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

Dr Antonis Michail
WPSP Technical Coordinator
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World Ports Sustainability Program

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

Lead by IAPH

Demonstrating global leadership of ports in contributing to Sustainable Development.

Ports must respond to worldwide, regional and local challenges such as climate change, mobility, digitalisation, migration and social integration.

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

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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 NOx, SOx (indirectly PM) and CO2 also rewards the use of OPS

**ESI SCORE : ESI NOx + ESI SOx + ESI CO2 + OPS**

(maximum 100)

- NOx: dependent on performance of main and auxiliary engines
- SOx: 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

- 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

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

Share of world fleet

- Container: 50%
- Chemical tanker: 20%
- Gas tanker: 10%
- Bulker: 10%
- Oiltanker: 10%
- General Cargo: 5%
- Passenger (cruise): 5%
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!

Antonis.michail@sustainableworldports.org

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