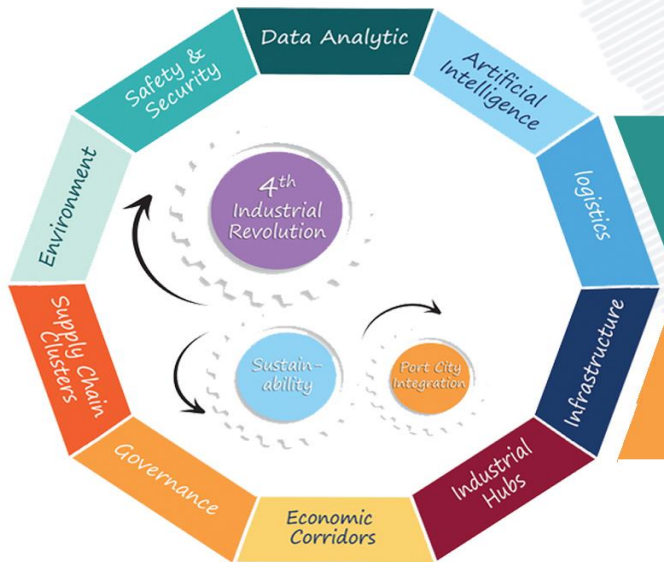




الأكاديمية العربية للعلوم والتكنولوجيا والنقل البحري
Arab Academy for Science, Technology & Maritime Transport



The International Maritime Transport and Logistics Conference “Marlog 9”
Impacts of the Fourth Industrial Revolution on Port-City Integration
“World Port Sustainability Program Aspects”



The World Ports Sustainability Program

Dr Antonis Michail, Technical Director WPSP

10-12- October, 2020



World Ports Sustainability Program



www.sustainableworldports.org



WPSP Priority Areas



WPSP port projects portfolio

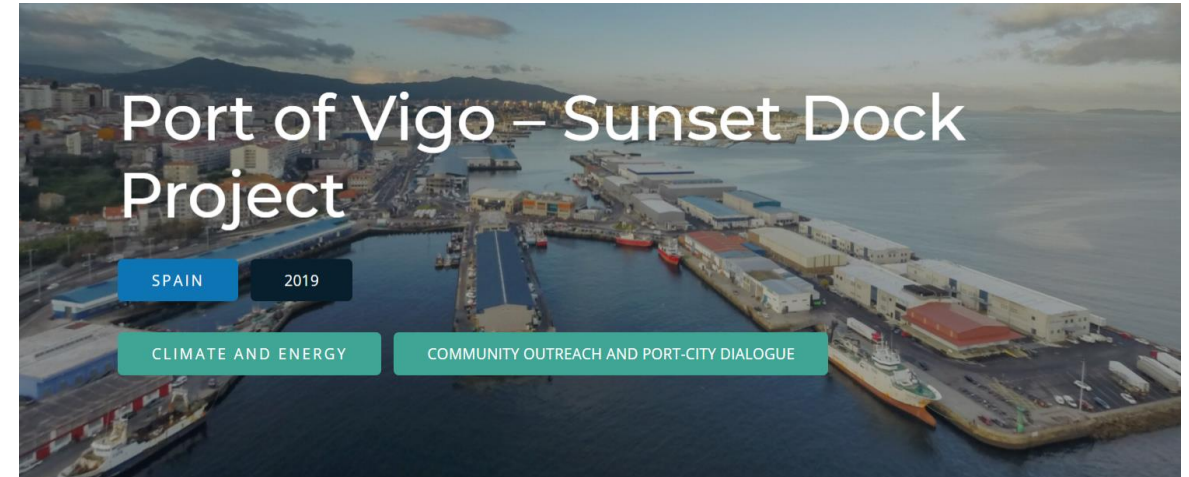


- ✓ 120 + projects
- ✓ 71 ports
- ✓ 38 countries

Share your projects and join us !

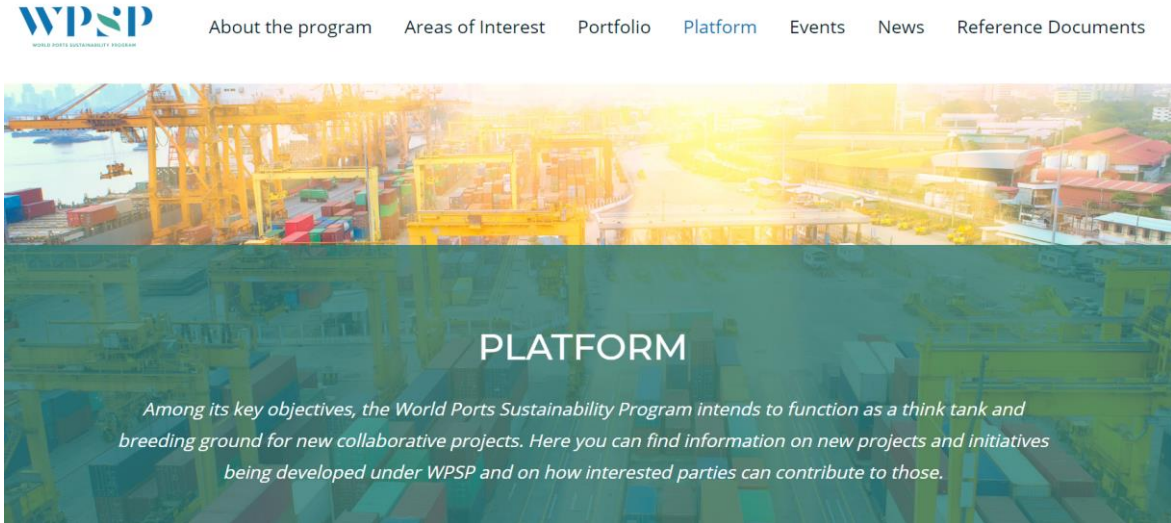
<https://sustainableworldports.org/submit-your-project/>

Link with the IAPH Sustainability Awards



<https://sustainableworldports.org/submit-your-project/>

WPSP Platform

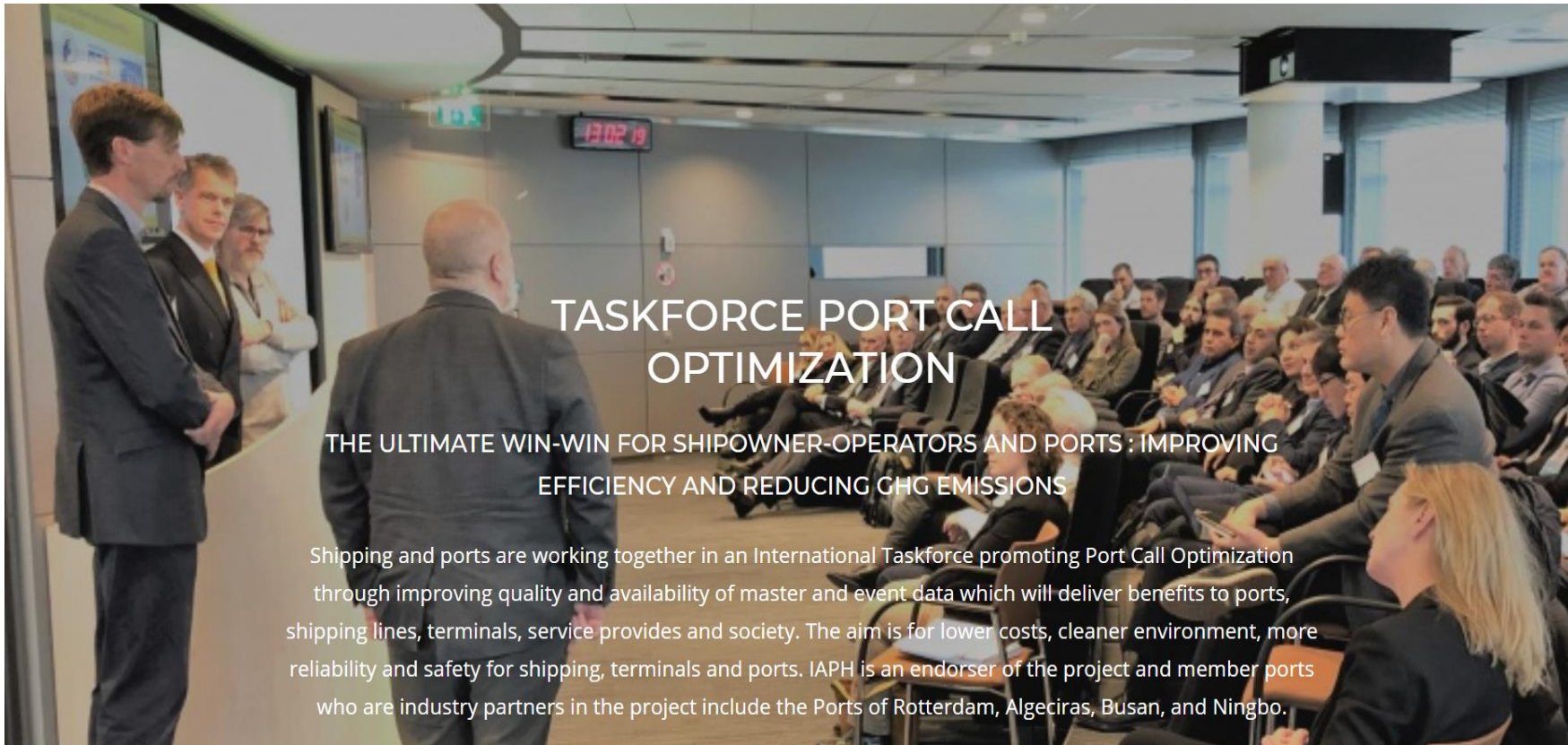


- IAPH/WPSP leadership initiatives
- Think-tank for new collaborative projects

Project Partners	Resilient Infrastructure	Climate and Energy	Community Outreach and Port-City Dialogue	Safety and Security	Governance and Ethics
IAPH / WPSP Cruise Project		●	●		●
SDGs and Port Governance	●	●	●	●	●
Environmental Ship Index		●	●		●
PortXL Accelerator	●	●	●	●	●
World Ports Climate Action Program		●	●		●
Clean Marine Fuels		●	●	●	
Womens' Forum					●
GloMEEP		●	●		
Navigating a Changing Climate	●	●			
Port Call Optimization	●	●	●		
Maritime anti-corruption Network					●

www.sustainableworldports.org/platform/

Port Call Optimization



International Taskforce

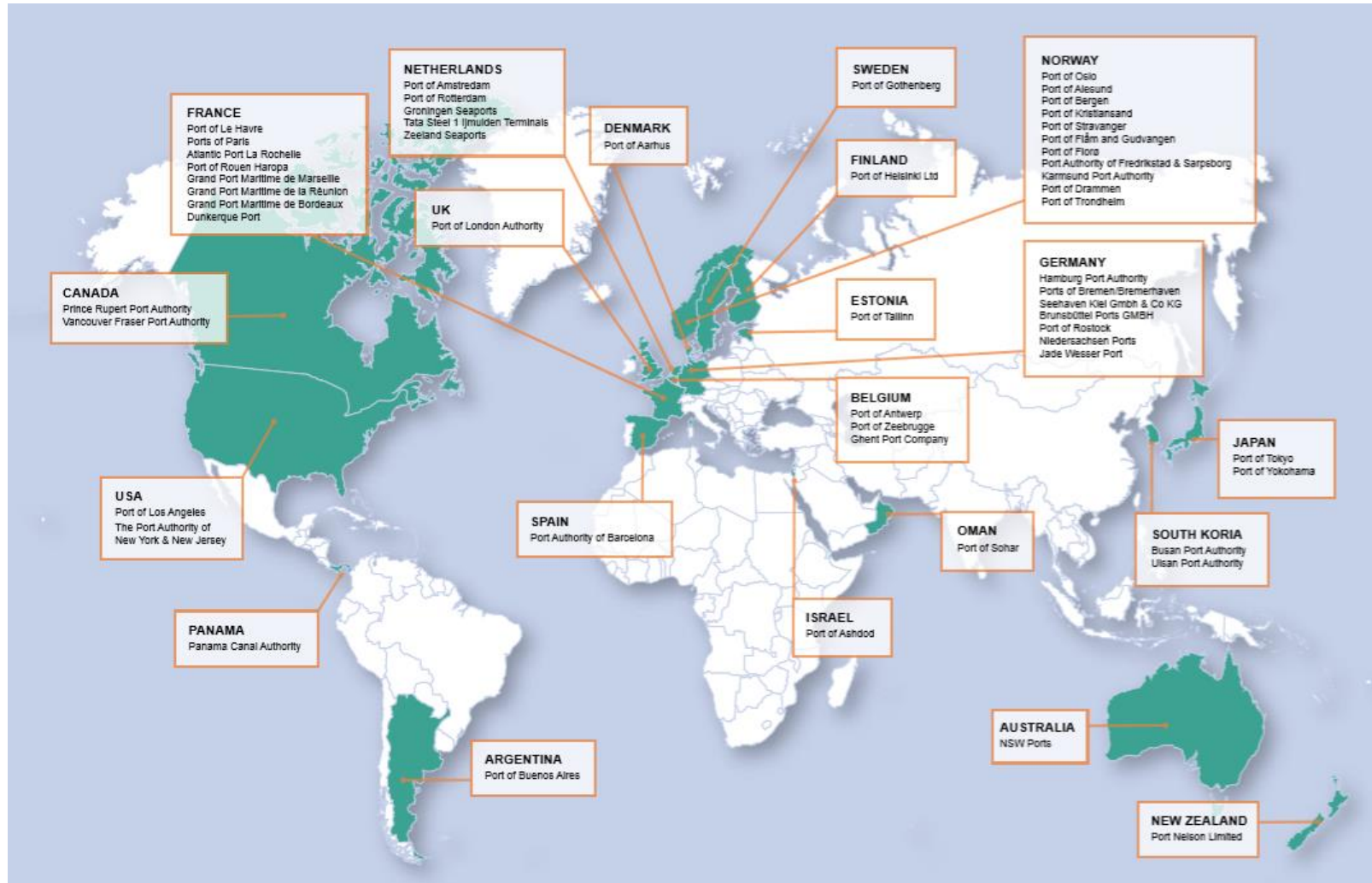


Port Call Optimization

A reliable port starts with reliable information

<https://portcalloptimization.org/>

Environmental Ship Index (ESI)

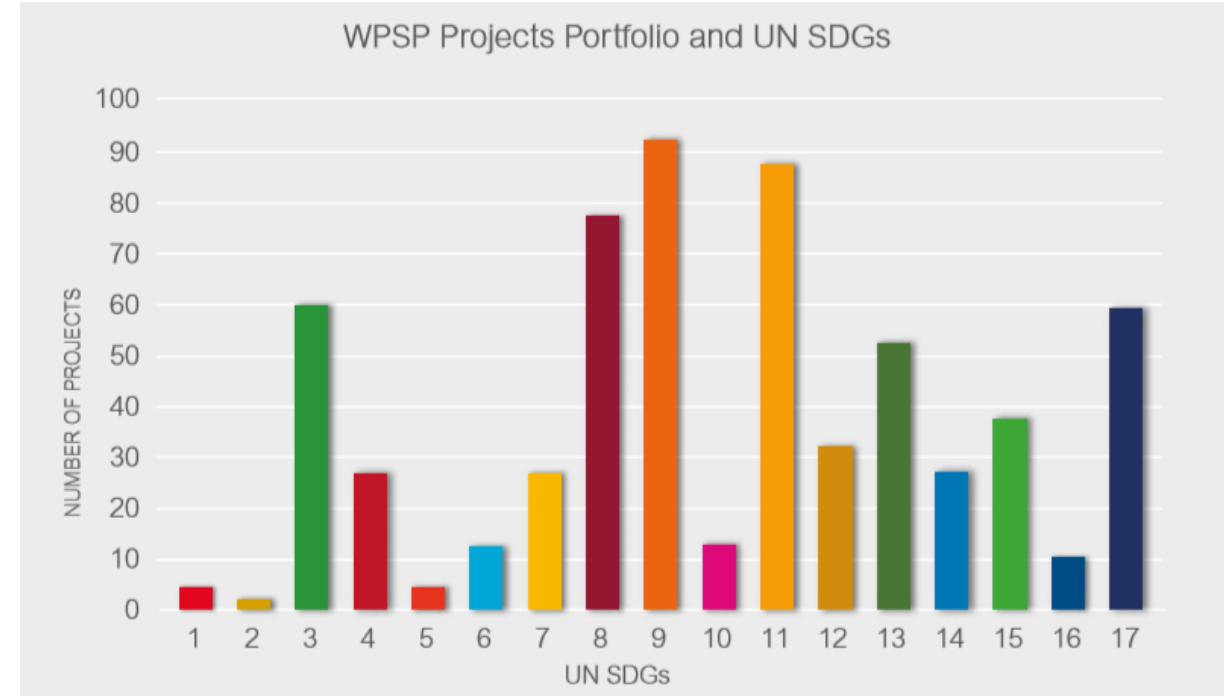


- The standard Index used by ports for the provision of incentives to best performing vessels
- 8000+ vessels
- 58 Incentive providers

<https://www.environmentalshipindex.org>

UN SDGs priorities in ports

WPSP Portfolio analysis (120 projects)



Blueprint on ports' contribution to each of the SDGs

Application of the 17 UN SDGs in ports



- Setting a good minimum wage for the port employees and encouraging similar practices in the port community
- Taking responsibility for the application of ethical standards throughout the supply chain (e.g. working conditions and human rights in developing countries)
- Including sustainability requirements (e.g. Fairtrade label) in procurement
- Supporting local communities in need through social projects targeting sustainable growth
- Supporting local social institutions (e.g. schools, orphanages, NGOs)



- Supporting local projects targeting the provision of food to families/communities in need
- Encouraging the transfer of food surpluses out of the warehouses in the port to charities, food banks and community organizations
- Supporting the trade/storage of Fairtrade and other ethically-produced agricultural products in cooperation with NGOs and community organizations
- Sourcing Fairtrade food products for own catering



- Improving health and safety awareness of employees and local communities through training and transparent communication on health and safety risks
- Minimizing environmental externalities (e.g. air pollution, water pollution, noise) of port operations and greening of the port and urban areas
- Initiatives on sustainable / safe mobility and projects targeting congestion
- Enhancing port safety and security and minimizing risks
- Awareness raising and actions against the use of addictive substances (e.g. tobacco, alcohol, drugs)
- Protecting habitats and biodiversity in and around the port area



- Competence and talent policy for port employees
- Enhance life-long learning for the port employees
- Cooperating with local schools, universities and research centres in educational programs, internships and port visits
- Offering training to port professionals through dedicated institutions
- Creating synergies with universities in port research and development projects



- Gender-neutral hiring and remuneration policies
- Promoting women to leadership roles; training and hiring more women for port operational positions (e.g. crane operators)
- Leveling the male/female ratio of port employees for operational and managerial positions
- Taking measures that make the port working environment more attractive to women (e.g. separate toilets, promotional campaigns, family-friendly HR-policy)



- Providing drinking water and clean sanitation facilities for port employees and visitors (e.g. vessels' crew, truck drivers)
- Minimizing/optimizing water consumption in the port area
- Harvesting rainwater for port use
- Protecting water-related ecosystems (e.g. estuaries, wetlands, mangroves) in and around the port area
- Projects protecting freshwater resources (e.g. wastewater and stormwater treatment)



- Locally producing and/or sourcing renewable energy
- Supporting research and development on clean energy technology
- Producing and/or recovering energy from industrial waste streams
- Investing in energy-efficient port equipment (stationary and mobile material handling equipment, lighting and technology)
- Encouraging clean energy initiatives from third parties (vessels, tenants and operators) through appropriate instruments (incentives, clauses in lease/concession agreements)
- Providing Onshore Power Supply from renewable sources
- Providing cleaner (marine) fuels in a safe and efficient manner
- Optimizing port operations and processes (logistics, port calls)



- Achieving economic growth through diversification, innovation and technological modernization
- Generating economic growth in an environmentally sustainable manner
- Ensuring that economic growth positively impacts local communities economically and socially
- Promoting employment, including opportunities for disadvantaged groups and young people
- Striving for a healthy and safe working environment for all: specific actions related to safety and ergonomics, and creating a good work/life balance
- Generating a sustainable model for cruise tourism
- Taking responsibility for applying ethical standards throughout the end-to-end supply chain (e.g. working conditions and human rights in developing countries)



- Devising sustainable port development policies supported by relevant key performance indicators
- Digitally optimizing infrastructure and port operations/processes/services
- Piloting, testing and implementing innovative IT and digital technologies in the port for public and private use
- Foreseeing the adaptation of port infrastructure to withstand climate change
- Adapting port infrastructure and processes to meet market demands (such as increasing ship size)
- Sustainable port development projects
- Investing in infrastructure for all transport modes to enable a balanced modal split
- Minimizing environmental impact of the port activities



- Achieving equality within the port independent of gender, origin, belief, conviction etc.
- Port community initiatives being all-inclusive irrespective of socio-economic background (e.g. supporting sensitive social groups)
- Social background-neutral hiring and remuneration policies
- Taking responsibility for the application of ethical standards throughout the supply chain (e.g. working conditions and human rights in third world countries)
- Financial support to local communities in need and social projects targeting sustainable growth of neighboring communities
- Ethical investment and banking



- Improving sustainable mobility and reducing congestion for both employees and goods
- Restoring ecosystems and making the port accessible and attractive for people in neighboring urban areas
- Minimizing environmental externalities of port operations (e.g. air pollution, water pollution, noise)
- Disaster recovery planning
- Community engagement programs and initiatives
- Supporting local communities in need through social projects targeting decent living and working opportunities that generate sustainable growth of neighboring communities
- Supporting local social institutions (e.g. schools, orphanages, NGOs)



- Sustainably managing natural resources, chemicals and waste
- Implementing responsible procurement and sustainable investments in port area management and development as well as the end-to-end supply chain etc.
- Encouraging circular economy and industrial reuse and mutually beneficial use of resources in the port community
- Optimizing port operations/processes/services
- Reducing food wastage and food loss in the production / supply chain (e.g. connecting the cruise industry with an NGO addressing poverty in your city or region)



- Improving energy efficiency of port operations, processes and services
- Enabling the reduction of carbon and greenhouse gas emissions within the port area
- Adapting port infrastructure and port-related operations to Climate Change
- Providing services to reduce greenhouse gas emissions at sea and on the waterways, as well as the hinterland part of the supply chain
- Producing and/or sourcing renewable energy
- Encouraging third parties (vessels, tenants and operators) to take clean energy initiatives, by providing incentives and integrating clauses in lease and concession agreements



- Taking measures to prevent waste from ending up in the oceans (e.g. port reception facilities, fishing for litter, clean-up actions)
- Promoting sustainable fishing activities
- Supporting research regarding sustainable use of maritime resources
- Reducing the emission of CO₂, SO₂, NO_x, NH₃ from port-related activities to avoid acidification of the oceans
- Minimizing water pollution through adequate wastewater treatment facilities
- Protecting coastal and estuarine ecosystems
- Minimizing disturbing factors such as underwater noise for marine mammals



- Supporting local projects regarding nature development and biodiversity
- Recovering and protecting nature and biodiversity in the port surroundings
- Preventing deforestation through the usage/procurement of sustainably-certified wood and paper
- Offering nature and environmental education programs to employees
- Port area development in balance with ecosystems
- Minimizing environmental externalities of port operations (e.g. air pollution, noise)



- Constructive dialogue between employer and employees
- Good governance (a clear policy statement, stakeholder analysis, defined measurements, consistent reporting...)
- Peace initiatives (e.g. peace education on the work floor, prevention of illegal arms trafficking)
- Addressing security: cyber security measures, commercial and operational data protection, improving the careful use and protection of personal data
- Open dialogue and collaboration with all stakeholders (including emergency services, customs and armed forces) and availability of a hotline for complaints and questions
- Transparent internal and external communication



- Partnerships with local communities for port-city relation initiatives
- Partnering with other ports and parties in the logistics chain in joint projects of common interest
- Public-private partnerships for funding and implementing sustainability projects
- Establishing supply chain partnerships for ensuring CSR values throughout the chain
- Cooperating with other ports for educational/training purposes (e.g. joint port training programs and centers)
- Joint research and development projects involving port stakeholders, academia, industry and authorities



Port Endeavor – A port journey to SDGs

BREAK THROUGH THE NOISE
 During the last few years, your harbor's port authority has been receiving more and more noise disturbance complaints from residents near the port's cruise terminal, due to running engines. NGOs (non-governmental organizations) and the local community media are asking you to take immediate action.

SOLUTIONS

- You introduce a monitoring and reporting system for cruise vessels near the port. You provide residents to quieter routes and you do noise measurements as far as possible from the residential area.
 - SDGs: 11, 13, 14, 15
 - Cost: A
- You install noise barriers near the cruise terminal.
 - SDGs: 11, 13, 14, 15
 - Cost: B
- You plant trees and install noise barriers near the residential area. You provide local residents to quieter routes near the cruise terminal.
 - SDGs: 11, 13, 14, 15
 - Cost: C

GET SMART
 The port has successfully launched a nationwide survey on innovative digital solutions. This can assist port management in making the port smarter and more efficient. The port now has to decide which of the shortlisted proposals is to be implemented first.

SOLUTIONS

- The survey on IT platform for the collection and analysis of operational data is successful. The port has decided to implement the solution. The port has decided to implement the solution.
 - SDGs: 9, 11, 13, 14, 15
 - Cost: A
- The survey on IT platform for the collection and analysis of operational data is successful. The port has decided to implement the solution. The port has decided to implement the solution.
 - SDGs: 9, 11, 13, 14, 15
 - Cost: B
- The survey on IT platform for the collection and analysis of operational data is successful. The port has decided to implement the solution. The port has decided to implement the solution.
 - SDGs: 9, 11, 13, 14, 15
 - Cost: C
- The survey on IT platform for the collection and analysis of operational data is successful. The port has decided to implement the solution. The port has decided to implement the solution.
 - SDGs: 9, 11, 13, 14, 15
 - Cost: D

RAVENHILL HARBOR

Operational model: Landlord port
 Urban proximity: Close
 Hinterland connect: Uni-modal
 Dominant business: Passengers
 Presence of industry: No

For centuries, Ravenhill Harbor has been a vital ferry port that connects Ravenhill island with the mainland. Currently, three ferry companies mainly offer services to passengers but also offer some road freight services. They operate under concession of the local port authority.

Apart from a small ship repair yard there is no industry. Ravenhill Harbor mainly serves the local community and is fully surrounded by housing. The port area can only be reached by road.

SUSTAINABILITY MANAGER
 You coordinate all of the port's Corporate Social Responsibility (CSR) activities. You are responsible for reducing the environmental impact and optimizing the social impact of the port's commercial and operational activities. Your aim is to do this in a commercial and economically efficient way.

YOUR RESPONSIBILITIES

- Structural implementation of CSR considerations into the daily practices
- Internal and external partnerships
- Reduction of carbon, greenhouse gas, dust emissions and noise pollution
- Improvement of energy efficiency in the port
- Water reduction and reuse in the port
- Implementation of building with water principle
- Coordination of eco-innovations and other biodiversity
- Local community engagement

CEO
 You implement the board's strategy. You are in charge of the day-to-day commercial and operational management of the port. That implies you are responsible for the port's financial performance, as well. You also manage the port's good governance and corporate social responsibility.

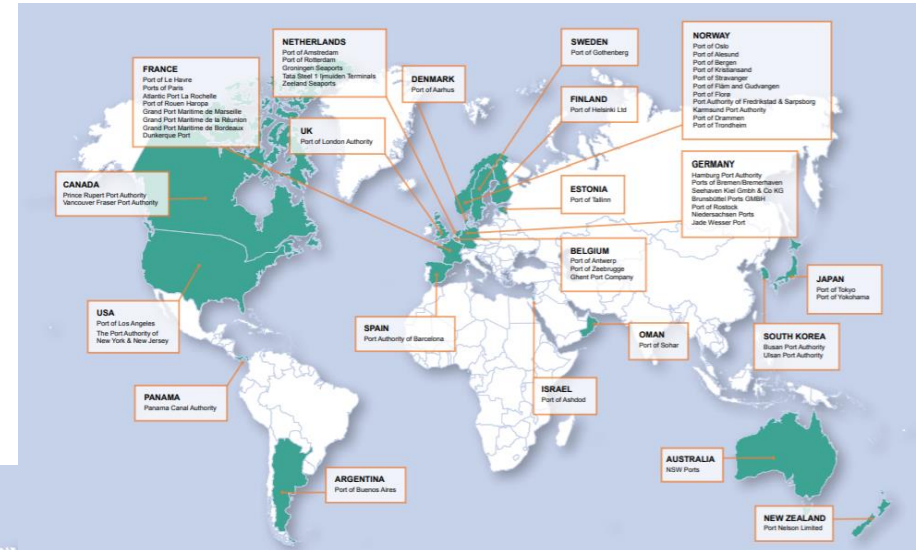
YOUR RESPONSIBILITIES

- Development of strategic plans and objectives to carry out the port's vision and mission
- Alignment of employees roles and daily tasks with the port's strategy
- Advancement of employees engagement in the port's strategy on objectives
- Leadership over the management teams to guarantee delivery
- Supervision of all operations and business activities to ensure financial results and consistency with the overall strategy
- Negotiation with other ports, port users, unions, government, NGOs and business partners on a local and international level

Port Endeavor – A port journey to SDGs



World Ports Sustainability Report 2020



Sources:
 Friends of the Earth International (2018),
 DWI-GI (2020),
 European Alternative Fuels Observatory (2019),
 World Ports Sustainability Program (2020),
 International Association of Ports and Harbors (2011)

<https://sustainableworldports.org/reference-documents/>

Key messages

- MARLOG 9 themes (digitalization, port-city integration, sustainability) are clear priorities of world ports and very much linked to the UN SDGs
- Call to ports to share their initiatives on our WPSP Portfolio
- Call for entries for the 2021 IAPH Sustainability Awards is now open
- Join us in IAPH and our WPSP ongoing collaborative initiatives



Thank you for your attention!



antonis.michail@sustainableworldports.org

www.sustainableworldports.org / www.worldportsconference.com