

Ship Review

Environmental, Sustainability and
Reliability Performance of Ships

(a product of the Ocean Score family)



Scope at a glance

Registered credit rating agency

ESMA accreditation in 2012
(European Securities and Markets
Authority)

240+
employees
entrepreneurial
culture

Pan- European

Berlin
London
Madrid
Frankfurt
Milan
Paris
Oslo

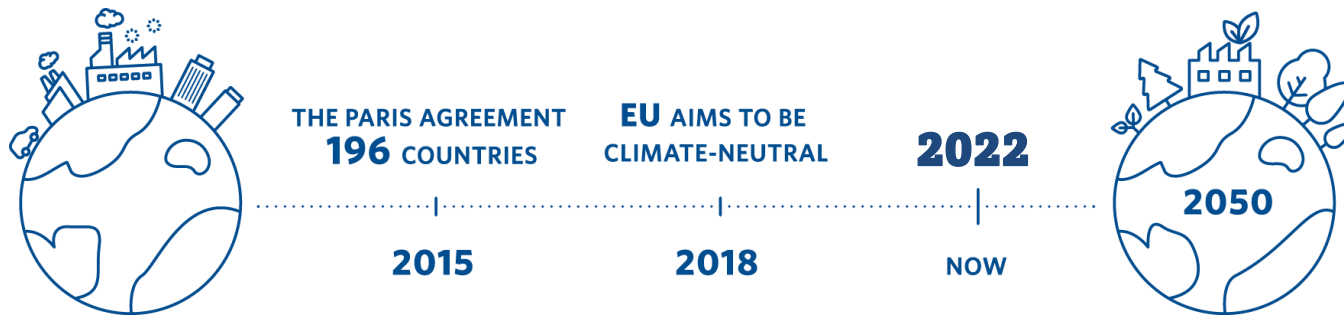
serving
~380
institutional
investors

with total
assets under
management
of ~ € 49tn

ECB coverage
requirements for
ECAAF status met
in **2018**

The largest European rating agency

The challenge



Ship owners and ship managers

meet customers' and partners' requirements by implementing reliable, safe, green and sustainable shipping



banks and investors

meet regulatory requirements from market authorities and initiatives such as the Poseidon Principles



port authorities and flag states

identify green shipping operators to ensure cleaner harbors and cities



shippers and logistic companies

meet consumer needs by identifying environmentally friendly sea transport providers



The solution

Ship Review measures the evolving sustainability of the sea freight sector as ship owners and operators face growing pressure to meet tougher environmental regulations & 2050 climate goals.


Ship Environmental Review: Measures air borne emissions, sea emissions, emissions through garbage disposal and emissions impact to people onboard and ashore

Ship Sustainability Review: Measures the adoption of the 17 United Nations sustainable development goals of a specific ship



Ship Reliability Review: Measures technical and crew related deficiencies and detentions and therefore availability of a vessel

Ship Condition Review (coming soon): Measures the condition of a ship i.e. maintenance status of technical components, quality standard of refurbishment, extend of work during drydocking.

Ship Review has been created in collaboration with **GMS** 



Why Scope?

Scope is already registered with ESMA and therefore well positioned to meet future regulatory requirements on ESG ratings and assessment tools.



“ESMA highlights the need to match the growth in demand for these products with appropriate regulatory requirements to ensure their quality and reliability.”

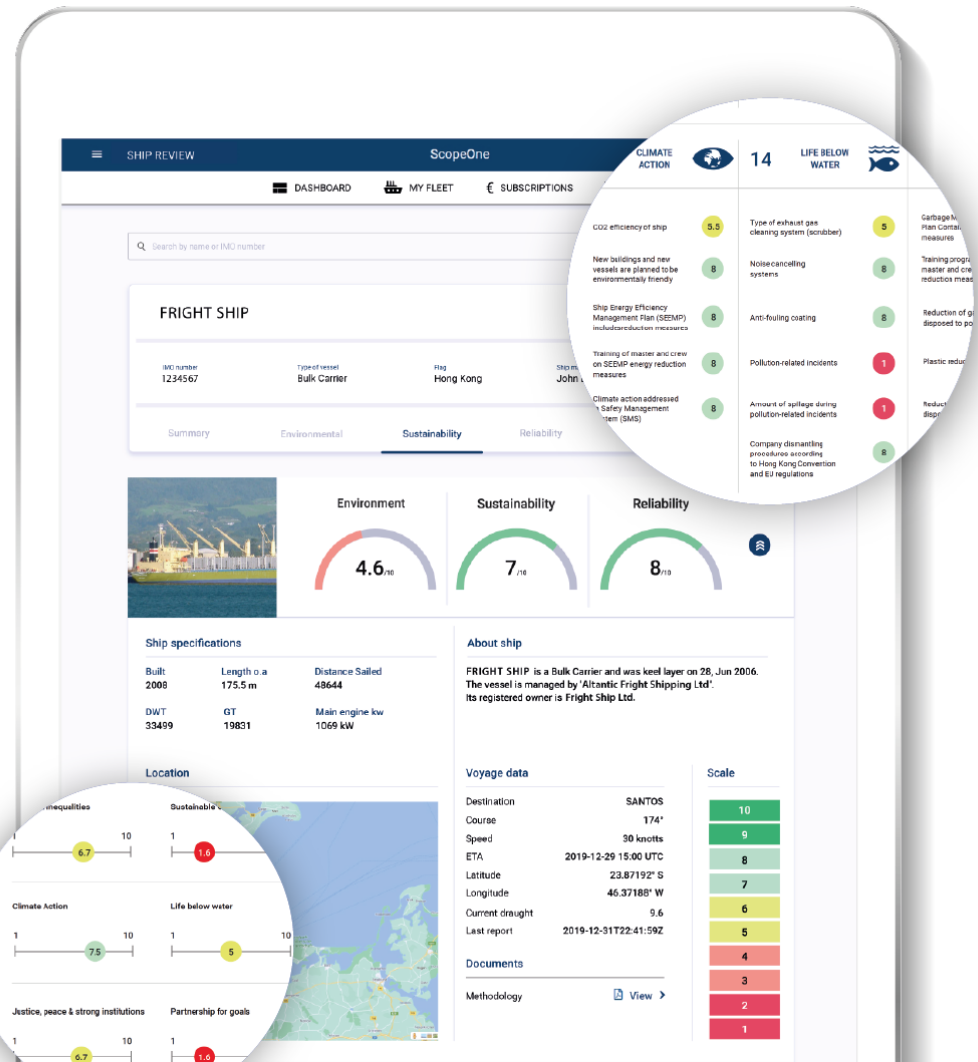
“The market for ESG ratings and other assessment tools is currently unregulated and unsupervised. When combined with increasing regulatory demands for consideration of ESG information, there are increased risks of greenwashing, capital misallocation and products mis-selling.”

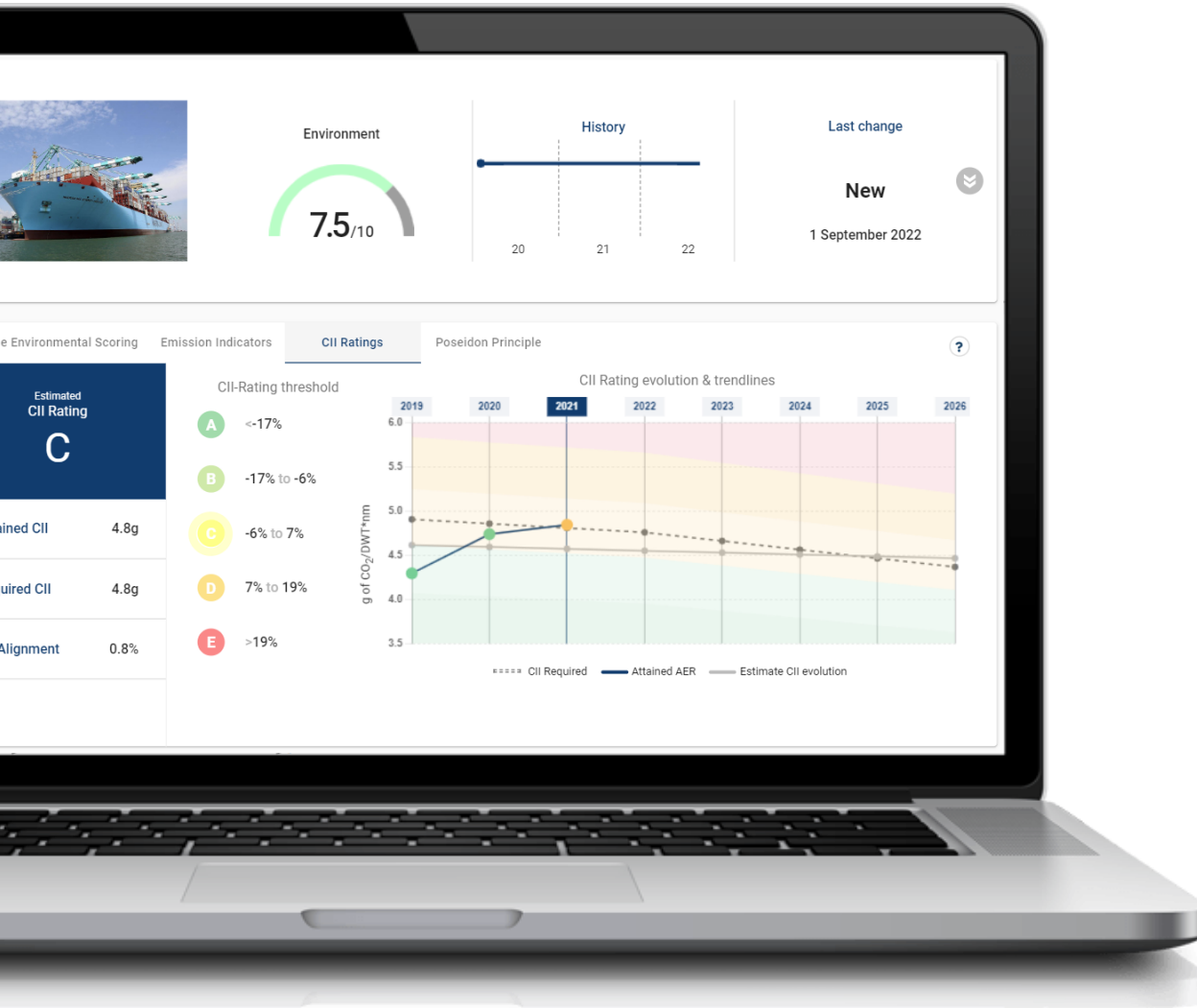


The content

More than 70.000 ships

Container:	5,300 ships
Tankers:	15,100 ships
Passenger:	3,600 ships
Bulk carriers:	12,200 ships
General cargo:	12,100 ships
Offshore:	6,200 ships
Other:	31,000 ships





What Ship Review shows:

- CII Rating estimate, CII Rating forecast and ship comparison
- Carbon Intensity Estimate (EEOI), (CO₂/mt*nm) based on MRV data.
- Annual Efficiency Ratio (AER)
- Allowed AER based on Poseidon Principles trajectory.
- Climate Alignment Rating (Allowed AER vs. Poseidon Principle target).
- Total annual emissions of a ship
- Emission estimates for ships that do not report emissions to MRV based on sophisticated peer group emissions analytics and satellite based distance sailed.

Ship 1



97,303
102,389
5.27
5
8,3%
1,052

Environment



vs.

Ship 2



Environment



Distance sailed (2021 AIS data)
Total CO2 Emitted (2021 MRV data)
Annual Efficiency Ratio (AER)
Poseidon AER trajectory

Estimated Poseidon Principles Climate Alignment

Annual average CO2 emission per distance from MRV (kg CO2/nm)

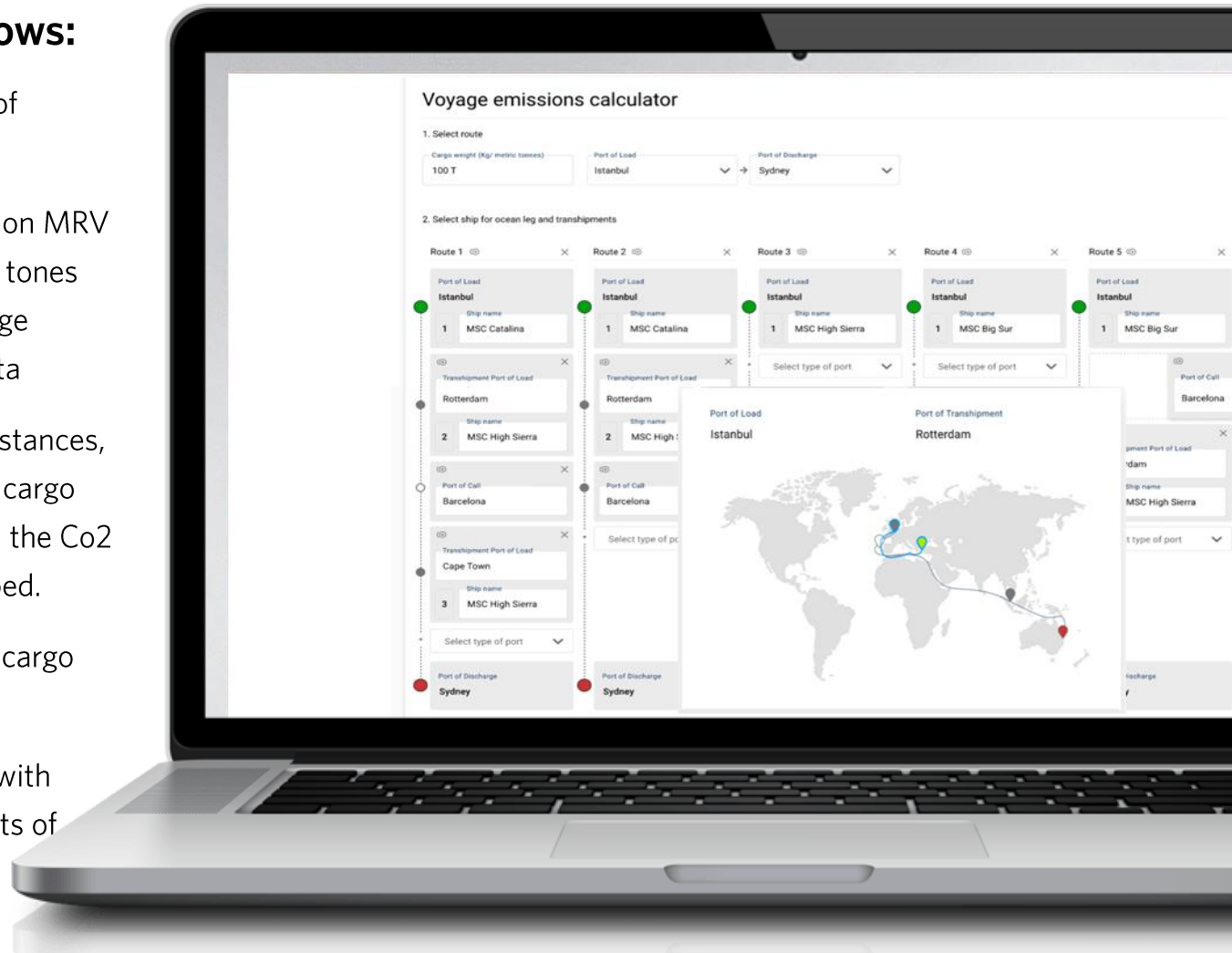
74,405
72,811
4,57
5
-8,6%
979

What Ship Review shows:

- Vessels with similar engines and dwt emit different amounts of CO2/nm and show different AER
- Ship 1 has a slightly negative and Ship 2 a slightly positive impact on Poseidon Portfolio performance
- Ships with better CO2 performance can be worse in the overall environmental performance as other parameters also have an impact on the environment

What Ship Review shows:

- Real emission data instead of theoretical emissions.
- Emissions calculated based on MRV certified emissions data per tones carried and nm sailed. Voyage based on hourly satellite data
- Alternative routes (ships, distances, port of calls, transfer ports) cargo can be book on, to minimize the Co2 emissions of products shipped.
- Total Co2 footprint for their cargo for each voyage alternative.
- Emissions of different legs, with different ships, different ports of call and transmission ports.





Case study - Emission indicators

What Ship Review shows:

Carbon Emissions Indicators

Total CO2 emissions	Annual efficiency ratio (AER)	Carbon intensity (EEOI)	Allowed AER as per Poseidon Principles	Poseidon Principles climate alignment	Poseidon CA rating
100,139.7 CO2 t	4.7g CO2/DWT*nm	5.8g CO2/mt*nm	4.8g CO2/DWT*nm	-1.2%	Cp

Sulphur Emission Indicators

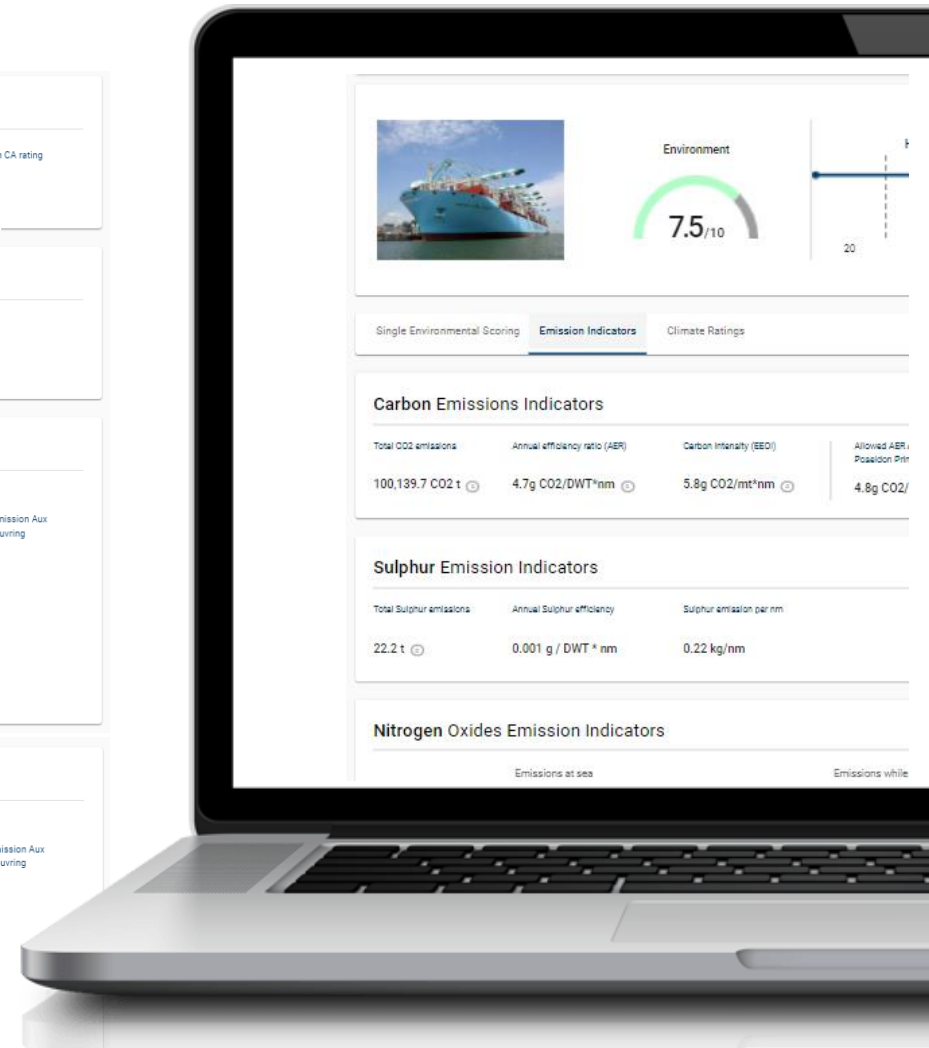
Total Sulphur emissions	Annual Sulphur efficiency	Sulphur emission per nm
22.2 t	0.001 g / DWT * nm	0.22 kg/nm

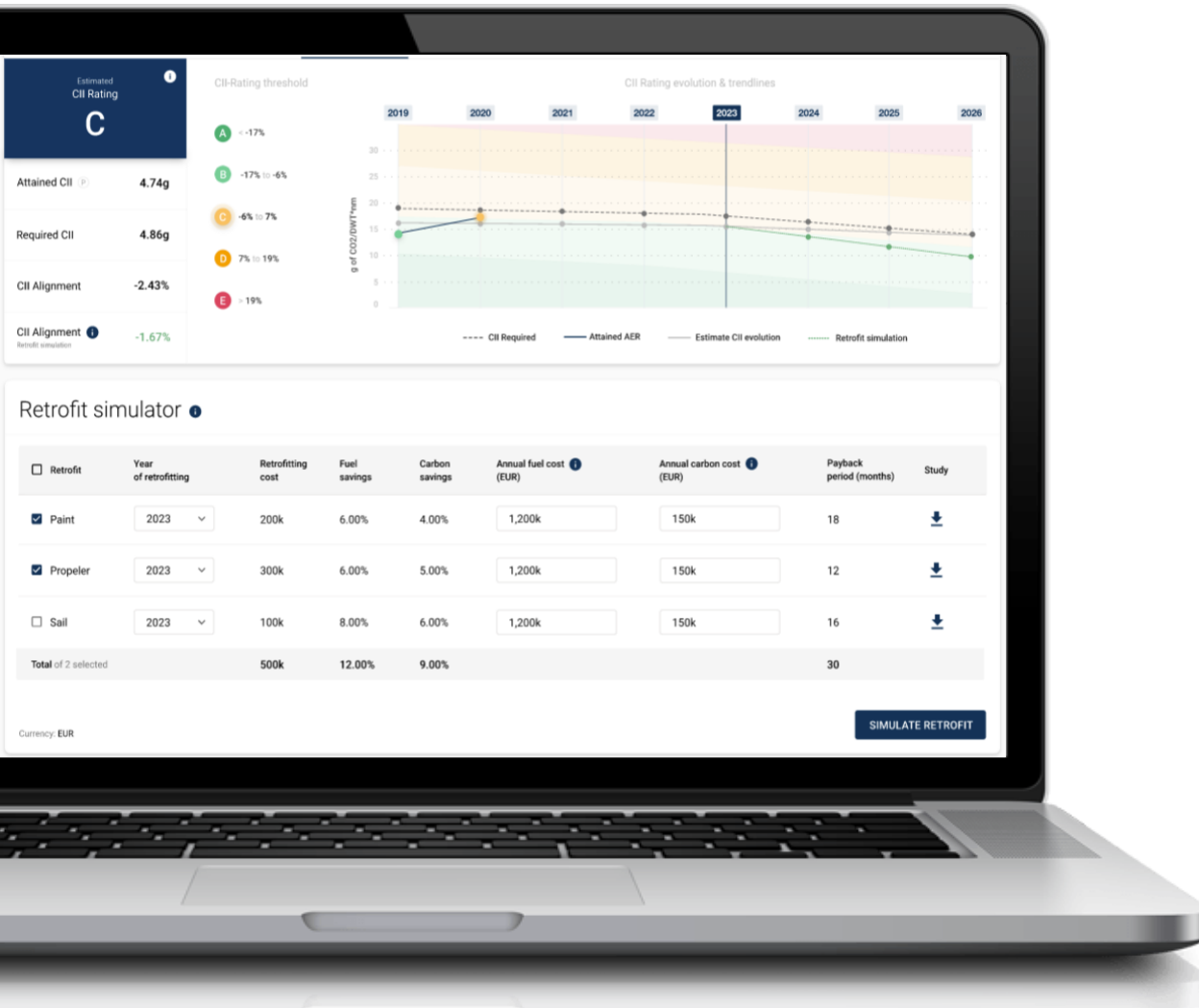
Nitrogen Oxides Emission Indicators

Total NOx emissions	Emissions at sea		Emissions while idle		Emissions while Manoeuvring	
	Total NOx emission ME at sea	Total NOx emission Aux Engs at sea	Total NOx emission Aux Engs idle	Total NOx emission ME manoeuvring	Total NOx emission Aux Engs manoeuvring	
	3,402.9 t	143.9 t	39.1 t	200.0 t	16.5 t	
	NOx ME per hr at sea		NOx Aux Eng per hr idle (port/anchor)		NOx ME per hr manoeuvring	
	573.1 kg/hr		16.2 kg/hr	458.5 kg/hr		
	0.0 kg/hr	in ECA	0.0 kg/hr	in ECA	0.0 kg/hr	in ECA
	573.1 kg/hr	outside ECA	16.2 kg/hr	outside ECA	458.5 kg/hr	outside ECA

Particular Matter Emission Indicators

Total PM emissions	Emissions at sea		Emissions while idle		Emissions while Manoeuvring	
	Total PM emission ME at sea	Total PM emission Aux Engs at sea	Total PM emission Aux Engs idle	Total PM emission ME manoeuvring	Total PM emission Aux Engs manoeuvring	
	2.4 t	19.0 t	4.7 t	0.1 t	2.2 t	
	PM ME per hr at sea		PMs Aux Eng per hr idle (port/anchor)		PM ME per hr manoeuvring	
	0.4 kg/hr		1.9 kg/hr	0.3 kg/hr		
	0.4 kg/hr	in ECA	1.9 kg/hr	in ECA	0.3 kg/hr	in ECA
	0.4 kg/hr	outside ECA	1.9 kg/hr	outside ECA	0.3 kg/hr	outside ECA



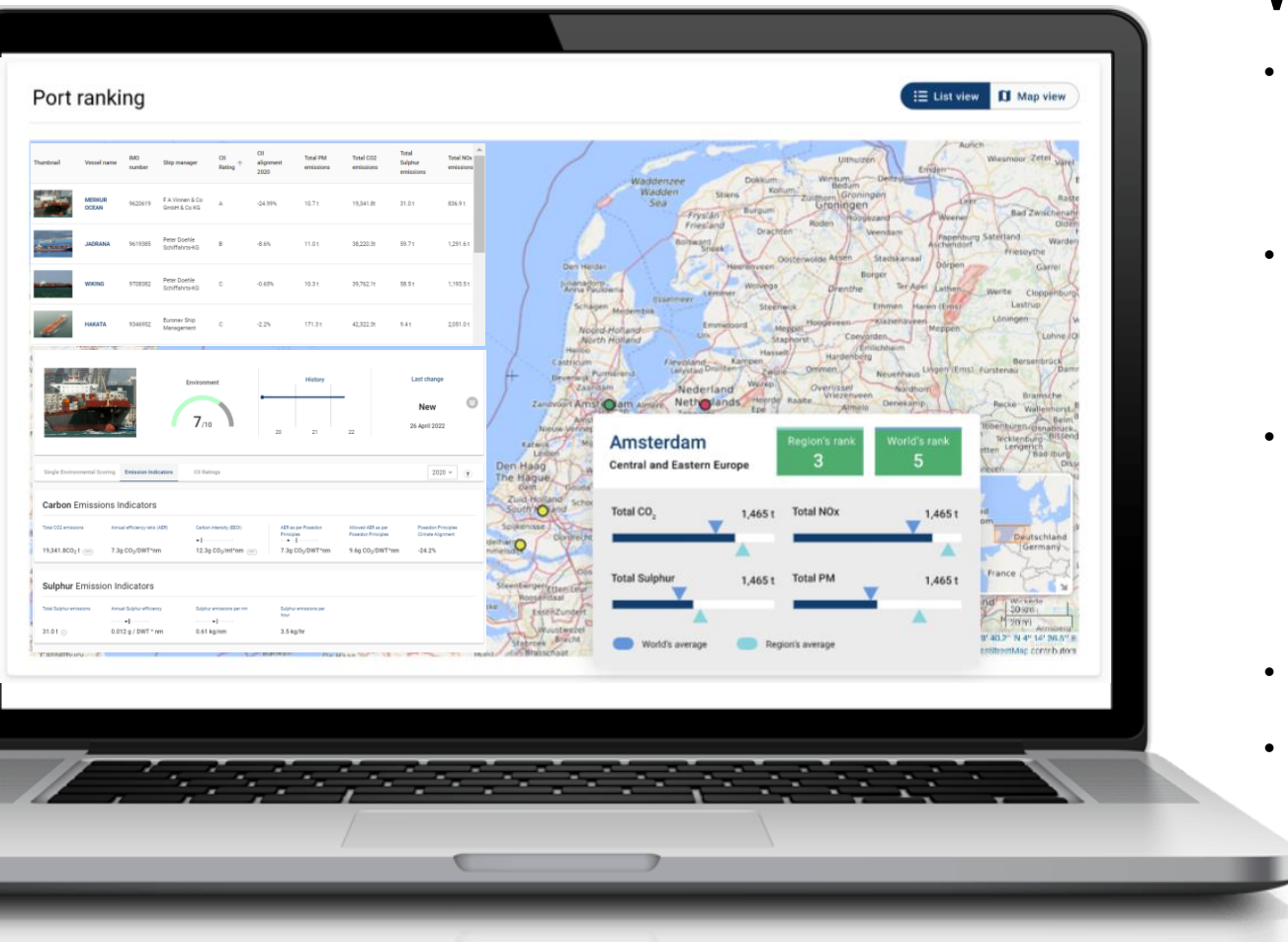


What Ship Review shows:

- Cost of retrofit
- Fuel cost savings of retrofit
- Carbon cost savings of retrofit
- Payback of retrofit
- CII improvement of retrofit
- Poseidon Principle improvement of retrofit
- Study about retrofit cost and benefits

What Ship Review shows:

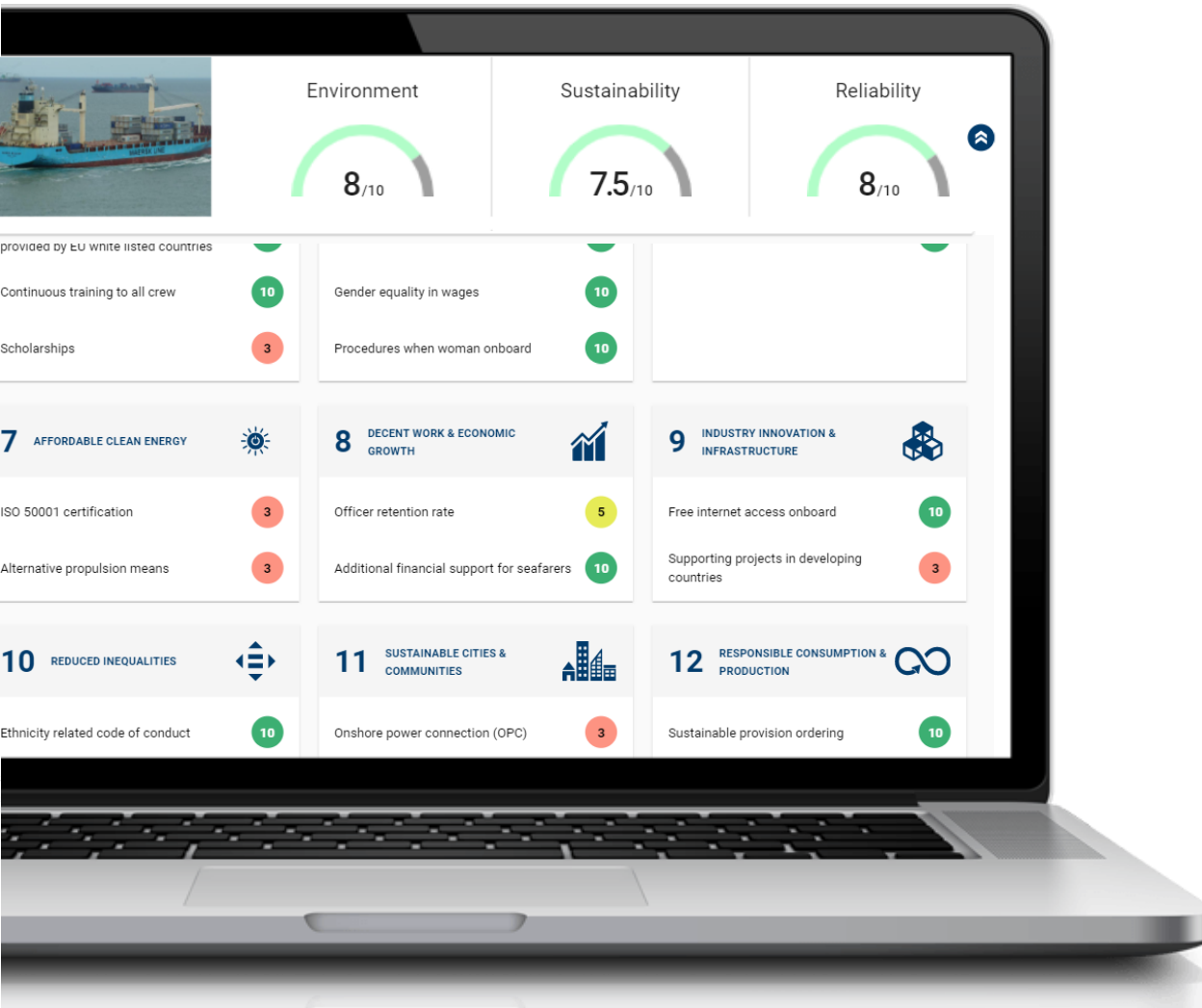
- Absolute missions on CO₂, NO_x, SO_x and PM per day, week, month and year in port
- Relative missions on CO₂, NO_x, SO_x and PM per day, week, month and year in port
- Global and regional ranking of port based on relative emissions, i.e. per DWT/hr, metric tonnes and TEU/hr etc.
- Port emission reduction over time
- Emission ranking of ships in port per DWT/hr



What Ship Review shows:

- CO2 emissions and hours of ships being within the polygon in a time period (week, month, year)
- “CO2 per voyage in port”, showing CO2[kg]/(dwt + hr) per ship, per call in the port
- CO2 per ship during the busiest day (2021-05-07) compared with CII rating. Note: CII rating is not a good measure for port emissions.
- CO2 emissions of tankers or container ships during the busiest week





What Ship Review shows:

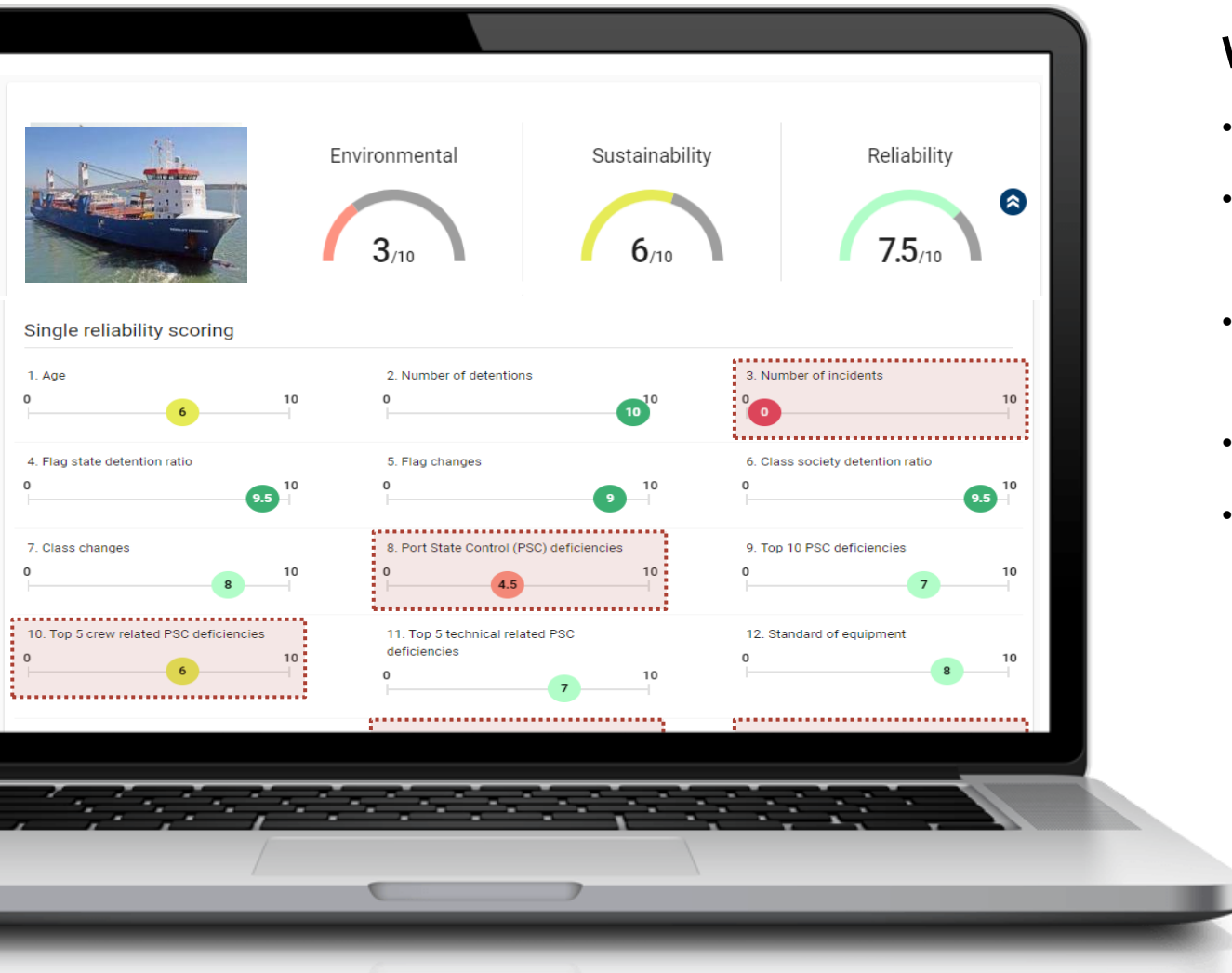
- Well being of employees, i.e. wage level, social & health benefits, permanent employment contracts, training, education, etc.
- Governance (corruption measures of flag, ship manager, owner domicile, anti corruption and bribery initiatives, etc.
- Water, air and land pollution prevention, climate initiatives, etc.
- SDG fleet performance of ship managers

Emergency Action Secures Heavy-Lift Vessel as it Nears Norwegian Coast



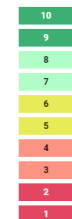
What Ship Review shows:

- Very high number of incidents
- High number of port state control deficiencies
- High number of top 5 crew related deficiencies
- High ship manager deficiency ratio
- Very high number of ship manager incident ratio



Very good

Scale



Very bad

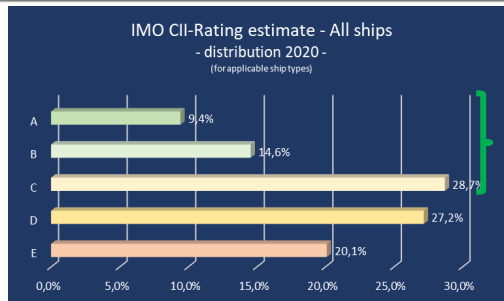
Scope CII Rating estimate



41.000 Carbon intensity indicator (CII) rating estimates



CII-Rating estimates by ship type

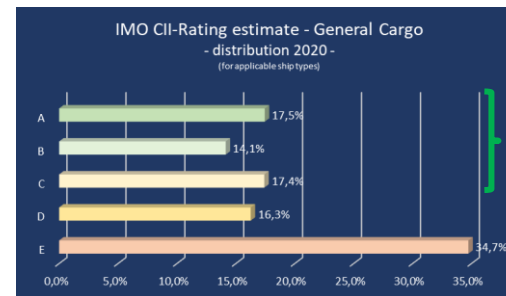


41,346

52.7 %

27.7%

20.1%

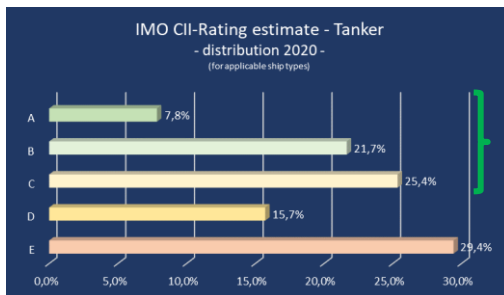


7,448

49.0 %

16.3 %

34.7 %

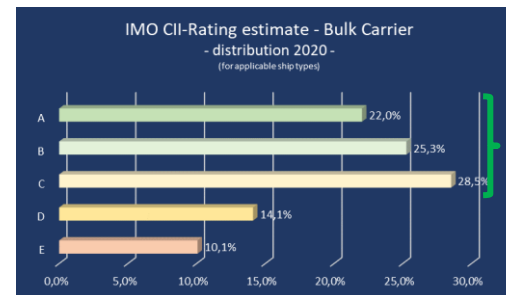


12,551

54.9 %

15.7 %

29.4 %

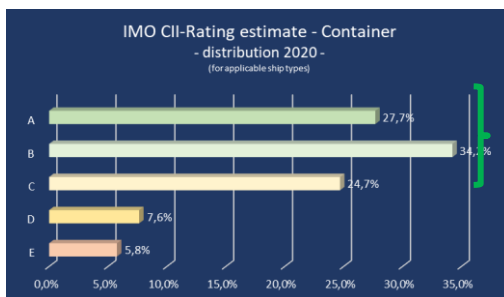


10,118

75.8 %

14.1 %

10.1 %

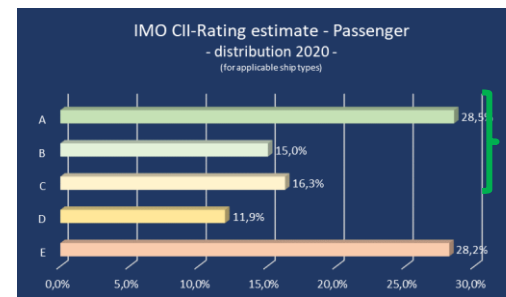


5,107

86.6 %

7.6%

5.8 %



2,572

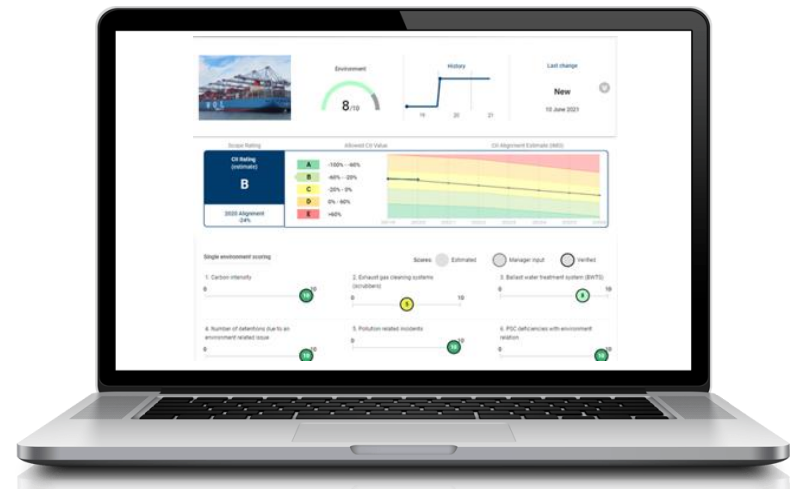
59.9 %

11.9 %

28.2 %

Lenders will look at:

- GHG impact on **portfolio performance**
- GHG adjusted **pricing / covenants**
- Feasibility of financing **retrofitting projects**
- **Carbon credit** finance
- Impact on **regulatory reporting** (SFDR)



Ports, governments and regions will look at:

- Impact of **port pollution** on climate strategy
- Impact and monitoring of **coastal water pollution**
- Port **support infrastructure** (climate strategy)
- Performance of **ship registry fleet**

Shipper, Forwarders, will look at:

- Emissions per **cargo carried per voyage**
- Impact on companies **CO2 footprint** (Scope3)
- Alternative routes/ships that **minimize emissions**
- Impact on **carbon credit** financing

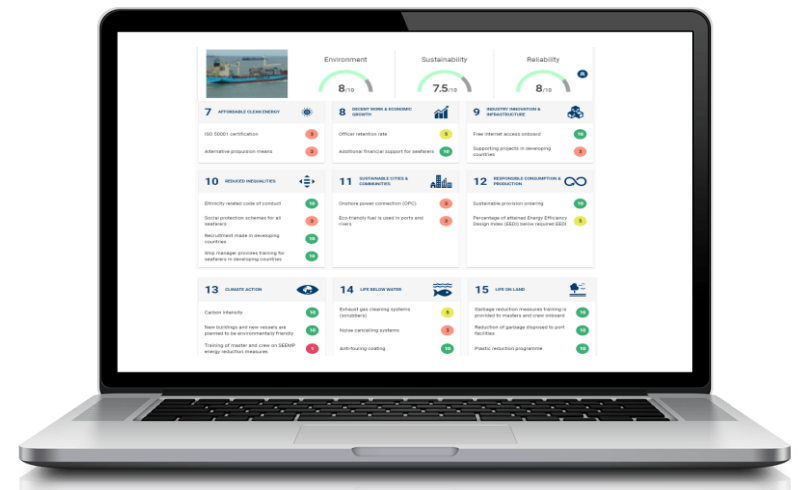
Ship Owners will look at:

- Options and cost of emission reduction
- Emission linked KPIs for ship management/crew
- New shipping contracts involving emission targets
- Impact of carbon credits on charter rates

Ship Manager/ Charterer will look at:

- Emissions per cargo carried per voyage
- Current and forecasted CII Rating of ships
- Crew training on new emission linked KPIs
- Impact of carbon credits on transport cost

The impact of the CII Rating is just the beginning. It will accelerate the implementation of **UN Sustainable Development Goals**





Access CII-Ratings on the Ship Review landing page

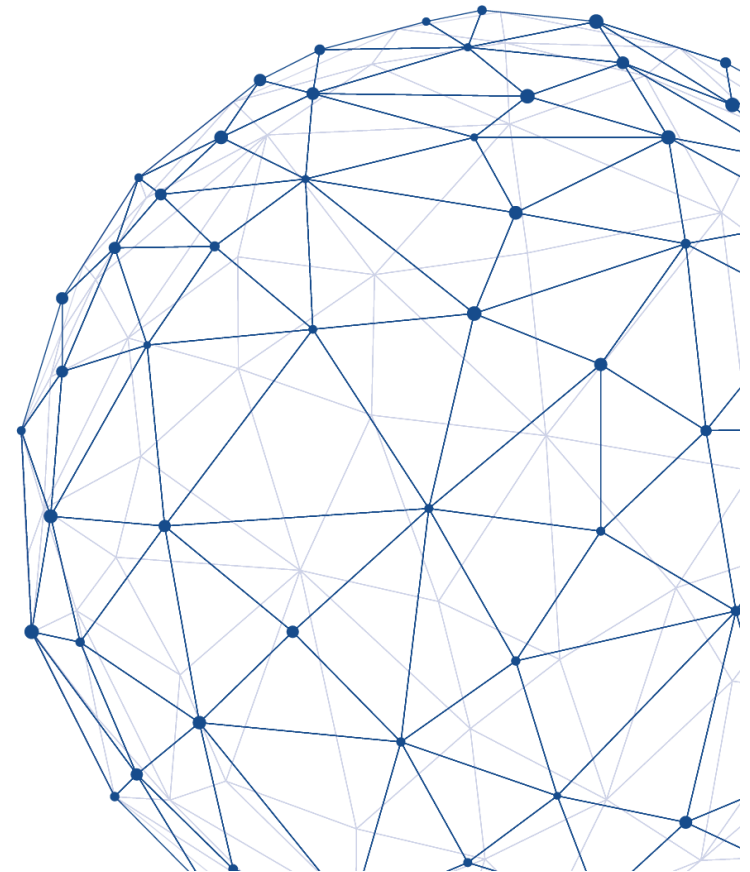
The screenshot shows a web browser window with the URL <https://www.scope-one.com/ship-review> highlighted in a yellow box. The page header includes the ScopeOne logo, a 'Products' link, and buttons for 'Register for free', 'Sign in', and a phone number '+49 30 27891 300'. The breadcrumb trail reads 'ScopeOne > ESG Analysis > Ship Review'. The main content area features a large image of a container ship. On the left, a white box contains the 'Ship Review' title, a subtitle 'Database with 70,000+ ships', a description 'The primary industry solution to evaluate sustainable and reliable maritime logistics.', and two buttons: 'Search ships' and 'Start a free trial'. A yellow arrow labeled 'Go to' points to the 'Search ships' button. Another yellow arrow labeled 'Search ships' points to the 'Search ships' button. At the bottom, a light blue banner states 'The goal is to reduce emissions by 50% by 2050'.

Go to

Search ships

Ship Review
Database with 70,000+ ships
The primary industry solution to evaluate sustainable and reliable maritime logistics.
Search ships Start a free trial

The goal is to reduce emissions by 50% by 2050



Management & Shareholders



Scope Management

Managing Board



Florian Schoeller

Group CEO

Founder



Christopher Hoffmann

Group CFO

va-Q-tec AG, Zouk Capital
LLP, McKinsey & Company



Guillaume Jolivet

Group COO

Moody's, UBS Warburg

Supervisory Board



Inès de Dinechin

Chair of Supervisory Board of
Scope SE & Co. KGaA and
Scope Management SE

Former CEO of Aviva Investors France
Former CEO and Chairwoman of Lyxor
Asset Management



Carsten Dentler

Deputy Chair of Supervisory
Board of Scope SE & Co. KGaA
and Scope Management SE

Former Member of the Executive Board of
UBS Deutschland AG
Former Member of the Executive Board of
Morgan Stanley Bank AG



Sebastian Canzler

Member of Supervisory Board
of Scope SE & Co. KGaA and
Scope Management SE

Managing Partner of Alpina Capital
Partners
Former member of the management board
of AUCTUS Capital Partners



Chantal Schumacher

Member of Supervisory Board
of Scope SE & Co. KGaA

Former Group CFO and Member of the
Board of Euler Hermes Group
Former CFO of Allianz Reinsurance



Eberhard Vetter

Member of Supervisory Board
of Scope SE & Co. KGaA

Head of Asset Management RAG-Stiftung
Member of various supervisory boards
(DIC ASSET AG etc.)



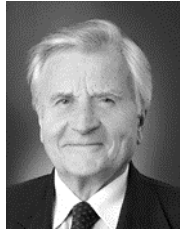
Scope Foundation

Honorary Board



Prof Dr Horst Köhler

Former Head of EBRD/IMF
Former Federal President
of Germany



Jean-Claude Trichet

Former President of the ECB
Former Governor of the
Bank of France



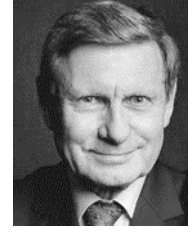
José Manuel González-Páramo

Former Member of the
Executive Board of the ECB



Pier Carlo Padoan

Chairman of the Board of
Directors of UniCredit
Former Minister of Economy
and Finances of Italy



Leszek Balcerowicz

Former Chairman of the
National Bank of Poland
Former Deputy Prime
Minister of Poland

Board of Trustees



Gerd Häusler

Member of the Supervisory
Board of MunichRe,
Former CEO and Chairman of
the Supervisory Board of
Bayerische Landesbank



Lorenzo Bini Smaghi

Chairman of Société Générale
Former Member of the
Executive Board of the ECB



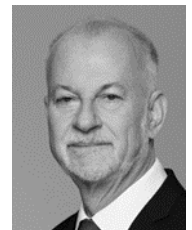
Yves Mersch

Former member of the Executive
board of the ECB (2012-2020)
Former positions at Banque
centrale du Luxembourg, IMF,
World Bank, EIB



Dr Johannes Fritz

Former Managing Director
and Head of Stefan Quandt's
family office, Board Member
Johanna-Quandt-Stiftung



Dr Dieter Schenk

Vice Chairman of the
Supervisory Board of Fresenius
SE & Co. KGaA and Fresenius
Medical Care



Shareholder

Scope has numerous renowned shareholders with distinguished backgrounds in finance and industry as well as insurance companies from Austria, France, Germany, Luxembourg and Switzerland.

Shareholders of Scope Management SE (General Partner of Scope SE & Co. KGaA)



Selected shareholders of Scope SE & Co. KGaA





scopegroup.com

app.scope-one.com

scope-one.com

Headquarters EU

BERLIN

Lennéstraße 5
D-10785 Berlin
Phone +49 30 27891 0

Headquarters UK

LONDON

52 Grosvenor Gardens
London SW1W 0AU
Phone +44020-7340-6347

Central & Eastern Europe

FRANKFURT AM MAIN

Eurotheum Neue
Mainzer Straße 66-68
D-60311 Frankfurt am Main
Phone +49 69 66 77 389 0

Southern Europe

MADRID

Edificio Torre Europa
Paseo de la Castellana 95
E-28046 Madrid
Phone +34 914 186 973

HAMBURG

Ferdinandstraße 29-33
D-20095 Hamburg
Phone: +49 40 60 77 812 00

MILAN

Regus Porta Venezia
Via Nino Bixio, 31
20129 Milano MI
Phone +39 02 8295 8254

Nordics & Baltics

OSLO

Karenslyst allé 53
N-0279 Oslo
Phone +47 21 62 31 42

Western Europe

PARIS

23 Boulevard des Capucines
FR - 75002 Paris
Phone +33 6 62 89 35 12





Disclaimer

“Scope Group” or “Scope” refers to the holding company “Scope SE & Co. KGaA” and any and/or all of its subsidiaries. Scope Ship Review is a product of Scope ESG Analysis GmbH. The information and data supporting Scope Ship Review originate from Green Mare Services Lda. & Comandita (“GMS”). The Ship Review Methodology was built by GMS.

The presentation does not constitute an offer of any kind.

This presentation is for illustrative and informational purposes only and does not purport to be exhaustive. The information in this presentation may be outdated, and Scope does not make any representations or guarantees for the correctness, timeliness, or completeness of the information provided in the presentation. Scope assumes no liability or responsibility for any information provided by third parties.

The information and data included herein is protected by copyright and other laws. To reproduce, transmit, transfer, disseminate, translate, resell, or store for subsequent use for any purpose the information and data contained herein is prohibited, except as expressly agreed otherwise by Scope in advance. For questions contact Scope ESG Analysis GmbH at Lennéstraße 5, D-10785 Berlin.

Key aspects a platform should consider:

- ☐ Transparency, in particular how a rating score has been arrived at
- ☐ Clear guidance as to how the information provided be used by either the client/owner.
- ☐ Free, or at least low-cost access to owners own information if they are not a client.
- ☐ Accuracy of the information held on each ship.
- ☐ Criteria that are set within the platform must be within the control of the owner / manager.
- ☐ Ease of engagement with the platform provider to update or correct information
- ☐ Cost consideration should be given to smaller operators.