iaph
international association of ports and harbors

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OceanScore

ESI Methodology Change Webinar

June 2026

Agenda

- Hello, we are OceanScore
- From ESI 1.0 to ESI 2.0: Why now?
- Benefits of the methodology change
- What changed: Major scoring differences
- Guiding the next steps & why they matter
- Support: How we empower ports
- Q & A

Hello, we are OceanScore.

A brief introduction

OceanScore at a glance

Turning Compliance into Commercial Success

Our Team

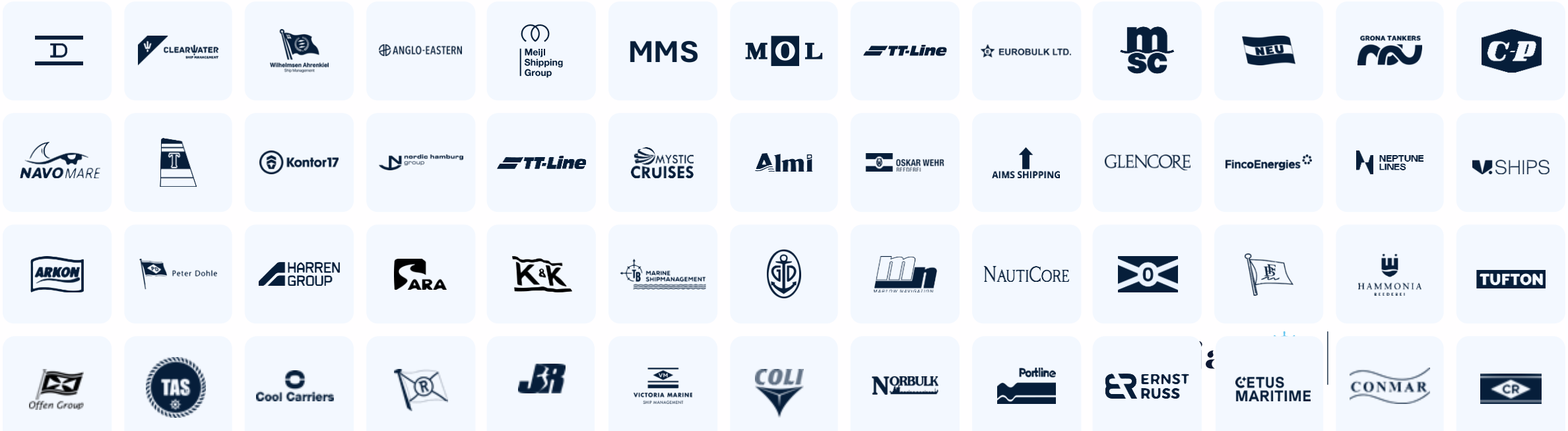
40+ with deep technical and commercial expertise in shipping. Germany, Greece, Singapore, Japan, Poland and Portugal. Serving shipping since 2022, growing quickly.

Our Solutions

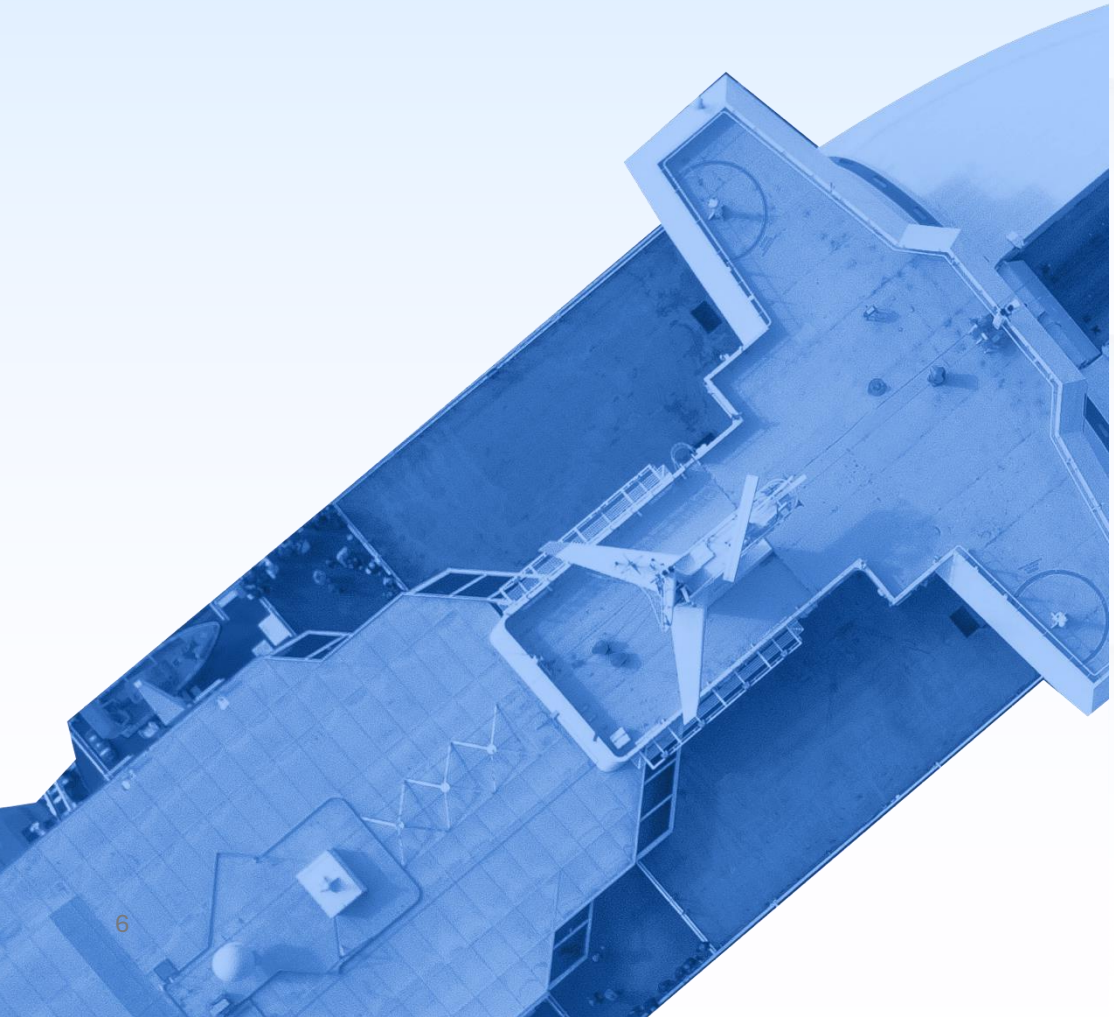
Software and data solutions that help successfully manage the commercial aspects of shipping regulation. Serving more than 100 customers in three verticals: Shipping, Finance and Ports

Our Backers

Leading industry players (MSC, Doehle, Nordic Ship-management, Portline, Stolt), investors (the DOCK, Motion Ventures) and individuals. Seed Round in 2023, Series A in 2024.



Mission & Vision for the maritime world



Mission

Turning Compliance Into Commercial Success

Vision

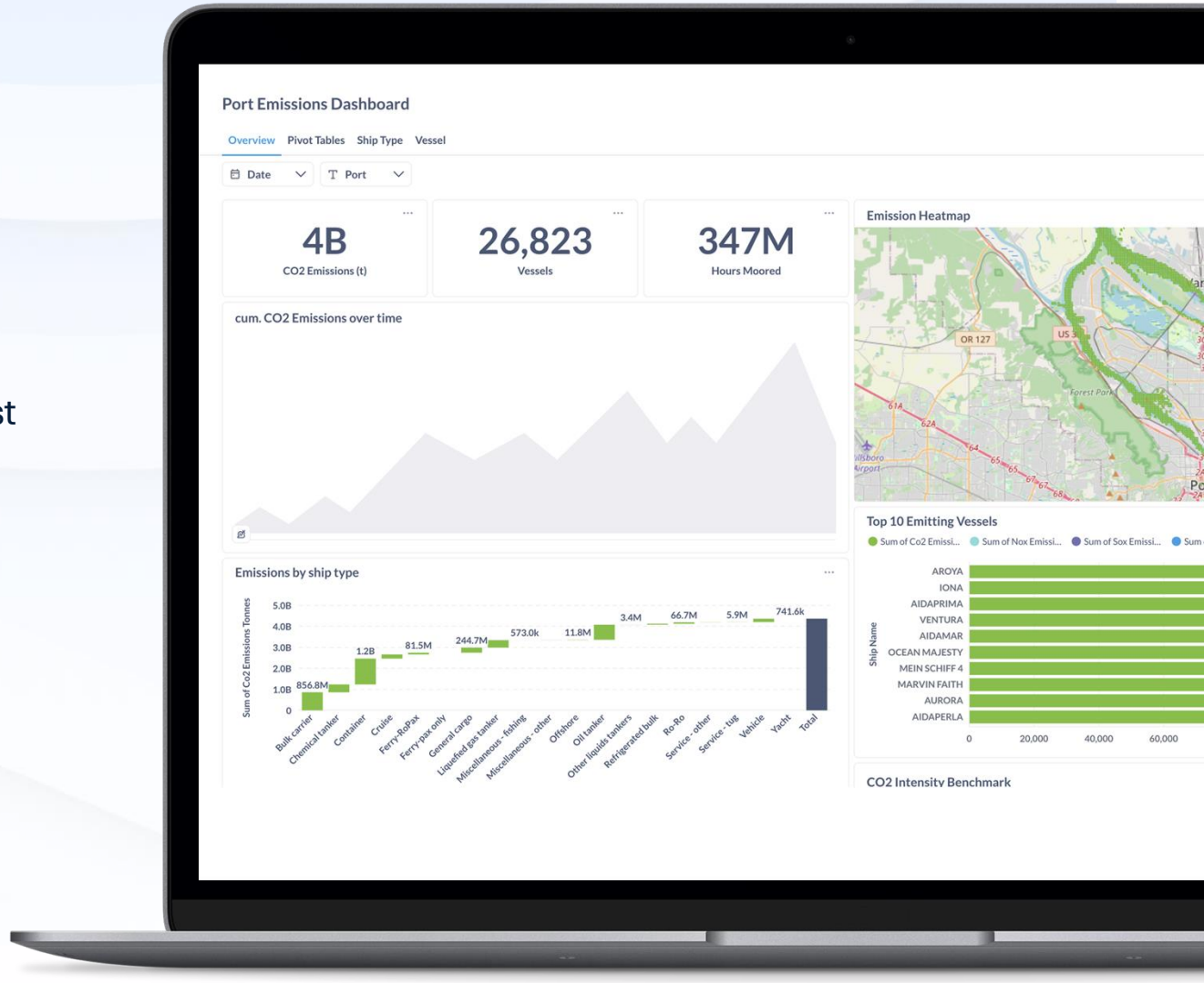
The Globally Trusted Standard for Emissions Compliance Management

We support ports with ESI and our PortView product

PortView is our intelligence platform for ports

PortView simplifies sustainability scheme management and reporting for scope 3 emissions, while offering a robust fundament for innovation and infrastructure decisions.

- Constantly trackable flow of accurate vessel-level emissions data within defined port areas
- Emissions data broken down by vessel, vessel type, pollutant, time period and area
- Create more targeted and justifiable initiatives, e.g. OPS, grid invest or fuel bunkering
- Backed by IAPH



OceanScore

From ESI 1.0 to ESI 2.0.

Why now?

Since it’s beginnings in 2011, ESI has become the industry’s most successful environmental incentive scheme.

Currently 107 ports participating all around the world, 7,200 vessels signed up

Represents about half of global container fleet & many other segments

Developed and owned by the International Association of Ports & Harbors (IAPH)

For good reason: ESI provides major benefits to ports

What makes ESI the smart choice for ports worldwide

Harmonized signal for cleaner vessels

Ports get an established incentive scheme, making participation more attractive and manageable.

Proof for environ-mental action

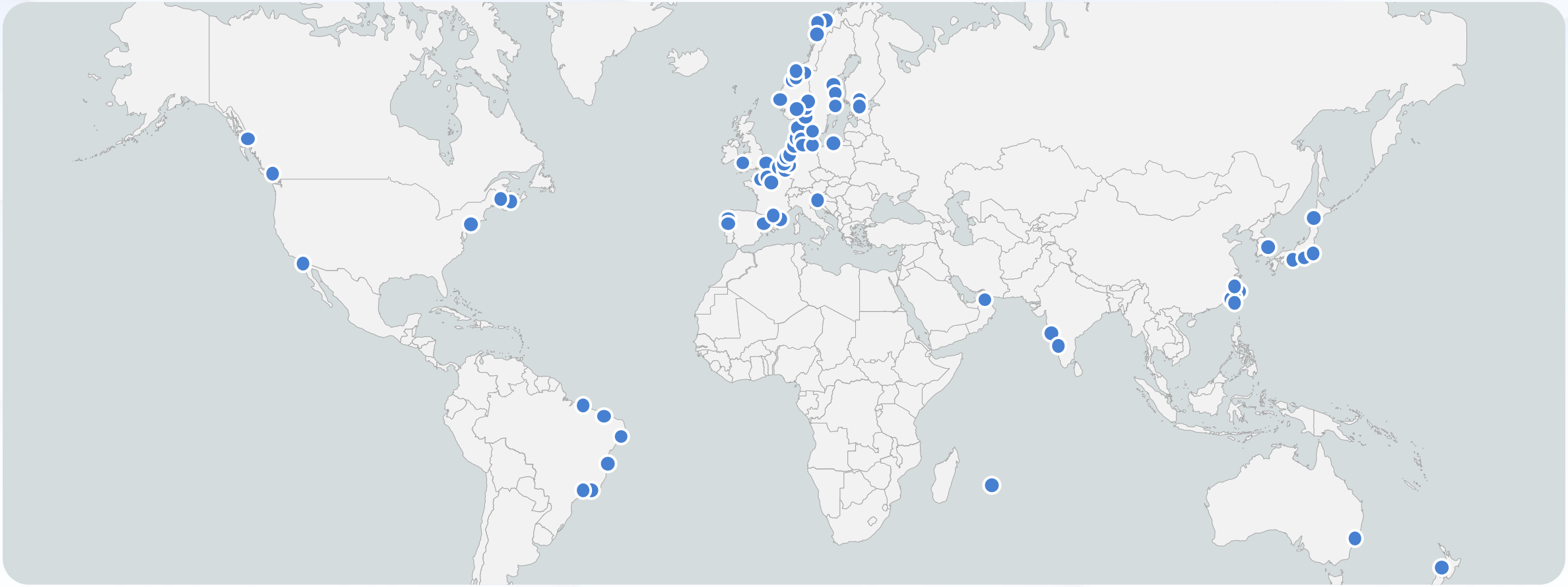
A straightforward way to demonstrate action on air quality and Scope 3 to cities, regulators and investors.

Centrally managed, structured dataset

A centrally managed dataset of vessel environmental performance, allowing for further analysis and planning.

Today, participating ports can be found around the world

With numbers steadily growing



Part of ESIs success stems from the ambition to provide a realistic baseline, reflecting contemporary practices

Realities of 2011

Regulation was about local air pollution, not lifecycle GHG
Climate policy for shipping was still at an early stage. ESI 1.0 mirrored this by putting almost all weight on NOx and SOx.

Alternative energy systems were not as present
LNG, scrubbers, OPS, batteries and fuel cells were still a rarity in 2011. ESI 1.0 rewarded the levers operators could realistically use then.

No IMO DCS and EU MRV in place to standardize reporting
ESI 1.0 established its own reporting cycle around a 6-monthly rhythm using EIAPP, BDN sulphur content, fuel and distance totals).

Yet, there have been limitations of the 2011 scheme that created pains for ports and shipping

Blind for actual operational use
ESI did not distinguish well between how and how often cleaner modes, OPS, or new equipment were used in service.

Limited link to climate and Scope 3 goals
The score didn‘t properly signal well-to-wake GHG performance – suboptimal for ports with clear targets.

Newer technologies hardly addressed
Investments in innovative tech were only indirectly or not at all rewarded, which frustrated frontrunner shipowners and limited ports’ ability to incentivise what they want to see more of.

High administrative effort for shipping
With 6-month validity periods and fixed upload windows, managing ESI felt like a separate, manual process on top of everything else, decreasing appeal.

After a decade of innovation and change within the industry, ESI has to adapt again.

Benefits of the methodology change.

What’s in it for ports

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The new ESI raises the ambition level and provides a strong foundation for environmental and infrastructure strategies

Stronger environmental signal you can trust

ESI 2.0 puts clear weight on NOx, SOx, and a modern WtW GHG methodology, so your incentives are aligned with both air-quality and climate objectives.

Rewards technologies you want to encourage in your port

Several technologies feed into the GHG and innovation sub-scores, allowing you to design schemes that support your OPS and alternative-fuel strategies.

Richer data foundation for planning and reporting

ESI 2.0's underlying data (fuel mix, OPS use, innovative technologies) gives you a more solid basis to support internal analysis and external reporting.

More predictable score communication

A score based on the previous year's data makes it easier to communicate eligibility windows, update tariffs, and align with cities and regulators.

Feedback on which actions actually move the needle

Since scores are rebased and more spread out, differences between vessels are easier to see and to explain, making incentive design more transparent.

Future-proof framework backed by IAPH

Methodology is designed to evolve with upcoming IMO fuel standards and regional climate rules, so ports don't have to constantly reinvent their own environmental charging schemes.

Major scoring differences.

What changed?

Cheat-Sheet: Shift from 1.0 to ESI 2.0 in detail

Topic	ESI 1.0 (today)	ESI 2.0 / Core	Explanation
Basic Logic	Focus on NOx, SOx, CO_2 bonus, OPS	Four subscores: NOx, SOx, GHG, Innovation	Expanded to include climate perspective and innovation
CO_2 / Climate	CO_2 only indirectly via efficiency (bonus)	GHG well-to-wake (gCO_2e/MJ)	Shift from tank-to-wake → lifecycle approach
Energy Use	Focus on fuel (BDNs)	Energy mix: fuel + electricity (EDNs)	Integration of electricity (OPS, solar, etc.)
OPS-Assessment	Installation = bonus (10 points)	Usage is evaluated, not the installation	Shift from CapEx → actual usage
SOx Logic	Based on sulfur content + BDNs	Focus on low-sulfur fuels + energy shares	Simplification + stronger linkage to energy use
NOx Assessment	Based on engine certificates	Additional consideration of operating mode (e.g. Tier III usage)	Operationalization of NOx performance. New (increasing) threshold to tier II. And running hours in tier III count.
Innovation	Not explicitly included	Independent innovation score	New category for technologies installed, e.g. wind assist, air lubrication, solar minimum 5kw, batteries minimum 500kwh
Fuel Types	Limited differentiation (e.g. LNG implicit)	Broad fuel palette (biofuels, e-fuels, H_2, etc.)	Expansion to future energy carriers
Database	Relatively limited (BDN, engine data)	Expanded data: EDN, fuel types, operational data, engine types	Greater data depth
Regulatory Alignment	Indirect	Alignment with FuelEU / IMO GHG logic	Harmonization with regulation
Assessment Logic	Partly technology-driven	Performance- and intensity-based	Focus on output instead of input

Deep dive on the role of sulphur oxides within ESI 2.0

SOx Score

- **Base score uses only fuels ≤ 0.1% sulphur**
- **Maximum of 43.3 points - 33.3 + bonus up to 10 points**

$$Fuel\ Quality\ Score = 33.3 * \left(Prop.Electrical\ SOx + Prop.Fuel\ SOx * \frac{(0.1 - Average\ Sulphur\ \%)}{0.1}\right) + Bonus$$

Where:

$$Proportion\ Electricial\ SOx = \frac{Electrical\ Energy}{Electrical\ Energy + Fuel\ Energy \leq 0.1\%\ S}$$

$$Proportion\ Fuel\ SOx = \frac{Fuel\ Energy \leq 0.1\%\ S}{Electrical\ Energy + Fuel\ Energy \leq 0.1\%\ S}$$

$$Average\ Sulphur\ \% = \frac{\sum_{BDNs} Sulphur\ \%\ of\ Fuel * Tonnes\ of\ Fuel \leq 0.1\%\ S}{\sum_{BDNs} Tonnes\ of\ Fuel \leq 0.1\%\ S}$$

$$Bonus = \frac{\sum_{BDNs} Tonnes\ of\ Fuel \leq 0.1\%\ S}{\sum_{BDNs} Tonnes\ of\ Fuel} * 10$$

Deep dive on the role of nitrogen oxides within ESI 2.0

NOx Score

- **Only considers engines that can achieve improvements from Tier II baseline**
- **Maximum of 66.7 points**

$$NOx\ Score = 66.7 * \left(Prop.Electrical + Prop.Fuel * \frac{\sum_{Power\ Sources} Av.Improvement * Rated\ Power}{\sum_{Power\ Sources} Rated\ Power}\right)$$

Where:

$$Proportion\ Electricial = \frac{Electrical\ Energy}{Electrical\ Energy + Fuel\ Energy}$$

$$Proportion\ Fuel = \frac{Fuel\ Energy}{Electrical\ Energy + Fuel\ Energy}$$

$$Average\ Improvement = \frac{(Tier\ II\ Requirement - Average\ NOx\ Emissions)}{Tier\ II\ Requirement}$$

$$Average\ NOx\ Emissions = \frac{\sum_{\{Tier\ II\ Mode, Tier\ III\ Mode\}} Time * min\{Tier\ II\ Required, Emissions\}}{\sum_{\{Tier\ II\ Mode, Tier\ III\ Mode\}} Time}$$

Deep dive on the role of GHG within ESI 2.0

GHG Score

- **Maximum of 20 points**

$$GHG\ Score = OPS\ Bonus + Low\ GHG\ Bonus$$

Where:

$$OPS\ Bonus = 5\ Points\ IF\ count\ of\ EDNs \geq 5\ otherwise\ 0\ Points$$

Low GHG Points according to the Table – best wins.

(Note that this is a variable and year dependent, driven by the IMO NZF trajectories.)

Yearz	WtW < Base (5 points)	WtW < Direct (10 points)	WtW < ZNZ (15 points)
2027	89.568	77.439	19.000
2028	89.568	77.439	19.000
2029	87.702	75.573	19.000
2030	85.836	73.707	19.000
2031	81.731	69.602	19.000
2032	77.626	65.497	19.000
2033	73.520	61.391	19.000
2034	69.415	57.286	19.000
2035	65.310	53.181	14.000

Deep dive on the innovation score within ESI 2.0

Innovation Score

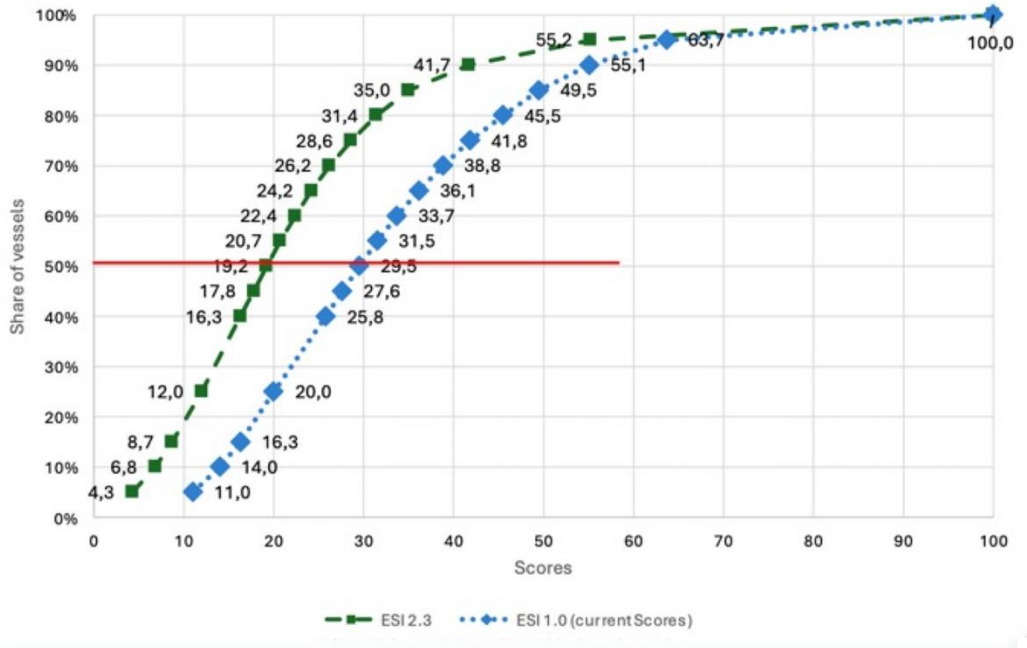
- **Maximum of 20 points**

$$Innovation\ Score\ = 0.2 * \sum_i Innovation\ Points$$

Where:
Max of $\sum[[Innovation\ Points]] = 100$
Max of Innovation Score = 20 Points

Technologies	Points	Max Points	Data input & criteria
Carbon Capture	10	10	y/n
Wind assist (all types) e.g. including Wings/Sails, Rotors/wind turbines, Kites.	Linear from 0 to 100 points	100	P_{wind} & P_{prop}
Air lubrication	20	20	y/n
Fuel Cell (all types)	20	20	y/n
Solar Minimum 5kw	10	10	y/n
Batteries Minimum 500kwh for score	10	10	y/n
Particulate Matter Filter (PM)	10	10	y/n

As the methodology has changed, score values will differ from what shipping companies are used to



The new methodology rebases the score

For the same vessel, the numerical value will usually be lower than under ESI 1.0.

This does not mean the ship performs worse – it is simply the consequence of the positive adjustments and new subscores.

It is crucial for incentive providers to address this adjustments by adapting their incentive thresholds – keeping ESI membership realistic and attractive for incentive receivers.

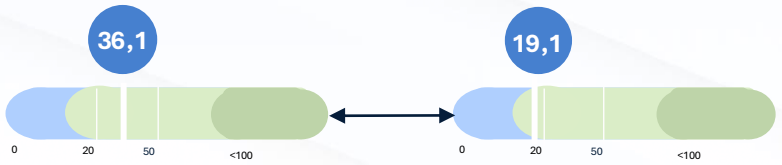
Scoring examples before and after ESI 2.0*

NORD MAJESTIC

Type: Oil tanker
IMO: 9902835
Year built: 2020

ESI 2.0 Scores			
SOx	NOx	GHG	Innovation
13,9	5,2	0	0

ESI 1.0 **ESI 2.0**

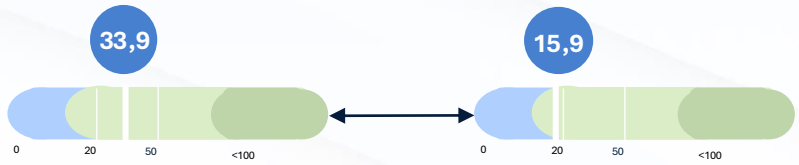


Lady Hedwig

Type: General cargo ship
IMO: 9834985
Year built: 2017

ESI 2.0 Scores			
SOx	NOx	GHG	Innovation
14,5	5,1	0	0

ESI 1.0 **ESI 2.0**



(*) Note: Exemplary scoring results based on 2024 data – score might differ for 2027

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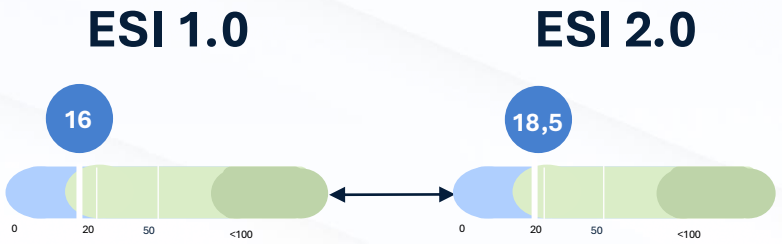
Scoring examples before and after ESI 2.0*

MSC YURIDA III

Type: Container Ship
IMO: 9344564
Year built: 2015

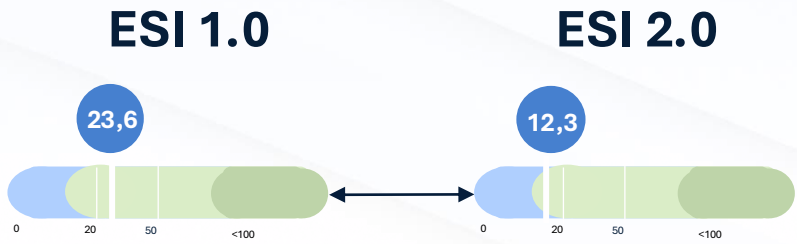
ESI 2.0 Scores			
SOx	NOx	GHG	Innovation
18,5	0	0	0



MSC POLINA

Type: Container ship
IMO: 9376141
Year built: 2007

ESI 2.0 Scores			
SOx	NOx	GHG	Innovation
12,3	0	0	0



(*) Note: Exemplary scoring results based on 2024 data – score might differ for 2027

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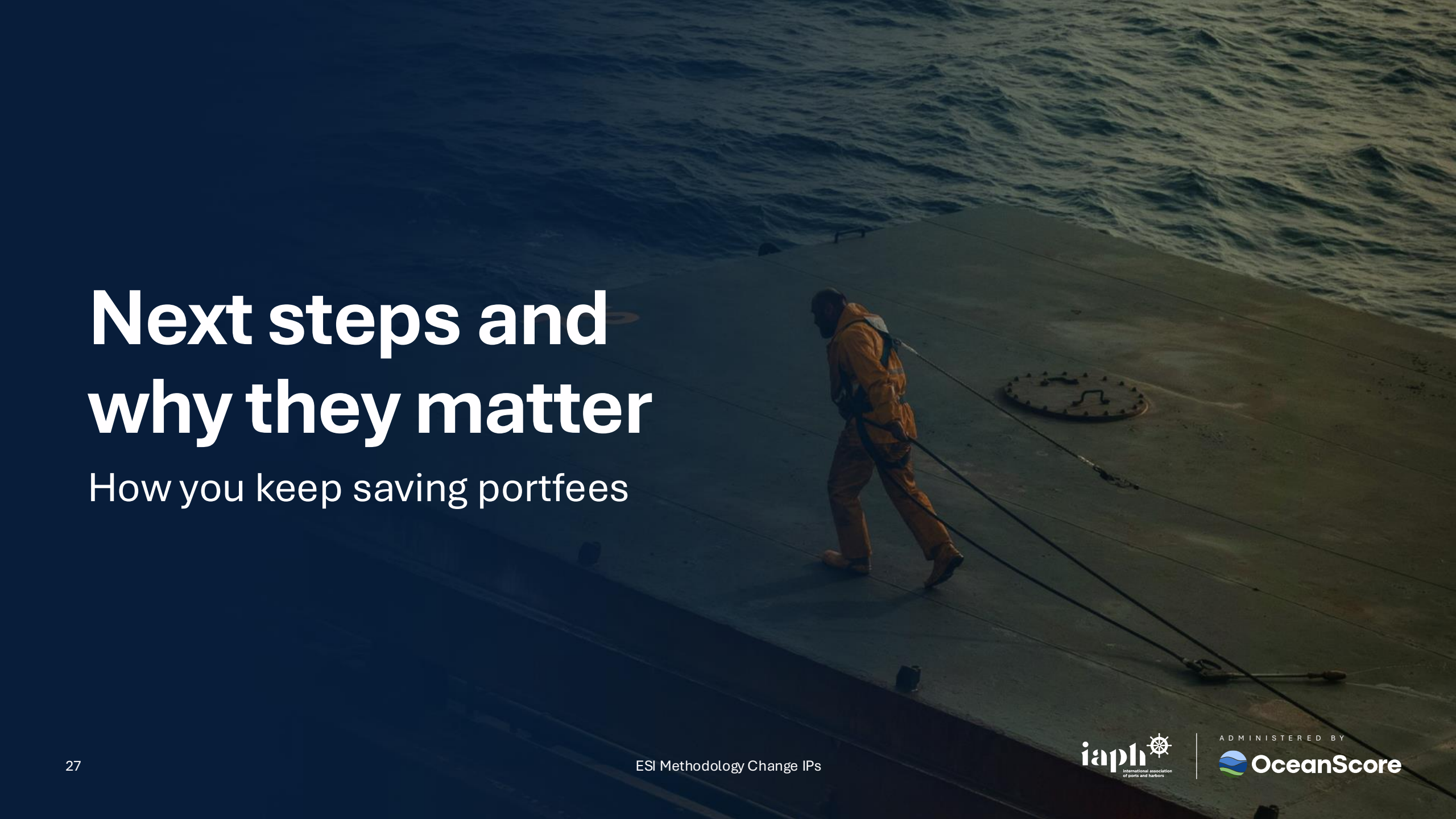
Next steps and why they matter

How you keep saving portfees



Timeline for the next steps

TRANSITION PHASE

July 31st 2026

- Deadline for data input from shipping companies

January 1st 2027

- ESI 2.0 enters into force, with its first score based on 2025 full-year data

FULLY ESTABLISHED

June 30th 2027

- Deadline for data input for shipping companies
- Until then, score will remain based on 2025 full-year data

July 1st 2027

- From July onwards, scores will be recalculated using 2026 full-year data

June 30th 2028

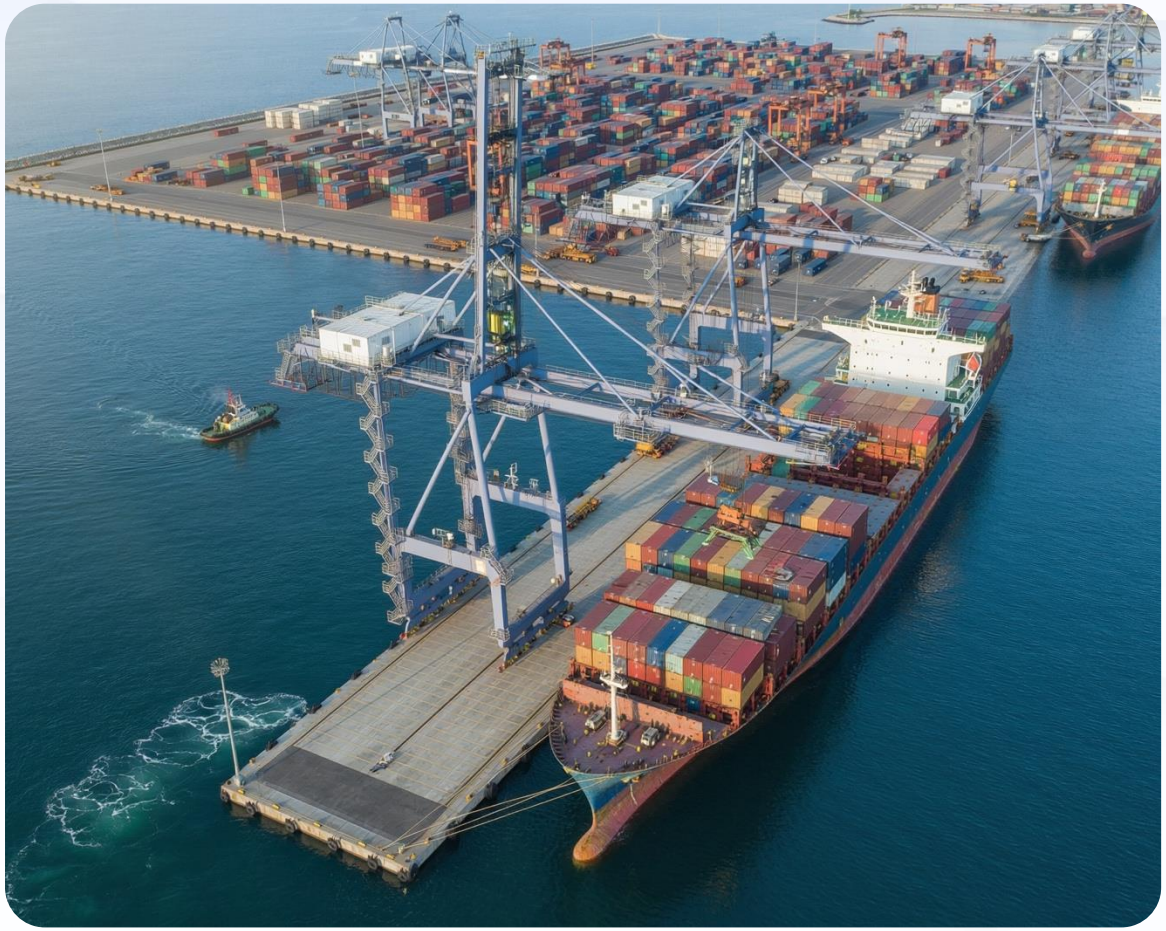
- Deadline for data input from shipping companies, establishing the yearly reporting cycle

Our service

How we empower ports

OceanScore is your partner for the transition and beyond

Ensuring a smooth transition for the new ESI 2.0



How we support you

- Modelings for port incentive scheme adjustment (based on individual port calls and other relevant data points)
- Helpdesk by industry experts
- Live ESI insights & statistics relevant to ports
- Tailored port webinar series on ESI 2.0
- Facilitating change with IAPH and organizing port events

Summary

What we've learned today

ESI 2.0 is the most ambitious ESI to date

... while reflecting the realities of modern shipping and regulation more accurately

MORE REALISTIC

ESI 2.0 aligns more closely with current operational practices, including the growing adoption of cleaner fuels, shore power usage, and innovative emission reduction technologies.

MORE GRANULAR

With more data points addressed and improved comparability of vessels, ports get a stronger foundation for internal analysis and external reporting – data that can be leveraged for decisions.

FUTURE PROOF

Since ESI will evolve with upcoming IMO fuel standards and regional climate rules, the scheme is ready for whichever direction regulation will take – keeping membership practical and safe.

Q&A

Let’s discuss

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Meet our Service Team

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Take me to website