valenciaport

Autoridad Portuaria de Valencia

Environmental Declaration

2023

ECOPORT

Autoridad Portuaria de Valencia

Contents

1. INTRODUCTION AND SUSTAINABILITY STRATEGY OF THE PORT AUTHORITY: LETTER FROM THE PRESIDENT

Introduction and sustainability strategy of the Port Authority

Decarbonisation and care for the environment within the framework of port activity form the transversal axis of Valenciaport's management. In the 2023 financial year, the contribution of the Port Authority of Valencia to the fight against climate change has been the guiding thread of each and every one of the actions undertaken within this institution. These actions could not be developed without the commitment, support and involvement of the entire port community formed around each of the three ports managed: Valencia, Sagunto and Gandia.

The shipping sector has developed a strategy for the present and the future based on sustainability. In the case of the port community of Valencia, we are working towards the common objective of neutralising our carbon footprint by implementing a series of initiatives framed within the Valenciaport Zero Emissions Plan (PCEM2030). Through the Ecoport II group, an ecosystem of companies was formed, with a commitment to the environmental improvement and sustainability of port activities, and that work is already bearing fruit.

Within this framework, the Port Authority of Valencia is committed to continuous improvement through the development of innovation projects that enable us to propose technologically advanced solutions to meet new regulatory requirements and, at the same time, to advance on the roadmap towards full decarbonisation of the premises. In the 2023 financial year, this was evident in the completion of the Green and Connected Ports (Green-C-Ports) project, which saw major improvement the environmental control networks in the Port of Valencia and further progress on the digitisation the site.

Another commitment to the future based on innovation was the undertaking of the Renmarinas Valenciaport project, which consists of the creation of a prototype platform for the generation of green energy from marine resources and which will include a wave energy pilot and a floating photovoltaic energy device. But an unprecedented achievement for this Port Authority has undoubtedly come with hydrogen. During the past financial year, two hydrogen-powered machines have been commissioned: a reach-stacker at the MSCTV terminal and a terminal tractor at the VTE terminal (both at the Port of Valencia).

Of the major milestones in this area, already a reality and which are contributing to the decarbonisation of the Valencian docks, the completion of the works and commissioning of two solar installations stand out: the photovoltaic plant at the Port of Gandía - which has provided it with an infrastructure capable of self-sufficient energy supply for its operation - and the solar plant located on the Príncipe Felipe quay at the Port of Valencia. In addition to these two projects, we have also delivered on the tender for the first electrical connection installation for ships on the Transversal de Costa quay at the port of Valencia and the completion of the works for the electrical substation which will allow the future connection of the ships to the shore power supply.

Our commitment to sustainability, environmental improvement and energy efficiency is not just about innovation projects and new infrastructures. It is the basis of an entire line of work integrated into our corporate culture and complemented by mitigation initiatives framed within the PCEV2030. Thanks to all this work, the institution holds the highest national and international certifications in the field: ISO 14001, PERS, EMAS and ISO 50001.

That commitment is also based on collaboration with other ports, because this path is a path that is travelled together. Last year the work of the ECCLIPSE initiative was completed, resulting in the creation of the Climate Change Observatory for ports and the reference document for the preparation of future plans for the adaptation of ports to climate change. 2023 also saw Valenciaport participate in the ESPO working groups on Blue Growth and Sustainability, as well those of the World Ports Climate Action Program (WPCAP) for the introduction of new fuels in maritime transport and the electrical connection of ships at ports.

Collaborations, certifications, actions, projects, infrastructure and investment, area all part of the roadmap for the decarbonisation of port activity on the quays of the Port of Valencia and all are also absolutely necessary. A short, medium and long-term strategy focused on achieving the objectives of carbon neutrality, competitiveness and transparency that have been central to the decision making of the Port Authority of Valencia in 2023. It was a year in which Valenciaport reinforced its commitment to providing a public service in the development of its economic, social and environmental surroundings.

MAR CHAO
President of the Port Authority of Valencia

2. INTRODUCTION: BACKGROUND

2. INTRODUCTION: BACKGROUND

The Port Authority of Valencia has used sustainability criteria for the development of our business strategy for many years. These criteria have been central to the design of our main lines of work with the objective of emission-free ports by 2030, assuming the commitments of the Environmental and Energy Policy within a Corporate Social Responsibility approach. In this regard, in 2023 we also launched a series of environmental and energy initiatives aimed at meeting the objective set and aligning the port with the United Nations' Sustainable Development Goals. To do this however, it has been necessary to work through several stages during this time:

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 Port Authority of Valencia has also assumed 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, the signing 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 "cálculo" (calculation) seal. Along these lines, 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.

As a continuation of the above, the Port Authority of Valencia continues to work on numerous initiatives in relation to the environment, energy and the fight against climate change, participating actively in different R&D projects with the aim of environmentally improving the performance of activities and to act as a catalyst for the companies that form part of our 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 and Energy Management System, ensuring efficient management of resources while improving the information contained in this Declaration year after year and enabling continued improvement environmental and energy performance over time.
- Driving the implementation of renewable energies on port premises with the aim of decarbonising activities carried out therein and reducing the carbon footprint.
- Developing the 2030 Zero-Emissions Plan in the port of Valencia.
- Registration of the Carbon Footprint in the Registry of the Ministry for Energy Transition and the Demographic Challenge and obtaining the "reduzco" (reduce) 2019 seal

3. DESCRIPTION OF THE PORT

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.

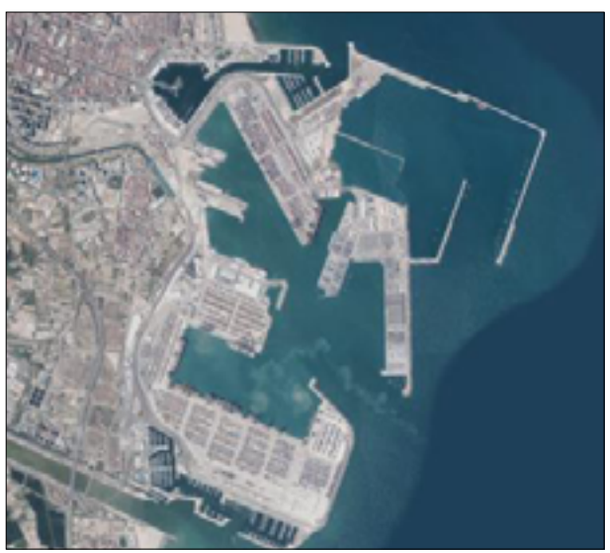
The prime geo-strategic location of Valenciaport in the centre of the Western Mediterranean Arch, in line with the east-west corridor that crosses the Suez Canal and the Straits of Gibraltar, positions Valenciaport as the first and last call for the principal shipping companies operating regular lines 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	PIERS BERTHING LINE
SAGUNTO	LONGITUDE 0º 13' W LATITUDE 39º 39' N	2,397,800 M^2	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 M^2	5,985,000 M2	27 QUAYS 13,554 M BERTHING LINE
GANDÍA	LONGITUDE 0º 9' W LATITUDE 38º 59' N	245,000 M^2	284,000 M2	6 QUAYS 1,573 M BERTHING LINE

Port of Sagunto 2023



Port of Valencia 2023

Port of Gandía 2023

/ 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 grants 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 the 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:

Clock Building

- **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 logs as well as control of other types of emissions such as those generated by the existing furnace.
- **Discharges:** although not a significant factor as existing discharges at the facilities are of a domestic nature (from toilets and showers installed and controlled by the organisation). These requirements have been met with the exception of the one arising from a specific episode of hydrogen sulphide gas odours from the PAV's connections to the sewerage network, which led to a disciplinary case and, following the application of corrective and preventive actions described in point 6.10, was satisfactorily closed.
- **Noise:** using periodic measurements, demonstrating compliance with legal requirements.

Similarly, as reflected in the Environmental and Energy Policy, the PAV is committed to complying with the legal environmental, energy and other applicable requirements, promoting compliance among the staff of the Port Authority itself and the concessions located in the port area through training activities.

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

- Registration as Small Hazardous Waste Producer No. 3631/P02/RP/CV
- Registration as a Waste Holder in the port of Valencia No. 363/P05/CV
- Registration as a Waste Holder in the port of Gandía No. 364/P05/CV
- Registration as a Waste Holder in the port of Sagunto No. 365/P05/CV
- Plan for reception and handling of waste from ships
- Inland Maritime Plan
- Authorisation for discharge of water from the air-conditioning plant in the port of Valencia into the maritime-terrestrial public domain (VERMAR 217)
- Permit to discharge into the municipal sewage network of Valencia (RES. 118-R)

/ 3.3 Basic Port Traffic Data

MAGNITUDES BÁSICAS DE TRÁFICO APV. Datos acumulados.

Diciembre 2023

		2022	2023	Dif.23/22	Δ23/22	Δ23/22 mes ant	Evolución 23/22
TOTAL TRÁFICO (t) (1+2) (1)		78.962.958	76.746.424	-2.216.534	-2,81%	-3,64%	
(Toneladas)							
1. TOTAL GRANEL		8.074.393	7.762.519	-311.874	-3,86%	-2,08%	
	Líquido	5.819.229	5.296.951	-522.278	-8,98%	-5,88%	
	Sólido	2.255.164	2.465.568	210.404	9,33%	7,39%	
2. TOTAL MERC. GRAL.		70.888.565	68.983.905	-1.904.660	-2,69%	-3,81%	
	No containerizada	14.763.010	15.310.254	547.244	3,71%	3,99%	
	Containerizada	56.125.555	53.673.651	-2.451.904	-4,37%	-5,86%	
BUQUES.:	NÚMERO	7.521	7.575	54	0,72%	0,92%	
	G.T.	291.259.080	302.474.267	11.215.187	3,85%	4,20%	
ESTRUCTURA DEL TRÁFICO (t)		78.962.958	76.746.424	-2.216.534	-2,81%	-3,64%	
	Carga / Descarga	48.624.049	46.365.309	-2.258.740	-4,65%	-4,54%	
	Carga	25.303.234	23.720.684	-1.582.550	-6,25%	-6,57%	
	Descarga	23.320.815	22.644.625	-676.190	-2,90%	-2,35%	
	Tránsito Marítimo	30.338.909	30.381.115	42.206	0,14%	-2,19%	
CONTENEDORES (TEU)		5.052.272	4.796.985	-255.287	-5,05%	-6,41%	
	Llenos	3.909.325	3.656.202	-253.123	-6,47%	-7,80%	
	Carga	999.071	870.031	-129.040	-12,92%	-14,05%	
	Descarga	850.589	823.003	-27.586	-3,24%	-2,73%	
	Tránsito	2.059.665	1.963.168	-96.497	-4,69%	-6,86%	
	Vacíos	1.142.947	1.140.783	-2.164	-0,19%	-1,72%	
	Carga	346.697	344.863	-1.834	-0,53%	-2,08%	
	Descarga	463.937	410.678	-53.259	-11,48%	-14,66%	
	Tránsito	332.313	385.242	52.929	15,93%	17,05%	
PASAJEROS LÍNEA REGULAR Y CRUCEROS							
	Total pasajeros	1.373.552	1.558.180	184.628	13,44%	12,54%	
	Línea regular	750.499	776.900	26.401	3,52%	3,24%	
	Cruceros	623.053	781.280	158.227	25,40%	23,11%	
VEHÍCULOS EN REG. DE MERCANCÍA RoRo (uds.)							
	Total	603.566	643.151	39.585	6,56%	9,19%	

MAGNITUDES BÁSICAS DE TRÁFICO APV. Datos acumulados.

Diciembre 2023

	VALENCIA			GANDÍA			SAGUNTO			APV		
	2022	2023	Δ23/22	2022	2023	Δ23/22	2022	2023	Δ23/22	2022	2023	Δ23/22
TOTAL TRÁFICO (t) (1+2) (1)	69.376.085	67.612.832	-2,54%	247.964	194.472	-21,57%	9.338.909	8.939.120	-4,28%	78.962.958	76.746.424	-2,81%
(Toneladas)												
1. TOTAL GRANEL	2.922.024	3.277.155	12,15%	4.214	4.136	-1,85%	5.148.155	4.481.228	-12,95%	8.074.393	7.762.519	-3,86%
Líquido	1.421.367	1.527.237	7,45%				4.397.862	3.769.714	-14,28%	5.819.229	5.296.951	-8,98%
Sólido	1.500.657	1.749.918	16,61%	4.214	4.136	-1,85%	750.293	711.514	-5,17%	2.255.164	2.465.568	9,33%
2. TOTAL MERC. GRAL.	66.454.061	64.335.677	-3,19%	243.750	190.336	-21,91%	4.190.754	4.457.892	6,37%	70.888.565	68.983.905	-2,69%
No containerizada	10.838.893	11.179.056	3,14%	243.726	190.336	-21,91%	3.680.391	3.940.862	7,08%	14.763.010	15.310.254	3,71%
Containerizada	55.615.168	53.156.621	-4,42%	24			510.363	517.030	1,31%	56.125.555	53.673.651	-4,37%
BUQUES.: NÚMERO	6.171	6.228	0,92%	82	60	-26,83%	1.268	1.287	1,50%	7.521	7.575	0,72%
G.T.	261.771.244	270.722.989	3,42%	507.063	453.536	-10,56%	28.980.773	31.297.742	7,99%	291.259.080	302.474.267	3,85%
ESTRUCTURA DEL TRÁFICO (t)	69.376.085	67.612.832	-2,54%	247.964	194.472	-21,57%	9.338.909	8.939.120	-4,28%	78.962.958	76.746.424	-2,81%
Carga / Descarga	39.072.557	37.275.974	-4,60%	247.964	194.472	-21,57%	9.303.528	8.894.863	-4,39%	48.624.049	46.365.309	-4,65%
Carga	22.699.813	21.007.014	-7,46%	63.033	78.690	24,84%	2.540.388	2.634.980	3,72%	25.303.234	23.720.684	-6,25%
Descarga	16.372.744	16.268.960	-0,63%	184.931	115.782	-37,39%	6.763.140	6.259.883	-7,44%	23.320.815	22.644.625	-2,90%
Tránsito Marítimo	30.303.528	30.336.858	0,11%				35.381	44.257	25,09%	30.338.909	30.381.115	0,14%
CONTENEDORES (TEU)	4.996.782	4.739.127	-5,16%	4	0	-100,00%	55.486	57.858	4,27%	5.052.272	4.796.985	-5,05%
Llenos	3.875.967	3.620.336	-6,60%	4			33.354	35.866	7,53%	3.909.325	3.656.202	-6,47%
Carga	974.377	845.067	-13,27%				24.694	24.964	1,09%	999.071	870.031	-12,92%
Descarga	842.106	812.610	-3,50%	4			8.479	10.393	22,57%	850.589	823.003	-3,24%
Tránsito	2.059.484	1.962.659	-4,70%				181	509	181,22%	2.059.665	1.963.168	-4,69%
Vacíos	1.120.815	1.118.791	-0,18%				22.132	21.992	-0,63%	1.142.947	1.140.783	-0,19%
Carga	344.551	341.267	-0,95%				2.146	3.596	67,57%	346.697	344.863	-0,53%
Descarga	443.951	392.282	-11,64%				19.986	18.396	-7,96%	463.937	410.678	-11,48%
Tránsito	332.313	385.242	15,93%							332.313	385.242	15,93%
PASAJEROS LÍNEA REGULAR Y CRUCEROS												
Total pasajeros	1.373.552	1.558.180	13,44%	0	0		0	0		1.373.552	1.558.180	13,44%
Línea regular	750.499	776.900	3,52%	0	0		0	0		750.499	776.900	3,52%
Cruceros	623.053	781.280	25,40%							623.053	781.280	25,40%
VEHÍCULOS EN REG. DE MERCANCÍA RoRo (uds.)												
Total	487.961	478.902	-1,86%	0	0		115.605	164.249	42,08%	603.566	643.151	6,56%

(1) Incluido Tránsito Marítimo.

4. DESCRIPTION OF ENVIRONMENTAL MANAGEMENT SYSTEM

4. DESCRIPTION OF ENVIRONMENTAL MANAGEMENT SYSTEM

/ 4.1 Environmental Policy

POLÍTICA AMBIENTAL Y ENERGÉTICA DE LA AUTORIDAD PORTUARIA DE VALENCIA

/ 4.2 Certifications

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

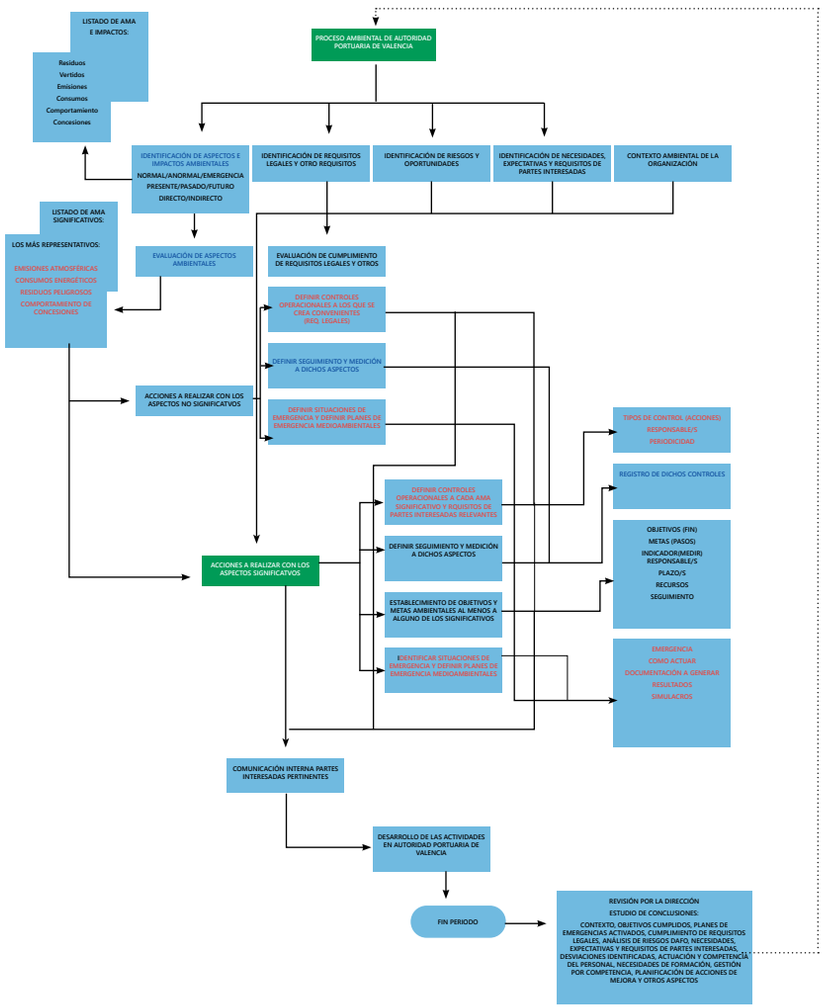
Since 2006, the Port Authority of Valencia is certified under ISO 14001. In October 2017, we renewed the certification under the new standard 14001:2015.

Certificate of Registration in the Carbon Footprint Register of the calculo reduzco (calculate reduce) seal of the Ministry of Ecological Transition for the year 2019

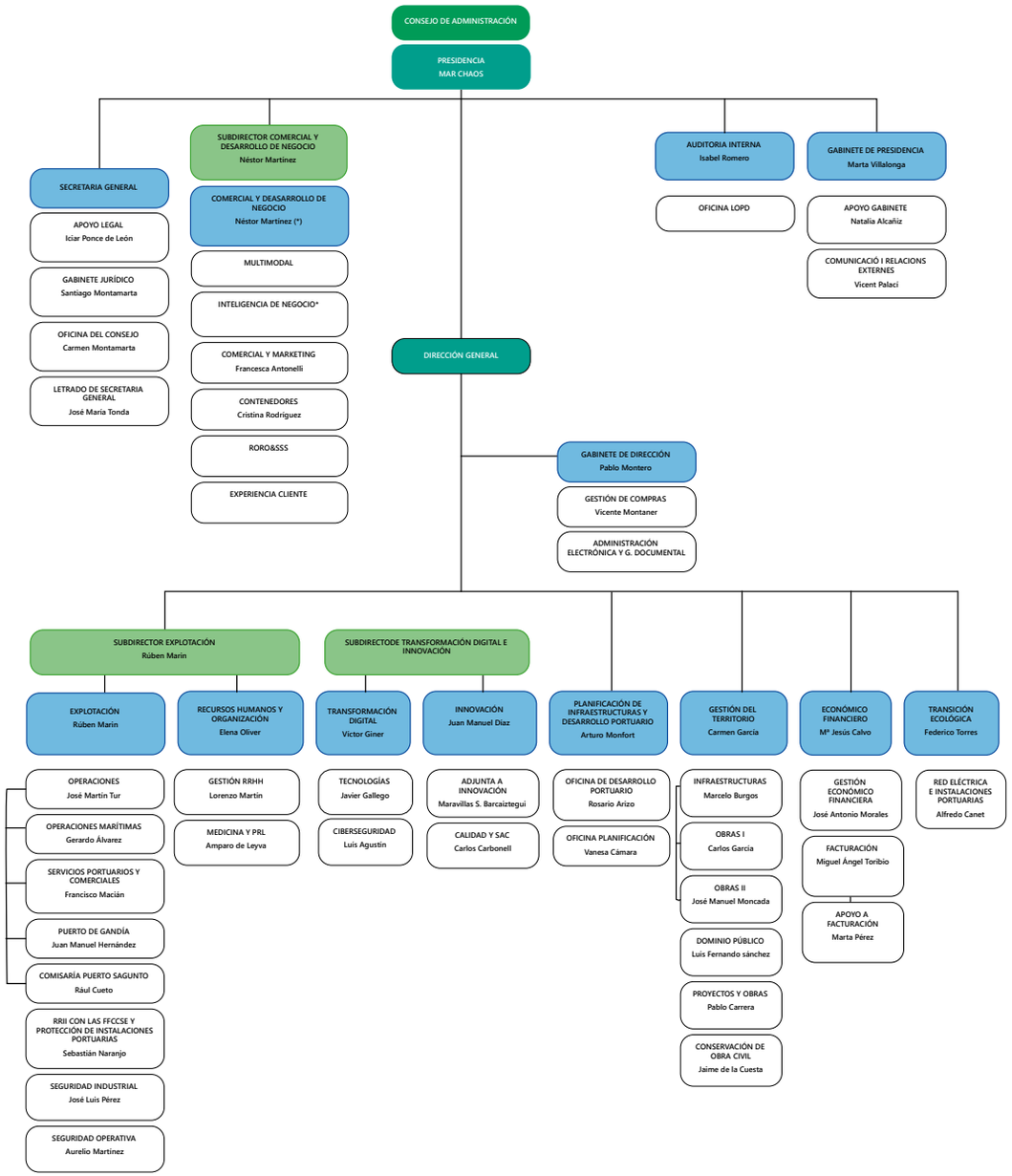
From 15 January 2008, the Port Authority of Valencia was registered by the Regional Ministry of Infrastructure, Territory and the Environment under number ES-CV 000023 in compliance with the Regulation (EC) 1221/2009 and 761/2001

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 DIC 2023
(*) Provisional

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.
  - Reporting 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:
  - Keeping the Environmental and Energy Management System and the documentation thereof up to date, proposing 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.
  - Identifying possible accidents and emergency situations that may have environmental consequences and establish the preventive measures and steps of action. Conducting, together with the Head of Security, monitoring of the preventive measures established for each emergency situation through drills. Complying with the Emergency Report.
  - Managing 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
  - Detecting 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.
  - Ensuring training of personnel who work in the name of the Port Authority of Valencia through the drafting and distribution of the Environmental Best Practice.
  - Proving continuous support and advice to the rest 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.
  - Drafting the 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 send an email to the following address

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 are 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 High Severity, 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 AQMS. 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:

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.

DIRECT:	OBJ.	INDIRECT	OBJ.	POSSIBLE ENVIRONMENTAL IMPACT
WASTE GENERATION.		WASTE GENERATION ON THE PORT PREMISES		SOIL CONTAMINATION, ODOURS, LANDSCAPE DETERIORATION.
EMISSIONS TO THE ATMOSPHERE		EMISSIONS ARISING FROM PORT OPERATIONS ON THE PORT PREMISES	NO. 76	AIR POLLUTION AND CLIMATE CHANGE
WATER QUALITY		ENVIRONMENTAL PERFORMANCE OF CONCESSIONS		AFFECTING BIODIVERSITY
NOISE, VISUAL IMPACT	NO.75	NOISE ON ROADS ON THE PORT PREMISES	NO.75	ALTERATIONS IN BIODIVERSITY AND PEOPLE
WATER CONSUMPTION		WATER CONSUMPTION ON THE PORT PREMISES		DEPLETION OF RESOURCES
ELECTRICITY CONSUMPTION	NO. 70 NO. 79	ELECTRICITY CONSUMPTION ON THE PORT PREMISES	NO. 70	DEPLETION OF RESOURCES
CONSUMPTION OF RAW MATERIALS		CONSUMPTION OF RAW MATERIALS ON THE PORT PREMISES		DEPLETION OF RESOURCES

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. 70 NO. 79	NO. 76	ENVIRONMENTAL PERFORMANCE OF CONCESSIONS

(*) 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 4.6) 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 goals

■ 4.6.1 Fulfilment of objectives planned for 2023

The objectives planned and carried out in 2023 are differentiated by colour coding according to the legend described below and these were the following:

	Objective set in previous years and not completed.
	Objective set this year this but linked to another set in previous years.
	New objective set this year.

▸ **No. 59 Installation of a substation ELECTRICITY at the Port of Valencia.**

Following the report received from Puertos del Estado, the necessary requirements have been incorporated and all the necessary documentation for the new tender is being prepared.

The objective remains as envisaged for 2024.

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

Three photovoltaic installations are planned with funds from the Recovery and Resilience Mechanism (RRM):

- **Photovoltaic plant in Príncipe Felipe:** Once the project has been awarded, the execution of the planned works has been carried out and the handover is pending, which is expected to take place during the month of January.
- **Photovoltaic plant at the Valencia Terminal Europa (VTE) Silo:** following completion of the tendering process, construction work has begun and is expected to be completed in 2024.
- **Gandía photovoltaic plant:** once the bidding process was completed and the project awarded, work on the installation was carried out. The handover is scheduled to take place in January 2024.

The objective continues in 2024 with the installation of the Valencia Terminal Europa Silo.

▸ **No. 75 Extension of the acoustic control network in Sagunto and Gandía.**

A sound level meter has been installed in Sagunto at the "New AQMS Sagunto Norte" station. The recorded data are collected by the PAV network.

In Gandía, the technical installations that were pending, such as fibre optics, have been carried out at the installation site and the equipment has been installed. It is operational and collecting data.

Objective met.

▸ **No. 76 Implementation of OPS (Onshore Power Supply) technology at the Port of Valencia.**

As part of the Port of Valencia's Zero Net Emissions Plan 2030, the aim is to implement a ship electrification system. With the electrical capacity provided by the substations, the aim is to provide cruise ships and ferries berthed at the Transversal Poniente quay (Passengers 1) and at the future Perfecto Palacio quay in the port of Valencia (Passenger 2) with a facility to provide connection to the electricity grid for these ships, using OPS (Onshore Power Supply) systems. This connection will allow ships shut down the auxiliary engines during their stay in port.

It is also planned to install two OPS supply points for commercial vessels, mainly container ships, which dock at the Transversal Costa quay at the Port of Valencia.

Both the Passengers 1 and Transversal Costa projects receive Recovery and Resilience Facility funding from the European Commission. The Passengers 2 project will be completed at a later stage.

Tender documents are being drawn up for both projects.

This objective remains for 2024, as planned.

▸ **No. 78 Drafting of detailed design for the connection to ST2 from the AQUA substation and connection between ST1 and ST2.**

Work has been done on drafting the necessary documents to bring the project to tender. It is currently out to tender.

Objective remains pending for 2023 as planned.

▸ No. 79 Installation of LED bulbs in all road lighting at the port of Gandía, with the aim of reducing electricity consumption by at least 15%

The project aims to replace the current sodium vapour lamps in the public streets of the Port of Gandía with LED lamps, which are more efficient and less polluting. The project is at the drafting stage.

Objective remains pending for 2023 as planned.

▸ No. 80 Establishment of a technological platform in the Port of Valencia to implement innovative solutions: implementation of wave energy and floating photovoltaic energy.

As part of the RENMARINAS project, the installation of a test platform for the connection, testing and discharge to the Port of Valencia electricity grid of marine renewable generation technology demonstrators is planned for the Port of Valencia.

Objective remains pending for 2024 as planned

▸ No. 81 Obtaining the Environmental Impact Statement for the installation of a wind farm in the port of Valencia.

Once the preliminary project has been submitted to the Regional Ministry, work is underway to obtain the EIS. The document is being drafted, including the requirements made by the Regional Ministry. Preparing birdlife monitoring plans.

This objective remains for 2024

■ 4.6.2 Objectives planned for 2024

The objectives planned for 2024 tackle the principal environmental aspects relating to PAV activities and the processes developed and that have implications of an environmental nature. The planned objectives are detailed below:

▸ No. 59 Installation of a substation at the Port of Valencia (ST1).

This objective is carried out in order to cover future forecasts of use and to be able to plan and improve the energy system in the Port of Valencia, which will allow, among other measures, the electrical connection to moored ships, thus reducing emissions as the use of fossil fuels (auxiliary engines) will be avoided by using electrical energy which, in the case of PAV, is 100% renewable.

- **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 management of the port. **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..

▸ No. 70 Improvement of energy efficiency through the implementation of photovoltaic panels in the facilities of the Port of Valencia and at the Port of Gandía.

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:** Improving energy efficiency and increasing the proportion of self-consumption. **Lines of the 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. 76 Implementation of OPS technology at the Port of Valencia

The aim is to carry out the necessary installations to implement an Onshore Power Supply (OPS) system that will allow vessels at berth to be connected to the electricity grid, which will enable the auxiliary engines to be disconnected and therefore reduce emissions and noise.

- **Starting situation:** participation in R&D&I projects on OPS development.
- **Situation envisaged:** to implement OPS technology within the port of Valencia.
- **Result:** reduction of emissions and noise produced by ships' engines during their stay in port. **Lines of the Policy:** Use and provide the use of technology improvements that are visible in each activity.

No. 78 Installation of a connection between Substation 1 and Substation 2 at the Port of Valencia

This installation has been planned in order to provide the port with a redundancy system so that, in the event of a failure in one of the substations, the service necessary for port activity and services can be maintained.

- **Starting situation:** following the study of future demand, it was found that there was no supply capacity demanded in the medium term. Work began on the installation of the two substations.
- **Expected situation:** to be able to supply the energy demanded both to the port facilities and to the requested services, without service failures.
- **Result:** to increase the electrical capacity of the port of Valencia, and ensure supply in the event of failure of one of the substations. **Lines of the Policy:** To 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. 79 Installation of LED bulbs in all road lighting at the port of Gandía, with the aim of reducing electricity consumption by at least 15%

The aim is to make further progress in the reduction of energy consumption by switching the current lighting at the Port of Gandía to LED bulbs.

- **Starting situation:** The necessary control is available to ascertain consumption on roads and calculate savings.
- **Situation envisaged:** carry out actions necessary to reduce electricity consumption with respect to the previous year.
- **Result:** Improvement of energy efficiency. **Lines of the 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. 80 Establishment of a technological platform in the Port of Valencia to implement innovative solutions: implementation of wave energy and floating photovoltaic energy.

The objective is to implement innovative solutions in terms of new technologies that allow us to improve energy efficiency and the level of self-consumption

- **Baseline:** A Zero Emission Plan has been developed which aims to achieve net zero emissions by 2030 through the implementation of initiatives including new technologies.
- **Situation envisaged:** to create a technological platform that will allow us to incorporate the energy generated in a floating photovoltaic installation and a wave energy installation into the electricity grid.
- **Result:** improved energy efficiency and reduced emissions. **Lines of the Policy:** Use and provide the use of technology improvements that are visible in each activity.

No. 81 OBJECTIVE: Obtaining the Environmental Impact Statement for the installation of the wind farm in the port of Valencia (Origin 2023)

This objective aims to implement a wind farm at the port of Valencia, executing the preliminary design of the wind farm for objective 73 completed in 2022.

- **Starting situation:** Preliminary design was completed for electrical installations in the Port of Valencia.
- **Situation envisaged:** obtaining the relevant permits to be able to implement the wind farm project.
- **Result:** To be able to implement the wind power project at the port of Valencia. **Lines of the Policy:** Use and provide the use of technology improvements that are visible in each activity.

N 82 Installation of a photovoltaic pilot plant on the North Extension breakwater (Renewport Project)

The Port Authority of Valencia is working on a project with European funds for the installation of a pilot vertical photovoltaic system, which will be installed on the North Dock breakwater.

- **Baseline:** A Zero Emission Plan has been developed which aims to achieve net zero emissions by 2030 through the implementation of initiatives including new technologies.
- **Situation envisaged:** to create a technological platform that will allow us to incorporate the energy generated in a floating photovoltaic installation and a wave energy installation into the electricity grid.
- **Result:** improved energy efficiency and reduced emissions. **Lines of the Policy:** Use and provide the use of technology improvements that are visible in each activity.

/ 4.7 Needs and expectations of stakeholders

Detailed below are the needs and expectations detected for the stakeholders:

PARTES INTERESADAS PERINENTES	NECESIDADES/ EXPECTATIVAS		REQUISITO	ACCIÓN
CLIENTES	NE	MANTENER LOS PRINCIPIOS DEL MEDIO AMBIENTE Y MEJORA ENERGÉTICA	SI	SEGUIMIENTO SISTEMA DE GESTIÍN AMBIENTAL EMAS
CLIENTES	EX	DAR EL MEJOR SERVICIO AL MEJOR PRECIO MANTENIENDO CRITERIOS AMBIENTALES Y ENERGÉTICOS	NO	PUESTA A DISPOSICIÓN DE MEDIDAS Y MEDIOS AMBIENTALES
CLIENTES	EX	MANTENER EL CERTIDICADO DE GARANTÍA DE ORIGEN PROVENIENTE DE ENERGÍAS RENOVABLES DEL SUMINISTRO ELÉCTRICO	SI	INCLUSIÓN EN PLIEGO DE SUMINISTRO ELÉCTRICO
CLIENTES	EX	AUMENTAR CERTIFICACIONES/ PROYECTOS PARA L AMEJORA EN MATERIA AMBIENTAL Y ENERGÉTICA	SI	PROMOCIÓN DE NUEVAS CERTIFICACIONES Y PROYECTOS DE IINOVACIÓN AMBIENTALES Y ENERGÉTICOS
PROVEEDORES	NE/EX	MANTENER LA POLÍTICA DE COMPRAS FORTALECIENDO EXIGENCIAS AMBIENTALE,S DE EFICIENCIA ENERGÉTICA	SI	DEFINICIÓN CRITERIOS AMBIENTALES LEY Y CONTRATOS SECTOR PÚBLICO EMAS 140064, 500001
SUBCONTRATISTAS	NE/EX	MANTENER LA POLÍTICA DE CONTRATACIÓN FORTALECIENDO EXIGENCIAS AMBIENTALE,S DE EFICIENCIA ENERGÉTICA	SI	DEFINICIÓN CRITERIOS AMBIENTALES LEY Y CONTRATOS SECTOR PÚBLICO EMAS 140064, 500001
TRABAJADORES	EX	CONSOLIDACIÓN Y PROMOCIÓN EN LA ORGANIZACIÓN. MEJORA DE L A FORMACIÓN AMBIENTAL CONSIDERADA PARA PROMOCIÓN	SI	PLAN DE FORMACIÓN AMBIENTAL
ADMINISTRACIÓN PÚBLICA	NE	CUMPLIMIENTO DE REQUISITOS LEGALES Y OTROS EN MATERIAS AMBIENTAL Y ENERGÉTICA	SI	CERTIFICACIÓN Y EVALUACIÓN DE REQUISITOS LEGALES PERIÓDICO
ADMINISTRACIÓN PÚBLICA	EX	MANTENER PROACTIVIDAD EN LA GESTIÓN AMBIENTAL, EMAS	SI	SEGUIMIENTO SISTEMA DE GESTIÍN AMBIENTAL EMAS
ADMINISTRACIÓN PÚBLICA	EX	MANTENER EL INTERÉS DE LAS EMPRESAS PORTUARIAS POR LA IMPLANTACIÓN DE MEDIDAS DE MEJORA AMBIENTAL Y ENERGÉTIC	SI	GRUPO ECOPORT Y PROYECTOS DE IINOVACIÓN
COMPETENCIA	EX	MANTENER EL NIVEL DE EXIGENCIA AMBIENTAL Y DE MEJORA EN LA EFICIENCIA ENERGÉTICA	SI	PROMOCIÓN DE NUEVAS CERTIFICACIONES Y PROYECTOS AMBIENTALES /EFICIENCIA ENERGÉTICA
C VECINOS	EX EX	MINIMIZACIÓN DE MOLESTIAS AMBIENTALES	NO	CONTROL DE ASPECTOS AMBIENTALES Y FOMENTO DE ACTIVIDADES DE COMUNICACIÓN /INFORMACIÓN SOCIAL

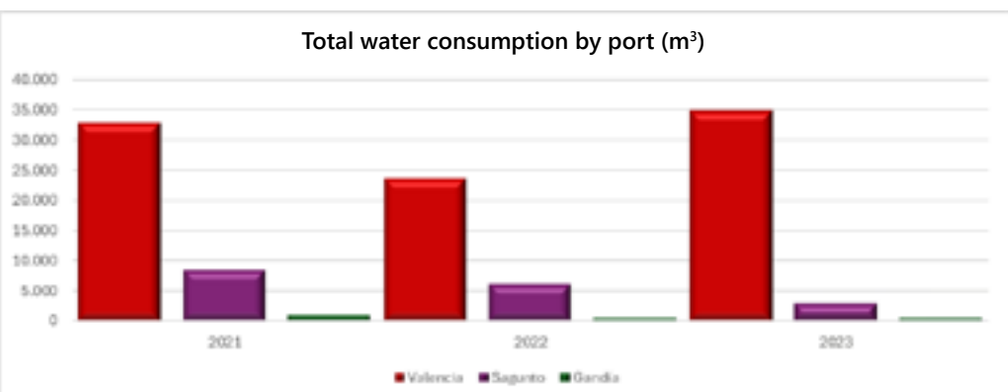
5. MANAGEMENT OF NATURAL RESOURCES

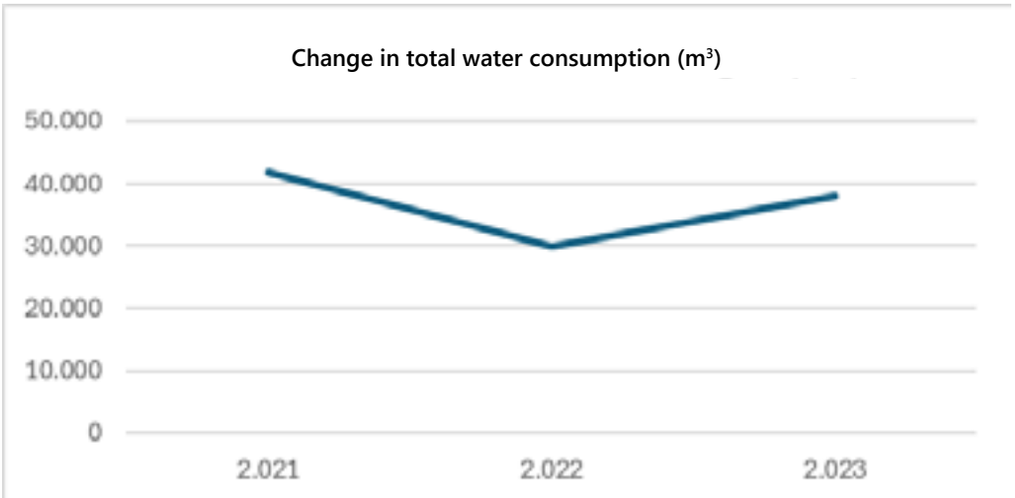
/ 5.1 Water

The PAV's water consumption corresponds to the consumption registered in buildings and for irrigation of gardens. The total water consumption of the PAV in 2023 was 39,047m3, an increase of around 26% on the previous year, mainly due to some leaks detected in Valencia, possibly as a result of the works carried out in the port area during this period.

Consumption per port was distributed as follows:

CONSUMPTION M³	2.021	2.022	2.023
VALENCIA	32,757	23,594	34,755
SAGUNTO	8,328	6,031	2,870
GANDÍA	781	370	422
TOTAL	41,866	29,995	39,047





In Valencia, where the highest consumption takes place due to the size of the port. In the port of Sagunto, there was also a reduction in consumption. In Gandía, consumption is relatively stable, although there was a slight increase on the previous year.

/ 5.3 Electricity

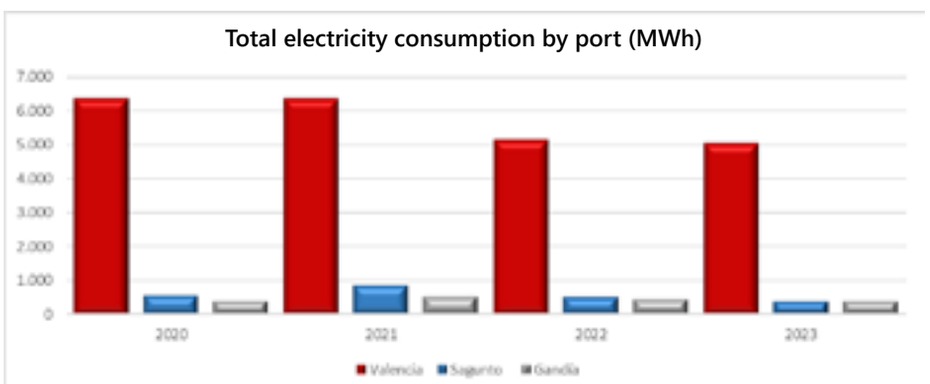
For 2023, the total energy consumption of the Port Authority of Valencia, including buildings and roads within the port premises, totalled 5,852,507 kWh (5,852.51Mwh), a reduction of 4% on the previous year.

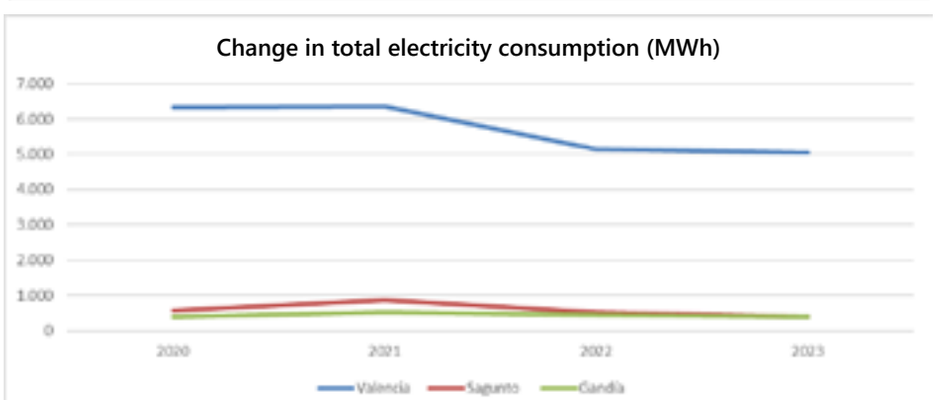
This reduction in consumption is mainly due to changes in street lighting and improvements in the air conditioning system.

It should be noted that photovoltaic panels have been installed for self-consumption in the air conditioning plant. Power generation data are being collected since September. A total of 18,031 kWh have been generated

Consumption was distributed across the ports as shown below:

ELECTRICITY (MWH)	2020	2021	2022	2023
VALENCIA	6,342	6,353	5,142	5,041
SAGUNTO	569	870	516	409
GANDÍA	396	518	440	402
TOTAL	7,307	7,564	6,099	5,853





As for the origin of the electricity consumed, during 2023, the supplier company was changed halfway through the year. Both certify that the energy comes exclusively from 100% renewable sources. The consumption certified by the supplier corresponds to the entire Port Authority, which includes the total electricity supplied to Valencia, Sagunto and Gandía as well as the companies with facilities within the port premises.


Naturgy

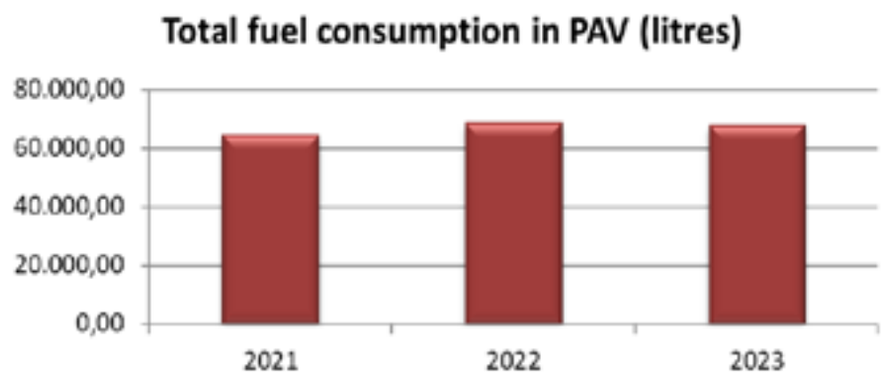
Certificación Garantías de Origen

Nº de Garantías de Origen: 47.518 MWh
Año: 2023

/ 5.3 Fuel

In 2023, fuel consumption for the vehicles of the PAV across the ports managed was 36,207.51 litres of gasoline and 31,697.62 litres of diesel. Total consumption is 67,905.13 litres. This includes:

FUEL (LITRES)	2021	2022	2023
GASOLINE	28,606.29	38,195.69	36,207.51
DIESEL	35,962.60	30,305.92	31,697.62
TOTALES	64,568.89	68,501.61	67,905.13



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

The PAV's vehicle fleet in 2023 remains stable compared to previous years. There are a total of 64 service vehicles, including cars, vans and lorries. Of the total fleet, 15 vehicles are electric and 3 are hybrids. The total number of electric vehicles accounts for 23.44% of the total vehicle fleet. The number of electric and hybrid vehicles has increased compared to the previous year, and the total fleet increased by two vehicles.

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 "environmentally friendly" (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.

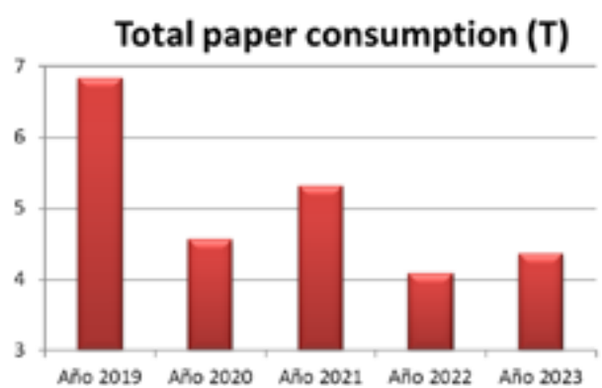
- The virgin fibre used in its production is obtained with respect for the environment, maintaining the biodiversity of forest ecosystems and guaranteeing that forests can be used by future generations.
- Whitening is performed without chlorine.
- The rights of local communities that live or work in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

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

In 2023, 4.36 t of paper was consumed, a slight increase of 6.7% on the previous year.

Over recent years, measures have been implemented aimed at the reduction of paper consumption, such as the austerity plan implemented by the PAV, raising awareness among employees, configuration of printers for double-sided printing, and reusing paper for drafts. A downward trend continues despite a slight increase compared to the previous year.

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



/ 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:

2023 INDICATOR	ANNUAL TOTAL	RELATIVE
ELECTRICITY CONSUMPTION	5,852,507 MWH	12,532 (MWH/WORKER)
WATER CONSUMPTION 100% FROM NETWORK	38,047 M^3	85,471 (M^3/WORKER)
TOTAL FUEL CONSUMPTION*	656,727 MWH	1.406 MWH/WORKER
TOTAL SURFACE AREA	3,661,289.71 M^2	7,840.02 (M^2 TOTAL SURFACE AREA/ WORKER)
TOTAL SEALED SURFACE AREA	3,174,893.71 M^2	6,798.49 (M^2 TOTAL SEALED SURFACE AREA/ WORKER)
TOTAL SURFACE AREA IN THE CENTRE BY NATURE	48,656.95 M^2	104.19 (M^2 TOTAL SEALED GARDENS/WORKER)
TOTAL SEALED SURFACE AREA	486,396 M^2	1,041.53 (M^2 TOTAL SEALED SURFACE AREA/ WORKER)
PAPER	4.36 T	0.009 (T/WORKER)
HAZARDOUS WASTE	3.44 T	0.007 (T/WORKER)
NON-HAZARDOUS WASTE	5.88 T	0.012 (T/WORKER)
CO2 EQUIVALENT EMISSIONS ** (DIRECT)	169,22 T CO2 EQ	0.36 (T CO2 EQ/ WORKER)
CO2 EQUIVALENT EMISSIONS ** (INDIRECT)	0 T CO2 EQ	0 (T CO2 EQ/WORKER)
TOTAL CO2 EQUIVALENT EMISSIONS** (DIRECT + INDIRECT)	169,22 T CO2 EQ	0.36 (T CO2 EQ/ WORKER)

*average number of staff 2023 = 467. Data provided by Human Capital.

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

No. workers 2021: 446; No. workers 2022: 454

RELATIVE INDICATOR	2021	2022	2023
ELECTRICITY CONSUMPTION	16.958	13.853	12.532
WATER CONSUMPTION	93.869	66.068	85.471
FUEL CONSUMPTION	1.41	1.456	1.406
TOTAL SURFACE AREA	9,516.07	9,374.98	7,840.02
TOTAL SEALED SURFACE AREA	8,425.50	8,303.62	6,798.49
TOTAL SURFACE AREA IN THE CENTRE BY NATURE	103.73	107.17	104.19
TOTAL SEALED SURFACE AREA	1,090.57	1,071.36	1,041.53
PAPER	0.012	0.008	0.009
HAZARDOUS WASTE	0.018	0.019	0.007
NON-HAZARDOUS WASTE	0.528	0.558	0.012
CO2 EQUIVALENT EMISSIONS** (DIRECT) (T CO2)	0.36	0.37	0;36
EMISSIONS CO2 EQUIVALENT** (INDIRECT) (T CO2)	0	0	0

* Fuel consumption: for the calculation of Mwh the conversion factors in the IDAE energy saving and emission reduction calculation are used. Thus, the equivalence of 1 toe of diesel and gasoline in litres and their equivalence in kWh is calculated.
** Emissions of CO2 Equivalent: 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

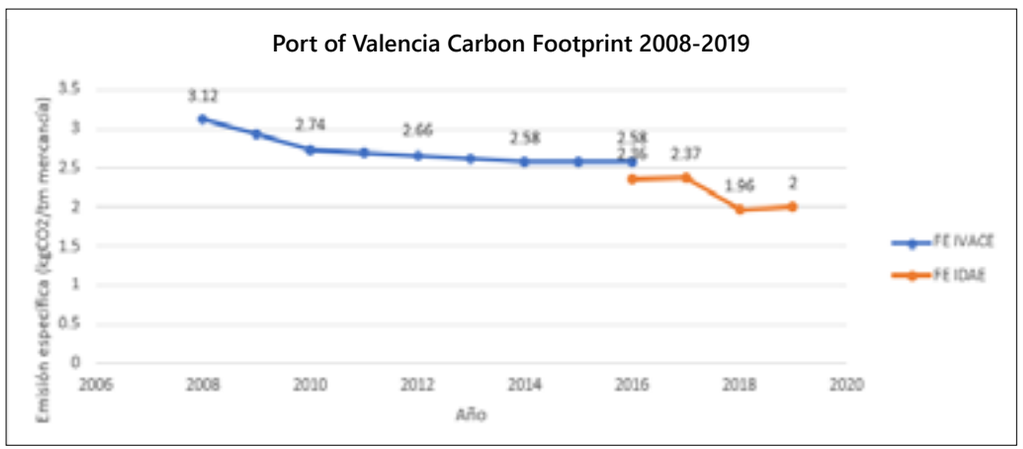
Since 2008, the Carbon Footprint of the entire Port of Valencia has been calculated. These calculations were made according to ISO 14064 and have been validated by the certifying body. In addition, they have been registered in the Carbon Footprint Register of the Ministry for the Ecological Transition, obtaining the "calculo" (calculate) seal until 2016. This seal reflects the efforts of Spanish organisations in the calculation and reduction of greenhouse gas emissions generated by their activity.

In 2021, the Carbon Footprint calculations were carried out from 2016 to 2019, in order to obtain the "reduzco" (I reduce) seal, awarded by the Ministry for the Ecological Transition.

Displayed below is the trend in emissions, cargo moves and Carbon Footprint between 2016 and 2019.

YEAR	2016	2017	2018	2019
EMISSIONS (KGCO2)	151,646,059	159,982,010	139,048,413	147,072,720
TONNES (T)	64,361,045	67,489,331	70,778,376	73,715,925
CARBON FOOTPRINT (KGCO2/T)	2.36	2.37	1.96	2.00

The following graph shows the evolution of the Carbon Footprint.



6. STATE OF THE ENVIRONMENT

/ 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.

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

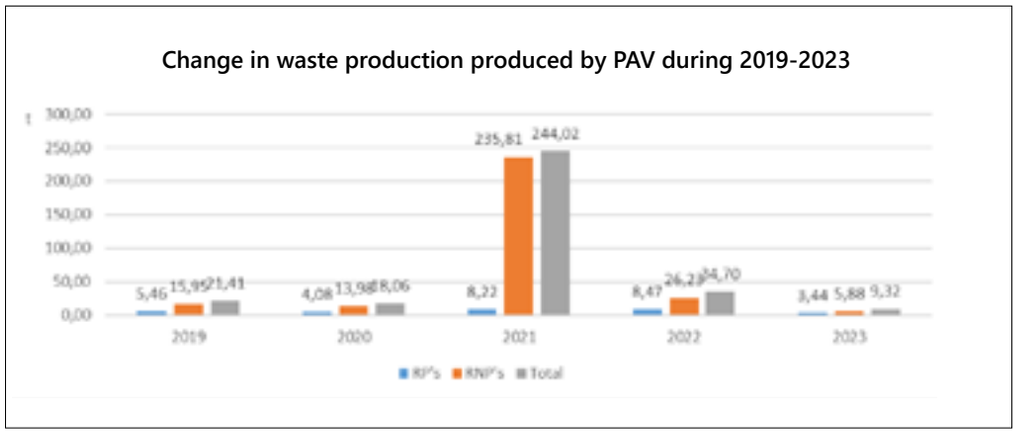
The PAV produces waste as a result of the company's activities in the Ports of Valencia, Sagunto and Gandía. In the case of Valencia, waste is produced in the offices, in the workshops and in the clinic. In the ports of Sagunto and Gandía, waste is produced by the activity carried out in the offices and by the PAV's own maintenance personnel.

As provided for in Law 7/2022, of 8 April, 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 21384/P02/CV for sanitary waste produced in the clinic located in the port of Valencia.

The total waste generated by the activity of the PAV in 2023 was 9.32 t of which 5.88 t corresponds to non-hazardous waste and 3.44 t to hazardous waste.

To analyse the data obtained in 2023 in Figure 1 we can observe the trend in the production of waste generated by the PAV from 2019 to 2023, both years inclusive.

Figure 1



As can be seen in graph 1, there is a clear trend towards a reduction in the production of both hazardous and non-hazardous waste in recent years, as the production of non-hazardous waste in 2021 was very high as a result of fenders that had to be removed as a result of the remodelling work on the port of Valencia.

Below, graphs 2 and 3 show the data for the production of hazardous and non-hazardous waste produced by the PAV in 2023:

Figure 2

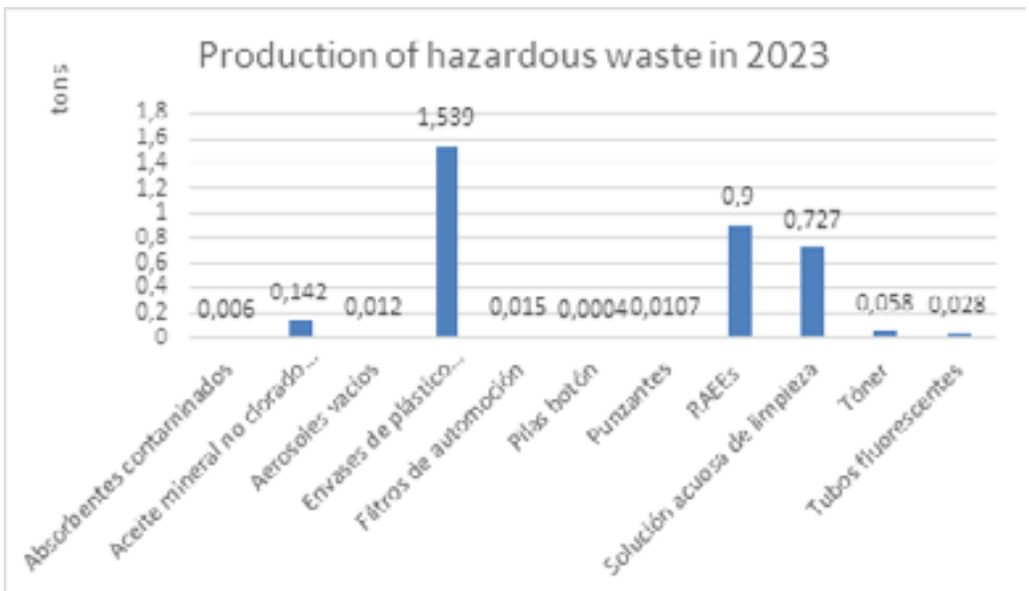
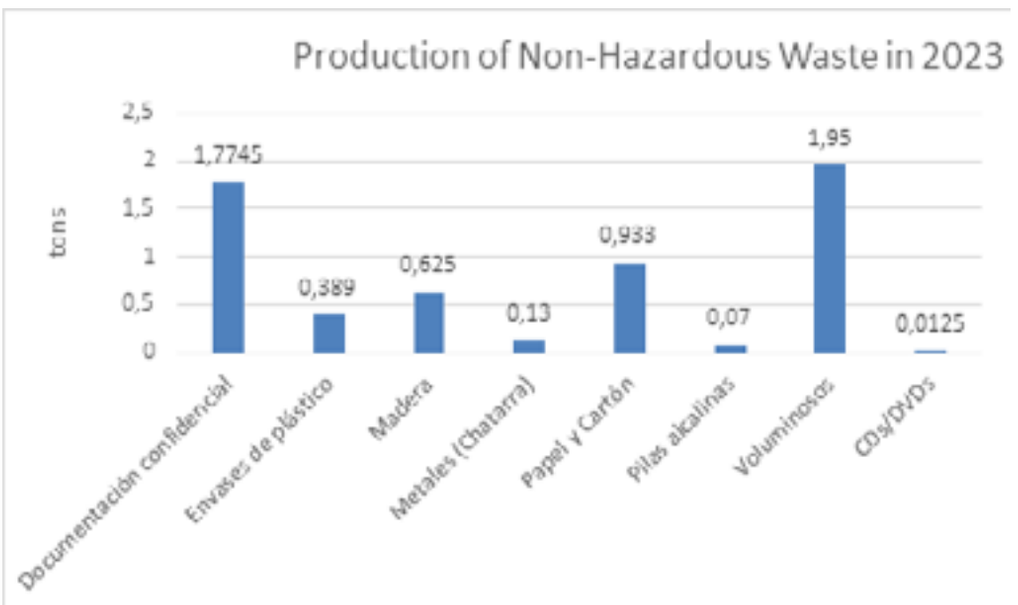


Figure 3



A) For hazardous waste, there was a fall in the production of waste in general, at a total production figure of 3.44 t in 2023.

Figure 2 shows that the highest hazardous waste production figures are for "Contaminated plastic packaging" and "Waste" Electronic Equipment" (WEEE)."

It should be noted that the WEEE production figure has been reduced considerably in 2023 compared to previous years, from 5.61 t in 2022 to 0.9 t in 2023.

On the other hand, with regard to the heading "Contaminated plastic packaging", it should be noted that production has increased in 2023.

B) For non-hazardous waste, in 2023 a production figure of 5.88 t was recorded.

Figure 3 shows how, as has occurred since 2023, the most significant volume of non-hazardous waste generated by the PAV corresponds to the heading "Confidential Documentation" with production figures of 1.95 and 1.77 t respectively.

However, if we compare the data obtained in 2023 with those for the financial year 2022, it is clear that the production of bulky waste and confidential documentation has been significantly reduced

6.1.2 Waste from the port premises

The companies located on Port Authority of Valencia premises are obliged to adequately manage the waste they generate at their facilities.

To promote the appropriate management of waste in companies on the premises of the ports of Valencia, Sagunto and Gandía, in 2003, a Waste Transfer Centre (WTC) was opened, located in the Port of Valencia, allowing for the collection and storage of waste generated in port facilities. This waste is stored in the WTC for subsequent transport to treatment plants where it will be reused, recycled, assessed or eliminated, respecting the Hierarchy of waste as established in Article 8 of Law 7/2022 of 8 April on waste and contaminated soils for a circular economy.

With the WTC the Port Authority of Valenica:

- 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.
- It contributes to maintaining a port area in harmony with its surroundings, thus avoiding the abandonment or uncontrolled dumping of waste.

The WTC of the Port of Valencia is located at the Xitá Pier, with a total surface area of 3,235.18 m2, of which 2,400 m2 is used for the storage of waste prior to transfer for final sorting.

For the storage of non-hazardous waste, there is one 20 m3 container for voluminous waste, one 20 m3 container for wood, several 3 m3 containers for light packaging and plastics, one 11 m3 container for glass, two 11 and 25 m3 containers for metals (scrap), one 11 m3 for used tyres and several 3 m3 containers for paper/cardboard.

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

The companies located in the port facilities managed by the Port Authority of Valencia have access to facilities where it is possible to manage the waste easily and flexibly in accordance with current legislation and benefiting from the savings generated by the economies of scale, as if they are members of the Ecoport Community, transport costs are deducted from invoicing.

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 with entry numbers 363/P05/CV, 365/P05/CV and 364/P05 /CV respectively.

The waste produced within 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.
- **Waste generated incidentally** 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, dumped waste, etc.

In relation to the total volume of waste produced at the three port facilities managed by the PAV, a total of 27.22 t was managed in 2023 broken down as follows:

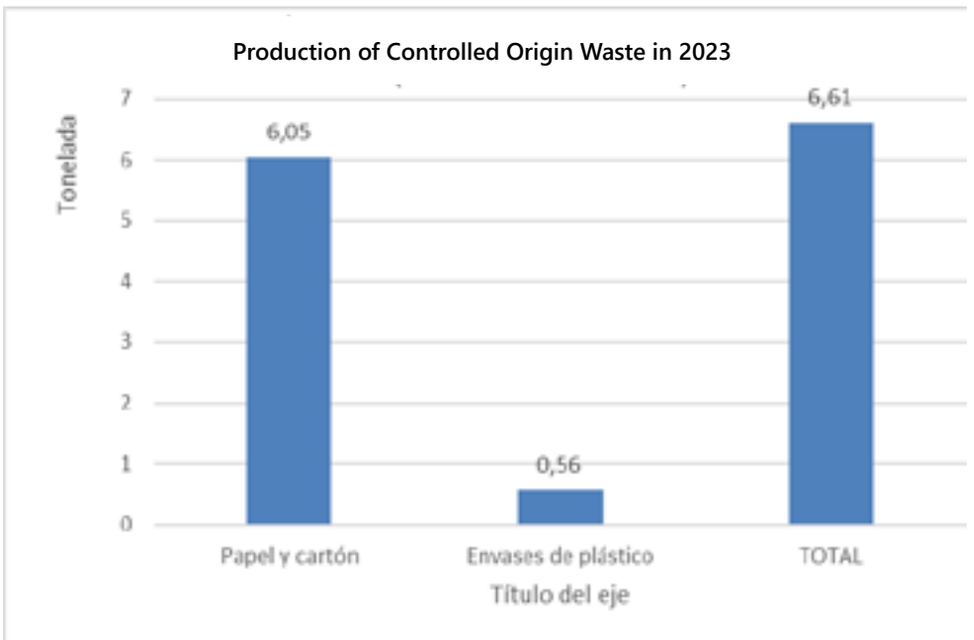
- **Controlled waste:** a total of 6.61 t of non-hazardous waste.
- **Ad hoc waste:** a total of 20.61 t, broken down into 8,14 t non-hazardous and 12,47 t of hazardous waste.

The PAV has therefore become directly and indirectly (through the status as Producer or Holder) responsible for a total of 36.54 t of waste. Specifically, 15.91 t of hazardous waste and 20.63 t of non-hazardous waste were managed in 2023.

Waste generated in the port premises of Controlled Origin

As presented below, the type of waste accounting for the greatest volume under the non-hazardous waste heading in 2023 was "Paper/cardboard", with hazardous waste produced during the period studied, at 6.05 t. The origin of the "paper/cardboard" heading related to the paper and cardboard deposited in containers provided specifically for that purpose in the different points of the port premises of Valencia, Sagunto and Gandía.

Figure 4



Waste of incidental origin generated in the port premises

In the case of ad hoc waste generated, as can be observed in figures 5 and 6, within the heading non-hazardous waste, "Floating Waste" stands out, with a production figure of 4t and within the hazardous waste category, "Contaminating Absorbents" stands out with a figure of 6.29 t.

"Floating Waste" is produced as a result of the cleaning service of the water mirror in the port of Valencia carried out by the vessel LIMPIAMAR III, as well as during the cleaning work carried out in the old Turia riverbed.

In terms of "Contaminated Absorbents" considered hazardous waste, it must be noted that these are produced from the cleaning of leaks and discharges both on land and at sea which occur as a result of traffic accidents within the port premises, discharges of bilge water into the sea, etc.

Figure 5

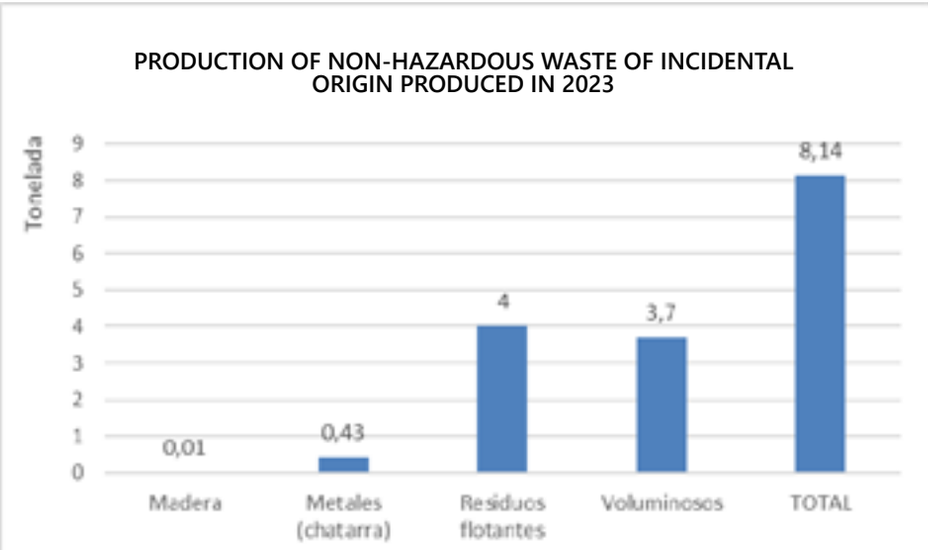
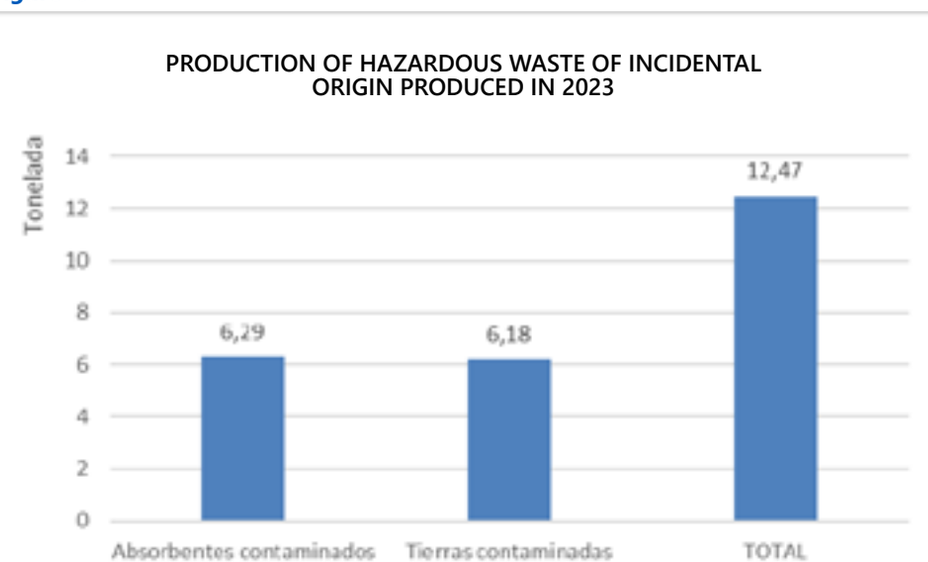


Figure 6



6.1.3 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.

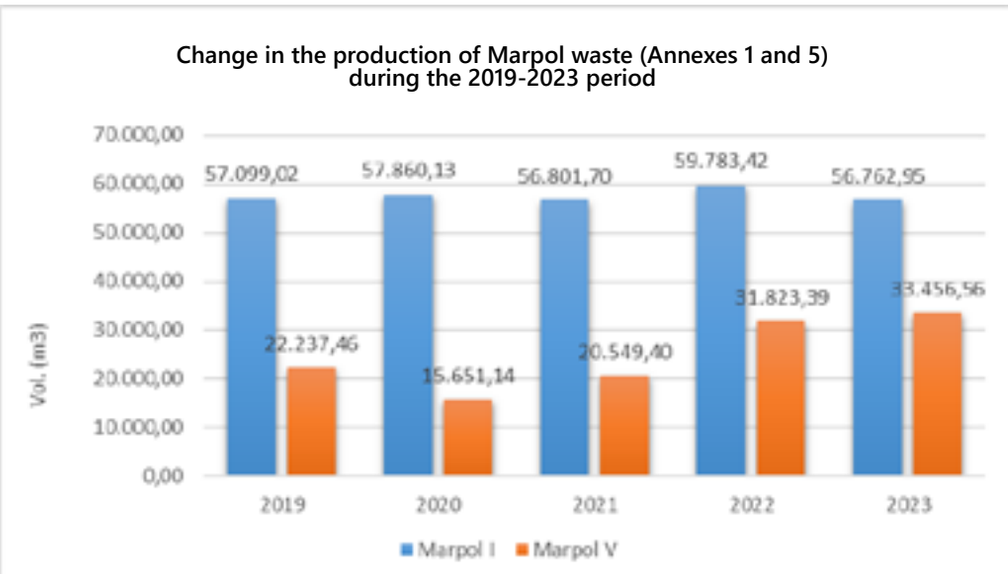
To comply with Article 132 of the consolidated Text of the State Ports and Merchant Navy Act, the PAV charges ships calling at port a fixed fee regardless of whether they use the waste reception service or not. This measure prevents all discharges at sea as vessels can discharge all waste included in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

The volume of waste generated in 2023 at the three ports was 56,762.95 m3 of Marpol I and 33,456.56 m3 of Marpol V, lo for a total of 90,219.51 t:

	2023	
	MARPOL I	MARPOL V
VALENCIA	51,147.65	30,997.83
SAGUNTO	5,514.90	2,411.43
GANDÍA	100.40	47.30
TOTAL	56,762.95	33,456.56

Below, Figure 7 shows the trend in the production of Marpol I and Marpol V waste over the period 2019 to 2023 both included.

Figure 7



/ 6.2 Air quality control

■ 6.2.1 Air quality in the port premises

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 Environment has set as a priority. To carry out this surveillance, the Port Authority of Valencia has an instrumentation and monitoring network that continuously supplies air quality , data, which allows us to analyse and categorize the status of same, in accordance with Order TEC/3561/2019, which approved the National Air Quality Index and the subsequent modification of the Annex to this Order, according to the Resolution of 2 September 2020, of the Directorate General for Environmental Quality and Assessment.

Control and monitoring of the concentrations of different pollutants is carried out, 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 recorded by a network of eight weather stations set up at significant locations in the port areas, five of them in the port of Valencia, two in the port of Sagunto and one in the port of Gandía.

The different strategic locations of this control equipment are shown below:

- Weather Stations (WS)
- Air Quality Monitoring Stations (AQMS)

Port of Valencia

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

The port of Valencia has two air quality control stations, hereinafter AQMS, with meteorological sensors and analysers for the measurement of various pollutants. The location of these stations was designated following the study carried out by the CEAM (Centro de Estudios Ambientales del Mediterraneo), in the Transversal de Poniente and in the old Turia riverbed, adjacent to the Nazaret neighbourhood. These locations, on the port-city interface, allow us to ascertain the presence of pollutants 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.

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. These data are validated and published on the website of the Regional Ministry of the Environment, Infrastructures and Territory of the Generalitat Valenciana and on the website of the Port Authority.

AQMS Turia Riverbed

AQMS Transversal Poniente

With regard to meteorology, the Port of Valencia has five meteorological stations, hereinafter EM, two more located in the AQMSs and three more distributed in different strategic points of the port, which provide information for operational decision making.

East Breakwater Weather Station

Príncipe Felipe Weather Station

Turia Quay Weather Station

Ports of Sagunto and Gandía

In the port of Sagunto there is an AQMS, at the port-city interface, with different pollutant and particle analysers. In addition, there are two weather stations, one located in the AQMS itself and the other in a strategic location for port operational decision-making.

The port of Gandía has a meteorological station that helps port operations.

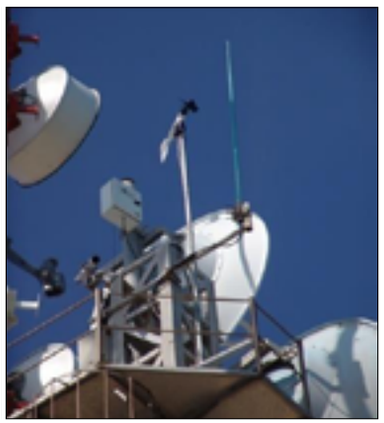
The following images show the locations of the same environmental monitoring equipment in each port:

Port of Sagunto

Port of Gandia

AQMS Sagunto Norte

Weather Station Beacon at Levante Quay, Sagunto



Weather Station at Serpis Quay, Gandía

6.2.2 Air quality in the port premises

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. Among these measures, the monitoring of wind direction speed variables stands out. This monitoring establishes that , when these variables surpass certain values of intensity and wind duration, loading, unloading or handling of powdery materials are suspended, all through the air quality control network and supervised by the Emergency Control Centre of the PAV. During 2023, a second wind speed and direction sensor has been installed at a height of 38 metres at the Dique del Este location to improve wind speed and direction monitoring.

The PAV has also, 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 handling bulk in Sagunto. In Sagunto, in addition, the construction of a bulk terminal with enclosed spaces that minimise particulate matter emissions has been completed at the Northeast quay.

Furthermore, the PAV also insists on measures to minimise particulate emissions for any operation performed in the premises of the PAV, such as cleaning of the common areas and concession space, maintenance of equipment, good handling practices, determination of maximum height of heaps in the case of bulk 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.

POLLUTANT	LIMIT VALUE/ TARGET VALUE/ALERT THRESHOLD	VALUE	AVERAGE PERIOD	
SO2	TIME LIMIT VALUE	350 MG/M³	1 HOUR	MAY NOT BE EXCEEDED MORE THAN 24 TIMES/ YEAR
	TIME LIMIT VALUE	125 MG/M³	24 HOURS	MAY NOT BE EXCEEDED MORE THAN 3 TIMES/ YEAR
	ALERT THRESHOLD	500 MG/M³	1 HOUR	(1)
NO2	TIME THRESHOLD	200 MG/M³	1 HOUR	MAY NOT BE EXCEEDED MORE THAN 18 TIMES/ YEAR
	ANNUAL LIMIT VALUE	40 MG/M³	1 YEAR	
PM10	DAILY THRESHOLD	50 MG/M³	24 HOURS	MAY NOT BE EXCEEDED MORE THAN 35 TIMES/ YEAR
	ANNUAL LIMIT VALUE	40 MG/M³	1 YEAR	
PM2.5	ANNUAL LIMIT VALUE	20 MG/M³	1 YEAR	
CO	THRESHOLD	10 MG/M³	MAX. DAILY EIGHT-HOUR MOVING AVERAGES	
O3	TARGET VALUE	120 MG/M³	MAX. DAILY EIGHT-HOUR MOVING AVERAGES	MAY NOT BE EXCEEDED MORE THAN 25 TIMES/ YEAR ON AVERAGE OVER 3 YEARS
	INFORMATION THRESHOLD	180 MG/M³	1 HOUR	
	ALERT THRESHOLD	240 MG/M³	1 HOUR	FOR 3 CONSECUTIVE HOURS

(1) It shall be deemed to be exceeded if, for three consecutive hours, that value is exceeded hourly at representative air quality locations over an area of at least 100 km2 or over an entire zone or agglomeration, whichever is the smaller.

Assessment of the results obtained in 2023 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. The procedure is based on the calculation of the validated data records of the values whose limits are legislated according to the reference standard. In some cases, maximum number of exceedances or average limit values are set according to a time period (monthly, yearly, daily, eight-hourly, etc.).

The atmospheric indices registered in the year 2023 were the following:

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

SO 2 (SULPHUR DIOXIDE)	2023	
	DAILY AVERAGE NO. SUP DE 125 MG/ M³ (< 3 EXCEEDANCES/ YEAR)	HOURLY AVERAGE NO. SUP 350 MG/M³ (< 24 EXCEEDANCES/ YEAR)
AQMS TRANSVERSAL PONIENTE	0	0
AQMS TURIA RIVERBED	0	0
AQMS SAGUNTO NORTE(1)	0	0

(1) Data available until 30/07/2023

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

CO (CARBON MONOXIDE)	2023
	DAILY MAXIMUM OF EIGHT-HOURLY MOVING AVERAGES NO. SUP OF 10 MG/M
AQMS TRANSVERSAL PONIENTE	0
ECA CAUCE TURIA	0
EMS SAGUNTO NORTE	0

NUMBER OF EXCEEDANCES OF CONCENTRATION LEVELS OF NITROGEN DIOXIDE (NO 2)		
NO2 (NITROGEN DIOXIDE)	2023	
	HOURLY AVERAGE NO. SUP DE 200 MG/M³ (< 18 EXCEEDANCES/ YEAR)	ANNUAL AVERAGE THRESHOLD 40 MG/M³
ECA TRANSVERSAL PONIENTE	0	15
ECA CAUCE TURIA	0	21
EMS SAGUNTO NORTE	0	12

NUMBER OF EXCEEDANCES OF CONCENTRATION LEVELS OF OZONE (O3)			
O3 (OZONE)	2023		
	DAILY MAXIMUM FOR EIGHT HOUR MOBILE AVERAGES NO. EXC. 120 MG/M³ TARGET VALUE (< 25 EXCEEDANCES/ YEAR)	HOURLY AVERAGE NO. EXC. 180MG/ M³ POPULATION INFORMATION THRESHOLD	HOURLY AVERAGE NO. EXC. 240MG/M³ POPULATION ALERT THRESHOLD
ECA TRANSVERSAL PONIENTE	2	0	0
ECA CAUCE TURIA	1	0	0
EMS SAGUNTO NORTE	0	0	0

NUMBER OF EXCEEDANCES AND AVERAGE ANNUAL VALUE OF CONCENTRATION LEVELS OF PM10 PARTICLES		
PM10 (PARTICLES <10 MM)	2023	
UNITS:MG/M³	DAILY AVERAGE NO. EXC. 50 MG/ M³ (< 35 EXCEEDANCES/ YEAR)	Annual average Threshold 40 µg/m³
ECA TRANSVERSAL PONIENTE	2	19
ECA CAUCE TURIA	5	20
ECA SAGUNTO NORTE(1)	7	17

(1) Data available until 30/07/2023

* Provisional values, not applied the discount for natural contributions for 2023 issued by MITRED (Ministry for Ecological Transition and the Demographic Challenge)

AVERAGE ANNUAL VALUE OF CONCENTRATION LEVELS OF PM2.5	
PM2.5 (PARTICLES <2.5 MM)	2023
	Annual average Threshold 25 µg/m³
ECA TRANSVERSAL PONIENTE	9
ECA CAUCE TURIA	10
ECA SAGUNTO NORTE(1)	8

(1) Data available until 30/07/2023

Conclusions Air Quality Results

After the analysis of the data corresponding to the year 2023 (January - December) and the assessment of these with respect to applicable limit values, the following conclusions are reached:

- **Sulphur dioxide (SO2,) and carbon monoxide (CO):**

There were no exceedances of the limit values or objectives set for any of these pollutants at any of the stations in the PAV network, with the values measured being far removed from them.

- **Nitrogen dioxide (NO2):**

There were no exceedances of the limit and alert threshold values at any of the stations.

- **Ozone (O3):**

With regard to ozone, the legislation establishes different information and alert thresholds as well as a target value for the protection of human health and vegetation. In this order, none of the above-mentioned information and alert thresholds, set at 180 and 240 µg/m³, respectively, were exceeded during the year 2023.

As regards the long-term objective value for the protection of human health, set in legislation at 120 µg/m³, the maximum of the eight-hourly moving averages, not to be exceeded on more than 25 occasions per year, as a 3-year average. We can affirm that, in spite of being exceeded on different occasions in the stations of the PAV network, during the year 2023 they would not exceed this requirement in number as a 3-year average, nor considering 2023 in isolation.

- **Particulate matter (PM10) and (PM2.5):**

With regard to the daily limit value of PM10, it was exceeded on some occasions at stations in the PAV network, but without reaching 35 exceedances. The annual mean did not exceed the limit value at any station.
It should be noted that the discounts for natural contributions established by the Ministry for Ecological Transition and the Demographic Challenge for the year 2023, which can be consulted on the website.

As for the PM2.5, fraction, there were no exceedances of the limit values or objectives set by RD 102/2011.

The increase corresponding to the influence of African air masses, commonly referred to as Saharan influences, in 2022 and episodes of which can be checked on the website of the Ministry for Ecological Transition, have not been deducted from these pollutants.

In summary, in the year 2023, the data registered complied with the air quality limit values defined in Royal Decree 102/2011 of 28 January, on the improvement of air quality.
Finally, the annual average values of all the aforementioned parameters have been calculated for the same year 2023, which are shown together with other nearby stations in the municipality of Valencia in the following section.

6.2.3 Environmental concentrations in the port of valencia environment

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 MG/M³	NO2 MG/M³	O3 MG/M³	CO MG/M³	PM10 MG/M³	PM2.5 MG/M³	PM1MG/M³
AVDA. FRANCIA	3,6	16	53	0,1	18	9	-
BULEVARD SUR	3,7	18	51	-	26	-	-
MOLÍ DEL SOL	3,3	16	53	0,1	14	8	4
PISTA DE SILLA	4,0	16	52	0,2	16	7	-
POLITÉCNICO	3,4	12	53	-	13	9	-
VIVEROS	3,7	12	57	-	23	14	-
CENTRE	-	28	-	-	24	11	-

Annual average values for the municipality of Sagunto, at three stations outside the port area:

STATION	SO2 MG/M³	NO2 MG/M³	O3 MG/M³	CO MG/M³	PM10 MG/M³	PM2.5 MG/M³	PM1MG/M³
SAGUNT PORT	3,0	9	61	0,2	8	5	3
SAGUNT NORD	-	8	59	-	17	-	-
SAGUNT CEA	3,2	9	55	0,1	13	7	-

NOTE 1: Calculations based on hourly averages.

The average annual values obtained by the stations in the PAV network:

STATION	SO2 MG/M³	NO2 MG/M³	O3 MG/M³	CO MG/M³	PM10 MG/M³	PM2.5 MG/M³	PM1MG/M³ MG/M³
ECA TRANSVERSAL PONIENTE	3	15	53	0,1	19	9	6
ECA CAUCE TURIA	4	21	49	0,1	20	10	7
ECA SAGUNTO NORTE	3 (1)	12	51	0,2	17 (1)	8 (1)	-

(1) Data available until 30/07/2023

The environmental assessment made according to the regulation indicates that all parameters are under the lower assessment threshold", below which it would be possible to limit the use of modelling techniques to assess air quality.
In those cases where the alert and/or information thresholds for the half hour, no half-hour values exceeding those thresholds were recorded in the case for sulphur dioxide, nitrogen dioxide and tropospheric ozone.

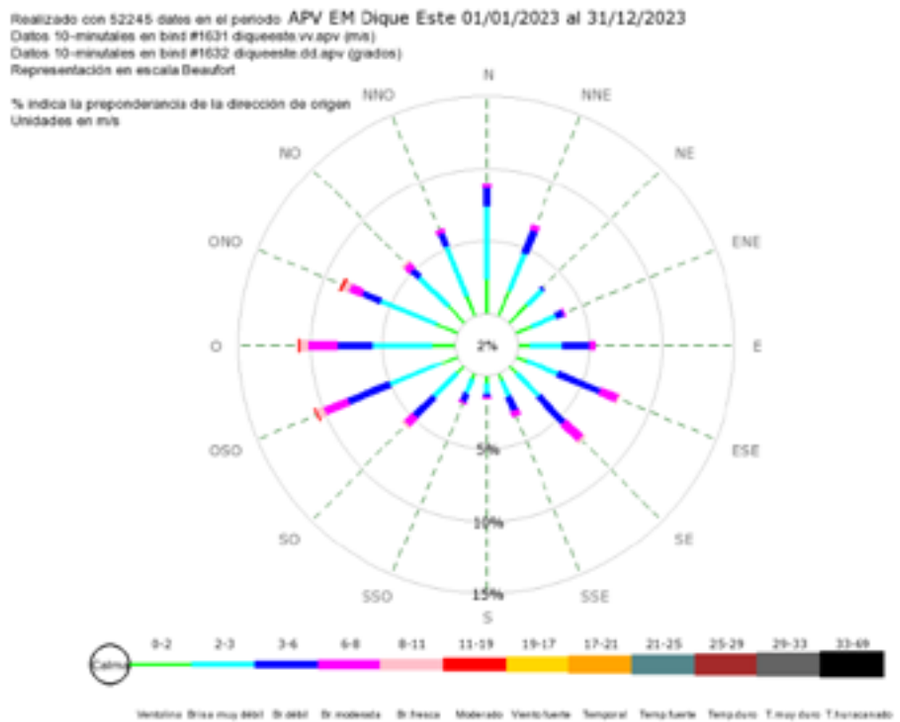
In general, the parameters of the stations of the Network of the Port Authority of Valencia are within the range of normality and correlation with respect to the automatic stations nearby in the city of Valencia and in the Sagunto area. In addition, it is worth noting the equality of values between the two AQMSs of the port of Valencia in almost all the parameters.
In short, for 2023 the results obtained across the Port Authority of Valencia Network complied with the air quality limit values defined in Royal Decree 102/2011, of 28 January, relating to the improvement of air quality.

6.2.4 Data recorded at weather stations

Monthly statistical values at the weather station WS VALENCIA EAST BREAKWATER– Year 2023

	DD (grd)		VV (m/s)				TMP (°C)				HR (%)				RS (w/m²)				PNM (mb)				LL (J/m²)	
	Muestras	Media	Muestras	Media	Máx	Mín	Muestras	Media	Máx	Mín	Muestras	Media	Máx	Mín	Muestras	Media	Máx	Mín	Muestras	Media	Máx	Mín	Muestras	Acumulado
Ene	30	259	31	3.71	8.89	1.55	31	13.2	19.1	9.3	31	63	84	36	31	106	140	42	31	1019	1032	996	31	2.8
Feb	28	263	28	2.74	5.71	1.44	28	11.9	13.9	8.1	28	71	90	40	28	121	186	21	28	1023	1036	1002	28	37.4
Mar	31	254	31	3.69	6.26	1.76	31	17	24.3	9.6	31	66	91	29	31	190	244	106	31	1015	1024	1007	31	0.0
Abr	30	176	30	3.08	4.92	1.30	30	18.6	22.7	15.4	30	72	88	42	30	244	280	156	30	1014	1020	1005	30	0.0
May	31	148	31	2.86	4.43	1.75	31	21.2	25.3	16.5	31	75	94	50	31	238	298	61	31	1014	1019	1010	31	80.6
Jun	30	95	30	2.69	4.71	1.75	30	29.7	36.2	25.9	30	75	87	50	30	262	310	90	30	1012	1021	1007	30	9.2
Jul	27	79	27	2.8	3.95	1.95	5	29.1	30.8	28.4	3	80	87	75	3	309	320	301	27	1022	1032	1002	27	0.0
Ago	31	107	31	2.98	4.79	1.71	31	28.7	32.2	25.9	0	–	–	–	0	–	–	–	31	1004	1010	997	31	5.2
Sept	30	123	30	3.11	6.43	1.71	30	25.4	29.4	23.3	0	–	–	–	0	–	–	–	30	1006	1013	998	30	116.4
Oct	31	206	31	3.55	6.84	1.69	5	26.8	27.8	25.8	0	–	–	–	0	–	–	–	31	1003	1015	987	31	2.2
Nov	30	267	30	4.16	9.63	1.49	0	–	–	–	0	–	–	–	0	–	–	–	30	1002	1013	988	30	0.0
Dic	31	276	31	3.25	5.94	1.30	0	–	–	–	0	–	–	–	0	–	–	–	31	1009	1025	987	31	1.2
																						TOTAL		255.0

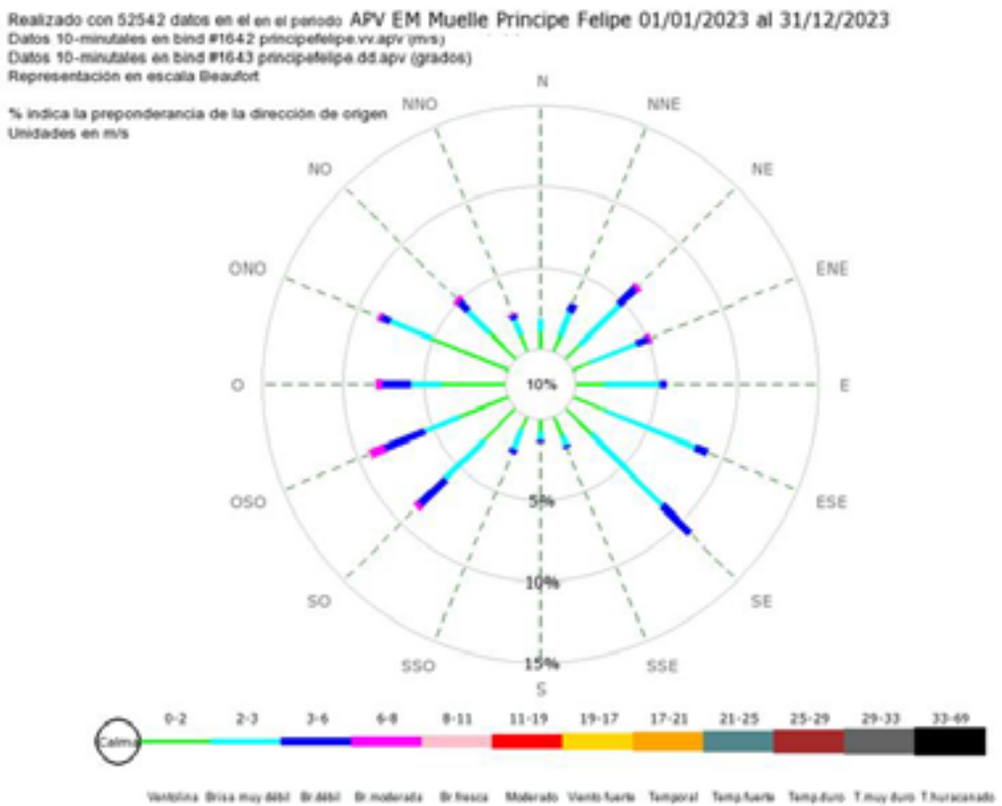
Wind rose -WS VALENCIA EAST BREAKWATER– 2023



Monthly statistical values, from daily averages, at the weather station VALENCIA PRINCIPE FELIPE – 2023

	DD (grd)		VV (m/s)				TMP (°C)				HR (%)				RS (w/m²)				LL (l/m²)	
	Muestras	Media	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Acumulado
Ene	31	265	31	2.5	6.2	0.9	31	11.5	17.4	7.5	31	67	92	34	31	75	101	29	31	8.2
Feb	28	207	28	1.8	4.3	0.8	28	10.3	12.3	6.9	28	75	93	36	28	88	15	136	28	45.0
Mar	31	197	31	2.4	4.4	1.2	31	15.7	23.1	8.6	31	68	93	42	31	140	180	78	31	0.8
Abr	30	116	30	2.3	3.8	1.3	30	18.1	21.6	14.4	30	74	92	40	30	195	244	147	30	0.0
May	31	124	31	2.2	3.4	1.4	31	20.3	22.0	18.4	31	76	95	49	31	228	288	58	31	85.6
Jun	30	114	30	2.0	2.9	1.5	30	25.0	27.8	22.0	30	80	90	64	30	251	296	91	30	14.8
Jul	31	93	31	2.0	2.9	1.5	31	28.7	30.3	26.1	31	83	90	64	31	252	293	189	31	19.0
Ago	31	132	31	2.0	3.8	1.2	31	28.5	30.1	25.9	31	75	89	48	31	243	280	188	31	11.8
Sept	14	108	14	2.4	5.4	1.4	14	26.1	26.8	24.7	14	84	96	79	14	176	219	76	14	49.8
Oct	31	206	31	2.4	5.0	1.5	31	22.6	25.4	17.9	31	75	88	60	31	142	197	72	31	4.0
Nov	30	251	30	2.7	6.6	0.9	30	18.0	22.1	13.8	30	67	96	50	30	67	96	50	30	0.0
Dic	31	253	31	2.1	3.8	0.9	31	13.8	20.9	10.2	31	69	87	47	31	82	104	24	31	0.0
																		TOTAL		242.8

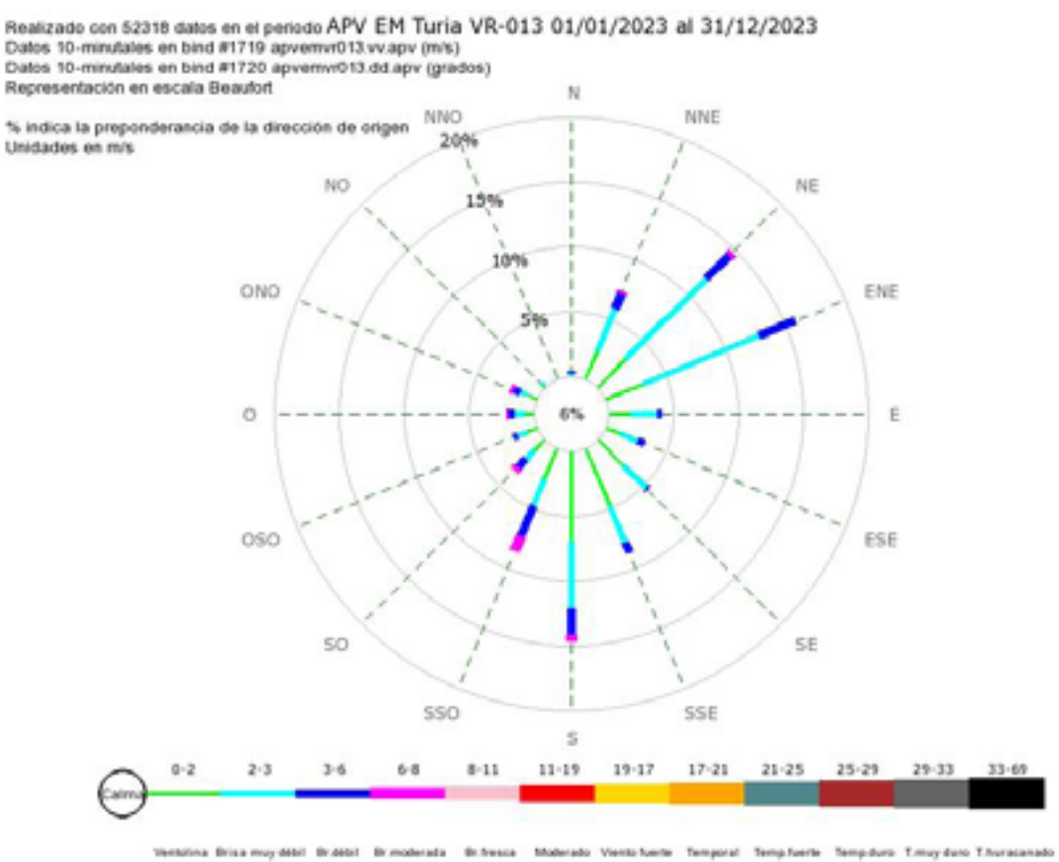
Wind rose - WS VALENCIA PRINCIPE FELIPE – 2023



Monthly statistical values at the weather station WS TURIA Year 2023

	DD (grd)		VV (m/s)				PRB (°C)			
	Muestras	Media	Muestras	Media	Máx.	Min.	Muestras	Media	Máx.	Min.
Ene	31	173	31	2.41	7.00	0.80	31	1018	1029	996
Feb	28	130	28	1.89	4.12	0.88	28	1021	1033	1001
Mar	28	139	28	2.55	4.76	1.42	28	1013	1021	1005
Abr	30	104	30	2.19	3.83	1.23	30	1011	1017	1002
May	31	89	31	2.09	3.68	1.43	31	1010	1015	1006
Jun	30	79	30	2.06	3.09	1.46	30	1008	1018	1003
Jul	26	62	31	2.36	3.55	1.72	31	1010	1015	1003
Ago	31	92	31	2.25	3.67	1.28	31	1011	1016	1004
Sep	30	101	30	2.33	5.34	1.40	30	1012	1019	1004
Oct	31	141	31	2.37	5.04	1.47	31	1011	1021	994
Nov	30	171	30	2.84	6.83	1.20	30	1012	1022	999
Dic	31	164	31	1.99	3.66	0.72	31	1019	1034	997

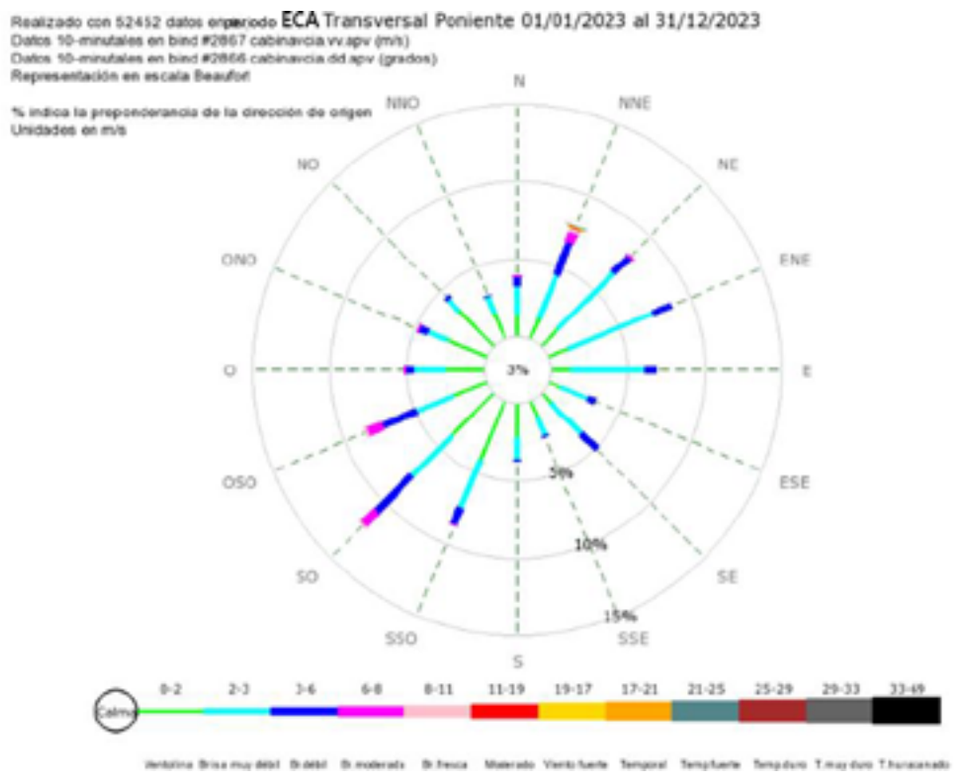
Wind rose - WS MUELLE TURIA – 2023



Monthly statistical values of WS at AQMS TRANSVERSAL NORTH Year 2023

	DD (grd)		VV (m/s)				TMP (ºC)				HR (%)				RS (w/m²)				PRB (mb)				LL (l/m²)	
	Muestras	Media	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Acumulado
Ene	31	236	31	2.20	6.68	0.96	31	11.7	18.1	7.6	31	62	87	31	31	105	143	35	31	1023	1035	1001	31	4.6
Feb	28	218	28	2.00	4.43	0.92	28	10.4	12.3	6.6	28	72	94	35	28	124	196	13	28	1028	1040	1006	28	30.2
Mar	31	176	31	2.63	4.36	1.49	31	16.0	23.7	8.4	31	66	93	38	31	204	267	111	31	1020	1028	1012	31	1.2
Abr	30	100	30	2.31	3.39	1.53	30	17.5	21.8	14.5	30	73	95	37	30	268	312	165	30	1016	1024	1007	30	0.0
May	31	107	31	2.28	4.07	1.53	31	19.5	21.5	17.5	31	76	97	47	31	251	322	51	34	1016	1021	1011	31	49.2
Jun	28	81	28	2.22	3.34	1.66	28	24.1	26.4	20.8	28	82	93	67	28	276	333	85	28	1015	1022	1010	28	11.40
Jul	28	50	28	2.41	3.72	1.79	28	27.4	29.6	25.2	31	84	93	62	28	290	332	191	28	1015	1020	1008	28	38.2
Ago	31	89	31	2.26	3.73	1.17	31	27.5	30.0	25.1	31	70	84	40	31	291	338	220	31	1015	1021	1008	31	29.8
Sept	30	127	30	2.51	6.90	1.32	30	24.2	25.8	22.2	30	72	92	45	12	205	251	72	30	1017	1024	1008	30	158.0
Oct	31	199	31	2.47	5.15	1.36	31	21.9	24.4	17.0	31	64	78	47	31	164	233	82	31	1015	1026	998	31	3.6
Nov	30	218	30	2.87	6.75	1.21	30	17.4	21.6	13.6	30	56	89	35	30	123	157	61	30	1016	1026	1002	30	0.2
Dic	31	226	31	2.11	4.15	0.93	31	13.2	20.3	9.5	31	26	72	37	31	94	118	28	31	1022	1038	1001	31	2.0
																						TOTAL		328.6

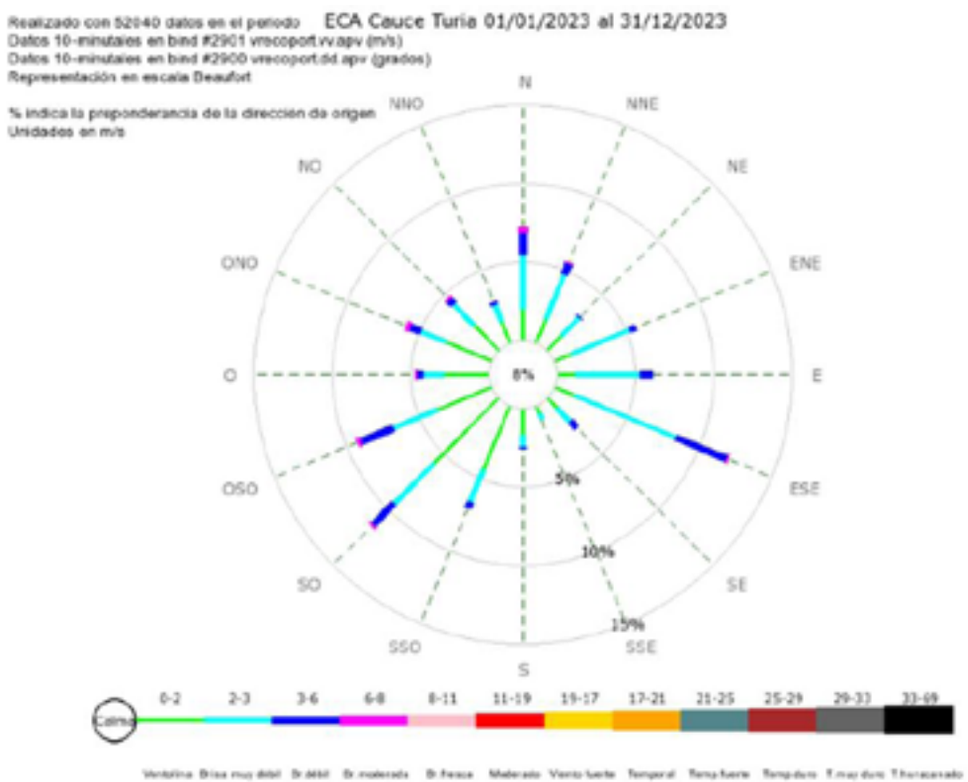
Wind rose - WS at AQMS TRANSVERSAL PONIENTE QUAY– 2023



Monthly statistical values, based on daily average, at the WS at AQMS WS TURIA Year 2023

	DD (grd)		VV (m/s)				TMP (°C)				HR (%)				RS (w/m²)				PRB (mb)				LL (l/m²)	
	Muestras	Media	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Acumulado
Ene	30	242	30	2.0	5.1	0.8	30	9.9	16.5	5.5	30	89	92	29	31	111	190	39	30	1023	1038	1003	31	7.6
Feb	28	243	28	1.7	3.9	0.8	28	8.4	10.5	4.8	28	67	87	33	28	132	203	22	28	1027	1039	1006	28	25.0
Mar	31	191	31	2.2	3.4	1.3	31	14.3	22.5	6.3	31	61	86	35	31	213	278	122	31	1016	1026	1007	31	1.0
Abr	30	127	30	2.2	3.6	1.3	30	15.8	20.4	12.5	30	68	86	35	30	276	319	172	30	1014	1020	1006	30	0.0
May	21	101	26	2.1	3.1	1.4	26	18	19.2	16.7	26	71	85	44	26	280	390	70	26	1012	1017	1004	26	82.6
Jun	29	96	30	2.0	2.7	1.4	30	23.6	26.6	18.9	30	74	84	61	30	304	363	107	30	1014	1023	1003	30	13.8
Jul	31	69	31	2.2	3.2	1.6	31	27.7	30.1	25.3	31	78	84	63	31	306	357	220	31	1014	1018	1008	31	24.4
Ago	31	124	31	2.2	3.6	1.3	31	27.7	30.1	25.2	31	70	82	41	31	294	346	226	31	1017	1022	1009	31	20.0
Sept	30	134	30	2.1	5.3	1.3	30	24.4	26.1	22.1	30	74	88	50	12	219	253	75	30	1020	1027	1013	30	143.4
Oct	31	223	31	2.1	3.9	1.3	31	22.2	24.7	17.1	31	69	84	51	31	164	234	83	31	1019	1028	1002	31	4.2
Nov	30	236	30	2.3	5.1	1.0	30	17.5	2.0	13.4	30	60	93	39	30	121	155	58	30	1022	1032	1009	30	0.2
Dic	31	232	31	1.7	3.1	0.6	31	13.0	20.8	8.8	31	61	77	40	31	92	115	27	31	1029	1044	1008	31	2.0
																						TOTAL		324.2

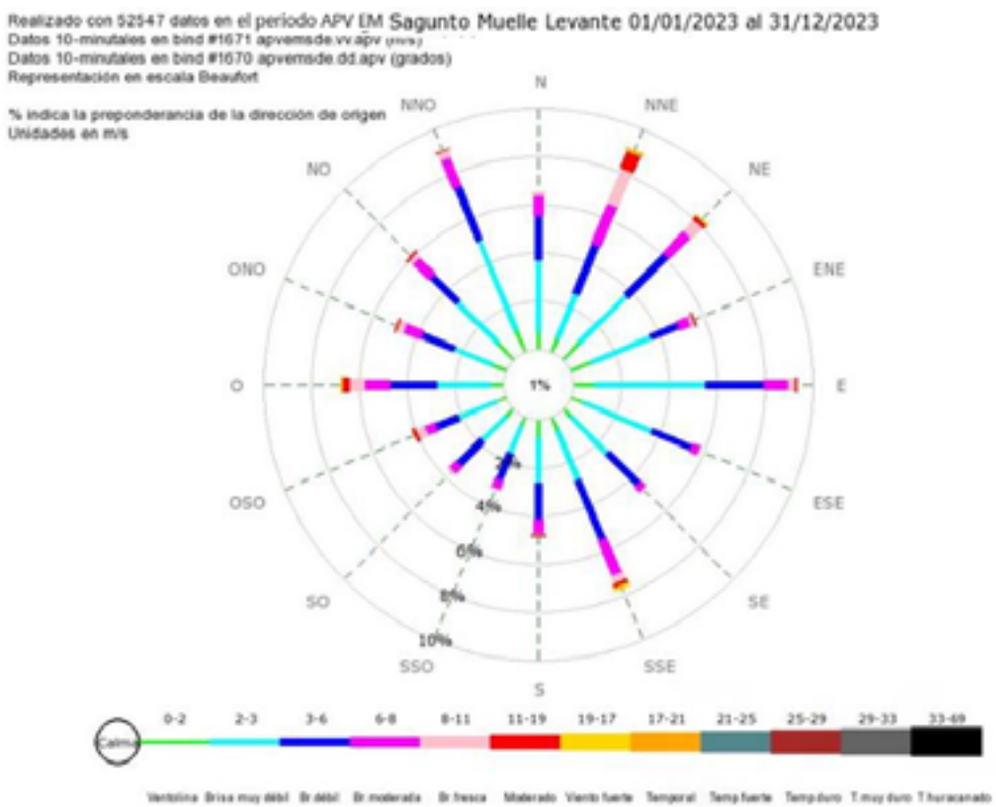
Wind rose - AQMS CAUCE TURIA – Year 2023



Monthly statistical values at the weather station WS LEVANTE QUAY– Year 2023

	DD (grd)		VV (m/s)				TMP (°C)				HR (%)				RS (w/m²)				PRS (mb)				LL (l/m²)	
	Muestras	Media	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Acumulado
Ene	31	274	31	4.34	9.96	1.77	31	10.9	18.0	6.5	31	57	82	30	31	101	123	54	31	1023	1033	1003	31	0.2
Feb	28	290	28	3.54	7.88	1.62	28	9.6	11.2	5.6	28	66	88	32	28	129	186	28	28	1027	1038	1009	28	43.0
Mar	31	192	31	4.26	7.46	2.23	31	14.6	22.3	7.0	31	62	87	37	31	190	225	109	31	1019	1027	1012	31	0.0
Abr	30	154	30	3.80	6.58	2.43	30	15.6	19.0	12.6	30	71	89	43	30	168	300	187	30	1018	1023	1011	30	0.0
May	31	121	31	3.59	5.32	2.43	31	17.8	19.4	15.6	31	70	94	44	31	273	354	101	31	1017	1021	1014	31	28.8
Jun	30	95	30	3.19	6.71	1.76	30	22.4	25.0	19.2	30	76	89	61	30	293	340	119	30	1014	1019	1010	30	61.2
Jul	31	159	31	3.51	5.31	2.39	31	26.1	27.5	23.2	31	81	87	60	31	296	332	263	31	1009	1015	1000	31	5.2
Ago	31	207	31	3.66	6.38	1.98	31	26.2	28.5	24.1	31	70	86	43	31	274	308	208	31	1007	1012	1000	31	18.2
Sept	30	173	30	4.33	11.67	1.99	30	23.3	24.9	21.2	30	74	89	47	30	212	263	66	30	1010	1016	1003	30	60.4
Oct	31	94	31	4.48	9.05	2.19	31	21.0	23.6	15.7	31	67	83	50	31	170	215	82	31	1010	1018	994	31	1.2
Nov	30	73	30	5.03	12.49	1.72	30	16.2	20.6	12.6	30	61	91	44	30	127	166	48	30	1013	1022	1000	30	1.2
Dic	31	54	31	3.99	8.55	1.76	31	12.7	19.9	9.3	31	58	75	37	31	95	118	28	31	1019	1033	999	31	2.0
																						TOTAL		216.4

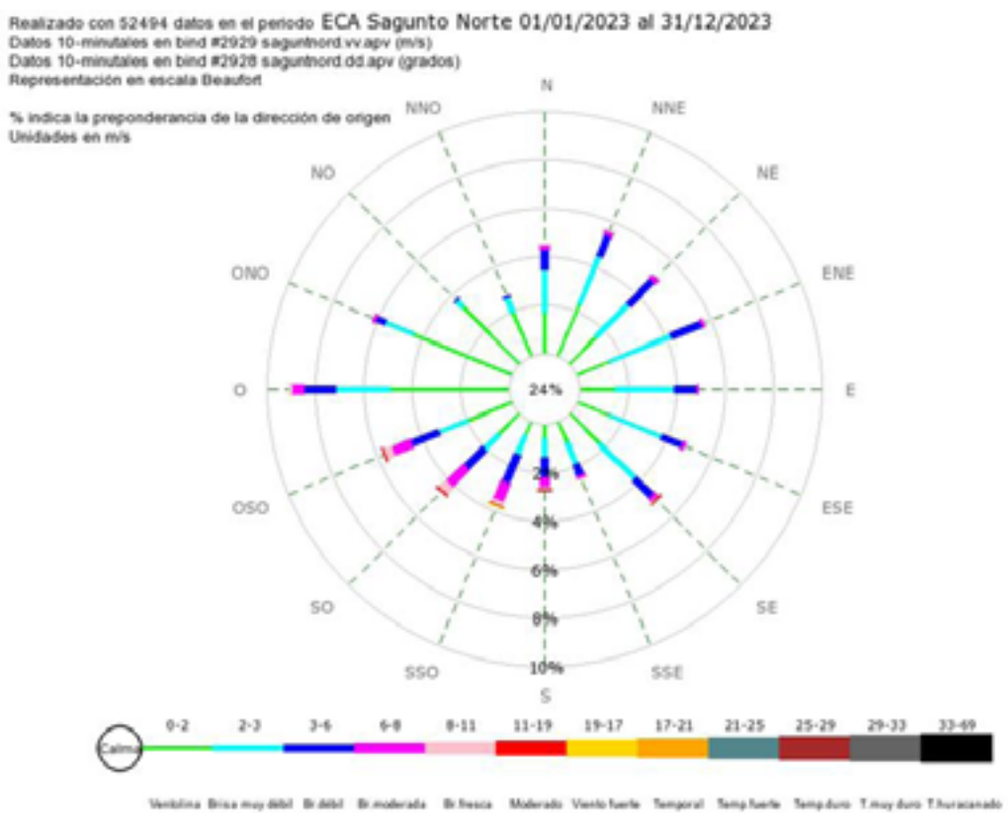
Wind rose - WS LEVANTE QUAY, SAGUNTO - Year 2023



Monthly statistical values, based on daily average, at the AQMS WS NORTE Year 2023

	DD (grd)		VV (m/s)				TMP (°C)				HR (%)				RS (w/m²)				PRB (mb)				LL (l/m²)	
	Muestras	Media	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Acumulado
Ene	31	257	31	2.36	8.09	0.56	31	11.3	18.6	7.1	31	57	84	29	31	74	102	17	31	1019	1032	998	31	0.2
Feb	28	282	28	1.62	4.19	0.39	28	10.3	12.1	6.7	28	65	89	29	28	94	143	5	28	1014	1036	1003	28	54.1
Mar	31	248	31	2.22	4.63	1.03	31	15.8	23.4	8.3	31	59	84	34	31	144	186	66	31	1016	1024	1007	31	0.3
Abr	30	175	30	1.98	4.84	0.88	30	17.1	20.6	13.9	30	65	83	37	30	216	271	142	30	1015	1020	1007	30	0.0
May	31	158	31	1.85	3.27	0.97	31	19.3	20.9	17.0	31	64	97	38	31	214	283	40	31	1015	1020	1011	31	35.4
Jun	30	71	30	1.66	4.36	0.77	30	24.0	26.5	20.7	30	69	85	52	30	239	289	76	30	1014	1021	1008	30	9.8
Jul	30	58	30	1.86	3.00	1.17	30	27.4	28.7	25.1	30	74	80	55	30	260	278	145	30	1014	1019	1011	30	12.6
Ago	31	137	31	1.99	4.08	0.78	31	27.5	29.7	25.1	31	63	77	35	31	247	286	163	31	1015	1020	1008	31	12.6
Sept	30	202	30	2.09	6.15	0.63	30	24.3	26.1	22.0	30	70	91	41	30	178	232	34	30	1016	1023	1007	30	79.0
Oct	31	233	31	2.26	5.22	0.77	31	22.0	24.8	16.8	31	65	83	43	31	158	203	59	31	1015	1025	997	31	1.4
Nov	30	248	30	2.64	9.35	0.57	30	17.2	22.0	13.4	30	56	94	36	30	103	157	30	30	1016	1026	1001	30	7.4
Dic	31	249	31	1.82	5.03	0.25	31	13.3	20.9	9.1	31	54	74	31	31	78	117	11	31	1022	1038	1000	31	2.7
																						TOTAL		215.6

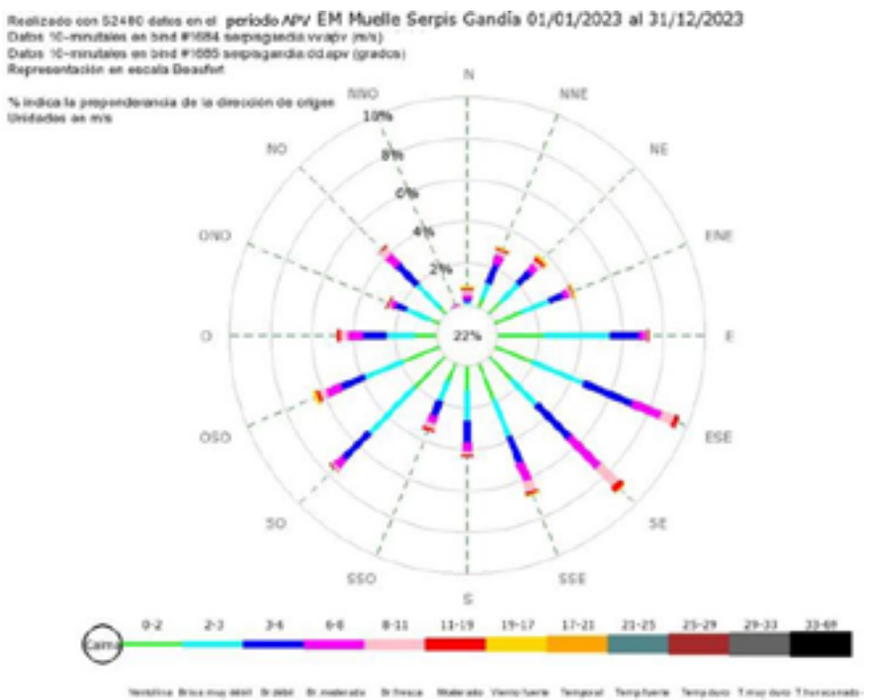
Wind rose - AQMS SAGUNTO NORTH - Year 2022



Monthly statistical values at the weather station WS SERPIS GANDÍA

	DD (grd)		VV (m/s)				TMP (°C)				HR (%)				RS (w/m²)				PRB (mb)				LL (l/m²)	
	Muestras	Media	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Media	Máx.	Mín.	Muestras	Acumulado
Ene	31	212	31	2.73	6.92	0.64	31	11.9	19.6	7.0	31	58	98	27	31	41	70	0	31	1025	1036	1009	31	20.6
Feb	28	171	28	2.41	11.46	0.48	28	10.4	12.4	7.1	28	79	98	51	28	55	111	1	28	1018	1040	1008	28	88.2
Mar	31	185	31	2.57	6.76	0.74	31	16.2	24.3	8.3	31	60	98	25	31	103	142	33	31	1020	1028	1013	31	2.8
Abr	30	147	30	2.83	5.06	1.34	30	17.3	22.1	14.1	30	74	98	29	30	138	159	93	30	1018	1024	1010	30	1.8
May	31	141	31	2.86	7.08	1.12	31	18.9	20.9	16.9	31	79	98	58	31	118	161	3	31	1019	1025	1014	31	145.2
Jun	30	138	30	2.52	4.84	0.43	30	23.5	26.6	20.2	30	84	98	56	30	135	169	19	30	1016	1024	1011	30	36.6
Jul	31	177	31	3.57	6.44	1.55	31	27.1	29.0	24.9	31	92	98	70	31	128	160	43	31	1017	1021	1010	31	11.2
Ago	31	190	31	3.73	7.15	1.45	31	26.9	30.2	24.4	31	77	98	33	31	130	157	60	31	1017	1022	1011	31	69.6
Sept	30	151	30	3.10	9.98	1.38	30	23.9	26.2	21.7	30	80	98	36	30	97	124	16	30	1019	1026	1011	30	161.6
Oct	31	132	31	2.92	7.51	1.42	31	21.8	24.7	17.5	31	67	97	36	31	70	113	16	31	1018	1028	1001	31	14.8
Nov	30	121	30	3.87	11.15	1.08	30	17.8	22.6	12.5	30	53	98	32	30	47	68	3	30	1019	1029	1006	30	2.0
Dic	31	129	31	2.74	6.67	0.74	31	13.5	18.4	9.2	31	58	94	32	31	30	43	9	31	1025	1051	1005	31	4.2
																						TOTAL		558.4

Wind rose - WS SERPIS GANDÍA – 2023



/ 6.3 Acoustic quality control network

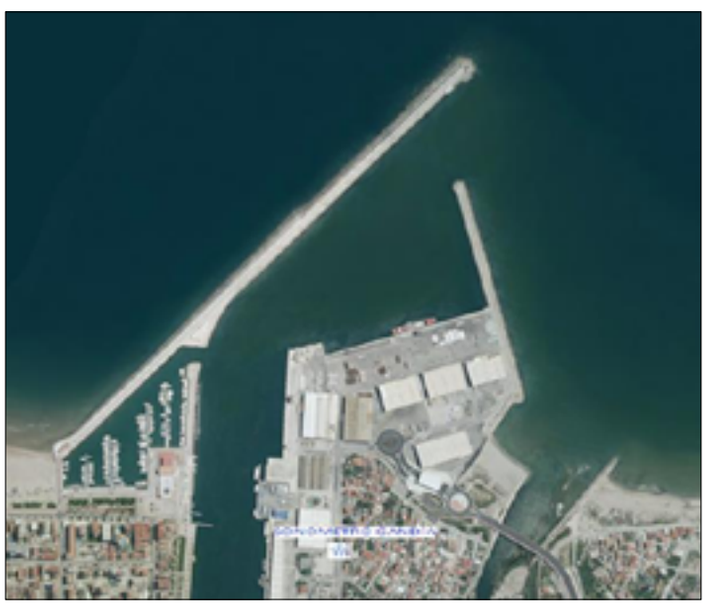
The Port Authority of Valencia monitors and controls acoustic emissions from the port environment. In this regard, the monitoring of acoustic quality is another of the objectives that the Department of Ecological Transition has set as a priority.
To carry out this monitoring, the Port Authority of Valencia has had four sound level meters in operation since 2021:

- Port of Valencia: three sound level meters distributed strategically across the port-city interface, allowing us to analyse acoustic quality in real time.
- Port of Sagunto: sound level meter was located at AQMS Sagunto North, the closest point of the port to the town of Sagunto.
- Port of Gandía: the sound level meter will be installed at the end of March 2023.

The location of acoustic control terminals is shown in the following image:

Port of Valencia

Port of Sagunto



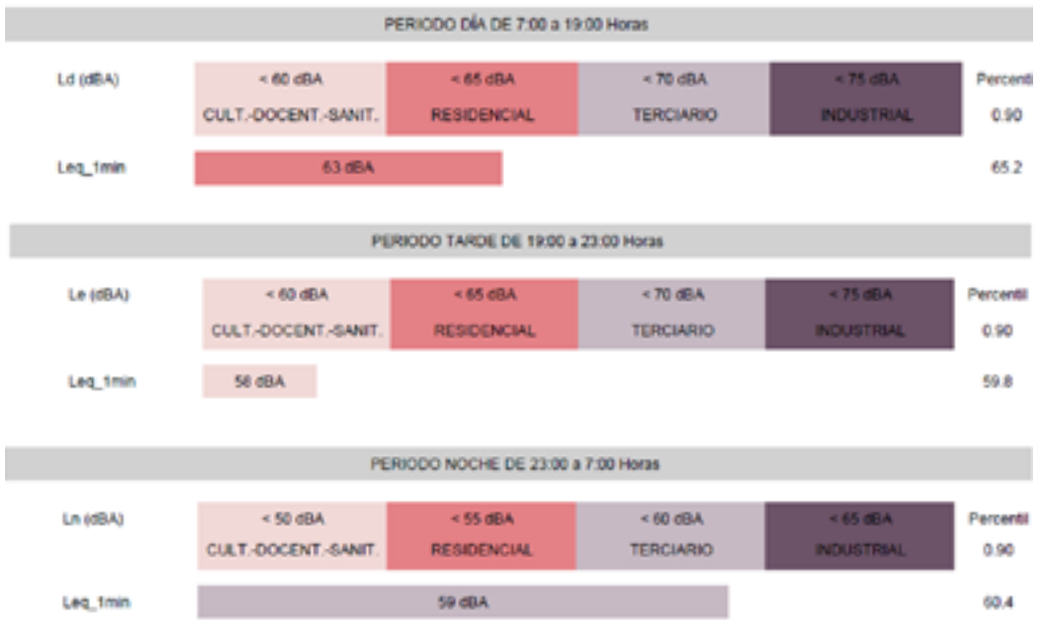
Port of Gandía

6.3.1 Results obtained in the year 2023 according to the benchmark regulation values

In 2023, 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 2023 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 October, developed Law 37/2003, of 17 December, in November, on Noise, 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).

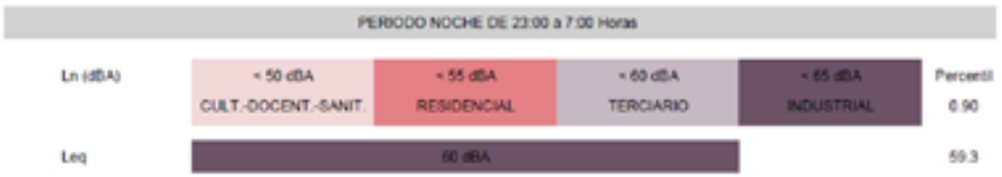
Sound level meter at AQMS Transversal Poniente Quay– 2023:

Sound level meter at AQMS Old Turia Riverbed – 2023



Sound level meter at VR Tunnel - Year 2023

Sound level meter at AQMS Sagunto Norte- Año 2023



Sound level meter in Gandía - Year 2023[(2)]

(2) Gandía sound level meter data from 22/03/2023

After the analysis of data in the annual period assessed (January-December 2023), 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.

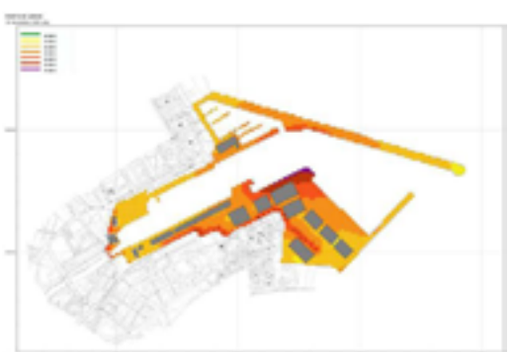
■ 6.3.2 "Static" acoustic maps

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, measurements 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.



L day (without vessels in port) Port of Gandía

L night (without 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.

In all the "predictive" acoustic maps and in the successive updates of these maps, which are described in the following section, the campaigns of punctual measurements established by regulation are carried out to validate them.

■ 6.3.3 Acoustic "predictive" maps

From 2011, updates were made 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, using the HARMONOISE NOMEPORTS model.

Subsequently, with the amendment of Annex II of Royal Decree 1513/2005, of 16 December, indicated in Order PCI/1319/2018, of 7 December, the calculation methods currently used for the assessment of industrial noise, aircraft noise, train noise and road traffic noise are replaced by a common calculation methodology developed by the European Commission through the project "Common Noise Assessment Methods in Europe (CNOSSOS-EU)". Therefore, in the 2020 and 2021 updates, according to the current regulations, the CNOSSOS model is used as the calculation method.

Port of Valencia

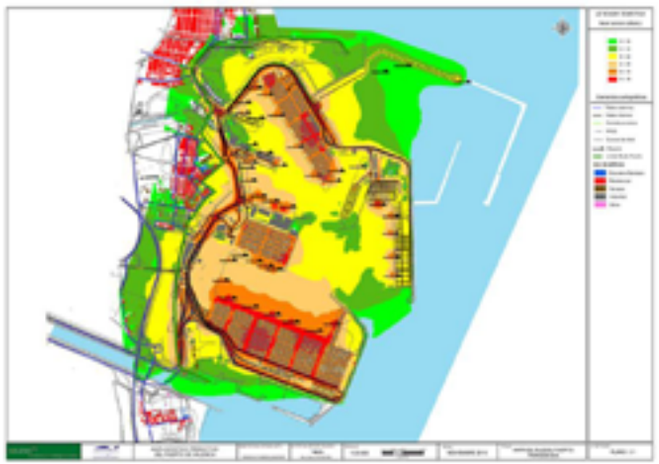
In the specific case of the port of Valencia, for its calculates, the initial information with which the 2008 map was drafted was updated and adapted to the new circumstances of the port: vehicle traffic on roads, type of activities carried out, acoustic level of machinery used in each area, timetables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

- The most significant noise in the daytime-evening period is vehicle traffic
- The most significant noise in the night period is industrial noise.
- 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 values established by R.D. 1367/2007 for the daytime period, or the 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

L afternoon Port of Valencia

L night Port of Valencia

In 2020, a study was carried out with the amendments arising from the implementation of the Special Plan for South Zone 2 of the Port of Valencia. The following image shows the area of study and its environment. The red line represents the scope of PEZS2 and the blue line represents the area where the acoustic impact of the new developments was considered most relevant:

In none of the scenarios that were calculated did noise levels exceed current legislation for both industrial and built-up areas. As such, it is not necessary to apply additional corrective measures.

During 2021, the predictive maps for the port of Valencia were updated, taking into account the new infrastructures, sources and current traffic for the creation of these maps.

The acoustic zoning is shown in the following map.

The noise levels obtained in the calculations of noise levels due to port activity show that the limit values indicated in table A1 of annex III of RD 1367/2007 are not exceeded in the urban environment of the port. Furthermore, in the urban environment which, a priori, may have a higher acoustic impact from the port, such as the Nazaret neighbourhood due to its proximity to the port infrastructure, it has been confirmed that the road traffic circulating along the roads in this neighbourhood also has an existing acoustic impact in the area. A summary of the predictive maps is presented below:

L day Port of Valencia

L afternoon Port of Valencia

L night Port of Valencia

The main conclusions obtained from the noise level maps and the evaluation of the façade are that the residential areas closest to the port infrastructures are not exposed, due to the activity of the port of Valencia, to levels higher than the limit values set out in table A1 of annex III of RD 1367/2007. Furthermore, it is concluded that the predominant source of noise in the day and evening periods is road traffic on the roads running through the port, which is mostly heavy vehicle traffic. Ships and industrial sources have a more moderate impact, however, in the night period the contribution of industrial sources increases due to the decrease in road traffic. Rail traffic has a minimal impact on the environment. However, in no case are the limit values set out in table A1 of Annex III of RD 1367/2007 exceeded.

Likewise, an evaluation of the acoustic impact due to road traffic on the roads around the port has been carried out, reaching the conclusion that port activity does not imply, in most of the dwellings, a transmission of sound levels higher than those already existing in the nearest residential buildings, due to road traffic on the city's roads in any of the three evaluation periods.

Port of Sagunto

In 2023, the predictive noise map of the port of Sagunto was updated. In line with current legislation, three periods (day, evening and night) are established for the presentation of the noise impact in the corresponding bands. The maps prepared are presented below:

- The acoustic zoning is shown in the following map:

Ld total port of Sagunto

Ln total port of Sagunto

Ld 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.

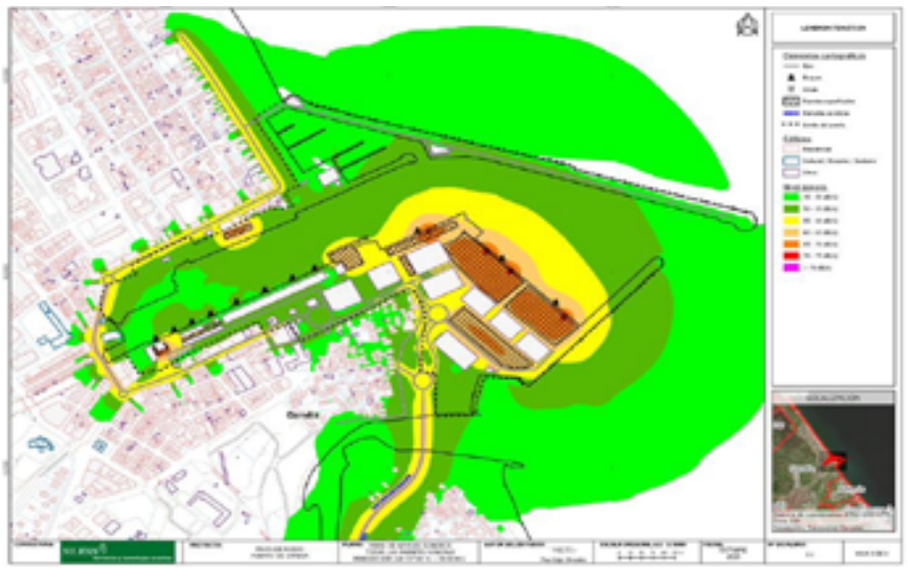
Port of Gandia

In 2013, the first predictive study was carried out with the new extension planned at the port of Gandía, and the day and night period maps were published. As a conclusion, it has been shown 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, completed in October 2020, are presented below:

Acoustic zoning map:

Acoustic maps for the port of Gandía including all existing sources:



L Day Gandía Port

L Night Gandía Port

L Afternoon Gandía Port

In terms of the variations detected with respect to the 2013 map, the main change with this update is the new south entrance with the section of the N-337 motorway that connects the N-332 with the entrance. This means that heavy vehicles have changed their access routes, eliminating the need to pass through the centre of Gandía. In acoustic terms, it is noted that a reduction of 5 dB was recorded from the levels shown in the 2013 map.

From the analysis of the thresholds set out in RD 1367/2007 and the noise maps drafted, it can be observed that said thresholds were not exceed in any period in the residential areas surrounding the port of Gandía.

/ 6.4 Water quality

■ 6.4.1 Quality of water bodies in the port premises

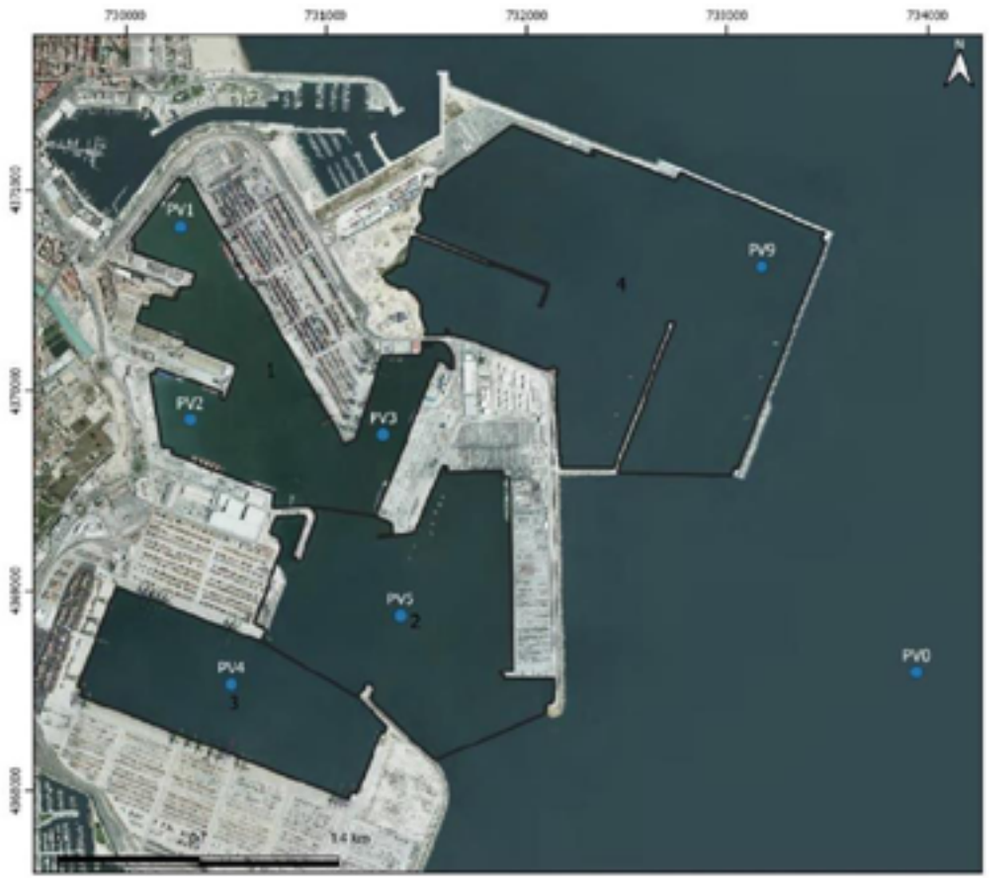
The Water Directive (2000/60/EC) establishes that the Member States must protect, improve and regenerate all surface water bodies, with the aim of reaching good condition for these water bodies no more than 15 years after the entry into force of the Directive in 2015. In the case of artificial or heavily 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 intra-port bodies of water. 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

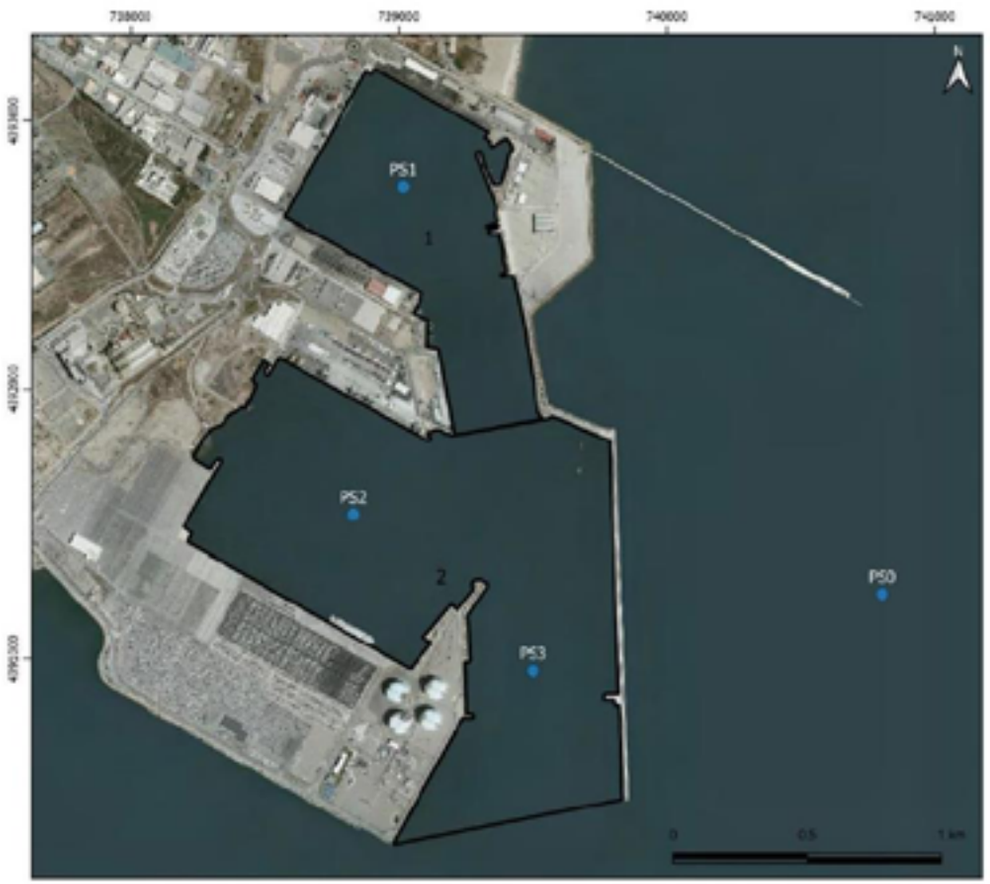
In the year 2023, periodic sampling campaigns were carried out for the control of the quality of waters in the ports managed by the Port Authority of Valencia:

The area of study includes both intra-port waters (water bodies heavily modified due to the presence of ports), and a control station located outside the ports, representing the extra-port waters (coastal water body) at each port.

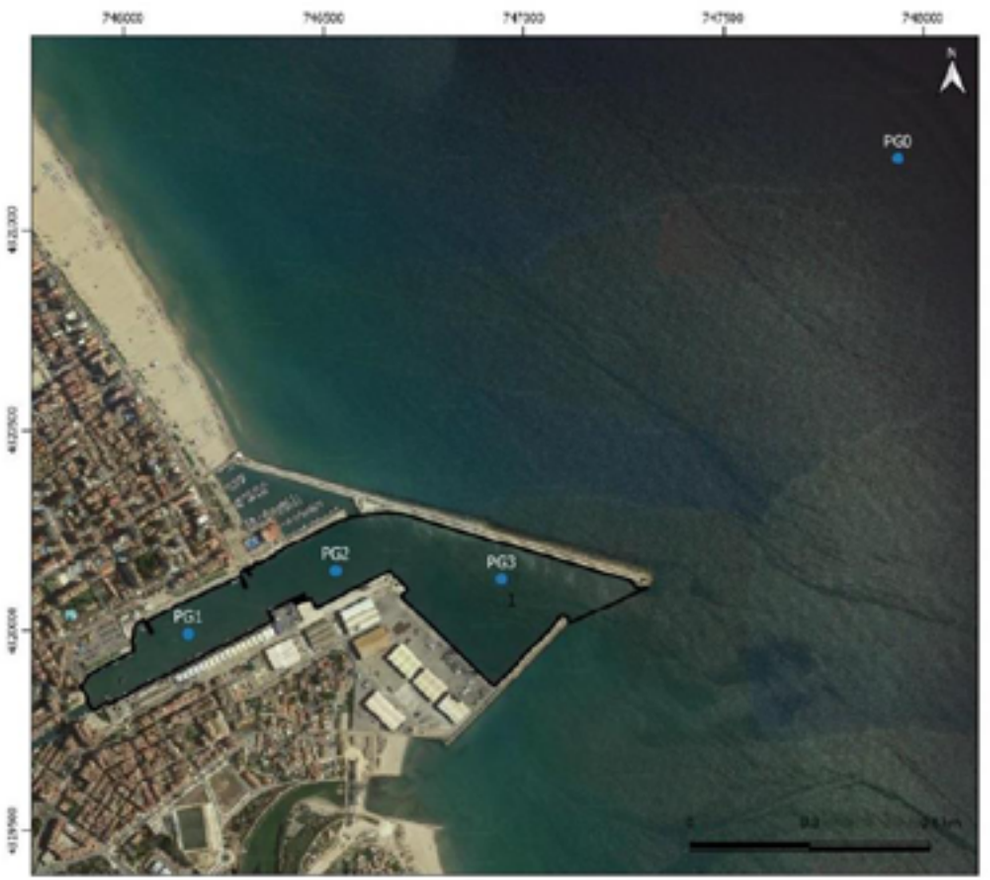
The locations of the control points established for the ports of Valencia, Sagunto and Gandía are displayed below:



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)

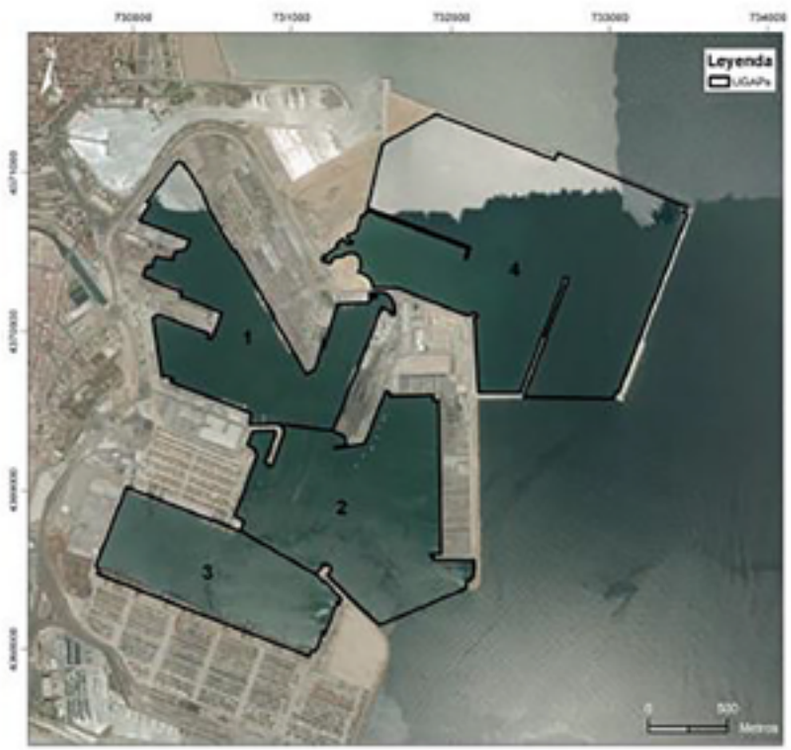
To assess the environmental quality of port waters, following the criteria established in the ROM 5.1-13, the Port Aquatic Management Units (hereinafter PAMUs) were delimited and defined as an instrument for the planning of the aquatic environment of the Port Services Zone (PSZ). In this context, these 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 hydro-morphological characteristics
- Hydrodynamic conditions

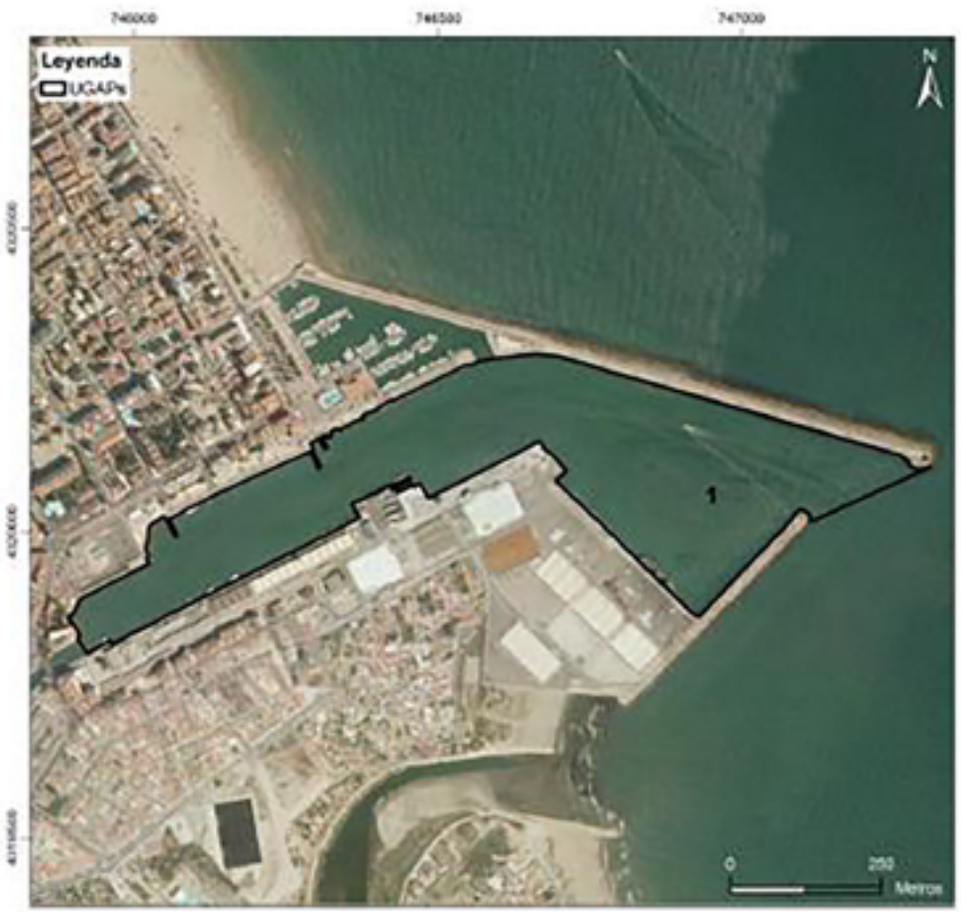
All PAMUs have been classified as:

PUERTO	UGAP	CATEGORÍA	CLASE	TIPO
VALENCIA	UGAP-1	AGUAS COSTERAS	AGUAS MUY MODIFICADA	CM3: AGUAS COSTERAS MEDITERRÁNEAS DE RENOVACIÓN BAJA
	UGAP-2	AGUAS COSTERAS	AGUAS MUY MODIFICADAS	CM3: AGUAS COSTERAS MEDITERRÁNEAS DE RENOVACIÓN BAJA
	UGAP-4	AGUAS COSTERAS	AGUAS MUY MODIFICADAS	CM3: AGUAS COSTERAS MEDITERRÁNEAS DE RENOVACIÓN BAJA
	UGAP-4	AGUAS COSTERAS	AGUAS MUY MODIFICADAS	CM3: AGUAS COSTERAS MEDITERRÁNEAS DE RENOVACIÓN BAJA
SAGUNTO	UGAP-1	AGUAS COSTERAS	AGUAS MUY MODIFICADAS	CM3: AGUAS COSTERAS MEDITERRÁNEAS DE RENOVACIÓN BAJA
	UGAP-2	AGUAS COSTERAS	AGUAS MUY MODIFICADAS	CM3: AGUAS COSTERAS MEDITERRÁNEAS DE RENOVACIÓN BAJA
GANDIA	UGAP-1	AGUAS COSTERAS	AGUAS MUY MODIFICADAS	CM3: AGUAS COSTERAS MEDITERRÁNEAS DE RENOVACIÓN BAJA

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 intra-port 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

For the classification of the ecological potential and chemical state of the water bodies, monitoring has been carried out on the biological and physio-chemical indicators in the case of ecological potential, and through the analysis of priority substances and other contaminants in the case of chemical state.

The parameters analysed in 2023 are detailed below:

MATRIX	MEASURES IN SITU	LABORATORY ANALYSIS	SAMPLING POINTS
WATER COLUMN	• Chlorophylla • 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.
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, Chriseno, 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

Variables analysed for study of ecological potential

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 he variables studied:

PARAMETER	UNITS	SAMPLING LEVEL	SAMPLING METHOD	ANALYSIS METHOD
TEMPERATURE	ºC	WATER COLUMN PROFILE	MULTIPARAMETER PROBE SBE 19PLUS V2	THERMOMETRY
SALINITY	PSU	WATER COLUMN PROFILE	MULTIPARAMETER PROBE SBE 19PLUS V2	CONDUCTIMETRY
DISSOLVED OXYGEN	MG/L Y % SAT.	WATER COLUMN PROFILE	SBE 43 SENSOR COUPLED TO MULTIPARAMETER PROBE SBE 19PLUS V2	POLAROGRAPHIC
METHOD	NTU	PERFIL COLUMNA DE AGUA	SENSOR SEAPOINT ACOPLADO A SONDA MULTIPARAMÉTRICA SBE 19PLUS V2	NEFELOMETRÍA
TURBIDITY	NTU	WATER COLUMN PROFILE	SEAPOINT SENSOR COUPLED TO SONDA MULTIPARAMETER PROBE SBE 19PLUS V2	NEPHELOMETRY
CHLOROPHYLL A	MG/L	WATER COLUMN PROFILE	CYCLOPS -7 SENSOR COUPLED TO MULTIPARAMETER PROBE SBE 19PLUS V2	FLUOROMETRICS

In situ measurement methods.

PARAMETER	UNIT	TESTING PROCEDURE
NITRATES	MG/L	COLORIMETRY
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	MG/L	GAS/MASS CHROMATOGRAPHY
ANTHRACENE	MG/L	GAS/MASS CHROMATOGRAPHY
ATRAZINE	MG/L	GAS/MASS CHROMATOGRAPHY
BENZENE	MG/L	GAS/MASS CHROMATOGRAPHY
BROMINATED DIPHENYL ETHERS	MG/L	GAS/MASS CHROMATOGRAPHY
CADMIUM	MG/L	ICP/MASS SPECTROSCOPY
CARBON TETRACHLORIDE	MG/L	GAS/MASS CHROMATOGRAPHY
CHLOROALKANES C10-13	MG/L	GAS/MASS CHROMATOGRAPHY
CHLORFENVINPHOS	MG/L	GAS/MASS CHROMATOGRAPHY
CHLORPYRIFOS (CHLORPYRIFOSSETHYL)	MG/L	GAS/MASS CHROMATOGRAPHY
ALDRIN	MG/L	GAS/MASS CHROMATOGRAPHY
DIELDRIN	MG/L	GAS/MASS CHROMATOGRAPHY
ENDRIN	MG/L	GAS/MASS CHROMATOGRAPHY
ISODRIN	MG/L	GAS/MASS CHROMATOGRAPHY
DDT TOTAL (ADD DDT, DDD AND DDE)	MG/L	GAS/MASS CHROMATOGRAPHY
PP-DDT	MG/L	GAS/MASS CHROMATOGRAPHY
1,2-DICHLOROETHANE	MG/L	GAS/MASS CHROMATOGRAPHY
DICHLOROMETHANE	MG/L	GAS/MASS CHROMATOGRAPHY
DI (2-ETHYLHEXYL) PHTHALATE (DEHP)	MG/L	GAS/MASS CHROMATOGRAPHY
DIURON	MG/L	CHROMATOGRAPHY LIQUID-MASS
ENDOSULFAN	MG/L	GAS/MASS CHROMATOGRAPHY
FLUORANTHENE	MG/L	GAS/MASS CHROMATOGRAPHY
HEXACHLOROBENZENE	MG/L	GAS/MASS CHROMATOGRAPHY
HEXACHLOROBUTADIENE	MG/L	GAS/MASS CHROMATOGRAPHY
HEXACHLOROCYCLOHEXANES	MG/L	CROMATOGRAFÍA GASES/MASAS

PARAMETER	UNIT	TESTING PROCEDURE
(A-HCH, B-HCH, Δ-HCH, LINDANE)	MG/L	GAS/MASS CHROMATOGRAPHY
ISOPROTURON	MG/L	CHROMATOGRAPHY LIQUID-MASS
LEAD AND ITS COMPOUNDS	MG/L	ICP/MASS SPECTROSCOPY
MERCURY AND ITS COMPOUNDS	MG/L	ATOMIC FLUORESCENCE
NAPHTHALENE	MG/L	GAS/MASS CHROMATOGRAPHY
NICKEL AND ITS COMPOUNDS	MG/L	ICP/MASS SPECTROSCOPY
NONYLPHENOLS (4-NONYLPHENOL)	MG/L	GAS/MASS CHROMATOGRAPHY
OCTIFENOLS ((4-(1,1',3,3'-TETRAMETHYLBUTYL)-FENOL))	MG/L	GAS/MASS CHROMATOGRAPHY
PENTACHLOROBENZENE	MG/L	GAS/MASS CHROMATOGRAPHY
PENTACHLOROPHENOL	MG/L	GAS/MASS CHROMATOGRAPHY
BENZO(A)PYRENE	MG/L	GAS/MASS CHROMATOGRAPHY
BENZO(B)FLUORANTHENE	MG/L	GAS/MASS CHROMATOGRAPHY
BENZO(K)FLUORANTHENE	MG/L	GAS/MASS CHROMATOGRAPHY
BENZO(G,H,I)PERYLENE	MG/L	GAS/MASS CHROMATOGRAPHY
INDENE(1,2,3-CD)PYRENE.	MG/L	GAS/MASS CHROMATOGRAPHY
SIMAZINE	MG/L	GAS/MASS CHROMATOGRAPHY
TETRACHLOROETHYLENE	MG/L	GAS/MASS CHROMATOGRAPHY
TETRACHLOROETHYLENE	MG/L	GAS/MASS CHROMATOGRAPHY
TRIBUTYLTIN COMPOUNDS (TRIBUTYLTIN CATION)	MG/L	GAS/MASS CHROMATOGRAPHY
TRICHLOROBENZENES	MG/L	GAS/MASS CHROMATOGRAPHY
TRICHLOROMETHANE	MG/L	GAS/MASS CHROMATOGRAPHY
TRIFLURALIN	MG/L	GAS/MASS CHROMATOGRAPHY
DICOFOL	MG/L	GAS/MASS CHROMATOGRAPHY
QUINOXYFEN	MG/L	CHROMATOGRAPHY LIQUID-MASS
PERFLUOROOCTANESULFONIC ACID AND ITS	MG/L	CROMATOGRAFÍA GASES/MASAS
COMPOUNDS (PFOS)	MG/L	CHROMATOGRAPHY LIQUID-MASS
ACLONIFEN	MG/L	GAS/MASS CHROMATOGRAPHY
CYBUTRYNE	MG/L	CHROMATOGRAPHY LIQUID-MASS
CYPERMETHRIN	MG/L	GAS/MASS CHROMATOGRAPHY
DICHLORVOS	MG/L	CHROMATOGRAPHY LIQUID-MASS
HEXABROMOCYCLODODECANE (HBCDD)	MG/L	GAS/MASS CHROMATOGRAPHY

PARAMETER	UNIT	TESTING PROCEDURE
HEPTACHLOR	MG/L	GAS/MASS CHROMATOGRAPHY
HEPTACHLOR EPOXIDE	MG/L	GAS/MASS CHROMATOGRAPHY
TERBUTRYN	MG/L	GAS/MASS CHROMATOGRAPHY
ETHYLBENZENE	MG/L	GAS/MASS CHROMATOGRAPHY
TOLUENE	MG/L	GAS/MASS CHROMATOGRAPHY
1,1,1-TRICHLOROETHANE	MG/L	GAS/MASS CHROMATOGRAPHY
XYLENES (ADD O, M, P)	MG/L	GAS/MASS CHROMATOGRAPHY
TERBUTHYLAZINE	MG/L	GAS/MASS CHROMATOGRAPHY
ARSENIC	MG/L	ICP/MASS SPECTROSCOPY
COPPER	MG/L	ICP/MASS SPECTROSCOPY
CHROMIUM VI	MG/L	COLORIMETRY
SELENIUM	MG/L	ICP/MASS SPECTROSCOPY
ZINC	MG/L	ICP/MASS SPECTROSCOPY

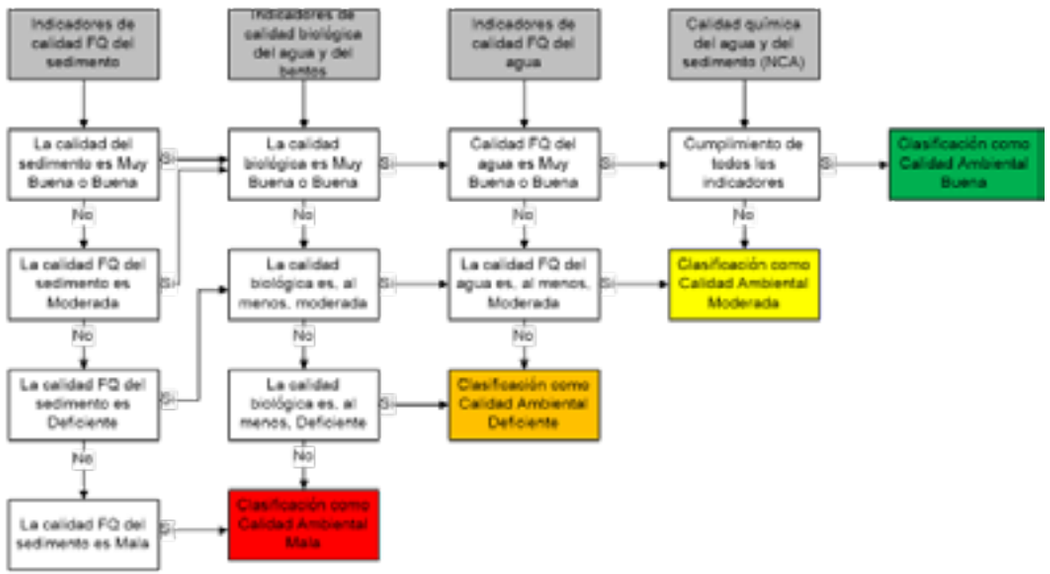
Laboratory test methods for water samples

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
METALS: CADMIUM, LEAD, COPPER, NICKEL, ZINC, ARSENIC, CHROMIUM VI	MG/KG	INDUCTIVELY COUPLED PLASMA (ICP)
MERCURY	MG/KG	ATOMIC ABSORPTION SPECTROMETRY
POLYCHLORINATED BIPHENYLS (PCBS)	MG/KG	GAS/MASS CHROMATOGRAPHY
COMPOUNDS AND TRIPHENYLTIN (TBTS)	MG/KG	GAS/MASS CHROMATOGRAPHY
HAPS	MG/KG	GAS/MASS CHROMATOGRAPHY
BENTHIC FAUNA OF INVERTEBRATES (BOPA)	IND/M2	OPTICAL MICROSCOPY

Laboratory test methods for sediment samples.

6.4.5 Water quality monitoring results

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:

Resultados de la evaluación de la calidad ambiental 2023

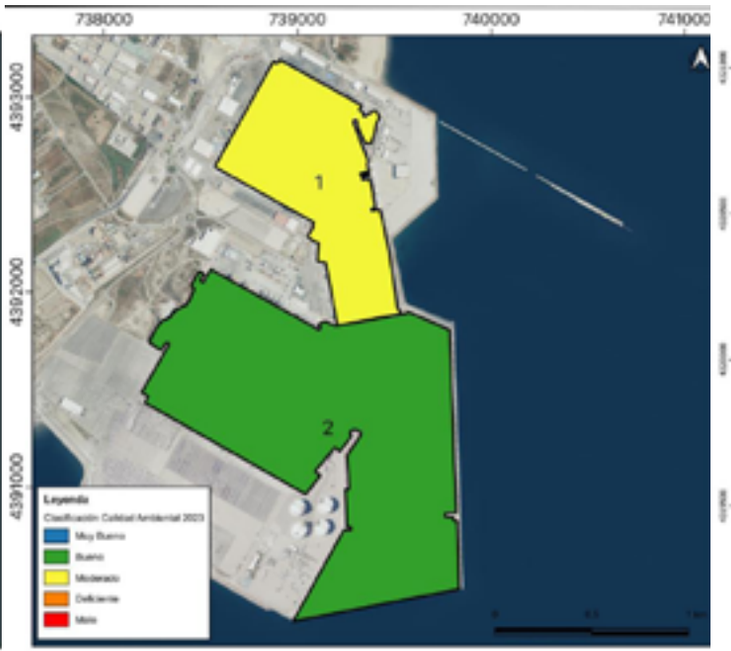
PUERTO	UGAP	POTENCIAL ECOLÓGICO			ESTADO QUÍMICO	CLASIFICACIÓN DE LA CALIDAD AMBIENTAL
		INDICADORES DE CALIDAD FQ DEL SEDIMENTO	INDICADORES DE CALIDAD BIOLÓGICA DEL AGUA Y DEL BENTOS	INDICADORES DE CALIDAD FQ DEL AGUA	CALIDAD QUÍMICA DEL AGUA Y DEL SEDIMENTO	
VALENCIA	UGAP 1	BUENA	BUENA	BUENA	NA	BUENA
	UGAP 2	BUENA	BUENA	BUENA	BUENA	BUENA
	UGAP 3	BUENA	MODERADA	BUENA	NA	MODERADA
	UGAP 4	BUENA	BUENA	BUENA	BUENO	MODERADA
SAGUNTO	UGAP 1	MUY BUENA	BUENA	BUENA	NO ALCANZA EL BUENO	MODERADA
	UGAP 2	MUY BUENA	BUENA	BUENA	BUENA	BUENA
GANDÍA	UGAP 1	BUENA	MODERADA	BUENA	NO ALCANZA EL BUENO	MODERADO

The results show that the environmental quality rating is:

- Port of Valencia: Good for PAMU 1 and PAMU 2, and Moderate for PAMU 3 and PAMU 4.
- Port of Sagunto: Moderate for PAMU 1 and good for PAMU 2.
- Port of Gandía: Moderate for PAMU 1.

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

Results of PAMU Evaluation at the Port Of Valencia.



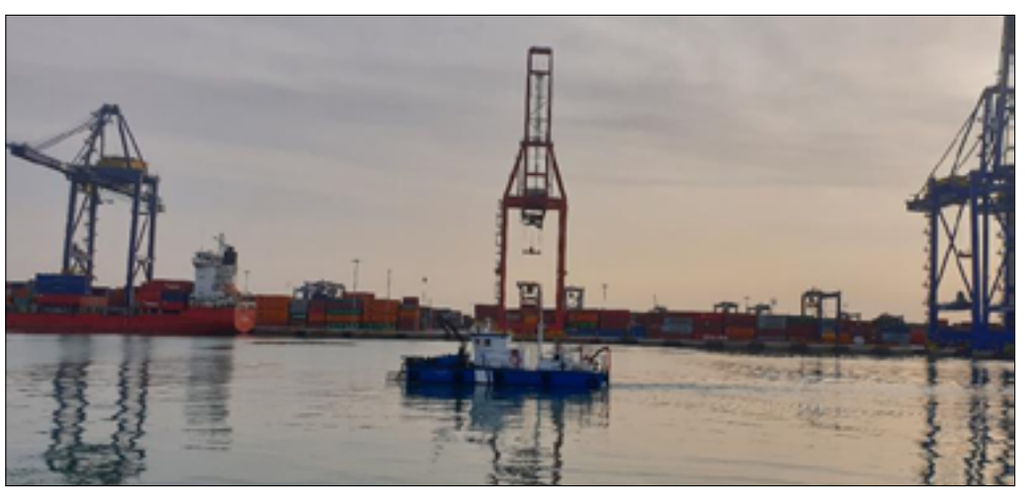
Results of PAMU Evaluation at the Port Of Sagunto.

Results of PAMU Evaluation at 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 2023 period, through LIMPIAMAR III, a total of 4 tons 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 piers, the Port Authority of Valencia periodically conducts dredging work for maintenance based on the needs for access and manoeuvrability of the ports managed.

No dredging operations were completed at the ports of Sagunto, Valencia, and Gandía in 2023.

/ 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 previously continued in the year 2023, simultaneously with the development of the works carried out.

From the start-up of the works, and therefore, the planned Environmental Monitoring Plan, in the year 2008, and taking into account the data obtained and reflected in the existing annual reports at that time, 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 provided for and therefore there was no significant effect on the environment.

/ 6.7 Soil management

From the Ecological Transition Area, environmental control of the concessions is conducted, 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 contaminating activities and the criteria and standards for the declaration of contaminated soils, before the competent environmental body. File of concessionary and authorised companies updated with the CNAE-2009 code of their activities.
- Request for the most detailed complementary reports, data or analysis that allow for soil contamination to be assessed, 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.
- At the legislative level, the changes in the new Law 7/2022 of 8 April on waste and contaminated soils for a circular economy have been incorporated. In this regard, the information provided to the corresponding department on the soil requirements that must be included in all concessions and authorisations granted to companies within the port public land domain has been updated.

Puertos del Estado has signed a management contract with EMGRISA, a company specialised in soil issues, for the establishment of a management plan for contaminated soil in ports of general interest, which is still pending receipt for its application.

/ 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 2023, the total surface green area of the Port of Valencia was approximately 39,612.95 m^2 of which 21,600.00 m^2 was pasture 18,012.95 m^2 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 m^2, broken down as follows: 425,00 m^2 of grass pasture and 1.250,00 m^2 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 m^2, broken down as follows: 3,059.00 m^2 of pasture and grass and 4,310.00 m^2 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

Given the need to update the existing studies in the field of mobility in the Commercial Port of Valencia, the PAV proceeded in July 2022 to the preparation of a Diagnostic Study of Sustainable Mobility to Work in the Commercial Port of Valencia in which the existing reality was reflected and, in 2023, as a next step, work is being carried out to draw up a new SUSTAINABLE TRANSPORT TO WORK PLAN IN THE COMMERCIAL PORT OF VALENCIA (hereinafter PTST) as a reference instrument that regulates and manages mobility in itinere of the PCV, which is expected to be completed in 2024.

The overall aim of the PTST is to optimise the efficiency and sustainability of travel for employees and users of the PCV, seeking to reduce vehicle congestion, minimise pollutant emissions and improve accessibility. It is further elaborated upon in the specific objectives:

1. Promote mobility by sustainable modes, mainly through non-motorised modes.
2. Reduce the use of private vehicles, through a more rational use of them.
3. Encourage the use of collective transport, either urban transport or through collaborative transport.
4. Improve the conditions of universal accessibility, both in the access routes and inside the building.
5. To raise awareness among the port community to the advantages of sustainable mobility in terms of quality of life, health and the environment.

In accordance with the problems identified and the objectives of the PTST, the following 5 strategic lines have been proposed:

- **STRATEGIC LINE 1: ENCOURAGE THE USE OF PUBLIC TRANSPORT:** Encourage and strengthen the preference for public transport, reducing reliance on individual vehicles and promoting more efficient and sustainable travel.
- **STRATEGIC LINE 2: ENCOURAGE PEDESTRIAN-CYCLE MOBILITY:** Promote and facilitate the use of bicycles/VMPs and walking as modes of transport, improving accessibility and contributing to a more active, healthy and environmentally friendly mobility.
- **STRATEGIC LINE 3 BOOST ELECTRIC MOBILITY:** Encourage the adoption of electric vehicles, reducing polluting emissions and promoting cleaner and more sustainable technologies in daily mobility
- **STRATEGIC LINE 4 IMPROVE ROAD TRAFFIC MANAGEMENT:** Implement strategies to optimise traffic flow and safety, reducing congestion and improving vehicle travel efficiency.
- **STRATEGIC LINE 5 OPTIMISE MOBILITY MANAGEMENT:** To coordinate and improve, on a global basis, the different aspects of mobility, integrating innovative solutions to ensure efficient, sustainable and adaptive management to the changing needs of the port environment.

/ 6.10 Other actions

The specific actions carried out in 2023 were the following:

- Monitoring of the existing sewerage network in the port of Valencia.
- Cat control service. This service is provided by the PAV for the non-concessioned and non-authorised area in the ports of Valencia, Sagunto and Gandía. In 2021, 2022 and 2023, a total of 188 animals were sterilised between the three ports.
- Pest Control Service with a specialist company in the field. This service is provided for all types of insect or rodent infestations in the PAV's own buildings and in areas of public port use that are neither concessioned nor authorised in the ports of Valencia, Sagunto and Gandía.
- Monitoring of birdlife in the ports of Valencia, Sagunto and Gandía.

7. EMERGENCY RESPONSE

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	2019	2020	2021	2022	2023
URGENT HEALTH CARE	266	186	231	271	270
TOTAL DISCHARGES	34	22	33	13	36
SMALL DISCHARGES OF SEA ORIGIN	17	6	17	6	20*
SMALL DISCHARGES OF LAND ORIGIN (SPILLS)	17	16	16	7	16
COLLECTION OF OBJECTS	2	18	9	22	13
CLOSURE OF THE PORT	14	15	8	23	10
FIRES OR OUTBREAKS	6	8	6	8	10

(*) 11 spots of non-hydrocarbon substances were accounted for here

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 2023:

DRILLS	2019	2020	2021	2022	2023
1. PAV EMERGENCY PLANS					
1.1.- LED BY THE PAV:	**6**	**0**	**2**	**5**	6
FIRE	6		1	5	4
HYDROCARBON SPILL				-	2
OTHER			1	-	-
1.2. IN COLLABORATION WITH OTHER ORGANISATIONS	**1**	**0**	**1**	**3**	5
IN DIFFERENT TERMINALS				2	3
IN COLLABORATION WITH OTHER ENTITIES	1		1	1	2
2. IN TERMS OF PROTECTION:	**14**	**13**	**19**	**21**	22
TOTAL	21	13	22	29	33

In terms of protection, 21 simulations were carried out.

8. INNOVATION AND COOPERATION PROJECTS

8. INNOVATION AND COOPERATION PROJECTS

For the implementation of responsible and innovative 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 fosters 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 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 the gradual introduction of technologies for the energy transition towards more sustainable operations both in ports and in the companies that form part of the Port Community.

/ 8.1 Projects completed

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

- ***PROJECT ECOPORT (1998)*** - *LIFE Programme of the European Commission*
- ***PROJECT INDAPORT (2000)*** - *Programme for the Promotion of Technological Research (PROFIT) of the Ministry of Science and Technology.*
- ***PROJECT HADA (2002)*** - *LIFE Programme of the European Commission*
- ***PROJECT ECOPORTS (2002)*** - *Fifth Framework Programme of the European Commission*
- ***PROJECT SECURMED (2004)*** - *European Commission Interreg IIIB Programme*
- ***PROJECT HADA (2005)*** - *LIFE Programme of the European Commission*
- ***PROJECT MADAMA (2005)*** - *Interreg IIIB Medocc Programme of the European Commission*
- ***PROJECT NOMEPORTS (2005)*** - *LIFE Programme of the European Commission*
- ***PROJECT ELEFSINA BAY 2020 (2007)*** - *LIFE Programme of the European Commission*
- ***PROJECT ECO- LOGISTYPORT (2008)*** - *Empleaverde Programme of the European Social Fund*
- ***IMPROVED 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.*
- ***PROJECT CLIMEPORT (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 Cádiz 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.

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 ended in December 2021.

ECCLIPSE PROJECT (2019)

European Project for the Assessment of Climate Change in Ports in south-western 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 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 ended in April 2023..

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, 50% of which will be financed 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 ended in December 2023.

EALING- OPS PROJECT (2020)

European flagship Action for cold ironing in ports (EALING) is led by the Valenicaport Foundation and financed by the European Commission's Connecting Europe Facility (CEF). This project has a total budget of €7,290,800, 50% of which will be financed by the Commission.

EALING - OPS is a European project that expresses the need to accelerate the effective rollout of solutions for electricity connection for vessels (OPS) in the ports of the EU and it proposes the following objectives:

- Assess operational and environmental functioning participating ports, for the supply to different ships (ro-ro, ro-pax, container ships, ferries);
- Contribute to the continued progress of an EU framework that is harmonised and interoperable to deploy OPS infrastructure in accordance with the EU's technical, legal and regulatory guidelines.
- Conduct the vital technical, environmental, socio-economic, and financial studies to hasten the works phase on OPS infrastructure.
- – Implement OPS infrastructure and equipment in at least 16 EU ports belonging to different sea basins: Mediterranean, Black Sea, Atlantic and North Sea.

The project ended in December 2023

/ 8.2 Development projects

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 pilot projects 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 working 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 at the Port of Valencia.

The project will end in December 2024.

PROJECT EALING – Works Valenciaport (2020)

The EALING - Works Valenciaport Project: Preparation of the electrical grid of the Port of Valencia for Onshore Power Supply is led by the Valenicaport Foundation and financed by the European Commission's Connecting Europe Facility (CEF). This project has a total budget of €8,593,050, 20% of which will be financed by the Commission.

EALING - Works Valenciaport has the aim of preparing the electricity network of the port for Onshore Power Supply to container ships, ferries and cruise liners in the new terminals of the Port of Valencia (new container terminal and new passenger terminal). For this purpose, during the project, a new Gas-Insulated Switchgear (GIS) electricity substation will be built with an initial capacity of 45MW (extendible to 90MW in the future). The action also includes the works to install a new underground electricity line that will connect the substation to the general grid. Both interventions will allow the supply of OPS at the Port of Valencia in situations of high demand.

This project is scheduled for completion in December 2024.

RENMARINAS PROJECT VALENCIAPORT (2023)

The RENMARINAS DEMOS Programme is an initiative of the Ministry for Ecological Transition and the Demographic Challenge, managed through the Institute for Energy Diversification and Saving (IDAE), which aims to grant aid for investment in test platforms and port infrastructures for marine renewables, both in the Spanish maritime-terrestrial public domain and in Spanish port waters.

The initiative is framed within component 7 "Deployment and integration of renewable energy" of the Recovery, Transformation and Resilience Plan.

The RENMARINAS VALENCIAPORT project consists of the creation of a platform for the demonstration of technologies that use the marine environment to produce electrical energy. Specifically, there is the collaboration with Bluenewables for the development of a 1 megawatt floating photovoltaic park; and also Enermarport in the creation of a 270 kilowatt device to obtain electrical energy from waves.

The intention is to install the wave energy system in the northern area of the Valencian dock, while the floating photovoltaic park would be located in the southern area.

The project will end in December 2025, although the pilots will be operational for another two years after this date

/ 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 2022 the Port Authority of Valencia participated in the meetings of the Executive Committee and the Sustainability Committee, as well as in the General Assembly, which were held at different times during the year

/ 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, the following have been carried out during the period 2023 booklet II on adaptation to climate change in ports and the booklet on Digitalisation for sustainability in ports.

Informative mails

A series of environmental advice emails are sent monthly to both PAV staff and posted on the employee web ports, and the concession holders in the ports of the PAV.

9. COMMUNICATION AND PUBLICATIONS

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 Valenica

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 2023, the PAV has continued to maintain permanent communication with institutions, clients and interested parties on the environmental activities of our ports.

In addition, as in previous years, the Environment Unit is providing environmental training to the Port Police, with the aim of making them more aware of the actions carried out by the PAV on environmental issues and the importance of their collective in certain environmental inspection and control tasks. This training has been planned with the areas of Operational Security and Human Resources.

The training lasts 1:15 hours and takes place on 7, 8, 9, 14, 15 and 16 November 2023.

The content of the course is set out along the following main lines:

1. Background
2. Environmental Commitment
3. State of the Environment
4. Promoting Innovation
5. Strategy Towards
6. Port police in environmental inspection

The PAV has also dealt with 248 visits, which has meant the attendance of a total of approximately 10,650 people. In addition to visiting our facilities, these visits include an explanation of the main environmental actions carried out.

/ 9.3 Collaboration and attendance at forums , and seminars

During the period 2023, the PAV, in its relationship with the port sector, participated in congresses, conferences, forums, courses and seminars on the environment, both nationally and internationally. Some of these events are worth mentioning:

- Master's in Logistics and Port Management, (Basel, Brazil, March 2023)
- International Certificate (Parana, Brazil, April 2023)
- Master's in Logistics and Port Management, (Panama, May 2023)
- Master's in Port Management and Intermodal Transport 31st Edition - Fundación Valenciaport (Valencia, April 2023)
- 1st Conference on Sustainability in the Port of Castellón, October 2023
- UNCTAD Course (Montevideo, Uruguay, October 2023)
- Master's in Logistics and Port Management, 3rd Edition (Brazil, March 2023)
- UNCTAD Classes (Santo Domingo, November 2023)
- Conference at the Jaime I University (Castellón, November 2023)

/ 9.4 Publications

The publications produced by the PAV include monographs and guides on specific subjects, as well as publications to disseminate information on the activities carried out. A distinction must be made between those published this year and those published before 2023.

PUBLICATIONS 2023

Environmental Report 2022

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 2022.

Environmental Information Preview 2023

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 2023 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 2023 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 2023:

- Environmental Bulletin No. 66, published in July 2023
- Environmental Bulletin No. 67, published in November 2023.

PUBLICATIONS BEFORE 2023

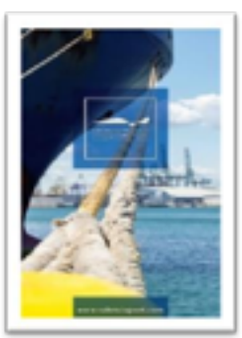
Publications published in previous years by the PAV include:

PAV REPORT: Sustainable port

The Port Authority of Valencia has drafted a report on the main landmarks achieved in relation to the environment and energy, and its contribution to actions carried out in line with the Sustainable Development Goals (SDGs) approved by the UN in the 2030 Agenda for Sustainable Development.

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.

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

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, commissioned the book "Living the Port Environment", 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.

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 GANDIA 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 FISHERS' guilds of Sagunto, Valencia and Gandía are collected. The guide presents the species 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 video 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

/ 10.1 Environmental spending

The PAV's costs and expenses for the financial year 2023, related to the improvement of the environment, are broken down as follows:

CONCEPTOS	EJERCICIO 2023	EJERCICIO 2022
GASTOS DE PERSONAL:	**350.188,27**	**391.854,73**
OTROS GASTOS DE EXPLOTACIÓN:	**4.783.033,92**	**4.680.510,90**
RECOGIDA DESECHOS GENERADOS POR BUQUES	3.886.706,41	3.770.215,67
REPARACIONES Y CONSERVACIÓN	547.208,32	601.918,81
SERVICIOS DE PROFESIONALES INDEPENDIENTES	143.554,44	120.460,56
SUMINISTROS Y CONSUMOS	15.325,40	15.294,80
OTROS SERVICIOS Y OTROS GASTOS	190.239,35	172.621,06
AMORTIZACIONES DEL INMOVILIZADO: (*)	**360.992,14**	**303.444,97**
TOTAL GASTOS Y COSTES MEDIOAMBIENTALES	**5.494.144,33**	**5.375.810,60**

(*) Activos adscritos al servicio de medioambiente

/ 10.2 Tangible and intangible fixed assets

The composition of and movements in intangible assets and property, plant and equipment related to environmental improvement during the financial year 2023 are as follows:

ACTIVOS MEDIOAMBIENTALES (IMPORTES BRUTOS	31/12/2022	ADICIONES DEL EJERCICIO (+)	BAJAS (-)	31/12/2023
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
MATERIALDIVERSO	960.784,67	184.092,00		1.144.876,67
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	**5.447.784,69**			**5.631.876,69**

AMORTIZACIONES DE ACTIVOS MEDIOAMBIENTALES	31/12/2022	ADICIONES DEL EJERCICIO (+)	BAJAS (-)	31/12/2023
ACCESOS MARÍTIMOS	1.603.554,39	78.185,28		1.681.739,67
OBRAS DE ABRIGO Y DÁRSENAS	74.263,24	2.969,28		77.232,52
OBRAS DE ATRAQUE	76.683,79	3.068,82		79.752,61
INSTALACIONES GENERALES	250.757,31	6.973,56		257.730,87
PAVIMENTOS CALZADAS Y VÍAS DE CIRCULACIÓN	5.899,45			5.899,45
MATERIAL FLOTANTE	116.627,52	9.519,66		126.147,18
MATERIAL DIVERSO	853.931,70	87.113,70		941.045,40
APLICACIONES INFORMÁTICAS	14.909,00			14.909,00
PROPIEDAD INDUSTRIAL	3.270,00			3.270,00
TERRENOS	2.999.896,40	187.830,30	-	3.187.726,70
TOTAL ACTIVOS MEDIOAMBIENTALES	**5.447.784,69**			**5.631.876,69**

11. SUSTAINABILITY INDICATORS

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.

First group:

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

See Chapter 7. Emergency responses

A 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.

A 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

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

13. VERIFICATION AND VALIDATION

This Environmental Declaration for 2023 registered with the Regional Government of Valencia under number E/CV/000023.

Verification body: Bureau Veritas Iberia, S.L.

Verifier: ES-V-003