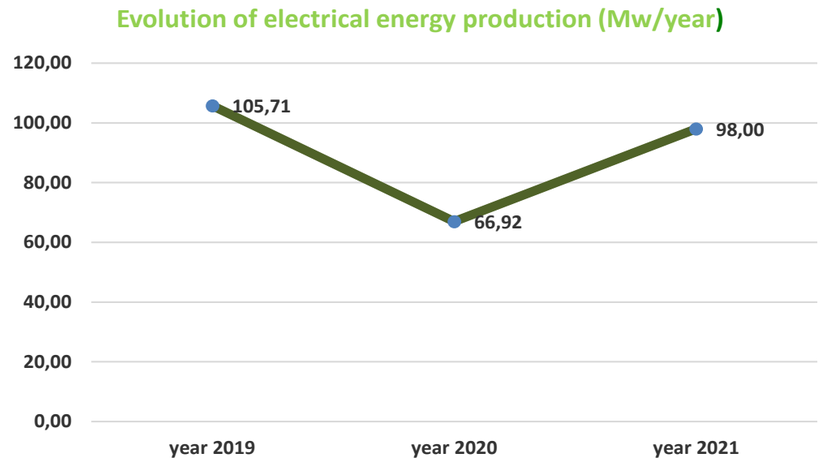
On the other hand, the consumption of third parties suffered a decrease of 6% compared to the previous year.



With regard to the production of electrical energy, in 2021 there was an increase of 46%, returning to the usual ratios in terms of production.

For the next year, a notable increase in production is expected as a result of the implementation of the energy efficiency systems of Auction Hall 4.0 project.

Finally, it is necessary to point out that an energy production ratio of 2% was achieved with respect to the total consumed, part of this energy going to the network (79.78 MW) and another small part (18 MW) being used for self-consumption



Fuel Consumption

The performance 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, vessels, boilers and various machinery.

Consumption of vehicles

In 2021, there was an increase of 7.16% in the fuel consumption of vehicles, derived from a slight increase in the km covered.

Consumption of machinery

The fuel consumption of machinery registered a decrease of 64.95%, consumption that depends on the conservation activity, which has been highly variable over the years.

Fuel consumption of vessels

As for the fuel consumption of port vessels, in 2021 there was an increase of 17.97%, due to the gradual return to normality of the service after the worst moments of the health emergency.

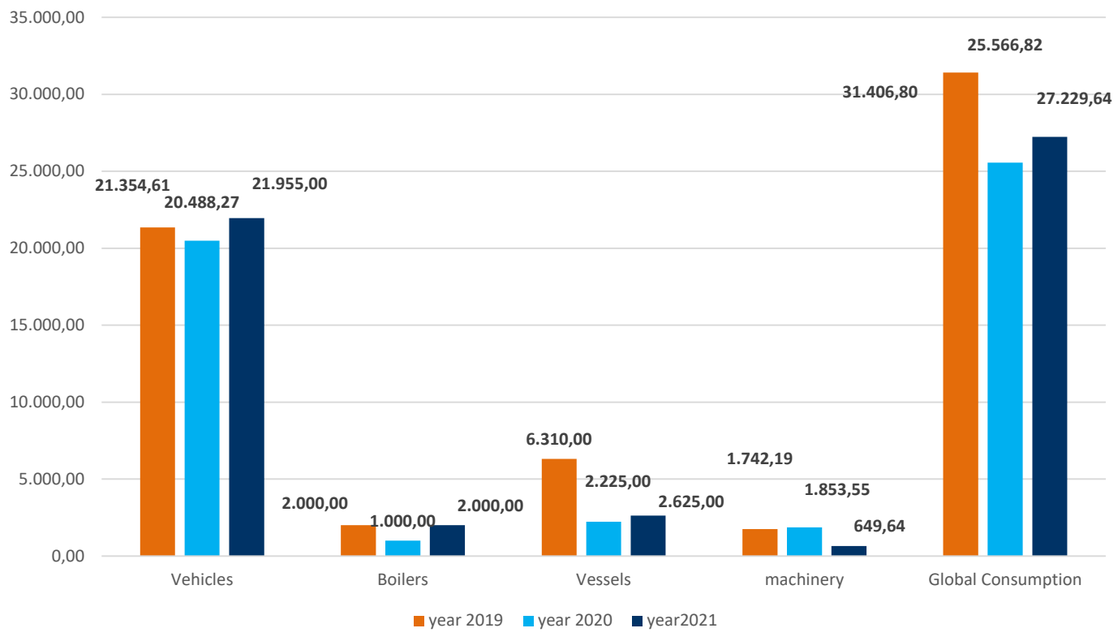
Consumption of boilers

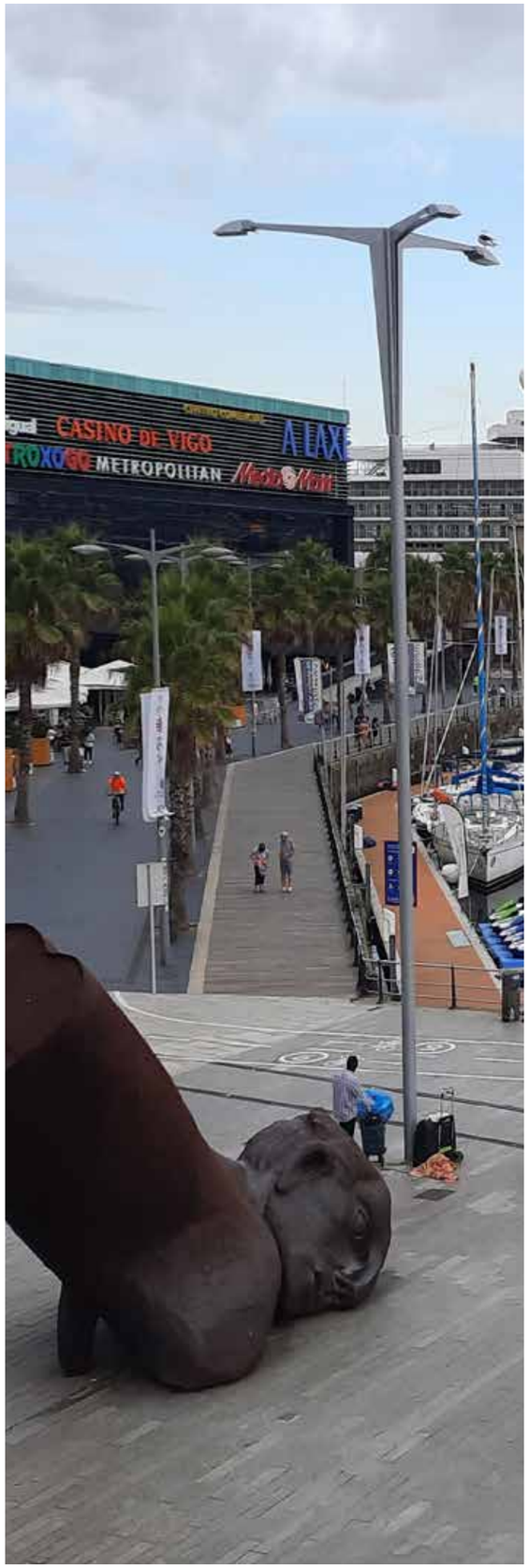
Regarding the consumption of diesel in boilers, there was an increase of 50%. This consumption depends directly on the purchase of fuel every year.

Global diesel and gasoline consumption

The global consumption of fuels (Diesel and Gasoline) for 2021 registered an increase of 6.5%, still well below that consumed in 2019.

Diesel and gasoline consumption (litres/ year)

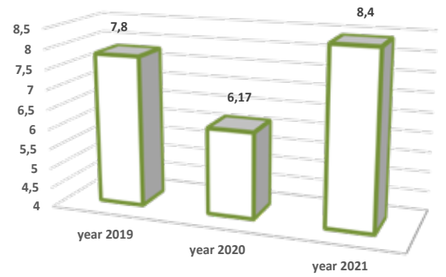




Propane consumption

Propane consumption registered an increase of 36.14%. This value depends directly on fuel purchases every year.

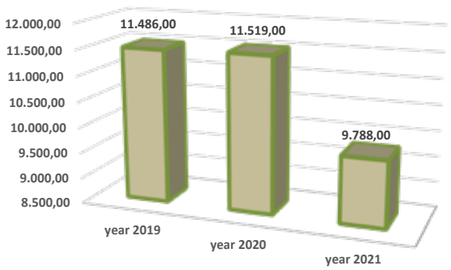
Evolution of propane consumption (Tn/ year)



Natural gas consumption

Natural gas consumption registered a decrease of 15.02% compared to the previous year, an issue that directly depends on the weather of the year in question.

Evolution of natural gas consumption (m^3/ year)



Other consumption and purchases

In 2021, the following materials were acquired:

Materials	year 2019	year 2020	year 2021
batteries (Units)	211	135	233
rechargables batteries (units)	0	2	0
Paper (Tn)	2,7	1,8	1,7

In 2021 there was a decrease of 5.10% in the consumption of sheets.

For 2022, an even more salient reduction is expected since "Gestiona" [“Manage”] process digitization platform will be launched. On the other hand, there was an increase of 170% 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 ufc100 ml**
Total Hydrocarbons	**15 mg/l**
pH	**7-9**

A Laxe	2020	2021
Total Coliforms (ufc/100 ml)	0	0
Faecal Coliforms Tot (mg/l)	0	0
Total Hydrocarbons (mg/l)	<0,50	<0,5
Suspended solids (mg/l)	6,2	<5
Sedimentable solids (ml/l)	<0,1	<0,1
pH	7	7,9
Turbidity (unf)	4,45	0,33
Dissolved oxygen (%O2)	4,75	4,7
Phosphates (mg/l)	<0,23	<0,23
Chlorophyll (µg/l)	<10	<10
Kjeldahl Nitrogen (mg/l)	47,75	31,61
Total organic carbon (mg/l)	0,5	<0,5

Fishing Port	2020	2021
Total Coliforms (ufc/100 ml)	0	0
Faecal Coliforms Tot (mg/l)	0	0
Total Hydrocarbons (mg/l)	<0,50	<0,50
Suspended solids (mg/l)	13,6	<5
Sedimentable solids (ml/l)	<0,1	0,1
pH	8	7,8
Turbidity (unf)	3,25	0,41
Dissolved oxygen (%O2)	4,8	4,6
Phosphates (mg/l)	<0,23	0,23
Chlorophyll (µg/l)	<10	<10
Kjeldahl Nitrogen (mg/l)	27,44	<5
Total organic carbon (mg/l)	<0,50	<0,5

Orillamar	2020	2021
Total Coliforms (ufc/100 ml)	0	5
Faecal Coliforms Tot (mg/l)	0	0
Total Hydrocarbons (mg/l)	<0,50	<0,50
Suspended solids (mg/l)	19	<5
Sedimentable solids (ml/l)	<0,1	<0,1
pH	8	7,9
Turbidity (unf)	4,22	2,22
Dissolved oxygen (%O2)	4,26	4,8
Phosphates (mg/l)	<0,23	<0,23
Chlorophyll (µg/l)	<10	<10
Kjeldahl Nitrogen (mg/l)	18,6	189,53
Total organic carbon (mg/l)	<0,50	<0,50

Guixar	2020	2021
Total Coliforms (ufc/100 ml)	0	0
Faecal Coliforms Tot (mg/l)	0	0
Total Hydrocarbons (mg/l)	<0,5	<0,5
Suspended solids (mg/l)	23	<5
Sedimentable solids (ml/l)	<0,1	<0,1
pH	7,8	7,9
Turbidity (unf)	0,52	0,4
Dissolved oxygen (%O2)	5,32	5,01
Phosphates (mg/l)	<0,1	0,23
Chlorophyll (µg/l)	<1	<10
Kjeldahl Nitrogen (mg/l)	24,45	112,73
Total organic carbon (mg/l)	<0,50	<0,50

Bouzas	2020	2021
Total Coliforms (ufc/100 ml)	0	0
Faecal Coliforms Tot (mg/l)	0	0
Total Hydrocarbons (mg/l)	<0,50	<0,50
Suspended solids (mg/l)	6,1	<5
Sedimentable solids (ml/l)	<0,1	<0,1
pH	8	7,9
Turbidity (unf)	1,28	0,83
Dissolved oxygen (%O2)	4,46	4,84
Phosphates (mg/l)	<0,23	<0,23
Chlorophyll (µg/l)	<10	<10
Kjeldahl Nitrogen (mg/l)	31,44	45,92
Total organic carbon (mg/l)	<0,50	<0,5

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 2021, 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.

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 on January 27, 2020.

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.

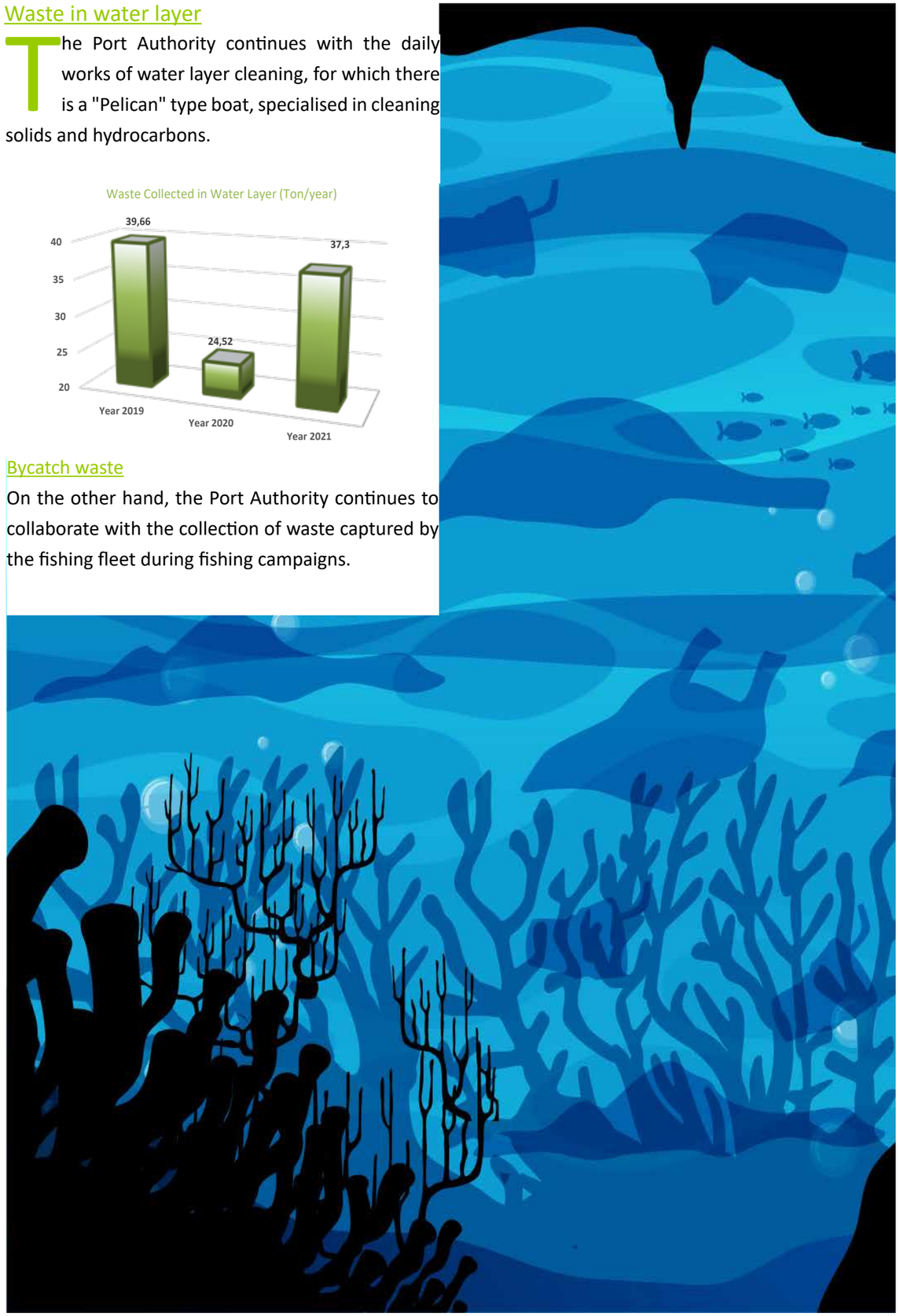
Companies with IMP according to RD 1695/2012 (Interior Maritime Plan)	
MARPOLGAL	Frialia
Astilleros Armada	Marina a Lagoa
Astilleros Metalships	TERMAVI
Aucosa	Rodman
Elnosa	Frigoríficos del Morrazo
Toysal	Montajes Cancelas
Atolvic Morrazo	Leibar del Naval
Astilleros Armon	Astilleros Freire
Astilleros Cardama	Pescanova

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.

Bycatch waste

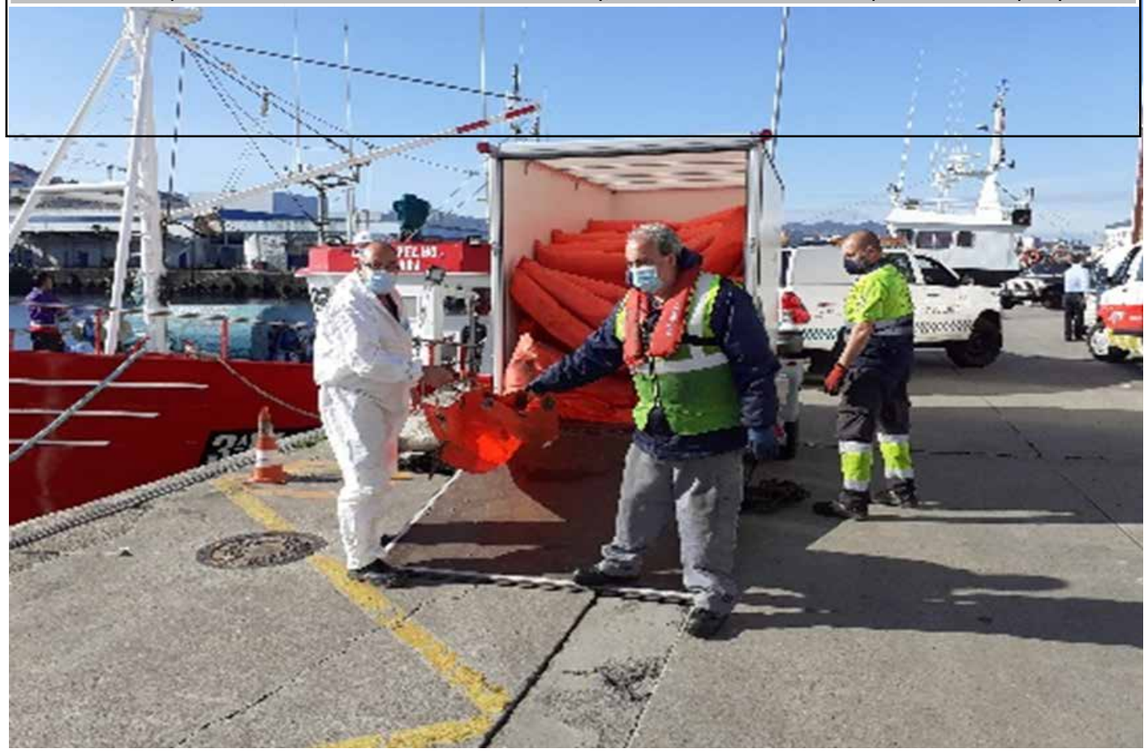
On the other hand, the Port Authority continues to collaborate with the collection of waste captured by the fishing fleet during fishing campaigns.



Exercise for the Fight against level I pollution

On April 14, the Port Authority of Vigo carried out a simulation of its Internal Maritime Plan. The exercise consisted in simulating an accidental spill during supply operations to a ship through the fixed intake that the company Cepsa has on dock 4 of the Vigo Fishing Port.

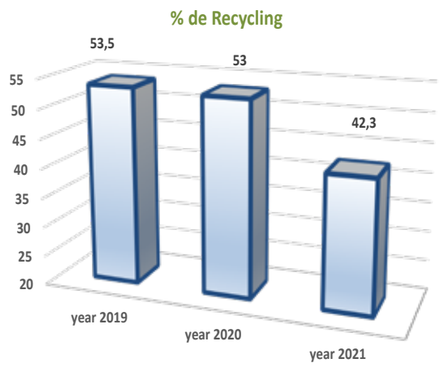
DATA REGARDING THE EMERGENCY	
Causes	Spill of diesel into the sea from a ship during supply operations by fixed intake.
Emergency level	LEVEL 1
Response time	15 MINUTES
Start time	09:15 AM
End time	10:30 AM
Duration of the emergency	1.15 HOURS
Product	MARINE DIESEL
ASSESSMENT	
Content with means belonging to the supplying company, the Port Authority and the pollution control company, coordinated by technicians from the sustainability department	
Response level	OK
Response time of PAV	OK
Response time of contracted company	OK
OBSERVATIONS	
Good response from the staff of the Port Authority, as well as from the anti-pollution company.	



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 wood (+137%), glass (+722%) and scrap (+115%). However, due to a change in the management of organic waste, the total percentage of recycled waste is still significantly low with respect to previous years.

Waste and by-products (Tn)	year 2019	year 2020	year 2021
Polystyrene	31,28	32,24	29,36
Paper and cardboard	38,65	49,37	38,19
Wood	134,26	164,53	225,98
Plastic	256,96	228,46	212,44
Packaging	56,44	63,33	63,14
Nets	71,34	18,84	13,3
Scrap	5,32	4,56	8,9
Glass	4,86	1	7,22
Tyres	6,62	0	0
Segregated organic waste	454,16	430,76	111,53
Total recycled waste and by-products	**1.055,68**	**993,0619**	**710,063**
Total not recycled solid urban waste	**915,18**	**865,56**	**964,64**
% recycled waste and by-products	**53,5**	**53**	**42,3**



Other Waste

In addition to this waste, others are also collected, such as sludge from sewage systems and non-hazardous EEEW from offices.

Other Non-hazardous Waste	year 2019	year 2020	year 2021
Sludge from the sewage system (m3)	10,48	7,92	3
Non-hazardous EEEW (Tn)	1,84	0,3	0,3

Hazardous waste

The Port Authority is registered as a small producer of hazardous waste with 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.

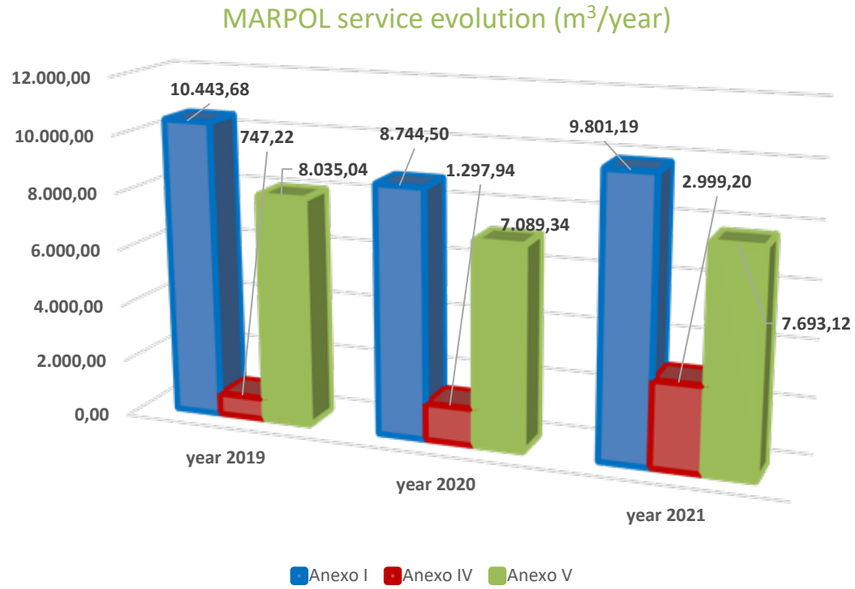
Hazardous waste (Kg)		
year 2019	year 2020	year 2021
783,62	929,86	117

During this year, empty containers, batteries and aerosols were managed.

MARPOL waste

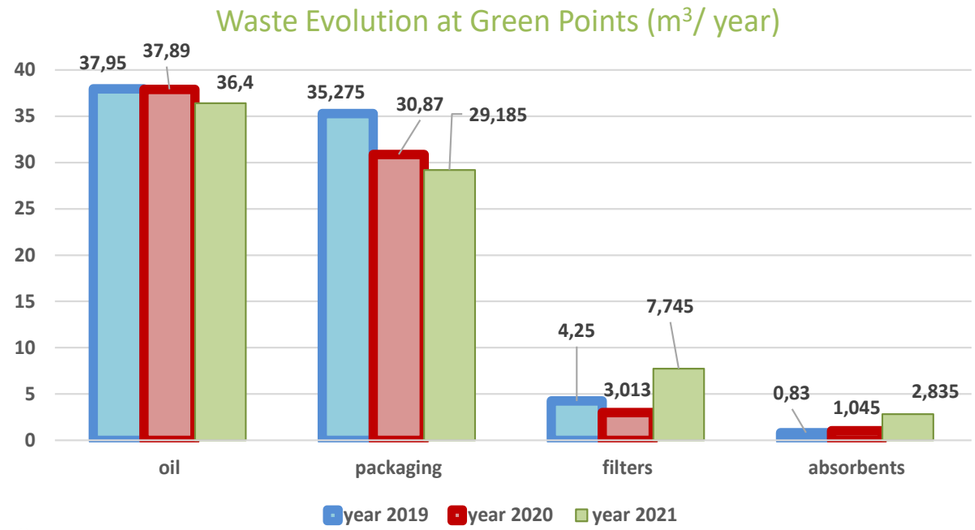
The service for receiving waste from ships (MARPOL) is regulated through the "Plan for the reception and handling of waste generated by ships", whose last revision was approved on November 29, 2019.

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 2019.



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 2021, 4.445 kg of batteries were also collected at the green point, 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.

Monitoring campaign in collaboration with Xunta de Galicia

The Port Authority of Vigo, with the collaboration of Secretaría Xeral de Calidade e Avaliación Ambiental de la Conselleria de Medioambiente [the General Secretariat for Quality and Environmental Assessment of the Department of Environment], has carried out a new campaign to monitor the quality of the air in the port area with the help of a mobile unit that has carried out Sampling in the port area.

This mobile unit is provided with various equipment that enables the absorption of the surrounding air, allowing continuous analysis and data collection every 10 minutes and the following parameters: Carbon Monoxide, Sulfur Dioxide, Nitrogen Oxides, Ozone, Suspended Particles, Benzene, Toluene and Xylene through sophisticated gas chromatography equipment and a particle collector for subsequent analysis. In addition to these automatic methods, it also has capture methods for the subsequent measurement in the laboratory of heavy metals and polycyclic aromatic hydrocarbons (PAHs) in ambient air.

BOUZAS AREA				
PARAMETER	DATA ANALYZED	Nº	V.REF	NOT COMPLY
CO	ABOVE 10 MG/M³ PER EIGHTH HOURS	0.00	0	No
CO	AVERAGE MG/M³	0,1	--	--
NO	AVERAGE UG/M³	6,2	--	--
NO2	ABOVE 200 UG/M³ IN ONE HOUR	0	18	No
NO2	AVERAGE UG/M³	17	40	No
NO2	NUMBER OF ALERTS OF 400 UG/M³ PER 3 CONSECUTIVE HOURS	0	0	No
NOX	AVERAGE UG/M³	27	--	--
O3	ABOVE 120 UG/M³ PER EIGHTH HOURS	0	25	No
O3	INFORMATION ABOVE 180 UG/M³ IN ONE HOUR	0	1	No
O3	ALERT ABOVE 240 UG/M³ IN ONE HOUR	0	1	No
O3	AVERAGE UG/M³	41	--	--
PM10	ABOVE 50 UG/M	0	35	No
PM10	AVERAGE UG/M³	15	40	No
PM25	AVERAGE UG/M³	5,1	10	No
SO2	ABOVE 350 UG/M³ IN ONE HOUR	0	24	No
SO2	ABOVE 125 UG/M³ IN ONE DAY	0	3	No
SO2	NUMBER OF TIMES THE ALERT THRESHOLD WAS EXCEEDED 500 UG/M³ PER 3 CONSECUTIVE HOURS	0	1	No
SO2	AVERAGE UG/M³	2,2	--	--

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	Final Guixar Dock	56,77	61,20	63,17
2	Guixar Dock	64,47	67,23	71,77
3	Arenal Dock	65,73	64,60	63,13
4	Transversal Dock	69,83	64,70	56,60
5	Arenal Roundabout	63,60	64,10	56,37
6	Transatlantic Dock	55,47	56,60	48,63
7	Auction Hall	59,67	59,23	55,53
8	Green Point	62,53	60,50	61,27
9	Calle Coruña Roundabout	65,93	60,57	57,70
10	Armada Shipyard	73,67	71,60	67,40
11	Orillamar Road	67,80	62,33	59,00
12	Repair dock	59,90	61,07	51,57
13	Zona Franca	49,60	57,37	44,07
14	Eduardo Cabello Breakwater	63,90	61,57	61,57

DB: Decibels

Limits are occasionally exceeded at night in:

- Guixar Dock: 3 vessels during container loading and unloading operations.
- Orillamar Road: Heavy traffic during measurements

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

On January 26, 2022, the Port Authority of Vigo obtained the registration of the carbon footprint for scopes 1 and 2 in relation to year 2020, for the activities related to service management and the use of the port public domain carried out in the buildings and facilities of the Port of Vigo and maritime signals.

This recognition is granted by the Ministry of Ecological Transition and Demographic Challenge after the registration procedures carried out by the Port Authority of Vigo for the registration of the carbon footprint and which implies a commitment to reduce greenhouse gas emissions.

The registration of the carbon footprint shows the commitment to sustainability of the Port Authority of Vigo in recent years, achieving a 48% reduction in greenhouse gas emissions in the 2018-2020 triennium with respect to triennium 2017-2019.

The initiatives that gave rise to this important reduction consist in the execution of various energy efficiency projects such as the installation of photovoltaic panels in the main headquarters of the Port Authority of Vigo, in Plaza de la Estrella, or the "Auction Hall 4.0" project in execution that will provide the Fishing Port facilities with a new photovoltaic energy installation, among other energy saving systems, which will mean, in addition to significant economic savings, a significant reduction in the emission of greenhouse gases, as well as the provision of various hybrid and pure electric vehicles for the service fleet, or the exclusive purchase of energy from 100% renewable sources for all the facilities of the Port.

This new recognition joins those already held by the Port Authority of Vigo, such as ISO 14001 environmental management certification, the EMAS registry, or PERS (Port Environmental Review System) certification, positioning the Port of Vigo at the head of the Port Authorities of greatest concern and environmental initiatives of the entire state port system, as well as in the Ecoports network of European ports.

The data obtained these last years are the following:

	2017	2018	2019	2020	2021
Scope 1 (Tons)	162,45	140,03	152,64	108,20	116,51
Scope 2 (Tons)	1.332,02	1.130,31	0,00	0,00	0,00
Scope 1 +2 (Tons)	1.494,47	1.270,34	152,64	108,20	116,51
% Footprint reduction compared to 2017	0,00%	15,00%	89,79%	92,76%	92,20%

Scope 1 Emissions, also known as Direct Emissions:

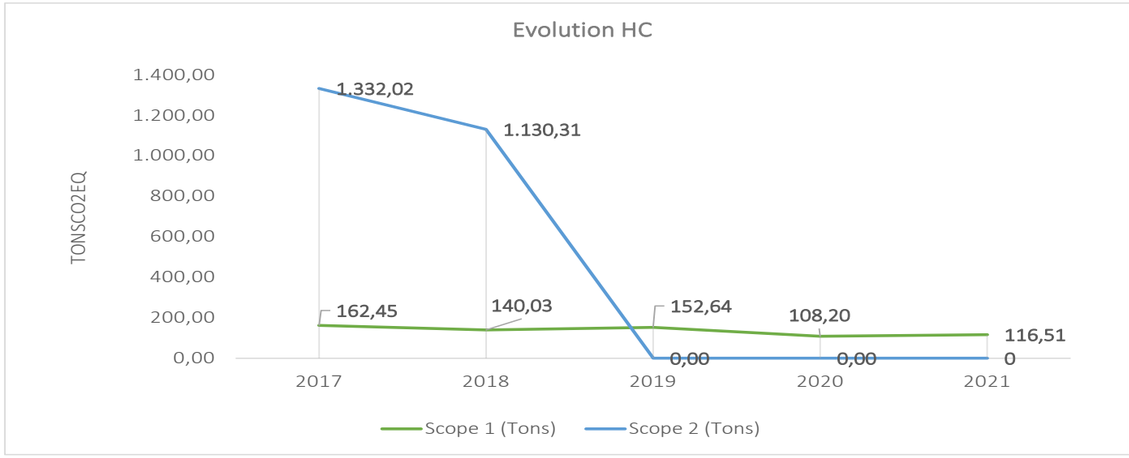
They are greenhouse gases emitted directly by the organisation, for example by the use of fossil fuels in machinery or vehicles owned by the organisation, by refrigerant gases leaks, or by chemical reactions during the production processes of the organisation.

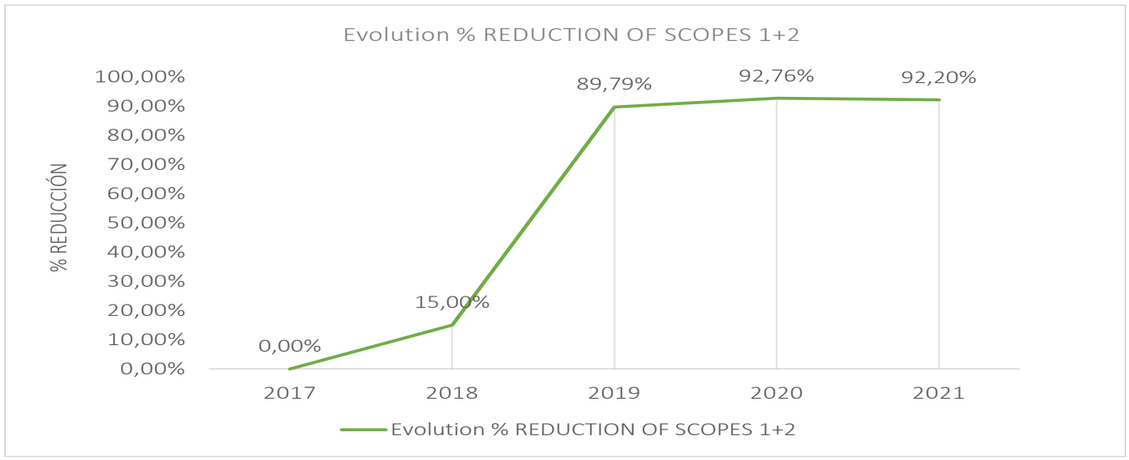
Scope 2 Emissions or Indirect Emissions from Energy:

These are greenhouse gases emitted by the producer of the energy needed 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 2021 the carbon footprint decreased by 92.20% in scopes 1 and 2, mainly due to the purchase of electrical energy coming 100% from renewable sources, which implies a factor of conversion equal to 0, leading to a drastic reduction in the carbon footprint.





6

Environmental Communication

6.1 Training and awareness

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

In 2021, there were a total of 49 courses with 4,048 teaching hours, attended by 178 students.

The subjects taught ranged 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

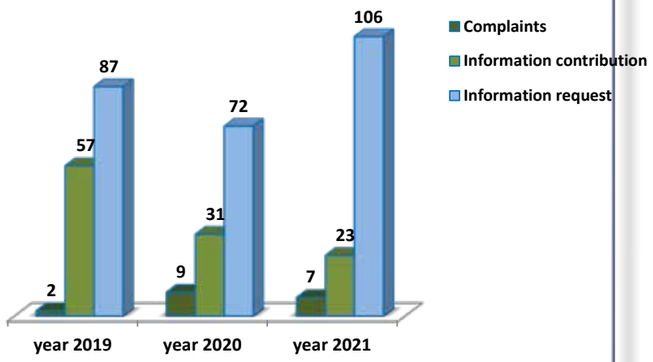
The Customer Service of the Port Authority deals with requests for information, suggestions, complaints or claims.

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 2021 a total of 136 were collected, most of them to request information.

In 2021 there were 7 complaints, one of them due to suspended cement dust and the remaining 6 due to the noise derived from the port operations of concessions and authorizations.



Port of Vigo

Port Authority of Vigo

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.

Here are some examples of relationships of the Port Authority of Vigo 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 estudio 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: Conselleria do Mar, Consellería de Medioambiente, Parques Nacionales das IIIas Atlánticas, INEGA; at national level, with institutions in Galicia: Capitanía Marítima (Maritime Captaincy), 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)

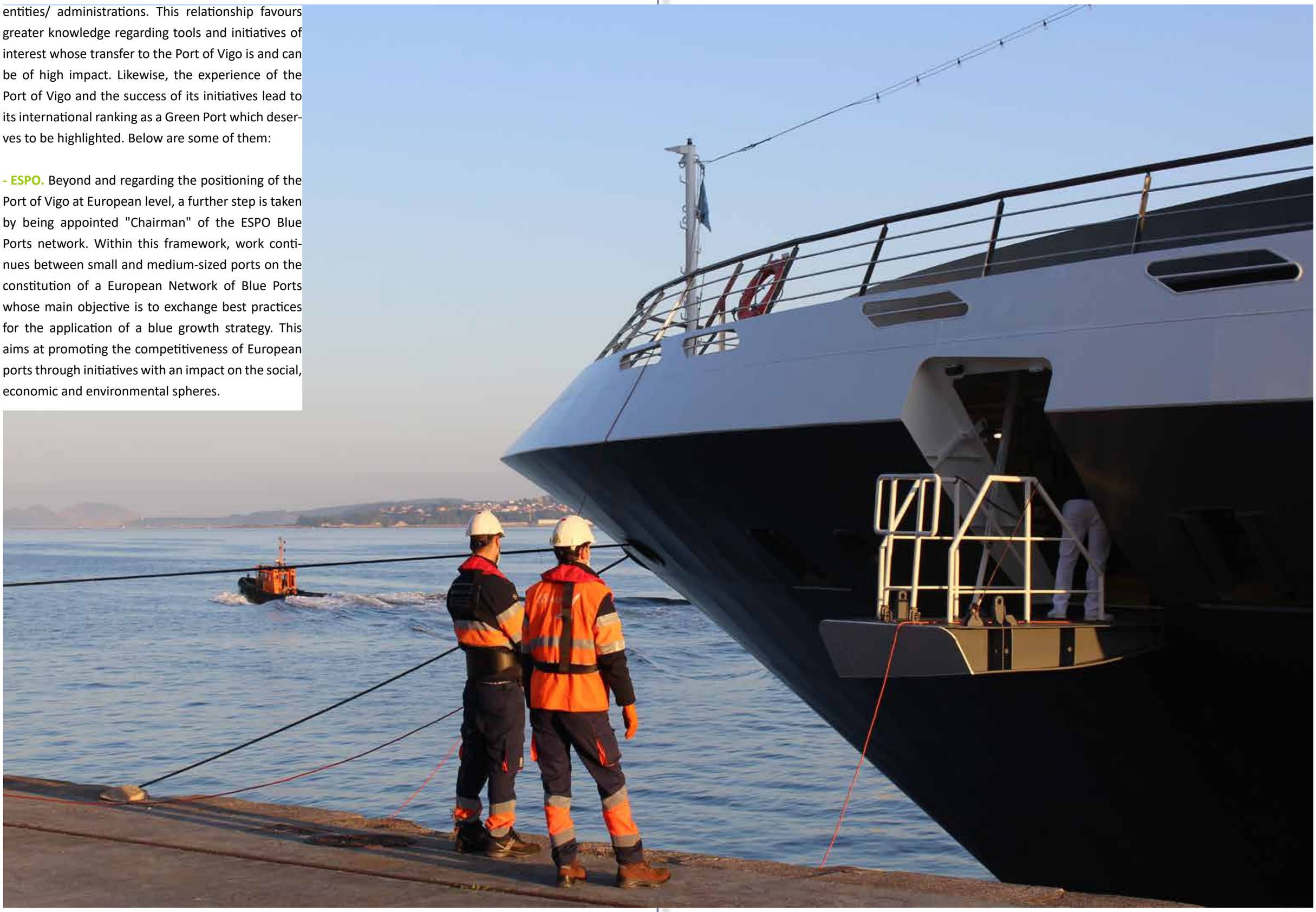
Business sector

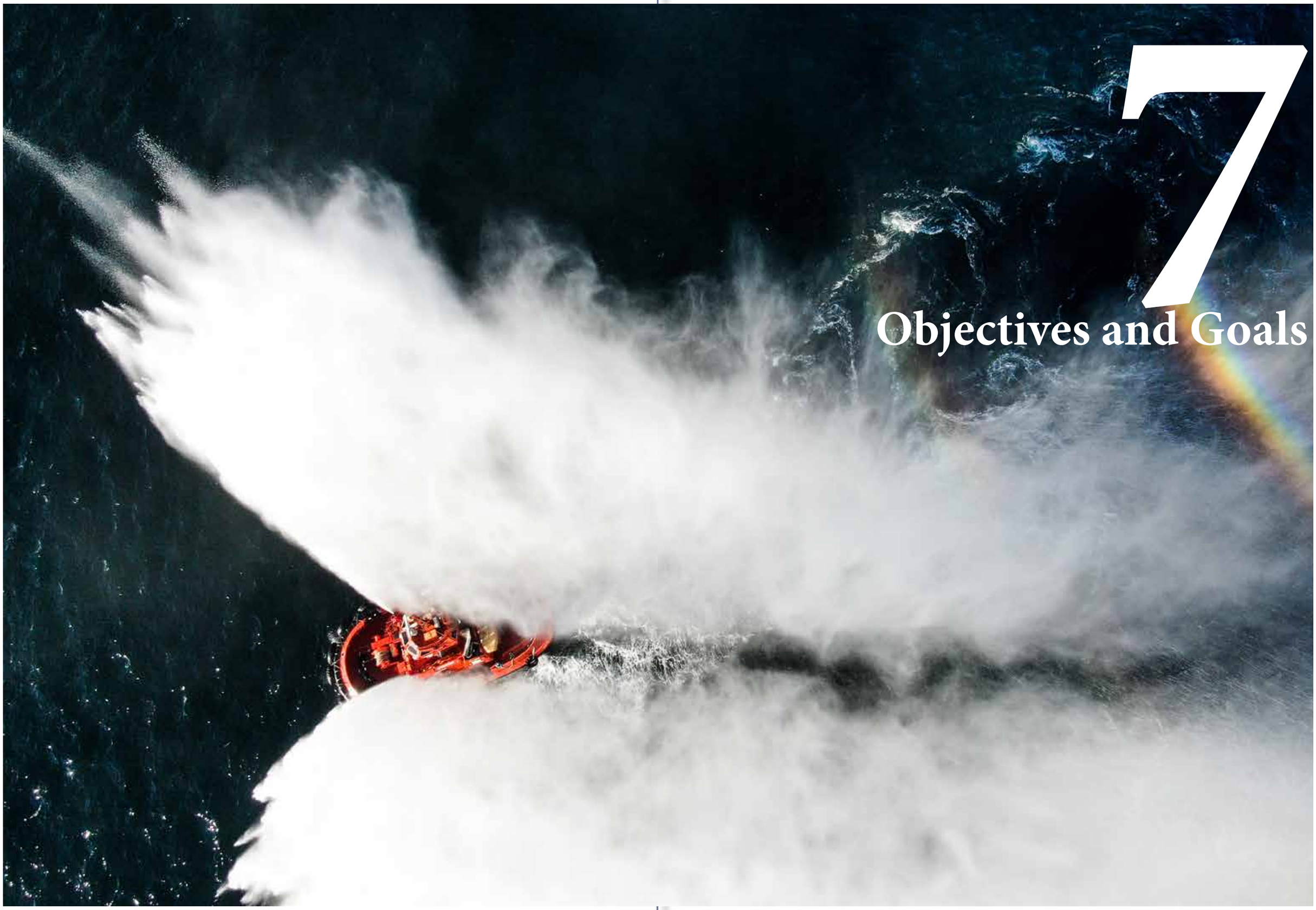
The role of the business sector in the environmental management is fundamental beyond compliance with regulations. This refers to collaboration with the business sector, through individual companies and/ or business organisations, which promotes the implementation of joint initiatives and projects with 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 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:

- ESPO. Beyond and regarding the positioning of 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.





7 Objectives and Goals

7. Objectives and Goals

7.1 Objectives 2021

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, the goal continues in 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	No, delay in the works, the goal is set for 2022
	Tender and Execution of works	
Monitoring of the Blue Growth Plan	Compliance with Indicators	Yes, the goal continues in 2022
	Blue Growth projects	
Training and awareness regarding the environment	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 state and the port activities.	Yes, this goal is considered fulfilled
	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.	

7.2 Fulfilment assessment

Objetivo 1, Puerto Verde/Compromiso Our Ocean 2014-2022:

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

Goal 1, Turn the Port of Vigo into a Green Port benchmark in southern Europe (reduction of 30% 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 2021. The Port Authority has achieved a reduction of 85% in emissions since 2016, 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 ended in 2021 with good results and conclusions.

Goal 3, Monitoring of energy efficiency projects: Auction Hall 4.0 project is already in the execution phase, with completion forecast in 2022.

Goal 4, Monitoring of Greening projects: The "Puertalmar" project began in 2021: During the project, various structures were installed to facilitate the restoration of coastal areas affected by port infrastructure, which were monitored during the 12-month duration of the project. The result was the fixation of organisms of more than 187 species, which represented a capture of CO2 greater than 6 Kg per square meter.

During 2021, the 30% emission reduction milestone is widely exceeded. The objective continues in 2022, when it is expected to achieve more than 3% energy self-sufficiency. For all these reasons, it is considered that the objective is progressing adequately so as to be completely fulfilled 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 Demain Obras y Servicios Frimarte UTE [Temporary Union of Companies].

Delays in the execution of the works result in the temporary extension of this objective until 2022.

Objective 3, Monitoring of the Blue Growth Plan

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

Goal 2, Review and monitoring of the Blue Growth Plan projects and working groups: In 2021 the working groups held their regular meetings. The following meeting were held in March:

- Shipbuilding:
- Merchandise and maritime transport
- Biotechnology and blue energy
- History and Training
- Cruise tourism
- Fresh and Frozen Fish

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

This objective continues for 2022.

Port of Vigo

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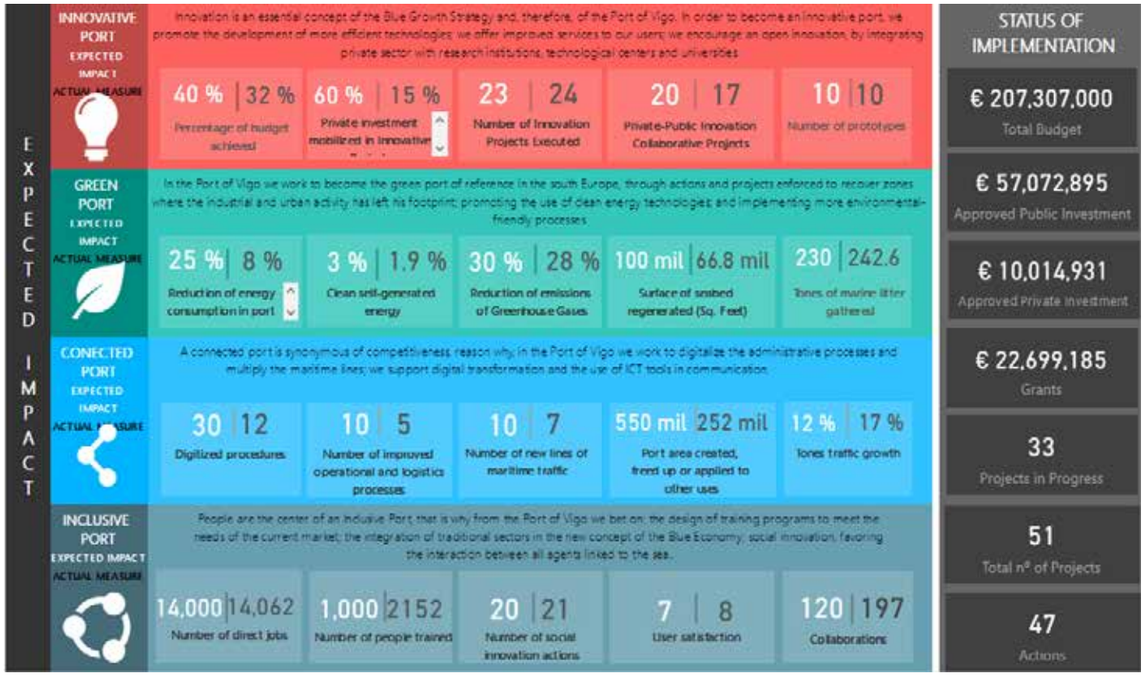


Objective 4, Training and awareness

Goal 1, Online workshops that had 370 students on April 14, 15 and 16. In these conferences, the PAV presented the main results of their environmental projects. Focus was placed on solutions that make it easier to reconcile an adequate ecological state with port activities.

Goal 2, Online workshop attended by 50 professionals from the maritime-port sector on April 21. This day, the environmental improvement initiatives in port areas were disclosed. Synergies were sought to promote ecological restoration actions and the growing demand for green infrastructure was addressed.

Goal 3, Course for university students on the operation of Container Terminals, which was attended by 10 students last September. Among other topics, key aspects were addressed to improve energy efficiency and reduce CO2 emissions.

Goal 4, Courses for fish market workers, which were attended by 19 students last September, and which dealt with transversal actions that facilitate good environmental practices and the reduction of waste

7.3 Objectives 2022

For 2022, 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 and the last objective is to monitor the Blue Growth initiative of the Port of Vigo 2021-2027.

8

Environmental Innovation and Improvement

8. Environmental Innovation and 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:

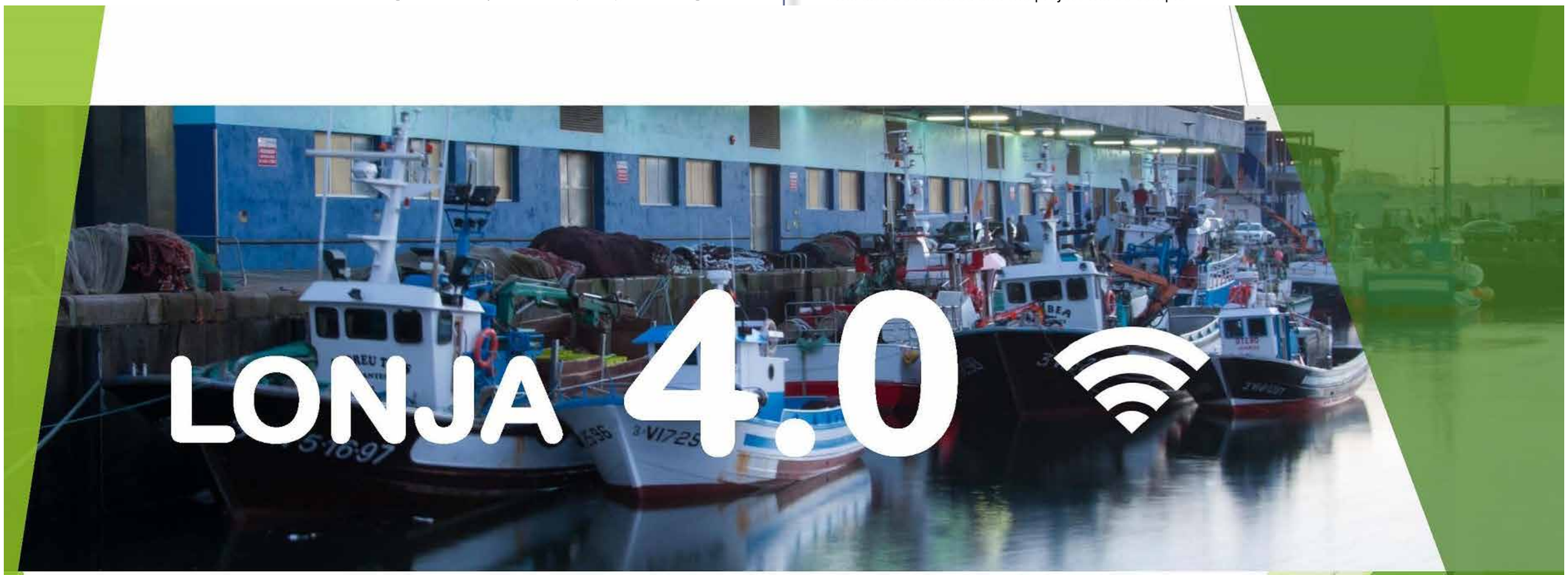
Self-sufficient Auction Hall 4.0

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 end of the works is scheduled for year 2022.



Puerto de Vigo

Autoridad Portuaria de Vigo

CoLogistics

CoLogisfics, 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.

CoLogisfics 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, Administração dos Portos do Douro, Leixões e Viana do Castelo, SA - APDL, Câmara Municipal de Famaliçao.

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 2021 and planning for 2022

There were several activities carried out in 2021 within the framework of the Cologistics project. Among others, the Port of Vigo contracted the preparation of a report on the economic impact of traffic and port logistics activities with the aim of putting in value its transcendence for the that provide innovative solutions to the challenges related to the logistics and supply chain function of the leading companies that are part of this CBA and that rely on open innovation as a means to improve their competitiveness. The Galician leading companies are: Altia Logistic Software, Altrans Fast Cargo, Babé y Cia, Bandalux, Coca Cola, Codisoil, Darlim, Deltacargo, Frigalsa, Grupo Marsan, Hijo de Carlos Albo, Kartin, Pérez-Torres Marítima and Selmark.

In addition, among the events planned for this year, the Port Authority of Vigo organised the Peninsular Vertebration Forum: Atlantic Corridor in March and the development of infrastructure in the Sessions Building. This forum dealt with important issues like the infrastructures of Galicia and the connection with the North of Portugal or the perspective of logistics in the Euroregion, among others, and was also attended by Conselleira de Infraestructuras [the Department of Infrastructures] of Xunta de Galicia and the presidents of important entities such as CEP, PAVIGO or IGAPE on the Galician side and APDL of Portugal, among many other personalities.

In November, the INTELLIGENT LOGISTICS: TECHNOLOGY, TALENT AND SUSTAINABILITY forum was also held in the Sessions building. At this forum, a dozen experts from Galicia and the North of Portugal analysed in Vigo the main aspects that will give rise to Logistics 5.0 or intelligent logistics: technology, talent and sustainability.

By 2022, besides continuing to develop the GREEN LOGISTICS tool, the Logistics support and Smart Logistics programmes will be launched as advisory services to companies aimed at improving their competitiveness and addressing the main challenges they face in the field of Industry 4.0. The Port of Vigo will also launch a study of rail connectivity to Bouzas TT and the analysis of its impact on Galicia - Northen Portugal Euroregion.

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 2021

In December 2021, PortForward was on its home straight. The project, which was extended until June 2022 to alleviate the delays caused by COVID 19, continued to advance in the deployment of the technical solutions of the Ports included in the Study. In the case of the Port of Vigo, Brunel University made the beta version of the Green Yard Scheduler (GYS) module available to the TERMAVI container terminal operator for final testing. This module was presented to other ports and actors in the port community in various workshops and events, including at the Green Energy Ports Conference organised by the Port of Vigo.

In addition, the project continued to hold biannual project monitoring meetings, being able to recover the face-to-face mode at its last meeting organised in the city of Naples.

The actions planned for 2022 include obtaining the final results of the GYS and the deployment of the PortForward platform, among others. Their final results will be presented at the Final meeting to be held in Brussels in mid-June.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769267.

Atlantic Maritme 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 2021

In February 2021, the Blue Entrepreneurship Programme was launched, whose objective was to promote sustainable business ideas in the Blue Economy sector and which was finally held virtually due to the restrictions imposed by COVID-19.

In May, during the European Maritime Day, the consortium presented the first European platform for training and employment in the field of the blue economy with a training offer of twelve courses promoted by Spain, Ireland and France. The Spanish partners promoted 6 courses: "Fundamentals of technical design with SolidWorks", coordinated by the Higher Technical School of Industrial Engineering of UVIGO, "Global governance of the oceans", coordinated by the Faculty of Law of UVIGO and " GIS course applied to the marine environment", "Port Logistics", "Fish Market Operator" and "Port Rules and Regulations" organised by the Port of Vigo in collaboration with the University. These training activities led to the implication of more than 160 people in activities related to the Blue Economy.

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 2021:

In the context of PORTOS project and related to the communication activities of the aforementioned project, the Port of Vigo organised the event Open Port - Green Energy Ports Conference under the theme "The Green Deal, the role of ports".

In its fourth edition, the conference revealed the actions and decisions taken by ports at present in their fight against climate change and in compliance with the Green Deal. The event, which took place on September 22 and 23, 2021 in a blended format, brought together more than 30 speakers from regional, state, European and international ports and was attended by more than 500 people of different nationalities.

Among the technical actions carried out this year, the Port of Vigo continued to advance in the design of the PORTOS Blue Energy Observatory, which will have information on Marine Renewable Energies and how its implementation in the ports favours the fulfilment of the objectives proposed by the EU Green Deal. The Observatory was publicly presented during the Green Energy Ports Conference.

In 2022 the project was on its home straight. Over the next few months, the Port of Vigo will proceed to validate the final design of the observatory and start it up. Among other technical actions that will be carried out by the partners are the organisation of the “Ports Relationship with Energy” seminar organised by the University of Cork, the creation of a decision-making tool that supports ports in the choice of new technologies for the use of energy and an action plan for the progress of ports towards energy self-sufficiency.

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.

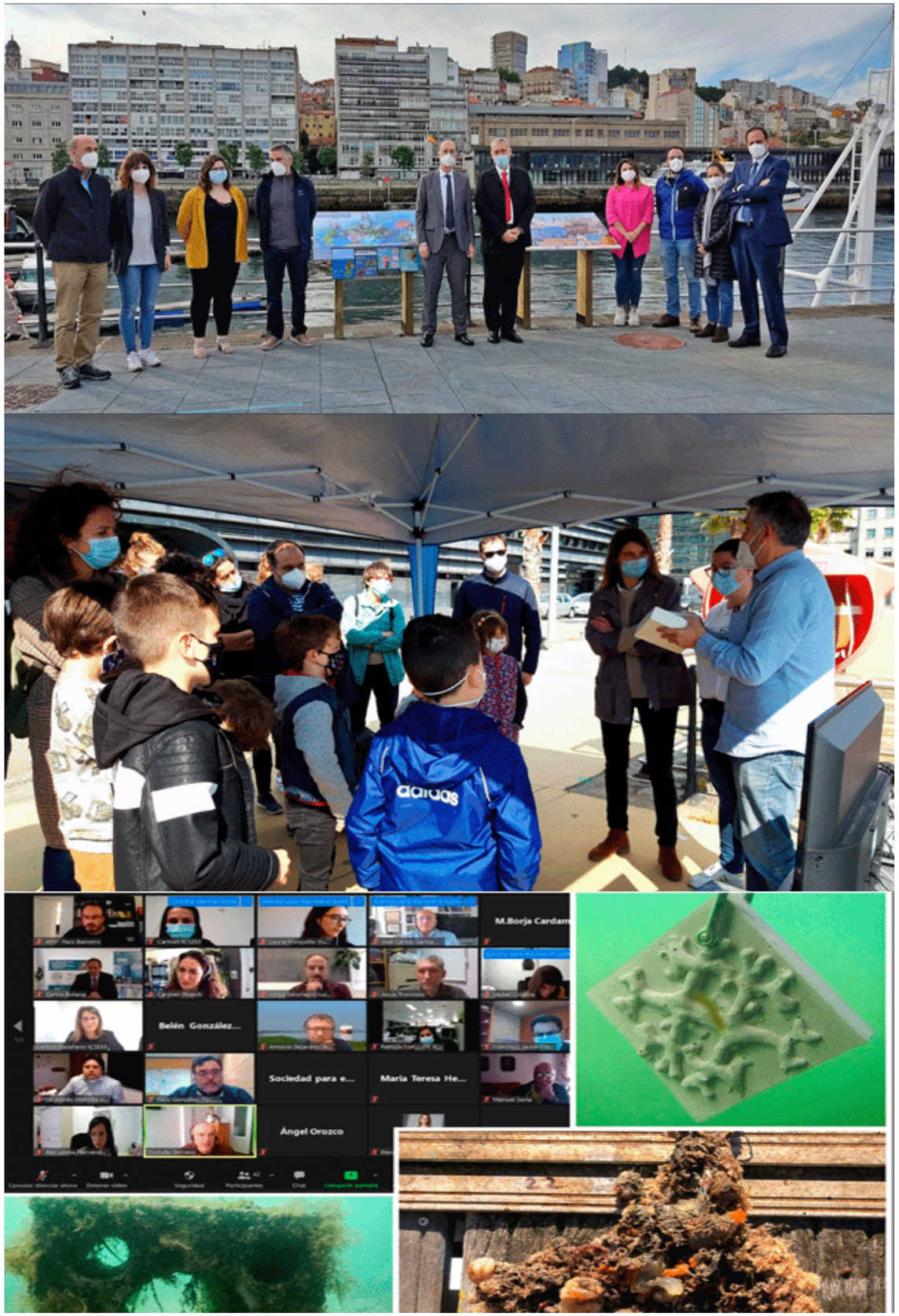
Actions taken in 2021

In 2021, the project called "Promotion of the recovery of altered in maritime-port areas and their benefits for the fishing activities: awareness and dissemination", better known as PuertAlMar, was finished. Throughout the execution of the project, various structures were installed to facilitate the restoration of coastal areas affected by port infrastructure, which were monitored during the 12-month duration of the project. The result was the fixation of organisms of more than 187 species, which represented a capture of CO2 greater than 6 Kg per square meter.

Among the activities of the project, several informative actions were also carried out to publicize its results, highlight the importance of port marine ecosystems, the integration of industrial activities and the need to conserve and recover altered coastal ecosystems.

For this reason, 4 informative posters were installed on the dock of A Laxe, equipped with multimedia content that can be accessed through QR codes and where citizens can observe the colonization and ecological succession of the port coastline.

In April, the Port Authority of Vigo organised, with the collaboration of its counterpart in Melilla and the University of Vigo, several online workshops for schoolchildren and professionals, which were attended by nearly 400 students and 50 professionals from the blue economy sector. In addition, the Port Authority of Vigo, with the collaboration of the Cultural and Sports Association of the Port and the University, organised a face-to-face conference in which, with the help of an underwater drone, the attendees were able to "dive" in the marine gardens of the Port of Vigo.



Phase II: Living Ports Project

Objective of the project

The project, which began in June 2021 and will last 3 years, is funded by the European Horizon 2020 Fast Track to Innovation programme. The consortium is made up of four partners from three countries: ECOncrete Tech Ltd, coordinator of the project, an Israeli company providing green CMI solutions; the Port of Vigo, one of the greenest ports in Europe; CARDAMA SHIPYARD, a Spanish shipbuilding and repair company; and the Institutes of Civil Engineering and Water Resources of the Technical University of Denmark (DTU).

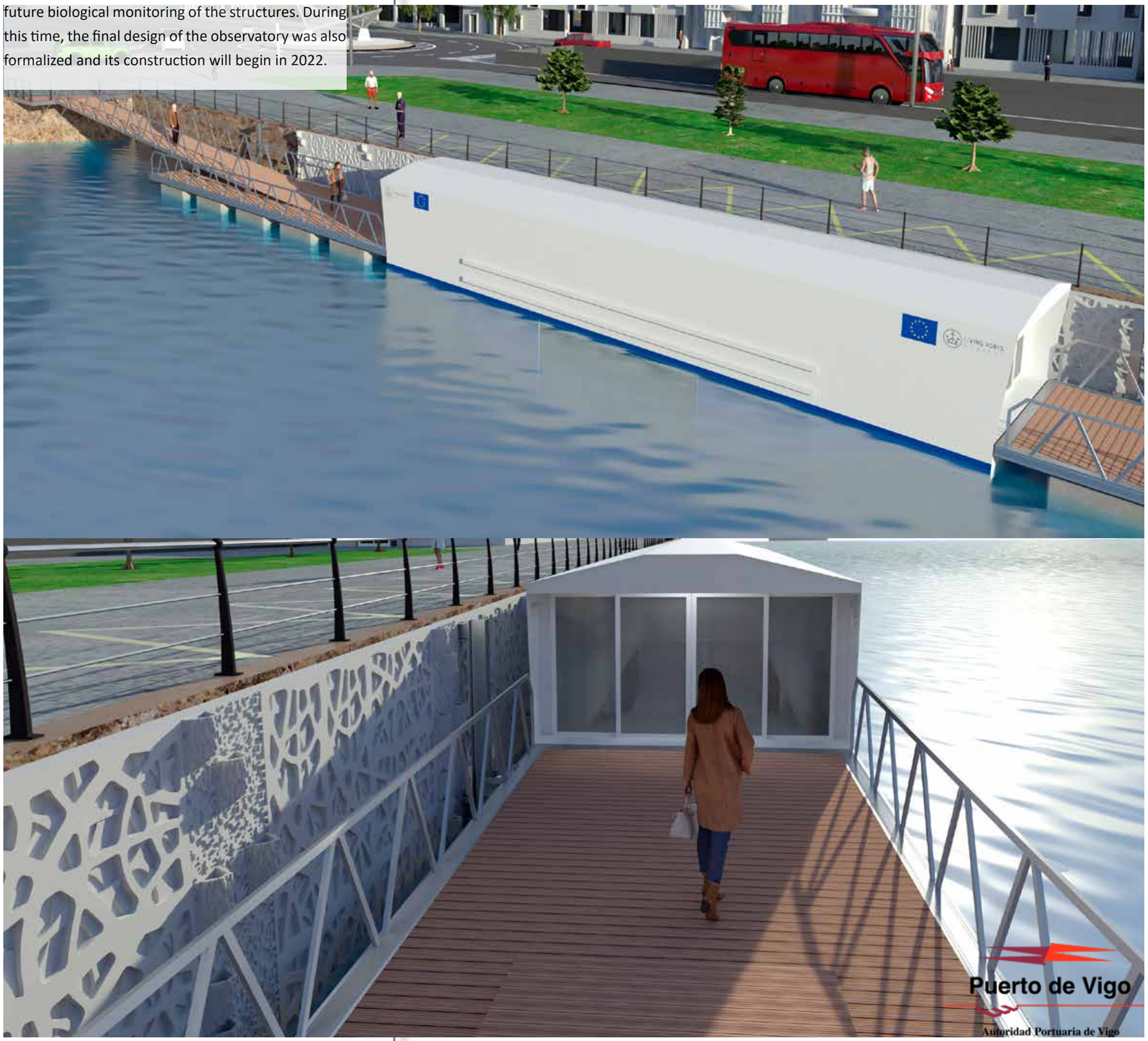
The Living Ports project catalyzes a fundamental change in coastal infrastructures (CMI) away from the obsolete "grey" towards solutions that include nature, with structural, environmental and socioeconomic benefits.

"Living Ports" includes 2 large-scale actions. The first is a dock, with sheltered waters, Portocultura. In this area, 310m2 of ECO Seawall type panels will be installed with their respective Control areas (made of standard concrete) and an underwater viewer designed by Cardama. This viewer will serve to observe the existing marine flora and fauna in the Port of Vigo, which will colonize the structures installed. It is a unique observation and monitoring tool with recreational, informative, educational and citizen awareness objectives.

The second area is located in an area more exposed to the waves, on Bouzas walk, at the mouth of Ría of Vigo. In this area, 100 CoastaLock units will be installed, the first piece of concrete designed following ecological-biological principles for the protection of single-layer sloped structures. These pieces will be integrated into the existing breakwater slope in the intertidal and submerged zone.

Actions taken in 2021

In 2021 the first steps in its execution were taken. After the launch meeting in June 2021, there were weekly meetings to deal with questions about the design and the project for the execution of the actions regarding "A Laxe" and "Bouzas", as well as the future biological monitoring of the structures. During this time, the final design of the observatory was also formalized and its construction will begin in 2022.



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.

Actions taken in 2021

Within the "Atlantic Regional Initiative" programme, the "ATIN-BLUECO" project was selected by ESA to seek innovative solutions in the field of the blue economy that facilitate the implementation of the Marine Spatial Planning Directive (MSPD) and Marine Strategy Framework Directive (MSFD).

Led by the GMV business group, and with the collaboration of the Port Authority of Vigo, the project evaluates the creation of a tool for detecting marine litter and hydrocarbon spills on the water layer.

Linked to the scope of the project and to collect data, in 2021 a field campaign was carried out in which plastic samples were placed on the water layer in three specific places in the Ria in order to validate their detection by satellite. The initiative also facilitated the planning of a plastic collection campaign (passive fishing) through the provision of containers in the fishing port for depositing the plastics collected during fishing operations and that will be maintained until 2022.

In addition, it is planned that in 2022 a seabed cleaning campaign will be carried out. The place will be determined by satellite according to the greater presence of plastics detected.

9 BLUE GROWTH

Puerto de Vigo

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 € 57 million of public funds and € 10 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 € 22.5 million of public subsidies from mostly European funds have been received.
Currently, 33 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.

Event
International Seminar on Entrepreneurship in the Blue Economy in Cape Verde (March 2021)
Presentation of Blue Growth to the Next Generation (April 2021)
Training and informative workshops PuertAlMar (April 2021)
uropean Week of Regions and Cities (March 2021)
Conference on the environment of the Port of Valencia (June 2021)
Atlantic Action Plan, conference of the European Commission (May 2021)
1st University-Company meeting of the Sherpa do Mar project (June 2021)
Thrid Workshop Blue Fishing Ports: Stepping Forward (Junio 2021)
II Conference on innovation and technology in port management - Technical Association of Ports and Coasts (October 2021)
Engaging Blue Ports in Marine Spatial Planning - FAO (October 20 and 27, 2021)
COFE Conference - All the opportunities of the sea - advancing in the blue economy (November 2021)

GREEN ENERGY
PORTS
CONFERENCE

Vigo-Spain

22nd-23rd September 2021

10

Open Ports - European Green Deal, role of the ports

Interreg Atlantic Area
European Regional Development Fund

EUROPEAN UNION

PORTOS PROJECT

The president of the Port Authority of Vigo, Jesús Vázquez Almuiña, accompanied by the director of Planning and Development of State Ports, Álvaro Rodríguez Dapena, and by the general director of Planificación Enerxética e Recursos Naturais de la Xunta de Galicia [Energy Planning and Natural Resources of Xunta de Galicia], Paula Uría, opened the 4th edition of the Green Energy Ports Conference on September 22.

This international conference was organised by the Port Authority of Vigo, with the support of Puertos del Estado [State Ports], Xunta de Galicia, the European Sea Ports Organisation (ESPO) and the International Association of Ports (IAPH), and on the other side of the screen were also present officials from prestigious world organisations such as Felix Leineman, from the Blue Economy Unit of DG Mare; Isabel Richboch, general secretary of the European Association of Ports (ESPO); Antonis Michail, director of the International Association of Ports (IAPH); or José Estors, FAO representative.

With around 500 participants from more than twenty countries, the Green Energy Ports Conference brought together, in virtual and face-to-face format, representatives of Port Authorities, not only national, but also international, including Germany, Greece, Italy, Switzerland, Portugal, Belgium, England, France Vietnam, Morocco, Indonesia, Iran, Mozambique, Peru, Romania, Ecuador, Israel, Lithuania, Denmark, Slovenia, the United States and, of course, Spain.

Compliance with the Green Deal

The objective of this biannual meeting was to put on the table "great ideas that are embodied in sustainable projects that respond to the problems caused by climate change and help us establish strategies for compliance with the European Green Deal".

During these conferences, they discussed how Ports can meet the important challenges of reducing emissions in the coming years: 55% in 2030 and zero emissions by 2050".

The Port of Vigo recalled that it set itself the goal of achieving zero emissions by 2030, with a strong commitment to the electrification of the docks, investment in renewables and the promotion of alternative and clean energies, such as liquefied natural gas or the hydrogen.

International recognitions

We should mention the one known as "Oscar to the environment" awarded by the International Association of Ports (IAPH) to the "Peiraos do Solpor" project; the prize of the Professional Association of Environmental Companies of Galicia (APROEMA); the Galicia Energy Award for the best innovation project for the intelligent multimodal energy barge; or the award from the European Commission to the MarEnet project, as the best training project in the Atlantic area.

Example of sustainability in Spain

The President of Puertos del Estado [State Ports], Álvaro Rodríguez Dapena, stated that the Port of Vigo is a great example of sustainability in Spain, with projects such as "Peirais do Solpor" or the self-sufficient "Auction Hall 4.0", but also with other initiatives that have arisen around its Port Community, along this line of dialogue and openness.

Likewise, the general director of the International Association of Ports (IAPH), Antonis Michail, highlighted that the Port of Vigo is an example of what a green port should be, not only in Europe, but also worldwide.

11

Our Ocean Commitment

Our Ocean Commitment

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).

In 2021, progress was made in terms of the execution of the works of Auction Hall 4.0 project, which is expected to ensure the fulfilment of the energy self-sufficiency commitment for year 2022.

Regarding the reduction of emissions, in 2021 it was possible to maintain the ratios achieved since 2019, expecting a greater reduction in 2022 with the completion of the work and start-up of the photovoltaic equipment framed in Auction Hall 4.0 project.

These actions resulted in a compliance of 75% today. To date, the carbon footprint of the Port of Vigo has already been registered in MITECO, for scopes 1 and 2, and work is being done on the registration of scope 3 for year 2022.

Port of Vigo

Port Authority of Vigo

OUR OCEAN
MALTA, 5-6 OCTOBER 2017

12

Environmental Indicators

12 Environmental Indicators

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

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.

We should mention that this year the indicators defined in the standard as "Environmental performance indicators for the Public Administrations sector" were also included.

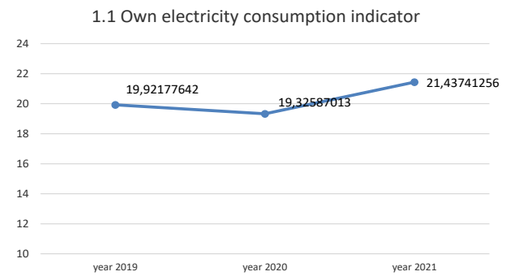
All the indicators that were not fulfilled are marked with (*) and have their corresponding explanation on page no. 114.

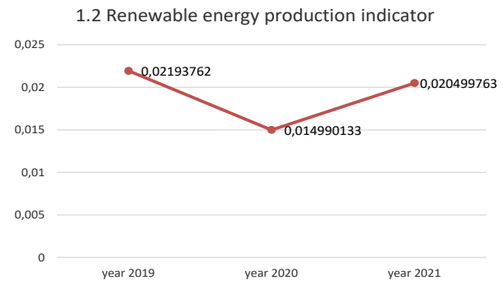
The planned value and the conversion values are defined on page 112 of this Statement.

Environmental aspect	Indicator	Formula	Value 2021	Planned Value(1)	Fulfilment
1. Energy Efficiency(2)					
1.1 a) Own and not justified electrical consumption	Own and not justified MW consumed/ No. of workers	4.780,54/223	21,43	19,31	(*)
1.2 Production of renewable energy	Total MW produced from renewable energy (photovoltaic) / Total MW consumed	98/4.780,54	0,020	0,0163	√

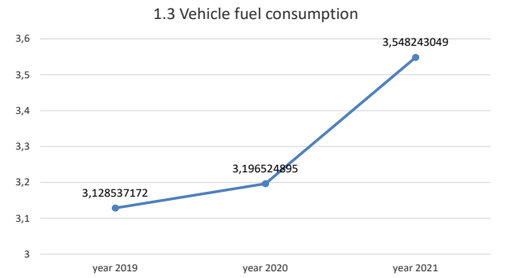
Environmental aspect	Indicator	Formula	Value 2021	Planned Value(1)	Fulfilment
1. Energy Efficiency(2)					
1.3 Fuel consumption vehicles	GJ consumed (diesel) / No. of workers	791.25/223	3,54	3,31	(*)
1.4 Fuel consumption vehicles	Litres consumed (diesel) / Km	21.955 / 282.189	0,077	0,075	(*)
1.5 Fuel consumption boilers	GJ consumed (diesel) / No. of workers	72,08/223	0,32	0,26	(*)
1.6 Fuel consumption boilers (Natural Gas)	GJ consumed (natural gas) / No. of workers	$7{,}15E^{-17}$/223	$3{,}20*10^{-19}$	$3{,}29*10^{-19}$	√
1.7 Fuel consumption boilers (Propane gas)	GJ consumed (Propane gas) / No. of workers	$2{,}06E^{-20}$/223	$9{,}26*10^{-23}$	$1{,}37*10^{-22}$	√
1.8 Fuel consumption vessels	GJ consumed (diesel) / No. of workers	94,60/223	0,42	0,67	√
1.9 Fuel consumption machinery	GJ consumed / No. of workers	23,41/223	0,10	0,32	√
	Litres/ No. of workers	649,64/223	2,91	9,03	√

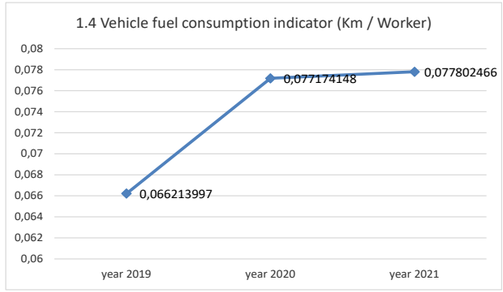
1. Energy efficiency, electrical power

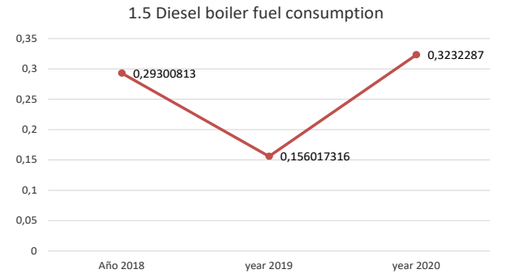


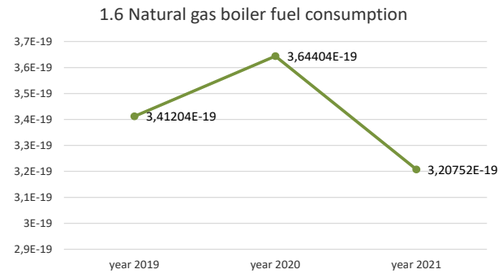


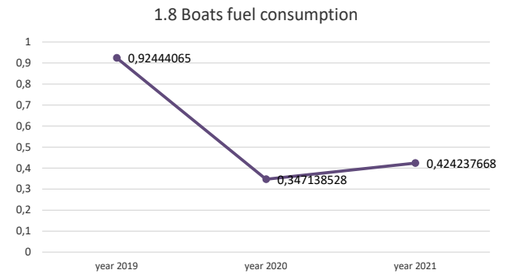
1. Energy efficiency, fuels

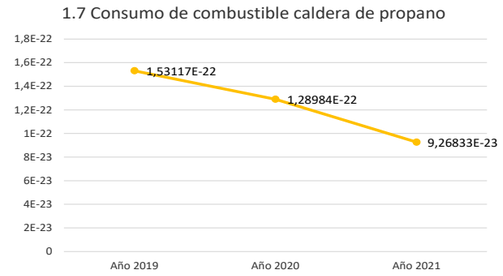


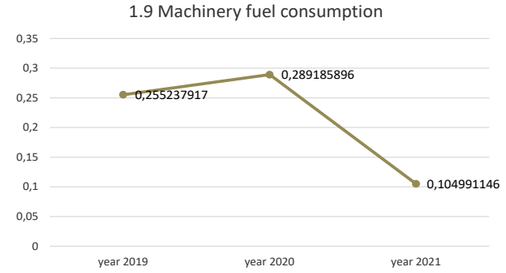


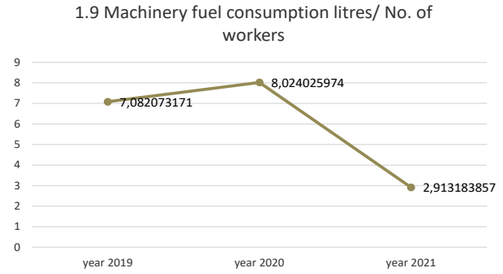






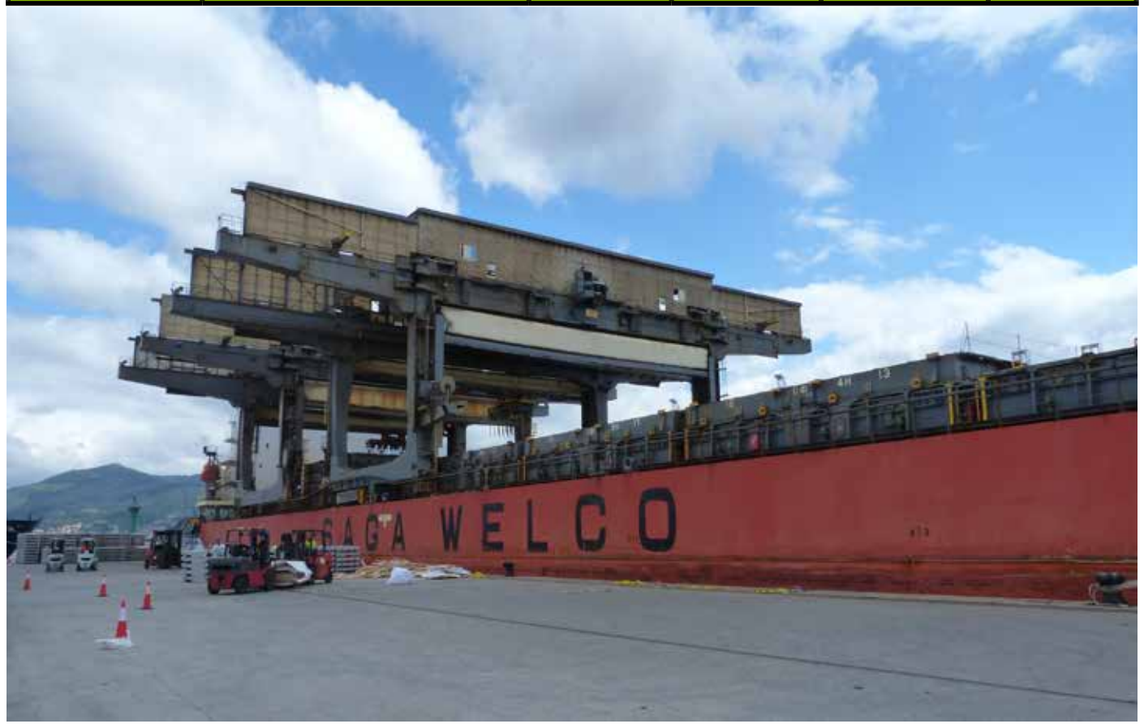




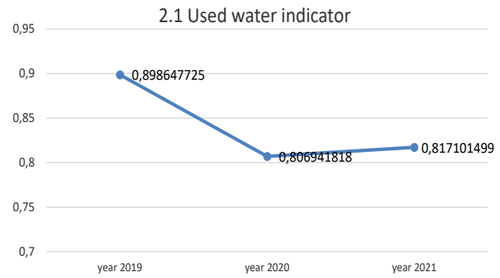


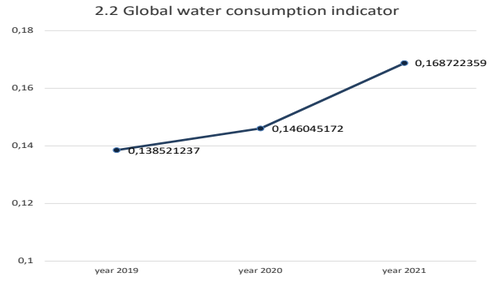
* Analysis of graphs on page 114

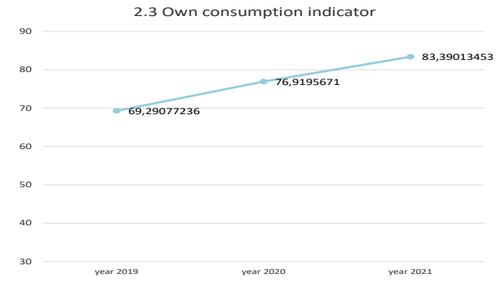
Environmental aspect	Indicator	Formula	Value 2021	Planned Value(1)	Fulfilment
2. Water					
2.1 Water used	m3 water used / m3 drinking water supplied	349.297/ 427.483	0,81	0,9	(*)
2.2 Water consumption	m3 drinking water supplied / m2 service area	427.483 /2.533.647,6	0,16	0,14	(*)
2.3 Own consumption	m3 drinking water consumed / no. of workers	18.596/223	83,39	75,01	(*)



2. Water





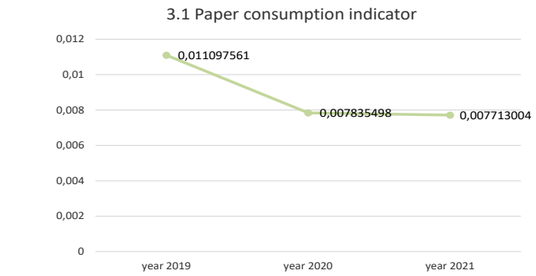


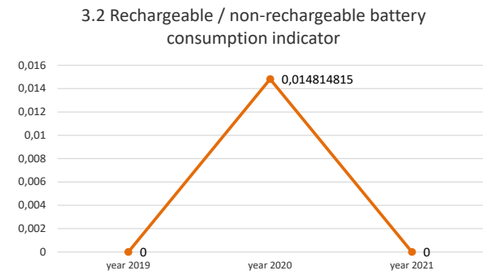
Port of Vigo
Port Authority of Vigo

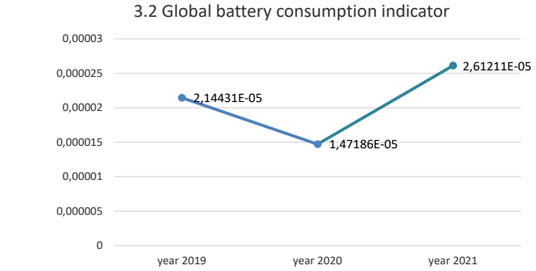
* Analysis of graphs on page 114

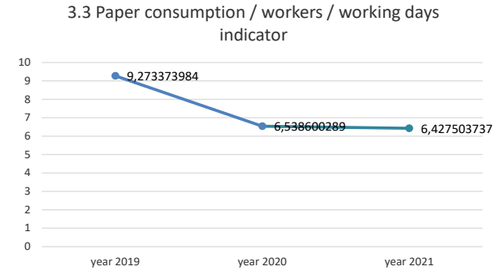
Environmental aspect	Indicator	Formula	Value 2021	Planned Value(1)	Fulfilment
3. Consumption of Products					
3.1 Paper consumption	Tn of sheets/ no. of workers	1,7/223	0,0077	0,010	√
3.2 Consumption of batteries	No. of rechargeable batteries / no. of non-rechargeable batteries	0/223	0	0,0049	(*)
	Tn Batteries used / no. of workers	0,0058/223	$2,61*10^{-5}$	$1,85*10^{-5}$	(*)
3.3 Paper consumption / workers / working days	Paper consumption/ worker / day (Environmental behaviour of Public Administrations)	344.000/223/240	6,42	7,90	√

3. Product consumption



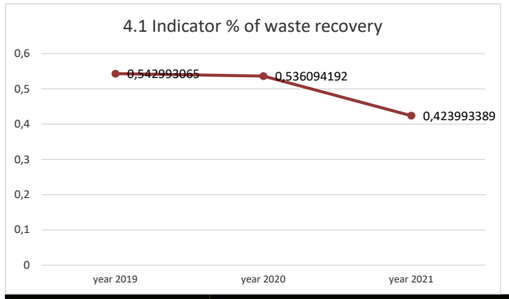






Environmental aspect	Indicator	Formula	Value 2021	Planned Value(1)	Fulfilment
4.Recoverable Waste					
4.1 Non-hazardous recoverable waste with respect to total waste.	Total annual generation of recoverable waste (in tn)/tn total (%)	710,06/1.674,7	0,42	0,57	(*)

4. Recoverable waste

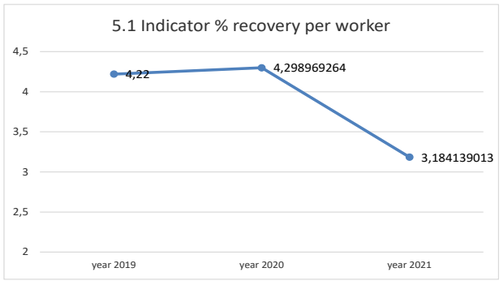


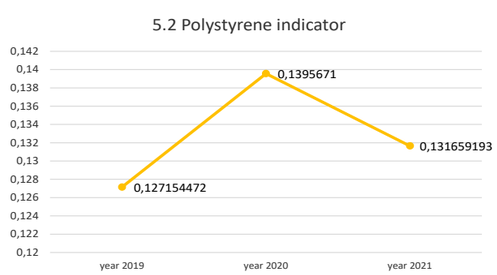
Port of Vigo

Port Authority of Vigo

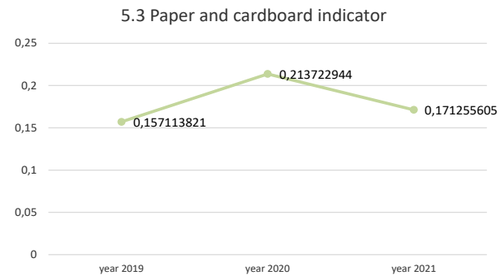
* Analysis of graphs on page 114

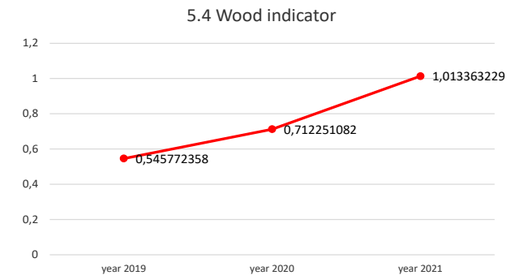
Environmental aspect	Indicator	Formula	Value 2021	Planned Value(1)	Fulfilment
5. Waste with respect to number of workers [3]					
5.1 Non-hazardous recoverable waste with respect to no. of workers	Total annual waste generation (in tn)/ no. of workers	710,06/223	3,18	5,19	(*)
5.2 Polystyrene	Total annual Polystyrene generation (tn) / no. of workers	29,36/223	0,131	0,128	√
5.3 Paper/ cardboard	Annual Paper and Cardboard generation (tn) / no. of workers	38,19/223	0,17	0,20	(*)
5.4 Wood	Annual Wood generation (tn) / no. of workers	225,98/223	1,01	0,64	√
5.5 Plastic	Annual Plastic generation (tn) / no. of workers	212,44/223	0,95	1,01	(*)
5.6 Nets	Annual Nets generation (tn) / no. of workers	13,3/223	0,059	0,20	(*)
5.7 Organic waste	Annual Organic Waste generation (tn) / no. of workers	111,53/223	0,50	2,68	(*)
5.8 Scrap	Annual Scrap generation (Tn)/ no. of workers	8,9/223	0,039	0,023	√
5.9 Tyres	Annual Tyres generation (Tn)/ no. of workers	0/223	0	0,008	(*)
5.10 Glass	Annual Glass generation (Tn)/ no. of workers	7,22/223	0,032	0,01	√
5.11 Municipal solid waste (MSW)	Annual MSW generation (tn) / no. of workers	964,64/223	4,32	3,80	(*)
5.12 Plastic packaging (Ecoembes)	Annual Plastic packaging generation (tn)/ no. of workers	63,14/223	0,28	0,26	√

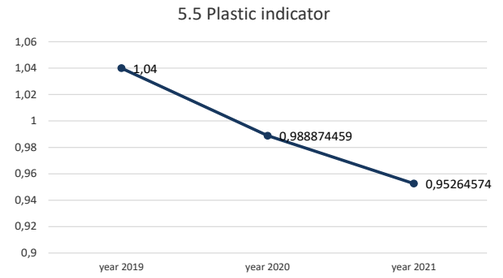


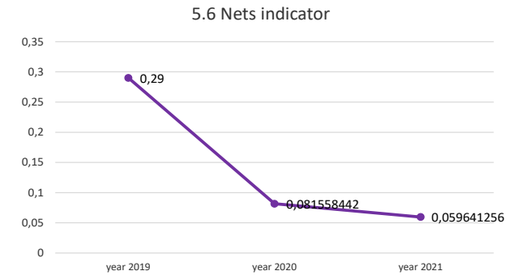


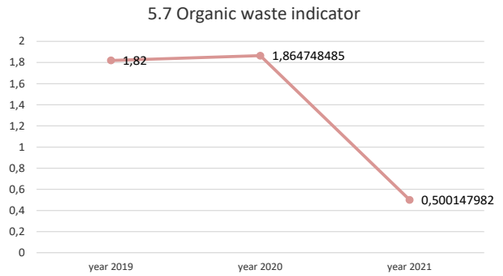
5. Waste with respect to the number of workers

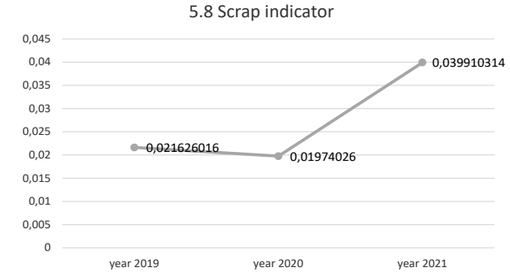


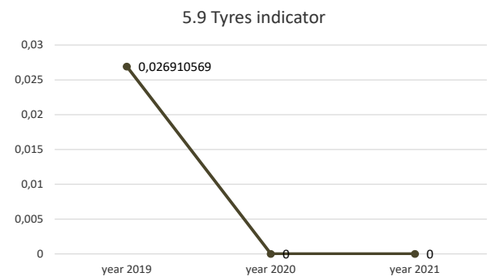


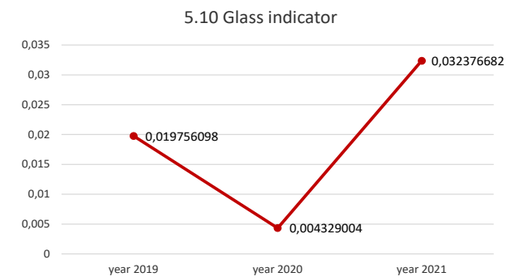


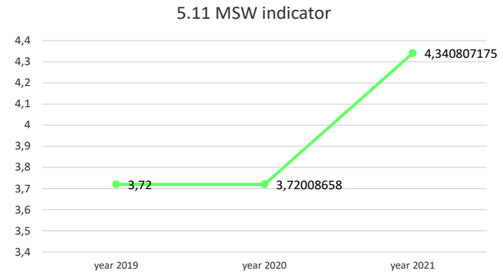


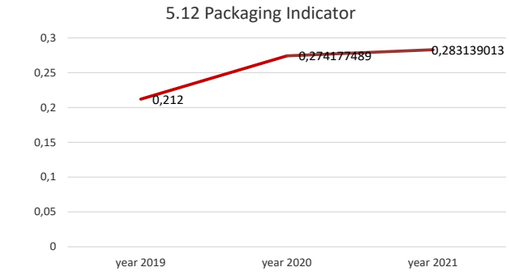












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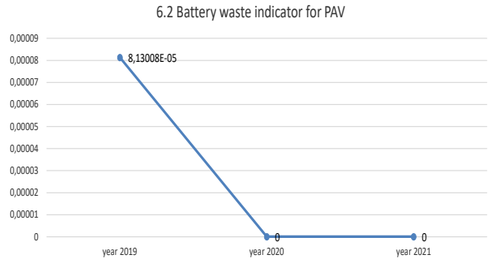
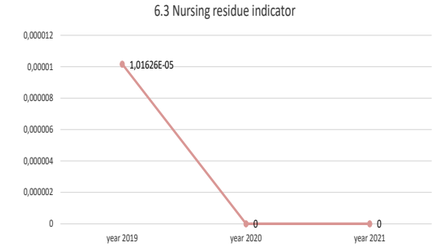
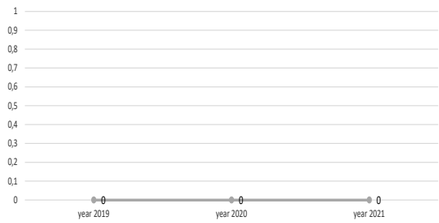
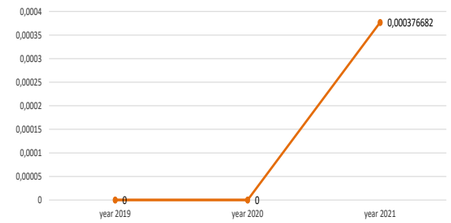
Environmental aspect	Indicator	Formula	Value 2021	Planned Value(1)	Fulfilment
6. Generation of hazardous waste with respect to number of workers					
6.1 Total generation of hazardous waste by PAV and users: (batteries, aerosols, packaging, nursing waste, Green P. batteries, etc.)	Total annual generation of hazardous waste (in Tn)/ no. of workers	4,562/223	0,020	0,021	√
6.2 Hazardous waste generated only by PAV: Batteries	Total annual generation of hazardous waste (in Tn)/ no. of workers	0/223	0	$5,2 *10^{-5}$	√
6.3 Hazardous waste generated only by PAV (Nursing waste)	Total annual generation of hazardous waste (in Tn)/ no. of workers	0/223	0	$1,30*10^{-5}$	√
6.4 Hazardous waste generated only by PAV (Contaminated Packaging)	Total annual generation of Contaminated Packaging (in Tn)/ no. of workers	0,027/223	0,0001	0,0002	√
6.5 Hazardous waste generated only by PAV (Used Oil)	Total annual generation of Used Oil (in Tn)/ no. of workers	0/223	0	0,002	√
6.6 Hazardous waste generated only by PAV (Batteries)	Total annual generation of Battery (in Tn)/ no. of workers	0,084/223	0,0003	0,0005	√
6.7 Hazardous waste generated only by PAV (Aerosols)	Total annual generation of Pressure Bottles (in Tn)/ no. of workers	0,006/223	$2,7*10^{-5}$	$1,4*10^{-6}$	(*)
6.8 Hazardous waste generated by PAV (Oil waste Rías Bajas)	Total annual generation of Oil Waste in Rías Bajas (tn)/ no. of workers	0/223	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	4,44/223	0,019	0,014	√
6.10 Fluorescent tubes generated by PAV and users of the Port	Total annual generation of Fluorescent tubes (tn)/ no. of workers	0/223	0	0,0007	√
6.11 Hazardous waste generated only by PAV (EEEW)	Total annual generation of EEEW (in Tn)/ no. of workers	0/223	0	0	√
6.12 Cutting fluid generated by PAV	Total annual generation of hazardous cutting fluid waste (Tn)/ no. of workers	0/223	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	0/223	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	0/223	0	0,0011	√

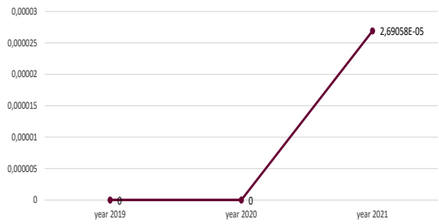
6.Hazardous waste

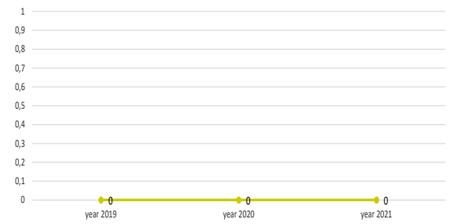


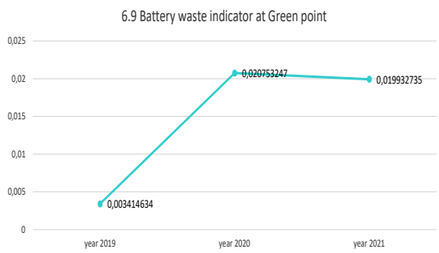


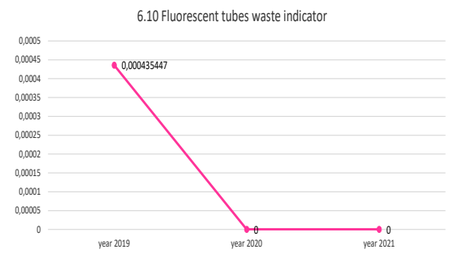


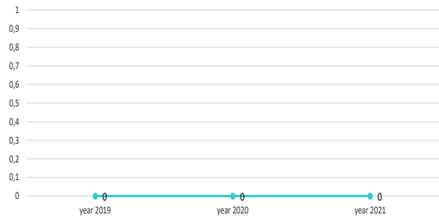


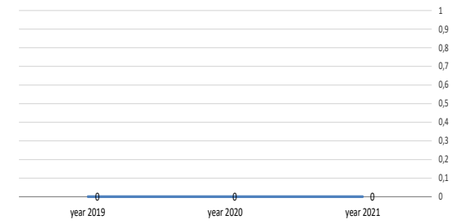


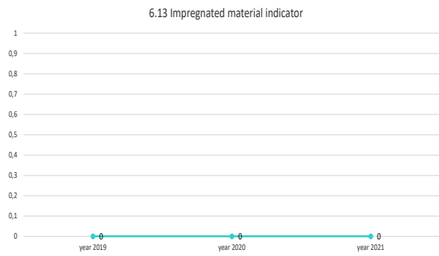


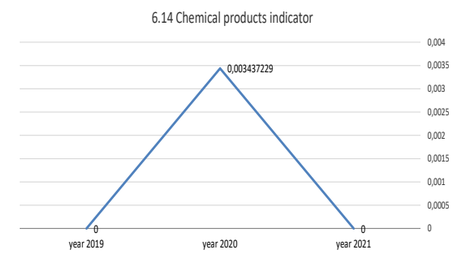








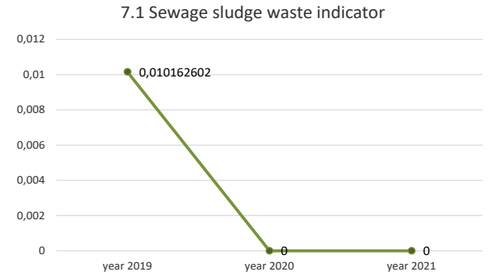


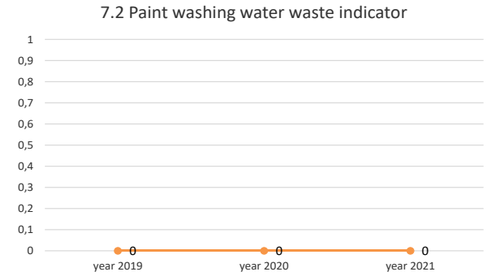


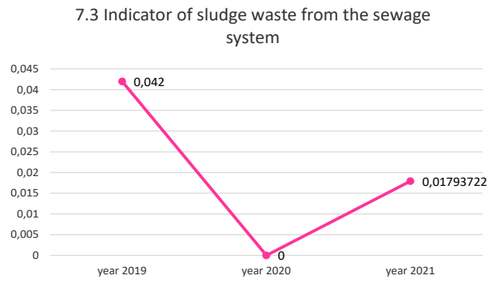
* Analysis of graphs on page 114

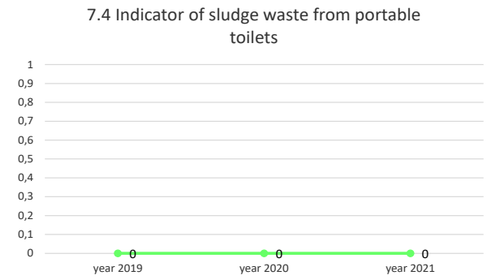
Environmental aspect	Indicator	Formula	Value 2021	Planned Value(1)	Fulfilment
7. Other waste					
7.1 Sewage sludge (Generated only by PAV)	Total annual generation of sewage sludge (tn)/ no. of workers	0/223	0	0,006	√
7.2 Paint Washing Water generated only by PAV	Total annual generation of paint washing water (Tn)/ no. of workers	0/223	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	4/223	0,017	0,029	√
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	0/223	0	0,010	√
7.5 EEEW generated by PAV and users of the Port	Total annual generation of EEEW (Tn)/ no. of workers	1,2/223	0,005	0,013	√
7.6 Toner cartridges generated only by PAV	Total annual generation of toner cartridges (Tn)/ no. of workers	0/223	0	1,35E-05	√
7.7 Other waste generated by PAV and users of the Port	Total annual generation of other waste (Tn)/ no. of workers	0/223	0	0,0004	√
7.8 Office waste (Environmental behaviour of Public Administrations)	Annual generation of office waste (Folios+Batteries+Tonner in Kg)/ no. of workers	1700/223	7,62	9,44	√

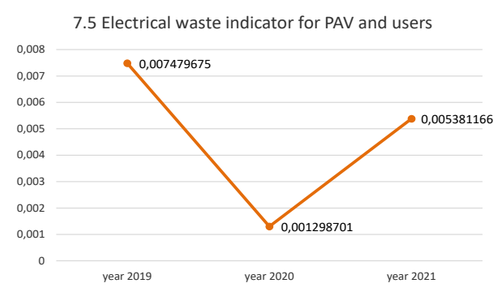
7. Other waste

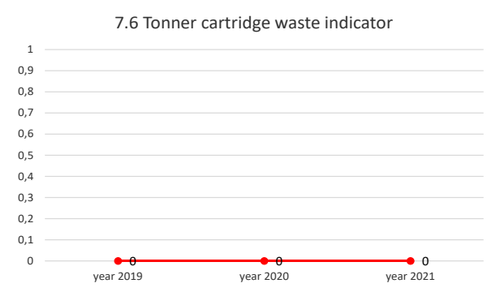


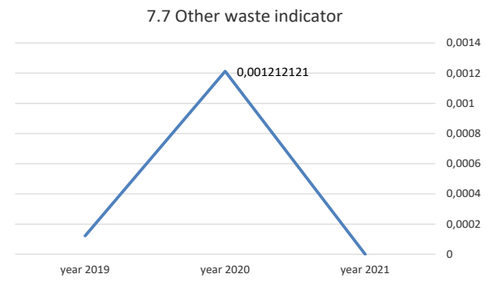


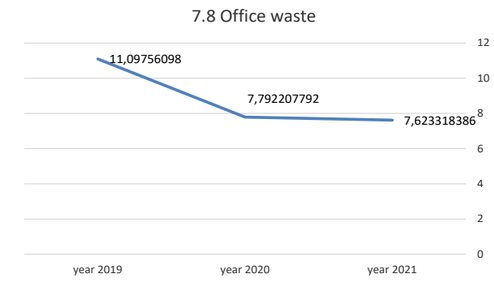








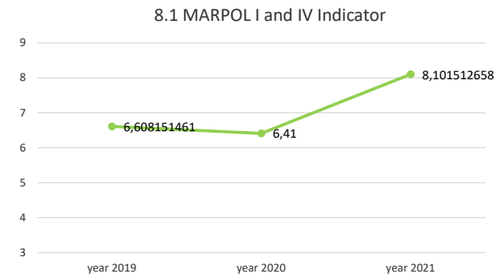


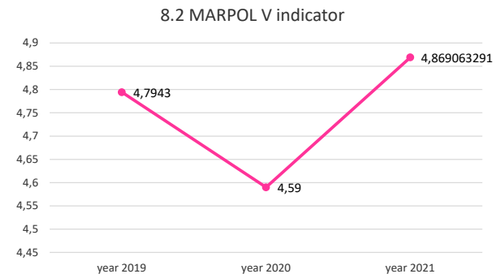


* Analysis of graphs on page 114

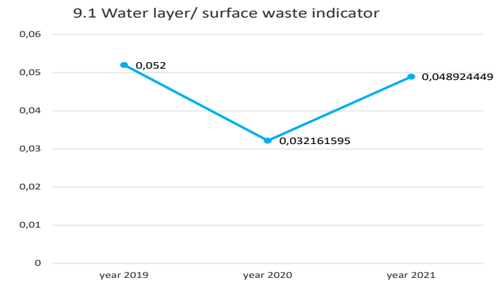
Environmental aspect	Indicator	Formula	Value 2021	Planned Value(1)	Fulfilment
8 . MARPOL waste[4]					
8.1 MARPOL waste I, IV	Total annual generation of MARPOL waste (m3)/ no. of vessels	12.800,39/1.580	8,10	6,53	√
8.2 MARPOL waste V	Total annual generation of MARPOL waste (m3)/ no. of vessels	7.693,12/1.580	4,86	4,69	√
9. Water layer waste					
9.1 Water layer waste	Waste collected (Tn)/ Area 1 (ha)	37,3/762,4	0,048	0,051	√
9.2 Water layer waste with respect to number of workers(3)	Waste collected (Tn)/ No. of workers	37,3/223	0,16	0,16	√
10.Noise Pollution					
10.1 Noise Pollution	No. of complaints about noise	No. complaints noise	6	3,66	(*)

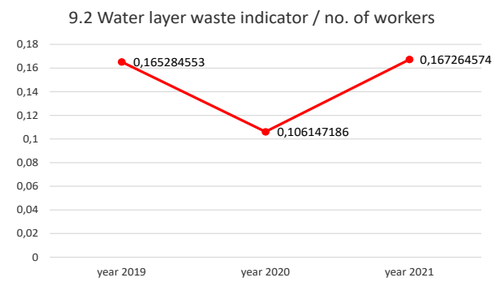
8. MARPOL waste



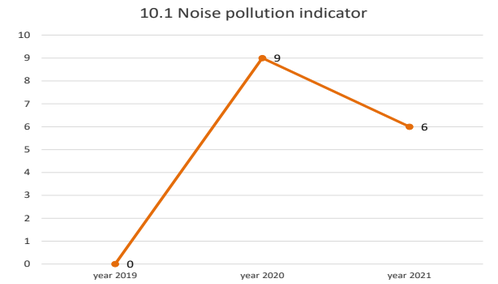


9. Water layer waste





10. Noise pollution



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Environmental aspect	Indicator	Formula	Value 2021	Planned Value(1)	Fulfilment
11. Air Emissions [6]					
11.1 CO2 Emissions(5)	CO2 emissions (Tn)/ No. of workers	116,5/223	0,52	2,19	√
11.2 Air emissions	Number of cases of air pollution / total incidents	2/99	0,020	0,016	(*)
11.3 Air emissions from business trips / year (Environmental Behaviour of Public Administrations)	Tons of CO2 generated by professional vehicles/ Year	57,06/año	57,06	52,58	(*)
11.4 Air emissions from business trips / year/ worker	Tons of CO2 generated by professional vehicles/ Year/ Worker	57,06/223/año	0,25	0,219	(*)
12. General Environmental Management					
12.1 Resources used in Environmental management	Economic resources used in Environmental management/ Total expenses (Euro)	2.251.495,65 / 24.633.310,64	0,091	0,07	√
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	11.361	10.536,32	(*)
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	√

(1) The planned values are obtained from the average of the data of the last three years (2018, 2019 and 2020).
(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 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, as 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. It is not considered necessary to reflect other emissions (eg NOx, SOx, etc.) since the significant ones are those of CO2 generated by the vehicles, although they are taken into account through the establishment of objectives for their reduction.
(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 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

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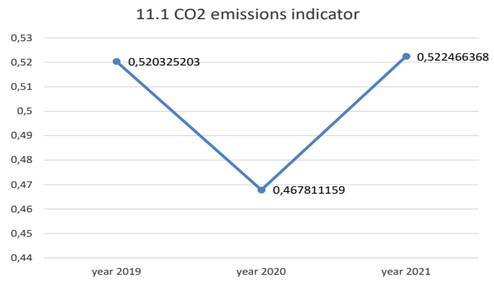
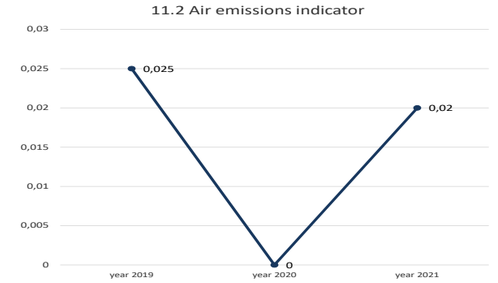
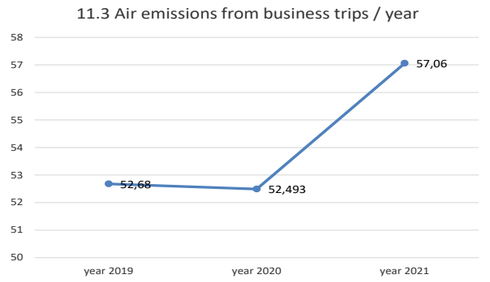
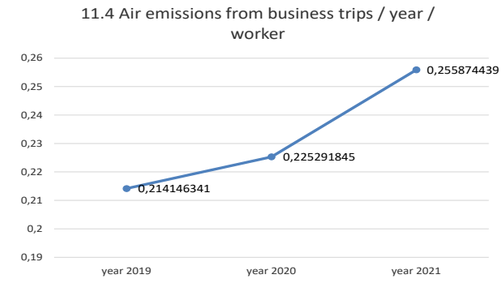
11. Air emissions

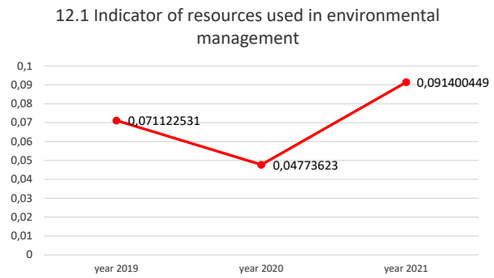








12. General environmental management



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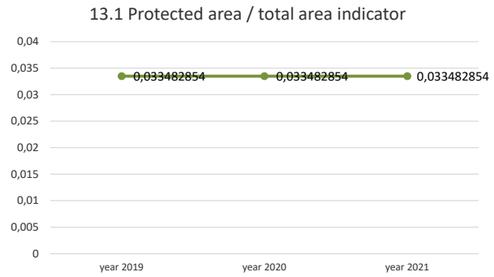
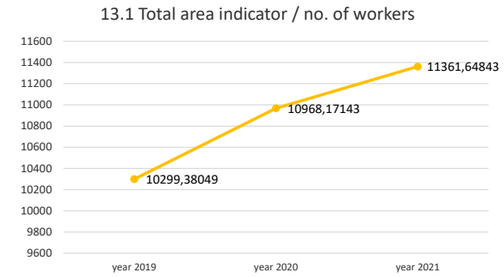
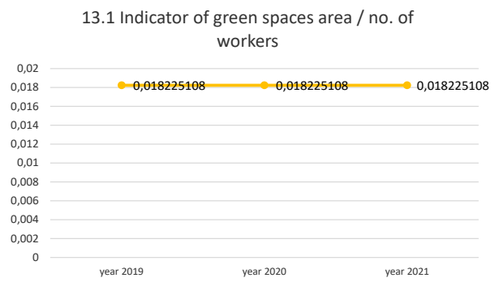
13. Biodiversity







* Analysis of graphs on page 114

Analysis of Results Obtained

In 2021, there was a notable increase of 46% in the production of photovoltaic energy with respect to the previous year, and a reduction of 15% in the consumption of natural gas, 64% in the consumption of machinery fuel and 5 % in paper consumption. With regard to recoverable waste, an increase of 37% in the recovery of wood and 15% in scrap should be highlighted.

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

- 1.1 Own electricity consumption: The planned value was exceeded, since own consumption increased by 7% due to the gradual return to normality after the health emergency.
- 1.4 Fuel consumption vehicles/KM: The planned value was exceeded due to an increase in fuel consumption, like in the previous case, derived from the return to normality after the health emergency.
- 1.5 Fuel consumption of diesel boilers: An increase of 100% was recorded with respect to the previous year. This is due to the fact that fuel purchases are taken into account and not actual consumption.
- 2.1 Water used: The planned value was not reached since the value obtained (0.81) slightly exceeded the average of the last three years (0.9), but within normal limits for a 32 KM supply network.
- 2.2 Water supplied/ Service area: The planned value was exceeded due to the increase of 16.9% in global water consumption (own consumption + user consumption)
- • 2.3 Water supplied/no. of workers: The planned value was exceeded due to the increase in consumption with the return to normal activity and the decrease in the number of workers.
- • 3.2 Rechargeable batteries/ Non-rechargeable batteries: The planned value was exceeded since no rechargeable batteries were purchased in 2021.
- 3.2 Batteries/ Number of workers: The planned value was exceeded, since the purchase is taken into account and not the actual consumption of batteries.
- 4.1 Recoverable waste and 5.1 Recoverable waste/ no. of workers: The planned value was not reached since there was a drastic reduction in the collection of organic waste from the Fishing Port caused by a change in the manager of said waste and by taking into account exclusively the organic waste collected in common areas.
- 5.3 Cardboard paper, 5.5 plastic, 5.6 nets, 5.7 organic, 5.9 tires, 5.11 MSW: There is an increase in municipal solid waste (MSW) and a decrease in the management of recoverable waste compared to the previous year. The change of the cleaning company of the fishing port that reports data exclusively on the waste collected in common areas and the variable situation of the concessionaire companies of the Fishing Port after the health emergency contributed to these results.
- 6.7 Aerosol hazardous waste: The planned value was exceeded, since 6 kg of aerosols were managed this year, well above the average of the last three.
- 10.1 Noise pollution: The planned value was exceeded, as 6 complaints regarding noise were registered compared to the average of the last three years (3.6).
- 11.2 Air emission incidents: In 2021, two incidents were recorded compared to the average of the last three years (1.33).
- 11.3 Air emissions generated by professional trips/year: The planned value was exceeded due to the lower number of PAV workers and the increase in professional trips after the health emergency.
- 11.4 Air emissions generated by professional vehicles/ year/ worker: The planned value was exceeded due to the lower number of PAV workers and the increase in travelling after the health emergency.
- 13.1 Constructed area/ No. of workers: Although the constructed area remained stable, the planned value was exceeded due to the lower number of PAV workers.

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Legal Requirements

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13. Legal Requirements

The following legislative references must be highlighted for 2021:

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
Industrial safety
The Port Authority has awarded, and it is currently underway, the improvement and regulatory adaptation of the detection, alarm and automatic fire extinguishing systems in the transformation centres and buildings of the Port Authority of Vigo, in accordance with the provisions of RD 513/ 2017
Currently, various fire-fighting installations are undergoing the correction of defects detected in their corresponding regulatory inspections, based on the Port Authority's commitment to complying with the law.
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.

14
Conclusions

Conclusions

After two years 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 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.

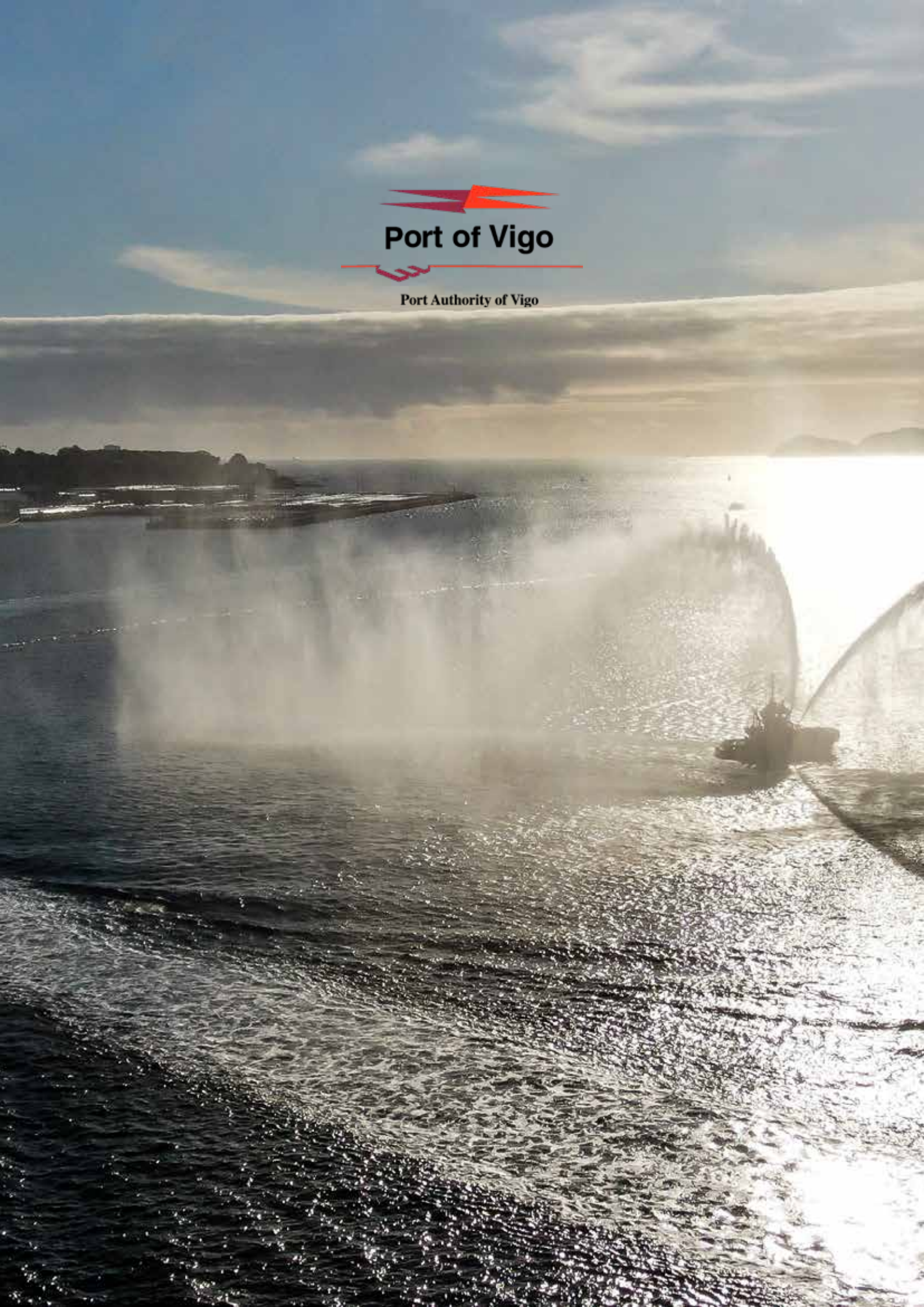
An example of this is "Our Oceans" commitment to reduce emissions by 30% in 2022. This year, the Port Authority achieved a reduction of 85% in their Carbon Footprint, compared to 2016.

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 81%.

Regarding waste management, there was an increase in the recovery of waste such as wood (+137%), glass (+722%) and scrap (+115%).

Also noteworthy is the increase in MARPOL waste management, as a result of the increase in port activity. The same happened with waste from the water layer cleaning service, which registered an increase of 52% compared to the previous year.

As a final conclusion, it is clear that 2021 was a year of post-pandemic transition, hoping to recover the recycling ratios, energy consumption, water consumption and energy efficiency recorded in previous years.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