

ESPO AWARD 2024

PORT PROJECTS OR
STRATEGIES IN THE
FIELD OF CIRCULAR
ECONOMY THAT
BENEFIT THE CITY AND/
OR THE SURROUNDING
COMMUNITY



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FOREWORD

BY ZENO D'AGOSTINO, CHAIR OF ESPO

While Europe aims to stay on course for the Green Deal, the “new” European Commission will be preparing a “Clean Industrial Deal”. With this new flagship project, the Commission wants to ensure that decarbonisation and competitiveness go hand in hand, to attract net-zero businesses and to ensure that Europe’s industry has access to affordable, sustainable and secure energy supplies and raw materials. To that end, strategic vulnerabilities will be tackled and dependencies from third countries should be reduced. Circular economy is part of the answer and will be a political priority of this Commission mandate.

I am delighted that Circular Economy has been chosen as the theme for the sixteenth edition of the ESPO Award. It shows that ESPO supports the Commission in its endeavours. The submissions for this year’s ESPO award demonstrate what is already happening in terms of circular economy in different European ports and what can be the role of ports in these projects. At the same time, it allows to share knowledge between ports already having a circular economy strategy and others having it only on their minds or on their to-do list.

The nine ports that submitted a project for this year’s award all deserve recognition, and even though they are very different, ticking the circularity box in different ways, and not all projects are at an advanced stage, they are all first movers. The ESPO Award 2024 firmly places Circular Economy on the ESPO agenda.

I would like to congratulate all candidates. I wish the jury, ably chaired this year by Eamonn O’Reilly, a fruitful meeting as they face the challenging task of selecting a winner among winners, as always. I would also like to thank our sponsors, who each year help in making the award ceremony evening a platform for networking and dialogue between our members and European policymakers as well as a well-deserved feast for the ESPO award winner.

FOREWORD

**BY EAMONN O'REILLY,
CHAIRMAN OF THE ESPO AWARD JURY**

Looking back at the sixteen ESPO awards since the Port of Gijón's success in the first edition in 2009, I am struck by how the port sector has matured and developed and has become much more sophisticated, not only in responding to the concerns of citizens, but also in making a wider contribution to the challenge to use the earth's natural capital more sustainably. The theme for this sixteenth ESPO Award on Societal Integration of Ports focuses on one aspect of this challenge - circular economy projects or strategies by ports which benefit local communities.

My first response to the nine submissions this year is admiration for the confidence and scale of ambition that is now evident in our sector to make a pro-active contribution to the enormous challenge of our times. Ports have been the locus for the international trade in fossil fuels and for other trade flows which we now accept are unsustainable. However, ports are, today, at the centre of the response to climate change while, at the same time, being challenged to adapt to the effects of rising sea levels and more extreme weather events.

The nine submissions for this year's award display a lot of innovation on the part of port authorities and many partners in responding to these challenges.

Some projects look to make better use of dredge spoils, including developing new wetlands to compensate for the impact of climate change on important habitats. On a related theme, another project looks at replacing the beneficial use of dredge spoils for use in port infrastructure development works with an even more sustainable approach by repurposing construction excavation material.

We have a project that looks to harness waste heat from some port-based industries for reuse in others which need heat. In contrast, another project looks to make beneficial use of waste cold!

Cleaning waste products from the marine environment is clearly important and one project goes to the next step of finding a beneficial use for such waste.

The energy transition is profoundly challenging, and society's embedded dependence on fossil fuels cannot be eliminated in one swift set of actions. Carbon capture, utilisation and storage is at the core of another project.

From a defensive response to the challenges of societal integration in the first decade of the century, the ESPO awards have come a long way as ports have risen to the challenge of decarbonisation and sustainability. All this year's projects are exemplars for the circular economy ambitions of other ports and the winner of the 2024 award will be a first among equals.

ABOUT THE ESPO AWARD

The ESPO Award on Societal Integration of Ports entered its sixteenth edition this year. Established in 2009, the ESPO Award promotes innovative projects of port authorities to improve the societal integration of ports, especially in the city or wider community in which they are located. Through this initiative, the Award aims to promote the sustainable development of European ports and their cities. The experience of the first two ESPO Award editions made it clear that 'Societal Integration of Ports' is a topic with many layers. As a result, beginning with the third edition, the ESPO Award adopted an annual thematic focus while maintaining the overall goal of societal integration of ports.

The theme for the sixteenth edition of the ESPO Award on Societal Integration of Ports is 'Port Projects or Strategies in the Field of Circular Economy that Benefit the City and/or the Surrounding Community.'

The ESPO Award 2024 will go to the port managing body that has developed a circular economy strategy and/or a significant circular economy project involving different stakeholders in or around the port. The award aims to honor efforts that actively engage the port and benefit the surrounding community through circular economy activities.

The call for proposals resulted in nine project submissions which are summarised in this brochure. The jury shortlisted the projects of Port of Antwerp-Bruges, Port of Gothenburg, Port of Huelva and Port of Sevilla.

Previous winners

Previous winners of the Award are the Port of Gijón (2009), the Port of Helsinki (2010), the Ports of Stockholm (2011), the Port of Genoa (2012), the Port of Antwerp (2013), the Port of Koper (2014), Port of Dublin (2015), BremenPorts (2016), Guadeloupe Ports Caraïbes (2017), Port of Rotterdam (2018), Port of Dover (2019), Algeciras Port Authority (2020), Port of Gdańsk Authority (2021), Port of Barcelona (2022) and North Sea Port (2023).

ESPO CODE OF PRACTICE ON SOCIETAL INTEGRATION OF PORTS

In May 2010, ESPO published a Code of Practice on Societal Integration of Ports. This Code builds on the experience of the first edition of the ESPO Award and results from the project "People Around Ports" initiated by the Port of Rotterdam (The Netherlands). The Code brings together a series of practical recommendations that can guide port authorities in improving their general public image, attract young people to work in the port and make people living in and around the port area their ambassadors.

The Code is available in English and Spanish at www.espo.be/publications.

THE AWARD PAINTING

ESPO AWARDS BY SASJA HAGENS

COLOURS OF ESPO

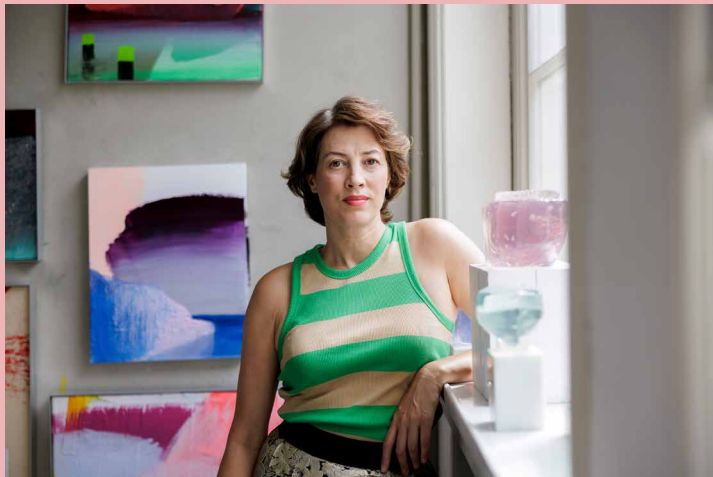
"The port is about adventure, about coming home, about loss, about joy, hope and life energy. This year, I am thrilled to present to you another artwork of the series of 16 'THE COLOURS OF ESPO'. In this series of paintings, I add different pieces of materials. Besides acrylic paint, emulsions and sand, I also use wood, metal copper and metal leaf. Although every painting, at a glance, has familiar port elements, you find in each work a unique atmosphere, surprising colour combinations and bold material choices. Every single artwork presents its own distinguished harbour narrative.

I hope this series gives you a glimpse of how I see the harbour: bright, playful, and exciting. Do you recognise your future harbour here?

About me

My father, grandfather and great-grandfather are all marine educated, sailors, or pilots stationed at the Surinam River Paramaribo. I see myself as a 4th generation sailor. Proud of where I came from, and excited to share my colours with you."

Sasja Hagens
sasjahagens@gmail.com



Sasja Hagens

THE JURY



Eamonn O'Reilly, Chairman of the Jury

Former Chief Executive of the Dublin Port Company and former Chair of ESPO



Knut Fleckenstein

Partner 'Von Beust & Coll International', former Member of the European Parliament, Transport Committee



Elvira Haezendonck

Professor in Strategy, Infrastructure and Sustainability Vrije Universiteit Brussel – Solvay Business School



Caya Hein

Project Leader – Green transition & Agenda 2030, AIVP



Annaleena Mäkilä

LLM, CEO of ACM Consulting Ltd, former CEO of Finnish Ports Association, and former Chair of ESPO



Marta Moretti

Journalist at Portus Online



Victor Schoenmakers

Former Director Corporate Strategy of the Port of Rotterdam Authority and former Chair of ESPO



David Whitehead OBE

Former Director of the British Ports Association and former Chair of ESPO

PORT OF ANTWERP- BRUGES, BELGIUM

Connecting Communities – Circular Economy at Port of Antwerp-Bruges

The Port of Antwerp-Bruges, centrally located in Europe, is the continent's second-largest port and a key global container hub. It plays a pivotal role in the transition towards a circular economy and aims to be climate-neutral by 2050, balancing economic growth, societal integration, and environmental sustainability.

The brochure "Connecting Communities, Circular Economy at Port of Antwerp-Bruges" highlights the port's commitment to collaboration and community building in circular projects. The Antwerp North Heat Network, launched in 2022, reuses residual heat from the waste management company Indaver. This project is planned to expand and supply heat to schools, public buildings, and households, significantly reducing CO₂ emissions. The NextGen District is transforming 88 hectares of an old General Motors factory site into a hub for circular economy activities, accommodating startups and large plants alike. Through NextGen, the Port Authority adds value to existing businesses and fosters a circular ecosystem across the entire port platform. Additionally, the first recycled cycling path was inaugurated in 2022, and the port continues to invest in these paths as part of its climate neutrality goal. Another example is the new Antwerp Coordination Center (ACC), designed to bring all nautical chain partners together in a new building. The ACC focuses on circularity and biodiversity, and is designed to be sustainable, future-proof, and energy-neutral, considering its surrounding environment and nature.

The port acts as a hub for collaboration among various stakeholders, including companies, local governments, and residents. For example, Antwerp's City Council engaged with local residents, while the Port Authority worked with architects and contractors to minimise environmental impact. The NextGen District project had consultations with major port players and presentations to various government levels. Finally, collaborations with research institutes and BlueChem were key for implementing circular economy concepts. Thus, a holistic approach is essential, considering the needs of the Port Authority, users, the environment, and local citizens.

As such, the port's initiatives are designed to benefit surrounding cities and communities by improving societal integration. For instance, the Antwerp North Heat Network will eventually supply heat to residential areas, demonstrating the port's commitment to contributing to the well-being of its neighbouring regions. To conclude, the Port of Antwerp-Bruges is at the forefront of the circular economy, with innovative projects and a strong commitment to societal integration and environmental sustainability.

SHORT-
LISTED
PROJECT

"The projects related to the circular economy taking place at Port of Antwerp-Bruges, reflect the strong connection between communities, as well as the ambition to reconcile people, climate and profit."

Jacques Vandermeiren,
**CEO Port Antwerp-
Bruges**





PORT OF HIRTSHALS, DENMARK

Greenport Scandinavia CCUS Hub: The first full end-to-end value chain

“Greenport Scandinavia is not just a project; it is a statement of our commitment to circular economy and sustainability. Through innovative partnerships and cutting-edge technologies, we aim to transform the Port of Hirtshals into a leading hub for CO₂ management, benefitting both our local community and the broader environment.”

**Per Holm Nørgaard,
CEO at Port of Hirtshals**

Greenport Scandinavia stands out as one of Northern Europe's most ambitious Carbon Capture, Utilization, and Storage (CCUS) initiatives, initiated by Port of Hirtshals. The project aims to develop a comprehensive CCUS value chain, creating a major CO₂ import and export hub at Port of Hirtshals, which is ideally located for both onshore and offshore CO₂ storage.

The Greenport Scandinavia project is set to unfold in several key phases. Starting in 2026, the project will begin its initial operations, focusing on shipping up to 500,000 tonnes of CO₂ annually from regional emitters to the Greensand storage site in the North Sea. This phase marks the beginning of transforming the Port of Hirtshals into a significant European CO₂ hub. By 2029, the project plans to expand its infrastructure further with the completion of a CO₂ pipeline from Aalborg to Hirtshals. This expansion is expected to increase the port's capacity to handle approximately 3 million tonnes of CO₂ per year. The long-term vision, extending to 2031 and beyond, involves integrating Danish and Northern European pipeline infrastructures to boost the capacity to over 15 million tonnes annually.

The success of Greenport Scandinavia relies on strategic collaborations with key industry players. INEOS Energy and Wintershall Dea are important partners, managing CO₂ storage at Greensand and exploring onshore storage at Gassum. Additionally, Biocarb Solution and Aalborg Portland are involved in CO₂ capture, while Evida oversees gas distribution. The project also embraces innovative technologies, including Power-to-X (PtX), which converts captured CO₂ into valuable products, thus supporting circular economy practices and renewable energy integration. Finally, the project emphasizes transparency through extensive public consultations and feedback, aiming to improve air quality and boost community resilience.

Greenport Scandinavia is also expected to drive significant economic benefits by fostering industrial growth and job creation in Northern Denmark. The project will attract green businesses and develop specialized CCUS skills, contributing to regional and local economic development. Environmentally, it supports the EU's goal of a 55% reduction in emissions by 2030 and aligns with the Paris Agreement's (COP21) target of limiting global warming to 1.5°C. The substantial funding from the Just Transition Fund reflects the European Commission's confidence in the project's viability and its alignment with broader climate objectives. Over the next decade, this project is expected to attract more investments, showing its critical role in transitioning to a low-carbon economy.

In conclusion, Greenport Scandinavia is set to transform Port of Hirtshals into a key player in CO₂ management in Northern Europe. Through its strategic partnerships and commitment to sustainability and community integration, the project represents a major step towards achieving global climate objectives while fostering local economic growth.

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PORT OF GDAŃSK, POLAND

Construction “Under the Linden Tree” playground for the residents and local community of New Port

The Port of Gdańsk Authority, in partnership with the City of Gdańsk, is developing the creation of the ‘Pod Lipą’ (Under the Linden Tree) playground in the central Nowy Port district. This initiative, part of the Port’s Corporate Social Responsibility (CSR) policy, is designed to improve the quality of life for the approximately 10,000 residents in the area. Scheduled to begin its first phase in October 2024, the playground aims to foster community integration by offering a space for families to enjoy outdoor activities.

The ‘Pod Lipą’ playground will have equipment suitable for children of various ages and those with disabilities. The design incorporates trees and shrubs for shade, aligning with the ‘Zielono Mi’ environmental program launched by the Port of Gdańsk in June 2023. The planning and permit acquisition process for the project lasted three years due to public consultations and legal requirements.

The project reflects the strong vision and leadership of the Port of Gdańsk Authority, which has actively engaged with the local community through regular meetings with the District Council. Recognising a community need for more green spaces, the Port Authority committed to co-financing the playground, despite challenges such as the COVID-19 pandemic. The final concept was developed in collaboration with the City of Gdańsk and the Nowy Port District Council, incorporating feedback from residents.

The project demonstrates extensive collaboration among key stakeholders: the Port of Gdańsk Authority, the City of Gdańsk, and the Nowy Port District Council. The idea originated from local residents who highlighted the need for an outdoor recreational area. Throughout the planning process, all parties worked together to create a project that met community needs and adhered to environmental considerations. Despite delays caused by the pandemic, including complications with the heritage conservator, the project has progressed steadily. A contractor agreement signed in May 2024 will see the completion of the playground’s first phase within 20 weeks. Moreover, the Port Authority of Gdańsk has increased its financial contribution to cover costs for planting additional greenery.

The ‘Pod Lipą’ playground is set to make a significant impact on the Nowy Port district by addressing the community’s lack of outdoor spaces. The collaborative effort over three years, overcoming challenges like the pandemic, reflects a strong commitment to improve local quality of life. The project not only provides a new recreational facility but also shows the Port of Gdańsk Authority’s dedication to social responsibility and environmental stewardship. By fostering community engagement and integrating environmental sustainability, the project exemplifies the Port’s core values and long-term commitment to local development.

“We are proud to collaborate with the City of Gdańsk and Nowy Port District Council on building ‘Pod Lipą’ playground that improved the residents’ quality of life. This safe, inclusive, and eco-friendly space for families reflects our commitment to social responsibility and community engagement. Despite challenges, we worked closely with the community to bring this vision to life and look forward to its positive impact on Nowy Port district.”

**Piotr Bura, Marketing
and Communications
Department Director,
Port of Gdańsk Authority**





PORT OF BILBAO, SPAIN

BilbOFFSHORE

“The BilbOFFSHORE project is an example of how circular economy can play a key role for the community in view of reconciling biodiversity protection with port infrastructure development and the financial feasibility of new business models in ports, such as offshore wind industry or green hydrogen.”

Ekaitz Lopez Amurrio,
CFO of the Port
Authority of Bilbao

The Port Authority of Bilbao (PAB) is a key European CORE TEN-T port, part of the Atlantic Corridor and the main port in Northern Spain. It hosts a significant offshore and onshore wind energy hub, covering 10% of its total area. This project, crucial for the Atlantic Corridor and Northern Spain, aims to expand and strengthen the port's logistics for offshore wind transport, addressing the need for substantial port space, currently at 90.2% capacity, by adding 31 hectares. This initiative is part of the EU's strategy to increase offshore wind capacity from 25GW to at least 111GW by 2030, aligning with Europe's goals for clean and resilient energy.

The BilbOFFSHORE project involves constructing the second phase of the Central Quay and will use surplus excavation material from public works instead of dredged seabed material. This method supports the circular economy by minimising environmental impact, reducing transport distances, and cutting construction costs. The project will also feature two 5.5 MW wind turbines, generating 15 GWh of green energy, which improves the port's sustainability. By using local materials, the project avoids 34,935 tonnes of CO₂ emissions and eliminates the need for hydraulic sand dredging. This helps with seabed preservation and aligns with biodiversity and restoration goals in partnership with the University of the Basque Country and AZTI.

The BilbOFFSHORE project will create over 700 green jobs through local training centres, such as the Somorrostro Training Centre. It supports a just transition for workers in municipalities like Muskiz, Santurtzi, and Zierbena, shifting from oil refining and gas industries. As such, the project will significantly improve local employment opportunities and quality of life.

As part of the Port Authority of Bilbao's 2024 Business Plan, the BilbOFFSHORE project has been approved by the Spanish National Ports Agency and supported by agreements with the Basque Government and Vizcaya Council to promote circular economy commitments. Extensive stakeholder involvement, including 39 letters of support, highlights the collaborative efforts to implement circular economy principles and repurpose excavation materials for new infrastructure. The goal is to efficiently use these materials as fillers between 2024 and 2027, minimising environmental and health impacts. This strategy involves multiple public administrations and aims to engage economic and social stakeholders.

The BilbOFFSHORE project shows innovation by integrating circular economy principles with infrastructure development to address the Port of Bilbao's expansion needs and the financial challenges of the offshore wind industry. By using local resources and collaborating with various authorities, it minimises environmental impact, promotes regional innovation, and creates green jobs. The project aligns with public works and environmental preservation, positioning the Port of Bilbao as a leader in sustainable port development. Overall, BilbOFFSHORE improves the port's capacity and resilience while demonstrating a commitment to sustainability, social responsibility, and economic innovation.

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PORT OF CASTELLÓN, SPAIN

Upcycling the oceans – in conjunction with ECOEMBES, ECOALF, and Cofradia de Pescadores San Pedro de Grao Castellón

The Upcycling the Oceans project, launched in October 2015, is an initiative by Ecoembes and Ecoalf in collaboration with the Port Authority of Castellón and the Sant Pere Fishermen's Guild. The project aims to combat marine litter by partnering with the fishing sector to collect abandoned marine debris, which harms ecosystems and marine life. This debris also impacts tourism, damages fishing gear, and leads to high cleanup costs. The project has three main objectives: raising awareness about marine litter, analysing collected debris to prevent further pollution, and promoting the recycling of marine litter.

Fishers use designated bins to dispose of marine litter, with waste managed by Ecoembes and recycled into high-quality clothing materials by Ecoalf. Initially operating in nine ports, the project has expanded to 72 ports, of which 45 are Spanish, involving over 600 boats and 2,600 fishers in Spain. Internationally, 4,000 fishers from Spain, Greece, Italy, France, and Egypt have removed over 1,700 tonnes of waste. In 2023, Spanish ports deposited 154,000 kg of waste, with the Sant Pere Fishermen's Guild collecting 269 tonnes since the project's creation. Challenges include fewer fishing days and a lack of new trawler operators. To address these, the project involves training fishers on proper waste disposal and works with associations for waste container space. Despite financial issues, efforts are focused on optimising waste collection and expanding to more ports. By 2025, the goal is to involve 10,000 fishers and recover 1,000 tonnes of marine litter annually.

The Port Authority of Castellón demonstrates a commitment to sustainability through initiatives like Upcycling the Oceans, aligned with the UN's Sustainable Development Goals (SDGs). This project promotes environmental stewardship, community engagement, and economic benefits by improving waste disposal practices and fostering cooperation with local fishing communities. The Port aims to lead in transparency, sustainability, and innovation for environmental and community impact.

Additionally, the Upcycling the Oceans project strengthens the connection between the port and local fishing communities, promoting sustainability and cooperation. By raising public awareness about ocean cleanliness and sustainable practices, the project engages society in marine conservation efforts. It has created employment and training opportunities for fishers, improved waste disposal practices, and boosted the local economy by supporting the fishing sector. This collaboration improves environmental conditions around the port and enhances the port's sustainability efforts. In conclusion, the Port of Castellón is dedicated to integrating sustainability into its operations and driving impactful change. Through initiatives like the Upcycling the Oceans project, it aims to be a leader in transparency, sustainability, and innovation for the benefit of the environment and the community.

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“Together with companies, ports and communities, we fight against marine litter, improve fishing sectors and defend the conservation of the oceans. Let's innovate for a cleaner and more sustainable future.”

María José Rubio Felip,
Director of Planning,
European Policies and
Innovation Department
at the Port Authority
of Castellón



SHORT-
LISTED
PROJECT

PORT OF HUELVA, SPAIN

Sustainable Cold Logistics Hub

“The Sustainable Cold Logistics Hub of the Port of Huelva is a unique circular economy initiative that drives collaborations across multiple levels, including public-private partnerships, the energy industry and general cargo logistics, as well as energy efficiency and transition efforts.”

Alberto Santana,
Chairman Port
Authority of Huelva

The Port of Huelva is a key component of the Trans-European Transport Networks (TEN-T), serving as the official node of the Atlantic Corridor to the Canary Islands. Its significant growth in freight traffic has established it as a crucial node for international transport via rail, road, and sea. As an industrial and multimodal port, it handles substantial liquid bulk and general cargo, with an important LNG terminal operated by the international company Enagás.

The Sustainable Cold Logistics Hub project aims to add value to the LNG logistics chain by efficiently using cold energy from LNG regasification for various applications, including logistics of perishable and general cargo. The project uses the energy-intensive liquefaction process to cool natural gas to -160°C. Normally, the cold energy is lost during regasification. Instead, this project captures and transfers the cold energy to cold warehouses and industrial applications, reducing energy costs and the carbon footprint by almost 100%, as the energy needed for the compression and propulsion of the refrigerant fluid will be of renewable origin. To support this, the Port of Huelva is improving its general cargo terminal and is developing infrastructure to supply cold energy from the LNG terminal to these warehouses and industrial projects. Additionally, the project supports the production of alternative fuels like green ammonia, methanol, and biofuels by providing sustainable cold supply to different processes along the production and storage of the alternative fuels and their raw materials.

Key participants and collaborators are making this project successful. Enagás, through its spin-off E4Efficiency, is developing technology to transfer cold energy from LNG regasification to refrigerant fluids, supplying cold to logistics applications up to 5 km away. Frigoríficos Portuarios del Sur (Friportsur) is operating a cold warehouse with a capacity of 28,000 pallets, utilizing cold energy from Enagás. This public-private collaboration is supported by national and European R&D&I funding programs. The initial pilots of Enagás' cold exchanger technology received support from these programs and the construction of Friportsur's cold store was funded by the Spanish Government's Regional Incentive. The Port Authority of Huelva will build and fund a cold pipeline to transfer cold energy from Enagás' LNG terminal to the South Wharf of the Port of Huelva, where Friportsur is located. This project is financed by NextGeneration EU funds.

The Port Authority of Huelva's Strategic Plan 2023-2030 aligns with the European Green Deal and initiatives like Fit for 55 and FuelEU Maritime. The plan focuses on decarbonisation, circular economy projects, and reducing environmental impact, especially in protected natural areas. As part of this plan, the Sustainable Cold Logistics Hub exemplifies these goals by potentially cutting CO₂ emissions by over 90% for cold warehouses. This project supports the EU's climate objectives, creating jobs and fostering sustainable growth. It benefits Huelva's agricultural, livestock, and fishing sectors by improving export opportunities for temperature-controlled goods, which in turn supports rural development and strengthens the region's social and economic structure.

To conclude, the Port of Huelva aims to develop a sustainable, resilient industry through the Sustainable Cold Logistics Hub project, enhancing community relations, improving residents' quality of life, and boosting regional economic activities.

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LAS PALMAS PORT AUTHORITY, SPAIN

Las Palmas Port Circular Economy (PAPCE)

PAPCE is a collaboration between the Port Authority of Las Palmas, the Island Energy Council of the Cabildo de Gran Canaria, the Canary Islands Technological Institute (ITC), TRANSVIRGIN, S.L. and the CANARY ISLANDS MARITIME CLUSTER. This initiative focuses on the integration of circular economy principles to improve sustainability and innovation in the maritime sector, with the future objective of bringing the ports of the Las Palmas Port Authority as close as possible to a 100% circular economy. It is in line with the European Commission's Circular Economy Action Plan and supports the Canary Islands' energy security and sustainable development objectives.

The Port of Las Palmas is very proud to present the RENMARINAS DEMOS project, which aims to transform the Port of Las Palmas and its Arinaga dock into a testing platform for marine renewable technologies. This will include a hydraulic laboratory in Arinaga with a 400 m² test basin for offshore energy platforms and facilities for floating photovoltaic platforms. Arinaga will also have a 625 m² water surface for prototypes up to 500 kW, while the Port of Las Palmas will have a 49,000 m² area for real offshore testing of floating platforms. Wave generator and offshore wind turbine test benches are also planned, with dedicated areas for each technology to support the different stages of research and development.

Another complementary and important circular economy project, RESH2PORT, involves the installation of a 250 kW electrolyser in the Port of Las Palmas. This electrolyser will be powered by a 500-kW photovoltaic plant and a 100 kW/750 kWh battery, producing hydrogen for the public transport fleets on the islands and for the development of R&D&I activities to test new fuels for the naval sector, reducing carbon emissions.

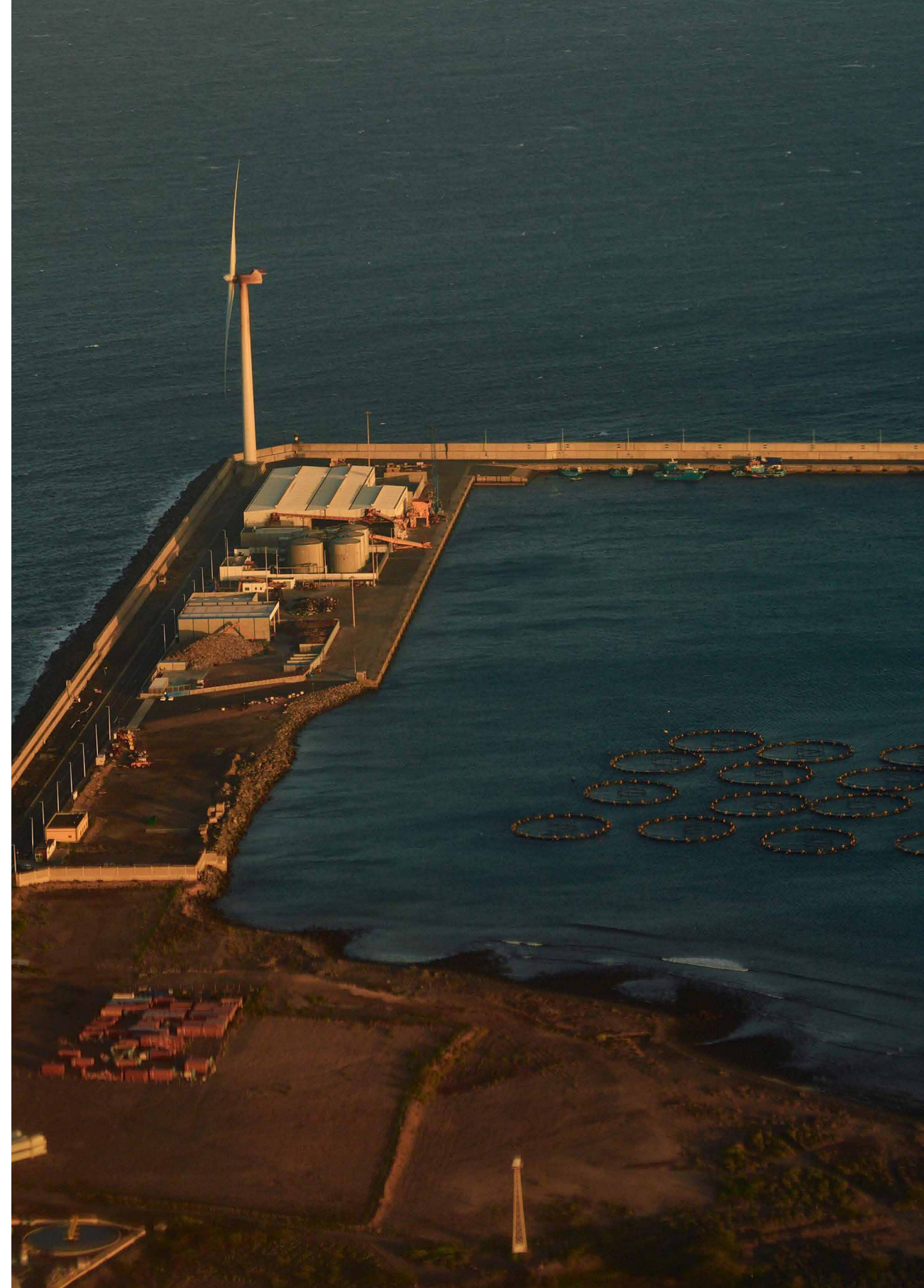
RENMARINAS DEMOS has a budget of 4.71 million euros and RESH2PORT has a budget of 1.42 million euros. Both projects will be funded by the European Commission and must be completed by 30 June 2026.

The CANARY ISLANDS MARITIME CLUSTER, whose partners include port companies such as TRANSVIRGIN, universities, academic institutions and government support and innovation agencies such as PLOCAN, is heavily involved in our circular economy project, including social and vocational training. We highlight the award-winning project CLEANING MARPOL WASTE in the Port of Las Palmas: the CLEANING OF MARPOL IV WASTE (grey water from ships) by TRANSVIRGIN, S.L. Achievements include a remarkable 36% reduction in the port's carbon footprint by 2021, with a target of 70% reduction by 2030, and the certification of the port's energy as 100% renewable by IBERDROLA.

The Las Palmas Port Authority is very committed and has allocated 650,000 euros from the European Interreg MAC 2021-27 funds over the next four years for technical conferences, trade fairs, seminars, training, and an interactive 360° museum to encourage the community to minimise the environmental impact of the Port of Las Palmas.

“The PAPCE project is the first phase of our ambition to fully embrace the circular economy at the Port Authority of Las Palmas. It aims to drive the port community to further reconcile the protection of biodiversity with the development of port infrastructure and the financial viability of offshore wind, wave, and marine solar energy, quayside electrification, green hydrogen in marine fuels, and all new business models within our port.”

Beatriz Calzada,
President of the Port Authority of Las Palmas





SHORT-
LISTED
PROJECT

PORT AUTHORITY OF SEVILLA, SPAIN

Circular Economy for Valorising Maintenance Dredging Sediments

“Dredged sands are a valuable resource, and we give them a second life by creating wetlands, regenerating beaches, or using them in the ceramics industry.”

Rafael Carmona,
*President of the
Port Authority of Sevilla*

The Port of Sevilla is supporting navigation and environmental sustainability by reusing dredged sediments from the Guadalquivir estuary. The Port Authority of Sevilla (APS) integrates these efforts into its environmental strategy, focusing on circular economy principles and sediment reuse. Their approach is guided by the ‘Working With Nature’ model, which aims to improve navigation and environmental protection through natural processes.

The Navigation Optimization Project on Eurovía E.60.02 is a key initiative under this strategy. It aims to improve the estuary’s navigability and efficiency, allowing larger cargo ships to enter without changing the channel’s gradient. This project supports both environmental conservation and socio-economic development by employing sustainable dredging practices and repurposing sediments for various uses, including biodiversity, coastline restoration, and applications in the ceramics and construction industries. Stakeholder collaboration through sectoral roundtables helps shape and inform these efforts. As such, the project’s stages include start-up, development, environmental processing, and final execution, with a focus on improving navigability while protecting and restoring the environment.

For instance, dredged sediments are being used to create and preserve wetlands that benefit aquatic birds like the ferruginous pochard and the osprey, supporting over 70 bird species and 19,000 individual birds. The Port Authority of Sevilla (APS) is also exploring their use in the ceramic industry in collaboration with Innovarcilla Foundation and Todobarro to develop sustainable products. Recent projects include using these sediments for coastal regeneration, building new sandy ridges for beaches, and creating compacted earth blocks to combat erosion in the Guadalquivir estuary. Additionally, the “Puerto Residuo 0” project, funded by the PORT 4.0 fund, aims to develop artificial substrates from dredged materials to improve degraded agricultural soils, support climate resilience, and control pollution.

Therefore, the Guadalquivir estuary’s complex transformation necessitates a multifaceted approach, including stakeholder involvement and scientific guidance. The Eurovía E.60.02 project is notable for its innovative and participatory approach, involving diverse stakeholders and a Technical-Scientific Committee to ensure environmental, technical, and economic objectives are met. Five sectoral roundtables have been created to address different aspects of the project. In conclusion, the project fosters societal integration by engaging a wide range of stakeholders and aligning with the “Working With Nature” philosophy to balance economic and environmental goals.

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PORT OF GOTHENBURG, SWEDEN

Circular usage of dredge masses for the recreation of wetlands and city development

The Port of Gothenburg has integrated circular economy principles into its sustainability strategy, emphasizing innovative methods for dredging and material reuse. Since 2015, the port has pledged to use dredged materials for natural area restoration, urban development, and port expansion. This aligns with a 2023 Gothenburg City Council decision, aiming for the reuse or recycling of all feasible surplus materials by 2030.

One notable initiative is the creation of the Wetland at Torsviken. This project involved converting 7 hectares of land, for decades used as a deposition site for contaminated dredging spoils, into a wetland for wildfowl. As a key innovative feature, clean glacial clay excavated from a nearby road tunnel construction was used to cover the contaminated soil and thus create a protective barrier. The dialogue with stakeholders began in 2010, and after extensive preparation and cleanup, the wetland was officially inaugurated on September 10, 2021. This transformation addressed the challenge of dealing with a site previously used for depositing contaminated dredge spoils. Thanks to a collaborative effort with the Swedish Transport Administration, the project successfully repurposed this material, creating a thriving wetland that now supports over 280 bird species and features a 2 km walking trail. The project involved several key stakeholders, including the County Administrative Board of Västra Götaland, Gothenburg's Environment Management, the Gothenburg Ornithological Society, and the Swedish Transport Administration.

Another example is the Lundby Old Port Basin redevelopment in Gothenburg, which aims to create 100,000 square meters of city centre land by repurposing around 400,000 m³ of dredged materials, addressing challenges in managing clean and contaminated dredge spoils. This project has been part of the Rivercity Gothenburg Vision since 2012, with stakeholder discussions starting in 2020 and construction planned to take place between 2025 and 2035. This project avoids high emissions and costs of exporting contaminated materials and includes plans for a pedestrian walkway using rock material from another port project, improving city accessibility. It represents a cost-effective, environmentally beneficial urban development initiative. Key stakeholders include various departments in the City of Gothenburg and the Swedish Maritime Administration.

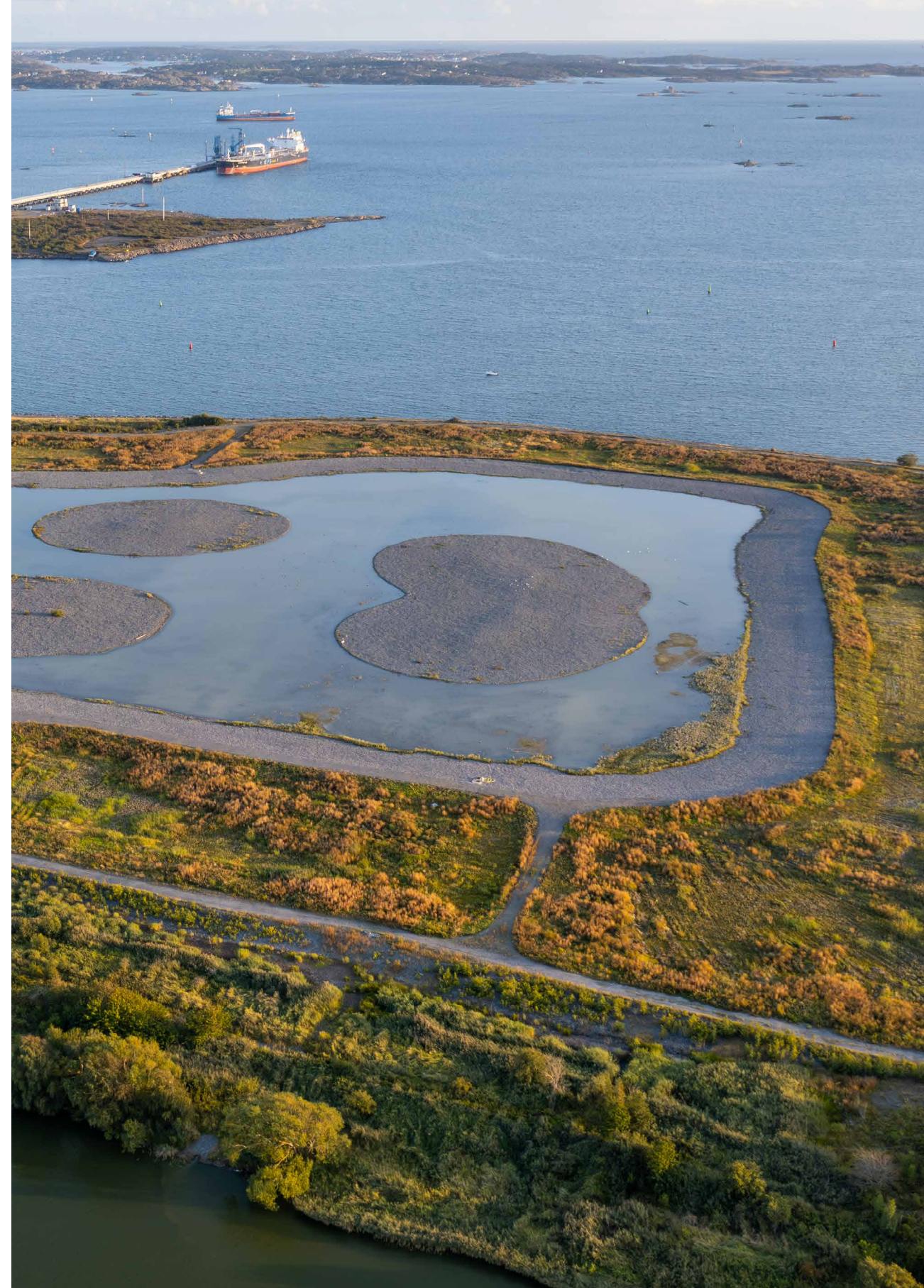
As such, the Port of Gothenburg exemplifies innovative sustainability through stakeholder engagement and resource management, advancing environmental and urban goals while strengthening city relations. Its projects transform industrial sites into beneficial spaces, improving societal integration and community well-being. The Torsviken Wetland offers recreational space and biodiversity support, and the Lundby redevelopment revitalizes central Gothenburg with new public spaces and improved urban mobility. These efforts show a successful model of circular economy practices that benefits both the environment and the local community.

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More information on www.portofgothenburg.com – Wetland at Torsviken

SHORT-
LISTED
PROJECT

“The Port of Gothenburg has proved to be the natural leader, engaging all relevant stakeholders, in developing significant circular economy projects reusing dredge masses to create benefits for the surrounding community.”

Patrik Benrick,
*Head of Strategic
Development &
Innovation*



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