Port of Vigo

Port Authority of Vigo

ENVIRONMENTAL SYSTEM CERTIFICATION DNV·GL ISO 14001:2015

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001:2015

SAFETY SYSTEM CERTIFICATION DNV·GL OHSAS 18001

ECOPORTS

Environmental Report 2019

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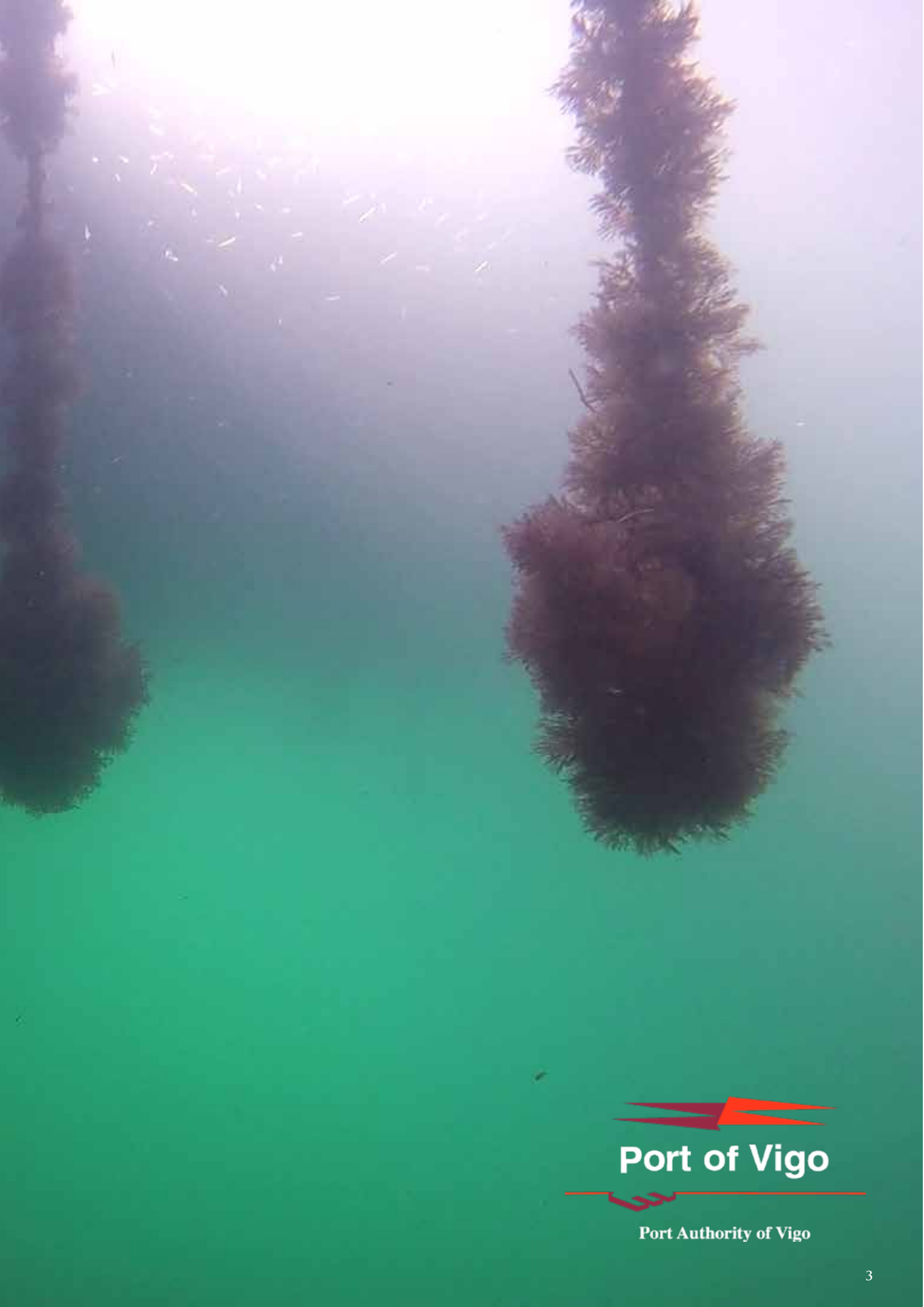


Port of Vigo

Port Authority of Vigo

Presentation of the Declaration

1

One more year, the Port Authority continues to develop the Blue Growth strategy, which has become the main engine for the development of projects and initiatives that seek job improvement and the sustainable economic boost of the entire port sector. This initiative promotes environmental, economic and social projects. The strategy is made of 45 projects and 25 of them are underway.

With this initiative, we are designing and creating the Port we want in the future. For this reason, the Port Authority has established as a strategic objective to achieve zero emissions in 2030, even to become an energy sink with projects such as Peiraos do Solpor, which was born as a response to international commitments (Our Oceans and Agenda 2030) and to the sustainability objectives of the Port of Vigo. It is a pioneering project that seeks to reconcile port activity with the optimal ecological status of the service area. For this, innovative techniques (artificial micro-reefs) will be used, which will enhance the increase in biodiversity and reduce CO2 emissions. The designs developed and evaluated during the execution of the project will finally be integrated into a marine eco-reserve, which will be located between the ferry terminal and the museum of the sea. Due to its innovative and complex nature, Peiraos do Soplor is executed in several phases, starting with the installation of an underwater garden, for CO2 fixation, and the planting of Zoostera, continuing with the construction of an underwater observatory that will facilitate the city the observation of marine life, and ending with the construction of Peiraos do Soplor on the promenade in Bouzas.

We continue with our inescapable objective of being the Green Port of reference in Southern Europe, and proof of this are our environmental certifications such as ISO 14001, the EMAS III registration or the ECOPORTS PERS certificate which make the Port of Vigo one of the four European ports that hold these three certifications.

In 2019, the Vigo Port Authority worked intensively to comply with Our Oceans commitment, which was signed in October 2017 and which aimed to reduce polluting gas emissions by 30% (CO2, SOX, NOX), as well as to achieve an energy self-sufficiency of 3%, by year 2022. For this, a series of initiatives have already been launched, such as the contracting of electricity supply for the Port 100% from renewable sources, signed last November, which causes an immediate reduction of the carbon footprint of the Port of Vigo, or also the contracting of the installation of photovoltaic solar panels in the central offices of the Port Authority, which are already contributing up to 20% of energy saving, or the Auction Hall 4.0 project, with the future installation of more than 146kw/h of photovoltaic panels in the Auction Hall.

Parallel to this, the self-sufficient Auction Hall 4.0 agreement was signed with Puertos del Estado (State Ports) for a value of one million euros and aid to the IDAE (Institute for diversification and energy saving) worth more than three million euros has been approved for Auction Hall 4.0 and the improvement of the exterior lighting of the Port, which together is estimated to reduce consumption by 32.6%.

On the other hand, the Port of Vigo continues to bet on Liquefied Natural Gas as an alternative fuel or on the implementation of electricity supply (OPS) to ships. As proof of this were the tests carried out last November, where electricity was supplied to a Ro-Ro ship through a Liquefied Natural Gas generator, or the design of the LNG supply facilities in the Port of Vigo, or the different studies for the implementation of OPS in the terminal in Bouzas or the terminal for ocean liners, which tried to combine renewable energies with supply to ships, and which continued to be studied in 2020.

Knowing that training plays an important role, with the Blue Careers project more than 340 professionals from the Port community were trained in 2018 and 2019 on topics such as climate change, concept 4.0, ICT tools. At this moment, training continues with the Marenet project, which, together with Campus do Mar, is intended to create a training centre in the field of blue economy for the European Atlantic façade.

Finally, we want to show our gratitude to the Port Community, the university and the research centres. Without their collaboration and participation, it would be impossible to achieve compliance with the environmental objectives and goals of the Port of Vigo, which makes us be considered as one of the “Green” ports of Reference in Europe.

Port of Vigo

Port Authority of Vigo

Description of the Port

2


PESCADERIA


Port of Vigo
Port Authority of Vigo

2.1 Location and Main Features

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

With more than 14,000 hectares of harbored sea, the Port of Vigo provides a magnificent shelter against storms due to the natural protection that Cies Islands and Morrazo Peninsula provide. 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 2019 amounted to 4,382,044 tons. 87.12% of this amount corresponds to general merchandise, fundamental axis of the Port of Vigo, and only 6.79% to solid bulk and 1.06% to liquid bulk.

Another important data for 2019 is related to the cruise traffic which brought over 141,695 passengers in the city.

We must also highlight Fishing, which as a whole (frozen, salted, fresh and processed or preserved) amounted to 770,996 tons in 2019.

As for automobile traffic, in 2019 the movement of 481,277 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 2018	Year 2019
Liquid Bulk	93.912	46.770
Solid Bulk	271.820	297.778
Containers	2.667.697	2.659.344
Ro-Ro	1.067.556	1.116.655
General merchandise	3.770.116	3.817.779
Provisioning	148.448	139.914
Fresh Fishing	78.169	79.803
Interior Traffic	0	0
Total Traffic	4.362.465	4.382.044

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

2.3 The Port Authority of Vigo

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

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

-The planning, project, construction, conservation and exploitation of the works and services of the port, and maritime signals entrusted.

.-The management of the port public domain and maritime signals.

.-The optimisation of economic management and the profitability of the assets and resources assigned.

.-The promotion of industrial and commercial activities related to maritime or port traffic.

.-The coordination of the operation of different means of transport in the port.

-The management and coordination of both maritime and land port traffic.

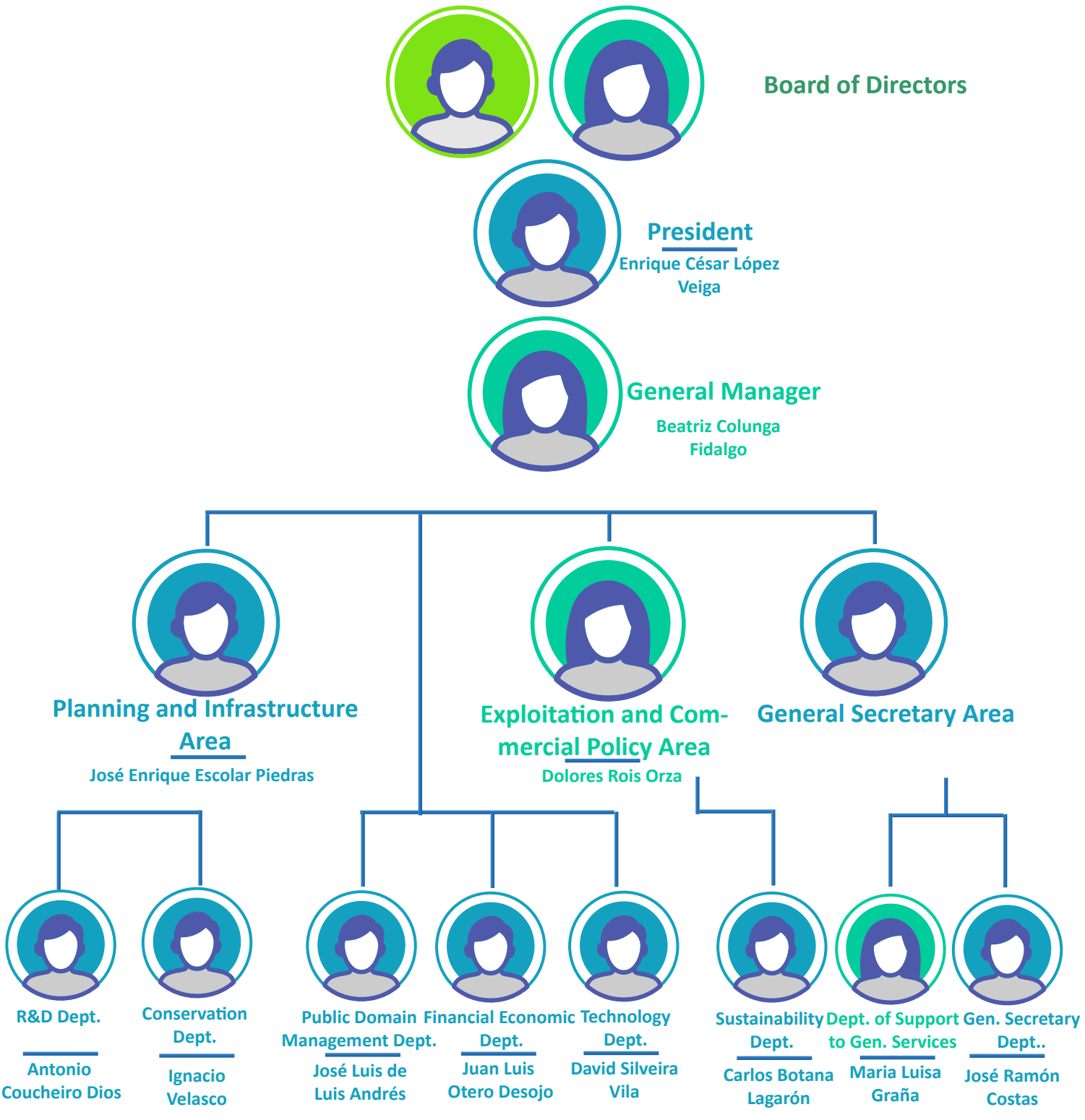
The Port of Vigo gives service to the most developed industrial area of Galicia and extends its influence area to Northern Portugal and Castillian Plateau, all of which being supported with the launch of the Motorway of the Sea. Likewise, the Port of Vigo also has competencies and functions in five municipalities: 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.

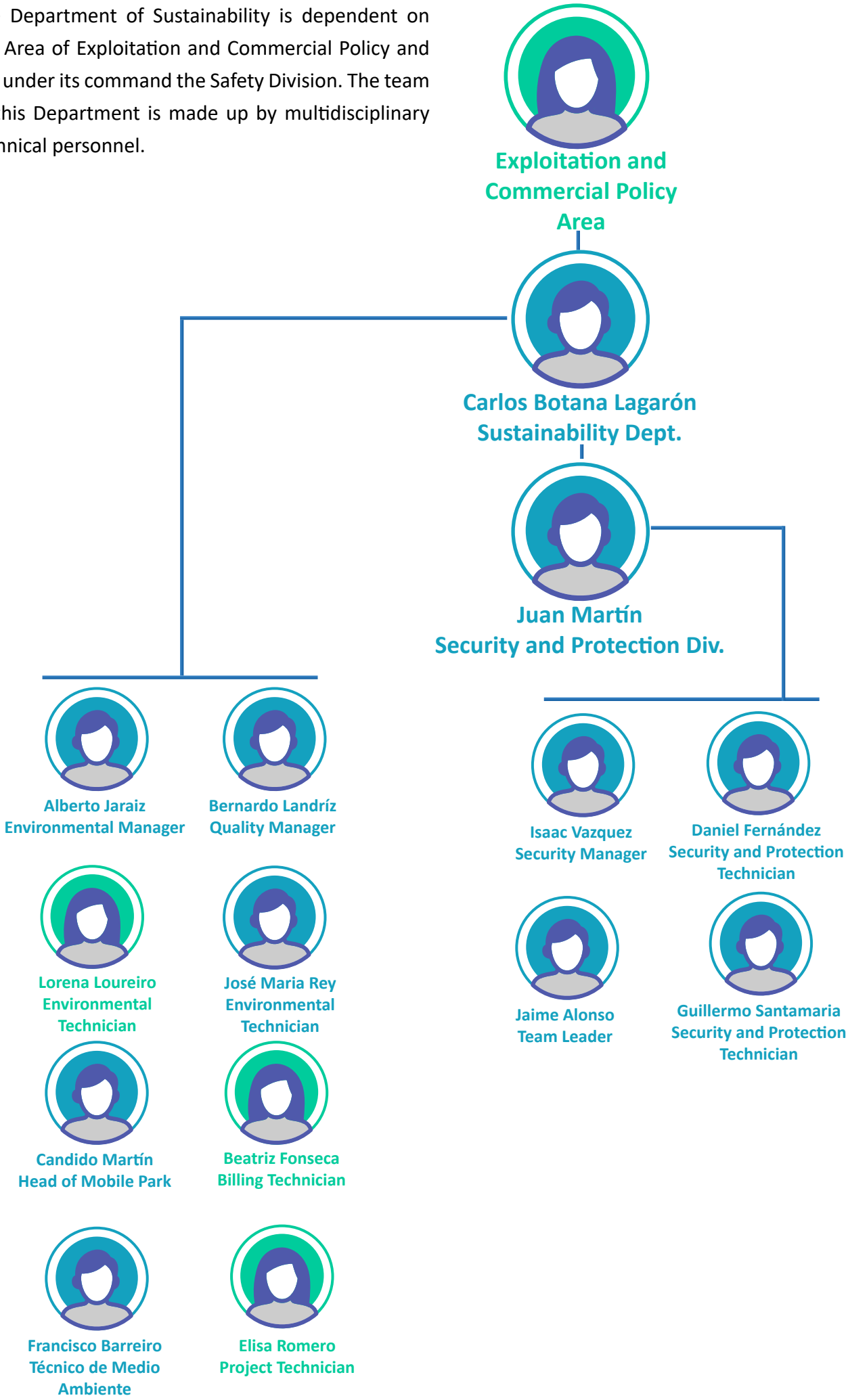
In 2019, the Port Authority of Vigo obtained a turnover of 31.2 million euros and 0.4 million losses.

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 fire protection.
◊ IS 06 Coordination of activities in concessions and authorisations.
◊ IS 07 Stay of ship in port.
◊ IS 08 Fishing operations.
◊ IMA 01 Fuel supply to ships.
◊ IMA 02 Oil supply.
◊ IMA 03 Construction, repair, scrapping and recycling of ships in tier and afloat.
◊ IMA 04 MARPOL Service.

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

EMAS
Gestión ambiental verificada
REG.NO. ES-GA-000203

DNV·GL OHSAS 18001 · DNV·GL ISO 9001 · DNV·GL ISO 14001

Port of Vigo
Port Authority of Vigo

3.2 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 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.**
- **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.**
- **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.**

Port of Vigo

Port Authority of Vigo

DNV·GL

CERTIFICADO DEL SISTEMA DE GESTIÓN

Número de certificado:
243087-2017-AE-IBE-ENAC

Fecha Inicial de Certificación:
03 abril 2014

Validez:
03 julio 2017 - 03 julio 2020

Se certifica que el sistema de gestión de

AUTORIDAD PORTUARIA DE VIGO

Plaza de la Estrella, 1, 36202, Vigo, Pontevedra, Spain
y las sedes que se mencionan en el Anexo que acompaña a este certificado

es conforme a la Norma del Sistema de Gestión Medioambiental:
ISO 14001:2015

Este certificado es válido para el siguiente campo de aplicación:
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.

Lugar y fecha:
Barcelona, 03 julio 2017

ENAC
CERTIFICACIÓN
Nº 06/C-MA004

Oficina de emisión:

Ana del Rio Salgado
Representante de la dirección

El incumplimiento de las condiciones establecidas en el Contrato puede dar lugar a la cancelación del certificado.
ENTIDAD ACREDITADA: DNV GL BUSINESS ASSURANCE ESPAÑA, SLU, C/ Garrotxa, 6-8, Pl. 3 Of. 1, 08820, El Prat de Llobregat, Barcelona, Spain.
TEL:+34 93 479 26 00. www.dnvgl.es/assurance

DNV·GL

CERTIFICADO DEL SISTEMA DE GESTIÓN

Número de certificado:
242141-2017-AHSO-IBE-ENAC

Fecha Inicial de Certificación:
03 abril 2014

Validez:
03 julio 2017 - 03 julio 2020

Se certifica que el sistema de gestión de

AUTORIDAD PORTUARIA DE VIGO

Plaza de la Estrella, 1, 36202, Vigo, Pontevedra, Spain
y las sedes que se mencionan en el Anexo que acompaña a este certificado

es conforme a la Norma del Sistema de Gestión de la Seguridad y Salud en el trabajo:
OHSAS 18001:2007

Este certificado es válido para el siguiente campo de aplicación:
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.

Lugar y fecha:
Barcelona, 03 julio 2017

ENAC
CERTIFICACIÓN
Nº 03/C-SG051

Oficina de emisión:

Ana del Rio Salgado
Representante de la dirección

El incumplimiento de las condiciones establecidas en el Contrato puede dar lugar a la cancelación del certificado.
ENTIDAD ACREDITADA: DNV GL BUSINESS ASSURANCE ESPAÑA, SLU, C/ Garrotxa, 6-8, Pl. 3 Of. 1, 08820, El Prat de Llobregat, Barcelona, Spain.
TEL:+34 93 479 26 00. www.dnvgl.es/assurance

DNV·GL

CERTIFICADO DEL SISTEMA DE GESTIÓN

Número de certificado:
243088-2017-AQ-IBE-ENAC

Fecha Inicial de Certificación:
03 abril 2014

Validez:
03 julio 2017 - 03 julio 2020

Se certifica que el sistema de gestión de

AUTORIDAD PORTUARIA DE VIGO

Plaza de la Estrella, 1, 36202, Vigo, Pontevedra, Spain
y las sedes que se mencionan en el Anexo que acompaña a este certificado

es conforme a la Norma del Sistema de Gestión de Calidad:
ISO 9001:2015

Este certificado es válido para el siguiente campo de aplicación:
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.

Lugar y fecha:
Barcelona, 03 julio 2017

ENAC
CERTIFICACIÓN
Nº 03/C-SC005

Oficina de emisión:

Ana del Rio Salgado
Representante de la dirección

El incumplimiento de las condiciones establecidas en el Contrato puede dar lugar a la cancelación del certificado.
ENTIDAD ACREDITADA: DNV GL BUSINESS ASSURANCE ESPAÑA, SLU, C/ Garrotxa, 6-8, Pl. 3 Of. 1, 08820, El Prat de Llobregat, Barcelona, Spain.
TEL:+34 93 479 26 00. www.dnvgl.es/assurance

3.4 EMAS III

CERTIFICADO DE INSCRICIÓN NO REXISTRO
CERTIFICADO DE INSCRIPCIÓN EN EL REGISTRO

O Secretario Xeral de Calidade e Avaliación Ambiental da Conselleria de Medio Ambiente, Territorio e Infraestruturas de la Xunta de Galicia certifica que:
El Secretario General de Calidad y Evaluación Ambiental de la Conselleria 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 activiadades 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
CONSELLERÍA DE MEDIO AMBIENTE, TERRITORIO E VIVENDA
Dirección Xeral de Calidade Ambiental e Cambio Climático

San Lázaro, s/n
15781 Santiago de Compostela

galicia

REXISTRO XERAL DA XUNTA DE GALICIA
REXISTRO DA CONSELLERÍA DE MEDIO AMBIENTE E ORDENACIÓN DO TERRITORIO
Data 01/07/2019 09:27:41
SAÍDA 3392 / RX 991186

AUTORIDAD PORTUARIA DE VIGO
05 JUL. 2019
Registro de ENTRADA Nº
Referencia:

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

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

AUTORIDAD PORTUARIA DE VIGO inscrita no sistema comunitario de xestión e auditoría medioambiental, co n. º ES-GA-000303 con data 06.10.2010, presenta a nova declaración medioambiental validada por DNV GL BUSINESS ASSURANCE ESPAÑA, S.L. (Unipersonal) dentro do prazo previsto. A dita declaración medioambiental foi validada segundo o Regulamento (CE) n.º 1221/2009 do Parlamento Europeo e do Consello de data 25 de novembro de 2009, relativo á participación voluntaria de organizacións nun sistema comunitario de xestión e auditoría medio ambientais EMAS modificado segundo o Regulamento (UE) 2017/1505.

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

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

Este documento ten validez ata o 13.06.2020, data límite da presentación da seguinte declaración ambiental validada, agás a súa anulación ou suspensión temporal.

Manuel Díaz Cano

Xefe de Servizo de Avaliación Ambiental de Proxectos

Asinado por: DIAZ CANO, MANUEL
Cargo: Xefe do Servizo de Avaliación Ambiental de Proxectos
Data e hora: 28/06/2019 10:15:17

CVE: EHxkL2H6h1
Verificación: https://sede.xunta.gal/cve

Xacobeo 2021

3.5 PERS Certification (Port Environmental Review Sistem)

CERTIFICATE OF VERIFICATION

ECOPORTS
PERSCERTIFIED

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

Autoridade Portuaria de Vigo
Spain

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

Port Environmental Review System (PERS) version 4

THE SYSTEM IS APPLICABLE
TO THE:

Activities, products and services of the port authority

Certificate no: 128
Verification date: 2 May 2017

ON BEHALF OF ESPO

ESPO

ON BEHALF OF LLOYD'S REGISTER
ROTTERDAM

Lloyd's Register
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.

3.6 Corrective Actions / Non-conformities

In 2019, 2 corrective actions were opened, one as a result of the internal audit and the other of the external audit, and they were successfully closed.

Port of Vigo

Port Authority of Vigo

Environmental Aspects

4

Port of Vigo

Port Authority of Vigo


-VI-5-382-07

4 Criteria for assessing Environmental Aspects

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

Criteria for assessing direct and indirect environmental aspects:

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

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

Criteria for assessing potential environmental aspects:

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

Criteria for assessing environmental aspects of a new project:

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

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

4.1 Aspectos Ambientales Directos

Activity / Service	Environmental aspects	Significant	Potential associated impact
General puerto	Electrical energy consumption	Yes	Consumption of natural resources
	Water consumption	Yes	
	Fuel consumption of natural gas boilers	Yes	
	Fuel consumption of propane boilers	Yes	
	Generation of battery waste	Yes	Potential pollution of soil and groundwater / marine environment
Faros	Generation of sewage sludge	Yes	
Limpieza y recogida de residuos	Generation of plastic waste	Yes	
	Generation of fishing nets	Yes	
	Generation of glass	Yes	
	Generation of MARPOL waste Annex IV	Yes	

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

General Port Activity

Consumption of electrical energy, water, consumption of fuels of natural gas and propane boilers: In 2019 there was an increase of 6.51% in the consumption of own electrical energy without any justification, due to an increase in the activity of the port.

Regarding water consumption, in 2019 there was a decrease of 11.76%. However, consumption is higher than the average of the last two years.

As for fuel consumption of propane gas and natural gas boilers, it is seasonal and varies every year due to various factors like the weather or the use of the social centre.

With regard to hazardous waste, an increase in the generation of batteries was detected.

Lighthouses

- Generation of sewage sludge: In 2019 there was a slight increase in the generation of sewage sludge from Faro Silleiro. This waste disappeared the next year due to the connection of this facility to the municipal sewage system.

Cleaning service

Recoverable waste: In 2019 there was an increase in some recoverable waste such as plastics, nets and glass, which gives rise to their being identified as significant environmental aspects, but from a positive point of view, since it implies an increase in the waste recovery ratios.

Generation of MARPOL waste: In 2019 an increase in MARPOL Annex IV waste was recorded, which, like recoverable waste, leads to its identification as significant environmental aspects from a positive point of view since it derives from a greater environmental awareness of users, preventing this type of waste from ending up in the sea.

4.2. Indirect Environmental Aspects

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

As a result of this survey, data are obtained on the consumption of energy, water, fuel, waste generation, etc., with which indirect environmental aspects are assessed.

Likewise, these visits also serve to advise companies and users on the best environmental practices as well as the legal requirements regarding environmental issues.

Port of Vigo

Port Authority of Vigo

Activity/Servcice	Environmental aspects	Significant	Potential associated impact
Shipyards	Generation of wastewater	Yes	Potential pollution of soil and ground-water / marine environment
	Fuel consumption	Yes	Consumption of natural resources
	Water consumption	Yes	
	Electrical energy consumption	Yes	
	Generation of hazardous waste	Yes	Potential pollution of soil and ground-water / marine environment
	Generation of waste assimilable to urban waste	Yes	
MARPOL Service	Generation of hazardous waste	Yes	
Fight against pollu-tion	Water consumption	Yes	Consumption of natural resources
	Electrical energy consumption	Yes	
	Fuel consumption	Yes	
	Generation of hazardous waste	Yes	
	Generation of wastewater	Yes	Potential pollution of soil and ground-water / marine environment
Waste management	Fuel consumption	Yes	
Fuel transport	Electrical energy consumption	Yes	Consumption of natural resources
	Fuel consumption	Yes	
	Generation of waste assimilable to urban waste	Yes	Potential pollution of soil and ground-water / marine environment
	Generation of hazardous waste	Yes	
Fuel supply	Fuel consumption	Yes	Consumption of natural resources
Water and energy supply	Electrical energy consumption	Yes	
Pest control	Water consumption	Yes	Consumption of natural resources
	Generation of hazardous waste	Yes	Potential pollution of soil and ground-water / marine environment
	Generation of wastewater	Yes	

4.3 Potential Environmental Aspects

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

4.4 Environmental Aspects New project

Activity / Service	Environmental aspects	Significant	Potential associated impact
Expansion of user departments in the Auction Hall	Generation of non-hazardous waste	Yes	Potential pollution of soil, groundwater / marine environment and air
	Generation of construction and demolition waste	Yes	
Expansion of the esplanade attached to the Auction Hall	Generation of non-hazardous waste	Yes	**Potential pollution of soil, groundwater / marine environment and air**
	Generation of construction and demolition waste	Yes	
Reinforcement of Dock 4 Orillamar	Generation of non-hazardous waste	Yes	Potential pollution of soil, groundwater / marine environment and air
	Generation of construction and demolition waste	Yes	
Provisional removable roof structure in road lighthouses	Generation of non-hazardous waste	Yes	**Potential pollution of soil, groundwater / marine environment and air**
Improvement of perimeter fences	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


CRESSI

5.1 Consumption of Resources

Water Consumption

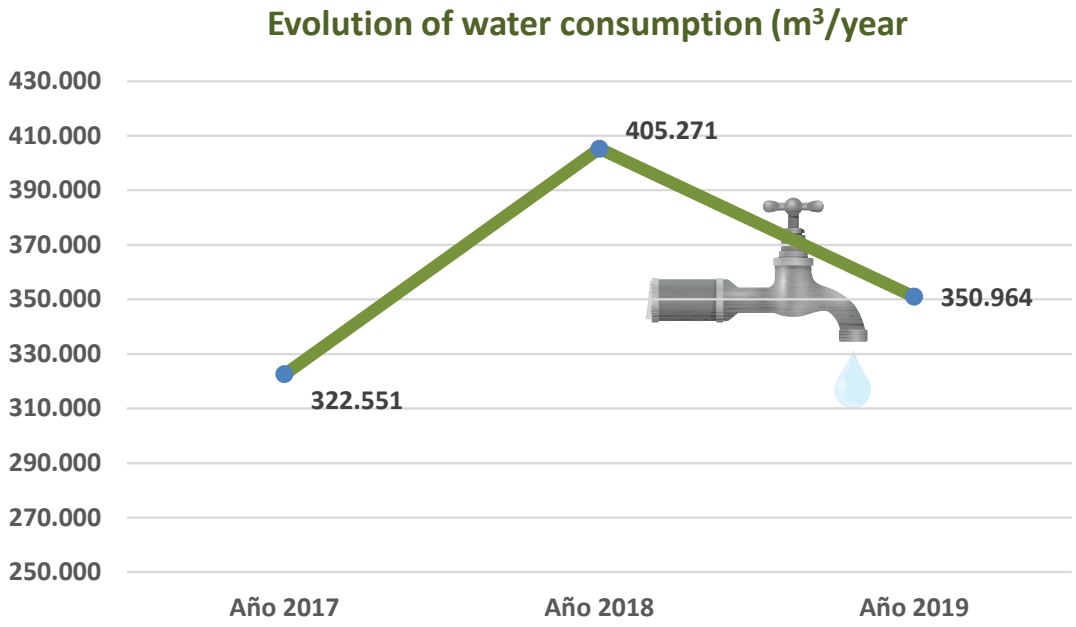
In 2019, there was a decrease in water consumption of more than 11% derived from the flushing of common areas and roads in Auction Halls, with salt water, and the optimisation in the management of the network.

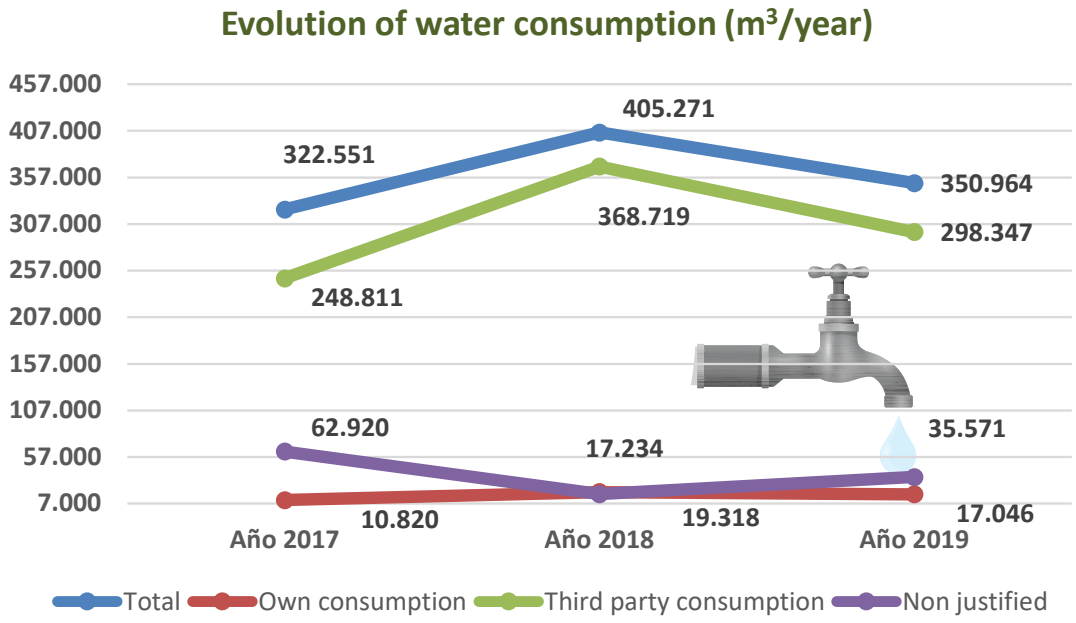
On the other hand, the consumption of fresh water by users and concessions has also decreased by more than 19%, since in many cases they have replaced the use of fresh water with salt water.

Regarding the percentage of water use, this stands at 89%, which represents 11% of losses and errors in its accounting.

Port of Vigo

Port Authority of Vigo

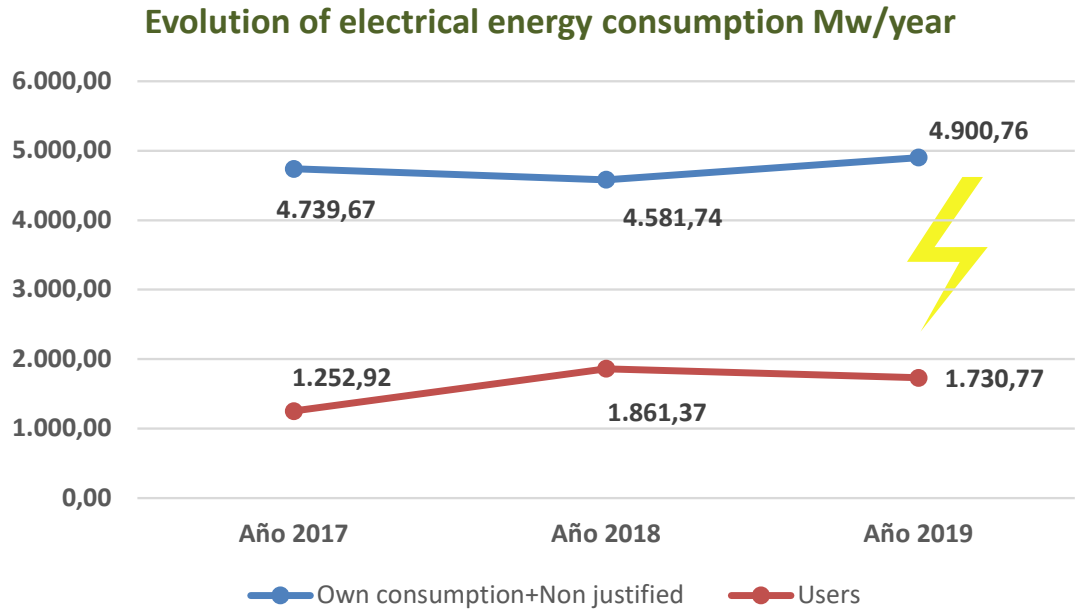




Electrical energy consumption

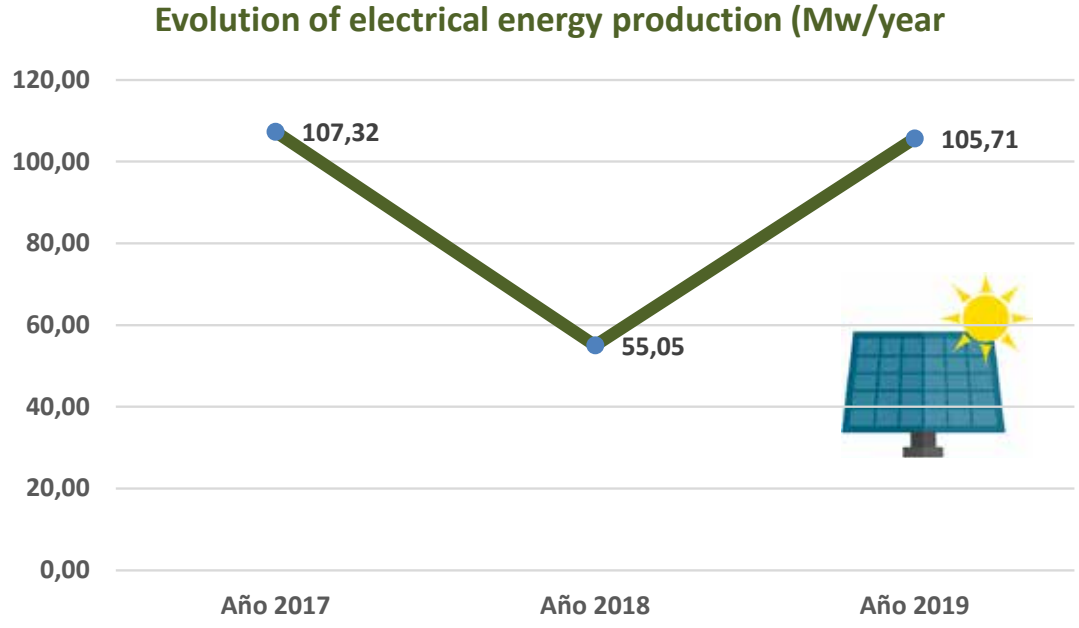
In 2019, there was an increase in electrical energy consumption of 6.5%, derived from an increase in port activity, which implied more hours of lighting, as well as an increase in the consumption of the cooling equipment in the Auction Hall. On the other hand, the consumption of third parties decreased by 7%.

All this represents an increase in global consumption of 2.84%.



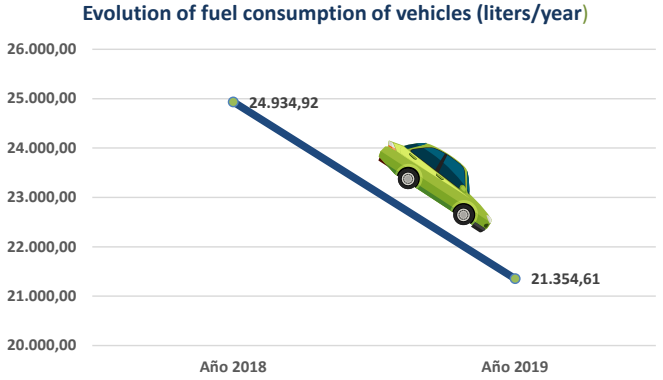
Regarding the production of electrical energy, the Port Authority of Vigo has a new photovoltaic energy installation that provides service to the administrative building in Plaza de la Estrella. The installation was added to the two existing ones, one of them located in the Ro-Ro terminal in Bouzas and the other in the port services warehouse on the dock in Arenal.

The three installations generated 105.71 Mw in 2019. This represents an increase of more than 47% in the production of electrical energy, with self-consumption ratios that reach 2.19%, which represents a clear approach to the self-sufficiency commitment of 3%.

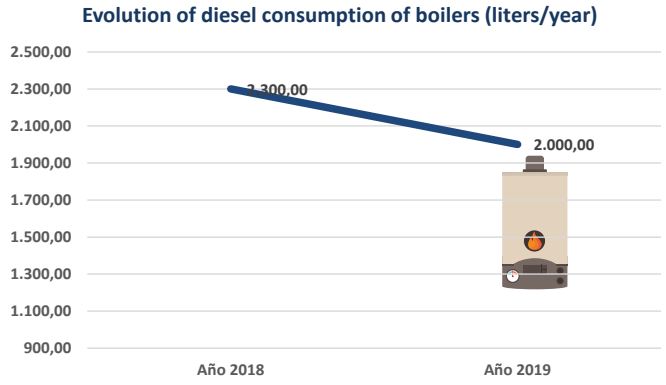


Fuel Consumption

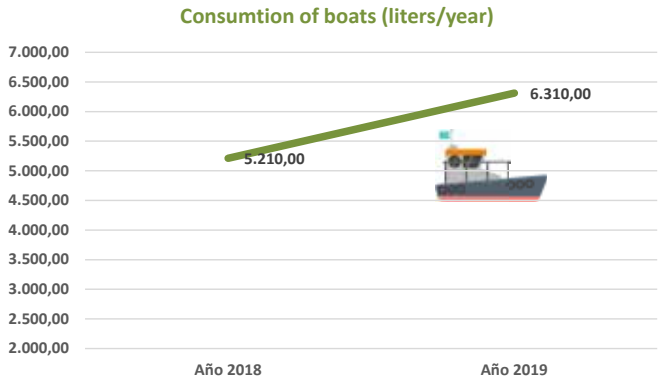
The development of conservation services, offices, fleet and vessels of the Port Authority of Vigo generates consumption of diesel, petrol, natural gas and propane gas, of vehicles, boats, boilers and various machinery. In 2019, there was a decrease in vehicle fuel consumption of 14.35%, derived from the efficient use of the fleet and the savings that hybrid and electric vehicles represent. This meant two consecutive years of decrease.



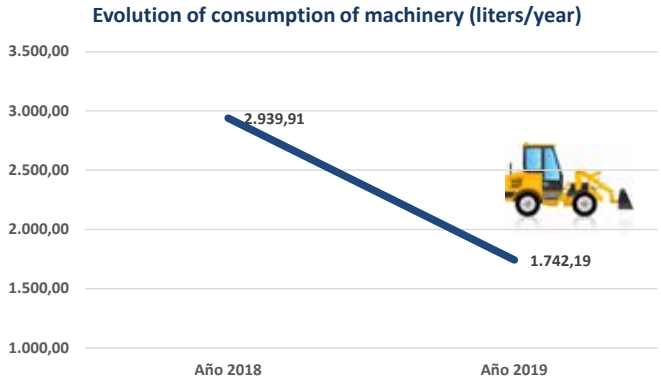
Regarding the consumption of diesel in boilers, there was a decrease of 13%. This consumption varies seasonally and depends directly on the weather of each year. Even so, it can be seen that there has been a notable decrease in the last two years.



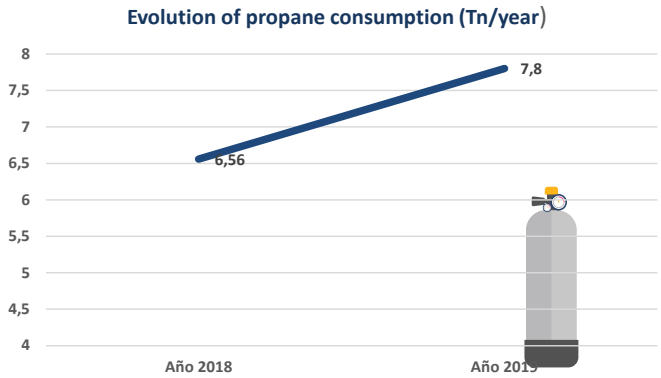
Regarding the fuel consumption of port vessels, in 2019 there was an increase of 17%, due to the fact that the fuel supplied was counted and not the fuel actually consumed.



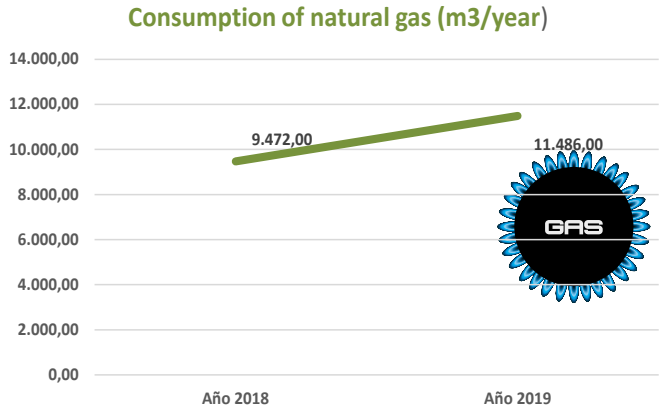
Fuel consumption of machinery also registered a decrease of 40.72%. This consumption depends on the conservation activity, which is highly variable over the years.



Propane consumption registered an increase of 15%. These values depend directly on the use of the Social Building, so they are remarkably variable year after year.



Natural gas consumption registered an increase of 17%. Like diesel and propane, it depends directly on the weather and the degree of use of the central offices of the Port Authority, so it varies year after year depending on these factors.



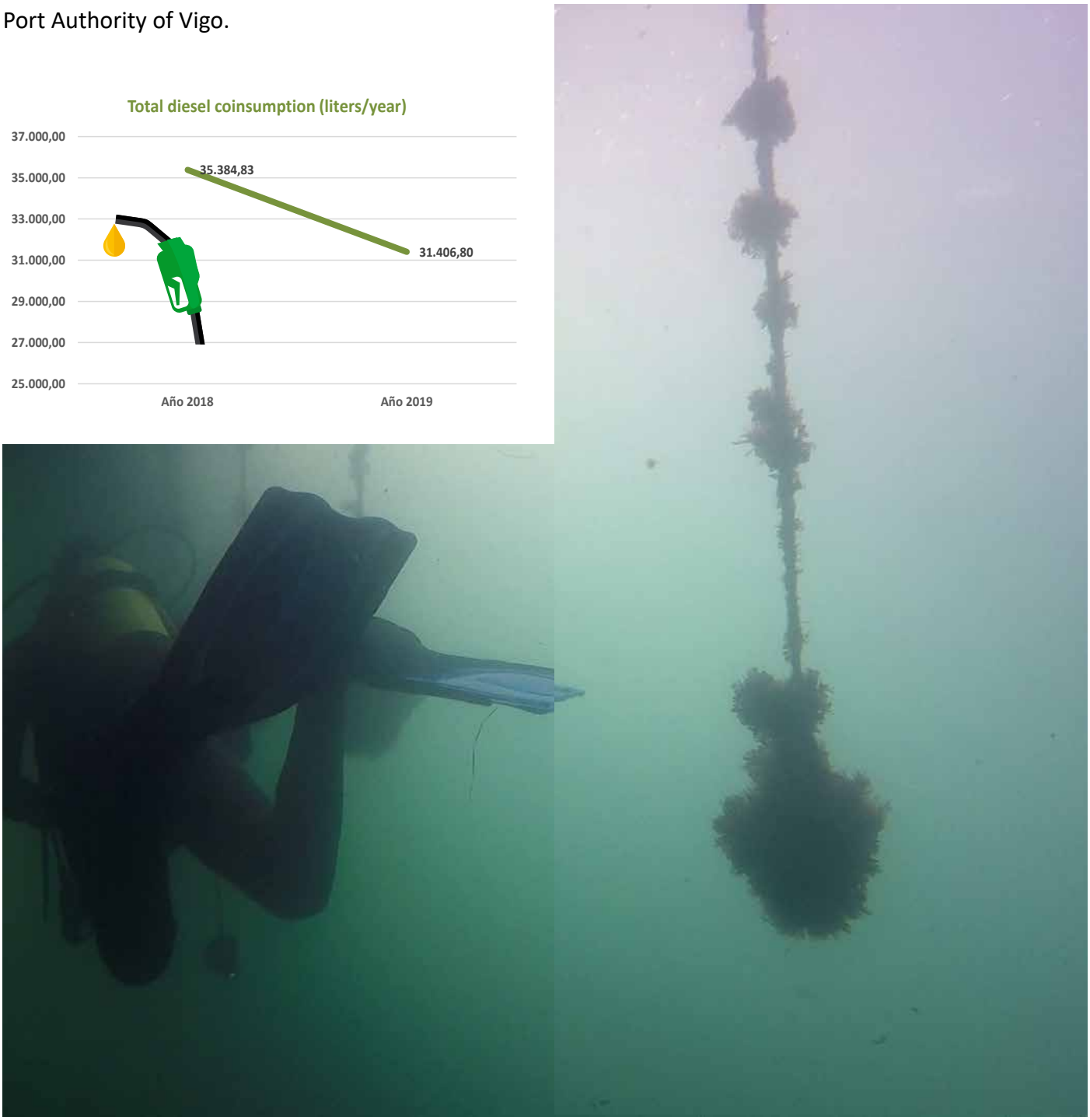
In 2019, global diesel consumption registered a decrease of 11%. This meant two consecutive years of reduced consumption, which shows the energy efficiency and sustainable development policy of the Port Authority of Vigo.

Other consumption and purchases

In 2019, the following materials were acquired:

Materials	Año 2017	Año 2018	Año 2019
Batteries (units)	322	193	211
Rechargable Batteries (units)	6	0	0
Paper (Tn)	2,9	3,2	2,7

In 2019, there was a decrease in the consumption of paper of 15.6%, derived from the digitization of the processes and operations of the Port Authority "Smart Viport". On the other hand, there was a slight increase of 8.5 % 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 sectorial 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.

In 2019, a notable decrease in the microbiological load was registered in all the samples analysed, which highlights the improvements in the canalisation and capacity of the water treatment system and canalisation of the municipal sewage system.

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	December 2018	2019
Total Coliforms	190 ufc/100 ml	<10 ufc/100 ml
Faecal Coliforms	60 ufc/100 ml	0 ufc/100 ml
Total Hydrocarbons	<0.50 mg/l	<0.50 mg/l
Suspended solids	8 mg/l	9 mg/l
Sedimentable solids	<0.09 ml/l	<0.1 ml/l
pH	8	8.3
Turbidity	0.1 unf	<0.1 unf
Dissolved oxygen	8.37 %O2	7.8 %O2
Phosphates	<0.38 mg/l	<0.53 mg/l
Chlorophyll	1 µg/l	6.3 µg/l

Fishing Port	December 2018	2019
Total Coliforms	160 ufc/100 ml	<10 ufc/100 ml
Faecal Coliforms	64 ufc/100 ml	0 ufc/100 ml
Total Hydrocarbons	<0.50 mg/l	<0.50 mg/l
Suspended solids	9 mg/l	9 mg/l
Sedimentable solids	<0.1 ml/l	<0.1 ml/l
pH	8	8.4
Turbidity	0.1 unf	<0,1 unf
Dissolved oxygen	8.6 %O2	7.75 %O2
Phosphates	<0.29 mg/l	<0.84 mg/l
Chlorophyll	<0.1 µg/l	16.6 µg/l

Bouzas	December 2018	2019
Total Coliforms	120 ufc/100 ml	<10 ufc/100 ml
Faecal Coliforms	58 ufc/100 ml	0 ufc/100 ml
Total Hydrocarbons	<0.50 mg/l	<0.50 mg/l
Suspended solids	8 mg/l	10 mg/l
Sedimentable solids	<0.1 ml/l	<0.1 ml/l
pH	7.9	8.1
Turbidity	0.1 unf	<0.1 unf
Dissolved oxygen	8.54 %O2	7.8 %O2
Phosphates	<0.29 mg/l	<0.42 mg/l
Chlorophyll	2.3 µg/l	6.8 µg/l

Guixar	December 2018	2019
Total Coliforms	30 ufc/100 ml	<10 ufc/100 ml
Faecal Coliforms	0 ufc/100 ml	0 ufc/100 ml
Total Hydrocarbons	<0.50 mg/l	<0.50 mg/l
Suspended solids	2 mg/l	8 mg/l
Sedimentable solids	<0.1 ml/l	<0.1 ml/l
pH	8	8,4
Turbidity	0.4 unf	<0.1 unf
Dissolved oxygen	8.6 %O2	7.58 %O2
Phosphates	<0.32 mg/l	<0.29 mg/l
Chlorophyll	1.2 µg/l	3.1 µg/l

Orillamar	December 2018	2019
Total Coliforms	81 ufc/100 ml	<10 ufc/100 ml
Faecal Coliforms	24 ufc/100 ml	0 ufc/100 ml
Total Hydrocarbons	<0.50 mg/l	<0.50 mg/l
Suspended solids	6 mg/l	8 mg/l
Sedimentable solids	<0.1 ml/l	<0.1 ml/l
pH	8	8.3
Turbidity	0.4 unf	<0.1 unf
Dissolved oxygen	8.28 %O2	7.65 %O2
Phosphates	<0.29 mg/l	0.32 mg/l
Chlorophyll	2.2 µg/l	7.9 µg/l

Sewage

The sewage system of the Port Authority is fully connected to the municipal sewage system, except the treatment system installed in Silleiro lighthouse.

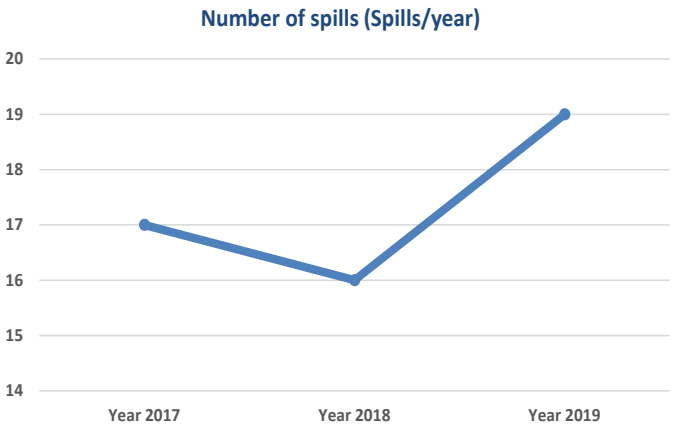
These facilities are provided with a treatment equipment with a primary and secondary anaerobic treatment system, that was granted the corresponding discharge authorization by Aguas de Galicia on November 19, 2008, which is subject to annual analytical controls.

This is the last year this water treatment system is used, since the sewage installation will be connected to the municipal sewage system of the Council of Bayonne.

Silleiro Lighthouse (Tests on January 24, 2019)		
Parameter	Result	Limit
Suspended solids	2 mg/l	35mg/l
DBO5	<10 mg/l	25 mg/l
Total DQO	<30 mg O2/l	125 mg O2/l
Ammoniacal Nitrogen	3.89 mg/l N	15 mg/l N
Oils and Fats	<10 mg/l	20 mg/l
Phosphorus	2,72 mg/l	10 mg/l

Hydrocarbons

On a daily basis, the personnel of the Sustainability Department carries 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 2019, but 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 in 2019.

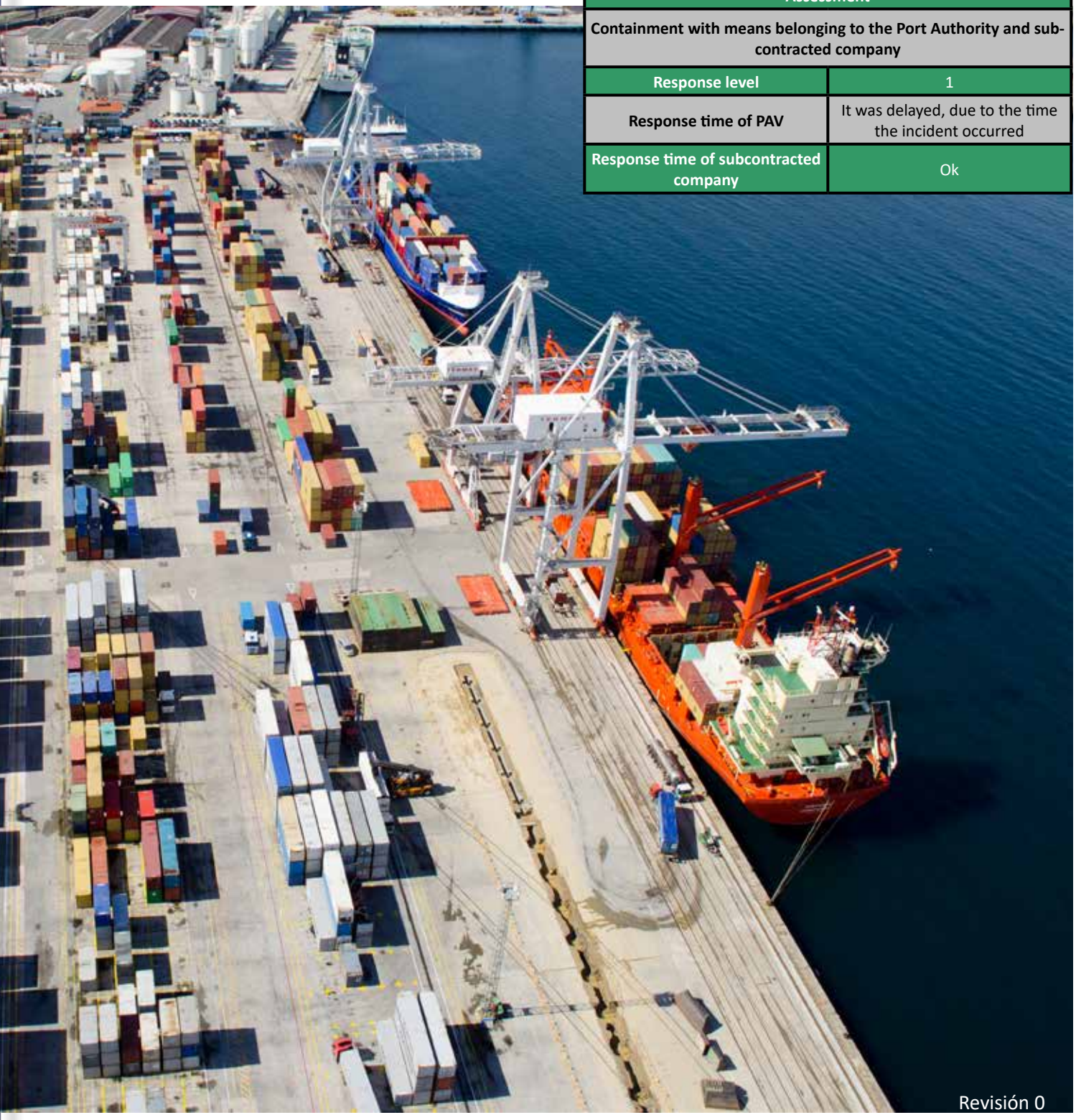
This document presents the procedures regarding the actions to be taken against a spill of hydrocarbons or chemical substances to the water layer. Besides, the "IMP" integrates all the plans of companies and concessions located in the port area in order to give an effective joint response in the event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

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

Actual exercise for the Fight against level I pollution

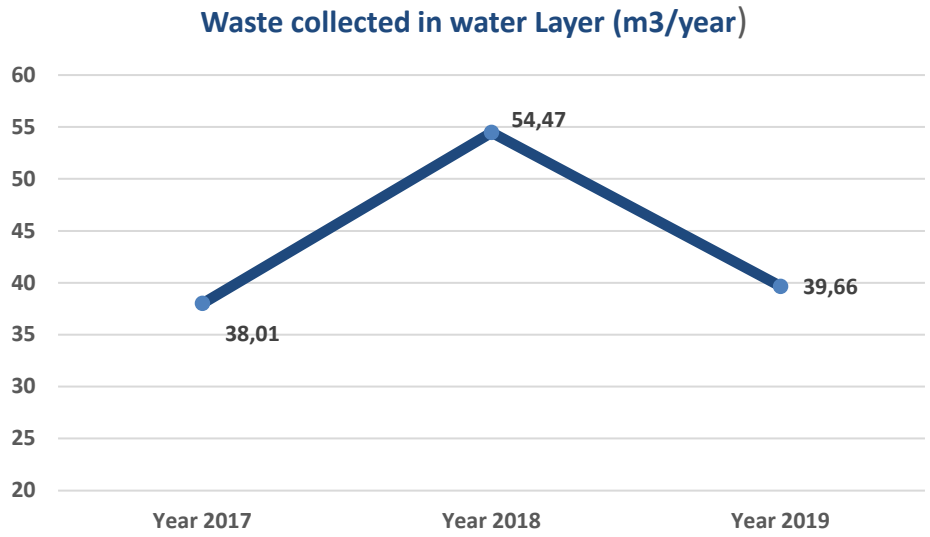
In January 2019, an actual level 1 pollution control exercise was carried out by Salvamento Marítimo (Sea Rescue), the Port Authority of Vigo, Xunta de Galicia and Capitanía Marítima (Maritime Captaincy). The incident is due to a spill of around 200 litres of hydrocarbon in the Berbés area.

Data regarding the exercise	
Causes	Spill of diesel into the sea
Emergency level	Level 1
Response time	1 hour
Start time	11:12 PM, 20/06/2019
End time	3:00 AM, 21/06/2019
Duration of the emergency	15 hours to the total elimination of the spot
Product	hydrocarbon / diesel
Assessment	
Containment with means belonging to the Port Authority and subcontracted company	
Response level	1
Response time of PAV	It was delayed, due to the time the incident occurred
Response time of subcontracted company	Ok



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.



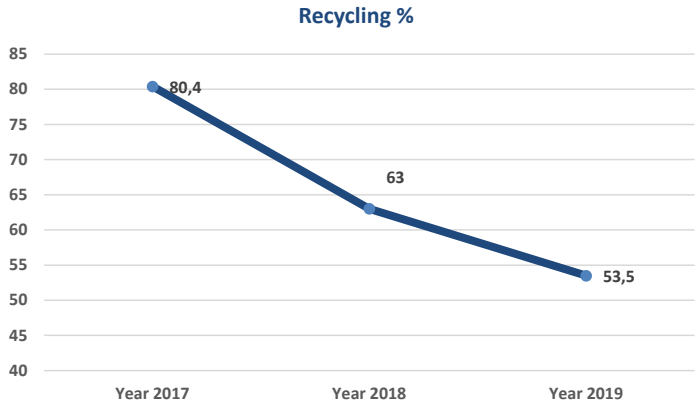
On the other hand, the Port Authority is still immersed in the MLSTYLE project, whose objectives include, among others, the use of waste collected by the fishing fleet during the fishing seasons.

Since the beginning of the project, a total of 12,346 the Port of Vigo and has been managed by the Port Authority of Vigo.

5.4 Waste and by-product management

The Port Authority continues with its policy of waste recycling, achieving during this year increases in the recycling of polystyrene (+ 7.77%), nets (+ 15.19%), tires (+ 100%). However, due to a change in organic waste management, the total percentage of recycled waste has decreased significantly with respect to previous years.

Waste and by-products (Tn)	Year 2017	Year 2018	Año 2019
Polystyrene	33.38	28.86	31.28
Paper and cardboard	65.56	62.36	38.65
Wood	241.01	167.77	134.26
Plastic	146.32	244.5	256.96
Packaging	71.76	75.85	56.44
Nets	16.28	60.5	71.34
Scrap	6.6	6.78	5.32
Glass	0	7.66	4.86
Tyres	0	0	6.62
Segregated organic waste	4,158.53	1,061.72	454.16
Total recycled waste and by-products	**4,739.44**	**1,716.00**	**1,055.68**
Total not recycled solid urban waste	**1,150.32**	**970.99**	**915.18**
% recycled waste and by-products	**80.4**	**63**	**53.5**



Other Waste

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

Other Non-hazardous Waste	Year 2017	Year 2018	Year 2019
Sludge from the sewage system (m3)	0.00	8.9	10.48
Sludge from water treatment (m3)	2	2.2	2.5
Portable toilets (m3)	8.1	8.02	0
Toner cartridges (Tn)	0.08	0	0.01
Non-hazardous electrical and electronic equipment waste (EEEW) (Tn)	0.78	8.1	1.84
Other non-hazardous waste (Tn)	3.84	0.13	0.03

During this fiscal year, 30Kg of obsolete port uniforms were destroyed. The disappearance of portable toilets in the Port should also be highlighted.

Hazardous waste

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

Hazardous waste (Kg)		
Year 2017	Year 2018	Year 2019
2,116	3,556.79	783.62

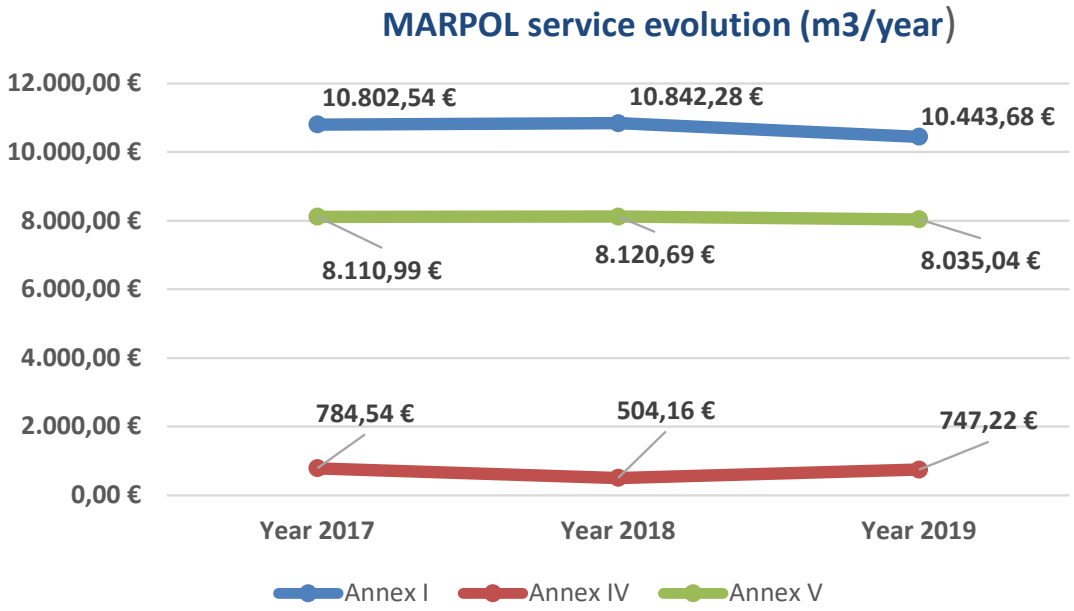
During this year, batteries, contaminated empty containers, paint and varnish waste and nursing waste were managed.

Port of Vigo
Port Authority of Vigo

MARPOL waste

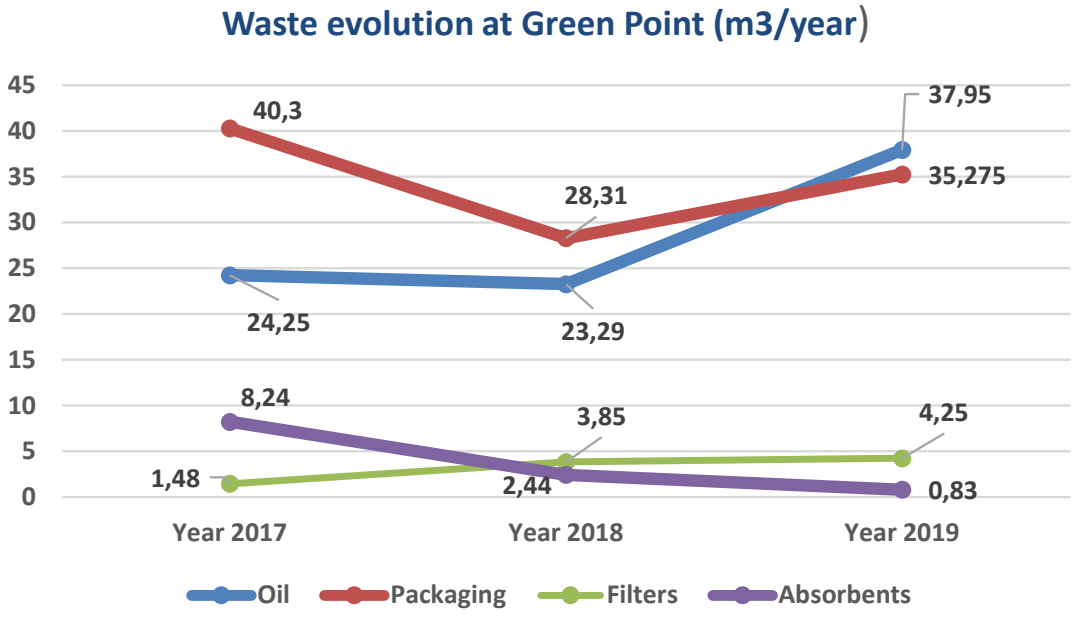
The service for receiving waste from ships (MARPOL) is regulated through the "Plan for the reception and handling of waste generated by ships", whose last revision was approved on November 29, 2019.

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 2017.



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 2019, 840 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".

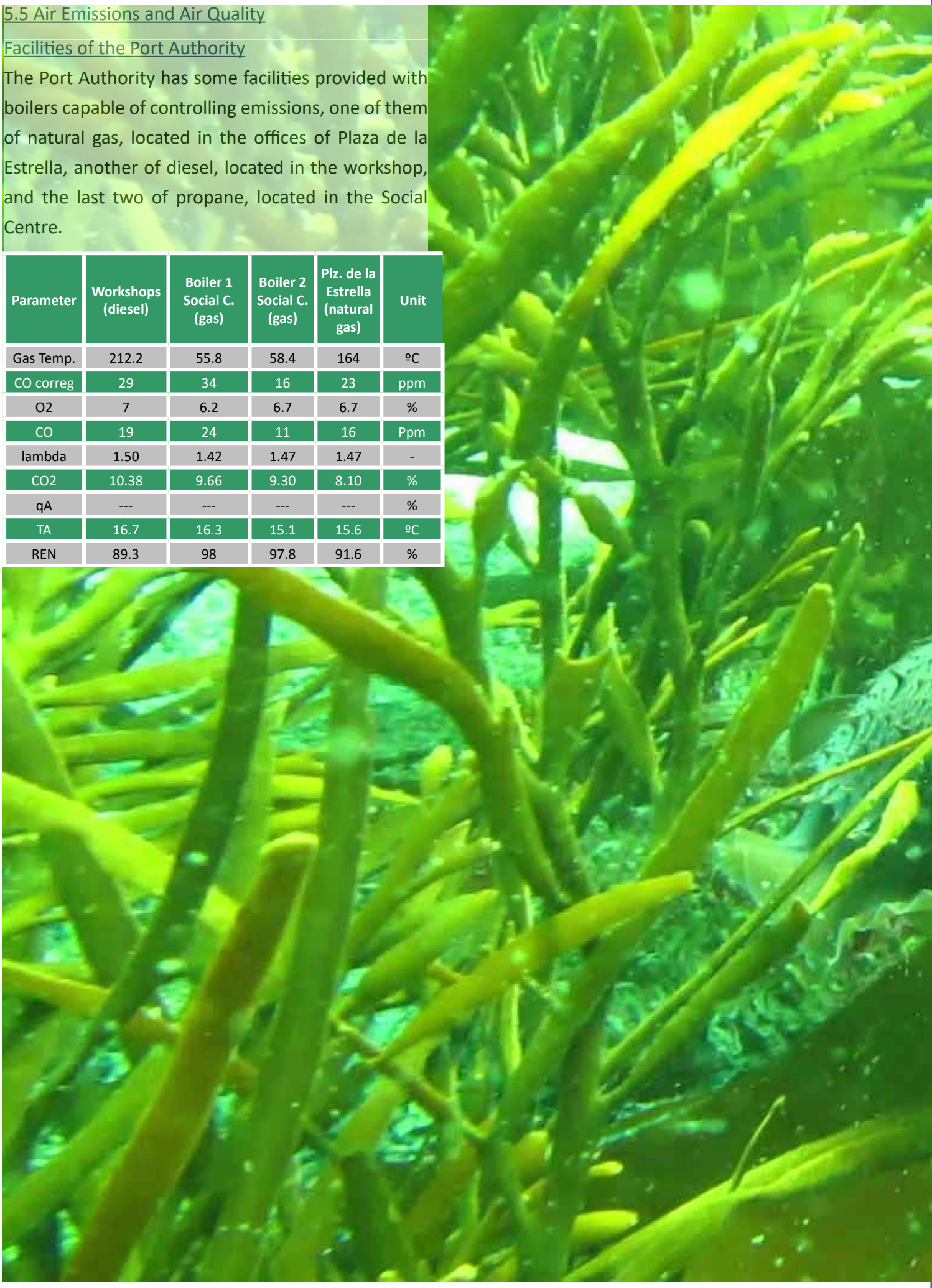


5.5 Air Emissions and Air Quality

Facilities of the Port Authority

The Port Authority has some facilities provided with boilers capable of controlling emissions, one of them of natural gas, located in the offices of Plaza de la Estrella, another of diesel, located in the workshop, and the last two of propane, located in the Social Centre.

Parameter	Workshops (diesel)	Boiler 1 Social C. (gas)	Boiler 2 Social C. (gas)	Plz. de la Estrella (natural gas)	Unit
Gas Temp.	212.2	55.8	58.4	164	ºC
CO correg	29	34	16	23	ppm
O2	7	6.2	6.7	6.7	%
CO	19	24	11	16	Ppm
lambda	1.50	1.42	1.47	1.47	-
CO2	10.38	9.66	9.30	8.10	%
qA	---	---	---	---	%
TA	16.7	16.3	15.1	15.6	ºC
REN	89.3	98	97.8	91.6	%



5.6 Environmental Noise

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

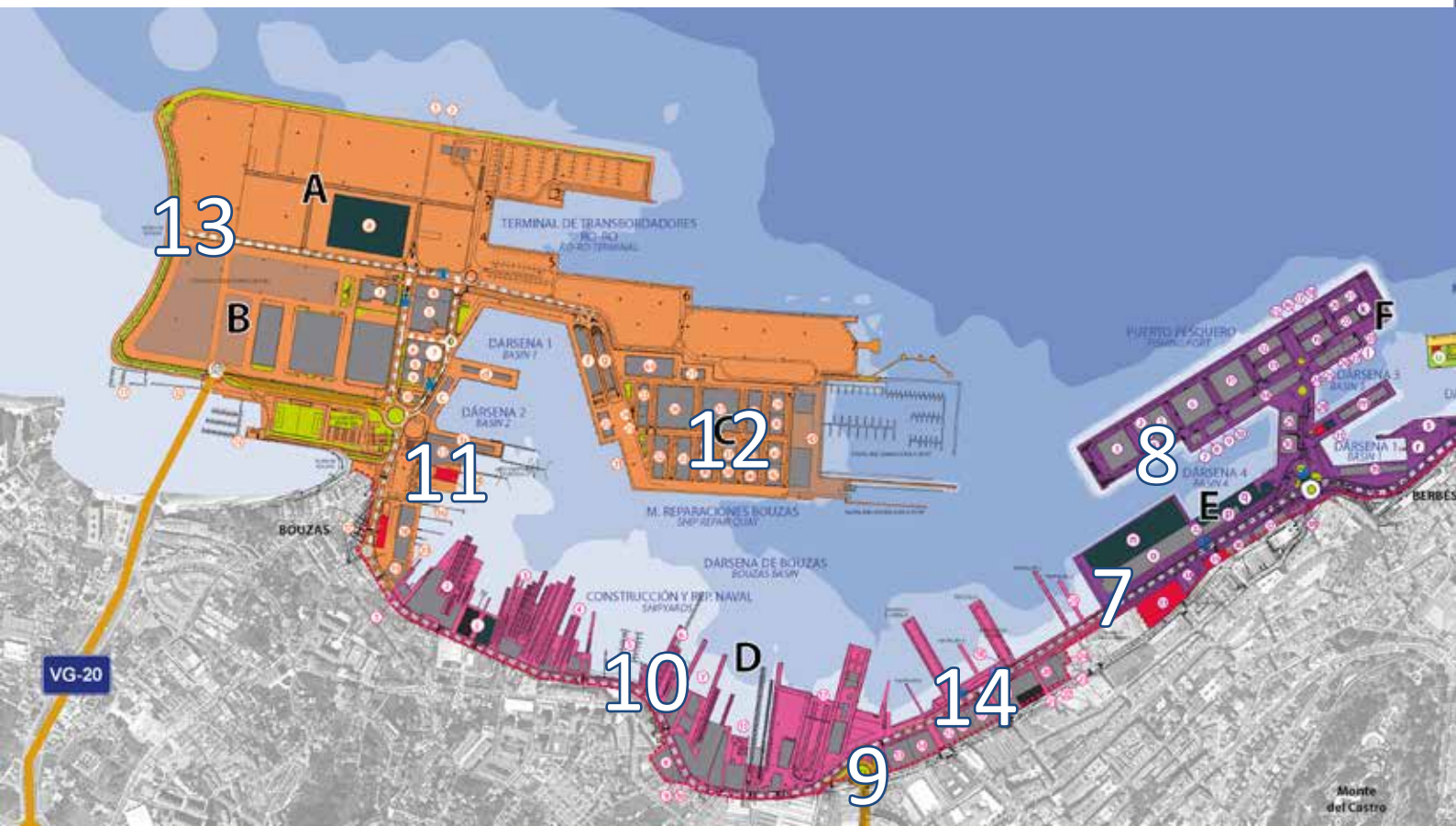
Time Slots	
Ld	7,00-19,00
Le	19,00-23,00
Ln	23,00-7,00

Point	Location	Ld (DB)	Le (DB)	Ln (DB)
1	Final Guixar Dock	57,77	51,27	58,83
2	Guixar Dock	66,63	55,37	48,83
3	Arenal Dock	65,17	66,97	62,83
4	Transversal Dock	61,87	54,87	58,97
5	Arenal Roundabout	66,03	64,90	59,47
6	Transatlantic Dock	54,53	54,13	54,40
7	Auction Hall	59,53	58,63	58,63
8	Green Point	60,70	60,67	69,30
9	Calle Coruña Roundabout	71,27	70,73	63,13
10	Armada Shipyard	76,10	73,00	58,50
11	Orillamar Road	68,93	62,43	61,03
12	Repair dock	62,90	52,03	48,97
13	Zona Franca	50,67	48,03	75,33
14	Eduardo Cabello Breakwater	64,70	61,07	71,67

DB: Decibels

Limits are occasionally exceeded in:

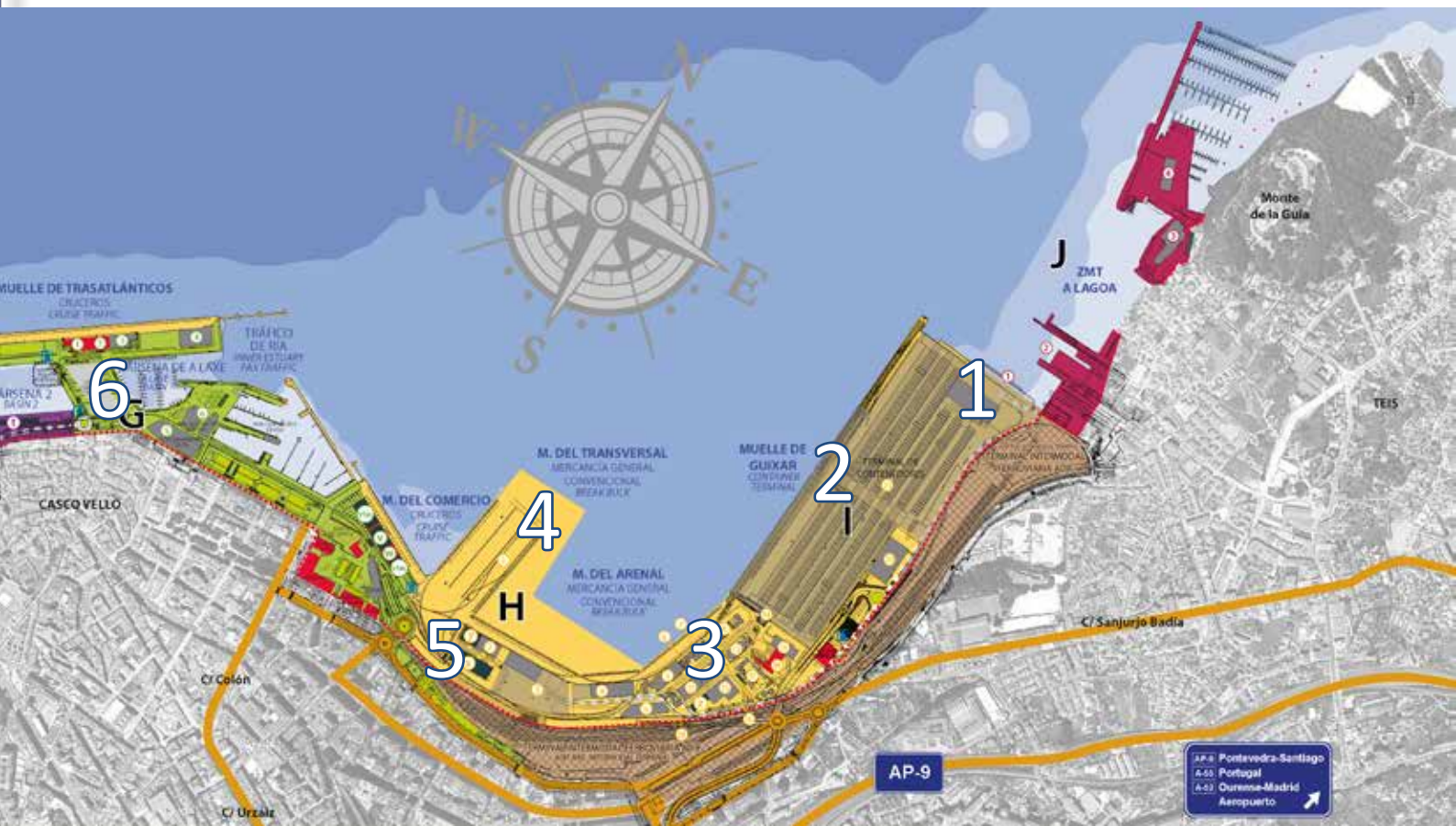
- The Green Point: Due to an unloading operation of a fresh fish vessel.
- Orillamar Road: Derived from the road traffic
- Zona Franca: Due to the passage of trucks transporting vehicles.
- Eduardo Cabello breakwater: Due to the equipment operations of a fishing vessel.



Objectives of acoustic quality Royal Decree 1367/2007				
Type of acoustic area		Noise rate		
		Ld (DB)	Le (DB)	Ln (DB)
a	Sectors from the region with land mainly for residential use	60	60	50
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.



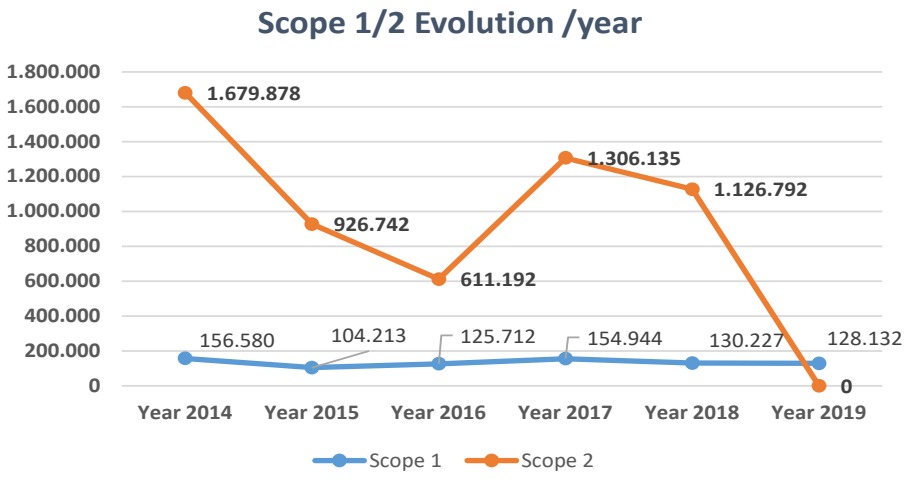
5.7 5.7 Carbon footprint

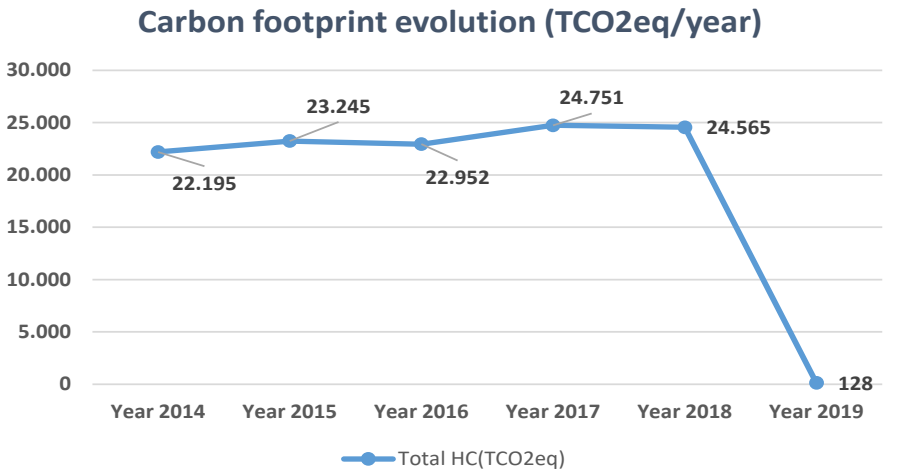
One more year, the carbon footprint study of the Port Authority of Vigo was carried out with the following results:

Scope	Año 2014	Año 2015	Año 2016	Año 2017	Año 2018	Año 2019
Scope 1	156.580	104.213	125.712	154.944	130.227	128.132
Scope 2	1.679.878	926.742	611.192	1.306.135	1.126.792	0

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

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





5.8 New indicators of environmental performance for the Public Administration sector

Indicator	Unit	Description	Minimum level of monitoring	Associated basic Indicator	
Total annual generation of office waste	kg / ETC / year	Total annual generation of office waste in office buildings divided by the number of equivalent full-time employees (FTE).	Organisation	Waste	Tota bui equi
Daily amount of office paper used per equivalent full-time employee	Sheets of paper / ETC / working day	Total number of sheets of office paper used each year divided by the number of equivalent full-time employees (FTE) and the number of working days.	Organisation	Efficiency in the use of materials	Offic tha ful
Adoption of means to promote the sustainable movement of workers between home and workplace	Yes / No	The staff is committed to promoting sustainable movement between home and workplace thanks to the application and promotion of tools that support behaviour change	Organisation	Emissions	p s wo
Total annual emissions of eq CO2 generated by professional trips	Tons eq CO2 / year	Total annual emissions of CO2 generated by professional trips in the municipality	Organisation	Emissions	C ye ratio the i
Total annual emissions of eq CO2 generated by professional trips per equivalent full-time employee	kg eq CO2 / ETC / year	Total annual emissions of CO2 generated by professional trips in the municipality per employee	Organisation	Emissions	C ye ratio the i
Availability of videoconferencing services for all staff and monitoring and promotion of their use	Yes / No	Video conferencing facilities are promoted within the organisation, and the number of hours of use is tracked. All staff members can use the video conferencing facilities	Organisation	Emissions	Vide ava use i
Adoption of a climate change adaptation strategy	Yes / No	A global climate change adaptation strategy within the municipality can be based on other local and regional adaptation strategies.	Organisation	Emissions / Energy Efficiency	A glo clim
Percentage of energy consumption that is satisfied with renewable energy sources	%	Renewable energy produced on site or in close proximity, divided by the energy consumption of public buildings or social housing.	Organisation	Emissions / Energy Efficiency	cor i re
Provision of information and advisory services	Yes / No	The public administration provides information and advice services on energy efficiency and renewable energies to citizens and companies to reduce their energy consumption.	Organisation	Emissions / Energy Efficiency	
% of green spaces	Yes / No	Green space area with respect to the total port area	Organisation	Biodiversity	corr are

Parameter of excellence	Formula	Value 2019	Good environmental management practices
al waste generated in office ildings is less than 200 kg / ivalent full-time employee / year	Office waste (Paper + Batteries + Tonner) / number of workers = 2,700 + 20 + 10/246	11.09	Promotion of double-sided and black and white printing, as well as promotion of saving paper and tonner (signs on printers)
ce paper consumption is less n 15 A4 sheets / equivalent l-time employee / working day	No. of sheets / No. of workers / No. of working days = 547,500 / 246/240	9.97	
Means are applied and promoted to support the sustainable movement of orkers between home and workplace.	-----	No	The use of electric vehicles is encouraged among workers in the PAV, through the provision of free recharging points.
Continuous improvement ear after year through the onalisation of travelling and increase in the use of hybrid or electric vehicles.	Tons of CO2 generated by professional vehicles / Year = 128.13 Tons CO2 / year	128.13	Videoconferences are promoted to hold meetings or online training, in order to try to reduce the number of professional trips
Continuous improvement ear after year through the onalisation of travelling and increase in the use of hybrid or electric vehicles.	Tons of CO2 generated by professional vehicles / Year = 128,132 Tons CO2/ year/ 246	0.52	
eoconferencing facilities are ailable to all staff, and their is monitored and promoted.	----	Yes	Teams application was installed to hold videoconferences on the devices in the meeting rooms
obal strategy for adapting to nate change was established for the municipality.	-----	Yes / Blue Growth / Our Ocean Commitment	Portos Project for the implementation of Marine Renewable Energies in the ports of the Atlantic Area, Auction Hall 4.0 project.
100% of the electricity nsumed in a public building s generated on-site from enewable energy sources.	Produced Energy / Consumed Energy (MW) = 4,900 / 105	2.14%	Ensuring the consumption of electrical energy from renewable sources in its entirety as well as the installation of photovoltaic equipment in the central administrative building, workshop and vehicle silo in Bouzas.
------	----	Yes / “Check List” visits	Included in the evaluation of indirect environmental aspects, advice is provided on the improvement of environmental management to concessions and authorisations
Most of the port area responds to the operational ea, with only green spaces	Green area / total built area: 46,176 / 2,533,647	1.82%	The maintenance and conservation of green spaces within the port environment is promoted

6 Environmental Communication

6.1 Training and awareness

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

In 2019, there were a total of 55 courses with 7,881 teaching hours, attended by 319 students.

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

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

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

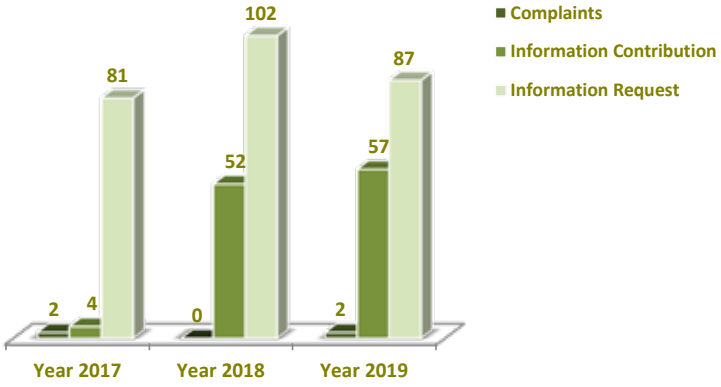
6.2 External communication

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

Communications can be made through:

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

On the other hand, environmental communications are recorded in the management system. In 2019 a total of 146 were collected, most of them to request information.



Port of Vigo

Port Authority of Vigo

6.3 Relationship with other institutions

The Campus del Mar, University of Vigo, ECIMAT, Meteogalicia, the Marine Research Institute, research centres such as Cetmar or Aimen, are examples of entities and institutions that collaborate closely with the Port Authority year after year.

Animal Protection Associations

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

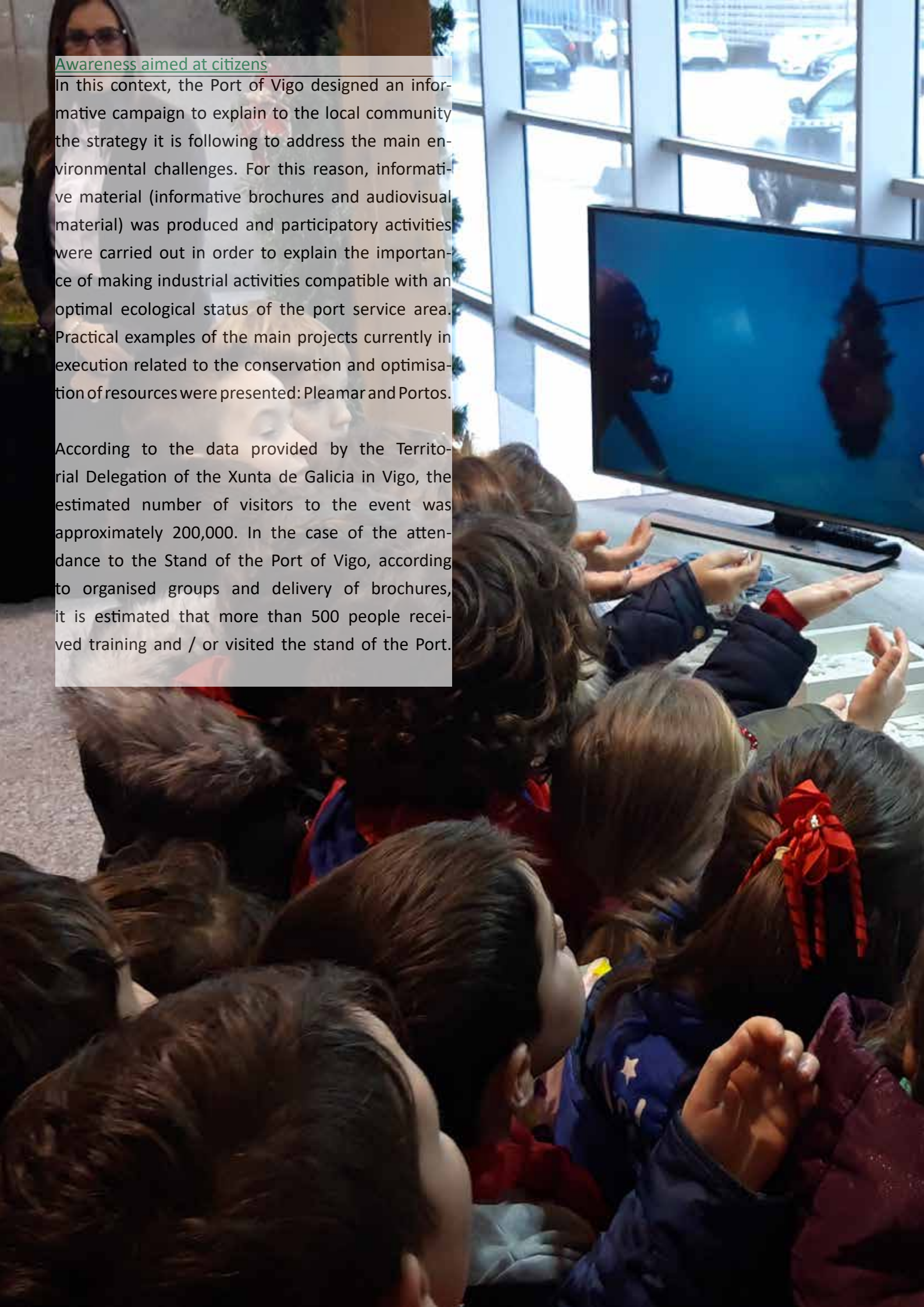
Seprona, Sasemar, Capitanía Marítima, Xunta

Regarding the environmental control of the ría and its surroundings, the Port Authority collaborates actively with Capitanía Marítima (Maritime Captaincy), Conselleria do Mar, Salvamento Marítimo (Sea Rescue) and Seprona among other administrations.

Collaborations with FAO, UNESCO and ESPO

Within the framework of the sustainability of the Blue Growth strategy of the Port of Vigo, and therefore of the continuity and reinforcement of ongoing and potential projects, international alliances with other ports at the regional and international level are strengthened. Through collaboration with multilateral institutions such as UNESCO and FAO, work is being done to promote the creation of an “International Network of Blue Ports”, which currently involves 19 ports at an international level, to promote joint work in favour of a sustainable port activity, and for which a workshop on good practices in blue fishing ports was held in June 2019. For this, it is also crucial to apply the Maritime Spatial Planning (MSP) approach led by UNESCO and DGMARE (European Commission) through which the interaction between economic activities and their impact on the economic, social and environmental spheres is analysed. More than 300 experts from the academic, governmental, business and representative fields of civil society had different successful experiences, in Vigo (May 2019), in which joint work results in initiatives with a high measurable impact of the Blue Economy strategy.

Beyond and in the field of positioning the Port of Vigo at a European level, a further step is taken by being appointed "Chairman" of the ESPO Blue Growth Working Group. Within this framework, small and medium-sized ports are working together to create 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.



Awareness aimed at citizens

In this context, the Port of Vigo designed an informative campaign to explain to the local community the strategy it is following to address the main environmental challenges. For this reason, informative material (informative brochures and audiovisual material) was produced and participatory activities were carried out in order to explain the importance of making industrial activities compatible with an optimal ecological status of the port service area. Practical examples of the main projects currently in execution related to the conservation and optimisation of resources were presented: Pleamar and Portos.

According to the data provided by the Territorial Delegation of the Xunta de Galicia in Vigo, the estimated number of visitors to the event was approximately 200,000. In the case of the attendance to the Stand of the Port of Vigo, according to organised groups and delivery of brochures, it is estimated that more than 500 people received training and / or visited the stand of the Port.


Impactos


Objetives and Goals
7


TRES
VI-5-16-97
VI-5-9-02

7. Objetives and Goals

7.1 Objetives 2019

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
	PERS renewal	
	Monitoring of LNG / OPS projects	
	Monitoring of energy efficiency projects	
	Monitoring of Greening projects	
Self-sufficient Auction Hall 4.0	IDAE aid	Yes
	Preparation of the Project / Specifications	
	Tender and Execution of works	
Monitoring of the Blue Growth Plan	Compliance with Indicators	Yes
	Blue Growth projects	

7.2 Fulfilment assessment

Objective 1, 2014-2022

Milestone 1, Turn the Port of Vigo into a Green Port benchmark in southern Europe (30% reduction in emissions (CO2, SOx and NOx) and 3% in energy self-sufficiency by 2022): Throughout 2019, the aid requested from IDAE for the execution of the Self-Sufficient Auction Hall 4.0 project was processed. With the latest data available (2018), it can be stated that an 8% reduction in emissions was achieved, and already with data from 2019 it is verified that an energy self-sufficiency of 2.19% is achieved.

Milestone 2, PERS Renewal: On September 24, 2019, the PERS renewal certification is obtained.

Milestone 3, Monitoring of LNG / OPS projects: On November 18, 2019, the last tests of the Core LnGas Hive project are carried out successfully.

Milestone 4, Monitoring of energy efficiency projects: Aid for Auction Hall 4.0 project is processed.

Milestone 5, Monitoring Greening projects: Peiraos do Solpor project was prepared throughout 2019.

Throughout 2019, an energy self-sufficiency of 2.19% is achieved, since at the moment only the photovoltaic installations of Bouzas, Arenal and Plaza de la Estrella are available. It is expected that by 2021 the facilities of Auction Hall 4.0 project will be available, which will mean a notable increase in energy self-sufficiency.

With regard to atmospheric emissions, with the available data (2018), an 8% reduction in emissions was achieved, which on the other hand will increase in 2020.

For all these reasons, the objective is considered to be working properly to be completely fulfilled in 2021, as planned.

Objective 2, Self-sufficient Auction Hall 4.0:

Milestone 1, Processing of IDAE aid: Throughout 2019, the aid requested from IDAE for the execution of Self-Sufficient Auction Hall 4.0 project was processed.

Milestone 2, Preparation of Auction Hall 4.0 project: In 2019 the technical assistance for the preparation of Auction Hall 4.0 project is approved.

The proposed objective is not achieved, since the

granting of aid by IDAE dates from December 14, 2019, so the entire project suffered delays.
It is considered appropriate to extend this objective to year 2020-2021.

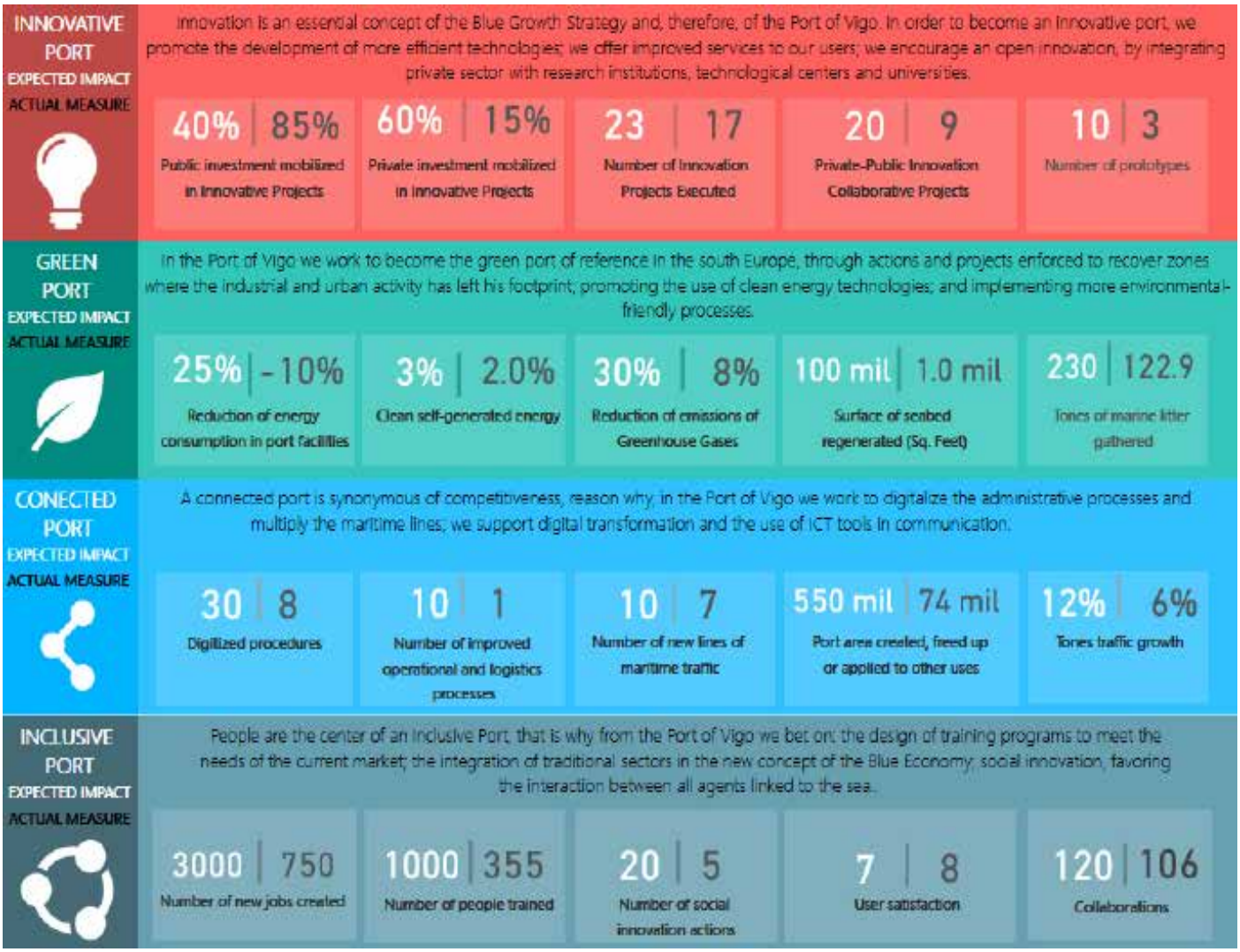
Objective 3, annual: Monitoring of the Blue Growth Plan

Milestone 1, Compliance with Indicators: Throughout 2019, the indicators of the Plan are monitored through the website www.bluegrowthvigo.eu.

Milestone 2, Review and monitoring of projects and working groups of the Blue Growth Plan: In 2019 the working groups hold their regular meetings.
First semester:
- June 13, 2019: Naval Construction WG
- June 14, 2019: Fresh Fish and Frozen Fish WG, Biotechnology and Blue Energy WG.
- June 17, 2019: General Merchandise, Containers and RoRo WG
- July 10, 2019: WG Training and History and Maritime-Port Culture
- July 19, 2019: Cruise Traffic WG

Second semester:
- December 4, 2019:General Merchandise, Containers and RoRo WG, Fresh Fish and Frozen Fish WG

The proposed objective is achieved, as the Blue Growth Plan continues to be carried out normally.



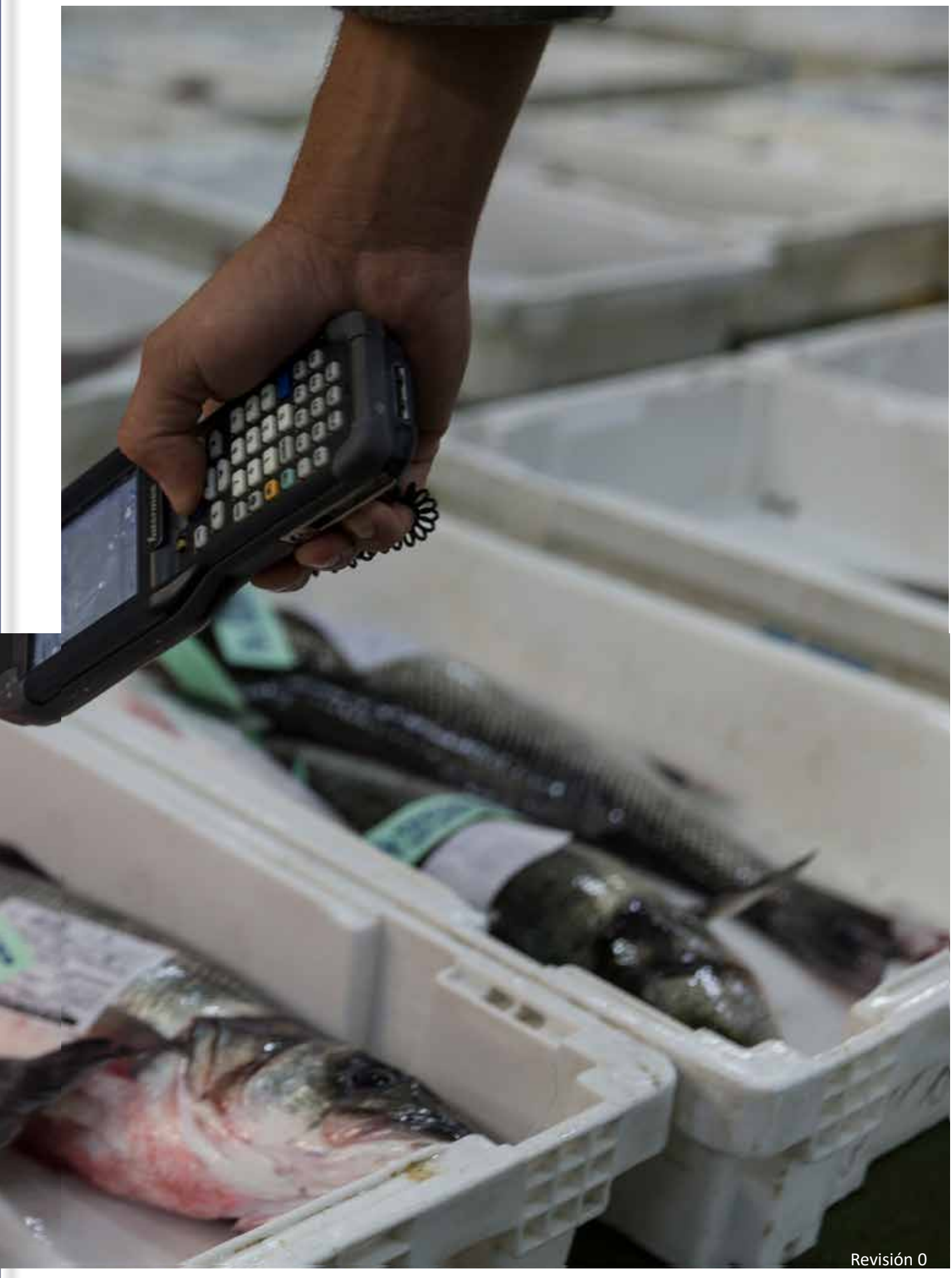
7.3 Objetives 2020

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)	2014-2022
	Monitoring of LNG / OPS projects	
	Monitoring of energy efficiency projects	
	Monitoring of Greening projects	
	Preparation of the Project / Specifications	2019
	Tender and Execution of works	
Monitoring of the Blue Growth Plan 2022 through indicators	Monitoring of the degree of compliance with the indicators of the Plan	2019-2022
	Review and monitoring of projects and working groups of the Blue Growth Plan	

For 2020, the objective of the Port of Vigo remains to fulfil their "Our Ocean" commitment, which aims to reduce emissions and energy self-sufficiency.

The second objective has been broadened in terms of compliance time, and is aimed at achieving "Auction Hall 4.0" project, which aims to achieve energy self-sufficiency in fish markets as well as an increase in energy efficiency.

And finally, the third objective is aimed at monitoring the Blue Growth initiative of the Port of Vigo.



8 Environmental Innovation and Improvement

8. Innovation and Environmental Improvement

8.1 Research Projects (R + D + I)

The Port Authority continues immersed in various R+D projects, in the field of sustainability, use of clean energy, environmental improvement and protection. Among these projects, we should highlight the following:

CORE LNGas hive

The Port Authority of Vigo continues with the Core LNGas Hive project and its main objective is to reduce air emissions derived from port activity.

This project is intended to supply electricity to the ship through a generator powered by liquefied natural gas, which will allow the ship to completely shut down its engines during its stay in the port.

In November 2019, a pilot test was carried out in Tenerife and supervised by the Head of the Environment of the Port Authority of Vigo.

Like in Vigo, the tests in Tenerife were carried out with total normality, giving a very positive result.

Throughout 2020, there will be the last phase of the project. In this phase, various meetings will be held with all partners to assess the suitability of the prototype and its possible commissioning in ports.

CEF programme

Puertos del Estado

Puerto de Vigo

Autoridad Portuaria de Vigo

enagas

Port de Barcelona

Puertos de Tenerife

GRUPO SUARDIAZ


SIEMENS
HARBOUR NATURAL GAS MARINE GENSET
SIEMENS
GRGU10118045GG

Self-sufficient Auction Hall 4.0

On November 27, 2019, the IDAE (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.

The tender and execution of the works will begin in 2020. Its purpose 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.

This project also includes the improvement and replacement of outdoor lights in various port areas:

	EXTERIOR LIGHTING PROJECT	ACTION PLACE
ACCEPTED	A total of 196 65W, 71W, 97W and 196W LED projectors are replaced and installed	Avda. de Orillamar
	Installation and parameterization of a luminaire controller with 1-10 Vdc regulation	
	80 530W LED projectors are replaced and installed	Transversal Dock and Arenal 2 alignment
	Installation and parameterization of a luminaire controller with 1-10 Vdc rgulation	
	A total of 248 530W LED projectors are replaced and installed	TT Terminal in Bouzas
	Supply, installation and parameterization of a luminaire controller with 1-10 Vdc regulation	
PENDING	267 48.5W, 55W, 122W, 154W, 148W, 154W, 295W LED lamps are replaced and installed	Roads in the fishing port
	97 84W, 134W, 148W, 194W LED lamps are replaced and installed	Roads in the repair dock

Puertalmar

Co-financed by the Biodiversity Foundation within the Pleamar Programme, and within the framework of the Blue Growth Plan, the "Promotion of the recovery of altered areas in maritime-port environments" project is launched.

The two main objectives are “A green port” of reference and “an inclusive port” focused on people.

The action programme of PUERTALMAR initiative will last 12 months and it includes activities aimed at disseminating the importance of marine port ecosystems, the integration of industrial activities, as well as the ecological and socioeconomic importance of conserving and recovering altered coastal ecosystems.

The project will carry out 9-month monitoring of hanging structures previously installed on docks in port areas that support the fixation of algae and other marine organisms. During this period of time, the characterisation of the created ecosystem and its evolution and repercussion on the socio-economic activities of the environment will be analysed.

PUERTALMAR, which is led by the Port Authority of Vigo, has two partner entities: the University of Vigo and the Port Authority of Melilla. UVIGO will be in charge of carrying out the technical research and monitoring activities, as well as adapting the generated scientific knowledge for dissemination activities. The Port Authority of Melilla will collaborate in activities related to the dissemination of the project results.

With all this we hope to achieve the objective mentioned above: the recovery of altered areas in maritime-port environments.

MLSTYLE

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

The project began in the ports of Vigo and Marín, then it was joined by OPROMAR, Federación Provincial de Cofradías de Pontevedra (the Provincial Federation of Associations of Pontevedra) and the Associations of A Garda, Baiona, Vigo, Redondela, Cangas, Cambados, O Grove, Portonovo, a Illa de Arousa and Vilanova de Arousa, and Portos de Galicia, through the Galician ports where the fishermen belonging to the aforementioned associations unload. All this in order to achieve a significant reduction in marine litter and a greater supply of materials that make its recovery economically viable.
In addition to the coordination and management tasks, there were 7 Activities or Task Packages:

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

Data on waste collected MLSTYLE		
Origin	**Associations/Ports**	**Weigth (Kg)**
On foot shellfish gathering	**Vilanova de Arousa**	**2.703**
	O Grove	**2.126**
	Illa de Arousa	**514**
	A Guarda	**276**
	Baiona	**92**
Total On foot shellfish gathering		**5.711**
Minor Arts	Vilanova de Arousa	**303**
	Portonovo	**184**
	Cambados	**3.047**
	Illa de Arousa	**3.920**
	Canido	**7**
	Cangas	**33**
	Vigo	**3**
	O Grove	**70**
	Redondela	**393**
Total minor arts		**7.960**
Ports	Vigo	**12.343**
	Marin	**13.625**
Total Ports		**25.968**
Total waste (Kg)		**39.639**

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 promoting 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.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gística de la Eurorregión

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.

PortForward

PortForward

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

This project has received funding in the European Commission's Horizon 2020 Research Program under Grant Agreement Number 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.

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:

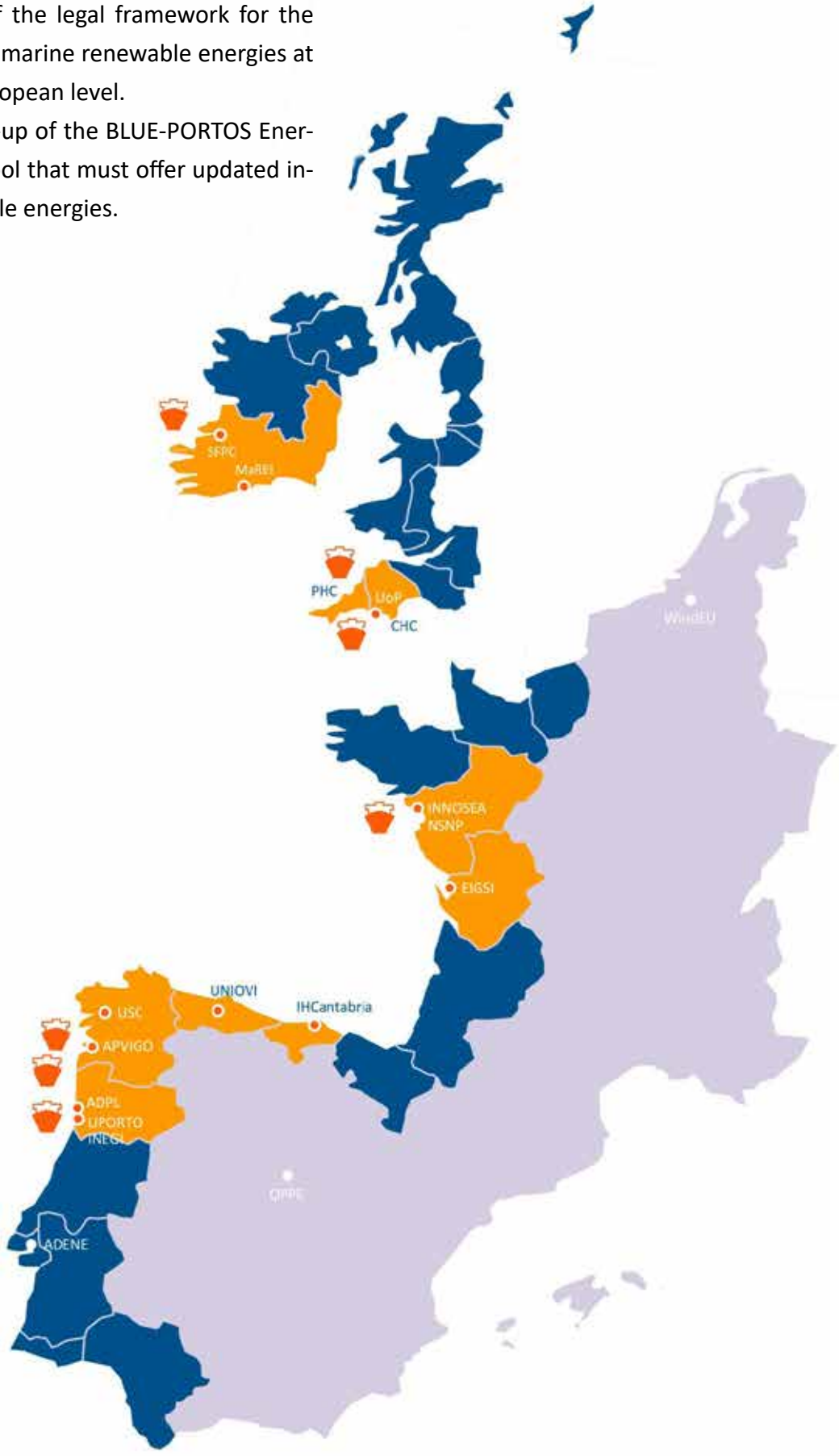
- Diagnose energy efficiency in the ports which participate in the project.
- Evaluate the potential of marine renewable energies in the target ports.
- Develop technologies that facilitate the use of marine energy.
- Design tools for the selection of adequate marine energies.
- Establish guidelines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

This project, which is led by the University of Porto, is made up of a consortium of 18 entities from 6 countries, including: Portugal, Spain, France, the United Kingdom, Ireland and Belgium.

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 will be evaluated within its area.

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

- Carry 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.



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 se caracteriza por establecer sinergias entre empresas, instituciones de investigación y centros tecnológicos con el fin de generar conocimiento y promover el desarrollo de nuevas tecnologías que fomenten las mejores prácticas sostenibles en áreas portuarias. Debido a su envergadura y complejidad, el proyecto se distribuye en cuatro fases secuenciales:

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 has been 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 society. For this, informational material, posters and panels, as well as awareness workshops, have been designed.

Phase ll. Blue Ports Ecosystem

The second stage consists of research actions applied in different pilot projects located in the Mediterranean and Atlantic ports. It is intended to explore the development of a new environmental eco-innovation product that makes it easier for ports to improve their sustainable practices. The product is based on the use of ecosystem services to reduce the carbon footprint of ports. The general objective of the project is to reduce the environmental impact of port activities through the creation of Best Practice Guidelines tested during the project: Carbon Management Strategies and thus test an innovative methodology in Port Environmental Impact assessment.

As a result, this phase will provide adequate solutions to minimize CO2 emissions, as well as increase biodiversity by carrying out port activities compatible with a high quality of the ecosystem.

Phase III. ECO Pontoon Living Ports

Based on the results of phase 1, phase 3 contemplates the installation of a biologically improved "wall" and an ecological concrete floating dock in the vicinity of Portocultura (an area of the Port of Vigo) with a first submerged monitoring platform and observation extension, which is also submerged, in front of the wall (see images).

The dock will show the biodiversity of Vigo to visitors. This emblematic project will be located in 2 locations, one in the heart of the port and the other in an open water area.

For the construction of the dock, innovative environmentally sustainable materials will be used, which will improve the ecological value of the intertidal zone. In addition, the colonisation of fauna and flora provides greater resistance and durability to the built structures.

Fase IV. Peiraos do Solpor

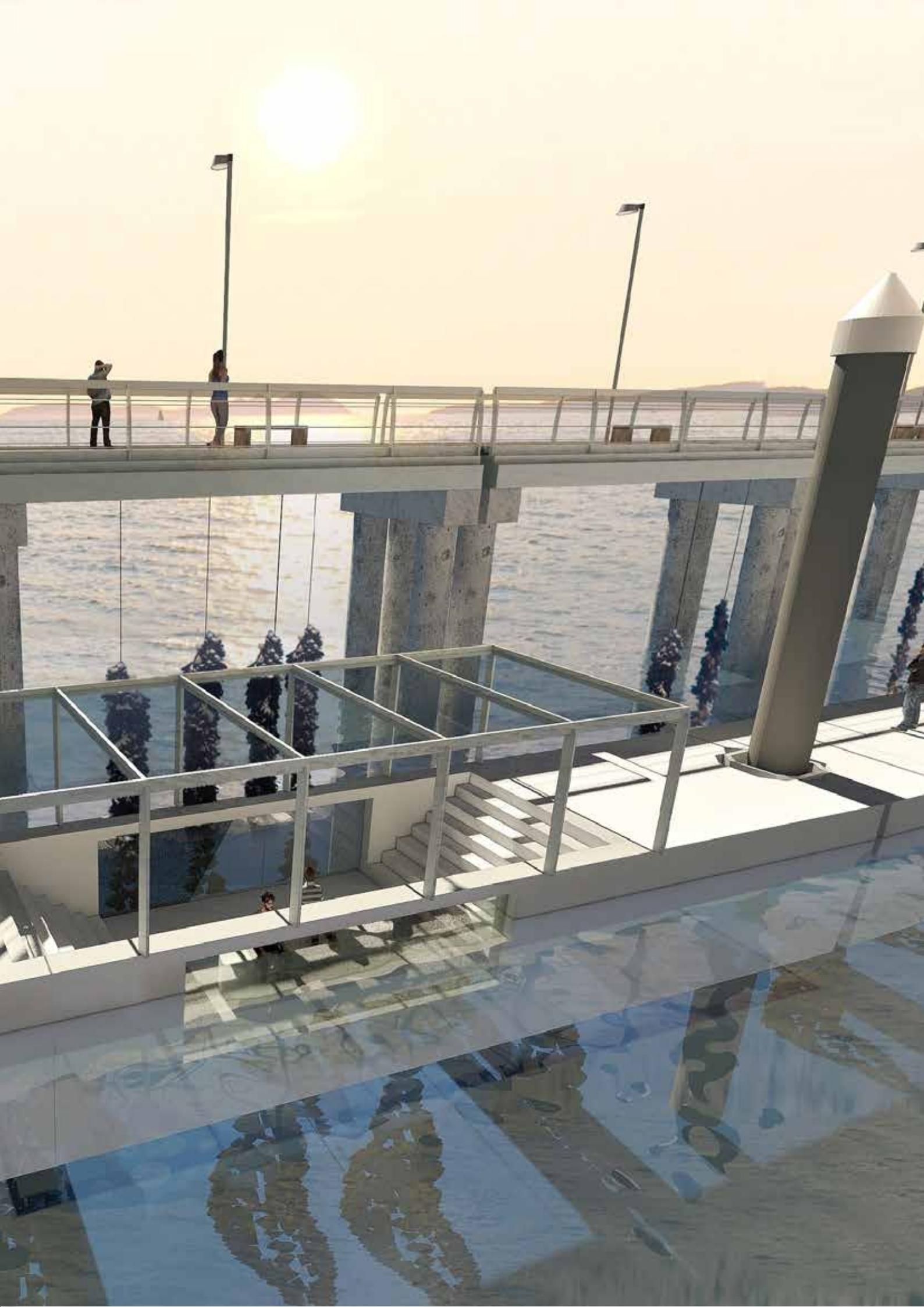
In the last stage, the construction of a dock for recreational use is proposed and it integrates the technologies and designs created in the previous phases. This large-scale implementation of all phases and their monitoring will demonstrate the important carbon offset in port infrastructure and the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

Therefore the final goal is to create an ecological reserve for the Port of Vigo. For this, a walk will be ena-

bled on the docks with elements that combine the structures created in the previous phases, which favour biodiversity. Besides, an area of the seafloor will also be regenerated with seagrass beds.

Port of Vigo

Port Authority of Vigo



OPS

In 2019, the Port Authority of Vigo carried out an OPS (Onshore Power Supply) implementation study in two areas of the port, the dock for Ocean liners and the Ro-Ro Terminal.

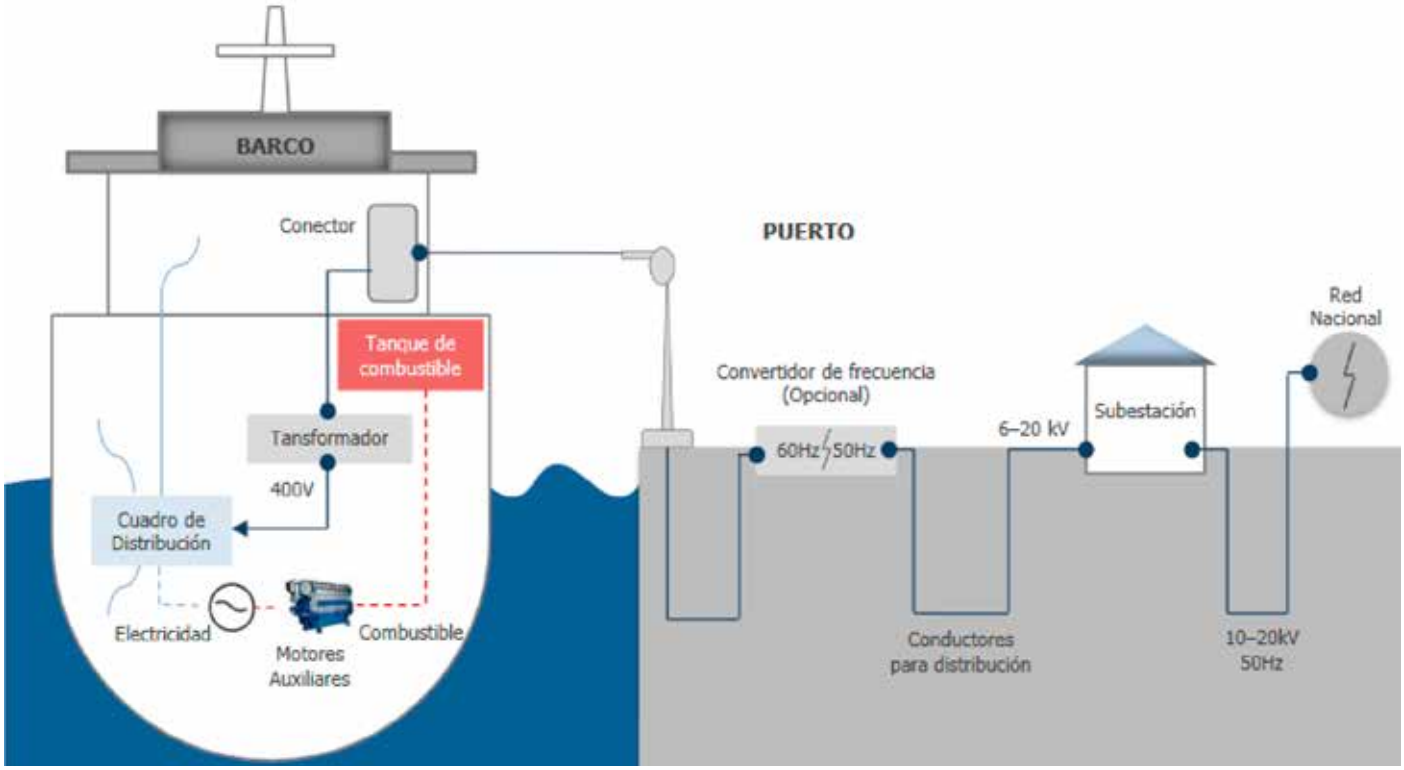
The use of these OPS (Onshore Power Supply) technologies, also known as “Cold Ironing”, consists in connecting the ships docked in port to the general electrical network. This allows them to shut down their auxiliary engines, which they would otherwise have to use to generate the power required to meet their various onboard needs. In this way, the OPS constitutes for maritime transport an alternative to burning fuel during the stay in port, which means a significant reduction in noise and polluting gas emissions.

This system has the following advantages:

• Reduce direct CO2, NOX, SOX and PM emissions in their surroundings, which is particularly important if they are close to population centres.

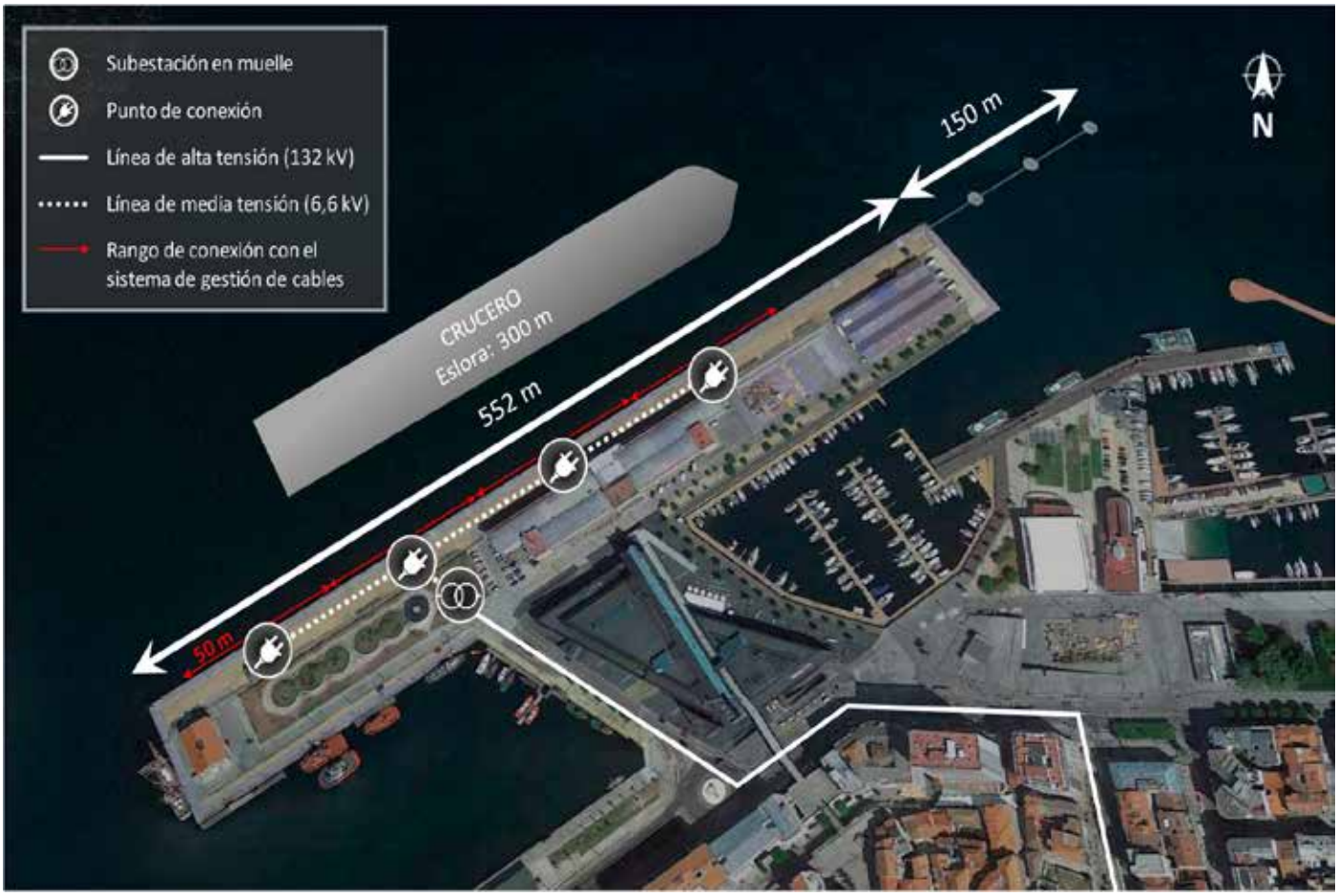
• Satisfy social demand, increasingly aware of the reduction of emissions, climate change and the harmful effects of particles on human health.

• Lead the change fostered by the European regulatory framework.



Ro-Ro Terminal

Dock for Ocean Liners



LNG in the Port of Vigo

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

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

These studies show that Ro-Ro vessels represent more than 60% of the potential demand for the next 10 years that could rise to an average of 73 GWh/year during the 2020-2029 period, mainly due to their recurring calls. (500 in 2016, 60% of them being carried out by only 10 vessels).

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

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

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

- Three cylindrical tanks of 330 m3 each
- Two pumps, one to supply LNG to the ship and the other to maintain cold recirculation in the distribution pipes.
- Transfer system to ship by means of cryogenic flexible hoses (2 intakes initially, with waits for up to 5).
- Supply of CNG to forklifts through a dispenser.
- BOG management: a compressor will be available for injection into the distribution network
- LNG dispenser for heavy vehicles (service station for concerted professionals).


GAS

Blue Growth 9

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: € 207,307,000, combining public and private funds.

Currently, more than € 34 million of public funds and € 5.9 million of private funds have been mobilized for the execution of projects and actions, resulting in a total of almost € 40 million.
Besides, more than € 14 million of public subsidies from mostly European funds have been received.
Currently, 25 projects are in execution. Through these projects, it contributes to the achievement of impact objectives in terms of environment, innovation and inclusion. Regarding the "Green Port" objective, it is possible to consult at http://bluegrowthvigo.eu/ impact the status of achievement of the established goals, defined according to the most relevant aspects regarding port activities: reduction of energy consumption, reduction of gas emissions, regenerated marine surface or the elimination of plastics from the sea. As part of Our Ocean commitment of the Port of Vigo, it is expected in 2022 to reduce its emissions by 30% and achieve a 3% energy self-sufficiency, having already achieved a 2% self-sufficiency with clean energy and an 8% reduction in energy emissions. In this regard, the actions to improve energy efficiency and the installation of renewable energy production systems should be highlighted.

INNOVATIVE PORT

EXPECTED IMPACT
ACTUAL MEASURE

Innovation is an essential concept of the Blue Growth Strategy and, therefore, of the Port of Vigo. In order to become an innovative port, we promote the development of more efficient technologies; we offer improved services to our users; we encourage an open innovation, by integrating private sector with research institutions, technological centers and universities.

40% | 85%	60% | 15%	23 | 17	20 | 9	10 | 3
Public investment mobilized in Innovative Projects	Private investment mobilized in Innovative Projects	Number of Innovation Projects Executed	Private-Public Innovation Collaborative Projects	Number of prototypes

GREEN PORT

EXPECTED IMPACT
ACTUAL MEASURE

In the Port of Vigo we work to become the green port of reference in the south Europe, through actions and projects enforced to recover zones where the industrial and urban activity has left his footprint; promoting the use of clean energy technologies; and implementing more environmental-friendly processes.

25% | -10%	3% | 2.0%	30% | 8%	100 mil | 1.0 mil	230 | 122.9
Reduction of energy consumption in port facilities	Clean self-generated energy	Reduction of emissions of Greenhouse Gases	Surface of seabed regenerated (Sq. Feet)	Tones of marine litter gathered

CONECTED PORT

EXPECTED IMPACT
ACTUAL MEASURE

A connected port is synonymous of competitiveness, reason why, in the Port of Vigo we work to digitalize the administrative processes and multiply the maritime lines; we support digital transformation and the use of ICT tools in communication.

30 | 8	10 | 1	10 | 7	550 mil | 74 mil	12% | 6%
Digitized procedures	Number of improved operational and logistics processes	Number of new lines of maritime traffic	Port area creeled, freed up or applied to other uses	Tones traffic growth

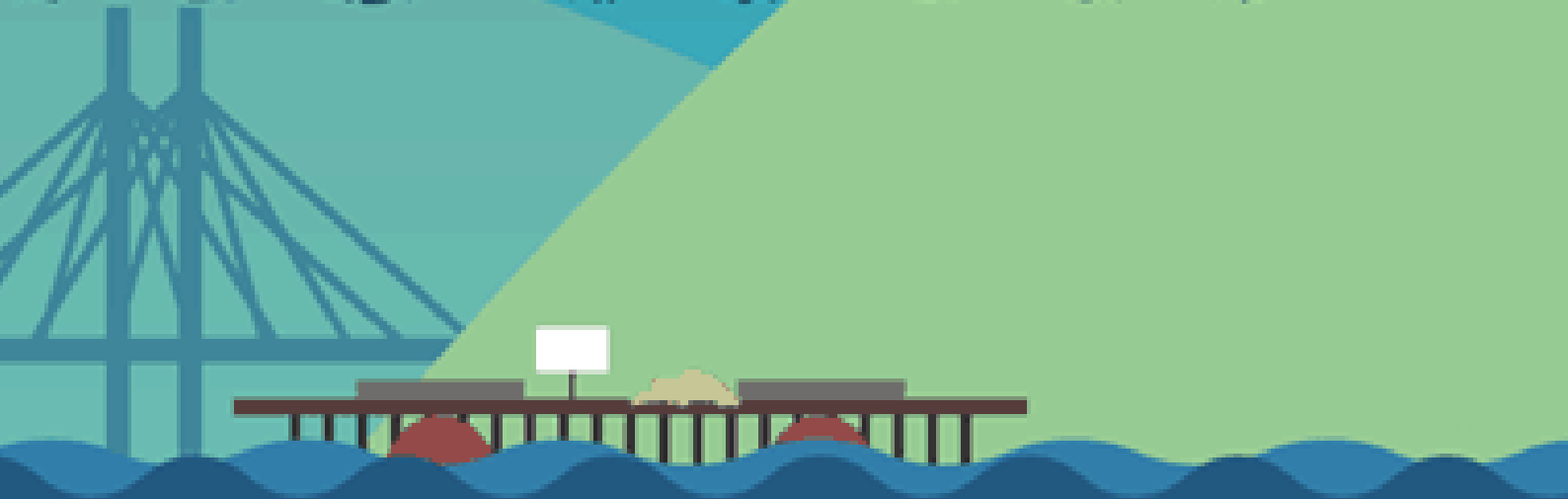
INCLUSIVE PORT

EXPECTED IMPACT
ACTUAL MEASURE

People are the center of an Inclusive Port, that is why from the Port of Vigo we bet on: the design of training programs to meet the needs of the current market; the integration of traditional sectors in the new concept of the Blue Economy; social innovation, favoring the interaction between all agents linked to the sea.

3000 | 750	1000 | 355	20 | 5	7 | 8	120 | 106
Number of new jobs created	Number of people trained	Number of social innovation actions	User satisfaction	Collaborations

ROWTH



Revisión 0

Our Ocean Commitmen

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

Electricity is currently available from 100% renewable sources, which implies a direct reduction of the Port Authority's carbon footprint, so much so that it has gone from an emission of 24,565 TCO2eq to 128 TCO2eq, that is, a reduction in CO2 emissions of 99.4%.

On the other hand, with the installation of photovoltaic equipment in the administrative building of Plaza de la Estrella, an energy self-sufficiency of 2.19% was achieved in 2019, a value that will be increased with the launch of Auction Hall 4.0 project during 2020-2021.

Currently, the calculation of scope 3 (Total scope) of the carbon footprint of the Port of Vigo is being carried out, and it is expected to achieve a reduction of the footprint of around 27% compared to 2018.

Port of Vigo

Port Authority of Vigo

11 Environmental Indicators

11 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.

All the indicators that were not fulfilled are marked with (*) and have their corresponding explanation on page no. 83.

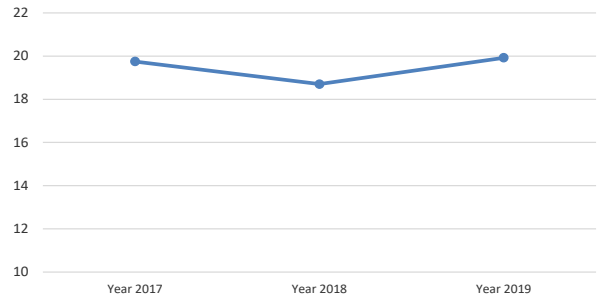
The planned value and the conversion values are defined on page 80 of this Declaration.

Environmental aspect	Indicator	Formula	Value 2019	Planned Value(1)	Fulfilment
1. Energy Efficiency(2)					
1.1 a) Own and non-justified electrical consumption	Own and non-justified MW consumed/ No. of workers	4,900.75/ 246	19.92	18.70	(*)
1.1 b) Consumption of renewable energy	Total MW consumed from renewable energy (photovoltaic) / Total MW consumed	28.98/ 4,900	0.0059	First year of this indicator	√
1.2 Production of renewable energy	Total MW produced from renewable energy (photovoltaic) / Total MW consumed	105.71/ 4,900.75	0.021	0.019	√

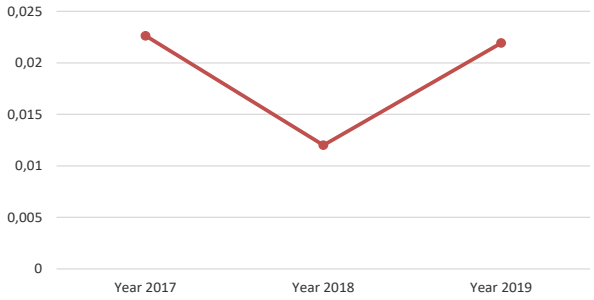
Environmental aspect	Indicator	Formula	Value 2019	Planned Value(1)	Fulfilment
1.Energy Efficiency					
1.3 Fuel consumption vehicles	GJ consumed (diesel) / No. of workers	769,62/246	3,128	3,91	√
1.4 Fuel consumption vehicles	Litres consumed (diesel) / Km	21.354,61 / 322.509	0,066	0,080	√
1.5 Fuel consumption boilers	GJ consumed (diesel) / No. of workers	72,08/246	0,29	0,287	√
1.6 Fuel consumption boilers (Natural Gas)	GJ consumed (natural gas) / No. of workers	$8{,}39E^{-17}$/246	$3{,}41*10^{-19}$	$2{,}76*10^{-19}$	(*)
1.7 Fuel consumption boilers (Propane gas)	GJ consumed (Propane gas) / No. of workers	$3{,}76E^{-20}$/246	$1{,}53*10^{-22}$	$1{,}22*10^{-22}$	(*)
1.8 Fuel consumption vessels	GJ consumed (diesel) / No. of workers	227,41/246	0,92	1,19	√
1.9 Fuel consumption machinery	GJ consumed (diesel) / No. of workers	62,78/246	0,25	0,34	√

1. Energy efficiency, electrical power

1.1 Own electricity consumption indicator

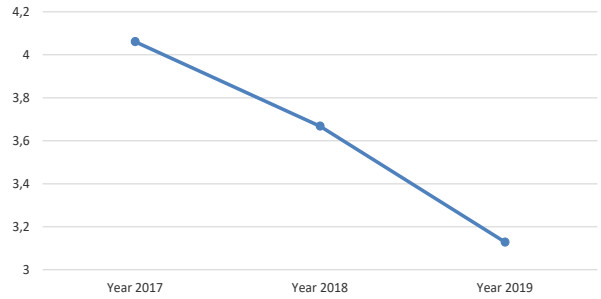


1.2 Renewable energy production indicator

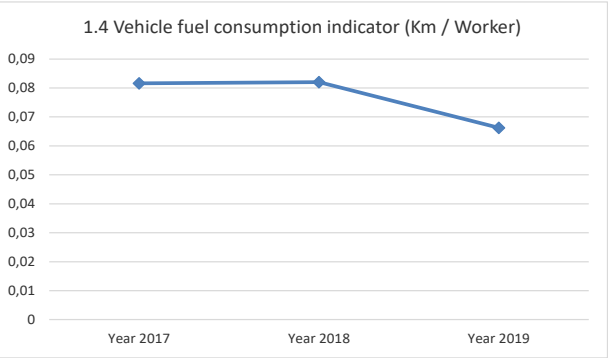


1. Energy efficiency, fuels

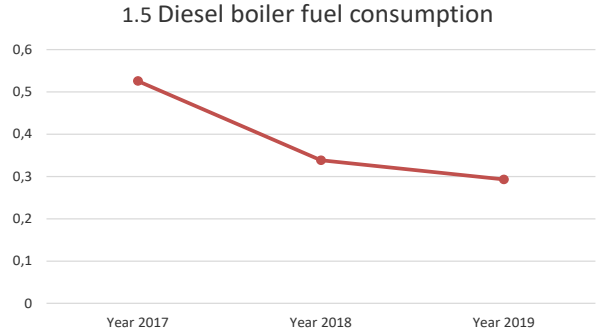
1.3 Vehicle fuel consumption



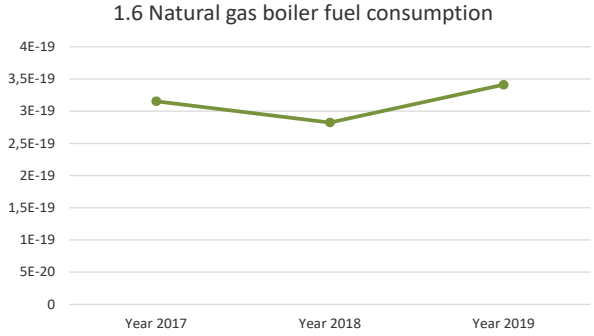
1.4 Vehicle fuel consumption indicator (Km / Worker)



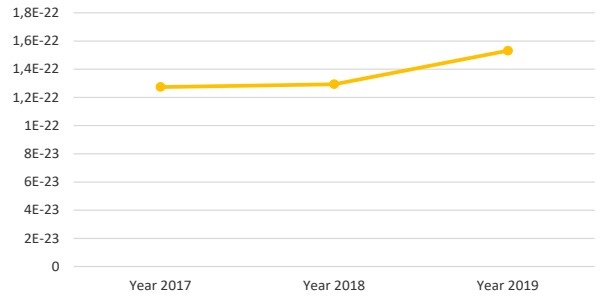
1.5 Diesel boiler fuel consumption



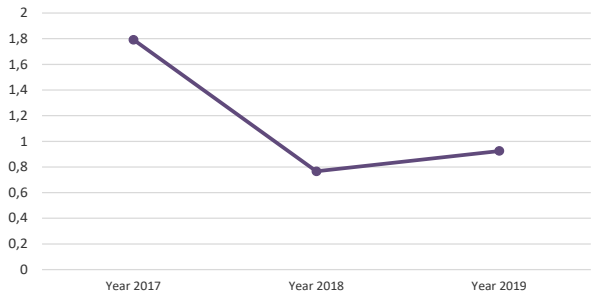
1.6 Natural gas boiler fuel consumption



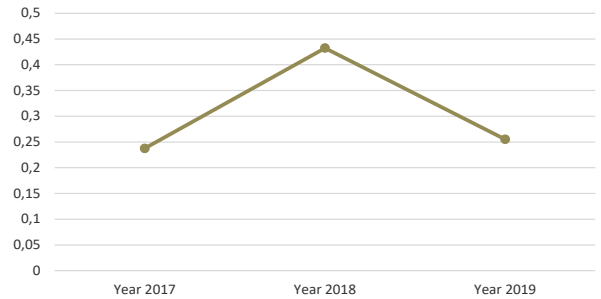
1.7 Propane boiler fuel consumption



1.8 Boats fuel consumption



1.9 Machinery fuel consumption

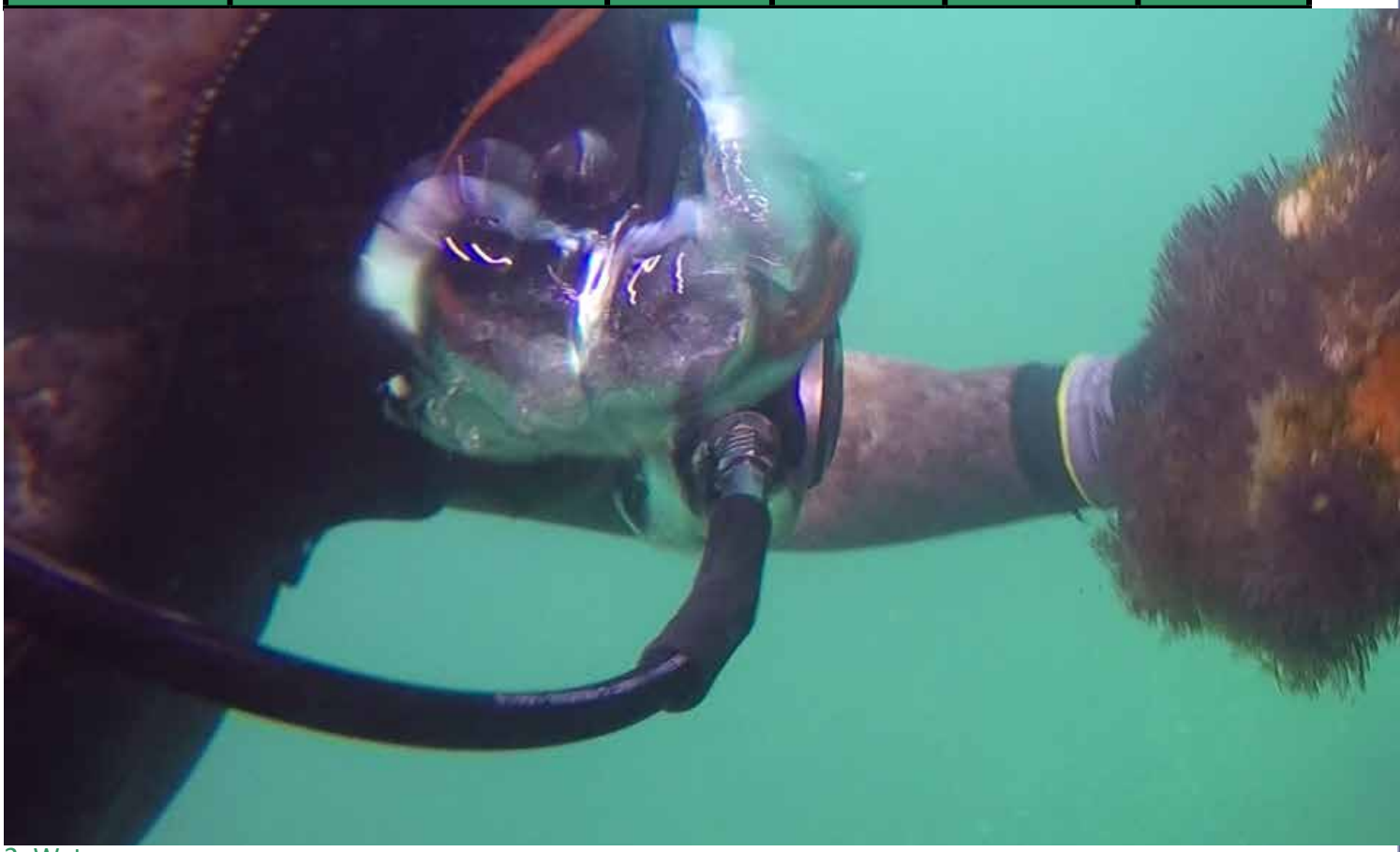


Port of Vigo

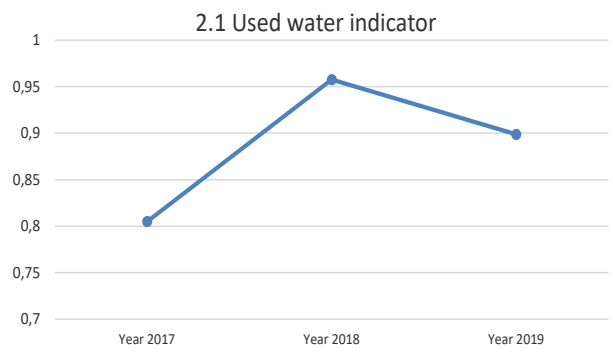
Port Authority of Vigo

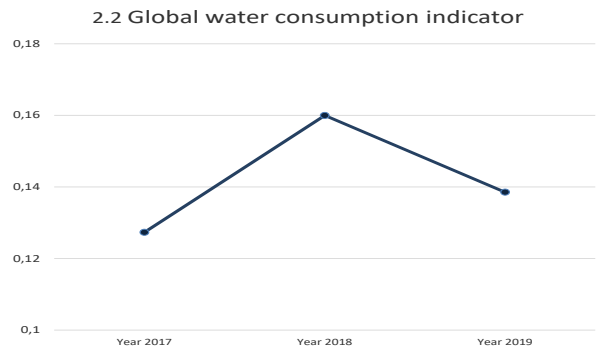
* Analysis of graphs on page 113

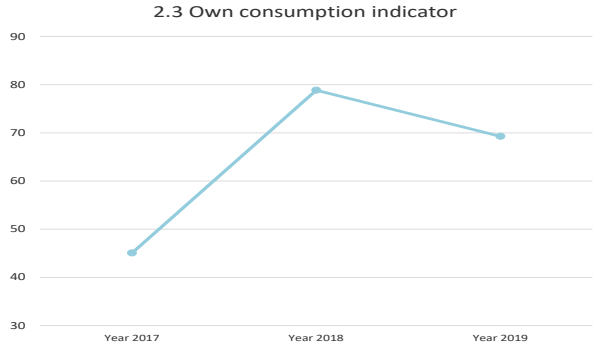
Environmental aspect	Indicator	Formula	Value 2019	Planned Value(1)	Fulfilment
2. Water					
2.1 Water used	m3 water used / m3 drinking water supplied	315,393/ 350,964	0.89	0.91	(*)
2.2 Water consumption	m3 drinking water supplied / m2 service area	350,964/ 2,533,647.6	0.13	0.129	√
2.3 Own consumption	m3 drinking water consumed / no. of workers	17,045/ 246	69.29	56.74	(*)



2. Water





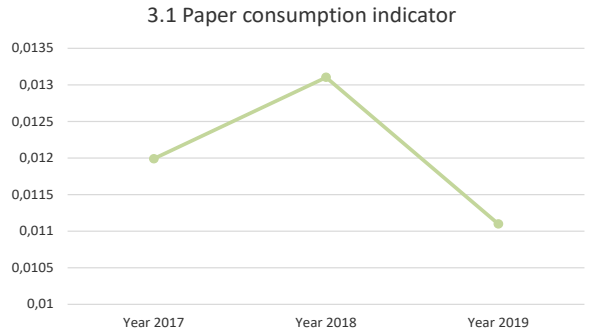


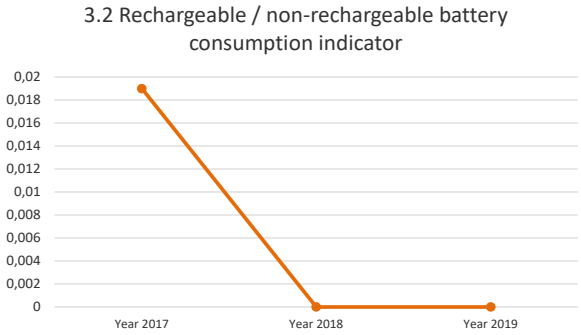
Port of Vigo

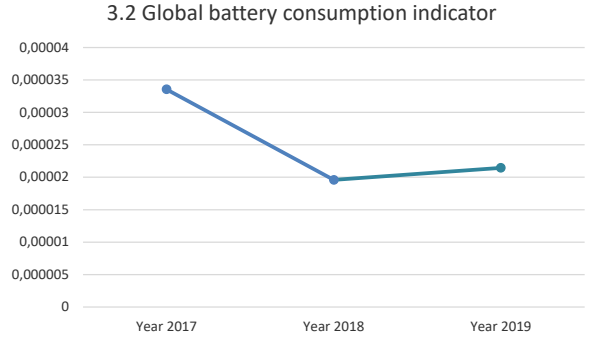
Port Authority of Vigo

Environmental aspect	Indicator	Formula	Value 2019	Planned Value(1)	Fulfilment
3. Consumption of Products					
3.1 Paper consumption	Tn of sheets/ no. of workers	2.7/ 246	0.011	0.010	(*)
3.2 Consumption of batteries	No. of rechargeable batteries / no. of non-rechargeable batteries	0/ 211	0	0.008	(*)
	Tn Batteries used / no. of workers	0.0053/ 246	2.14*10-5	2.78*10-5	√

3. Product consumption



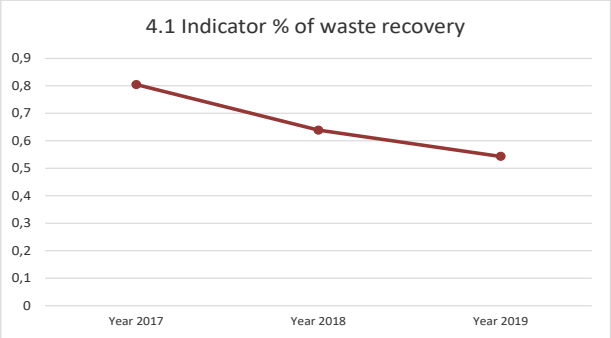




* Analysis of graphs on page 113

Environmental aspect	Indicator	Formula	Value 2019	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 (%)	1.055,68/ 1.970,86	0,53	0,72	(*)

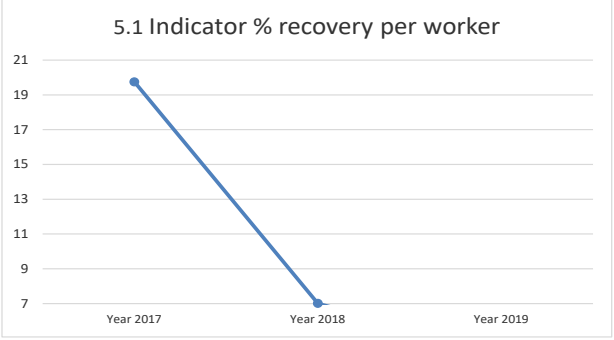
4. Recoverable waste

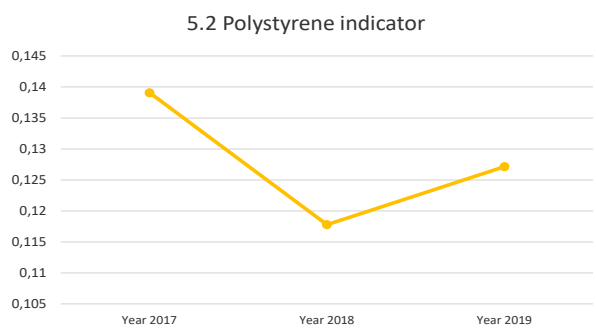


Port of Vigo

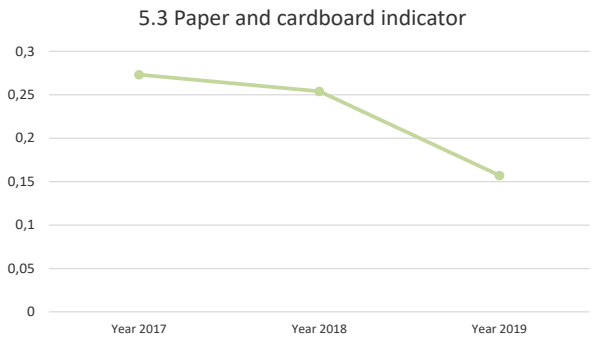
Port Authority of Vigo

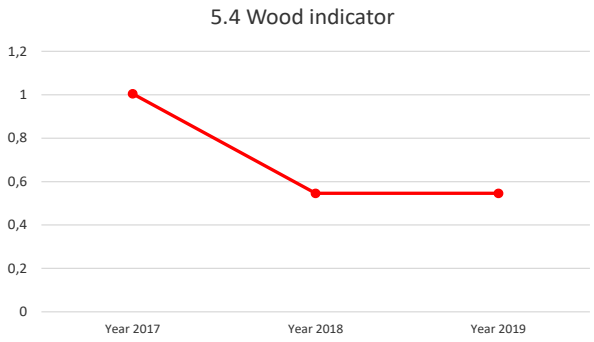
Environmental aspect	Indicator	Formula	Value 2019	Planned Value(1)	Fulfilment
5. Waste with respect to number of workers (3)					
5.1 Non-hazardous recoverable waste with respect to no. of workers	Total annual waste generation (in tn)/ no. of workers	1,039.81/ 246	4.29	13.91	(*)
5.2 Polystyrene	Total annual Polystyrene generation (tn) / no. of workers	31.28/ 246	0.127	0.128	√
5.3 Paper/ cardboard	Annual Paper and Cardboard generation (tn) / no. of workers	38.65/ 246	0.157	0.259	√
5.4 Wood	Annual Wood generation (tn) / no. of workers	134.26/ 246	0.54	0.80	(*)
5.5 Plastic	Annual Plastic generation (tn) / no. of workers	236.88/ 246	1.04	0.68	√
5.6 Nets	Annual Nets generation (tn) / no. of workers	71.34/ 246	0.29	0.15	√
5.7 Organic waste	Annual Organic Waste generation (tn) / no. of workers	454.16/ 246	1.84	11.61	(*)
5.8 Scrap	Annual Scrap generation (Tn)/ no. of workers	5.32/ 246	0.021	0.024	√
5.9 Tyres	Annual Tyres generation (Tn)/ no. of workers	6.62/ 246	0.026	0	√
5.10 Glass	Annual Glass generation (Tn)/ no. of workers	4.86/ 246	0.019	0.010	√
5.11 Solid urban waste (SUW)	Annual SUW generation (tn) / no. of workers	875.15/ 246	3.72	4.82	√
5.12 Plastic packaging (Ecoembes)	Annual Plastic packaging generation (tn)/ no. of workers	56.44/ 246	0.21	0.24	(*)

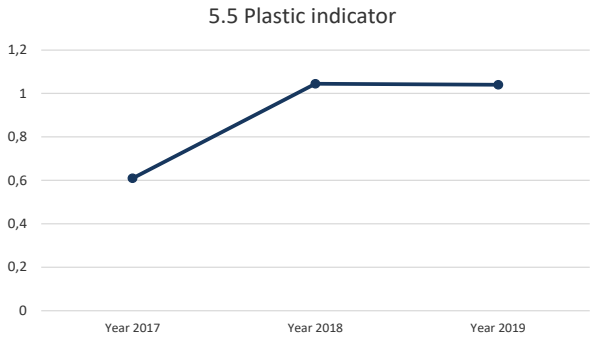


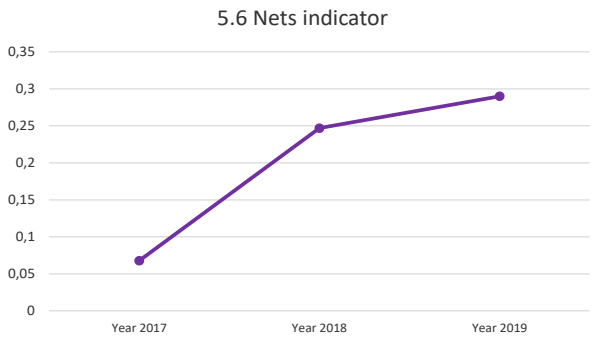


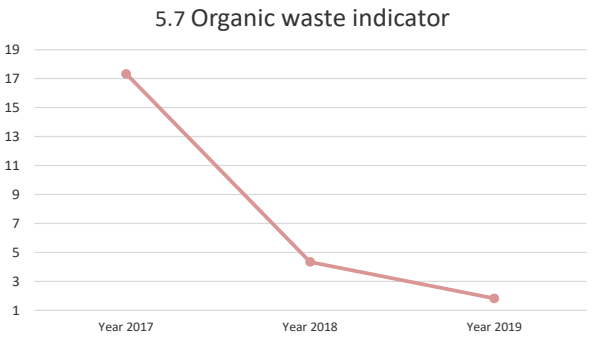
5. Waste with respect to the number of workers

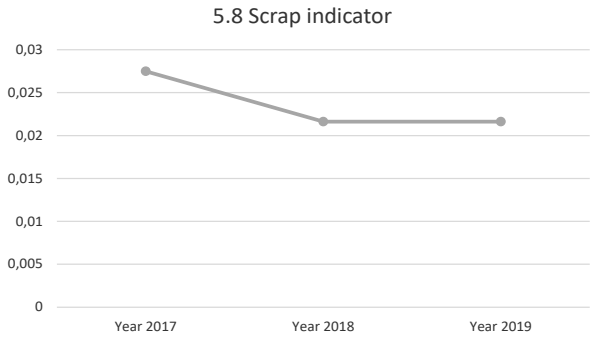


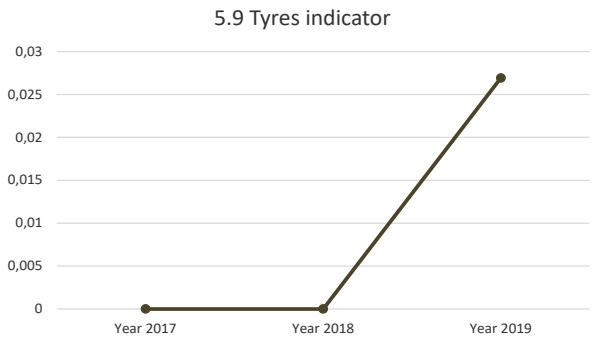


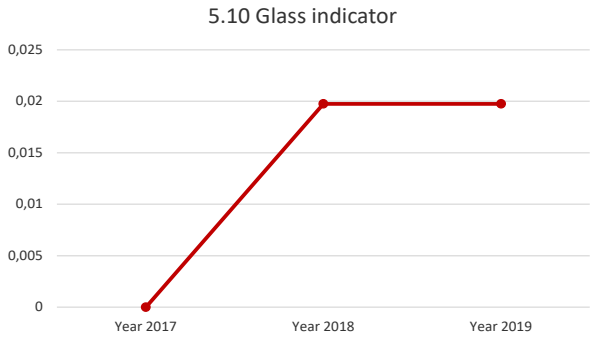


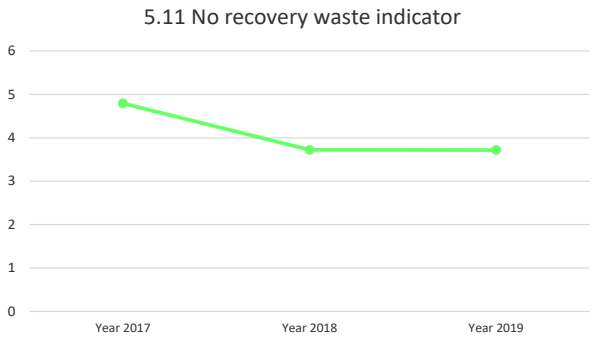


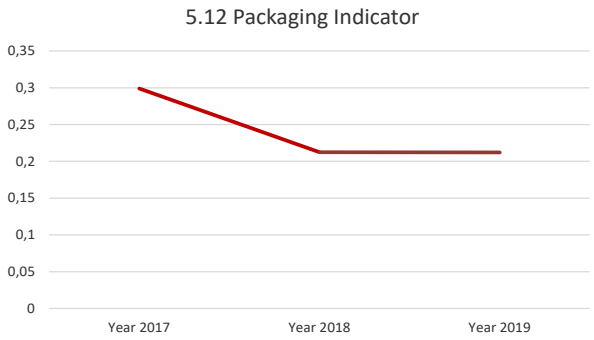








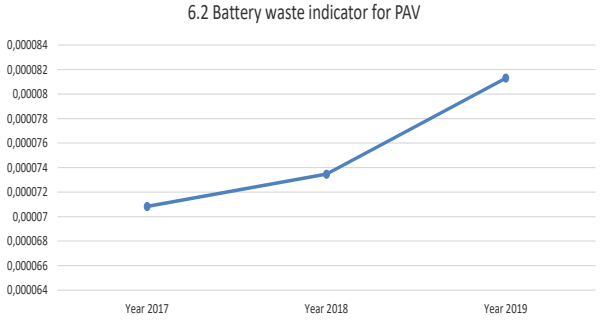




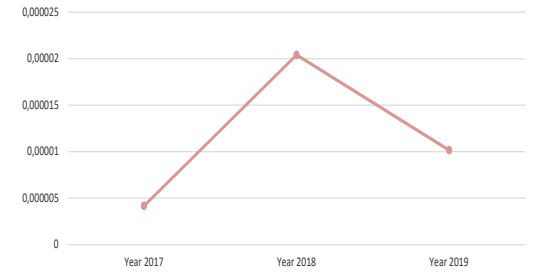
* Analysis of graphs on page 113

Environmental aspect	Indicator	Formula	Value 2019	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	1.62/ 246	0.006	0.018	√
6.2 Hazardous waste generated only by PAV: Batteries	Total annual generation of hazardous waste (in Tn)/ no. of workers	0.02/ 246	8.1 *10-5	9.6 *10-5	√
6.3 Hazardous waste generated only by PAV (Nursing waste)	Total annual generation of hazardous waste (in Tn)/ no. of workers	0.002/ 246	1.01 *10-5	1.24*10-5	√
6.4 Hazardous waste generated only by PAV (Contaminated Packaging)	Total annual generation of Contaminated Packaging (in Tn)/ no. of workers	0.034/ 246	0.00013	0.0003	√
6.5 Hazardous waste generated only by PAV (Used Oil)	Total annual generation of Used Oil (in Tn)/ no. of workers	0/ 246	0	0.00034	√
6.6 Hazardous waste generated only by PAV (Batteries)	Total annual generation of Battery (in Tn)/ no. of workers	0/ 246	0	0.0008	√
6.7 Hazardous waste generated only by PAV (Aerosols)	Total annual generation of Pressure Bottles (in Tn)/ no. of workers	0/ 246	0	8.4*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/ 246	0	0.0005	√
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	0.84/ 246	0.0034	0.0099	(*)
6.10 Fluorescent tubes generated by PAV and users of the Port	Total annual generation of Fluorescent tubes (tn)/ no. of workers	0.107/ 246	0.0004	0.0006	√
6.11 Hazardous waste generated only by PAV (EEEW)	Total annual generation of EEEW (in Tn)/ no. of workers	0/ 246	0	0.0001	√
6.12 Cutting fluid generated by PAV	Total annual generation of hazardous cutting fluid waste (Tn)/ no. of workers	0/ 246	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/ 246	0	4.89*10-5	√

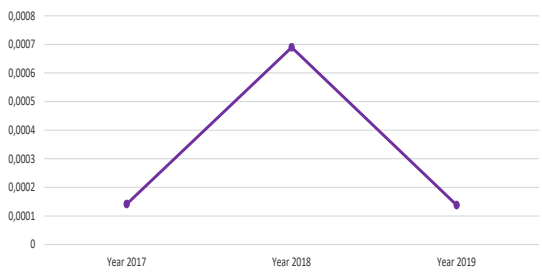
6. Hazardous waste



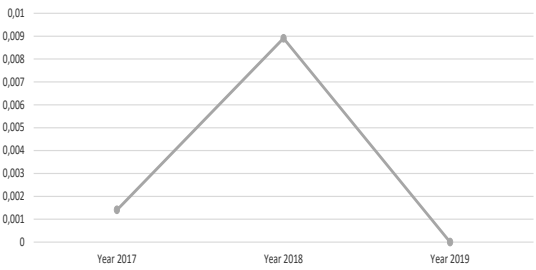
6.3 Nursing residue indicator



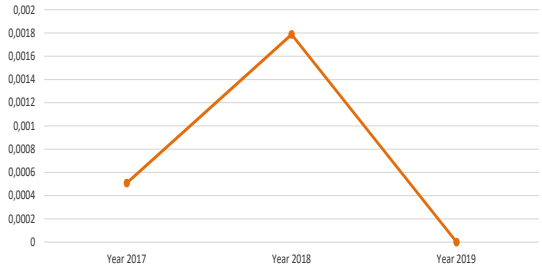
6.4 Contaminated packaging waste indicator



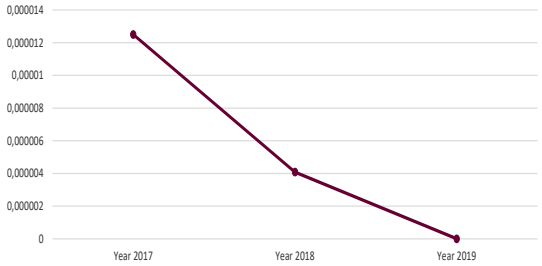
6.5 Oil residue indicator



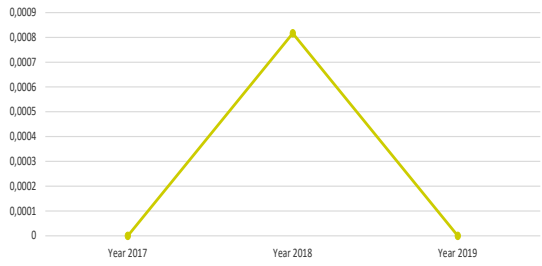
6.6 Battery waste indicator



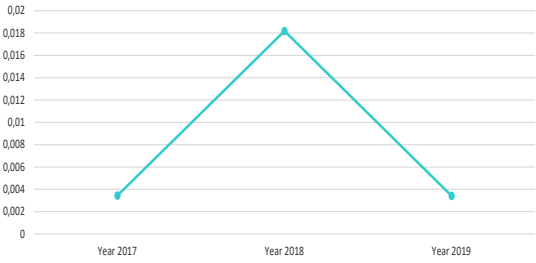
6.7 Aerosol residue indicator



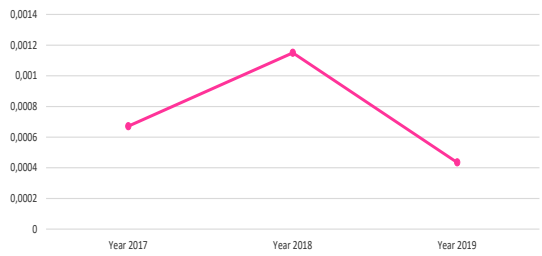
6.8 Oil waste Indicator for the Rías Bajas vessel



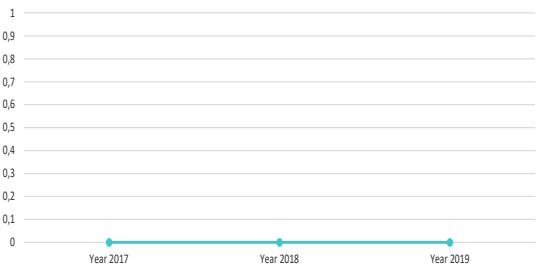
6.9 Battery waste indicator at Green point



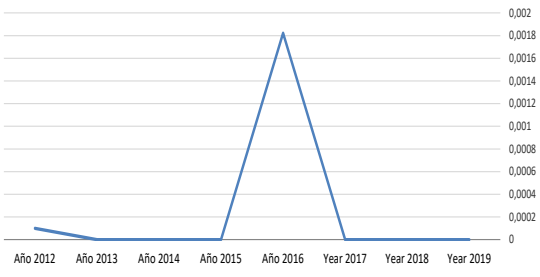
6.10 Fluorescent tubes waste indicator



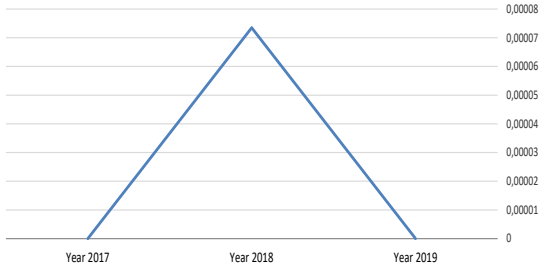
6.11 RAEES residue indicator



6.12 Chemical products indicator

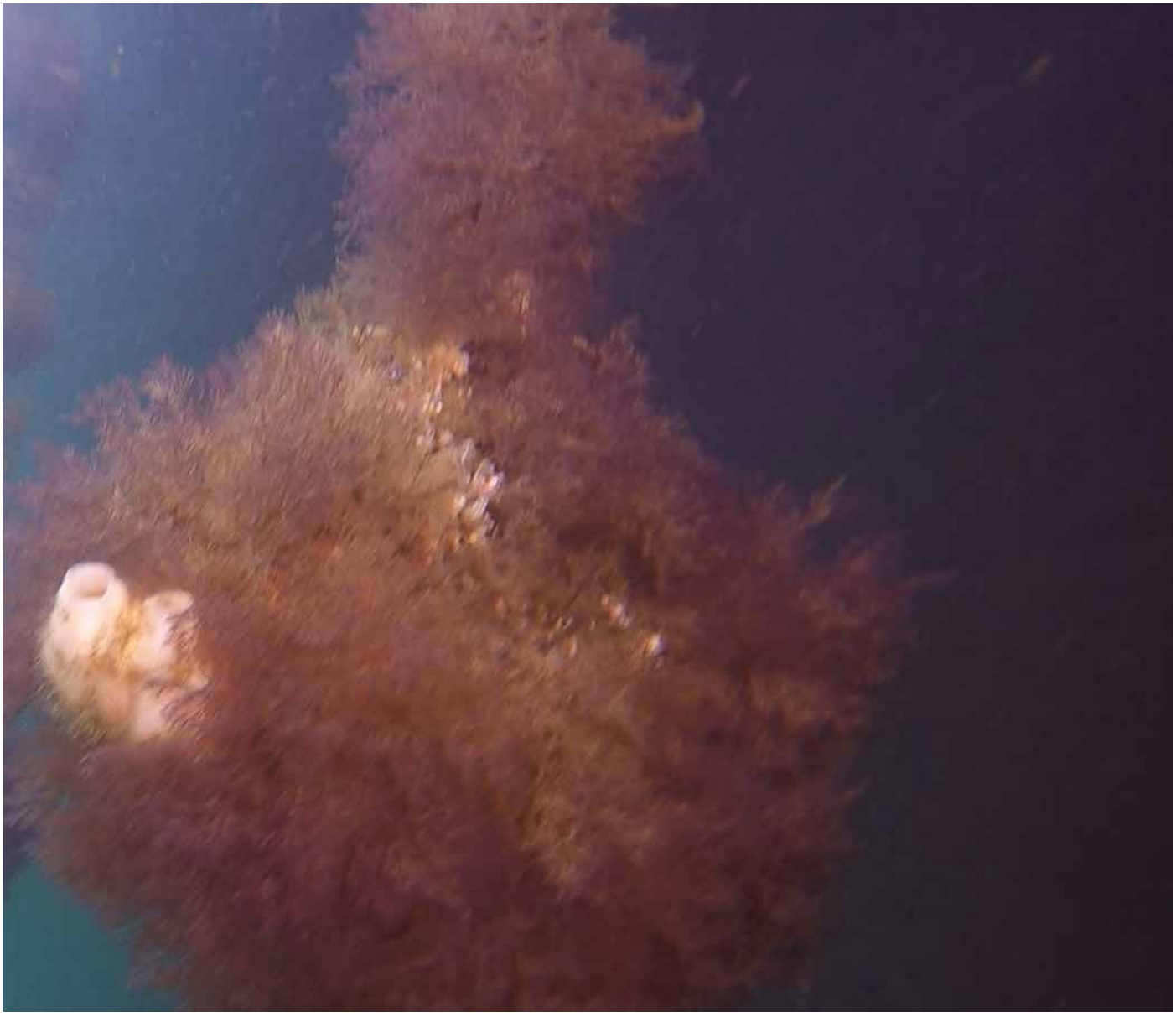


6.12 Cutting Fluid indicator



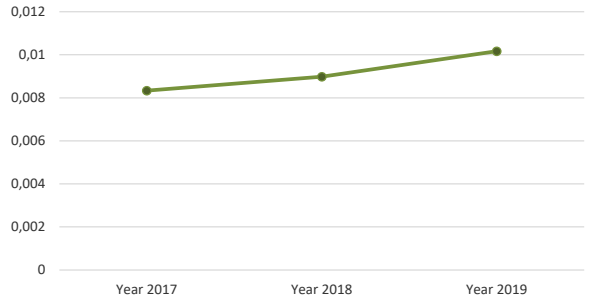
* Analysis of graphs on page 113

Environmental aspect	Indicator	Formula	Value 2019	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	2.5/246	0.010	0.0078	(*)
7.2 Paint Washing Water generated only by PAV	Total annual generation of paint washing water (in Tn)/ no. of workers	0/ 246	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 (in Tn)/ no. of workers	10.48/ 246	0.049	0.012	(*)
7.4 Sludge from portable toilets generated by users of the port(2)	Total annual generation of Sludge from portable toilets (in Tn)/ no. of workers	0/ 246	0	0.034	√
7.5 EEEW generated by PAV and users of the Port	Total annual generation of EEEW (in Tn)/ no. of workers	1.84/ 216	0.007	0.013	√
7.6 Toner cartridges generated only by PAV	Total annual generation of toner cartridges (in Tn)/ no. of workers	0.01/ 246	4.06*10-5	0.00015	√
7.7 Other waste generated by PAV and users of the Port	Total annual generation of other waste (en Tn)/ no. of workers	0.03/ 246	0.0001	0.0055	√

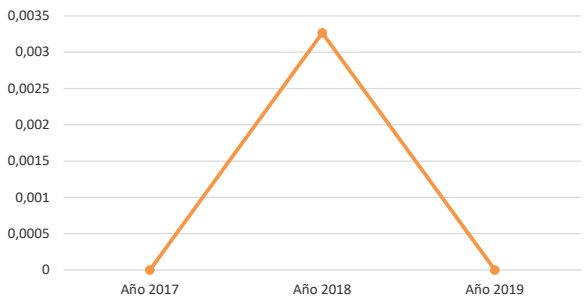


7. Other waste

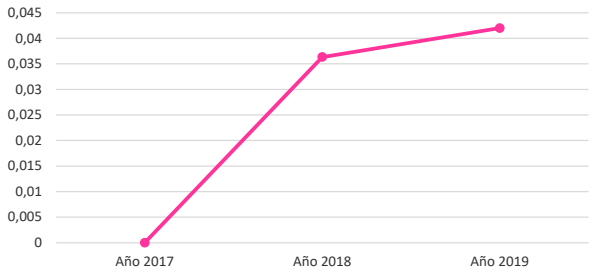
7.1 Sewage sludge waste indicator



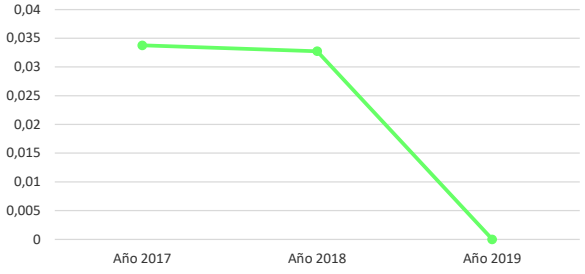
7.2 Paint washing water waste indicator



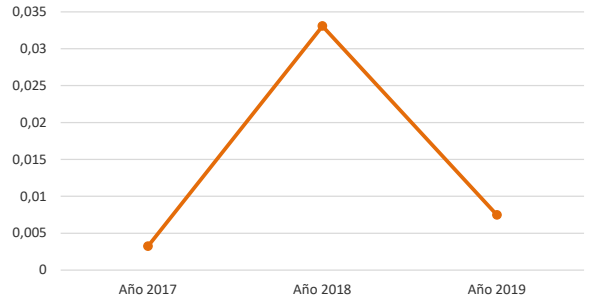
7.3 Indicator of sludge waste from the sewage system



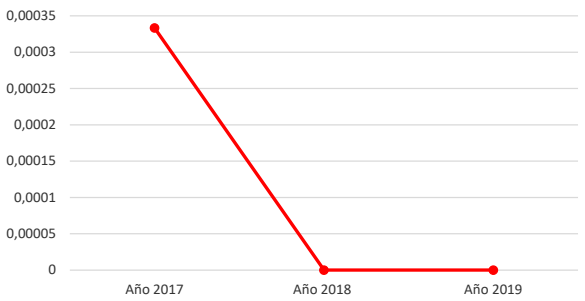
7.4 Indicator of sludge waste from portable toilets



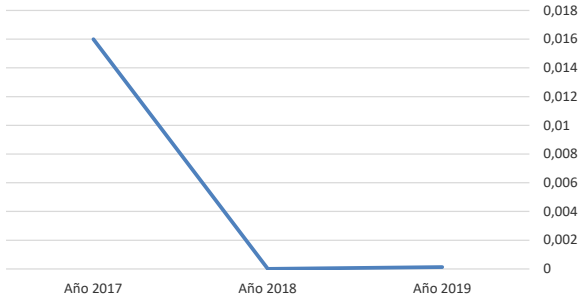
7.5 RAEES waste indicator for PAV and users



7.6 Tonner cartridge waste indicator



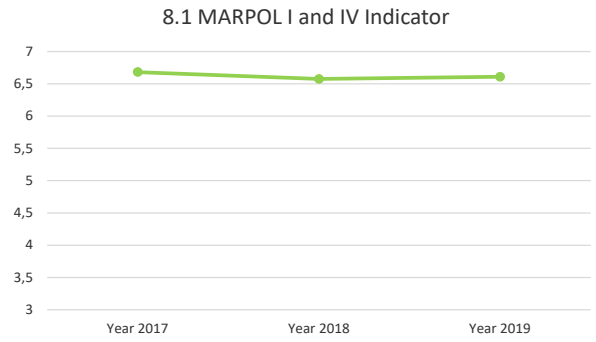
7.7 Other waste indicator

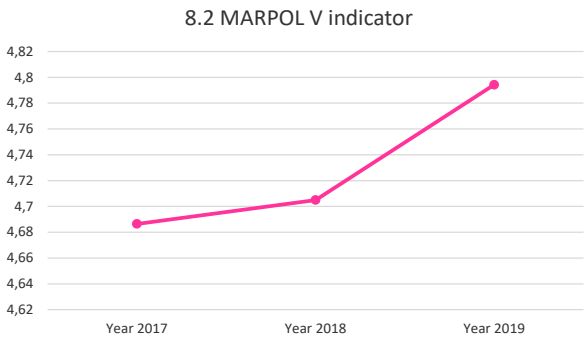


* Analysis of graphs on page 113

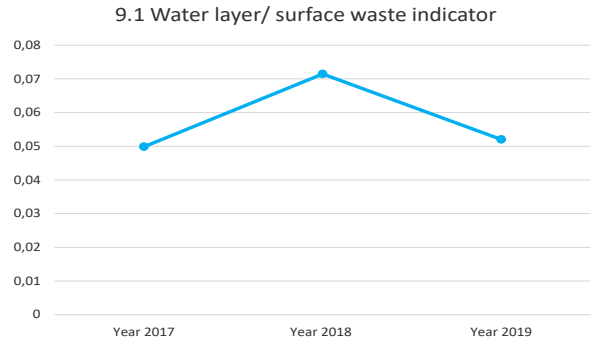
Environmental aspect	Indicator	Formula	Value 2019	Planned Value(1)	Fulfilment
8 . MARPOL waste(4)					
8.1 MARPOL waste I, IV	Total annual generation of MARPOL waste (in m3)/ no. of vessels	11,190.9/ 1,677	6.67	6.64	√
8.2 MARPOL waste V	Total annual generation of MARPOL waste (in m3)/ no. of vessels	8,035.04/ 1,677	4.79	4.70	√
9. Water layer waste					
9.1 Water layer waste	Waste collected (Tn)/ Area 1 (ha)	40.66/ 762.4	0.05	0.05	√
9.2 Water layer waste with respect to number of workers(3)	Waste collected (Tn)/ No. of workers	40.66/ 246	0.16	0.17	√
10. Noise Pollution					
10.1 Noise Pollution	No. of complaints about noise	No. complaints noise	0	1.66	√

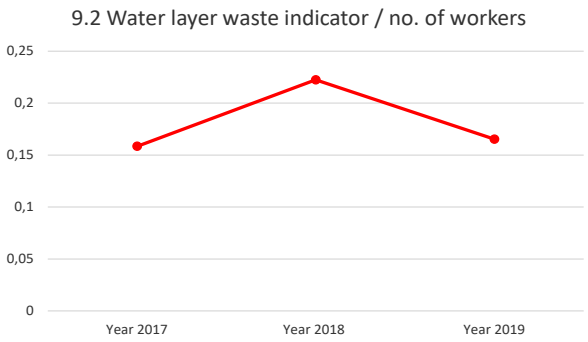
8. MARPOL waste



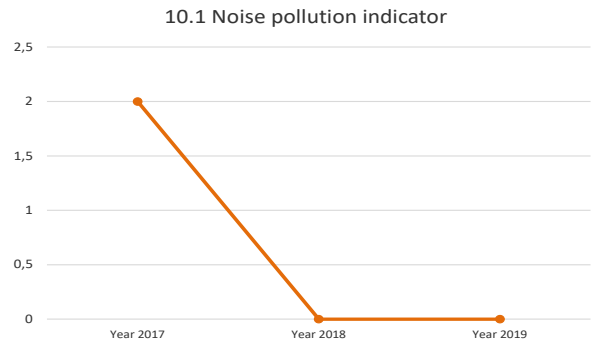


9. Water layer waste





10. Noise pollution



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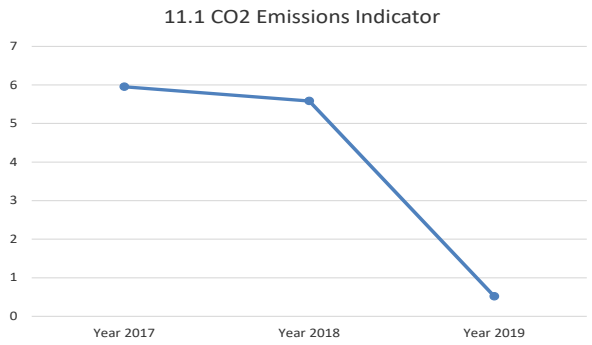
* Análisis de gráficas en la pagina 113

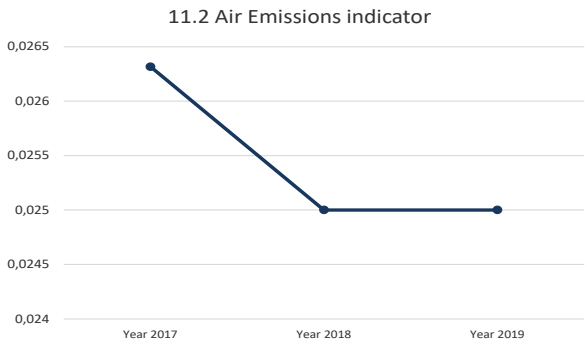
Environmental aspect	Indicator	Formula	Value 2019	Planned Value(1)	Fulfilment
11. Air Emissions					
11.1 CO2 Emissions(5)	CO2 emissions (Tn)/ No. of workers	128/ 246	0.52	5.81	√
11.2 Air emissions	Number of cases of air pollution / total incidents	2/ 80	0.025	0.021	(*)
12. General Environmental Management					
12.1 Resources used in Environmental management	Economic resources used in Environmental management/ Total expenses (Euro)	338,150.44/ 35,488,611.28	0.0711	0.089	(*)
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	2,533,647.60/246	10,299.38	10,229.92	√

(1) The planned values are obtained from the average of the data of the last three years (2016, 2017 and 2018).
(2) For the conversion to Giga joules, the units and conversion factors published by the INEGA (Instituto Enerxetico de Galicia - Energy Institute of Galicia) of the Department of Economy and Industry of Xunta de Galicia (the Autonomous Government of Galicia) are used.
(3) Due to EMAS requirements, the number of workers of PAV is taken as a reference, although the waste managed is due to the activity of users and companies in the Port of Vigo.
(4) MARPOL waste is measured in m3, and its density prevents direct equivalence in Tons.
(5) For the calculation of CO2 emissions, the Puertos de Estado (State Ports) methodology and the conversion factors of the Ministry of Transition are used.
(6) This section refers to the emissions associated with the consumption of electrical energy and fuels, as there are no other types of emissions derived from the activity of the PAV.

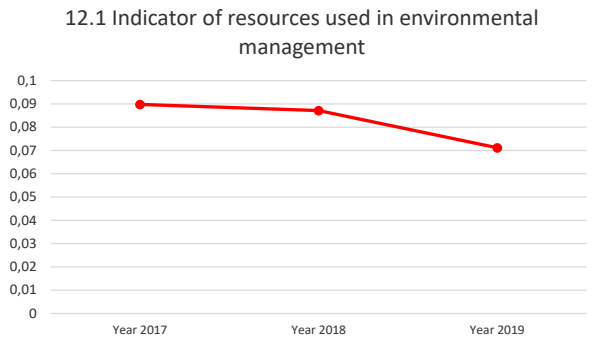
INEGA conversion factors	
1 J	2,34 * 10-11 tep
1 kWh	0,86 * 10-4 tep
1 BTU	0,25 * 10-7 tep
1 tec	0,70 tep
1 MWh	0,086 tep

11. Emisiones atmosféricas





12. General environmental management



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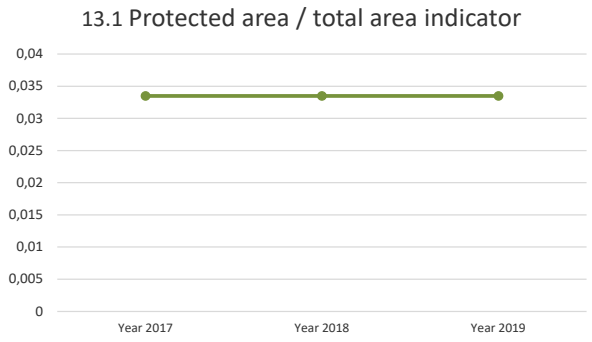
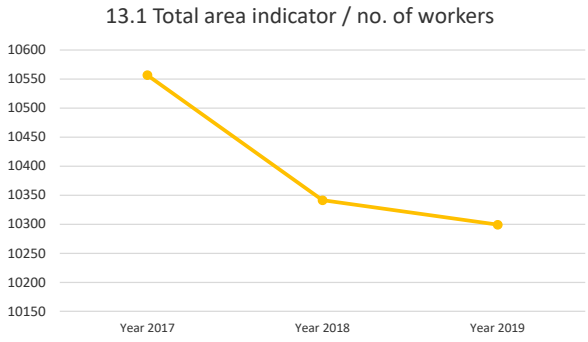
13. Biodiversity





* Analysis of graphs on page 113


HAMBURG
EVERGREEN

Analysis of Results Obtained

In 2019, the consumption of electric energy by users was reduced by 7.01%, the production of electric energy increased by 47.9%, the own consumption of water was reduced by more than 11%, the consumption of water by users by more than 19%, the fuel consumption of vehicles by more than 14%, the consumption of diesel boilers by more than 13% or the fuel consumption of machinery by more than 40%. On the other hand, it is worth highlighting the increase in the recovery of waste such as polystyrene (7.73 +%) or nets (+ 15.19%) with respect to 2018. Finally, the cases in which the planned value was not achieved, are the following:

- 1.1 Own and non-justified consumption of electricity: The planned value is exceeded, since own and non-justified consumption is increased by 6.5%.
- 1.6 and 1.7 Fuel consumption of natural gas and propane boilers: In 2019 there was an increase in the acquisition of propane (+ 15%), as well as an increase in the consumption of natural gas (17.5%).
- 2.1 and 2.3 Used water and own consumption of water: In 2019, although there was a decrease in own consumption of water, the average of the last three years is lower than the result for the year, which is why the planned value is exceeded. On the other hand, the percentage of water used this year decreased from 95% to 89%, derived from various leaks and accounting errors.
- 3.1 and 3.2 Consumption of products (paper and batteries): In 2019 there was a decrease by 14.7% in the purchase of paper. However the number of sheets purchased exceeds the average of the last three years, so the planned value is exceeded. Regarding rechargeable batteries, in 2019 they were not acquired, so the planned value is not reached.
- 4.1, 5.1, 5.4, 5.7 and 5.12 Recoverable non-hazardous waste (Wood, organic waste and plastic packaging): In 2019 there was a 57% decrease in the organic waste accounted. Therefore the overall recovery ratio decreased from 63% in 2018 to 54% in 2019. On the other hand, the recovery of plastic containers fell by 25% and of wood by 19.7%.
- 6.9 Hazardous waste (Green point batteries generated by port users): In 2019 there was an 81% decrease in the collection of batteries from the Green Point, returning to the usual ratios of around 840 or 850 Kg per year.
- 7.1 Other waste (treatment plant sludge): The amount of sludge generated at the Faro Silleiro facilities increased very slightly, from 2.2 tons in 2018 to 2.5 in 2019.
- 7.3 Sludge from the sewage system: In 2019 a greater volume of sludge was generated due to the cleaning of two large salt water tanks in the Fishing Port.
- 11.2 Air emissions: During this year there were two emission incidents, just like last year, but exceeding the average of the last three years.
- 12.1 Resources used in environmental management: Although in 2019 more than 338,000 Euros were invested in environmental management, there was also an increase in the overall expense of the PAV, so the planned value was not reached.

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Legal Requirements 12

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12. Legal Requirements

The following legislative references must be highlighted for 2019:

Port Regulations
Royal Decree 1695/2012, of December 21, which approves the National Response System for marine pollution.
Order fom / 1793/2014 of September 22, which approves the National Response System to Marine Pollution.
Preventive instruments
Order fom / 1793/2014 of September 22, which approves the National Response System to Marine Pollution.
LAW 21/2013, of December 9, on environmental assessment.
Water
ROYAL DECREE 817/2015, of September 11, which establishes the criteria for monitoring and assessing the state of surface water and the environmental quality standards.
Waste
Registration as a small producer of hazardous waste PO-RP-P-PP-00609
The derogatory provision of Law 3/2018, dated December 26, on fiscal and administrative measures indicates that numbers 31, 32 and 33 of articles 4 and article 56 of Law 10/2008 on waste in Galicia, of November 3, are repealed.
Therefore, the obligation to submit the Environmental Self-Assessment of Waste (ESAW) is abolished.
Plan for MARPOL Waste reception/ MARPOL Agreement 73/78 approved on December 21, 2015
Air
Royal Decree 1027/2007, which approves the regulation on thermal installations in buildings (RTIB)
Noise
LAW 12/2011, of December 26, on fiscal and administrative measures.
Soil
Law 11/2012, of 19 December, on urgent measures regarding environment, which partially modifies Law 22/2011, of July 28, on waste and polluted soil.
EMASIII
COMMISSION REGULATION (EU) 2017/1505 of August 28, 2017 amending Annexes I, II and III to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community Environmental Management and Audit scheme (EMAS)
COMMISSION DECISION (EU) 2019/61 of December 19, 2018 on the sectoral reference document on best environmental management practices, sector environmental performance indicators and benchmarks of excellence for the public administration sector under Regulation (EC) No 1221/2009 on the voluntary participation by organisations in a Community Environmental Management and Audit Scheme (EMAS)

Revisión 0

13 Verification and Validation

13. Verification and Validation

This Environmental Statement was verified in the following Audits:

- In Internal Audit, carried out by Grupo Atlante, on September 2, 3 and 4, 2020.
- In External Audit, carried out by DNV on June 18, 29 and 30, September 28, 29 and 30, and October 1 and 2, 2020.

The environmental verifier accredited by ENAC that verifies and validates this declaration is DNV GL BUSSINES ASSURANCE ESPAÑA, S.L with the code number ES-V-0005

This Environmental Declaration will be updated in successive Annual Declarations, which will be validated by an authorised entity and presented to the Regional administration.

This Environmental Statement will also be available on the website of the Port Authority of Vigo, www.apvigo.es

Conclusions

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Conclusions

According to the Water Framework Directive, the Quality of the Waters of the Port of Vigo can be considered as waters in very good ecological condition. In 2019, an improvement was recorded in some parameters, such as the notable decrease in the microbiological load in all the samples of the water layer analysed, which highlights the improvements in the canalisation and capacity of the sewage system, which clearly results in the good condition of the docks of the Port of Vigo. However, it is still necessary to reduce discharges from the municipal sewage system in times of heavy rains.

The Port continues in its commitment to Our Oceans, to reduce emissions by 30% by 2022. This year there was a reduction of 93% of the Carbon Footprint of the Port Authority, and close to 26% of the carbon footprint of the Port, as established

in the commitment. Despite this, the consumption of electrical energy in 2019 suffers a slight increase derived from a greater consumption in the Auction Hall due to the cooling systems. With the Auction Hall 4.0 project, which involves replacing the equipment and improving the insulation, a notable reduction in consumption will be achieved in the Auction Hall.

With regard to production, due to the proper functioning of the new photovoltaic systems, there was an increase of more than 47% of electrical energy production. Regarding fuel consumption, there was a reduction of 14% in vehicles and 13% in heating boilers.

With regard to water consumption, it is necessary to highlight the significant reduction of 11% in own consumption, derived from better management of metres and repair of leaks.

Regarding waste management, there was an increase in the recovery of waste such as polystyrene (7.73 +%) or nets (+ 15.19%) compared to 2018. We should also highlight the cleaning of sea garbage with the support of the sector and the ML Style project.

Among the projects in which the Port Authority participates, the project “Peiraos do Solpor” stands out, which was awarded by the International Association of Ports, on June 24, 2020, the first prize in the category “Dialogue with the community and the port city ”, after competing with 45 other ports worldwide in this category.

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UNDERWATER PHOTOS PROVIDED BY ALBERTO OTERO

EMAS

ENVIRONMENTAL SYSTEM CERTIFICATION DNV·GL ISO 14001:2015

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001:2015

SAFETY SYSTEM CERTIFICATION DNV·GL OHSAS 18001

ECOPORTS PERS CERTIFIED