

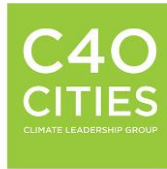
The Environmental Ship Index (ESI) of the World Ports Sustainability Program (WPSP)

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BACKGROUND



2008



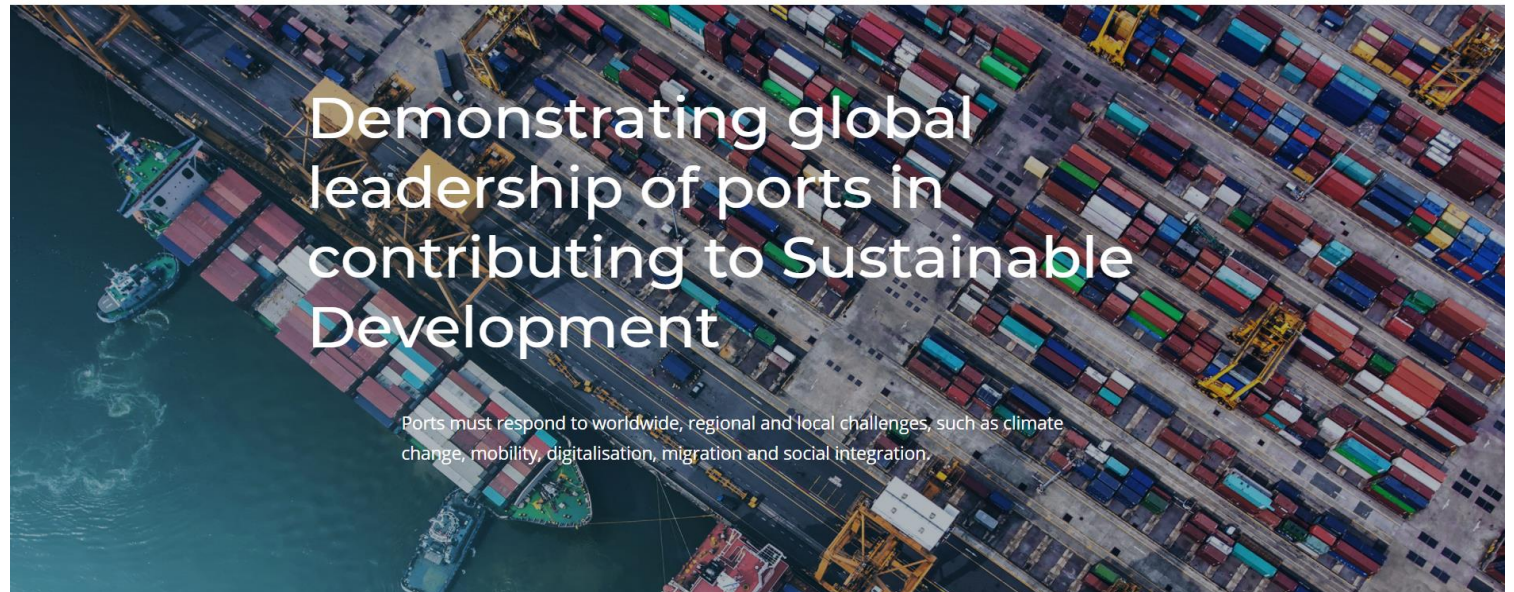
2018

World Ports Sustainability Program

Founding partners: AAPA, AIVP, ESPO, IAPH, PIANC
Lead by IAPH



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www.sustainableworldports.org

MISSION AND OBJECTIVES

*“The World Ports Sustainability Program aims to demonstrate **global leadership of ports** in contributing to the Sustainable Development Goals of the United Nations.”*

WPSP will:

- Establish and maintain a global library of best practices
- Provide a portal for projects and initiatives of its partner organisations
- Function as a think-tank and breeding ground for new collaborative projects
- Report regularly on sustainability performance of the global ports sector

SCOPE



resilient infrastructure



climate and energy



safety and security



community outreach
and port-city dialogue



governance and ethics

WPSP port projects portfolio – Join us!



PORT PROJECTS



Valparaiso Port Company –
“Valparaiso_Puerto Plus”
project



Port of Barcelona – Study on
Cruise Activity

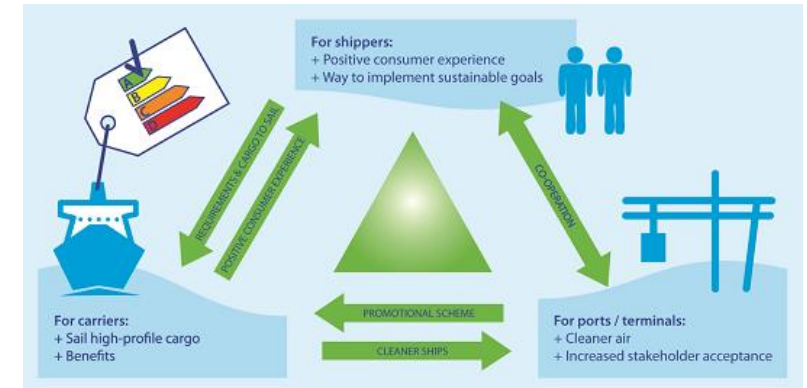


Port of Antwerp – CIVITAS
PORTIS project

IAPH Environmental Ship Index

Ship emissions – why ports care:

- Responsibility for local quality of life
- Implications of climate change
- Air quality is a limiting factor to port development
- License to operate and to grow



- *ESI provides the means to assess the environmental performance of sea going vessels (air emissions) relative to the IMO rules*
- *On that basis ports may choose to promote cleaner shipping by providing incentives to vessels with an outstanding, above legislation, performance*

ESI formula

- ESI is composed of credits (0-100) for above-baseline environmental performance regarding NO_x, SO_x (indirectly PM) and CO₂ also rewards the use of OPS

$$\text{ESI SCORE} : \text{ESI NO}_x + \text{ESI SO}_x + \text{ESI CO}_2 + \text{OPS}$$

(maximum 100)

- NO_x: dependent on performance of main and auxiliary engines
- SO_x: dependent on the sulphur content of the fuels used
- CO₂: dependent on reporting of fuel consumption, distance sailed and increase in efficiency
- OPS: Bonus if the vessel can connect to Onshore Power Supply facilities

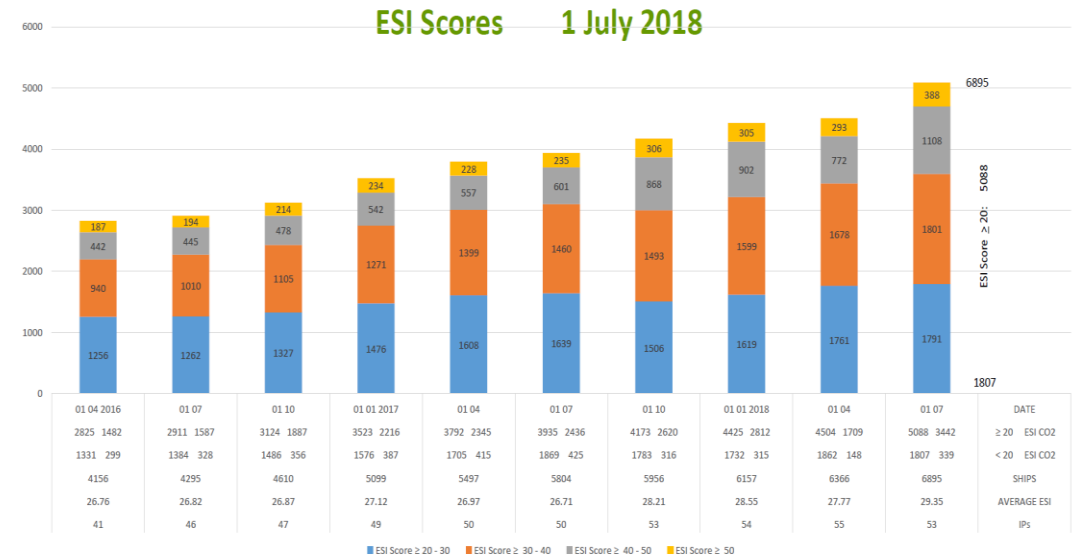
ESI – how it works

- Ships obtain an ESI Score by reporting on engine certificates, bunker fuel information and CO2 reporting, via a secured web-based application
- The ESI Score is calculated and made publicly available on the website
- Ports develop their own incentive scheme based on ESI points and report to the ESI administration
- The ESI incentives are also made publicly available on the website

www.environmentalshipindex.org

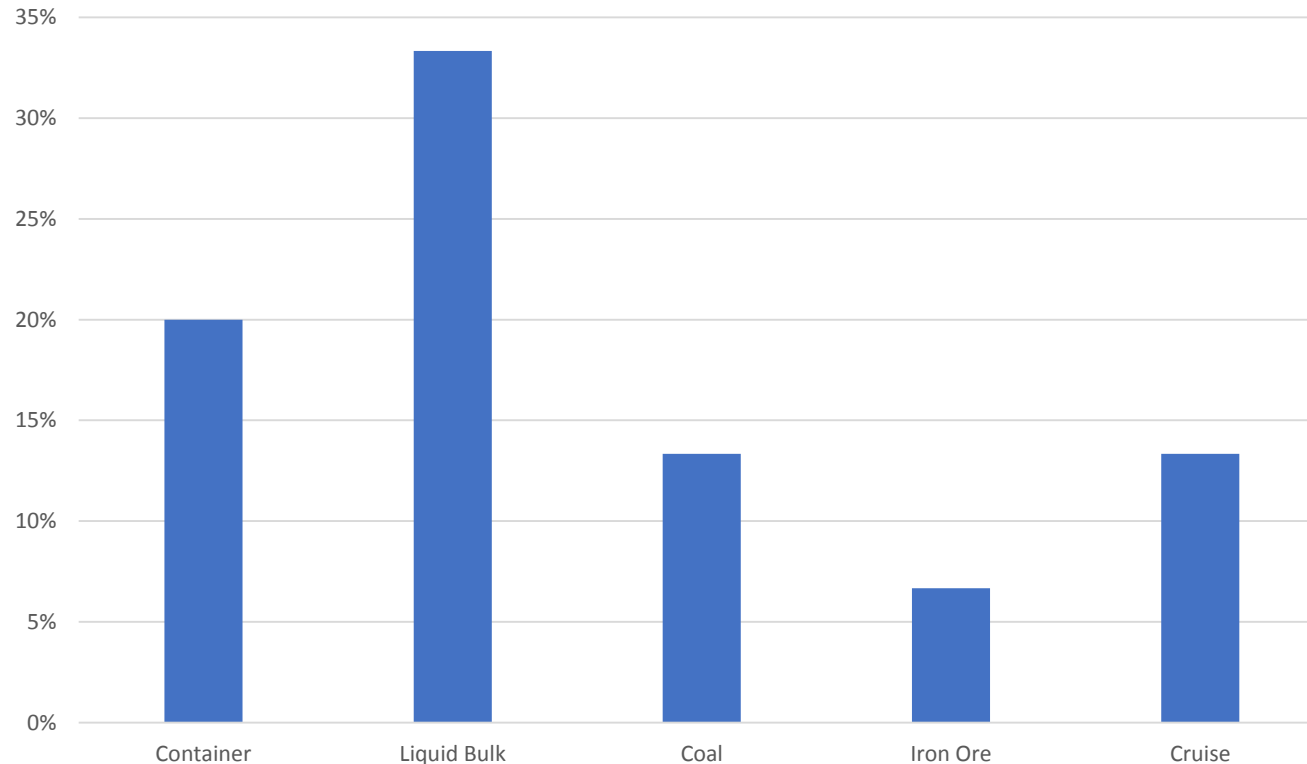
Progress to date

- 8 years of operation
- Around 7000 vessels registered
- Over 50 incentive providers most of them being ports



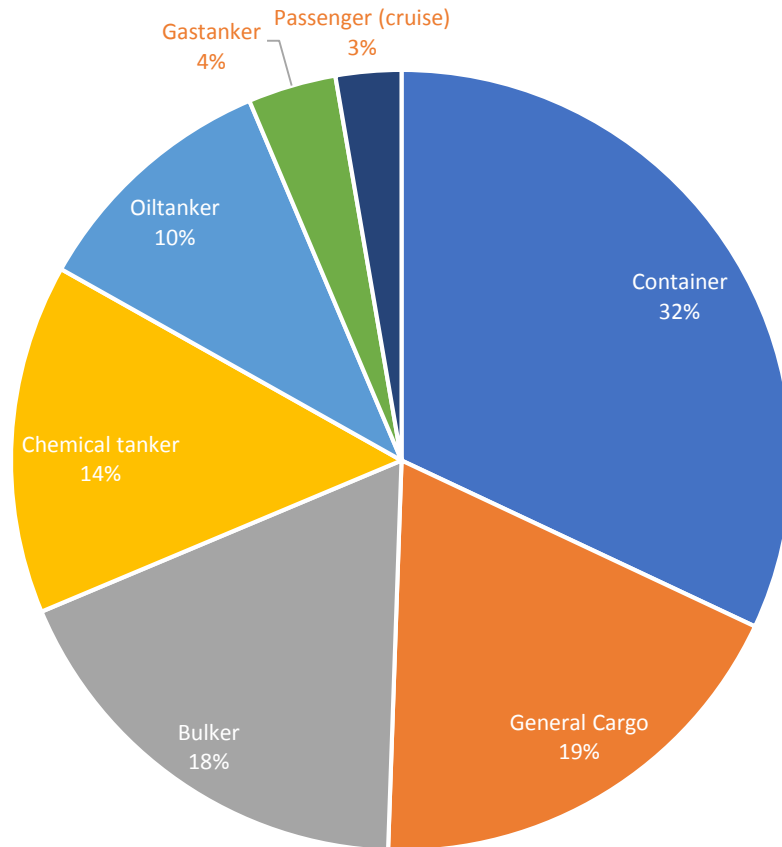
ESI ports participation

ESI participation of biggest 15 ports



- 20% of the biggest container ports participate in ESI, mainly North-West Europe
- More than 30% of the biggest liquid bulk ports participate
- Less than 15% of the biggest cruise ports participate

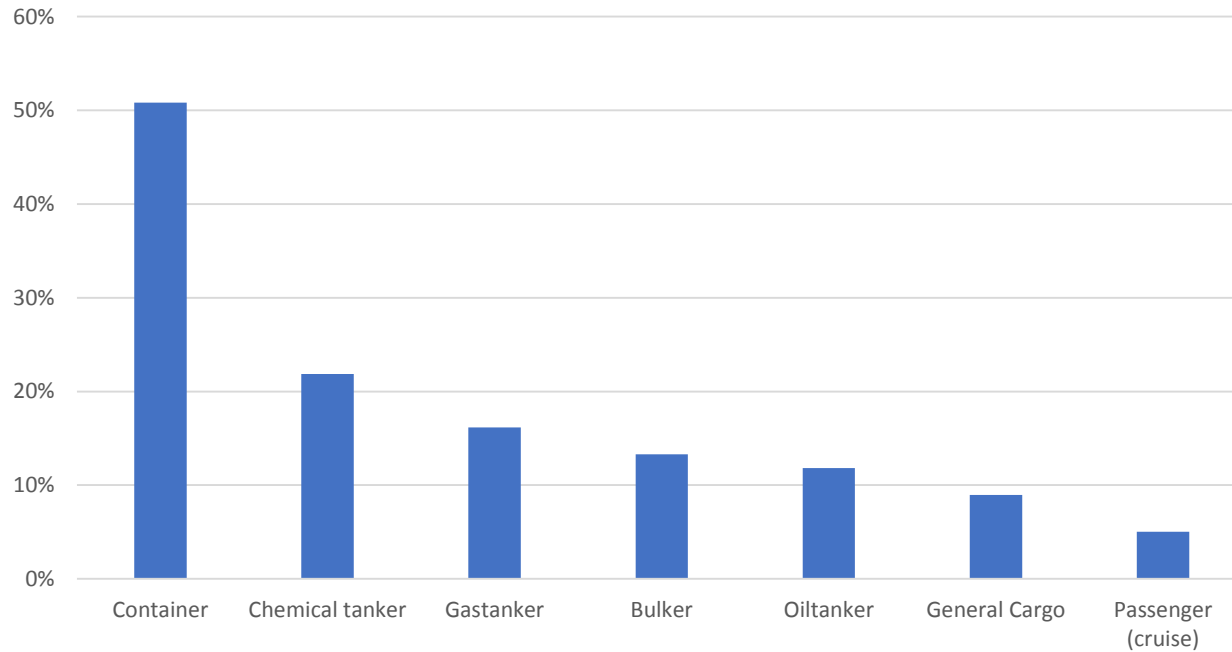
ESI – distribution of vessels types



- ESI is dominated by container vessels and tankers (60 %)
- Passenger vessels (cruise and RoRo) only with small share

ESI – distribution of vessels types

Share of world fleet



- 50% of the world container vessels are in ESI
- Only 5% of all passenger (cruise) and RoRo vessels are in ESI

Forhcoming developments for ESI

- Updating the website and IT infrastructure (increased reliability and user friendliness)
- Updating the ESI formula to incorporate IMO developments (e.g. 2020 Sulphur cap, CO2)
- Looking at widening the ESI formula (e.g. noise, PM) but leaving flexibility to incentive providers in selecting relevant modules
- Further consultation with ship-owners and cooperation with other schemes
- Focusing on highlighting the environmental benefits of ESI

Concluding remarks

- Port incentive schemes are voluntary by definition
- ESI is becoming the standard incentive system used by ports
- WPSP is committed to update and upgrade the system
- Call for contributions to the WPSP projects database
- Call for active involvement to the current and forthcoming WPSP initiatives

Thank you for your attention!

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