2019 Environmental Statement

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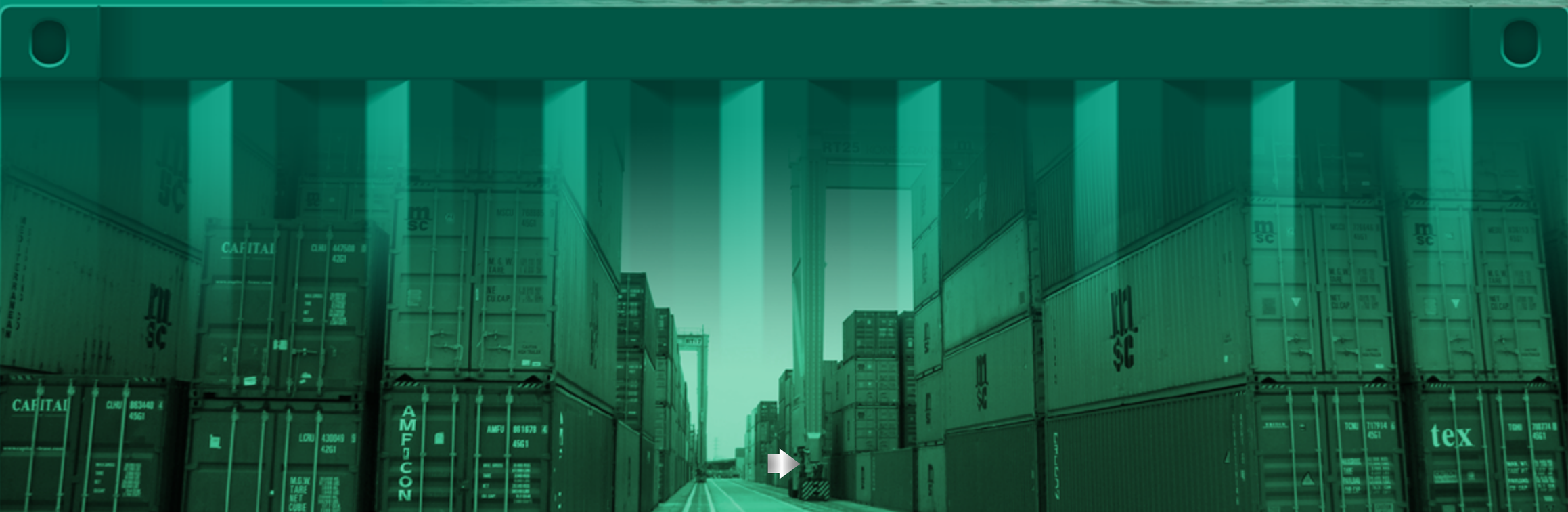

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1. CHAIRMAN'S LETTER

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1. Chairman's Letter

For another year, the Port Authority of Valencia (PAV) would like to share this Environmental Declaration, which is the result of our commitment to society through the protection of the environment and sustainability in our operations within the ports premises managed by this Entity / Port Authority.

The PAV has, over the course of 2019, maintained the most stringent environmental and energy certifications, including ISO 14001, ISO 50001 AND EMAS III and the European Sector Level certifications, PERS (Port Environmental Review System). The maintenance of these certifications requires significant effort from our professionals to ensure compliance with the commitments assumed voluntarily by the PAV.

In 2019, the most important actions in the environmental and sphere were the continuation of the processing of the file of the electrical substation of the Port of Valencia, the construction of which depended on the possibility of implementing new energy efficiency policies in the Port of Valencia and the initiation of the drafting of a Strategic Energy Plan for the 2030 horizon, which will establish the lines of action so that the PAV-managed ports can become neutral in CO2 emissions by that date.

In 2019, the PAV also experimented with operations for the supply of LNG to vessels using the "truck to ship" method in the port of Valencia, as well as the adaptation of the regasification plant at the port of Sagunto to supply LNG on a small scale. With these experiences, the PAV has positioned itself at the cutting edge of global knowledge of these types of operations, in line with the energy transition to cleaner fuels.

We are convinced that the future energy in ports will progressively transition through the incorporation of renewable energies in the energy mix, which is why the PAV installed a LIDAR (Light Detection and Ranging) device in June to measure the wind resources in the port of Valencia. The results will be essential to the drafting of a viable wind energy generation project. Moreover, a number of feasibility studies have been carried out both on wind energy and solar photovoltaic energy and the PAV is in contact with the regulatory authorities so that these kinds of facilities can become a reality in the short term.

2019 also saw us reduce electricity consumption, improving the energy efficiency of the premises managed by the port authority. A European project has been embarked upon to introduce alternative fuels into port operations, including hydrogen, as part of the H2Ports projected, financed by the EU through the H2020 programme.

We are committed to policies that aim to meet the Sustainable Development Goals adopted by the UN in 2015 and which we will gradually integrate into day-to-day management of our company. Those most closely related to the environment include initiatives aimed at promoting the use of sanitation systems in the companies in the port of Valencia, improving energy efficiency, promoting the use of renewable energies and improving ferry lines in the ports.

To realize many of these achievements, and others to come, the PAV relies on the R&D projects in which it has been participating for many years and which have provided many successes in management. In 2019 we completed the GAINN4MOS project, with the objective of implementing the use of LNG on port premises.

However, several projects are still running, including CORE LNG AS HIVE projects remain running, to be completed in 2020, and which provide for the installation of a pilot plant on land to supply LNG to vessels. The H2Ports project (mentioned above) aims to test the feasibility of using hydrogen as a fuel in port applications. The ECCLIPSE projects have also begun, with the aim of defining a methodology for the adaptation of ports to the effect of climate changes, along with GREEN-C-PORTS, which is a project that integrated digitalisation and smart networks for better management of traffic and port operations at different levels, including the environmental level.

We must also underline that the PAV presides, along with the port of Civitavecchia, the Medports Association's Sustainability Committee. The association brings together 21 port entities from 10 Mediterranean countries and its mission is to establish common frameworks in relation to environmental sustainability.

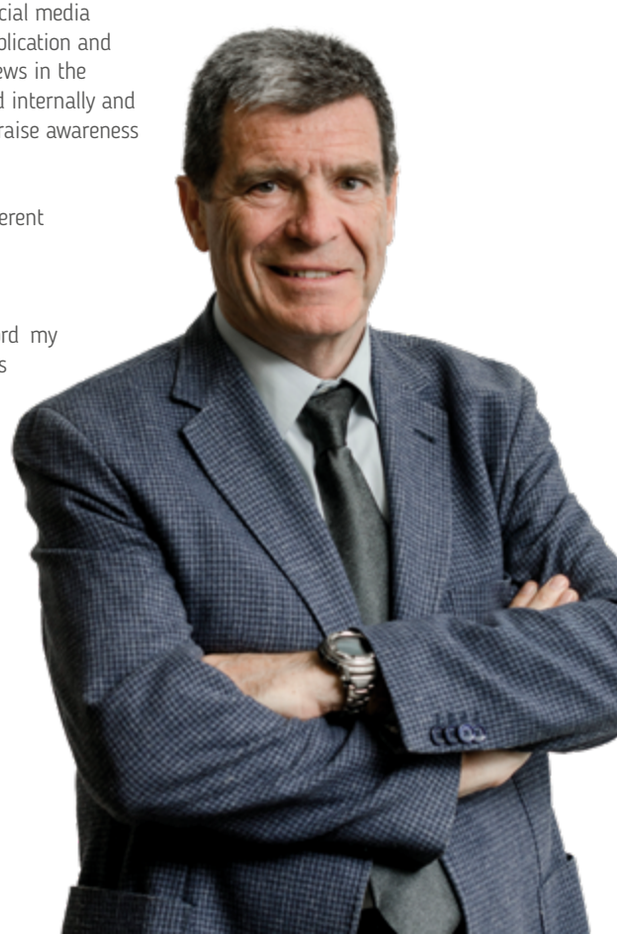
All of these initiatives and achievements are communicated, as is common, to both the port community and society in general through the publication of this Environmental Declaration, press releases, the publication of videos and news on social media (twitter, LinkedIn etc.) events with educators and the publication and dissemination of "environmental advice" and relevant news in the Environmental Bulletin. This information is disseminated internally and externally through the intranet and the PAV website, to raise awareness among our staff and the port community.

All of the information on this Port Authority and its different environment publications can be found on our website: www.valenciaport.com

To finish, I would like to highlight and place on record my appreciation for both the staff of the PAV and all members of the port community, who have been involved and collaborated with us to make ports more sustainable places. Without them, we would not be able to do this work to disseminate the results contained in this declaration.

Aurelio Martínez Estévez

CHAIRMAN OF THE PORT AUTHORITY OF VALENCIA



2. INTRODUCTION BACKGROUND

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2. Introduction Background

For several years, the Port Authority of Valencia has used environmental criteria as one of the pillars of its business strategy, incorporating the commitments assumed in its Environmental and Energy policy within a focus on Corporate Social Responsibility. The environmental actions led by the Port Authority of Valencia in the three ports it managed have, over this time, been diverse. Below we describe, in chronological order the most important achievements.

In 1998, the PAV launched the ECOPORT Project: Towards a Port Community Respectful of the Environment, which was financed by the European Commission's LIFE Programme. The fruit of this work was the drafting of a Methodology for the Implementation of Environmental Management Systems in Port Facilities. This methodology has become a reference for port management at national and international level and was subsequently implemented in a different port environments. With ECOPORT, the bases were established for the development of the Environmental Management System of the organisation and whose functioning is summarised in this documents, giving it, as early as 1998, responsibilities exclusively concerned with environmental protection.

On 12 April 2000, the Board of Directors of the PAV approved the Environmental Policy, which has been reviewed in the years since, last updated on 11 November 2016. Over those years, the PAV has extended its commitment to environmental management, as the Environmental Management System has matured, accepting new challenges.

In 2003, the PAV was the first Spanish port to obtain the PERS (Port Environmental Review), granted by the Lloyds Register and supported by the ECOPORTS Foundation and the European Maritime Ports Association, ESPO. In 2006, the SGA was certified in accordance with Standard ISO 14001 and 2008 was registered on the EMAS register of the Region, the first Spanish port to obtain that certification.

In the year 2008, the Port Authority of Valencia received the Eco-excellent Company award at Ecofira, proposed by the Clean Technologies Centre (CTL) of the Regional Ministry of the Environment, Territory and Housing of Valencia.

The PAV has also acquired a number of international commitments of a voluntary nature, including the signing, in 2006, of the Sydney Declaration for the Sustainable Development of Port Cities, under the auspices of the International Association of Cities and Ports and, in July 2008, of the "World Ports for a Better Climate Declaration" in Rotterdam.

The PAV, in its commitment to environmental improvement and the reduction of greenhouse gases, calculated and registered the Carbon Footprint of the Port of the Valencia on the Carbon Footprint, Compensation and CO2 Absorption Register created by the Ministry of Agriculture, Food and the Environment, obtaining the "calculation" seal. Along this line and also in 2016, the PAV obtained the certification of the Energy Management System in accordance with standard ISO 50001, integrating both environmental and energy policies in a single environmental and energy policy.

The Port Authority of Valencia carries out numerous initiatives and participates in different projects with the aim of environmentally improving the performance of their activities, and that of the companies that form part of the Port Community. Among these actions, we can highlight:

- The improvement of control tools and policies and measuring the principal environmental aspects generated in the ports it manages, along with energy and water consumption, etc.
- Policy to replace vehicles with others with better environmental performance, along with the replacement of lighting within buildings and roads for more energy efficient bulbs.
- Monitoring of environmental aspects generated by extension works at the ports of Valencia and Sagunto through the Environmental Monitoring Plan.
- Creation of the ECOPORT III project, the evolution of ECOPORT II, which aims to measure the levels of eco-efficiency within the Valenciaport port community and establishing the strategy to improve the energy-environmental performance through the definition of indicators like the carbon footprint.
- Maintenance of the Environmental Management System, whose functioning ensures the information contained in this Declaration and allows us to improve our environmental performance year after year.
- Fostering the implementation of renewable energies on port premises with the aim of decarbonising activities carried out therein and reducing the carbon footprint.
- Study of the Zero-Emissions Plan in 2030 in the port of Valencia.

3. DESCRIPTION OF THE PORT

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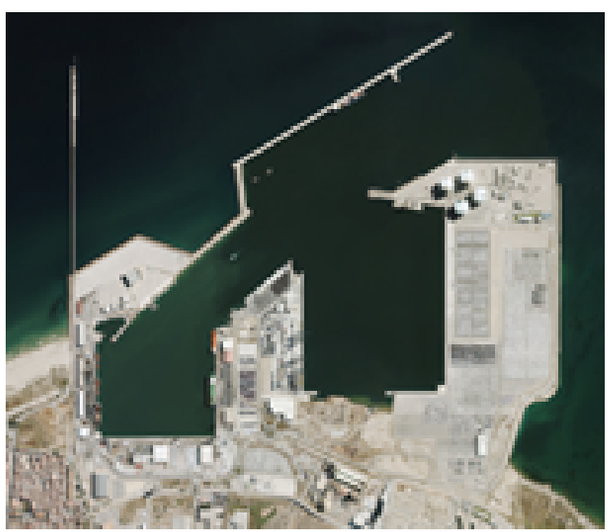
The Port Authority of Valencia (PAV), trading as Valenciaport, is the public body responsible for the management of the three state ports located on an 80-kilometre stretch of Spain's Mediterranean east coast: Sagunto, Valencia, and Gandía.

The privileged geo-strategic location of Valenciaport in the centre of the Western Mediterranean Arch, in line with the east-west corridor that crosses the Suez Canal and the Straits of Gibraltar, positions Valenciaport as the first and last call for the principal shipping companies operating regular lines between America, the Mediterranean Basin and the Far East.

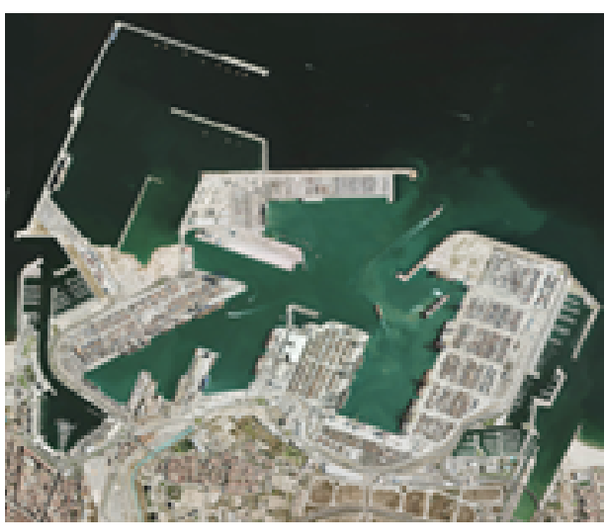
3.1 Location. Physical data

The ports of Sagunto, Valencia, and Gandía are located on the Iberian Mediterranean side, with a subtropical Mediterranean climate of moderate winters and rather hot summers.

PORT	STATUS	TOTAL SURFACE AREA	WASTER SURFACE AREA	QUAYS BERTHING LINE
SAGUNTO	LONGITUDE 0º 13' W LATITUDE 39º 39' N	2,397,800 M²	2,206,000 M²	14 QUAYS 5,801 M BERTHING LINE
VALENCIA	LONGITUDE 0º 18.1' W LATITUDE 39º 26.9' N	5,626,534 M²	5,746,000 M²	27 QUAYS 13,554 M BERTHING LINE
GANDÍA	LONGITUDE 0º 9' W LATITUDE 38º 59' N	245,000 M²	284,000 M²	6 QUAYS 1,289 M BERTHING LINE



PORT OF SAGUNTO. YEAR 2017



PORT OF VALENCIA. YEAR 2017

PORT OF GANDÍA. YEAR 2017

3.2 Legal Framework

The legal regime of the Port Authorities is described in Royal Decree 2/2011, of 5 September, approving the revised text of the Law on State Ports and the Merchant Navy.

The Port Authority of Valencia is a Public Law entity with its own status and equity, independent of the State, reporting to the public body Puertos del Estado, which is responsible for the administration, management, control and operation of the ports of Sagunto, Valencia, and Gandía. Its principal functions are the regulating of the public port domain, the granting of concessions and authorisations, the planning, design and construction of the necessary works, monitoring and policing within the service area of the ports and the maintenance of signals to assist navigation, among others.

The law assigns exclusive competency for the Ports of General Interest to the General State Administration (Art. 149.1.20 of the Constitution) and establishes the designation of government bodies of the Port Authorities to the Autonomous Communities. The bodies of the Port Authority of Valencia are the following:

a) Governance:
- Board of Directors
- Chairman

b) Management
- CEO

c) Assistance
- Navigation and Port Committee

In relation to legal action, the Port Authority of Valencia has a periodic identification and assessment system of legal requirements and other requirements of an environmental nature. Thus, compliance, among others, of the update of pertinent authorisations in environmental matters, and environmental obligations of an ad hoc nature.

The Port Authority of Valencia considers compliance with current legislation, and environmental legislation especially, to be essential. It complies with environmental requirements in all areas such as:

- Waste: Through the control of the production of hazardous and non-hazardous waste, and appropriate storage, labelling, separation, transport and management of waste using duly authorised transporters and managers.
- Emissions: with the corresponding vehicle inspection control registers as well as control of other types of emissions such as t hose that generate
- Discharges, despite not being a representative aspect, as existing discharges at facilities are of a domestic nature, from toilets and showers installed and controlled by the organisation.
- Noise, using periodic measurements, demonstrating compliance with legal requirements.

It pushes the fostering of compliance with legal requirements of an environmental nature, both among the personnel of the port authority and the concessions based on the port premises, conducting training activities on the legal requirements that facilities must fulfil such as hazardous waste, environmental responsibility of discharges.

The principal environmental legal regulations applicable to the company during the year 2019 are described in the following table:

EMAS
REGULATION (EC) No 1221/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) No 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC
COMMISSION REGULATION (EU) 2017/1505 of 28 August 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 eco-management and audit scheme (EMAS)
COMMISSION REGULATION (EU) 2018/2026 of 19 December 2018 amending Annexes 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 eco-management and audit scheme (EMAS)
GENERAL
Royal Legislative Decree 1/2016, of 16 December, approving the consolidated text of the Law on the integrated prevention and control of contamination.
Law 5/2014, of 25 July, of the Regional Government of Valencia, on Territorial Planning, Urban Development and Landscape of the Region of Valencia.
Law 6/2014, of 25 July, on Environmental Prevention, Quality and Control in the Region of Valencia.
Law 11/2014, of 3 July, amending Law 26/2007, of 23 October, on Environmental Responsibility (Official State Gazette (BOE) No. 162 of 04/07/2014).
Law 21/2013, of 9 December, on Environmental Assessment.
Royal Legislative Decree 2/2011, of 5 September, approving the consolidated text of the Law on State Ports and the Merchant Navy.
Law 6/2010, of 24 March, amending the consolidated text of the Law on the Environmental Impact Assessment of Projects, approved by Royal Legislative Decree 1/2008, of 11 January.
Law 33/2010, of 5 August, amending Law 48/2003, of 26 November, on the economic regime and the provision of services in ports of general interest.
Royal Legislative Decree 1/2008, of 11/01/2008, approving the consolidated text of the Law on the Environmental Impact Assessment of projects. (Official State Gazette (BOE) No. 23 of 26/01/2008).
Law 26/2007, of 23 December, on Environmental Responsibility.

WASTE
Law 22/2011, of 28 July, on waste and contaminated soils.
Law 10/2000, of 12 September, on waste in the Region of Valencia
Royal Decree 180/2015, of 13 March, regulating the transfer of waste within the territory of the State.
International Convention for the Prevention of Pollution from Ships, of 2 November 1973 (Marpol Convention) and subsequent amendments.
Royal Decree 1381/2002 on Port Facilities for the reception of waste generated by vessels.
ENERGY AND WATER
Royal Legislative Decree 1/2001, of 20/07/2001, approving the consolidated text of the Law on Waters. (Official State Gazette (BOE) No. 176 of 24/07/2001).
Royal Decree 817/2015, of 11 September, establishing the monitoring and assessment criteria for the assessment of the state of surface waters and environmental quality rules.
EMISSIONS
Royal Decree 100/2011, of 28 January, updating the catalogue of potentially atmosphere-polluting activities and establishing the basic provisions for their application.
Law 34/2007, of 15/11/2007, on Air Quality and Atmospheric Protection. (Official State Gazette (BOE) No. 275 of 16/11/2007).
NOISE
Royal Decree 1367/2007, of 19 October, developing Law 37/2003, of 17 November, on Noise Pollution, relating to acoustic zoning, quality objectives and acoustic emissions.
Law 37/2003, of 17/11/2003, on noise pollution. (Official State Gazette (BOE) No. 276 of 18/11/2003).
CONSUMPTION
Royal Decree 56/2016, of 12 February, transposing Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, relating to energy efficient with regard to energy audits, accreditation of service providers and promoting the efficiency of energy supply.
OTHER
Royal Decree 513/2017, of 22 March, regulating fire-protection facilities.
Royal Decree 337/2014, of 9 May, approving the Regulation on technical conditions and safety guarantees at high-voltage electrical facilities and their Complementary Technical Instructions ITC- RAT 01 a 23.
Royal Decree 1695/2012, of 21 December, approving the National Response System for marine pollution.
ROYAL DECREE 1027/2007, of 20 July, approving the Thermal Facilities in Buildings Regulation.

Among the main environmental authorisations and obligations, we should highlight the following:

- Environmental Impact Declaration of the Extension of the Port of Valencia.
- Environmental Monitoring Plan for the Extension of the Port of Valencia
- Registration as Small Hazardous Waste Producer No. 3631/P02/RP/CV.
- Annual declaration of Possession of Devices containing PCBs.
- Log Book for potentially polluting activities. Atmospheric pollution.
- International Convention for the Prevention of Pollution from Ships, of 2 November 1973 (Marpol Convention).

CLOCKTOWER BUILDING

3.3 Basic magnitudes of port traffic

Autoridad Portuaria de Valencia

	2018	2019	Δ 19/18 dic acum	Δ 19/18 nov acum	Tendencia Anual
Tráfico total (t)	**76.621.101**	**81.063.555**	*5,80%*	*6,65%*	*5,80%*
Granel Líquido	1.909.692	3.120.013	*63,38%*	*55,35%*	*63,38%*
Granel Sólido	2.544.075	2.190.118	**-13,91%**	**-13,23%**	**-13,91%**
Mercancía No Containerizada	14.085.935	14.585.870	*3,55%*	*4,50%*	*3,55%*
Mercancía Containerizada	57.885.808	60.831.738	*5,09%*	*6,15%*	*5,09%*
Pesca	2.894	1.495	**-48,36%**	**-48,66%**	**-48,36%**
Avituallamiento	192.697	334.321	*73,50%*	*67,81%*	*73,50%*
Buque (ud)	**7.722**	**7.891**	*2,19%*	*2,98%*	*2,19%*
G.T.	262.922.154	273.704.772	4,10%	5,05%	4,10%
Contenedores (TEU)	**5.182.665**	**5.439.827**	*4,96%*	*6,01%*	*4,96%*
Pasajeros (ud)	**1.107.963**	**1.112.727**	*3,80%*	*4,31%*	*3,80%*
Línea Regular	650.445	677.111	4,10%	4,03%	4,10%
Cruceros	421.518	435.616	3,34%	5,93%	3,34%
Automóviles (ud)	**820.221**	**722.758**	*-11,88%*	*-10,77%*	*-11,88%*

Puerto de Valencia

Tráfico total (t)	**70.778.376**	**73.715.925**	*4,15%*	*4,86%*	*4,15%*
Granel Líquido	1.488.639	1.367.338	*-8,15%*	*-13,01%*	*-8,15%*
Granel Sólido	1.871.096	1.530.847	*-18,18%*	*-18,51%*	*-18,18%*
Mercancía No Containerizada	9.852.024	10.200.466	*3,54%*	*3,45%*	*3,54%*
Mercancía Containerizada	57.396.829	60.318.952	*5,09%*	*6,16%*	*5,09%*
Pesca	577	367	*-36,31%*	*-35,82%*	*-36,31%*
Avituallamiento	169.211	297.955	*76,08%*	*67,95%*	*76,08%*
Buque (ud)	**6.048**	**6.099**	*0,84%*	*1,03%*	*0,84%*
G.T.	236.832.093	243.918.494	*2,99%*	*3,66%*	*2,99%*
Contenedores (TEU)	**5.128.855**	**5.386.309**	*5,02%*	*6,10%*	*5,02%*
Pasajeros (ud)	**1.018.992**	**1.027.821**	*0,87%*	*1,12%*	*0,87%*
Línea Regular	597.474	592.205	*-0,88%*	*-2,40%*	*-0,88%*
Cruceros	421.518	435.616	*3,34%*	*5,98%*	*3,34%*
Automóviles (ud)	**528.975**	**565.430**	*6,89%*	*10,35%*	*6,89%*

Autoridad Portuaria de Sagunto

Tráfico total (t)	**5.458.913**	**6.961.504**	*27,53%*	*29,92%*	*27,53%*
Granel Líquido	421.053	1.752.675	*316,26%*	*301,09%*	*316,26%*
Granel Sólido	672.979	659.271	*-2,04%*	*1,09%*	*-2,04%*
Mercancía No Containerizada	3.859.816	4.020.059	*4,15%*	*7,54%*	*4,15%*
Mercancía Containerizada	488.937	512.006	*4,72%*	*4,63%*	*4,72%*
Pesca	150	112	*-25,11%*	*-24,62%*	*-25,11%*
Avituallamiento	15.978	17.381	*8,78%*	*4,42%*	*8,78%*
Buque (ud)	**1.396**	**1.371**	*-1,79%*	*-0,47%*	*-1,79%*
G.T.	23.927.774	24.720.625	*3,31%*	*3,81%*	*3,31%*
Contenedores (TEU)	**53.800**	**53.442**	*-0,67%*	*-1,89%*	*-0,67%*
Pasajeros (ud)	**81**	**105**	*29,63%*	*47,14%*	*29,63%*
Línea Regular	81	105	*29,63%*	*47,14%*	*29,63%*
Cruceros					
Automóviles (ud)	**291.209**	**156.400**	*-46,29%*	*-47,88%*	*-46,29%*

Puerto de Gandía

Tráfico total (t)	**383.813**	**386.125**	*0.60%*	*4,86%*	*-2,34%*
Granel Líquido					
Granel Sólido					
Mercancía No Containerizada	374.095	365.345	*-2,34%*	*1,37%*	*-2,34%*
Mercancía Containerizada	42	780	*1.757,14%*	*1.952,63%*	*1.757,14%*
Pesca	2.168	1.015	*-53,17%*	*-53,57%*	*-53,17%*
Avituallamiento	7.508	18.985	*152,86%*	*228,19%*	*152,86%*
Buque (ud)	**278**	**421**	*51,44%*	*66,95%*	*51,44%*
G.T.	2.162.287	5.065.653	*134,27%*	*223,80%*	*134,27%*
Contenedores (TEU)	**10**	**76**	*660,00%*	*850,00%*	*660,00%*
Pasajeros (ud)	**52.890**	**84.801**	*60,33%*	*87,37%*	*60,33%*
Línea Regular	52.890	84.801	*60,33%*	*87,37%*	*60,33%*
Cruceros					
Automóviles (ud)	**37**	**928**	*2.408,11%*		*2.408,11%*

4. DESCRIPTION OF ENVIRONMENTAL MANAGEMENT SYSTEM

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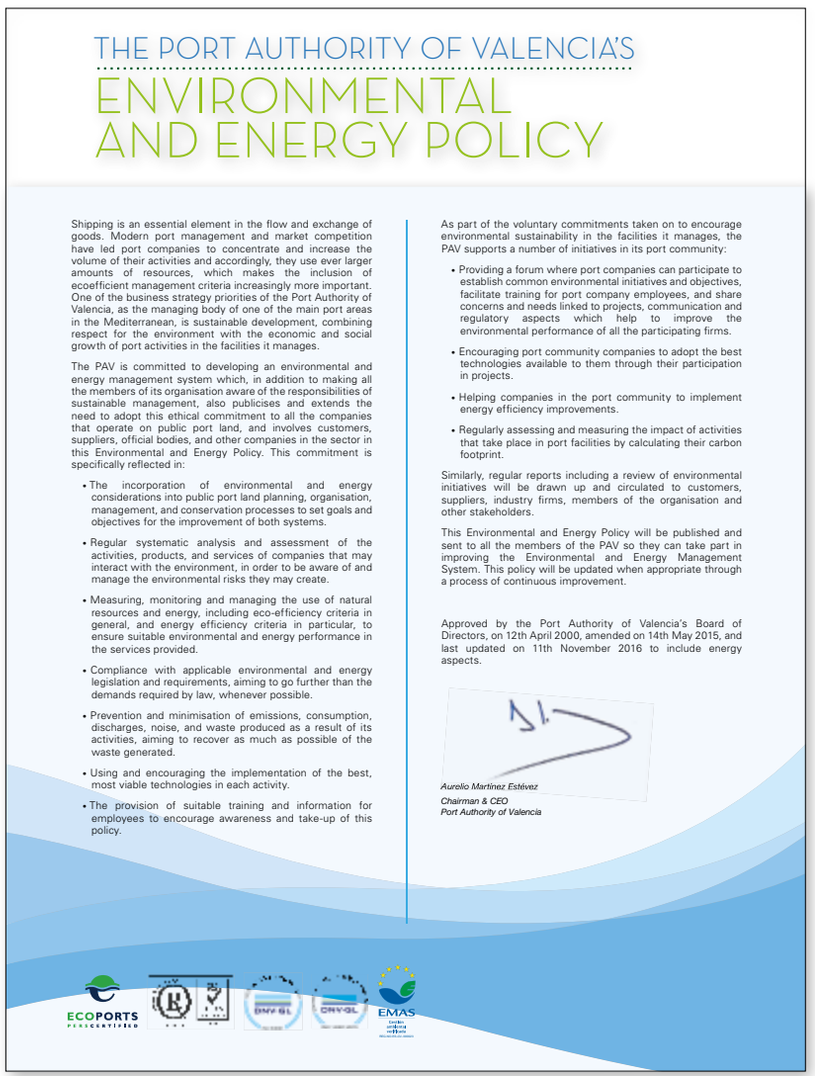
4.1 Environmental policy



THE PORT AUTHORITY OF VALENCIA'S

ENVIRONMENTAL AND ENERGY POLICY

Shipping is an essential element in the flow and exchange of goods. Modern port management and market competition have led port companies to concentrate and increase the volume of their activities and accordingly, they use ever larger amounts of resources, which makes the inclusion of ecoefficient management criteria increasingly more important. One of the business strategy priorities of the Port Authority of Valencia, as the managing body of one of the main port areas in the Mediterranean, is sustainable development, combining respect for the environment with the economic and social growth of port activities in the facilities it manages.

The PAV is committed to developing an environmental and energy management system which, in addition to making all the members of its organisation aware of the responsibilities of sustainable management, also publicises and extends the need to adopt this ethical commitment to all the companies that operate on public port land, and involves customers, suppliers, official bodies, and other companies in the sector in this Environmental and Energy Policy. This commitment is specifically reflected in:

- The incorporation of environmental and energy considerations into public port land planning, organisation, management, and conservation processes to set goals and objectives for the improvement of both systems.
- Regular systematic analysis and assessment of the activities, products, and services of companies that may interact with the environment, in order to be aware of and manage the environmental risks they may create.
- Measuring, monitoring and managing the use of natural resources and energy, including eco-efficiency criteria in general, and energy efficiency criteria in particular, to ensure suitable environmental and energy performance in the services provided.
- Compliance with applicable environmental and energy legislation and requirements, aiming to go further than the demands required by law, whenever possible.
- Prevention and minimisation of emissions, consumption, discharges, noise, and waste produced as a result of its activities, aiming to recover as much as possible of the waste generated.
- Using and encouraging the implementation of the best, most viable technologies in each activity.
- The provision of suitable training and information for employees to encourage awareness and take-up of this policy.

As part of the voluntary commitments taken on to encourage environmental sustainability in the facilities it manages, the PAV supports a number of initiatives in its port community:

- Providing a forum where port companies can participate to establish common environmental initiatives and objectives, facilitate training for port company employees, and share concerns and needs linked to projects, communication and regulatory aspects which help to improve the environmental performance of all the participating firms.
- Encouraging port community companies to adopt the best technologies available to them through their participation in projects.
- Helping companies in the port community to implement energy efficiency improvements.
- Regularly assessing and measuring the impact of activities that take place in port facilities by calculating their carbon footprint.

Similarly, regular reports including a review of environmental initiatives will be drawn up and circulated to customers, suppliers, industry firms, members of the organisation and other stakeholders.

This Environmental and Energy Policy will be published and sent to all the members of the PAV so they can take part in improving the Environmental and Energy Management System. This policy will be updated when appropriate through a process of continuous improvement.

Approved by the Port Authority of Valencia's Board of Directors, on 12th April 2000, amended on 14th May 2015, and last updated on 11th November 2016 to include energy aspects.

Aurelio Martínez Estévez
Chairman & CEO
Port Authority of Valencia

4.2 Certifications

CERTIFICATE OF VERIFICATION

ECOPORTS PERS CERTIFIED

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

Autoridad Portuaria de Valencia

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

Port Environmental Review System (PERS) version 5

THE SYSTEM IS APPLICABLE TO THE:

Activities, products and services of the port authority

ON BEHALF OF ESPO — ON BEHALF OF LLOYD'S REGISTER ROTTERDAM — *14 June 2018*

ESPO — Lloyd's Register LRQA

The Port Authority of Valencia is among the entities certified through the PERS model (Port Environmental Review System)

DNV·GL

CERTIFICADO DEL SISTEMA DE GESTIÓN

Se certifica que el sistema de gestión de

AUTORIDAD PORTUARIA DE VALENCIA
Av. Muelle de Turia, s/n,46024, Valencia, Valencia, Spain

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

Este certificado es válido para el siguiente campo de aplicación:
Gestión de servicios e infraestructuras en los puertos de Segunto, Valencia y Gandia.

IAF ENAC

Since 2006, the Port Authority of Valencia is certified by ISO 14001. In October 2017, we renewed the certificated under the new standard 14001:2015.

Lloyd's Register LRQA

Assurance Statement

The GHG Emissions Inventory for the fiscal year 2016 prepared by:

The Port Authority of Valencia
AV. Muelle del Turia, S/N, 46024 Valencia,
Spain

has been verified by Lloyd's Register Quality Assurance España, S.L. in accordance with:

ISO 14064-3:2006[1]

as conforming to the requirements of:

ISO 14064-1:2006[2]

The assurance has been formed on the basis of a limited level of assurance and at a materiality of the professional judgment of the Verifier.

Scope of GHG emissions	Tonnes CO_2e
Direct GHG emissions (Scope 1)	168
Energy indirect GHG emissions (Scope 2)	2.511
Other indirect GHG emissions (Scope 3)	163.436
Total GHG emissions	**166.115**

Signed: Date: 20 April 2018

20 ABR. 2018

Fernando Adam Matamala
On behalf of
Lloyd's Register Quality Assurance España, S.L.
LRQA reference number: SG/801/185

This summary is not valid without the full Assurance Statement attached on pages 2 to 3 to which it applies.

[1] ISO 14064-3:2006 Greenhouse gases — Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions

[2] ISO 14064-1:2006 Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

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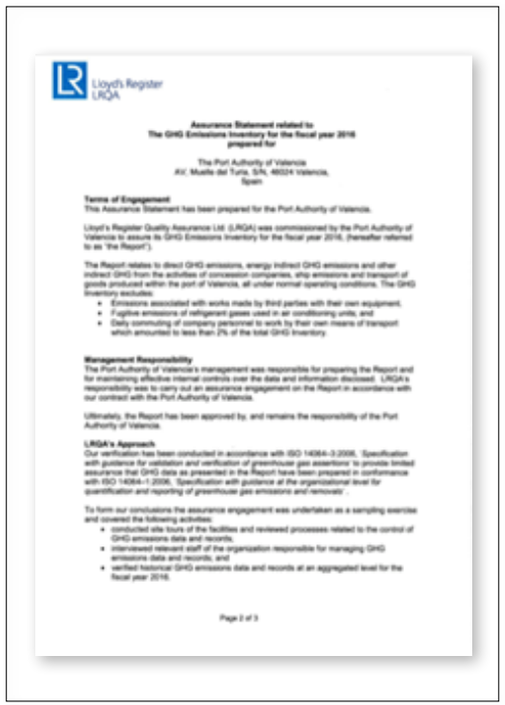


Lloyd's Register LRQA

Assurance Statement related to
The GHG Emissions Inventory for the fiscal year 2016
prepared for

The Port Authority of Valencia
AV. Muelle del Turia, S/N, 46024 Valencia,
Spain

Terms of Engagement
This Assurance Statement has been prepared for the Port Authority of Valencia.

Lloyd's Register Quality Assurance Ltd. (LRQA) was commissioned by the Port Authority of Valencia to assure its GHG Emissions Inventory for the fiscal year 2016, (hereafter referred to as "the Report").

The Report relates to direct GHG emissions, energy indirect GHG emissions and other indirect GHG from the activities of concession companies, ship emissions and transport of goods produced within the port of Valencia, all under normal operating conditions. The GHG inventory excludes:

- Emissions associated with works made by third parties with their own equipment.
- Fugitive emissions of refrigerant gases used in air conditioning units, and
- Daily commuting of company personnel to work by their own means of transport which amounted to less than 2% of the total GHG Inventory.

Management Responsibility
The Port Authority of Valencia's management was responsible for preparing the Report and for maintaining effective internal controls over the data and information disclosed. LRQA's responsibility was to carry out an assurance engagement on the Report in accordance with our contract with the Port Authority of Valencia.

Ultimately, the Report has been approved by, and remains the responsibility of the Port Authority of Valencia.

LRQA's Approach
Our verification has been conducted in accordance with ISO 14064-3:2006, *Specification with guidance for validation and verification of greenhouse gas assertions* to provide limited assurance that GHG data as presented in the Report have been prepared in conformance with ISO 14064-1:2006, *Specification with guidance at the organizational level for quantification and reporting of greenhouse gas emissions and removals*.

To form our conclusions the assurance engagement was undertaken as a sampling exercise and covered the following activities:

- conducted site tours of the facilities and reviewed processes related to the control of GHG emissions data and records,
- interviewed relevant staff of the organization responsible for managing GHG emissions data and records, and
- verified historical GHG emissions data and records at an aggregated level for the fiscal year 2016.

Page 2 of 3

Lloyd's Register LRQA

Level of Assurance & Materiality
The opinion expressed in this Assurance Statement has been formed on the basis of a limited level of assurance and at a materiality of the professional judgment of the Verifier.

LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that the total direct GHG emissions, energy indirect GHG emissions, and other indirect emissions disclosed in the Report as summarized in Table 1 below are not materially correct, and that the Report has not been prepared in conformance with ISO 14064-1:2006.

Signed: Dated: 20 April 2018

20 ABR. 2018

Fernando Adam Matamala
On behalf of
Lloyd's Register Quality Assurance España, S.L.
LRQA reference number: SG/801/185

Table 1. Summary of the Port Authority of Valencia, GHG Emissions Inventory 2016.

Scope of GHG emissions	Tonnes CO_2e
Direct GHG emissions (Scope 1)	168
Energy indirect GHG emissions (Scope 2)	2.511
Other indirect GHG emissions (Scope 3)	163.436
Total GHG emissions	**166.115**

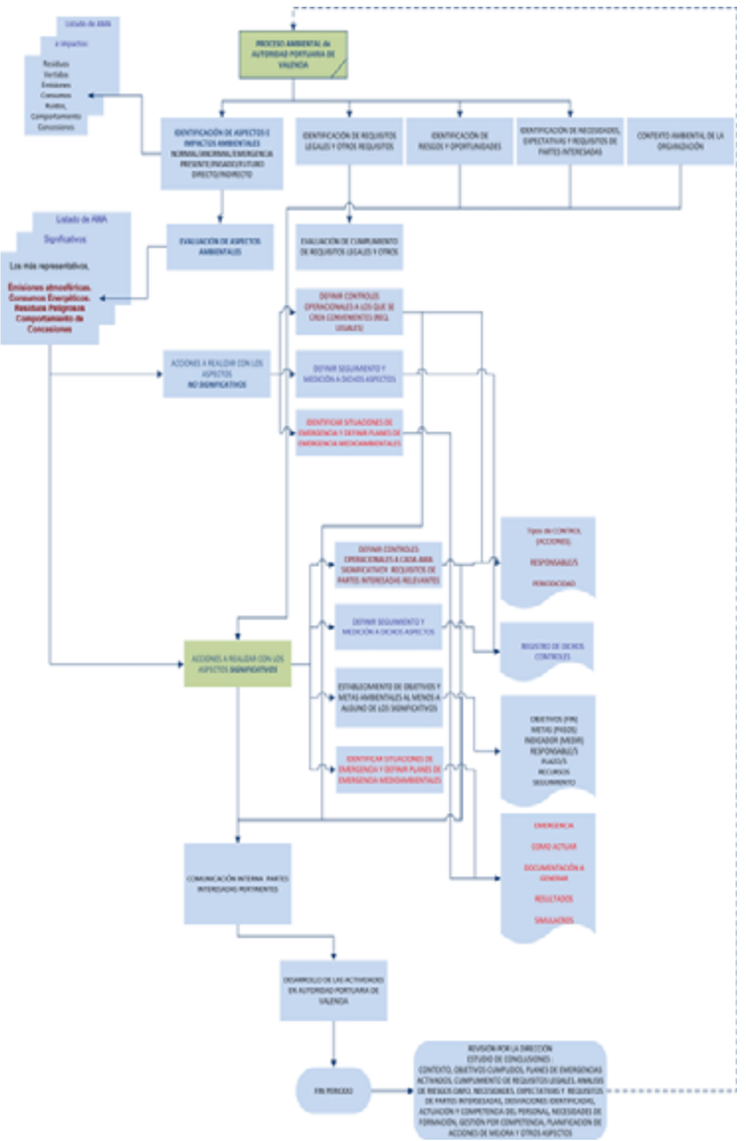
Page 3 of 3

Declaration of verifier in accordance with ISO 14064 for the calculation of the carbon footprint of the Port of Valencia corresponding to the year 2016

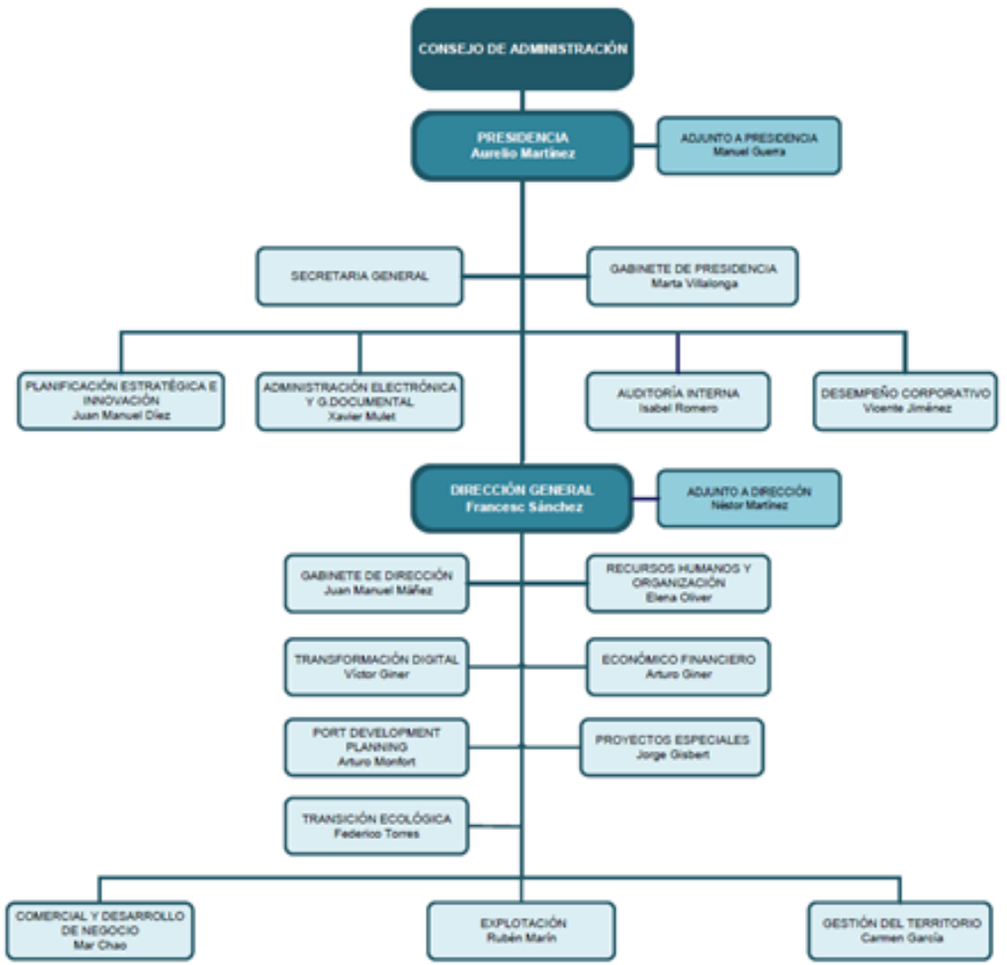
From 15 January 2008, the Port Authority of Valencia was registered by the Regional Ministry of Infrastructure, Territory and the Environment under number ES-CV 000023 in compliance with the Regulation (EC) 1221/2009 and 761/2001.

In 2016, the Port Authority of Valencia obtained ISO 50001 certification for the port of Valencia.

4.3 Description of the system



4.4 Flow chart



Organigrama versión julio 2020

Within the Management System, responsibilities are assigned as follows:

- The **Board of Directors** is responsible for:
  - Approving the environmental policy of the Port Authority of Valencia.

- The **CEO** is responsible for:
  - Reviewing the Environmental and Energy Management System and approving the Review Act:

- The **Head of the Ecological Transition Area** is responsible for:
  - Reviewing/approving the documentation comprising the Environmental and Energy Management System and the objectives and the Environmental and Energy Management Programme, prior to approval.
  - Ensure that the Environmental and Energy Management System complies with the requirements of International Standards.
  - Report to senior management on the performance of the environmental management system, including environmental performance.
  - They shall be responsible for the creation of an energy management team.

- **The Environment Officer** or the person designated person is responsible for:
  - Keep the Environmental and Energy Management System and the documentation thereof, complete the proposal of objectives, targets and environmental programmes, verifying the corrective and preventive actions, and drafting the Audit and Supervision Programme for the completion of environmental audits.
  - Identify and assess the environmental aspects arising from the activities and services of the Port Authority of Valencia, and the port facility for the purpose of focusing control on those that are significant.
  - Identify the legal requirements and other requirements applicable to the Port Authority of Valencia in relation to the environment, and the verification of compliance.
  - Identify possible accidents and emergency situations that may have environmental consequences and establish the preventive measures and steps of action. Conduct, together with the Head of Security, monitoring the preventive measures established for each emergency situation through drills. Comply with the Emergency Report.
  - Manage the monitoring tasks, supervising compliance with environmental objectives of the Port Authority of Valencia, the operational control operations with the management of discharges, waste, consumption of resources, noise and emissions to the atmosphere
  - Detect the training needs for personnel of the Port Authority of Valencia in environmental sphere, and collaborate with the Director of Human Resources in the drafting of the Position Files and the Environmental Training Programme.
  - Ensure training of personnel who work in the name of the Port Authority of Valencia through the drafting and distribution of the Environmental Best Practice.

- Plan environmental training of the concession of ports of Valencia, Sagunto and Gandía.
- Perform a task for continuous support and assessment of the challenge of Departments involved in environmental management.
- Process the management of complaints from stakeholders relating to environmental aspects of the activities and services of the Port Authority of Valencia and the management of internal and external communications of environmental content.
- Draft a Report on the Review of the Environmental Management System.
- In summary, ensuring that the environmental management system is established, implemented and maintained in accordance with the requirements of the standards and regulations and reporting to the senior management on the performance of the environmental management system, including the recommendations for improvements.

For any additional information, you can contact the following email: medioambiente@valenciaport.com

4.5 Environmental aspects

The Port Authority of Valencia has established, in its Environmental Management System, a Procedure for the identification and assessment of Environmental aspects (PMA-03) which, from the perspective of the life cycle, establish the methodology to identify and assess the environmental aspects linked to activities and services, and those generated on the port premises, both directly and indirectly.

In that procedure, both direct and indirect environmental aspects are identified, both in normal and abnormal situations. Similarly, the potential environmental aspects are identified based on accidents and emergency situations that have occurred in the past and the analysis of the installations and activities developed.

It considers:

Direct environmental aspects: Element of activities, products and services of an organisation that may interact with the environment.

Indirect environmental aspects: Generated as a consequence of the development of activities and upon which the organisation does not have full control in management.

Significant environmental aspects are the first to be taken into account when it comes to defining objectives and targets geared towards reducing those aspects.

Environmental impact: Any change in the environment, adverse or beneficial, as a total or partial development of environmental aspects of an organisation.

Normal conditions: The common or routine production conditions.

Normal conditions: The conditions that, although controlled, are special, such as the maintenance, cleaning, start-up, stops, etc.

Emergency situations: Uncontrolled situations, which includes both incidents and accidents.

For the assessment of the direct environmental aspects, the methodology used is summarised in accordance with the corresponding SGA procedure. Each of them is analysed separately, using the aforementioned methodology which uses the criteria of Frequency with which the environmental aspects are generated and the severity, which is determined by the calculation of the Danger and the Quality of the aspect.

The Frequency for each type of aspect is classified in accordance with three categories: Low, Medium and High. Both the Quantity and the Danger, which establishes the Severity, are classified as Low, Moderate, Medium and High. Those aspects evaluated with Severity in the High zone, regardless of frequency, shall be considered significant, as observed in the following table.

		SEVERITY			
		LOW	MODERATE	MEDIUM	HIGH
FREQUENCY	LOW				
	MEDIUM				
	HIGH				

For indirect environmental aspects, the Frequency criteria are used generating the environmental aspect and Consequences that assess the magnitude for each of the aspects identified. The Frequency is classified according to the category: Low, Medium and High and the Consequences are classified as: Low impact, Moderate impact and High impact.

Thus, those aspects whose consequences have a high impact or moderate impact with a High frequency, as shown in the following table

		CONSEQUENCES		
		LOW IMPACT	MODERATE IMPACT	HIGH IMPACT
FREQUENCY	LOW			
	MEDIUM			
	HIGH			

In terms of the environmental aspects identified in emergency situation, they are assessed in accordance under the criteria Frequency, Magnitude of Impact and Sensitivity of the Environment are awarded scores defined in the methodology established in the EMS. The total score is thus obtained with the sum of the scores awarded for each criterion and for each aspect. Once all the aspects identified are assessed, a ranking is established in the order of decreasing score. The 20% with the highest score are considered significant. Aspects not falling within this segment but with the same score as the last aspect considered significant, they will also be considered significant.

The possible aspects of the activities Port Authority of Valencia (PAV) may have for the environment, directly or indirectly, and the objectives established in relation to them, are summarised in the following table:

DIRECT:	OBJ.	INDIRECT	OBJ.
WASTE GENERATION.		WASTE GENERATION ON THE PORT PREMISES	
EMISSIONS TO THE ATMOSPHERE	No. 65	EMISSIONS ARISING FROM PORT OPERATIONS ON THE PORT PREMISES	No. 59 No. 64
WATER QUALITY		ENVIRONMENTAL PERFORMANCE OF CONCESSIONS	No. 66
NOISE, VISUAL IMPACT		NOISE ON ROADS ON THE PORT PREMISES	
WATER CONSUMPTION		WATER CONSUMPTION ON THE PORT PREMISES	
ELECTRICITY CONSUMPTION	No. 67 No. 68 No. 70 No. 71	ELECTRICITY CONSUMPTION ON THE PORT PREMISES	No. 68 No. 70
CONSUMPTION OF RAW MATERIALS		CONSUMPTION OF RAW MATERIALS ON THE PORT PREMISES	

In addition to the environmental aspects described above, the environmental aspect "environmental performance of concessions" is established. The assessment criterion used is the percentage of concessions in the different levels defined in Ecoport.

Following the assessment criteria established in the "Procedure for the Identification and Assessment of Environmental Aspects" the significant environmental aspects are presented below.

SIGNIFICANT ASPECTS				
DIRECT:	OBJ.		OBJ.	INDIRECT
ELECTRICITY CONSUMPTION*	No. 67 No. 68 No. 70 No. 71		No. 66	ENVIRONMENTAL PERFORMANCE OF CONCESSIONS
			No. 59 No. 64	EMISSIONS ARISING FROM PORT OPERATIONS ON THE PORT PREMISES

(*) The direct aspect "Electricity consumption" is not significant in the Assessment due to the purchase of energy from renewable sources and the reduction of consumption. But it was decided to consider it significant to continue acting on the improvement of energy efficiency.

The list of aspects is reviewed every year, updating it where considered necessary.

Objectives (see point 4.5) are established for the improvement of the principal aspects and the significant aspects.

In the case of works of general interest, the identification and assessment of the significant of the environmental aspects will be conducted in accordance with the Environmental Impact Study, and they are monitored through the Environmental Impact Declaration and the Environmental Monitoring Plan.

4.6 Objectives and targets

4.6.1 Previous and planned 2019

The objectives planned and carried out in 2019 are differentiated by colour coding according to the legend described below and these were the following:

- OBJECTIVE ESTABLISHED IN PREVIOUS YEARS THAT HAS NOT YET BEEN ACHIEVED.
- OBJECTIVE PLANNED IN THE CURRENT YEAR, WHICH IS LINKED TO OBJECTIVES ESTABLISHED IN PREVIOUS YEARS.
- NEW OBJECTIVE ESTABLISHED IN THE CURRENT YEAR.

No. 59 Installation of a substation at the Port of Valencia.

Once submitted to the State Ports, the project is submitted to the Regional Ministry of the Sustainable Economy for processing with the corresponding authorisation. That authorisation remains pending.

The objective remains as envisaged for 2020.

No. 64 Improvement of air quality in the port of Sagunto through the installation of a particle capture system.

After the start of the drafting of the specifications document for the purchase and installation of equipment, the Green C Ports project is granted with European funds. Said project includes the supply and installation of 2 immission cabins with 2 particle capture devices, 3 sound level meters and 2 weather stations for the port of Valencia. A change of criteria in the installation of equipment is assessed. Once the purchase of the equipment established in said project has been made, transfer of a complete station of those that were in the port of Valencia to the port of Sagunto. The wording of the specification documents for the supply and installation of the equipment is being amended, planned for the first quarter of 2020.

Transferred to the 2020 objective.

No. 65 OBJECTIVE: Completion of a campaign of measurement of wind resources in the port of Valencia.

A pre-feasibility study has been carried out for the installation of a wind farm in the port of Valencia. Once finalises, the campaign of measurement of wind resources in the port of Valencia was begun. It is scheduled to be completed in June 2020.

The objective continues for 2020.

No. 66 OBJECTIVE: Phase II ECOPORT III: Study and statistical analysis of the levels of eco-efficiency of the ports of the PAV, strategic definition of roadmap and update of GEIS inventory of PAV.

Drafted in Specifications Document for contracting study, analysis, strategic definition of levels of eco-efficiency. It is currently in the review of administrative specifications document stage. It is scheduled to be completed in the first quarter of 2020 to initiate the tender processes.

The objective continues for 2020.

No. 67 OBJECTIVE: Drafting of a Strategic Energy Plan of the PAV in the port of Valencia.

Design has begun on the Strategic Energy Plan of the PAV has, which aims to trace lines of action geared towards achieving the strategic objectives established. It has been delayed a little more than initially envisaged.

The objective continues for 2020.

No. 68 OBJECTIVE: Reduction of 10% in electricity consumption of public lighting through the drafting of the Plan for renewal of exterior lighting using LED technology in the area described. Phases I Levante Quay roundabout Shipyard roundabout.

The procurement process has been initiated as sources of financing are being sought. Assistance of IDEA requested.

The objective continues for 2020.

No. 69 Improvement of the emissions through the renewal of three fuel vehicles of the PAV fleet.

Three fuel vehicles have been replaced with three ZOE electric vehicles and another has been replaced with a hybrid vehicle (Yaris).

Objective met.

No. 70 Improvement of energy efficiency through the implementation of photovoltaic panels in the facilities of the Puerto de Valencia.

Progress continues to be made on drafting the technical specifications of the installation of photovoltaic panels for own consumption with anti-discharge in the port of Valencia. Although installation in Gandía is not initially planned, the extension to Gandía has been estimated.

The objective continues for 2020.

4.6.2 Our objectives 2020

The objectives planned for 2020 tackle the principal environmental aspects related to PAV activities and the processes developed and that have implications of an environmental nature. The objectives are grouped together below in accordance with these criteria, colour coded as explained above:

a) ENVIRONMENTAL ASPECTS:

ATMOSPHERE:

No. 64 Improvement of air quality in the port of Sagunto through the installation of a capture of particles.

This objective is carried out for the purpose of extending the control measures on activities that can affect air quality.

Starting situation: Air quality equipment available.

Situations envisaged: improve air quality control and know the air quality in the port of Sagunto in real time.

Result: improvement of air quality control in the port of Sagunto. Line of Environmental Policy: Analyse and assess, systematically and periodically, the activities, products and services of the company that may interact with the environment, for the purpose of knowing and managing the environmental risk it may generate.

No. 65 Completion of a campaign of measurement of wind resources in the port of Valencia.

With this objective, the aim is to ascertain the feasibility of generating wind energy at the Port of Valencia.

Starting situation: there are no data on the potential wind resources in the port of Valencia.

Prior situation: data on the feasibility of the installation of wind energy at PAV facilities in Valencia, in accordance with the data on wind resources obtained.

Result: improve the energy efficiency of the port of Valencia. Lines of the Policy: Use and provide the use of technology improvements that are visible in each activity.

b) FOR THE IMPROVEMENT OF PROCESSES / ACTIVITIES.

ECO-EFFICIENCY:

No. 59 OBJECTIVE: Installation of a substation at the Port of Valencia.

This objective is carried out for the purpose covering future usage forecasts and in order to plan, control and improve the energy system at the Port of Valencia.

Starting situation: Provision of current information relating to the energy management of the Port of Valencia.

Situation envisaged: Viable alternative actions to tackle the energy future of the port of Valencia.

Result: Energy assessment of the port. Lines of Environmental Policy: Integrate the environmental and energy considerations into planning processes, ordering, management and conservation of the port public domain, serving for the definition of targets and objectives of both systems.

No. 67 Strategic Energy Plan of the PAV in the port of Valencia.

Aim to trace defined lines of action geared towards achieving the strategic objectives established and aimed at energy improvements.

Starting situation: diverse measures carried out aimed at energy efficiency.

Situation envisaged: Define and plan future lines of action.

Result: Planning of actions to be implemented. Line of Environmental Policy: Integrate the environmental and energy considerations into planning processes, ordering, management and conservation of the port public domain, serving for the definition of targets and objectives of both systems.

No. 68 Improvement of energy efficiency by drafting a Plan for renewal of exterior lighting using LED technology

This objective is carried out with the aim of reducing electrical consumption in the port of Valencia, taking specific actions to improve energy efficiency.

Starting situation: The necessary control is available to ascertain consumption on roads.

Situation envisaged: carry out actions necessary to reduce electricity consumption with respect to the previous year.

Result: Improvement of energy efficiency. Line of Policy: Measure, control and manage consumption of natural resources and energy, incorporating eco-efficiency criteria in general and energy efficiency in particular, in order to achieve adequate environmental and energy performance of the services provided.

No. 70 Improvement of energy efficiency through the implementation of photovoltaic panels in the facilities of the Puerto de Valencia.

This objective aims to improve energy efficiency through the implementation of renewable energies.

Starting situation: There is a small network of photovoltaic panels in the port of Valencia.

Situation envisaged: extend the existing network and reduce electricity consumption incorporating renewable energies that improve emissions and the carbon footprint of the Port of Valencia.

Result: Improvement of energy efficiency. Line of Policy: Measure, control and manage consumption of natural resources and energy, incorporating eco-efficiency criteria in general and energy efficiency in particular, in order to achieve adequate environmental and energy performance of the services provided.

No. 71 Improvement of energy efficiency in the Climate Plant of the port of Valencia with a reduction of 15%.

With the roll-out of this objective, the aim is to improve energy efficiency by reducing the consumption of the plant through the incorporation of elements that improve performance.

Starting situation: Data available on current consumption of the climate plant.

Situation envisaged: improve existing equipment and reduce electricity consumption improving the energy efficiency of the climate plant.

Result: Improvement of energy efficiency. Line of Policy: Measure, control and manage consumption of natural resources and energy, incorporating eco-efficiency criteria in general and energy efficiency in particular, in order to achieve adequate environmental and energy performance of the services provided.

MANAGEMENT:

No. 66 OBJECTIVE: Phase II ECOPORT III: Study and Statistical analysis of the levels of eco-efficiency of the ports of the PAV, strategic definition of roadmap and update of GEIS inventory of PAV.

This objective is carried out with the aim of ascertaining the level of eco-efficiency of port premises of the ports managed by the PAV and the inventory of the GEIS, to trace future lines of action.

Starting position: in the framework ECOPORT III, where the majority of companies participate in the port community, environmental and energy initiatives are carried out, where the members of ECOPORT participate, carrying out their objectives.

Situation envisaged: complete an initial study to establish joint strategies.

Result: improvement of emissions and GEIS in ports managed by the PAV. Lines of the Policy: Integrate the environmental and energy considerations into planning processes, ordering, management and conservation of the port public domain, serving for the definition of targets and objectives of both systems.

4.7 Needs and expectations of interested parties

Detailed below are the needs and expectations detected are detailed to the interested parties:

PARTES INTERESADAS PERINENTES	NECESIDADES/EXPECTATIVAS		REQUISITO	ACCION
CLIENTES	NE	Mantener los principios de protección del Medio Ambiente	SI	SEGUIMIENTO SISTEMA DE GESTIÓN AMBIENTAL EMAS
CLIENTES	EX	Dar el mejor servicio ambiental al mejor precio	NO	PUESTA A DISPOSICIÓN DE MEDIDAS Y MEDIOS AMBIENTALES
CLIENTES	EX	Aumentar certificaciones en materia ambiental	SI	PROMOCIÓN DE NUEVAS CERTIFICACIONES Y PROYECTOS AMBIENTALES
PROVEEDORES	NE/EX	Mantener la Política de Compras fortaleciendo exigencias ambientales	SI	DEFINICIÓN CRITERIOS AMBIENTALES. LEY CONTRATOS SECTOR PÚBLICO. KM0, PRODUCTO ECO, EMAS, 14001, 140064, 50001
SUBCONTRATISTAS	NE/EX	Mantener la Política de Contratación fortaleciendo exigencias ambientales	SI	DEFINICIÓN CRITERIOS AMBIENTALES. LEY CONTRATOS SECTOR PÚBLICO. KM0, PRODUCTO ECO, EMAS, 14001, 140064, 50001
TRABAJADORES	EX	Consolidación y promoción en la organización. Mejora de la Formación Ambiental considerada para promoción	SI	PLAN DE FORMACIÓN AMBIENTAL
ADMINISTRACION PUBLICA	NE	Cumplimiento de requisitos legales y otros en materia ambiental	SI	IDENTIFICACION Y EVALUACION DE REQUISITOS LEGALES PERIÓDICO
ADMINISTRACION PUBLICA	EX	Mantener proactividad en la gestión ambiental, EMAS	SI	SEGUIMIENTO SISTEMA DE GESTIÓN AMBIENTAL EMAS
COMPETENCIA	EX	Mantener el nivel de exigencia ambiental	SI	PROMOCIÓN DE NUEVAS CERTIFICACIONES Y PROYECTOS AMBIENTALES
VECINOS	EX	Minimización de molestias ambientales	NO	CONTROL DE ASPECTOS AMBIENTALES Y FOMENTO DE ACTIVIDADES DE COMUNICACIÓN/INFORMACIÓN SOCIAL

5. MANAGEMENT OF NATURAL RESOURCES

CONTENTS

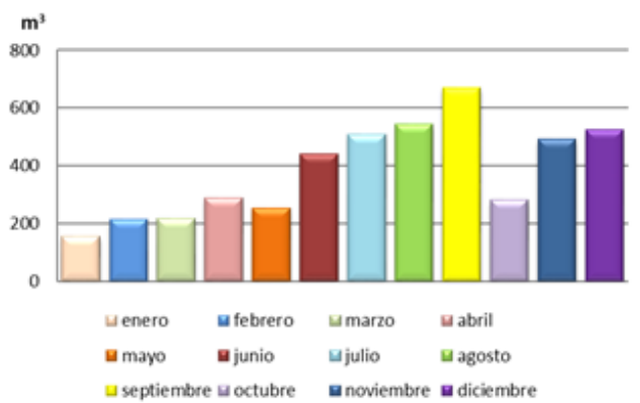
5.1 Water

Water consumption of the PAV corresponding to consumption of buildings and irrigation of gardens. Total consumption of water of PAV in 2019 was 46,067 m^3, an increase of almost 18% with respect to the previous year.

Consumption per port was distributed as follows:

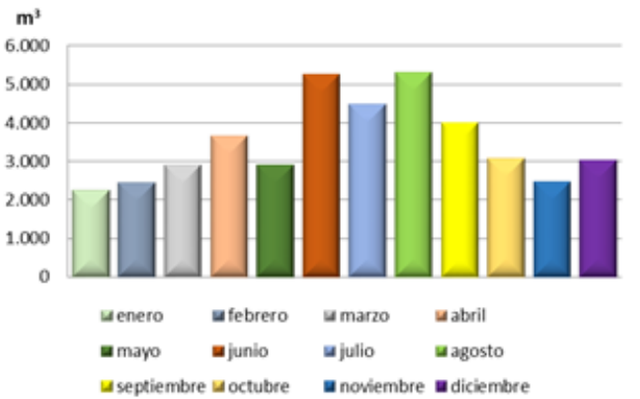
In the Port of Sagunto consumption was 4,591m^3. The graphic shows the distribution of consumption by months.

WATER CONSUMPTION SAGUNTO 2019



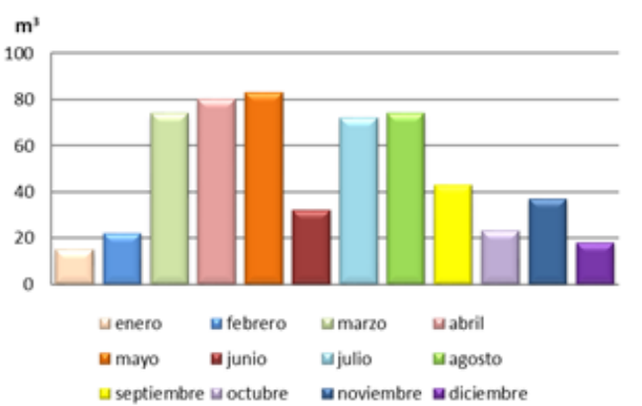
In the port of Valencia, consumption in 2019 was 40,903 m^3, with the following monthly breakdown:

WATER CONSUMPTION VALENCIA 2019



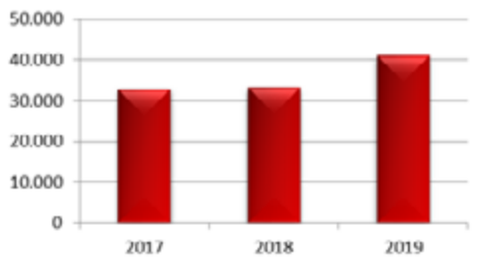
In the Port of Gandía, total consumption for the period was 573 m^3. Monthly consumption was broken down as follows:

WATER CONSUMPTION GANDIA 2019

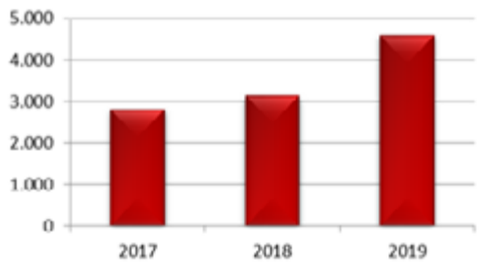


The evolution of annual consumption of water in the ports of Sagunto, Valencia, and Gandía was as follows

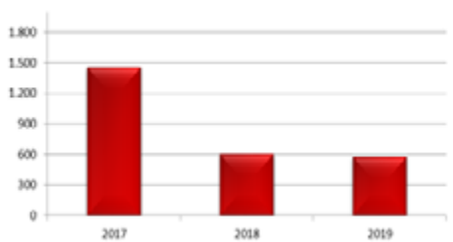
EVOLUTION OF CONSUMPTION VALENCIA (M3)



EVOLUTION OF CONSUMPTION SAGUNTO (M^3)



EVOLUTION OF CONSUMPTION GANDIA (M^3)



In the port of Valencia, there was an increase in water consumption due to a leak registered to a breakage detected and repaired for the temporary inclusion of new supply services and the service area of Mosteganem and cleaning of lorries, and additional consumption arising from cleaning of the network using the hyper-chloration of same to prevent problems of legionellosis.

The increase in consumption at Sagunto is due to various leaks detected that were repaired rapidly and consumption through cleaning and hyper-chloration of the drinking water network throughout the port.

The inclusion of objectives in this respect was not considered given that they are ad hoc data expected to continue the trend of previous years.

5.2 Electricity

In 2019, total energy consumption of the Port Authority of Valencia was 7,439,232 Kwh (7,439.23 Mwh), a reduction of 2% on the previous year.

In terms of the source of electricity consumed, Iberdrola has certified that the energy is sourced 100% from renewable sources.

IBERDROLA

IBERDROLA CLIENTES certifica que ha realizado las gestiones necesarias para acreditar que la energía con **Garantía de Origen** de Iberdrola consumida por:

Autoridad Portuaria de Valencia (Q4667047G)

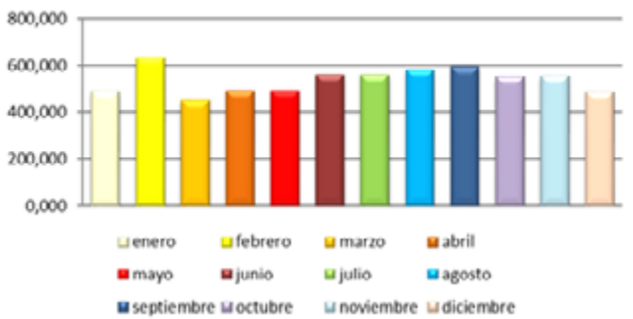
en el periodo comprendido entre 01/01/2019 y el 31/12/2019 , por un volumen de 83.246.000 kWh en barras de central, conste ante la Comisión Nacional de Mercados y la Competencia como energía proveniente exclusivamente de fuentes **100% renovables**, que respetan el medio ambiente y evitan las emisiones de CO_2 y otros gases contaminantes.

Alfonso Calderón Jiménez
Director Comercial

Monthly electricity consumption per port was distributed as follows:

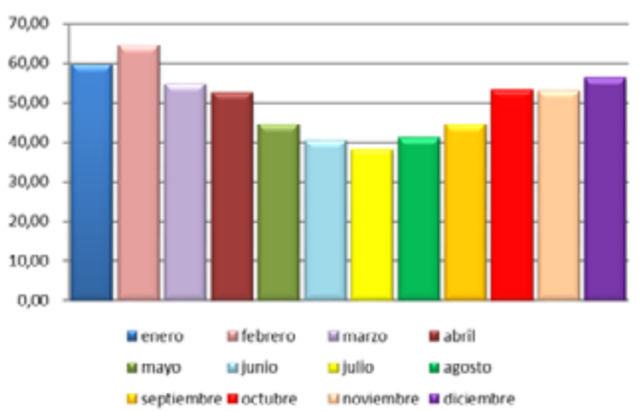
Total consumption in the Port of Valencia in the period was 6,411,926 Kwh (6,411.93 Mwh), broken down monthly as follows:

VALENCIA 2019 CONSUMPTION - Mwh



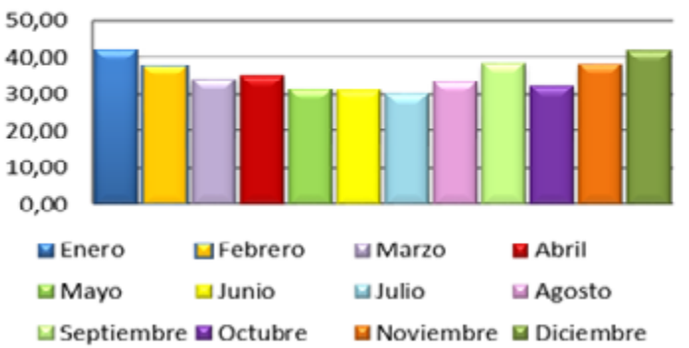
In the Port of Sagunto, total electricity consumption was 602,607 Kwh (602.61 Mwh). Monthly consumption was broken down as follows:

SAGUNTO 2019 ELECTRICITY CONSUMPTION - Mwh



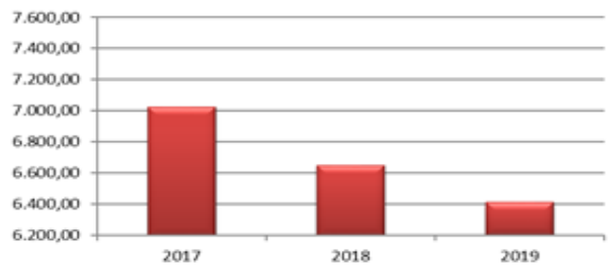
In the port of Gandía, total electricity consumption of the buildings and roads of the PAV during the year was 424,699 Kwh (424.70 Mwh), with monthly consumption displayed in the following graphic:

GANDIA 2019 ELECTRICITY CONSUMPTION - Mwh

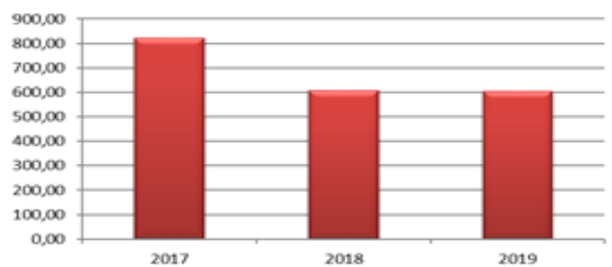


The evolution of annual consumption in the ports of Sagunto, Valencia, and Gandía was as follows:

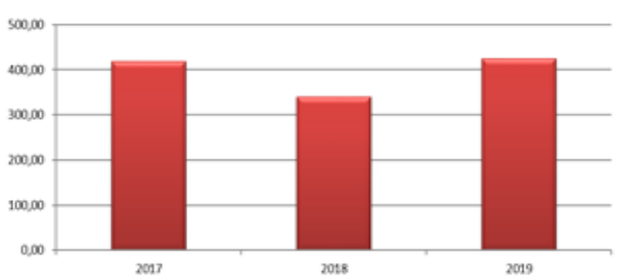
EVOLUTION OF CONSUMPTION VALENCIA (Mwh)



EVOLUTION OF CONSUMPTION SAGUNTO (Mwh)



EVOLUTION OF CONSUMPTION GANDIA (Mwh)

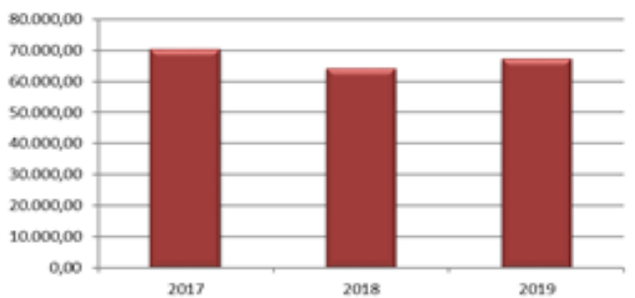


5.3 Fuel

In 2019, the fuel consumption of vehicles of the PAV in the ports managed was 19,970 litres of gasoline and 47,239.52 litres of gasoil. Total consumption is 67,210 litres.

TOTAL FUEL CONSUMPTION IN LITRES	2017	2018	2019
GASOLINE	18,846.00	16,855.00	19,970.84
GASOIL	51,306.00	47,121.00	47,239.52
TOTALS	**70,152.00**	**63,976.00**	**67,210.36**

TOTAL FUEL CONSUMPTION PAV (LITRES)



As can be observed in the previous graphic, the consumption of fossil fuels has increased slightly with respect to the previous year (+5%). Said increase may be due to the increase of mobility between ports during this period.

Fuel consumption per port is not specified because the service is centralised in Valencia.

The vehicle fleet of the PAV in 2019 was the following:

- Cars: 28 of which last year seven were electric.
- Vans: 27 compared to 26 last year, one of which was electric.
- Motorcycles: 2. Same as last year, both electric.
- Lorries: 4 compared to 5 last year.

In addition to the vehicles of the PAV, there are several generator sets and other auxiliary equipment that consume fuel. These sets are used to generate electricity in those areas of the piers where they are required.

5.4 Paper consumption

From the year 2010, conventional paper has been replaced with "organic" (Triotec IQ) paper which has the guarantee of Forest Stewardship Council (FSC) certification. With the purchase of FSC paper, the consumer is guaranteed that the paper has been produced in a sustainable manner and that its use contributes to the conservation of forests and respect for the environment.

- The virgin fibre used in its production is obtained with respect for the environment, maintaining the biodiversity of forest ecosystems and guaranteeing that forests can be used by future generations.
- The whitening is performed without chlorine.
- The rights of local communities that live or work in the forest are respected.

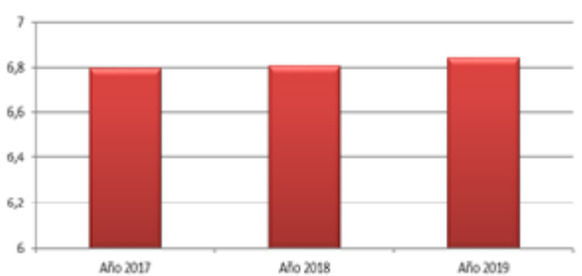
The paper used at the PAV is 100% organic paper.

In 2019, 8.83 t of paper was consumed, around the same quantity as the previous year.

Over recent years, measured have been implemented aimed at the reduction of paper consumption, such as the austerity plant implemented by the PAV, raising awareness among employees, configuration of printers for double-sided printing, reuse of paper for drafts.

Fuel consumption per port is not specified because the service is centralised in Valencia.

TOTAL PAPER CONSUMPTION (T)



5.5 Summary of indicators

5.5.1 EMAS indicators

In accordance with the requirements of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), and its amendment though Regulation EU 2018/2026, the following indicators are proposed:

2019 INDICATOR	ANNUAL TOTAL	RELATIVE
ELECTRICITY CONSUMPTION	7,439 232MWH	16,20 (MWH/WORKER)
WATER CONSUMPTION 100% FROM NETWORK	46,967 M3	102,324 (M3/WORKER)
TOTAL FUEL CONSUMPTION	662,321 MWH	1.443 MWH/WORKER
TOTAL SURFACE AREA	3,577,606 M2	7,794.35 (M2 TOTAL SURFACE AREA/ WORKER)
TOTAL SEALED SURFACE AREA	3,128,753 M2	6,816.45 (M2 TOTAL SEALED SURFACE AREA/WORKER)
TOTAL SURFACE AREA IN THE CENTRE BY NATURE	46,265 M2	100.79 (M2 TOTAL SEALED GARDENS/ WORKER)
TOTAL SEALED SURFACE AREA	448,853 M2	977.89 (M2 TOTAL SEALED SURFACE AREA/WORKER)
PAPER	6.83 T	0.014 (T/WORKER)
HAZARDOUS WASTE	5.46 T	0.012 (T/WORKER)
NON-HAZARDOUS WASTE	15.95 T	0.035 (T/WORKER)
CO2 EQUIVALENT EMISSIONS ** (DIRECT)	157,779 TCO2EQ	0.343 (T CO2 EQ/WORKER)
CO2 EQUIVALENT EMISSIONS **(INDIRECT)	0 TO2EQ	0 (T CO2 EQ/WORKER)
TOTAL CO2 EQUIVALENT EMISSIONS** (DIRECT + INDIRECT)	177,779 TCO2EQ	0.343 (T CO2 EQ/WORKER)

In terms of the annual evolution of the relative indicators calculated, we can observe:

RELATIVE INDICATOR	2017	2018	2019
ELECTRICITY CONSUMPTION	18.86	17.46	16.20
WATER CONSUMPTION	84.595	89.211	102.324
FUEL CONSUMPTION	1.581	1.453	1.443
TOTAL SURFACE AREA	7,999.09	8,054.25	7,794.35
TOTAL SEALED SURFACE AREA	6,851.29	6,973.67	6,816.45
TOTAL SURFACE AREA IN THE CENTRE BY NATURE	105.63	106.36	100.79
TOTAL UNSEALED SURFACE AREA	1,147.79	1,080.58	977.89
PAPER	0.015	0.015	0.014
HAZARDOUS WASTE	0.063	0.010	0.012
NON-HAZARDOUS WASTE	0.036	0.022	0.035
CO2 EQUIVALENT EMISSIONS** (DIRECT) (T CO2)	170.37	153.83	0.343
EMISSIONS CO2 EQUIVALENT** (INDIRECT) (T CO2)	2,314.14	0	0
EMISIONES CO2 EQUIVALENTE** (INDIRECTAS) (T CO2)	2.314,14	0	0

** CO2 Equivalent emissions: The Port Authority of Valencia as an organisation does not generate CO2 emissions beyond those directly associated with its own vehicles (direct emissions) and indirect emissions associated with energy consumption. For the calculation of total emissions in T CO2 eq the conversion factors for the years 2017, 2018 y 2019 published in the scope 1 and 2 carbon footprint calculators v.11 of the Ministry of Agriculture and Fisheries, Food and the Environment for the corresponding years were used.

5.5.2 Other indicators

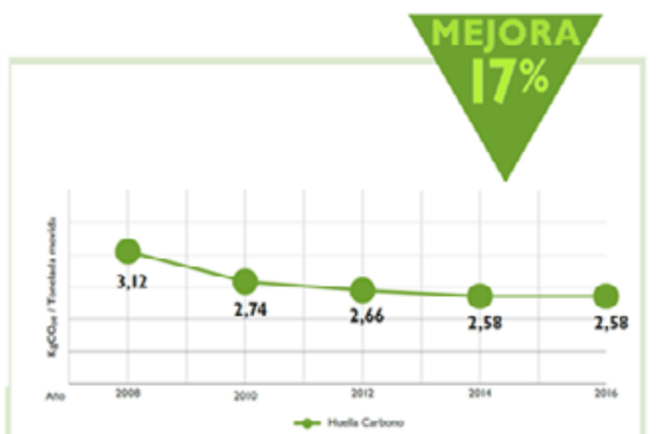
Since 2008, the Carbon Footprint of the entire Port of Valencia has been calculated. These calculations were made according to ISO 14064 and have been validated by the Lloyd's Register.

Displayed below is the trend in emissions, cargo moves and Carbon Footprint between 2008 and 2016. At present, the calculation of the Carbon Footprint corresponding to 2018 is in progress.

Año	2008	2010	2012	2014	2016
Emisiones (tCO2)	161.685	158.026	160.770	159.100	166.115
Toneladas (t)	51.897.937	56.893.676	60.517.225	59.359.080	64.361.045
Huella de Carbono (kgCO2/t)	3,12	2,74	2,66	2,58	2,58

In the following graphic the trend can be seen from the start of the calculation.

CARBON FOOTPRINT PORT OF VALENCIA



6. STATE OF THE ENVIRONMENT

valenciaport
Autoridad Portuaria de Valencia

ECOPORT
Autoridad Portuaria de Valencia

6.1 Waste

The PAV is responsible for the management of waste produced directly by the activity of the company through the figure of the Producer (Law 22/2011, of 28 July, on waste and contaminated soils).

The PAV also assumes responsibility, indirectly, for the correct management of waste produced on the port premises of Valencia, Sagunto and Gandía, which are managed by the PAV as Holder.

6.1.1 Own waste

The PAV produces waste as a result of the activity of the company in the offices of Valencia, Sagunto and Gandía and in the workshops and in the clinic, both facilities located in the Port of Valencia.

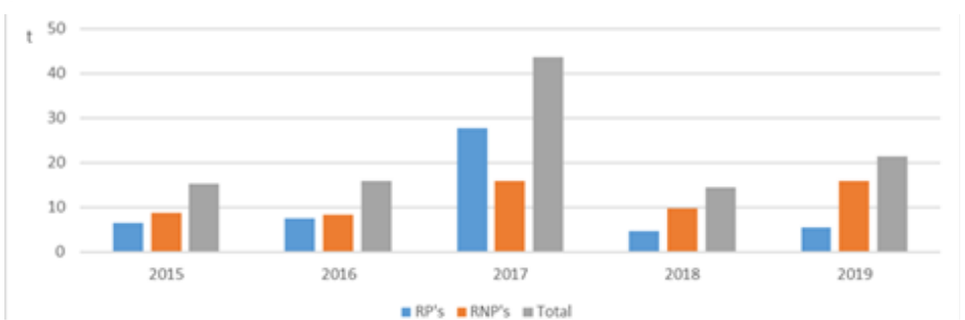
As set out in Law 22/2011, of 28 July, on waste and contaminated soils, for the waste produced directly by the company's activity, the PAV has the status of Producer of hazardous waste with registration number 3631/P02/RP/CV and Producer of sanitary waste with registration number 21384/P02/CV.

The total waste generated by the activity of the PAV in 2019 was 21.41 t of which 15.95 t corresponds to non-hazardous waste and 5.46 t to hazardous waste.

To analyse the data obtained in 2019 in the following graphic we can observe the trend in the production of waste generated by the PAV from 2015 to 2019, both inclusive.

EVOLUTION OF PAV WASTE PRODUCTION 2015-2019

Graph 1



As indicated in the data in Graph 1, the production of hazardous waste saw a slight increase with respect to 2018, while the production of non-hazardous waste has seen a more notable increase on the previous year.

Below, graphics 2 and 3 show the data for the production of hazardous and non-hazardous waste caused by the activity of the PAV in 2019.

A) In the case of non-hazardous waste in 2019, total production reached 15.95 t.

In Graph 2 it can be observed that, in 2019, as has occurred since 2013, the most significant volume of non-hazardous waste generate by the PAV corresponds to the heading "Confidential documentation". In the 2019 financial year, a slight increase of 38.00%, from 4,179 t in 2018 to 5,767 t in 2019 was produced.

Similarly, the second item with the largest quantity of non-hazardous waste in 2019 was the heading "Voluminous", which has doubled in production with respect to 2018, from 1,812t in 2018 to 3,512t in 2019.

B) In the case of hazardous waste, there was an increase of 18.95%. .

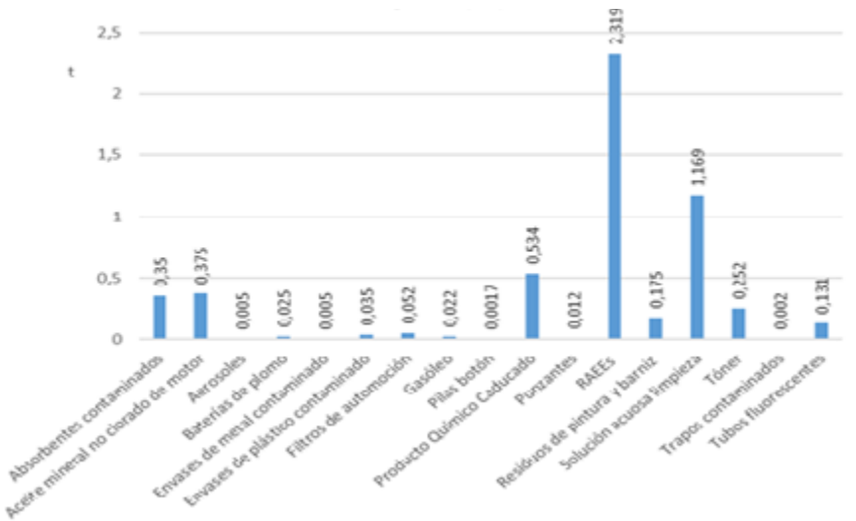
We continue to reduce the production of WEE with respect to 2018. Specifically, production was reduced from 3,027t in 2018 to 2,319t in 2019.

On the other hand, we can highlight the volume of waste of "aqueous cleaning solution" generated as a result of cleaning of pieces in the two piece-washing machines installed in the workshops in Valencia. The production figure for this waste has increased with respect to the year 2018, placed at around 1,169t in 2019, while in 2019, production of 0.798 t was managed.

The Port Authority authorised as small producer, maintains the total production figure for dangerous waste in 2019 below 10 tons, for a total figure of 5.46 t

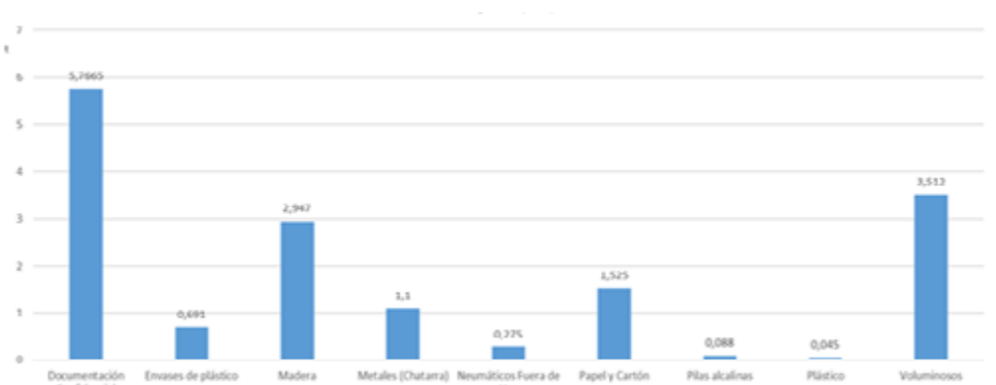
EVOLUTION OF HAZARDOUS WASTE PRODUCTION IN 2019 (PAV)

Graph 2



NON.HAZARDOUS WASTE PRODUCTION 2019 (PAV)

Graph 3



6.1.2 From the Port Premises

In order to foster adequate management waste in companies on the premises of the ports of Valencia, Sagunto and Gandía, in 2005, a Centre of Waste Transfer (CTR) was launched, located in the Port of Valencia and which allowed for the collection and storage of waste generated in port facilities. This waste is stored in the CTR for subsequent transport to treatment plants where it will be reused, recycled assess or eliminated, respecting the Hierarchy of waste as established in Article 8 of Law 22/2011 of 28 July on waste and contaminated soils.

With the CTR the Port Authority of Valencia:

- Facilitates the collection and management of waste generated in the ports of Sagunto, Valencia and Gandía.
- Facilitates the administrative processes relating to the removal of waste management.
- Contributes to maintaining the port premises in harmony with its environment.

The CTR of the Port of Valencia is located at the Xitá Pier, with a total surface area of 3,235.18 m^2, of which 2.400 m^2 is used for the storage of waste prior to transfer for final management.

For the storage of non-hazardous waste, there is 1 20 m3 container for voluminous waste, 1 20 m3 container for wood, various 3 m3 containers for light packaging and plastics, 1 11 m3 container for glass, 2 11 and 25 m3 containers for metals (scrap), 1 11 m3 for disused tyres and several de 3 m3 containers of paper-cardboard.

The CTR also has a calibrated weighing scale and an authorised vehicle for the transport of hazardous machinery.

The companies located in the port facilities managed by the Port Authority of Valencia therefore have access a facility where it is possible to comfortably and flexibly manage the waste they produce as a result of their activity, in accordance with current legislation and benefiting them in the form of savings generated by the economies of scale.

Detail of a trail loaded for transfer of waste to final destination.

Detail of works to load containers containing HW to trailer for subsequent unloading at a final destination plant.

In the case of the waste assumed by the PAV, whether because it appears fortuitously, or in a controlled manner, in the port premises of Valencia, Sagunto or Gandía, the PAV has the Status of Holder (in accordance with the adaptation to Law 22/2011, of 28 July, on waste and contaminated soils) with registration numbers 363/P05/CV, 365/P05/CV and 364/P05/CV respectively.

The waste produced in the port premises of Valencia, Sagunto and Gandía is classified under two headings:

- Waste produced in a controlled manner and deposited in containers installed in facilities or waste that has been generated as a result of ad hoc cleaning, which may produce voluminous, inert waste, rubble, etc.
- Those generated fortuitously as a result of leaks caused by traffic accidents, waste that may arrive by sea (such as wood, buoys and other remains of maritime signalling), waste from marine pollution emergency actions, abandoned waste, etc.

In relation to the total volume of waste produced at the three port facilities managed by the PAV, a total of 31.86 t was managed in 2019 broken down as follows:

- Controlled waste: a total of 9.35 t, of which the total corresponds to non-hazardous waste.
- Waste of fortuitous origin: a total of 22.51 t, broken down into 7,01 t non-hazardous and 15,50 t hazardous.

Therefore, the PAV has assumed direct or indirect responsibility (in the capacity as Producer or Holder) of a total of 20.96 t of hazardous waste and 32.31 t of non-hazardous waste, for a total of 53.27 t of waste in the year 2019.

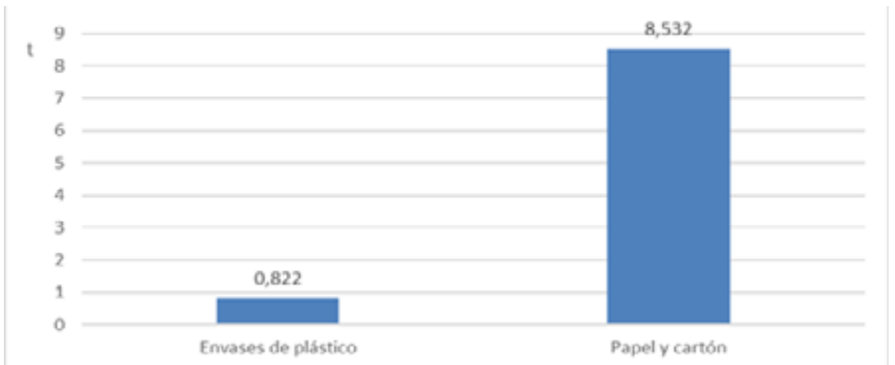
Waste generated in the port premises of Controlled Origin

During the year 2019, no hazardous waste of controlled origin was produced. Only non-hazardous waste was produced. Within the non-hazardous waste category, the largest volume registered was for “paper and cardboard” with a quantity of 8,532t. “Paper and cardboard” are waste deposited in the containers installed at different points of the port premises of Valencia, Sagunto and Gandía specifically for that purpose.

Note: The graphic showing the production of hazardous waste of controlled origin in the port premises due to the fact that no waste from this category was produced in the year 2019.

PRODUCTION OF NON-HAZARDOUS WASTE OF CONTROLLED ORIGIN IN THE PORT AREA IN 2019

Graph 4



Waste of fortuitous origin generated in the port premises of.

In the case of waste generate fortuitously, as can be observed in Graph 5 and 6, within the heading non-hazardous waste, "Voluminous" waste is prominent, and "Contaminating absorbents" in the hazardous waste category" with a production figure of 3,117 t y 8,865 t respectively.

With regard to "Floating waste", this covers waste managed with quality monitoring of the waters of the old source of the river Turia. Due to the accumulation of waste from upstream waters of the old source, an ant-contamination barrier was installed where waste of different types is collected..

Photograph taken during the installation of the barrier.

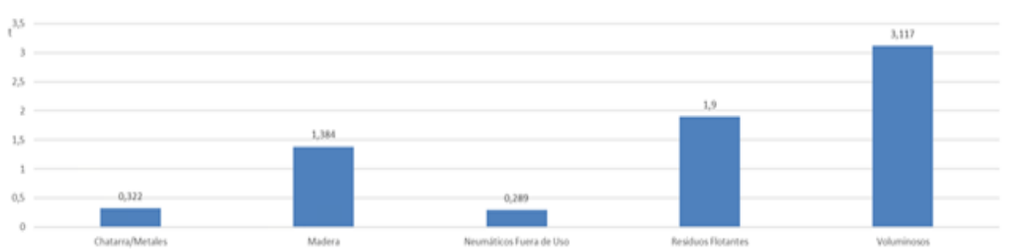
The waste that is produced as a result of the water mirror cleaning actions performed by the vessel Limpiamar also form part of this floating waste. In this case, in 2019, 1.9 t of "Floating Waste" was produced. Volume of waste that has seen production fall 67.85% with respect to 2018.

Thanks to the daily monitoring performed, the necessary corrective actions are made for the purpose of avoiding an impact on the environment.

The origin of the heading "absorbent headings" considered hazardous waste is due to leaks caused by traffic accidents in the three port premises, discharge on land and at sea, actions to combat marine pollutions, etc.

PRODUCTION OF HAZARDOUS WASTE OF ACCIDENTAL ORIGIN IN THE PORT AREA IN 2019

Graph 5



PRODUCTION OF HAZARDOUS WASTE OF ACCIDENTAL ORIGIN IN THE PORT AREA IN 2019

Graph 6

6.1.3 Waste from Vessels

The Marpol International Convention 73/78 to prevent marine pollution from ships, is one of the tools backed by the IMP for prevention. It contains six annexes that include detailed rules on the different sources of pollution. These are:

Annex I - Rules to prevent hydrocarbon pollution.

Annex II - Rules to prevent pollution from noxious bulk liquid substances.

Annex III - Rules to prevent pollution from hazardous substances transported by sea in packaged form.

Annex IV - Rules to prevent pollution from dirty waters of vessels.

Annex V - Rules to prevent pollution from waste and rubbish.

Annex VI - Rule to prevent atmospheric pollution from ships.

Royal Decree 1381/2002, of 20 December, on port facilities for the reception of waste generated by vessels and cargo waste, establishes the compulsory requirement for all vessels calling at the Ports of Sagunto, Valencia, and Gandía to submit waste subject to the Marpol Convention to a Marpol-authorised facility, except for the established exceptions.

To comply with Article 132 of the consolidated Text of the State Ports and Merchant Navy Act, the PAV charges ships calling at port a fixed fee regardless of whether they use the waste reception service or not. This measure prevents all discharges at sea as vessels can discharge all waste included in annexes I and V of the Marpol Convention as needed.

During the 2019 period, the three ports saw a total volume of 57,099.02 m^3 of Marpol I waste and 22.237,46 m^3 of Marpol V waste was registered, with the following breakdown:

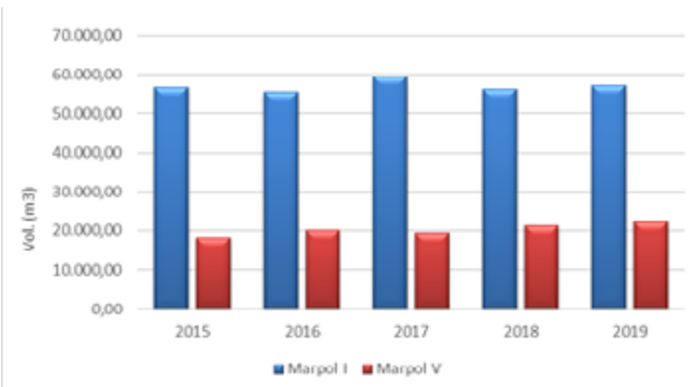
VOLUME REMOVED (M^3)					
2017	2018	2019	2017	2018	2019
59,450.36	56,327.06	57,099.02	59,450.36	56,327.06	57,099.02
19,335.58	21,259.69	22,237.46	19,335.58	21,259.69	22,237.46

DISTRIBUTION PER PORT IN 2019 (M^3)		
PORTS	MARPOL I	MARPOL V
VALENCIA	51,565.32	19,548.14
SAGUNTO	4,962.77	1,869.12
GANDÍA	570.93	820.20
TOTALS	**57,099.02**	**22,237.46**

Below, Graph 7 shows the trend over the period of study:

EVOLUTION OF PRODUCTION OF MARPOL WASTE (ANEXES I AND V) DURING 2015-2019 PERIOD

Graph 7



6.2 Air quality control

The Port Authority of Valencia performs monitoring and control of the different parameters impacting the quality of the environment. In this regard, the monitoring of the air quality is one of the objectives that the Department of Environmental Policy has set as a priority. To carry out this monitoring, the Port Authority of Valencia (PAV) has an instrumentation and monitoring network that supplies air quality data on a continuous basis, allowing us to analyse the state of the environment in real time. Specifically, there is control and monitoring of the concentrations of different pollutants, impacting the air quality in the port premises, such as particles (measured in concentrations of PM10, PM2.5 and PM1), sulphur oxide, nitrogen dioxide, carbon monoxide and ozone. At the same time, meteorological data are registered through five weather stations installed at important positions on the port premises.

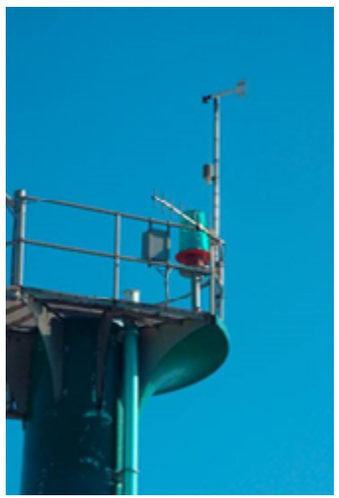
The map below shows the strategic location of the equipment comprising the air quality network in the Port of Valencia.

The sensors are integrated into an Air Quality Control Cabin located according to the recommendations of the CIEMAT, in the Transversal quay of the Poniente dock. Said location, at the port-city interface, allows us to ascertain the presence of contaminants and their possible influence on the area between the port and the city, making it possible to anticipate solutions to possible episodes of atmospheric pollution. There is also another particle capture device located at the port-city interface, in the area close of the neighbourhood of Nazaret.

Both the equipment at the Air Quality Control Cabin and the Weather Stations and the Particle Capture device have a maintenance plan and periodic data validation ensuring the correct data are obtained.

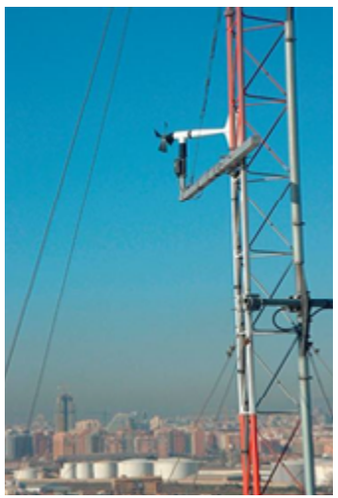
In addition to the station represented in the previous map, there are three more weather stations: two at the Port of Sagunto and another at the Port of Gandía.

Air quality control stations



1. East Breakwater Beacon Weather Station

2. Príncipe Felipe Weather Station



3. Silo Weather Station

4. Xitá Weather Station

5. Turia Weather Station

6. Río Turia Particle Capture Device

7. Immission Cabin - Particle Capture

Sagunto Offices Weather Station

Sagunto East Breakwater Weather Station

Gandía Serpis Dock Weather Station

6.2.1 Air quality in the port premises in the year 2019

Numerous epidemiological studies have shown the existence of adverse effects on health from ad hoc or prolonged exposure to elevated levels of atmospheric particulate matter. The most recent studies point to lower-diameter particulate matter as causes of major respiratory diseases. From here it has been demonstrated that there is a need for control of atmospheric pollution through particulate matter, not just PM10 but also PM2.5 AND PM1.

The PAV, as well as measuring air quality within the port premises, implements several measures to control operations that may have an impact on air quality.

These measures include control of the variables of wind direction and intensity. When these variables surpass certain values of intensity and time duration, loading, unloading or handling of powdery material operations are suspended, all through the air quality control network and supervised by the Emergency Control Centres of the PAV.

The PAV has also, and to reduce the negative impact of particulate emissions, invested in the construction of physical barriers that minimise the movement of particles in the area for the handling of bulk in Sagunto.

Furthermore, the inclusion measures to minimise particulate emissions for any operation performed in the premises of the PAV, such as cleaning of the area, maintenance of equipment, good handling practices, determination of maximum height of heaps, the case of storage, etc.

The monitoring and control of these concentrations was conducted according to the reference limits imposed in Royal Decree 102/2011, of 28 January, on the improvement of air quality.

Assessment of the results obtained in the year 2019 according to the reference values in regulation

The Port Authority of Valencia has been completing a monthly report of the data, assessing the trend for the purpose of identifying the possible causes. This is conducted in accordance with a colour scale reflecting the quality limit value according to the reference regulation and the number of exceedances or average accumulated value in each case.

The atmospheric indices registered in the year 2019 were the following:

NUMBER OF EXCEEDANCES OF CONCENTRATION LEVELS OF SULPHUR DIOXIDE (SO2)

SO2 (Dióxido de Azufre)	2019	
ug/m3	115 ug/m3 Medias diárias <3 Superaciones / año	350 ug/m3 Medias horarias <24 Superaciones / año
Nivel		
CABINA INMISIÓN	0 Superaciones	0 Superaciones

NUMBER OF EXCEEDANCES AND AVERAGE ANNUAL VALUE OF CONCENTRATION LEVELS OF CARBON MONOXIDE (CO)

CO (Monoxido de Carbono)	2019	
ug/m3	350 ug/m3 Proteccion de Salud Medias horarias	10ug/m3 Valor Medio Anual
Nivel		
CABINA INMISIÓN	0 Superaciones	0.2 ug/m3

NUMBER OF EXCEEDANCES OF CONCENTRATION LEVELS OF NITROGEN DIOXIDE (NO2)

NO2 (Dióxido de Nitrógeno)	2019	
ug/m3	200 ug/m3 Medias horarias <18 Superaciones / año	40ug/m3 Valor Medio Anual
Nivel		
CABINA INMISIÓN	0 Superaciones	12 ug/m3

NUMBER OF EXCEEDANCES OF CONCENTRATION LEVELS OF SULPHUR DIOXIDE (O3)

O3 (Ozono)		2019
ug/m3	180 ug/m3 Umbral de informacion Medias horarias	120 ug/m3 Proteccion de Salud <25 Superaciones / año
Nivel		
CABINA INMISIÓN	0 Superaciones	0 Superaciones

NUMBER OF EXCEEDANCES AND AVERAGE ANNUAL VALUE OF CONCENTRATION LEVELS OF PM10 PARTICLES

PM10 Particulas <10um		2019
ug/m3	50 ug/m3 Medias horarias <35 Superaciones / año	40ug/m3 Valor Medio Anual
Nivel		
CABINA INMISIÓN	1 Superaciones	20 ug/m3

PM10 Particulas <10um		2019
ug/m3	50 ug/m3 Medias horarias <35 Superaciones / año	40ug/m3 Valor Medio Anual
Nivel		
RIO TURIA PM 10	0 Superaciones	10 ug/m3

AVERAGE ANNUAL VALUE OF CONCENTRATION LEVELS OF PM2.5

PM2.5 Particulas <2.5um		2019
ug/m3	25 ug/m3 Valor Medio Anual	
Nivel		
RIO TURIA PM 2.5	7 ug/m3	

Note: In the above tables ug/m^3 = g/m^3 (micrograms per cubic metre)

Conclusions Air Quality Results

After the analysis of the data corresponding to the year 2019 (January - December) and the assessment of these with respect to applicable limit values, the following conclusions are reached:

- The hourly limit values were not exceeded for any of the SO2, NO2, O3 or CO environmental parameters.
- No daily limit value was exceeded for said parameters.
- The average annual value of NO2 is below the annual limit value.
- There was no exceedance of the daily value for the PM10 in the data registered at the river Turia CP station. At the Immission Cabin station recorded one exceedance of the daily limit value, once the discounts for Saharan intrusion were made. The maximum number of exceedances throughout the year is 35, therefore the objectives established for this parameter were met.
- The average annual value of PM10 at both stations were below the annual limit value.

In conclusion, in the year 2019, both at the Immission Cabin and in the River Turia Cabin, the data registered were complied with the air quality limit values defined in Royal Decree 102/2011 of 28 January, relating to the improvement of air quality.

6.2.2 Environmental concentrations in the surrounding area of the Port of Valencia in the year 2019

With the aim of assessing the results obtained in the port premises, the data of the measures taken in the city of Valencia by the Regional Ministry of Agriculture, Environment, Climate Change and Rural Development were collected. The statistical data displayed in the following table were obtained from the information on the Regional Ministry's website.

Annual average values of the city of Valencia:

STATION	SO2 µG/M³	NO2 µG/M³	O3 µG/M³	CO µG/M³	PM10 µG/M³	PM2.5 µG/M³
AVDA. FRANCIA	4	22	54	0.1	20	10
BULEVARD SUR	4	32	52	-	-	-
MOLÍ DEL SOL	4	20	51	0.1	20	17
PISTA DE SILLA	5	28	49	0.2	29	15
POLITÉCNICO	4	18	58	-	20	13
VIVEROS	4	22	55	-	-	-
VIVEROS	4	22	55	-	-	-

The average annual values obtained at the Port of Valencia stations were:

STATION	SO2 µG/M³	NO2 µG/M³	O3 µG/M³		PM10 µG/M³	PM2.5 µG/M³
PORT OF VALENCIA - IMMISSION CABIN	4	12	45	0.2	20	-
PORT OF VALENCIA - RIVER TURIA CABIN	-	-	-	-	10	7

The environmental assessment conducted in accordance with the regulation indicates that all the parameters are below the "lower assessment threshold" level and in accordance with the lower limits in legislation.

In general, the parameters of the stations of the Network of the Port Authority of Valencia are within the range of range of normality and correlation with respect to the automatic stations nearby in the city of Valencia.

In the year 2019, in the Port Authority of Valencia Network, the results of the data obtained complied with the air quality limit values defined in Royal Decree 102/2011, of 28 January, relating to the improvement of air quality.

6.2.3 Meteorological data

As of today, the Port Authority of Valencia has eight strategically distributed weather stations: five in the Port of Valencia, two in the Port of Sagunto and one in the Port of Gandía.

The information generated by these stations offers assistance for decision-making in different port operations, such as, for example, operations with bulk solids, where these operations are stopped when the wind reaches a certain intensity, with the aim of generating possible atmospheric particles.

Presented below are the monthly statistical data registered by some of the measurement stations in the Port of Valencia, Sagunto and Gandía in the year 2019.

MONTHLY STATISTICAL VALUES AT THE MA.V.1. STATION EAST BREAKWATER BEACON EM.1 - YEAR 2019

	DD (grd)		VV (m/s)				TMP (°C)				HR (%)			
	Madras	Media	Madras	Media	Max.	Min	Madras	Media	Max.	Min	Madras	Media	Max.	Min
Enero	0	-	31	4.28	9.28	2.07	31	12.2	17.2	7.8	0	-	-	-
Febrero	0	-	20	4.04	11.06	2.12	20	12.6	16.1	10.3	0	-	-	-
Marzo	0	-	6	3.84	6.68	2.77	6	14.6	15.5	13.6	0	-	-	-
Abril	0	-	0	-	-	-	0	-	-	-	0	-	-	-
Mayo	14	336.6	14	2.03	4.33	1.02	14	19.6	21.4	17.3	14	62	85	45
Junio	30	318.6	30	1.95	3.99	0.61	30	23.4	29.6	18.7	30	62	79	39
Julio	23	323.8	26	1.7	3.45	0.65	26	27.5	29.7	26.1	23	66	75	48
Agosto	0	-	1	2.97	2.97	2.97	1	26.6	26.6	26.6	0	-	-	-
Septiembre	8	320.7	8	3.53	5.12	2.22	19	23.9	26.9	22.2	7	68	74	52
Octubre	31	28.6	31	3.77	6.42	1.72	31	20.2	23.6	15.1	31	60	76	41
Noviembre	30	41.8	30	6.33	9.83	4.02	30	15.8	23.0	11.2	30	45	61	34
Diciembre	31	32.6	31	5.06	12.25	1.66	31	14.2	20.7	10.3	31	59	81	39

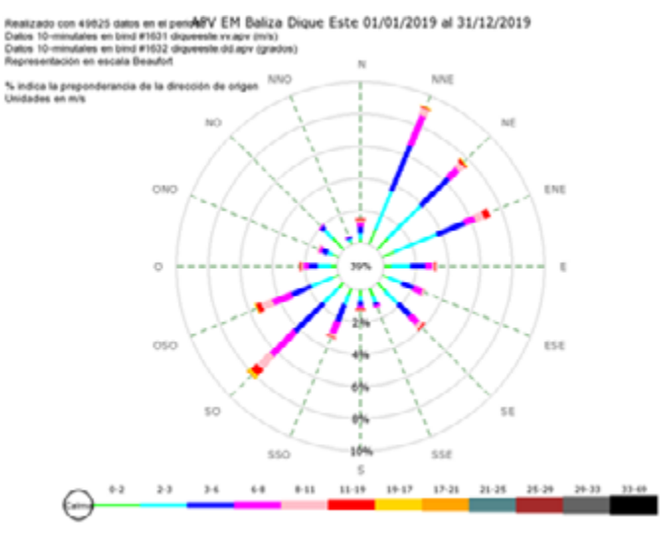
NOTE: Data calculated according to hourly base

MONTHLY STATISTICAL VALUES AT THE MA.V.7. STATION PRINCIPE FELIPE. EM6 - YEAR 2019

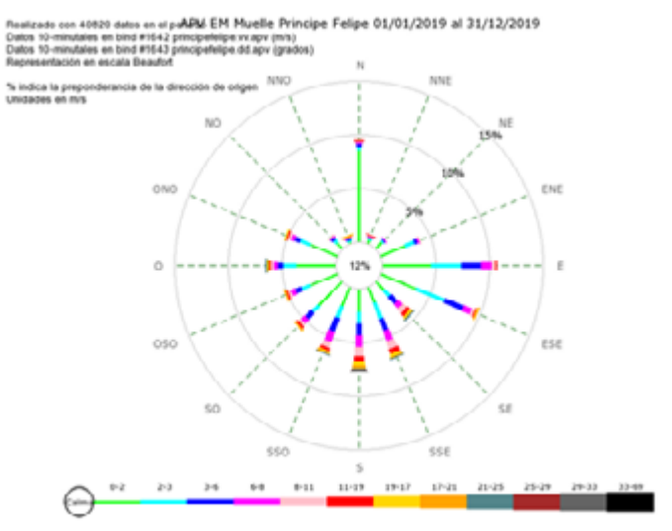
	DD (grd)		VV (m/s)				TMP (°C)				RS (w/mZ)			
	Madras	Media	Madras	Media	Max.	Min	Madras	Media	Max.	Min	Madras	Media	Max.	Min
Enero	31	33.5	31	2.73	8.10	0.59	31	11.8	17.1	6.6	31	104	180	46
Febrero	28	2.2	28	2.56	10.93	0.66	27	13.0	16.2	10.2	28	143	180	82
Marzo	31	352.7	31	2.14	5.41	0.98	31	15.3	20.2	13.8	31	184	280	82
Abril	26	345.7	26	3.41	6.11	1.23	26	16.4	19.1	12.8	26	201	277	140
Mayo	14	357.2	14	2.61	5.10	1.19	12	20.5	26.2	17.0	14	247	330	129
Junio	0	-	0	-	-	-	0	-	-	-	0	-	-	-
Julio	6	314.6	6	2.51	3.80	1.18	6	29.8	29.8	27.5	6	310	292	244
Agosto	0	-	0	-	-	-	0	-	-	-	0	-	-	-
Septiembre	19	340.1	19	2.12	4.59	0.52	19	25.0	26.7	23.5	17	153	204	16
Octubre	31	10.42	31	2.54	9.41	0.36	31	20.4	24.4	14.1	0	-	-	-
Noviembre	30	2.04	30	7.70	16.23	2.47	30	15.9	23.0	11.2	0	-	-	-
Diciembre	31	9.20	31	5.49	20.44	0.19	31	14.1	20.7	10.1	0	-	-	-

NOTE: Data calculated according to hourly base

WIND ROSE - MA.V.1. EAST BREAKWATER BEACON EM.1- YEAR 2019



WIND ROSE - MA.V.7. PRINCIPE FELIPE. EM6- YEAR 2019



MONTHLY STATISTICAL VALUES AT THE MA.V.2. STATION XITA. EM2 - YEAR 2019

	DD (grd)		VV (m/s)				TMP (°C)				HR (%)				PRB (mb)			
	Muestras	Media	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.
Enero	31	302.6	31	4.51	8.14	3.04	31	11.9	16.8	7.7	31	53	72	37	31	1018	1030	1001
Febrero	28	2.8	28	4.17	10.23	2.90	28	12.5	16.0	10.2	28	61	76	32	28	1024	1033	994
Marzo	31	2.4	31	4.18	8.63	3.01	31	14.4	19.6	12.3	31	59	75	39	31	1022	1029	1009
Abril	30	339.2	30	5.80	10.90	3.61	30	15.5	18.1	12.7	30	62	86	43	30	1012	1025	999
Mayo	14	357.6	14	4.9	6.51	3.88	14	18.2	25.0	14.7	14	66	77	43	14	1014	1022	1011
Junio	0	-	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-
Julio	8	9.61	8	4.3	5.55	2.88	8	26.8	28.1	25.6	8	60	67	49	8	1011	1016	1005
Agosto	27	26.20	27	3.77	7.21	2.83	27	26.4	60.5	23.7	27	68	77	52	27	1015	1019	1010
Septiembre	25	21.89	25	4.94	10.43	2.95	25	24.4	26.8	22.9	25	68	77	47	25	1017	1024	1012
Octubre	31	8.27	31	4.25	6.33	2.88	31	20.9	24.3	15.7	31	63	76	42	31	1016	1021	1007
Noviembre	30	293.64	30	5.70	8.34	3.78	30	16.3	23.5	11.6	30	50	71	36	30	1010	1017	997
Diciembre	13	333.9	13	5.8	9.50	4.13	13	13.9	16.5	12.7	13	68	82	52	13	1016	1024	1004

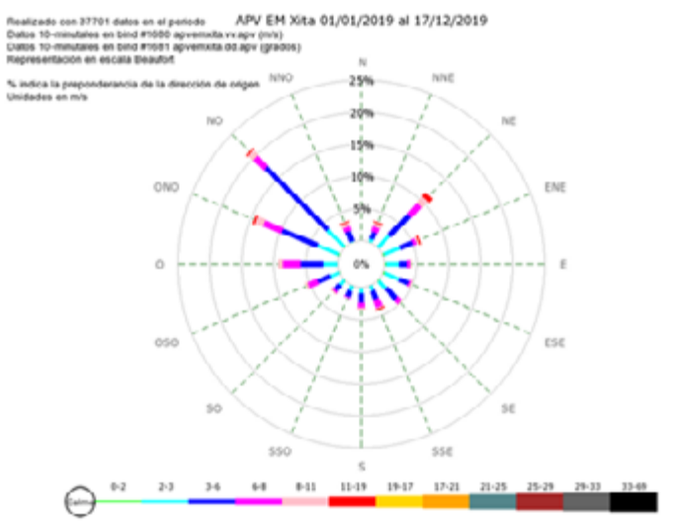
NOTE: Data calculated according to hourly base

MONTHLY STATISTICAL VALUES AT THE MA.V.6. STATION TURIA. EM5 - YEAR 2019

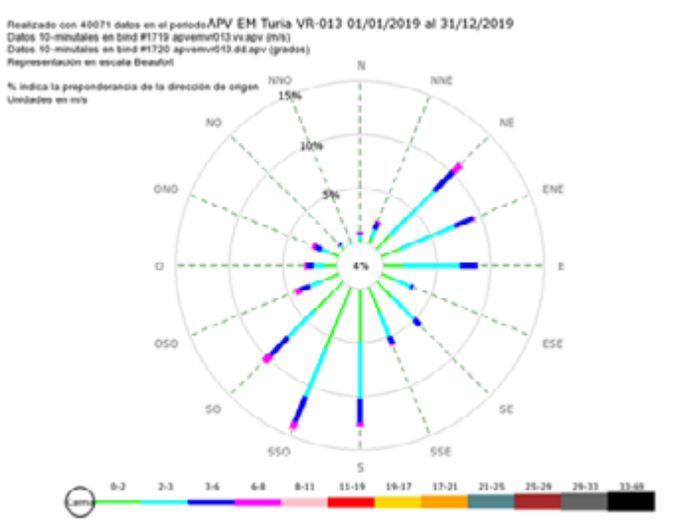
	DD (grd)		VV (m/s)				TMP (°C)				HR (%)				PRB (mb)			
	Muestras	Media	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.
Enero	29	14.41	29	2.19	5.06	1.28	29	11.9	17.3	7.3	29	53	69	38	29	1017	1029	1000
Febrero	28	356.65	28	2.12	6.37	1.24	28	12.8	16.5	10.4	28	59	71	32	28	1023	1032	995
Marzo	31	334.05	31	2.10	3.74	1.55	31	15.1	20.4	13.1	31	56	73	38	31	1021	1028	1008
Abril	30	18.59	30	3.00	6.37	1.64	30	15.9	19.5	12.6	30	60	83	43	30	1011	1023	998
Mayo	14	343.6	14	2.41	3.72	1.74	14	19.0	26.3	15.4	14	63	73	43	14	1014	1021	1009
Junio	0	-	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-
Julio	8	57.22	8	2.75	3.48	2.21	8	27.8	28.8	26.5	8	57	65	46	8	1009	1014	1003
Agosto	26	23.71	26	2.25	4.02	1.72	26	27.3	32.3	25.1	26	64	71	46	26	1013	1018	1008
Septiembre	25	355.02	25	2.51	5.97	1.44	22	24.9	27.4	22.8	22	65	72	46	25	1015	1023	1010
Octubre	31	338.52	31	1.92	3.07	1.01	0	-	-	-	0	-	-	-	14	1014	1019	1009
Noviembre	30	5.41	30	3.15	5.32	1.68	0	-	-	-	0	-	-	-	26	1006	1014	995
Diciembre	31	354.01	31	2.71	6.93	0.93	0	-	-	-	0	-	-	-	31	1015	1030	997

NOTE: Data calculated according to hourly base

WIND ROSE - MA.V.2. XITA. EM2 - YEAR 2019



WIND ROSE - MA.V.6. TURIA. EM5 - YEAR 2019



MONTHLY STATISTICAL VALUES AT THE MA.S.1. STATION OFICINAS.EM1 - YEAR 2019

	DD (grd)		VV (m/s)				TMP (ºC)				HR (%)				PRB (mb)			
	Muestras	Media	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.
Enero	28	12.97	25	1.20	3.16	0.29	28	11.9	17.1	8.4	28	48	69	30	28	1012	1024	995
Febrero	28	5.44	28	0.85	3.49	0.21	28	12.4	16.5	10.3	28	57	70	23	28	1019	1028	987
Marzo	31	20.72	31	1.03	2.48	0.32	31	14.6	20.4	12.3	31	53	75	34	31	1017	1023	1004
Abril	30	21.82	30	1.98	7.80	0.27	30	15.8	18.9	12.6	30	57	83	37	30	1007	1019	998
Mayo	28	8.63	28	1.28	2.78	0.53	28	18.6	25.2	15.1	28	61	77	42	28	1008	1017	998
Junio	20	21.7	20	1.48	3.34	0.39	20	21.3	23.6	18.3	20	58	70	43	20	1008	1015	1001
Julio	27	22.47	27	1.25	2.52	0.57	27	26.9	28.2	25.8	27	60	73	43	27	1006	1013	998
Agosto	31	20.95	31	1.19	3.76	0.38	31	26.5	30.8	23.7	31	64	73	46	31	1008	1013	1003
Septiembre	30	23.09	30	1.57	5.02	0.39	30	24.2	26.7	18.5	30	63	74	41	30	1010	1018	1003
Octubre	31	7.88	31	0.86	1.86	0.21	31	20.9	25.1	14.8	31	60	75	36	31	1009	1015	1001
Noviembre	30	11.39	30	1.37	2.66	0.51	30	16.4	23.6	12.2	30	45	69	32	30	1003	1011	991
Diciembre	31	6.52	31	1.26	4.50	0.20	31	14.2	21.5	10.2	31	61	84	35	31	1012	1027	995

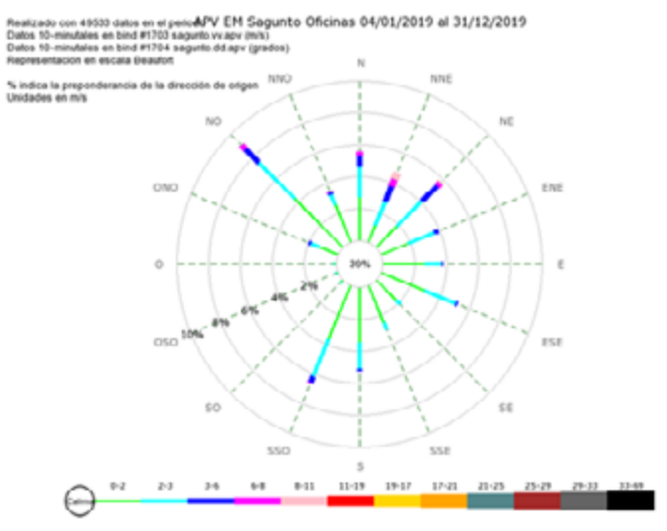
NOTE: Data calculated according to hourly base

MONTHLY STATISTICAL VALUES AT THE MA.S.1. STATION EAST BREAKWATER EM2 - YEAR 2019

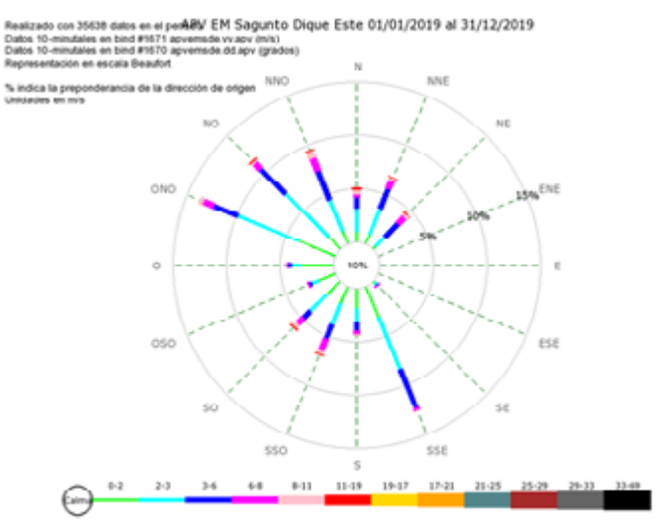
	DD (grd)		VV (m/s)			
	Muestras	Media	Muestras	Media	Máx.	Mín.
Enero	31	38.38	31	3.24	7.28	1.35
Febrero	28	14.28	28	2.73	9.06	1.01
Marzo	31	35.59	31	2.76	7.06	1.13
Abril	25	26.42	25	4.24	8.71	0.62
Mayo	29	25.91	29	2.86	5.93	1.07
Junio	30	12.60	30	2.75	5.22	1.17
Julio	31	27.67	31	2.40	4.52	1.13
Agosto	31	16.42	31	2.45	7.03	0.95
Septiembre	13	14.55	13	3.83	9.33	1.22
Octubre	0	-	0	-	-	-
Noviembre	0	-	0	-	-	-
Diciembre	0	-	0	-	-	-

NOTE: Data calculated according to hourly base

WIND ROSE - MA.S.1. OFICINAS.EM1- YEAR 2019



WIND ROSE - MA.S.1. EAST BREAKWATER EM2- YEAR 2019



MONTHLY STATISTICAL VALUES AT THE MA.G.EM1. STATION SERPIS BREAKWATER – YEAR 2019

	DD (grd)		TMP (°C)				HR (%)					PRB (mb)			LL (l/m²)		
	Muestras	Media	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Máx.	Acumulado
Enero	31	25.30	31	12.4	18.2	7.0	31	55	79	30	31	1017	1029	1001	31	0.00	0.00
Febrero	28	13.19	28	12.6	17.0	10.3	17	55	75	29	28	1023	1032	994	28	0.30	0.30
Marzo	31	0.88	31	14.6	20.0	12.1	28	55	70	35	31	1021	1028	1009	31	1.60	2.30
Abril	28	10.15	28	16.3	19.8	13.5	17	49	60	35	28	1012	1023	1000	28	0.50	1.80
Mayo	14	8.00	14	18.9	25.2	15.0	0	-	-	-	14	1014	1021	1010	14	0.20	0.70
Junio	0	-	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-
Julio	8	28.42	8	27.5	30.0	26.0	8	59	64	36	8	1010	1014	1004	8	0.00	0.00
Agosto	26	9.45	26	26.7	29.7	24.6	18	69	74	61	26	1014	1018	1009	26	0.80	0.90
Septiembre	25	14.38	25	24.5	27.0	23.1	12	68	77	46	25	1016	1023	1011	25	0.60	3.30
Octubre	30	35.31	30	21.1	24.3	15.9	24	57	69	33	30	1015	1020	1007	30	0.40	0.40
Noviembre	12	55.29	12	18.9	24.5	15.2	12	38	47	33	12	1010	1016	1004	12	0.00	0.00
Diciembre	0	-	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-

NOTE: Data calculated according to hourly base

6.3 Acoustic quality control network

The Port Authority of Valencia monitors and controls acoustic emissions from the port environment. In this regard, the monitoring of acoustic quality is another of the objectives that the Department of Environmental Policies has set as a priority.

To carry out this monitoring, the Port Authority of Valencia has three sound level meters strategically distributed on the port-city interface, which allows us to analyse the acoustic quality in almost real time.

The location of acoustic control terminals can be seen in the following image:

6.3.1 Results obtained in the year 2019 according to the reference values in regulation

In 2019, monthly reports have been drafted on the trajectory of the data registered for the purpose of identifying trends. Presented below is a graphic evaluation per station of the 2019 annual average, using, as a reference, the acoustic quality objectives applicable to urbanised areas existing in Table A of Annex II of Royal Decree 1367/2007, of 19 November, for the 3 assessment periods (annual measure for the daytime and evening period must be below 75 dB and for the night period must be under 65 dB):

After the analysis of data in the annual period assessed (January-December 2019), it can be concluded that all stations measuring noise levels comply with the acoustic quality objectives for predominantly industrial sectors established in Royal Decree 1367/2007, of 19 October, developing Law 37/2003, of 17 November, on Noise, in relation to acoustic zoning, quality objectives and acoustic emissions.

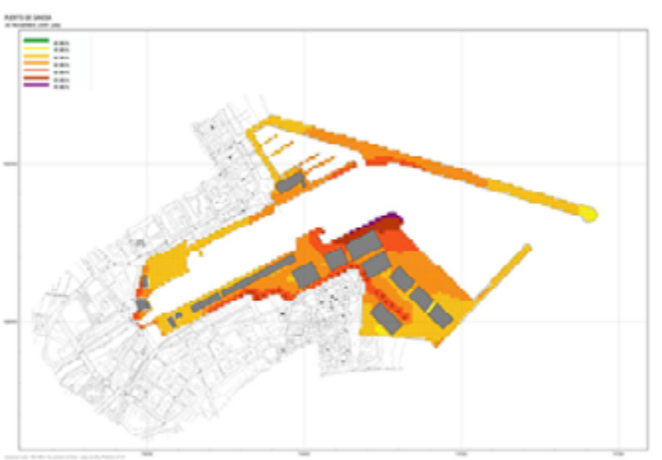
6.3.2 "Static" Acoustic Maps

Some years ago, the Port Authority of Valencia drafted static acoustic maps of the ports of Gandía, Sagunto and Valencia. These maps were drafted with on-site measurements in different representative locations within the port premises and the corresponding noise maps were prepared on the basis of these measurements.

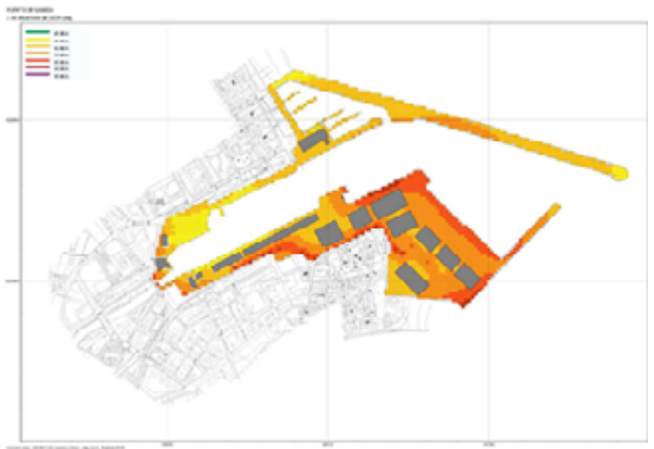
The result of these maps reflected that the effect of the noise generated in the Gandía, Sagunto and Valencia port environments was, in general, confined to the service area.

For the drafting of the static acoustic map of the Port of Gandía, measures were taken at 32 10-minute control points in each hourly period. These measures were taken over two days; one with the presence of vessels and the other in the absence thereof, in order to analyse the impact of their presence on the determination of noise levels in the area.

Subsequently, continuous measurements were taken over 24 hours at two representative control points close to the port-city interface.



Lday (no vessels in port) Port of Gandía



Lday (with vessels in port) Port of Gandía

These maps concluded that the noise levels emitted to the external atmosphere of the three acoustic areas in daytime, evening and night periods, measured over the 30 days of November and 1 December of 2009 were below the immission limit values for noise applicable to port infrastructures and activities established in Royal Decree 1367/2007 for sectors of the territory with predominantly industrial use land.

6.3.3 "Predictive" Acoustic Maps

From 2011, updates are available for the predictive acoustic maps of the ports of Sagunto and Valencia, while in 2012, work began to update the predictive acoustic map of the port of Gandía, which was completed in late 2013. For these updates, the Predictor calculation programme version 8 was used, with the model HARMONOISE NOMEPORTS.

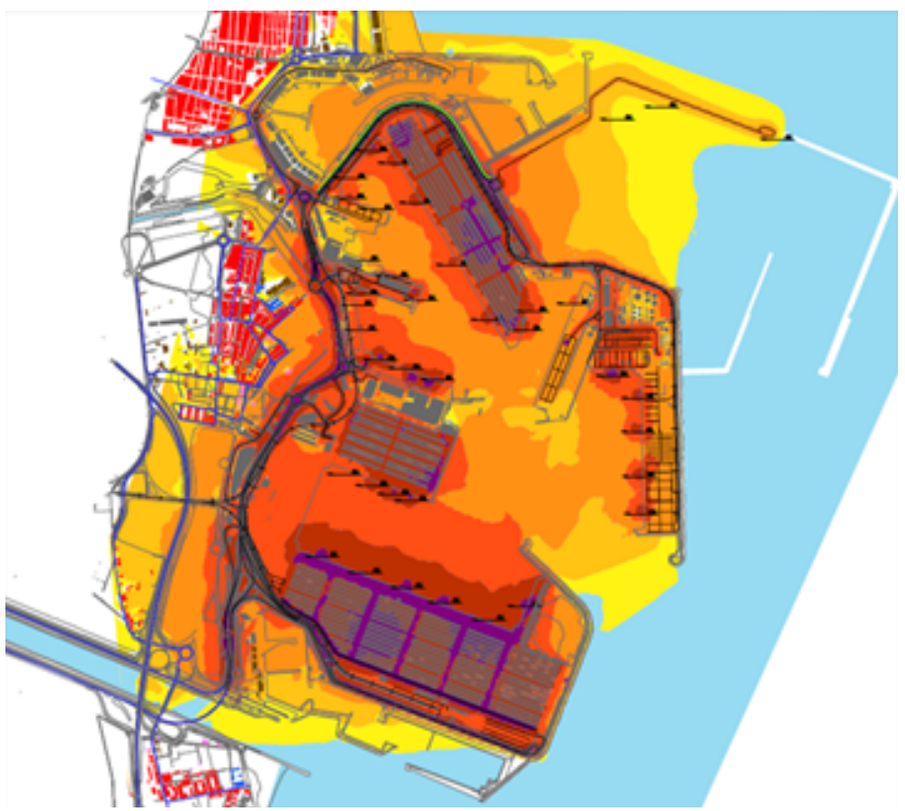
In the specific case of the port of Valencia, for its calculation, the initial information with which the 2008 map was drafted was updated and adapted to the new circumstances of the port: vehicle traffic on roads, type of activities carried out, acoustic level of machinery used in each area, timetables and shifts, etc.

Thus, and with all above information compiled, after a modelling process, the programme allowed for the drafting of a set of different maps, segregated by activities, timetables, etc., as a management tool for acoustic levels in the Port environment. An analysis of these maps provides the following conclusions:

- The most important focus of noise in the daytime-evening period is vehicle traffic
- The most important focus of noise in the night period is industrial noise.
- Average Lden1: Most influence by industry.
- The railway has no significant impact on the noise levels of the Port.

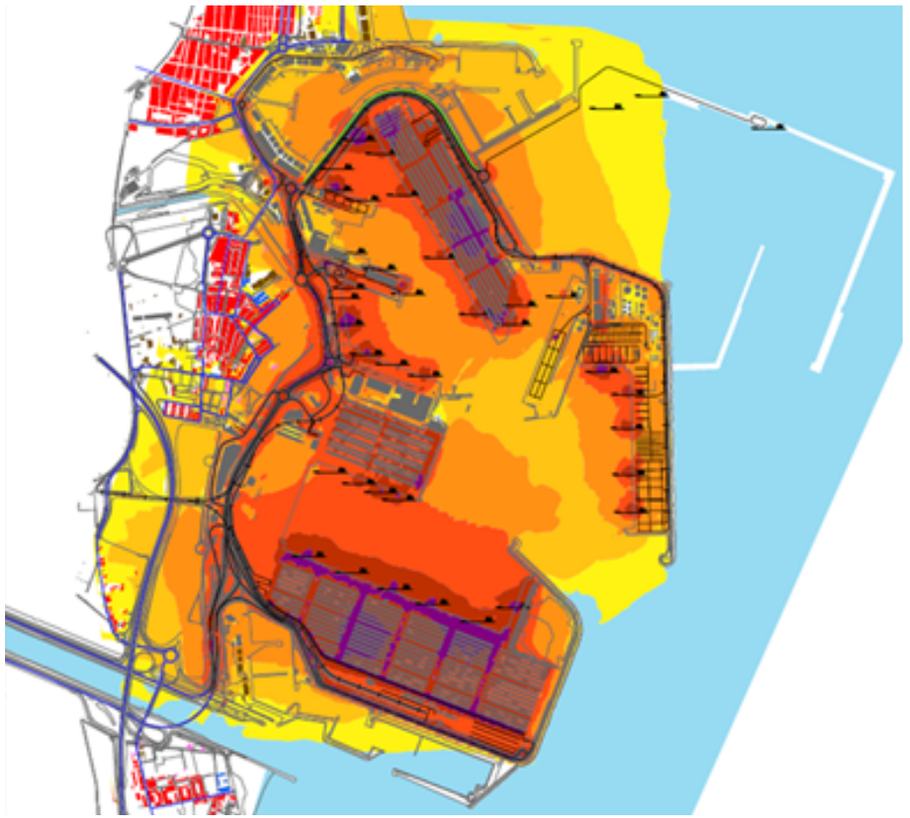
The compliance maps indicate that, with regard to the noise levels attributable to the port, at no point of the bordering urban area did noise levels exceed the 60 dB(A) established by R.D. 1367/2007 for the daytime period, or the 50 dB(A) established for the night period.

In 2016, the predictive noise map of the port of Valencia was updated to include the new North Extension. The maps prepared are presented below:

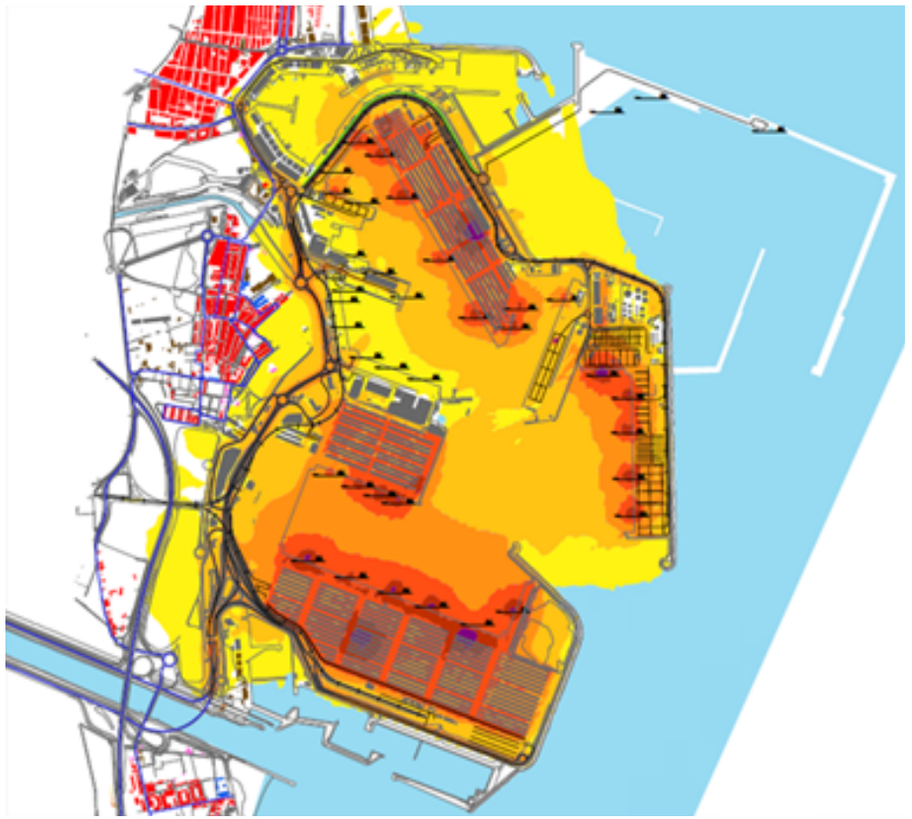


L day Port of Valencia

Lden. Average noise generated in daytime, evening and nocturnal hours

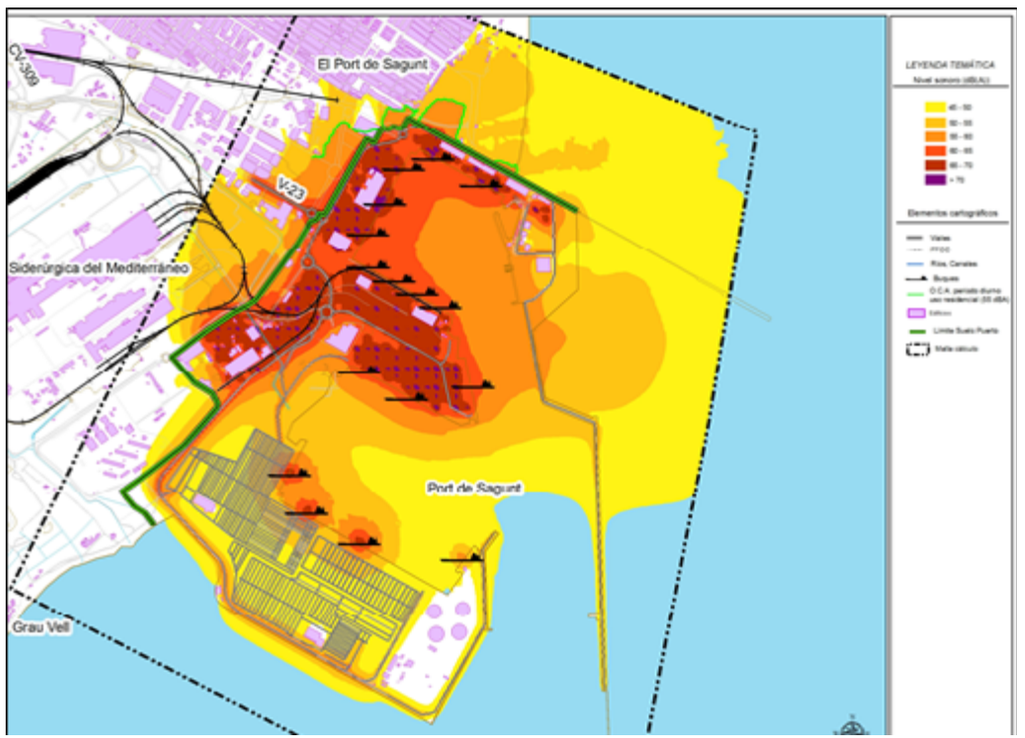


L evening Port of Valencia

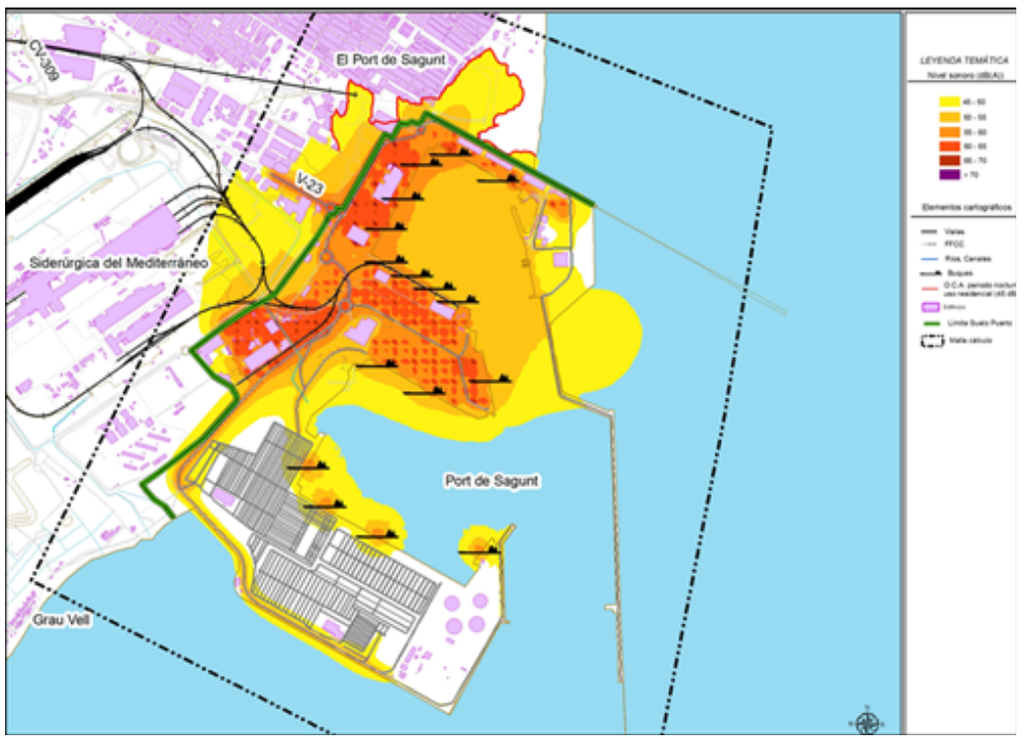


L night Port of Valencia

In 2018, the predictive noise map of the port of Sagunto was updated. The maps prepared are presented below:



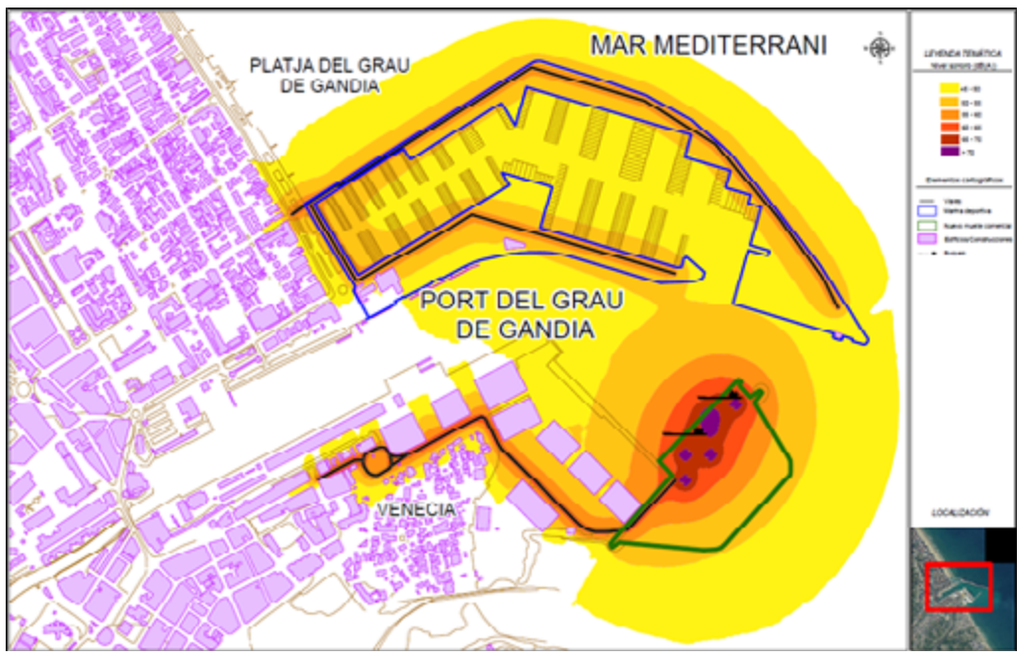
Ld total port of Sagunto



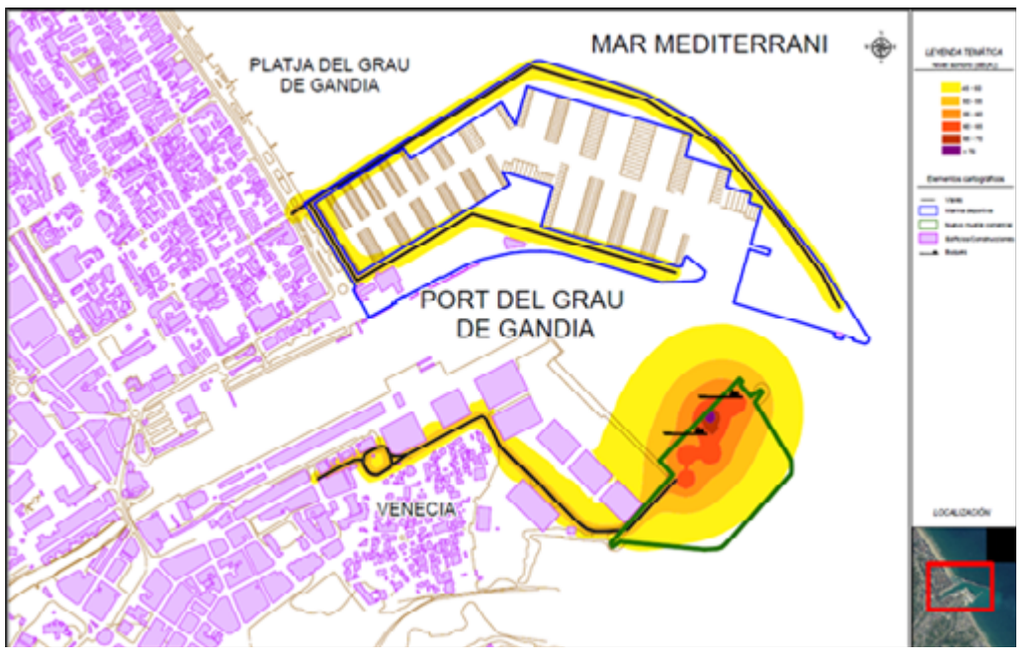
Ln total port of Sagunto

The principal conclusions reached from the above sound level maps is that residential areas close to port infrastructures are not exposed to levels above those established in table AD1 of Annex III of RD 1367/2007 due to the activity of ports.

In addition, a predictive study was completed in May 2013, on the new extension planned in the Port of Gandía. Displayed below are the maps for the daytime and night period:



Ld total port of Gandía



Ln total port of Gandía

As a conclusion, it has been shows that the sound levels obtained in the prediction do not exceed the acoustic quality objectives defined in Law 7/2002 of the Regional Government of Valencia on neighbouring and nearby areas.

In 2019, the updating of the predictive acoustic map of the Port of Gandía began due to the new road access entrance to the port, which avoids heavy vehicles having to cross the city to access the port. The results of the study will be available in 2020.

6.4 Water quality

6.4.1 Quality of water bodies in the port premises in the year 2019

The Water Directive (2000/60/EC) establishes that the member states must protect, improve and regenerate all surface water bodies, with the aim of reaching good condition for these water bodies no more than 15 years after the entry into force of the Directive, that is the year 2015. In the case of artificial or heavily modified water bodies, such as the case of the ports of Valencia, Sagunto and Gandía, the Directive determines that the member states must protect and improve them for the purpose of reaching good ecological condition and good chemical status, all in accordance with the guidelines established in Royal Decree 817/2015 of 11 September, establishing the monitoring and assessment criteria on the state of surface water and the environmental quality standards.

In 2013, the document ROM 5.1-13 was published on the "Coastal water quality in port areas" (hereinafter ROM 5.1-13) drafted by Puertos del Estado, compiling the standards and protocols for the analysis and assessment of intraport water bodies. This document is compatible with Royal Decree 817/2015 is specifically drafted for the extension of ports, the reason for which the PAV is implementing said methodology in the three port premises it manages for the assessment of the environmental quality of the waters.

6.4.2 Areas of study

In the year 2018, periodic sampling campaigns were completed for the control of the quality of waters in the three ports managed by the Port Authority of Valencia:

Port of Valencia

Port of Sagunto

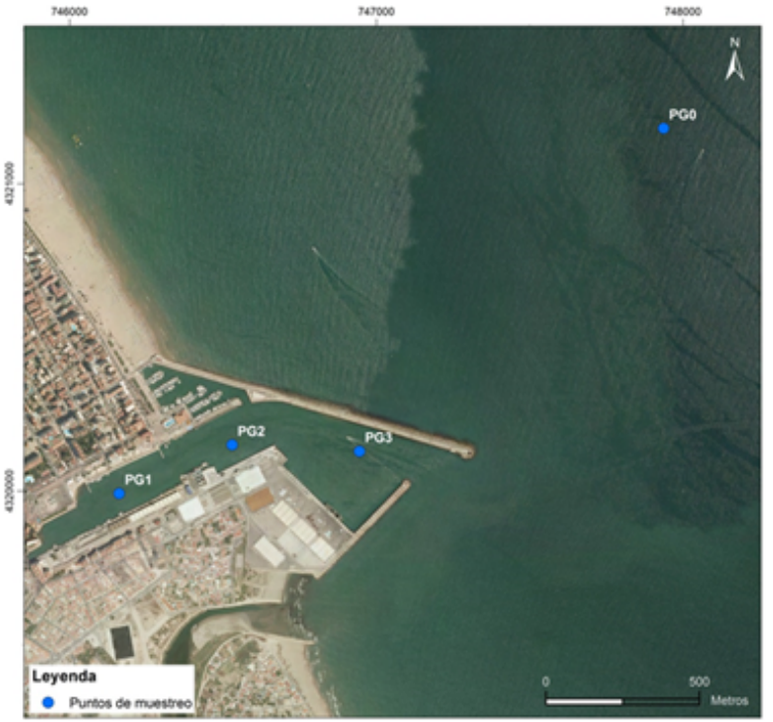
Port of Gandía

The area of study includes both intraport waters (water bodies heavily modified due to the presence of ports), and the representative control station for extraport waters (coastal water body) at each port.

The locations of the control points established for each of the port premises are displayed below:

Distribution of sampling points in the Port of Valencia

Distribution of sampling points in the Port of Sagunto



Distribution of sampling points in the Port of Gandía

6.4.3 Determination of the Port Aquatic Management Units (PAMUs)

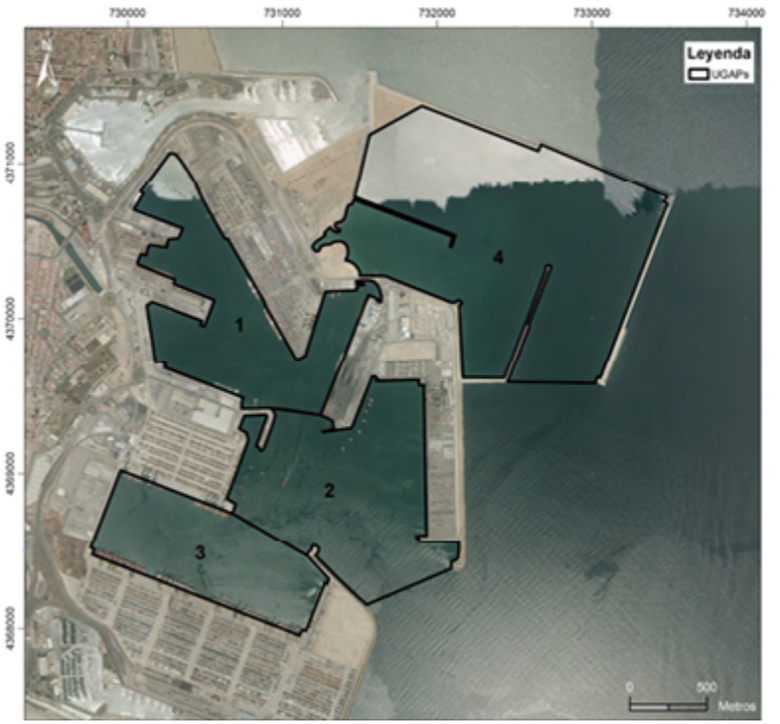
To assess the environmental quality of port waters, following the criteria established in the ROM 5.1-13, the Port Aquatic Management Units (hereinafter PAMUs) were delimited and defined as an instrument for the planning of the aquatic environment of the Port Services Zone (PSZ). In this context, these PAMUs, constituted as basic units for the management of port water quality and have been created in accordance with the following aspects:

- Uses and activities carried out in the PSZ
- Physical and hydromorphological characteristics
- Hydrodynamic conditions

All PAMUs have been classified as:

CATEGORY	CLASS	TYPE
COASTAL WATERS	HEAVILY MODIFIED WATERS	CM3: MEDITERRANEAN COASTAL WATERS WITH LOW RENEWAL

Indicated below are the PAMUs considered for each port:



PAMU established for the Port of Valencia

PAMU established for the Port of Sagunto

PAMU established for the Port of Gandía

6.4.4 Variables studied

The monitoring of the intraport water quality was conducted based on the indicators considered for environmental quality assessment in ROM 5.1.13 which are, for each of the PAMUs, the following:

- FC sediment quality indicators: Organic Quality Index (OQI)
- Biological water quality indicators: phytoplankton (concentration of chlorophyll a) and benthic invertebrates (BOPA)
- FC water quality indicators: turbidity, oxygen saturations, total hydrocarbons, faecal contamination and nutrients.
- Chemical quality of water and sediment: priority substances and other contaminants

The variables analysed, both in situ and in laboratory for the year 2019 are indicated below:

MATRIX	MEASURES IN SITU	LABORATORY ANALYSIS	SAMPLING POINTS
WATER COLUMN	• Chlorophyll a • Temperature • Salinity • Dissolved oxygen • Turbidity • Total hydrocarbons	• Faecal contamination E. coli and intestinal enterococci. • Nutrients: nitrates, nitrites, ammonium and phosphates.	PORT VALENCIA:PV1, PV2, PV3, PV4, PV5, PV9 AND PV0. PORT SAGUNTO: PS1, PS2, PS3. PS0. PORT GANDÍA: PG1, PG2, PG3 Y PG0.
SEDIMENT	• Redox potential	• Total organic carbon • Kjeldahl nitrogen • Total phosphate • Benthic fauna of invertebrates (BOPA)	PORT VALENCIA: PV2, PV3, PV4, PV5, PV9, PV0 PORT SAGUNTO: PS1, PS2, PS3, PS0 PORT GANDÍA: PG1, PG2, PG3, PG0.

Table with variables analysed for the study of ecological potential.

MATRIX	LABORATORY ANALYSIS	SAMPLING POINTS
WATER COLUMN	PERFLUOROOCTANESULFONIC ACID AND DERIVATIVES (PFOS), ACLONIFEN, A-HCH, B-HCH, D-HCH, LINDANE, ALACHLOR, ALDRIN, DIELDRIN, ENDRIN, ISODRIN, ATRAZINE, BIFENOX, CYBUTRYNE, CYPERMETHRIN, CHLORFENVINPHOS, CHLORPYRIFOS, DICHLORVOS, DICOFOL, DIURON, ENDOSULFAN, HEXABROMOCYCLODODECANE (HBCDD), HEXACHLOROBENZENE, ISOPROTURON, P,P'-DDT, PENTACHLOROBENZENE, PENTACHLOROPHENOL, QUINOXYPHENE, SIMAZINE, ADD DDT TOTAL, TERBUTRYN, TRIFLURALIN, BROMINATED DIPHENYL ETHERS, CHLOROALKANES, BENZENE, HEXACHLOROBUTADIENE, TETRACHLOROETHENE, CARBON TETRACHLORIDE, TRICHLOROETHENE, 4-N-NONYLPHENOL, 4-TERC-OCTILFENOL, BIS (2-ETHYLHEXYL) PHTHALATE, ANTHRACENE, BENZO(A)PYRENE, BENZO(B)FLUORANTHENE, BENZO(K)FLUORANTHENE, BENZO(GHI)PERYLENE, INDENE(1,2,3-CD)PYRENE) FLUORANTHENE, NAPHTHALENE, CADMIUM, MERCURY, NICKEL, LEAD, 1,2-DICHLOROETHANE, DICHLOROMETHANE, HEPTACHLOR, HEPTACHLOR EPOXIDE, TRICHLOROBENZENES, TRIBUTYLTIN (TBTS), CHLOROFORM.	PORT VALENCIA: PV5 AND PV9. PORT SAGUNTO: PS1 AND PS3. PORT GANDÍA: PG1 AND PG3.
SEDIMENT	ANTHRACENE, BENZO (A) ANTHRACENE, BENZO(A)PYRENE, BENZO(G,H,I)PERYLENE, CHRYSENE, PHENANTHRENE, FLUORANTHENE, INDENE, PYRENE, ARSENIC, CADMIUM, COPPER, CHROMIUM VI, MERCURY, NICKEL, LEAD, ZINC, PCB 18, PCB 28, PCB 31, PCB 44, PCB 52, PCB 66, PCB 95, PCB 101, PCB 105, PCB 110, PCB 118, PCB 138, PCB 149, PCB 153, PCB 156, PCB 170, PCB 180, PCB 187, PCB 194, COMPOUNDS OF TRIBUTYL TIN (TBTS).	PORT VALENCIA: PV5 AND PV9. PORT SAGUNTO: PS1 AND PS3. PORT GANDÍA: PG1 AND PG3.

Table with variables analysed for the study of chemical status.

The "in-situ" measurements of the different hydrological variables were taken continuously throughout the water column, using high-precision CTD oceanographic probe (model SBE 19 plus v2). The laboratory tests were performed by an ENAC accredited laboratory.

Detailed below are the sampling and analysis methods of the variables studied:

PARAMETER	UNITS	SAMPLING LEVEL	SAMPLING METHOD	ANALYSIS METHOD
TEMPERATURE	º C	PROFILE OF WATER COLUMN	MULTIPARAMETER PROBE SBE 19PLUSV2	THERMOMETRY
SALINITY	PSU	PROFILE OF WATER COLUMN	MULTIPARAMETER PROBE SBE 19PLUSV2	CONDUCTIMETRY
DISSOLVED OXYGEN	MG/L Y % SAT.	PROFILE OF WATER COLUMN	SBE 43 SENSOR COUPLED TO MULTIPARAMETER PROBE SBE 19PLUSV2	METHOD POLAROGRAPHIC
TURBIDITY	NTU	PROFILE OF WATER COLUMN	SEAPOINT SENSOR COUPLED TO MULTIPARAMETER PROBE SBE 19PLUSV2	NEPHELOMETRY
CHLOROPHYLL A	µg/l	PROFILE OF WATER COLUMN	CYCLOPS-7 SENSOR COUPLED TO MULTIPARAMETER PROBE SBE 19PLUSV2	FLUOROMETRICS

In situ measurement methods.

NITRITES	MG/L	COLORIMETRY
AMMONIUM	MG/L	SPECTROPHOTOMETRY
PHOSPHATES	MG/L	COLORIMETRY
E.COLI	UFC/100 ML	FILTRATION, INCUBATION AND RECOUNTS
INTESTINAL ENTEROCOCCI	UFC/100 ML	FILTRATION, INCUBATION AND RECOUNTS
ALACHLOR	µG/L	GAS/MASS CHROMATOGRAPHY
ANTHRACENE	µG/L	GAS/MASS CHROMATOGRAPHY
ATRAZINE	µg/l	GAS/MASS CHROMATOGRAPHY
BENZENE	µg/l	GAS/MASS CHROMATOGRAPHY
BROMINATED DIPHENYL ETHERS	µg/l	GAS/MASS CHROMATOGRAPHY
CADMIUM	µg/l	ICP/MASS SPECTROSCOPY
CARBON TETRACHLORIDE	µg/l	GAS/MASS CHROMATOGRAPHY
CHLOROALKANES C10-13	µg/l	GAS/MASS CHROMATOGRAPHY
CHLORFENVINPHOS	µg/l	GAS/MASS CHROMATOGRAPHY
CHLORPYRIFOS (CHLORPYRIFOSSETHYL)	µg/l	GAS/MASS CHROMATOGRAPHY
ALDRIN	µg/l	GAS/MASS CHROMATOGRAPHY
DIELDRIN	µg/l	GAS/MASS CHROMATOGRAPHY
ENDRIN	µg/l	GAS/MASS CHROMATOGRAPHY

NITRITES	MG/L	COLORIMETRY
ISODRIN	µg/l	GAS/MASS CHROMATOGRAPHY
DDT TOTAL (ADD DDT, DDD AND DDE)	µg/l	GAS/MASS CHROMATOGRAPHY
PP-DDT	µg/l	GAS/MASS CHROMATOGRAPHY
1,2-DICHLOROETHANE	µg/l	GAS/MASS CHROMATOGRAPHY
DICHLOROMETHANE	µg/l	GAS/MASS CHROMATOGRAPHY
DI (2-ETHYLHEXYL) PHTHALATE (DEHP)	µg/l	GAS/MASS CHROMATOGRAPHY
DIURON	µg/l	CHROMATOGRAPHY LIQUID-MASS
ENDOSULFAN	µg/l	GAS/MASS CHROMATOGRAPHY
FLUORANTHENE	µg/l	GAS/MASS CHROMATOGRAPHY
HEXACHLOROBENZENE	µg/l	GAS/MASS CHROMATOGRAPHY
HEXACHLOROBUTADIENE	µg/l	GAS/MASS CHROMATOGRAPHY
HEXACHLOROCYCLOHEXANES (α-HCH, β-HCH, δ-HCH, LINDANE)	µg/l	GAS/MASS CHROMATOGRAPHY
ISOPROTURON	µg/l	CHROMATOGRAPHY LIQUID-MASS
LEAD AND ITS COMPOUNDS	µg/l	ICP/MASS SPECTROSCOPY
MERCURY AND ITS COMPOUNDS	µg/l	ATOMIC FLUORESCENCE
NAPHTHALENE	µg/l	GAS/MASS CHROMATOGRAPHY

NITRITES	MG/L	COLORIMETRY
NICKEL AND ITS COMPOUNDS	µg/l	ICP/MASS SPECTROSCOPY
NONYLPHENOLS (4-NONYLPHENOL)	µg/l	GAS/MASS CHROMATOGRAPHY
OCTIFENOLS ((4-(1,1',3,3'-TETRAMETHYLBUTYL)-FENOL))	µg/l	GAS/MASS CHROMATOGRAPHY
PENTACHLOROBENZENE	µg/l	GAS/MASS CHROMATOGRAPHY
PENTACHLOROPHENOL	µg/l	GAS/MASS CHROMATOGRAPHY
BENZO(A)PYRENE	µg/l	GAS/MASS CHROMATOGRAPHY
BENZO(B)FLUORANTHENE	µg/l	GAS/MASS CHROMATOGRAPHY
BENZO(K)FLUORANTHENE	µg/l	GAS/MASS CHROMATOGRAPHY
BENZO(G,H,I)PERYLENE	µg/l	GAS/MASS CHROMATOGRAPHY
INDENE(1,2,3-CD)PYRENE.	µg/l	GAS/MASS CHROMATOGRAPHY
SIMAZINE	µg/l	GAS/MASS CHROMATOGRAPHY
TETRACHLOROETHYLENE	µg/l	GAS/MASS CHROMATOGRAPHY
TETRACHLOROETHYLENE	µg/l	GAS/MASS CHROMATOGRAPHY
TRIBUTYLTIN COMPOUNDS (TRIBUTYLTIN CATION)	µg/l	GAS/MASS CHROMATOGRAPHY
TRICHLOROBENZENES	µg/l	GAS/MASS CHROMATOGRAPHY
TRICHLOROMETHANE	µg/l	GAS/MASS CHROMATOGRAPHY
TRIFLURALIN	µg/l	GAS/MASS CHROMATOGRAPHY
DICOFOL	µg/l	GAS/MASS CHROMATOGRAPHY
QUINOXYFEN	µg/l	CHROMATOGRAPHY LIQUID-MASS

NITRITES	MG/L	COLORIMETRY
PERFLUOROOCTANESULFONIC ACID AND ITS COMPOUNDS (PFOS)	µg/l	CHROMATOGRAPHY LIQUID-MASS
ACLONIFEN	µg/l	GAS/MASS CHROMATOGRAPHY
CYBUTRYNE	µg/l	CHROMATOGRAPHY LIQUID-MASS
CYPERMETHRIN	µg/l	GAS/MASS CHROMATOGRAPHY
DICHLORVOS	µg/l	CHROMATOGRAPHY LIQUID-MASS
HEXABROMOCYCLODODECANE (HBCDD)	µg/l	GAS/MASS CHROMATOGRAPHY
HEPTACHLOR	µg/l	GAS/MASS CHROMATOGRAPHY
HEPTACHLOR EPOXIDE	µg/l	GAS/MASS CHROMATOGRAPHY
TERBUTRYN	µg/l	GAS/MASS CHROMATOGRAPHY
ETHYLBENZENE	µg/l	GAS/MASS CHROMATOGRAPHY
TOLUENE	µg/l	GAS/MASS CHROMATOGRAPHY
1,1,1-TRICHLOROETHANE	µg/l	GAS/MASS CHROMATOGRAPHY
XYLENES (ADD O, M, P)	µg/l	GAS/MASS CHROMATOGRAPHY
TERBUTHYLAZINE	µg/l	GAS/MASS CHROMATOGRAPHY
ARSENIC	µg/l	ICP/MASS SPECTROSCOPY
COPPER	µg/l	ICP/MASS SPECTROSCOPY
CHROMIUM VI	µg/l	COLORIMETRY
SELENIUM	µg/l	ICP/MASS SPECTROSCOPY
ZINC	µg/l	ICP/MASS SPECTROSCOPY

Laboratory test methods for water samples

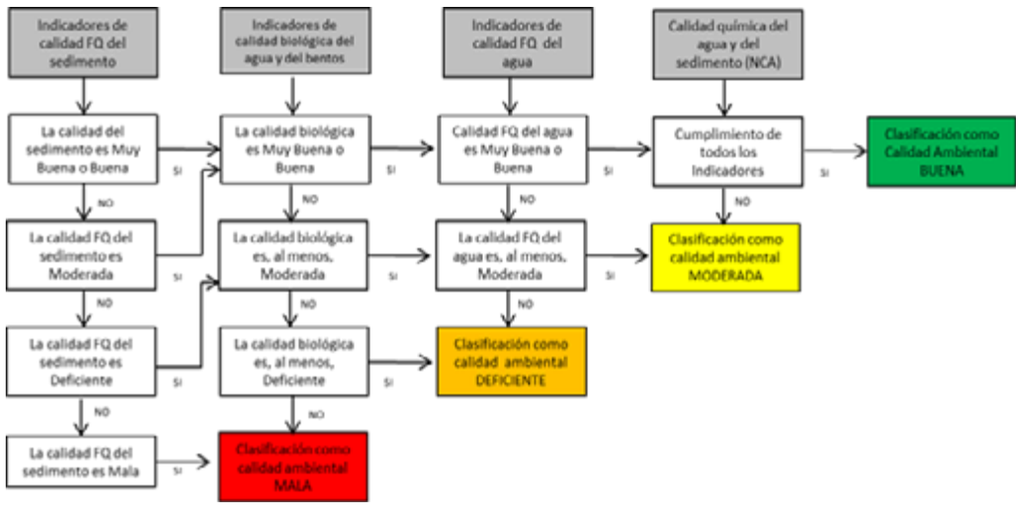
PARAMETER	UNITS	ANALYSIS METHOD
COT	MG/KG	CATALYSED COMBUSTION. NON-DISPERSIVE INFRA-RED
KJELDAHL NITROGEN	MG/KG	KJELDAHL DISTILLATION
TOTAL PHOSPHATE	MG/KG	INDUCTIVELY COUPLED PLASMA (ICP)
ORGANIC MATERIAL	MG/KG	DICHROMATE OXIDATION
GRANULOMETRY	%	LASER DIFFRACTION

PARAMETER	UNITS	ANALYSIS METHOD
METALS: CADMIUM, LEAD, COPPER, NICKEL, ZINC, ARSENIC, CHROMIUM VI	MG/KG	INDUCTIVELY COUPLED PLASMA (ICP)
MERCURY	MG/KG	ATOMIC ABSORPTION SPECTROMETRY
POLYCHLORINATED BIPHENYLS (PCBS)	µg/kg	GAS/MASS CHROMATOGRAPHY
COMPOUNDS AND TRIPHENYLTIN (TBTS)	µg/kg	GAS/MASS CHROMATOGRAPHY
HAPS	µg/kg	GAS/MASS CHROMATOGRAPHY
BENTHIC FAUNA OF INVERTEBRATES (BOPA)	IND/M^2	OPTICAL MICROSCOPY

Laboratory test methods for sediment samples

6.4.5 Water quality monitoring results 2019

The environmental quality of the heavily modified PAMUs is assessed based on the hierarchical integration of the quality elements indicated below:



As observed, the final classification of the bodies of water may be: Good, Moderate, Deficient or Poor

The results obtained for each PAMU and port are displayed below with the different indicators:

PORT	PAMU	FC QUALITY INDICATORS OF SEDIMENT	BIOLOGICAL QUALITY INDICATORS OF WATER AND BENTHOS	FC QUALITY INDICATORS OF WATER	CHEMICAL QUALITY OF WATER AND SEDIMENT	ENVIRONMENTAL QUALITY CLASSIFICATION
VALENCIA	PAMU 1	VERY GOOD	GOOD	MODERATE	NA	MODERATE
	PAMU 2	VERY GOOD	GOOD	GOOD	DOES NOT REACH GOOD	MODERATE
	PAMU 3	VERY GOOD	GOOD	MODERATE	NA	MODERATE
	PAMU 4	VERY GOOD	GOOD	VERY GOOD	GOOD	GOOD
SAGUNTO	PAMU 1	GOOD	MODERATE	GOOD	DOES NOT REACH GOOD	MODERATE
	PAMU 2	GOOD	MODERATE	GOOD	GOOD	MODERATE
GANDÍA	PAMU 1	GOOD	MODERATE	MODERATE	DOES NOT REACH GOOD	MODERATE

NE: not assessable

From the results obtained, the monitoring of each of the indicators, we can conclude that the classification of the environmental quality classification is moderate for all the PAMUs of the port of Valencia with the exception of the PAMU 4 for which status is good. In the ports of Sagunto and Gandía all the PAMUs achieved Moderate environmental quality

The results obtained for each PAMU and port are displayed below with the different indicators:

Assessment of the Port of Valencia

Assessment of the Port of Sagunto

Assessment of the Port of Gandía

The PAV also works to minimise the possible effects on water quality through initiatives such as that to allow for the cleaning of floating waste from the water mirror. In 2003, the Maritime Security and Rescue Society, part of the Directorate-General of the Merchant Navy, transferred the vessel LIMPIAMAR III to the Port Authority of Valencia, which assumes responsibility for the service, which is currently provided through a private company.

Said vessel has the mission, fundamentally, of collection of solid and liquid water waste, and to contribute to the service to combat episodes of accidental marine pollution, which will be considered another unit.

In the period 2019, through LIMPIAMAR III, a total of 155.40 m^3 of floating waste, mainly plastic, wood and derivatives were removed and managed.

6.5 Dredging Management

As a result of the sedimentation of sands and silts in the inbound channels to the ports and the construction of new quays, the Port Authority of Valencia periodically conducts dredging work for maintenance based on the needs for access and manoeuvrability of the ports managed. In 2019 the volumes dredged were the following:

- Dredging for improved access to Levante Quay and South Dock of the Port of Valencia saw a total volume of 326.935 m³ dredged.
- Deepening of Serpis dock, entrance channel and mouth of the Port of Gandía: 236.078,46 m³ dredged.

All of these activities applied the recommendations that the Centre of Public Works Studies and Experimentation (CEDEX) has published to ensure adequate environmental management of the dredged materials generated, without finding anything requiring specific treatment for quality.

6.6 Environmental Monitoring Plan

Since 2008, works have been conducted on the Extension project of the Port of Valencia. These works follow the instructions of the Environmental Impact Declaration (EID) of the Project of 30 July 2007, with the complete Environmental Monitoring Plan with the aim of ensuring compliance with the corrective and preventive measures Construction and Operating phase, and ensuring that the impact levels do not exceed those in the impact assessment.

With the aim of complying with the prescriptions included in the EID, the Plan in execution for several years, included the monitoring of the following environmental factors:

- Quality of water and sediments
- Marine biocenosis
- Fishing resources
- Evolution of seafood resources
- Monitoring of avifauna
- Atmospheric pollution
- Noise pollution
- Monitoring of archaeological prospecting
- Coastal dynamics.

Complementing the above monitoring, during 2008, and in order to comply with instructions of the EID, a study was carried out on the potential effect of the Project for the Dispersion of the Discharge from the Cabañal Spillway and the Vera Emissary, concluding that there was no effect on the initial situation.

In April 2012, the first phase of the works on the extension were completed. The principal result was the confinement of the waters of the new dock. In August 2012, the work began on the project “Cruise Liner Quay - Phase I”, which was completed in the year 2013.

The environmental monitoring of the vectors mentioned above continued in the year 2019, the work reduced to ad hoc addition of filling and pavement material during this period.

From the start-up of the works, and therefore, the Environmental Monitoring Plan planned, in the year 2008, and taking into account the data obtained and reflected in the existing annual reports from the year 2008, the conclusion reached was that the environmental impact of the actions corresponding to the North Extension of the Port of Valencia were within the margins envisaged and therefore there was no significant effect on the environment.

6.7 Soil management

From the Security, Environment and Facilities Area of the PAV, an environmental control of the concessions through which the following actions are taken:

- Compilation of the Reports of the Soil Situation of concession-holders/authorised companies subject to the provisions of Article 2 of Royal Decree 9/2005, of 14 January, establishing the list of potentially soil-contaminant activities and the criteria and standards for the declaration of contaminated soils (hereinafter, Royal Decree) before the competent environmental body.
- Request for the most detailed complementary reports, data or analysis that allow for the contamination of soil, in accordance with the provisions established in Article 3.3 of the Royal Decree, which the environmental authority has requested, ex oficio or through the Integrated Environmental Authorisation.
- Report, through the Internal Feasibility Reports of the PAV, on the obligations companies must fulfil in relation to the soil.

In 2019, the PAV carried out a specific environmental characterisation study of the soil and underground waters of the Port of Valencia, specifically on the future site of the Levante UD football training ground complex. This study has focussed on a quantitative analysis of the risks in the framework of the LEVANTE UD. FOOTBALL TRAINING GROUND COMPLEX PROJECT. Special Nazaret East Plan. Zone South 1 of the Port of Valencia.

According to the conclusions, it can be concluded that the levels of composts present in the subsoil studied guarantee conditions of risk admissible for human health for the scenarios assessed, even with the conditioning factor of intensive irrigation considered in the complementary assessment. Therefore, no corrective actions need to be adopted.

6.8 Visual Impact

This year, the Port Authority of Valencia continues, once again, to pay special attention to the maintenance of green areas in the interior of the port premises. In the year 2019, the total surface green area of the Port of Valencia was approximately 37,221.05 m² of which 20,432.33 m² was pasture 16,788.72 m² cultivation with no pasture.

In the Port of Gandía, the total occupied surface area of the gardens and green area to maintain is 1,675.00 m², broken down as follows: 425,00 m² of grass pasture and 1.250,00 m² of maintenance and conservation gardening wooded areas, shrubs, creeping plants and flower, palm species, hedges, etc.

The total surface area occupied by gardens and green areas to maintain in the Port of Sagunto is 7,369.00 m², broken down as follows: 3,059.00 m² of pasture and grass and 4,310.00 m² of maintenance and conservation of gardens, trees, shrubs, creeping plants and flowers, palm species, hedges, etc.

Sprinkler irrigation and automatic drip are used for the maintenance of green areas, contributing the reduction of water consumption.

6.9 Mobility Plan

The Port Authority of Valencia, in accordance with its policy to reduce atmospheric emissions, initiated its first study of mobility in the Port of Valencia in 2011. As a result of this study, the action plan for the period 2012-2017 was developed, which defines the guidelines of the mobility policy and the roll-out of specific actions responding to the commitment of the Port Authority of Valencia for the promotion of sustainable mobility in the Port of Valencia.

With regard to the proposed actions, the following 6 strategic lines were defined:

- Strategic line I: Management of mobility generated by the port
- Strategic line II: Promote walking
- Strategic line III: Promote cycling
- Strategic line IV: Promote the use of public transport
- Strategic line V: Encourage rational use of motor vehicle (light and heavy)
- Strategic line VI: Education of the port community on issues of mobility

For every one of the strategically defined lines above, different programmes and projects were proposed. Among those executed, we highlight:

- Constitution of a Mobility Commission within the PAV
- Appointment of a PAV mobility manager
- Creation of a monitored bicycle park for PAV workers
- Installation of dressing rooms for workers cycling to work
- Creation of a carsharing app within the Port of Valencia
- Improvement of passenger route at the Nazaret bridge roundabout
- Improvement of distribution and pedestrian connections to parking spaces reserved for persons with reduced mobility in PAV carparks

Through the financing of the SUMPORT project (Sustainable Urban Mobility in MED PORT cities), the Sustainable Mobility Plan of the Port Authority of Valencia is updated, in order to the review the initiatives put forward in the first Mobility Plan developed in 2011. This Plan aims to integrated the focus of sustainability within long-term mobility planning in port cities in the Mediterranean environment.

Furthermore, in 2019, in the framework of said project, a number of different pilot projects were launched to test sustainable mobility solutions in the port environment. The first pilot tested an electric bike rental system for cruise passengers to visit the city in a more sustainable way. This innovative tool allowed us to test more environmentally friendly mobility options in the port and city, that reduce greenhouse gas emissions and improve the quality of life of citizens and the entire port community.

Finally, the pedestrian route was improved for cruise passengers from the Trasmediterránea terminal to the public bus stop outside the port, improving mobility information provided to those passengers as well as the safety conditions on the route

6.10 Other Operations

6.10.1 Specific operations carried out during 2019

The specific operations carried out during 2019 in the environmental field are listed in this section.

- Since May 2019, the Port Authority of Valencia co-chairs the Sustainability Committee of the MEDPORTS Ports Association.
- Participation in May in the III European Environmental Ports Conference in Antwerp (Belgium).
- Celebration of Environment Day, 5 to 9 June 2019, Clock Tower Building, Port of Valencia.
- ·Participation in October in “Ecofira 2019: International Environmental Solutions Fair” held in Valencia.

7. EMERGENCY RESPONSE

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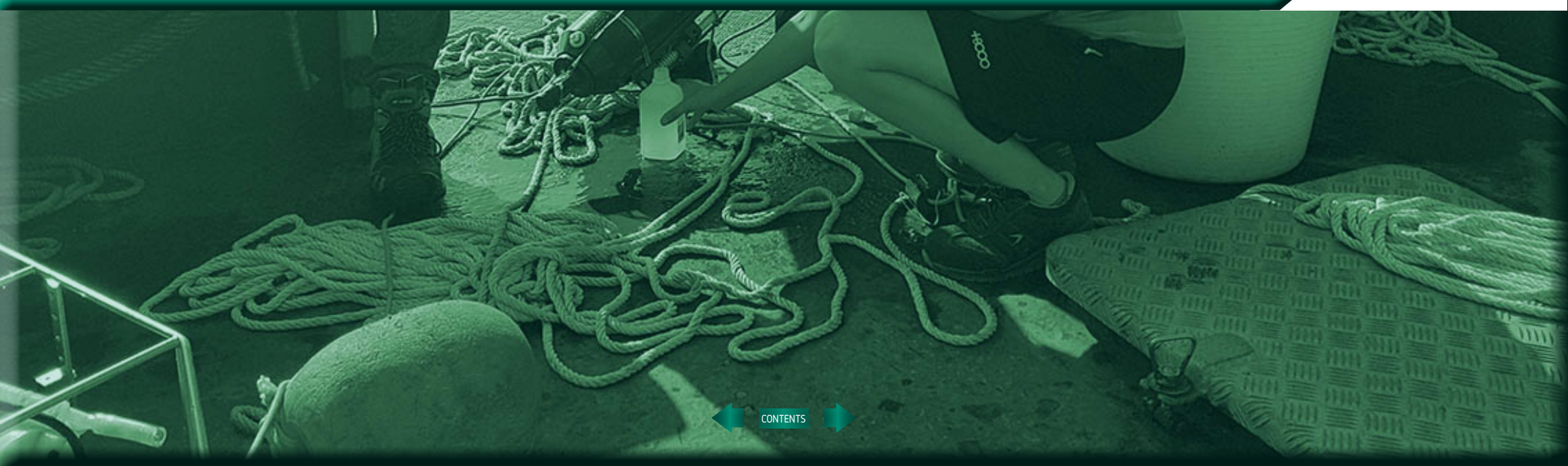

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7. Emergency response

The main aim of the Port Authority of Valencia is to make the ports of Sagunto, Valencia and Gandía areas with the greatest guarantees of security, as well as to provide more effective collaboration with other administrations with competencies in police, civil protection, fire prevention, rescue and pollution control.

For this reason, and in defence of the public interest, it is necessary to make compatible the outstanding increase in port traffic that is being registered in the Ports of its competence, with the maintenance of the integrity of people, the environment, infrastructures and goods.

To fulfil this goal, the Port Authority has a Port Police Service, a Fire Brigade in close collaboration with the Valencia Town Council, oil pollution control equipment with specialised personnel, and a medicalised ambulance, among other operational resources, active twenty-four hours a day, three hundred and sixty-five days a year. The coordination of resources, as well as with other administrations called upon to intervene, is carried out from the Emergency Control Centre.

From this Centre, the Port Authority supervises operations with dangerous goods, manages emergencies and cooperates in the preventive routines of industrial, operational, labour and environmental safety in the ports of Sagunto, Valencia and Gandía, both on land and in port waters.

INCIDENTS	2016	2017	2018	2019
URGENT HEALTH CARE	218	287	326	266
TOTAL DISCHARGES	**20**	**11**	**27**	**34**
SMALL DISCHARGES OF SEA ORIGIN	12	4	9	17
SMALL DISCHARGES OF LAND ORIGIN (SPILLS)	8	7	18	17
COLLECTION OF OBJECTS	11	10	15	2
CLOSURE OF THE PORT	16	12	9	14
FIRES OR OUTBREAKS	1	7	6	6

The personnel and teams of the Control Centre are on permanent alert to intervene immediately in any incident that may occur. In the meantime, there are constant operations for the maintenance of equipment, improvement of procedures and training of personnel, implementation of technological innovations, etc...

In this training effort, the exercises and drills that are periodically carried out are key. The following have been carried out in 2019:

DRILLS	2016	2017	2018	2019
1. PAV EMERGENCY PLANS	**10**	**8**	**7**	**7**
1.1.- LED BY THE PAV:	7	7	5	6
FIRE	6	7	5	6
HYDROCARBON SPILL	1	0	-	
OTHER	-	-	-	
1.2. IN COLLABORATION WITH OTHER ORGANISATIONS	3	1	2	1
IN DIFFERENT TERMINALS	1	-	2	
IN COLLABORATION WITH OTHER ENTITIES	2	1	-	1
IN COLLABORATION WITH MOORERS	-	-	-	
2. IN TERMS OF PROTECTION:	**11**	**11**	**17**	**17**
TOTAL	**21**	**19**	**24**	**24**

7. Emergency response

The following training actions have been carried out for all the staff assigned to the CEC

- A 30-hour refresher course on technical nautical knowledge.
- A training session on rail and port security.

Regarding training operations that we have provided to the Valencia Fire Department, within the framework of the current Collaboration Agreement:

- Seven visits to learn about the practicalities of LNG bunkering operations for passenger ships.
- 10 training sessions on the port of Valencia, its arrangement, port uses, its Self-Protection Plan and available resources. It includes a guided visit to the Boluda Tugboats with water launching practice outside the port.

Likewise, the following drills related to the PAV Emergency Plans:

- Participation in the open water drill Marsec-19, led by the Spanish Navy.
- Activation of the External Emergency Plan due to a fire at the Galp and Tepsa facilities.
- Fire in the office building in the Port of Gandía.
- Fire in the new Port Police building in the Port of Sagunto
- Fire in the trade union premises area in the PAV Workshops area in Valencia.
- Fire in the rack room, mezzanine floor of Building 3 of the PAV Management complex in Valencia.
- Fire in the Clock Tower Building, with two victims rescued at height

8. INNOVATION AND COOPERATION PROJECTS

For the implementation of responsible environmental policies in the ports managed by the PAV, it is essential to acquire knowledge, both at a theoretical and practical level. This knowledge is gained through participation in cooperation and innovation projects. The PAV participates in these projects both directly, by implementing the results obtained in the projects directly in its own management, and indirectly, by making the knowledge acquired available to third parties for implementation in their facilities.

The PAV promotes the participation, both its own and that of the companies that form part of the Port Community, in all those innovative programmes and projects the purposes of which are in line with those set out in the aforementioned Environmental and Energy Policy. This participation provides up-to-date knowledge of the latest trends, techniques and technologies available in the control and monitoring of the environmental situation of the ports it manages, as well as their eventual transfer to the rest of the Port Community.

8.1 Completed projects

To date, the PAV has participated in the following projects. From 2010 onwards they are detailed with more information:

- **ECOPORT PROJECT (1998)** - LIFE Programme of the European Commission
- **INDAPORT PROJECT (2000)** - Programme for the Promotion of Technological Research (PROFIT) of the Ministry of Science and Technology.
- **HADA PROJECT (2002)** - LIFE Programme of the European Commission
- **ECOPORTS PROJECT (2002)** - Fifth Framework Programme of the European Commission
- **SECURMED PROJECT (2004)** - European Commission Interreg IIIB Programme
- **SIMPYC PROJECT (2005)** - LIFE Programme of the European Commission
- **MADAMA PROJECT (2005)** - Interreg IIIB Medocc Programme of the European Commission
- **NOMEPORTS PROJECT (2005)** - LIFE Programme of the European Commission
- **ELEFSINA BAY 2020 PROJECT (2007)** - LIFE Programme of the European Commission
- **ECO-LOGISTYPORT PROJECT (2008)** - Empleaverde Programme of the European Social Fund
- **IMPROVEMENT OF ENVIRONMENTAL MANAGEMENT IN THE PORTS OF THE GULF OF HONDURAS (2008)** - Funds from the Inter-American Development Bank and the Spanish Cooperation.
- **EFICONT (2009)** - National R&D&I Plan of the Ministry of Public Works.
- **CLIMEPORT PROJECT (2009)** - MED Programme of the European Commission

GREENCRANES PROJECT (2012)

The GREENCRANES project (Green Technologies and Eco-Efficient Alternatives for Cranes and Operations at Port Container Terminals) had a total budget of 3,688,000 euros, 50% financed by the European Union through the Transport Network (TEN-T) programme. The purpose of the project was to show the feasibility of new technologies and alternative fuels through pilot projects developed in TPCs in order to provide decision criteria and recommendations for policy development at European level and decision making by the port logistics industry.

The project was coordinated by the Valenciaport Foundation and involved the PAV, Noatum, ABB, Konecranes, the Port Authority of Koper (Slovenia) and the Italian Ministry of Infrastructure and Transport, the Port Authority of Livorno, RINA SpA, Global Service Srl and the Scuola Superiore di Sant'Anna (Italy).

The main results of the project were the design of two prototypes of port machinery with natural gas engines and the viability of this type of engine for work in container terminals.

The project ended in November 2014.

GREENBERTH PROJECT (2013)

The GREENBERTH project (Promotion of Port Communities SMEs role in Energy Efficiency and GREEN technologies for BERTHING operations), had a budget of € 1.616.115 and 75% financing through the EU Regional Funds under the MED programme. The project lasted 30 months.

GREENBERTH was led by the PAV in collaboration with the most important Mediterranean ports, such as Marseille (France), Livorno, Venice (Italy), Koper (Slovenia) and Rijeka (Croatia). In addition, other partners are involved in the technological aspect, such as FEPORTS (Port Institute of Studies and Cooperation of the Valencian Region), University of Cadiz and CERTH/HIT (Hellenic Institute of Transport).

The main purpose of the project was to promote the access of SMEs to the opportunities offered by the port sector towards the application of energy management improvement solutions and the implementation of renewable energies with a special focus on port-ship operations.

The most important results of the project were:

1. Preparation of reports on Energy Efficiency Diagnosis, Identification of needs and the participation of SMEs in port activities.

2. Design of Energy Plans for Mediterranean ports

3. Development of action plans for the application and transfer of available technology including three pilot projects.

   a. Replacement of traditional engines in the port fleet with more efficient and less polluting engines,

   b. Implementation of the OPS-based technology and

   c. Replacement of traditional engines with more efficient and less polluting engines in port terminal machinery and truck fleets.

The project ended in June 2015.

MONALISA 2.0 PROJECT (2013)

The main purpose of the project was to contribute to the promotion of Motorways of the Sea (MOS) by implementing a series of measures, in line with EU policies for maritime transport.

The PAV participated in this project by coordinating the vessel components on the sea leg and the shore-based port facility component in case of accidents or incidents focusing not only on large passenger vessels, but also on other vessels or facilities at risk.

The results pursued by the project were the elaboration of documents related to Contingency Plans in ports and the guidelines to be complied with, as well as the implementation of an exercise on mass evacuation in ports, as a pilot and the elaboration of the report corresponding to the mentioned exercise.

The MONALISA 2.0 consortium consisted of 39 partners from 10 EU countries. The project was 50% funded by the EU through the Trans-European Transport Network Executive Agency programme, and had a budget of € 24,317,000.

The project ended in December 2015.

SEA TERMINALS PROJECT (2014)

The SEA TERMINALS (Smart, Energy Efficient and Adaptive Port Terminals) project had a budget of 6,273,896 € and 50% EU funding through its TEN-T programme. The project lasted 22 months.

The project was coordinated by the Valenciaport Foundation and involved the PAV, Noatum, Terberg, NACCO, the Instituto Tecnológico de la Energía (ITE), EDAE, Ampliatel, Baltic Ports Organization and the Italian Ministry of Infrastructures and Transport, as well as the Port Authority of Livorno, Global Service Srl, Offshore LNG Toscana and the Scuola Superiore di Sant'Anna (Italy) as executing agencies.

SEA TERMINALS aimed to drive the evolution of the port industry towards a progressive and efficient low carbon operating model, integrating smart and energy efficient technologies (hybrid machine concepts, liquefied natural gas as fuel, heavy duty electric vehicles) through innovative energy efficiency and business solutions, focusing on heavy duty machinery and equipment handling.

SEA TERMINALS took as a starting point the lessons learned from the GREENCRANES project, which has already been mentioned above.

The project ended in December 2015.

GAINN4SHIP INNOVATION PROJECT (2015)

The GAINN4SHIP INNOVATION project (LNG Technologies and Innovation for Maritime Transport for the Promotion of Sustainability, Multimodality and Efficiency of the Network), has a budget of € 15,025,564 and 50% EU funding through its CEF (Connecting Europe Facility) programme.

GAINN4SHIP INNOVATION aims to implement European environmental regulations through the conversion of the Diesel engines to LNG (Liquefied Natural Gas) engines of a Fast-Ferry vessel providing regular service in the Canary Islands. This project includes the final engineering projects on the prototype LNG-fuelled vessels and their adaptation to a real vessel.

Some results obtained from this study are as follow:

- definition of environmental indicators for LNG-fuelled vessels,
- definition of technical solutions for fuel intake;
- control of methane emissions to the atmosphere from LNG-fuelled prototype vessels;

The project ended in March 2018

GAINN4MOS PROJECT (2015)

The GAINN4MOS project (Sustainable LNG Operations for Ports and Shipping - Innovative Pilot Actions), had a budget of € 41,314,934 and 50% EU funding through its CEF (Connecting Europe Facility) programme.

GAINN4MOS aimed to improve the Motorways of the Sea (MOS) network in 6 Member States (Spain, France, Croatia, Italy, Portugal and Slovenia) by carrying out engineering studies for the rehabilitation of existing vessels and/or new construction, development of LNG port infrastructure, refuelling stations and a large set of pilot projects.

GAINN4MOS included 14 detailed engineering studies on LNG infrastructure and bunkering stations and ship conversion and/or newbuilding and 11 prototypes (4 ship conversions and 7 LNG bunkering stations at nodal ports).

The project ended in September 2019.

8.2 Projects under development

CORE LNG AS HIVE PROJECT (2014)

The CORE LNG Operations project (for Ports and Shipping - Innovative Pilot Actions), had a budget of € 33,295,760 and 50% EU funding through its CEF (Connecting Europe Facility) programme.

The main purpose of this project is to provide Spain and Portugal with an adequate infrastructure and operational framework for the deployment of a global supply network for liquefied natural gas (LNG) for transport use in the context of the network formed by the Mediterranean and Atlantic corridors, and the connecting area through the Strait of Gibraltar.

The project consortium is composed of representatives from different status (public or private) and different sectors (energy, education, transport...), thus allowing the consideration of different interests and ensuring the market-oriented approach of the actions included in the proposal.

Pilot actions to be implemented include:

- Adaptation of the SAGGAS terminal in the port of Sagunto to supply LNG to ships as fuel.
- Basic project for the conversion from diesel to LNG of a tugboat.
- Basic project for the installation of an LNG/CNG supply plant in the port of Valencia.

The project will end in December 2020.

H2PORTS PROJECT (2019)

"H2PORTS - Implementing Fuel Cells and Hydrogen Technologies in Ports" is a project coordinated by the Valenciaport Foundation, in close collaboration with the Port Authority of Valencia, and funded by the Fuel Cell and Hydrogen Joint Undertaking (FCH JU) programme. It has a budget of nearly 4 million euros and 50% financing.

H2PORTS aims to provide efficient solutions to facilitate a rapid evolution from a fossil fuel-based industry to a low-carbon and zero-emission sector.

Within the framework of the project, three pilots will be tested in the Port of Valencia: a reach stacker for loading/unloading and transporting containers, powered by hydrogen; a terminal tractor for ro-ro operations, powered by hydrogen cells and a mobile hydrogen supply station that will provide the fuel necessary to guarantee the continuous work cycles of the aforementioned equipment and which in the initial phase of the project will work in the Grimaldi (Valencia Terminal Europa) and MSC terminals of the Port of Valencia.

The project will end in December 2022.

GREEN-C-PORTS PROJECT (2019)

The Green and Connected Ports (GREEN C PORTS) project is led by the Valenciaport Foundation and funded by the European Commission's Connecting Europe Facility (CEF) Programme. This project has a total budget of € 7,175,700, which will be financed 50% by the Commission.

GREEN C PORTS has the overall goal of providing a set of digitisation tools and technologies to support the environmental sustainability of ports and the performance of port operations in the TEN-T network.

This project will address six business cases consisting of prototypes and pilot tests that will be implemented in different European ports and will serve as a basis for testing innovative technologies such as IoT, big data or predictive analytics through artificial intelligence models.

The project will end in March 2023.

ECCLIPSE PROJECT (2019)

European Project for the Assessment of Climate Change in Ports in Southwestern Europe (ECCLIPSE), led by the Valenciaport Foundation, co-financed by the European Commission through the Interreg V-B Southwest Europe Programme and in which the Port Authority of Valencia also participates. It has a budget of € 1,045,253.00 and is financed by the Interreg Sudoe programme.

The main purpose of ECCLIPSE is to define a common methodology for analysing the impacts of climate change and its effects on the maritime-port environment.

To achieve this goal, early prediction tools and models have been developed to allow a thorough understanding of their impact on a local scale.

The project will also contribute to raising awareness of the impact of climate change and will define transnational strategies for prevention, adaptation and action in the SUDOE area (South-West Europe) that can minimise its effects.

The project will end in September 2022.

8.3 Company shareholdings

As part of the objectives included in its Environmental Policy, the PAV is committed to disseminating and collaborating with third parties, so as to share the knowledge accumulated in the protection of the port environment and facilitate the extension of environmental management in other areas. Therefore, it participates in cooperation projects in which, through the contribution of this knowledge, it contributes to environmental improvement.

Participation in the MEDPORTS Association

In June 2018, the MEDPorts association, which brings together twenty of the main ports and state port organisations in the Mediterranean, was formed and held its first General Assembly, at which its main objectives were defined: to promote collaboration between Mediterranean ports to meet the new challenges of international trade and logistics and to highlight the centrality and importance of the Mediterranean in the new global trade flows, among others.

The founding members of MEDPorts are the ports of Barcelona, Tarragona, Algeciras and Valencia (Spain); Civitavecchia, Taranto and Venice (Italy); Marseille-Fos and Toulon (France); Luka Koper (Slovenia); Arzew, Skikda and Bejaia (Algeria); Tanger MED (Morocco); Damietta (Egypt); Beirut (Lebanon); and Malta Freeport (Malta), as well as the state agencies Puertos del Estado (Spain); the Office de la Marine Marchande et des Ports (Tunisia); and Serport (Algeria).

For this purpose, the association has created six working committees dedicated to Training, Sustainability, Security, Relations with International Institutions, Market Analysis and Smart Ports, with the Port Authority of Valencia being represented on all of them. In addition, the Port Authority of Valencia shares the presidency of the Sustainability Committee with the port of Civitavecchia.

In 2019 the Port Authority of Valencia participated in the following environmental and sustainability activities organised by the association:

- Meeting of the Sustainability Committee, May 2019, Tunis.
- MEDPorts Forum, June 2019, Marseille.
- 1st International Seminar on Port Management MEDPorts, September 2019, Barcelona.
- Meeting of the Sustainability Committee, November 2019, Malta.

Participation in the AEIE EUROPHAR

The PAV has been a member of the European Economic Interest Grouping EUROPHAR since 1997 and currently holds the presidency of the grouping. EUROPHAR is also made up of the Port Authorities of Toulon in France, as well as those of Genoa, Livorno, Piombino and Salerno in Italy. Other Spanish, French and Italian companies and institutions are also part of the Grouping, mainly linked to the field of safety and environmental protection in ports.

EUROPHAR is a preferred tool for communication and promotion of the PAV's policies in the international arena, as well as a cooperation tool for the development of R&D&I projects. Therefore, EUROPHAR has participated in recent years in numerous projects such as the SIMPYC project and the SUPPORT project "Security Upgrade for Ports", under the 7th Programme call for proposals, which ended in 2014. It is also worth highlighting its participation in the GREENCRANES and GREENBERTH projects as part of the Advisory Board.

In addition to the above, EUROPHAR has been following different project initiatives such as the SAURON security project which aims to improve the management and visualisation of risks in the combination of physical and cyber security in port environments. It should be noted that EUROPHAR is in contact with numerous environmental projects through the participation of both the PAV, presidency, and the FV, general secretariat.

Finally, it is worth highlighting the fact that, with all this experience, EUROPHAR has become an international benchmark in the fields of environmental protection and port security at European level.

8.4 Training

As stated in the environmental policy, the PAV endeavours to facilitate appropriate environmental training and awareness-raising, understood not only as a system for improving staff knowledge, but also as a means of acquiring new skills and abilities to make the ports of Sagunto, Valencia and Gandia more competitive. Therefore, courses and training sessions are scheduled annually to develop these skills in line with the activities carried out in this field. As far as possible, and as proposed in the ECOPORT II Project, these activities are carried out with the participation of the rest of the Port Community.

Within the training plan of the Ecoport II project, several environmental training councils on environmental aspects have been held during 2019.

Informative mails

A series of environmental tips are sent out monthly, both to PAV staff via the employee website and to the PAV port area concessions.

9. COMMUNICATION AND PUBLICATIONS

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The proximity of the Port Authority of Valencia to its different stakeholders allows it to be aware of their demands and concerns and serves as a basis for designing and developing specific actions for the fulfilment of the commitments undertaken. One of the purposes is to facilitate access to information to the maximum number of professionals and organisations in the fields in which it operates.

9.1 Communication

In order to facilitate this knowledge, the PAV has different communication channels aimed at the different stakeholders. In particular, the following may be highlighted.

Website of the Port Authority of Valencia

The PAV website (www.valenciaport.com) continues to be one of the organisation's most important platforms for public communication in different areas, including the environment.

9.2 Specific Environmental Information Talks

During 2019, the PAV has continued to maintain permanent communication with institutions, clients and interested parties on the environmental activities of our ports.

With regard to the PAV, 227 visits have been made, including a section on the Environment, which has meant the attendance of a total of approximately 9,727 people from different organisations and centres. The institutional visits have been, among others, representatives of the Delegation of Ukraine, Japan, Brazil, Colombia, Yan Ming, ICO Terminals, President of Puertos del Estado, Delegation of the Spanish Chamber of Commerce, Secretary of State for Infrastructures, ANAVE Management Committee, Centre for Industrial Technological Development.

9.3 Collaboration and attendance at forums and seminars

During 2019, the PAV took part in a large number of conferences and seminars on the environment in relation to ports, both nationally and internationally. It is worth mentioning in this regard:

- Master in Logistics and Port Management II Edition (Buenos Aires, Argentina November-December 2019)
- GREEN4SEA Conference (Athens, Greece March 2019)
- Master in Port Management and Intermodal Transport XXVIII Edition - Fundación Valenciaport (Valencia, April 2019)
- UNCTAD Port Management Course (Dominican Republic October 2019)

9.4 Publications

The publications produced by the PAV include monographs and specific guides on specific subjects, as well as publications to disseminate information on the activities carried out and periodical publications. A distinction must be made between those published this year and those published before 2019.

Publications of the year 2019

Environmental Report 2018

As a key element of environmental communication, once again this year the Port Authority of Valencia has published the Environmental Report which includes the environmental actions carried out during 2018. The publication has been made in 2019

Environmental Information Preview 2019

One of the purposes of the Port Authority of Valencia is the dissemination of the environmental actions carried out during the period.

For this reason, a preview of environmental information for 2019 has been prepared for dissemination to the Organisation and the general public.

Environmental Bulletins

Since 1998, the Port Authority of Valencia has published a four-monthly environmental bulletin in which it publishes all the news and developments of interest in the environmental field of the port area, both nationally and internationally.

Continuing the trend of recent years, the environmental bulletin has established itself in 209 as one of the preferred channels for the port sector to keep up to date on environmental issues. The contents of the bulletin are as follows:

- Editorial on environmental issues.
- Collaboration prepared by a person specialised in environmental issues in the maritime-port sector.

- Opinion of a company in the port community.
- News briefs related to port environmental issues.
- Environmental legislative developments.
- Agenda.

The following issues were published in 2019:

- Environmental Bulletin No. 56, published in March 2019
- Environmental Bulletin No. 57, published in July 2019
- Environmental Bulletin No. 58 published in November 2019

Environmental Sustainability Report

The Environment Department of the Port Authority of Valencia has developed an Environmental Sustainability Report on the activities carried out in the port areas of the three ports under its jurisdiction, in order to have a comprehensive view of the environmental actions carried out by the Authority: Sagunto, Valencia, and Gandía.

PAV Projects Progress Report

The Port Authority of Valencia has drawn up a report on the evolution of the Ecoport project from its inception in 1998 to the present day, and on the projects in which it has participated, with the aim of compiling and compiling all the available environmental information.

Publications before 2019

Publications published in previous years by the PAV include:

Guidance for the Calculation and Management of the Carbon Footprint in Port Facilities by Tier Levels

This guide has been published with the aim of supporting port companies in calculating and reducing their greenhouse gas emissions and has been drawn up by a team from the Port Authority of Valencia (PAV), the Polytechnic University of Valencia and the Valenciaport Foundation, which has been working on it for the last year.

The extensive document consists of a methodology for the calculation and management of the carbon footprint adapted to the needs of the port community and based on the study of good energy-environmental practices and successful energy efficiency projects of the last 8 years implemented in the ports of Valencia, Sagunto and Gandía. The Guide proposes the inventory and study of the different sources of greenhouse gas emissions corresponding to direct emissions, which are those produced by the consumption of fossil fuels, and indirect emissions or emissions from electricity consumption. It also includes other emissions from terminal operations.

Book "Vivir el puerto ambientalmente, un recorrido por los puertos de Sagunto, Valencia y Gandía" (Living the port environmentally, a journey through the ports of Sagunto, Valencia and Gandía)

The Port Authority of Valencia, aware of the social, economic and environmental value of the ports of Sagunto, Valencia and Gandía, has undertaken this book "Living the Port Environmentally", to communicate its responsible management of these historic spaces, vital for the development of both the municipalities in which they are located and their citizens, workers and employees, through their environmental protection and their integration into the society to which they belong.

With this book, the PAV provides a transparent and integrated vision of all the actions it carries out for the sustainable development of its ports, so that port activities comply with the highest levels of respect and current environmental protection without compromising its future economic, social and environmental capacity.

"Environmental Initiatives"·Brochure

In 2011, the Port Authority of Valencia published a brochure entitled "Environmental Initiatives", in Spanish and English, which sets out the different activities carried out by the PAV with regard to environmental protection, as well as the response to the commitments made in its Environmental Policy.

Greenberth project brochures and newsletter

Within the framework of the Greenberth project, brochures and newsletters have been published to publicise the project in different national and international forums.

E4Port Guide for the Implementation of Tiered Energy Management Systems in Port Facilities

This guide provides a specific methodology for the assessment of significant energy aspects applicable to port activities, as well as a three-level management model for the implementation of energy management systems for concessionary companies and port service providers pursuant to the current reference standards.

ECOPORT Guide for the Implementation of Tiered Environmental Management Systems in Port Facilities

The Port Community is made up of a large number of companies of different sizes, environmental situations and activities, so that the adoption of an Environmental Management System may involve different efforts and difficulties for each of them. With the idea of facilitating the access and participation of companies in this project and taking into account the characteristics of each one of them, the Port Authority has developed a guide that structures the requirements of an Environmental Management System in line with the ISO14001 standard and the EMAS II regulation into 5 levels.

According to this methodology, each company is assessed according to its environmental situation, starting from the level that best suits it and progressively working towards higher levels until reaching the last level that guarantees the definitive implementation of an Environmental Management System, which allows them easy and low-cost access to the implementation of such a system.

Eco-efficiency Guidelines

The Port Authority of Valencia (PAV) has published five Eco-efficiency Guides with the main objective of promoting sustainability criteria in companies in the port areas managed by the PAV: Sagunto, Valencia, and Gandía. The guidelines include various proposals and actions that allow the production of goods and services while consuming fewer natural resources and, as a consequence, reduce pollution through ecologically and economically efficient procedures.

These Guidelines have been drawn up after a thorough study of Eco-efficiency and Sustainability in the ports managed by the PAV and allow the application of eco-efficiency criteria in the following fields of action: energy eco-efficiency, preparation of an inventory of greenhouse gases, water use, waste generation and the use of materials in the execution of works.

Guide to environmental risk assessment in port facilities

This guide aims to be an easy to use and effective tool for those companies located in the ports of Sagunto, Valencia and Gandía that wish to carry out their own environmental risk assessment according to the UNE 150.008 standard.

Good environmental practice guides

As part of the ECOPORT project, a series of Good Environmental Practice Guides in Ports was published in 2000 with the aim of raising awareness among the different groups working in port areas of the importance of applying environmentally friendly criteria in their daily work. Each of these Guides is dedicated to a specific port activity and provides useful tips to be applied to the typical processes of each activity, as well as legislation applicable to each specific case. The following Guides have been published so far:

- Offices (published in 2000, reprinted in 2006 and 2009)
- Workshops (published in 2000, reprinted in 2006 and 2009)
- Land Road Transport (published in 2004 and reprinted in 2009)
- Handling and Storage of Solid Bulk (published in 2005 and reprinted in 2009)

Port Authority of Valencia Environmental Reports (annual since 2001)

The publication in 2002 of the first Environmental Report of the Port Authority of Valencia (the first in the Spanish port system), brought together all the actions that had been carried out in this area during 2001, in an attempt to take a step forward and fulfil a firm intention to inform society as a whole within the process of continuous improvement in which the PAV is immersed.

Since then and in consecutive years, the Port Authority of Valencia has been publishing these Reports, which recognise the institution's special interest in consolidating its commitment to respect and care for the environment, setting out the main activities related to the protection of the environment carried out in the ports of Sagunto, Valencia and Gandía, as well as the main environmental management parameters and indicators associated with them, together with a detailed description of the results obtained.

Guide to the Birds of the Port of Valencia

With the publication of this Guide to the Birds of the Port of Valencia, the PAV aims to disseminate the great variety of birds that can be sighted in the port environment, providing experts with some initial knowledge from which to carry out their study and monitoring and, at the same time, providing any citizen with the possibility of identifying in a practical way the species that fly over our ports during the different seasons.

The idea for this guide arose as a result of the ECOPORT project and its publication fulfils two purposes: Firstly, to respond to the demand for information from society in general regarding knowledge of the biodiversity of our port. And secondly, to comply with the commitment to "provide adequate training and awareness-raising for staff to promote the development of this policy", as stated in the Environmental Policy.

Guide to fishery resources

The species that are marketed in the Fishermen's Guilds of Sagunto, Valencia and Gandía are collected. The guide has the virtuality that the spices are presented in their usual natural form.

Guide to the underwater fauna and flora of the Port of Valencia

According to the commitments adopted in its Environmental Policy, this Port Authority, in collaboration with the University of Valencia, has carried out a study of the underwater flora and fauna of the Port of Valencia. The special morphological characteristics of the port environment, the great diversity of commercial activities, as well as the maritime traffic in this inter-oceanic port make this study an effective tool for the knowledge of biodiversity in the port area. At the same time, the study not only provides initial information to subsequently determine the possible effects that port activity may have on the fauna and flora, but also highlights the richness and importance of the living beings that inhabit the port enclave.

As a result of this work, this guide has been published, which has the virtue that all the images shown in it have been taken in the Port of Valencia. The species listed here are the most representative of the study area and therefore constitute a small part of the extraordinary wider catalogue of species present.

Video of the Valencia Port Authority's Environmental Actions

A DVD has been produced, compiling the main environmental actions carried out to date by the Port Authority of Valencia in the ports it manages (Sagunto, Valencia and Gandía). Its purpose is making known what the main environmental actions have been and what the results obtained have been, thus contributing to enriching the environmental knowledge of the different actors involved in port activity, and especially of other port authorities with similar environmental problems.

10. GREEN ACCOUNTING

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10.1 Environmental Expenditure

During 2019, the PAV has incurred expenses for the protection and improvement of the environment amounting to € 4,664,626.95, which are detailed in the summary table below:

CONCEPTOS	EJERCICIO 2019	EJERCICIO 2018
GASTOS DE PERSONAL:	**273.393,84**	**274.687,19**
OTROS GASTOS DE EXPLOTACIÓN:	**4.024.727,05**	**3.962.919,30**
Recogida desechos generados por buques	3.324.492,84	3.291.200,70
Reparaciones y conservación	404.002,23	460.715,43
Servicios de profesionales independientes	125.206,58	40.738,96
Suministros y consumos	12.473,34	11.534,72
Otros servicios y otros gastos	158.552,06	158.729,49
AMORTIZACIONES DEL INMOVILIZADO:	**366.506,06**	**324.610,44**
TOTAL GASTOS Y COSTES MEDIOAMBIENTALES	**4.664.626,95**	**4.562.216,93**

10.2 Tangible and intangible fixed assets

The PAV has the following investments in intangible and tangible fixed assets related to the improvement of the environment, with the following breakdown:

ACTIVOS MEDIOAMBIENTALES (importes brutos)	31/12/2018	Adiciones del ejercicio (+)	Bajas (-)	31/12/2019
ACCESOS MARÍTIMOS	3.748.162,71	-	-	3.748.162,71
OBRAS DE ABRIGO Y DÁRSENAS	148.247,29	-	-	148.247,29
OBRAS DE ATRAQUE	91.772,15	-	-	91.772,15
INSTALACIONES GENERALES	285.057,81	-	-	285.057,81
PAVIMENTOS CALZADAS Y VÍAS DE CIRCULACIÓN	5.899,45	-	-	5.899,45
MATERIAL FLOTANTE	126.147,18	-	-	126.147,18
MATERIAL DIVERSO	921.691,30	-	-	921.691,30
APLICACIONES INFORMÁTICAS	14.909,00	-	-	14.909,00
PROPIEDAD INDUSTRIAL	3.270,00	-	-	3.270,00
TERRENOS	63.534,43	-	-	63.534,43
TOTAL ACTIVOS MEDIOAMBIENTALES	**5.408.691,32**			**5.408.691,32**

AMORTIZACIONES DE ACTIVOS MEDIOAMBIENTALES	31/12/2018	Adiciones del ejercicio (+)	Bajas (-)	31/12/2019
ACCESOS MARÍTIMOS	1.290.813,38	78.185,22	-	1.368.998,60
OBRAS DE ABRIGO Y DÁRSENAS	62.386,12	2.969,28	-	65.355,40
OBRAS DE ATRAQUE	64.408,38	3.068,88	-	67.477,26
INSTALACIONES GENERALES	196.987,55	16.540,98	-	213.528,53
PAVIMENTOS CALZADAS Y VÍAS DE CIRCULACIÓN	5.536,83	362,62	-	5.899,45
MATERIAL FLOTANTE	78.442,80	9.546,18	-	87.988,98
MATERIAL DIVERSO	540.650,36	90.905,04	-	631.556,00
APLICACIONES INFORMÁTICAS	14.909,00		-	14.909,00
PROPIEDAD INDUSTRIAL	3.270,00	-	-	3.270,00
TOTAL AMORTIZACIONES DE ACTIVOS MEDIOAMBIENTALES	**2.257.404,42**	**207.578,80**		**2.464.983,22**

11. SUSTAINABILITY INDICATORS

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As in previous Reports, the following is a recapitulation of the environmental indicators used to report on the activity of this Port Authority.

Since 2011 the PAV has been working with three groups of indicators; the **first group** comes from the GRI (Global Reporting Initiative) methodology adapted to the characteristics of port activities and which were defined as a result of the MESOSPORT project.

The **second group** consists of the indicators required by Regulation EC1221/2009 EMAS III. In addition, the PAV is working on a **third group** of sustainability indicators to be included in the PAV Sustainability Report, as a result of the State Ports Sustainability Working Group, and which aims to unify criteria for reporting the sustainable behaviour of the Spanish Port System, which are not included in this Statement.

In this Statement only the most relevant of the **first group** are listed, in addition to those of the second group, as required by Regulation EC1221/2009 EMAS III.

Primer grupo:

TO 14 TOTAL NUMBER AND VOLUME OF THE MOST RELEVANT ACCIDENTAL SPILLS.

SEE CHAPTER 7. EMERGENCY RESPONSES

TO 15 INITIATIVES TO MITIGATE THE ENVIRONMENTAL IMPACTS OF PA ACTIVITY

CERTIFICATIONS:

SEE CHAPTER 4. DESCRIPTION OF THE ENVIRONMENTAL MANAGEMENT SYSTEM, SECTION 4.2. CERTIFICATIONS:

- UNE EN ISO 14001:2015 Standard on Environmental Management since 2006.
- UNE EN ISO 50001:2011 Standard on Energy Management since 2016.
- EMAS III certification since 2008.
- PERS (Port Environmental Review System) certificate, the latest renewal corresponding to 2015.

WATER QUALITY:

- Cleaning of floating debris from the water mirror: by means of the vessel Limpiamar III. See Chapter 6, section 6.4.5. Water quality monitoring results 2018.
- Fighting against oil spill pollution: through emergency plans. The PAV has equipment to mitigate the effects of contamination. See Chapter 7. Emergency responses
- Water quality control network. See Chapter 6. State of the Environment, section 6.4. Water quality.

AIR QUALITY:

SEE CHAPTER 6. STATE OF THE ENVIRONMENT, SECTION 6.2. AIR QUALITY CONTROL:

- Existence of Control Networks, Chapter 6. State of the Environment.
  - Acoustic quality control network, section 6.3.
  - Air quality control, section 6.2.

WASTE MANAGEMENT:

- A Waste Transfer Centre (WTC) is available to facilitate waste collection. See Chapter 6. State of the Environment, section 6.1. Waste, sub-sections 6.1.1. Own and 6.1.2. From the Port Premises.

- The PAV has the port service for the collection of Marpol I, IV and V under indirect management. See Chapter 6. State of the Environment, section 6.1. Waste, sub-section 6.1.3. Waste from Vessels.

INNOVATION AND COOPERATION PROJECTS: SEE CHAPTER 8. INNOVATION AND COOPERATION PROJECTS.

TO 17 COST OF SIGNIFICANT FINES AND NUMBER OF NON-MONETARY SANCTIONS FOR NON-COMPLIANCE WITH ENVIRONMENTAL REGULATIONS.

NO FINES OR NON-MONETARY SANCTIONS HAVE BEEN IMPOSED FOR NON-COMPLIANCE WITH ENVIRONMENTAL REGULATIONS.

Second group:

See Chapter 5. Natural Resources Management, section 5.5. Summary of indicators.

12. RECOMMENDATIONS FOR IMPROVEMENT

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12. Recommendations for Improvement

As the last section of this declaration, the Port Authority of Valencia wishes to encourage, as far as possible, the environmental improvement of our surroundings, proposing to the reader, be it an industry, the administration, a neighbour or any other interested party in the management system, the adoption of good practices that will undoubtedly result in both current and future generations being able to continue enjoying a clean and healthy port area:

- Reduce, at source and as far as possible, the waste generated.
- Reuse in another part of the process what apparently seemed to be waste.
- Separate hazardous waste from each other and from other waste.
- Manage such waste appropriately through authorised transporters and managers
- Do not discharge unauthorised substances into the sewage system.
- Check your vehicle(s); don't forget that they need regular inspections, they will consume less fuel and will not emit what they should not.
- The sea belongs to everyone; avoid dumping any substance, of solid or liquid nature, in port waters.
- Water is a scarce commodity; use the water you need and no more, use drip irrigation for your plants, use low consumption push button cisterns, reuse it whenever you can.

Please, do not forget that:

**"WE ARE NOT ONLY HEIRS OF THE EARTH,
OF THE RIVERS, OF THE MOUNTAINS, OF THE WIND;
WE ARE ITS GUARDIANS AND TRUSTEES"**

Kyoto Protocol

13. VERIFICATION AND VALIDATION

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13. Verification and Validation

This environmental statement has been internally audited by C Más Innovación de Sistemas, S.L. on 30 June, 24 and 30 July 2020 and externally audited by DNV GL Bussiness Assurance España from 7 September 2020 to 10 September 2020.

Verifying body: DNV GL BUSSINESS ASSURANCE ESPAÑA, S.L.U – ES-V-0005

Verifier:

This is the annual declaration for 2019 registered with the Regional Government of Valencia under number E/CV/000023.