



Clean Shipping Index

Merijn Hougee



Stichting De Noordzee

1. Duurzame visserij
2. Beschermde gebieden
3. Ruimtelijke ordening
4. Schone scheepvaart





Scheepsemissies



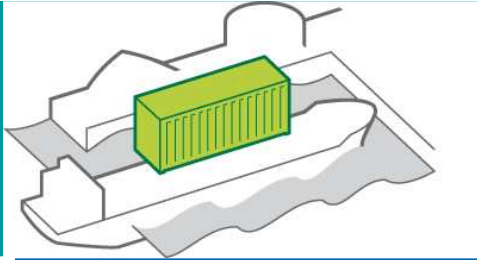


Environmental Ship Index (SONOx index?)





Clean Cargo



Corporate

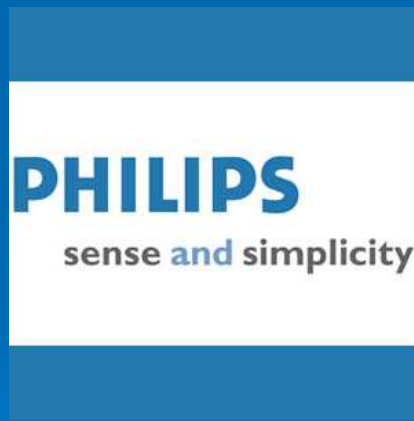
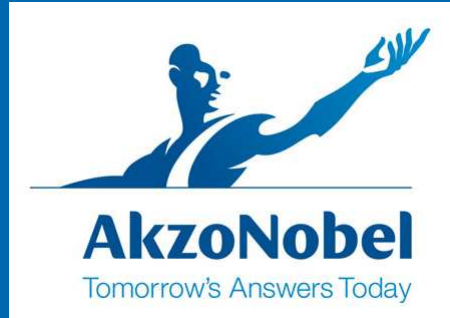
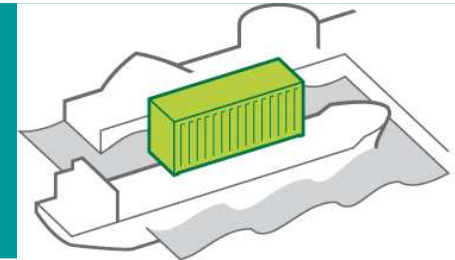
Ocean

Responsibility



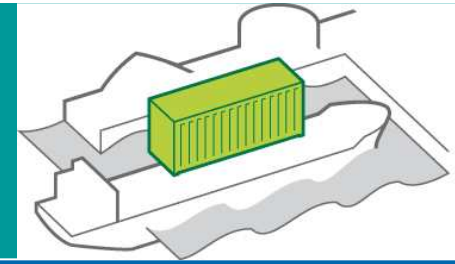


Cargo owners





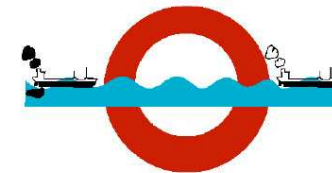
Clean Shipping Project



Clean solutions for ships

examples from the Port of Göteborg

Projekt Grön Kemi
Jan Ahlbom
Ulf Duus
May 2006



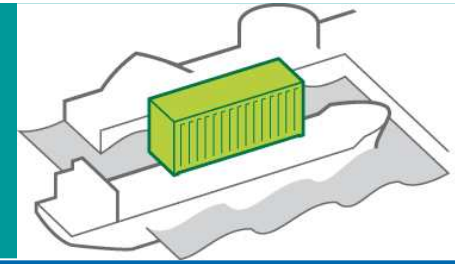
CLEAN SHIPPING CRITERIA

Guidance document for shipping customers developed by the Clean Shipping Project, Göteborg, Sweden

September 2007



Operational Clean Ship

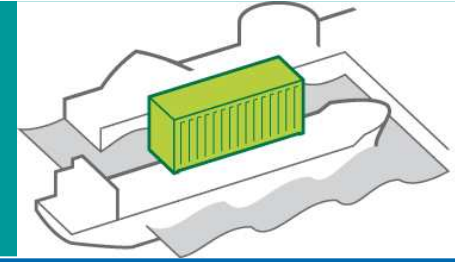


- NOx emission abatement techniques
- Low sulphur fuels
- Different energy saving measures – CO2 reductions
- Active bilge water cleaning equipment
- Environmentally adapted lubricants
- Environmentally adapted cleaning agents





Operational Clean Ship



- Antifouling coatings with low environmental impact
- Environmentally adapted boiler/cooling water treatment
- Shore-side electricity at berth
- Ballast water treatment
- Sewage treatment/black water

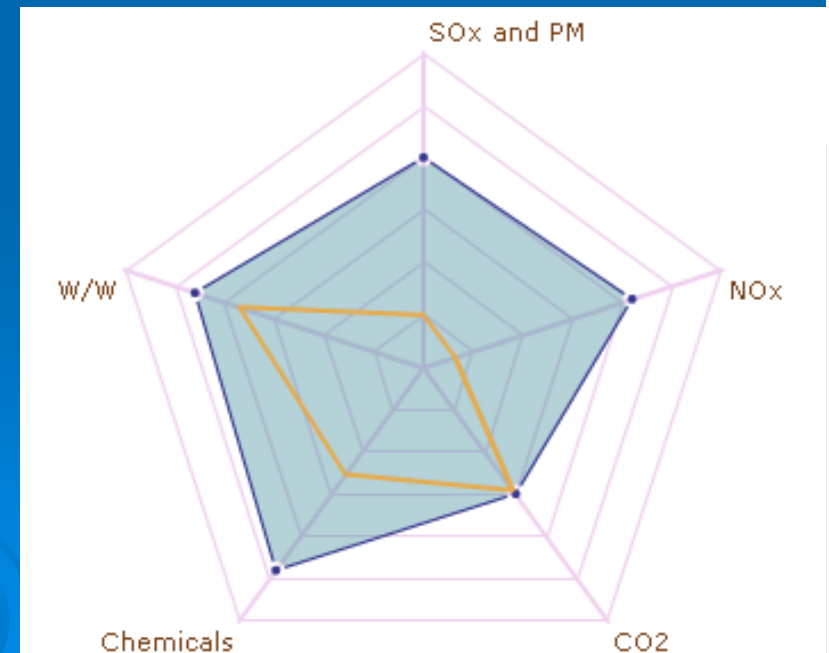




Clean Shipping Index

Environmental Index for Shipping Lines
based on the Clean Shipping Criteria for:

- Chemicals
- Water and waste control
- CO₂
- NO_x
- SO_x and PM





Clean Shipping Index

- Tool for cargo owners selecting environmentally acceptable shipping
- Simple! 20 questions give stringent information on carriers and their vessels
- Views the vessels total operational impact on environment
- Covers existing ships and beyond regulations
- Ten different types of ships – not only container vessels
- Members are large Swedish cargo owners – from 2010 also international
- Possibility to verify the information

Chemicals

Stern Tube Oil	<input type="radio"/> No data	(0)
	<input type="radio"/> Mineral oil based	(0)
	<input checked="" type="radio"/> Air seal	(3)
	<input type="radio"/> Based on biodegradable oil	(3)
	<input type="radio"/> Water lubrication	(7)
	<input type="radio"/> Not applicable	(7)
Boiler/ Cooling water treatment	<input type="radio"/> No data	(0)
	<input type="radio"/> Classified as CMR, toxic, sensitizing, dangerous to the environment	(0)
	<input checked="" type="radio"/> Not classified as above (nitrite exclusive)	(2)

Water and Waste control

Ballast water treatment

- No data (0)
- No treatment (0)
- Ballast water mid-ocean exchange (3)
- IMO final approval (10)
- Not applicable (10)

Garbage handling

- No data (0)
- Incinerator used on board (0)
- Waste overboard (0)
- No incinerator on board or documented no incineration of garbage and no waste overboard and separate garbage handling for reuse, recycling and disposal (3)

CO₂

CO₂ emission information

- No data (0)
- CO₂ per TEU-km according to BSR (3)
- CO₂ per tonne-nm according to MEPC (EEOI) (3)

CO₂ emission performance

- No data (0)
- Reference value or above (0)
- < Reference value (3)
- > 5% below reference (6)
- > 10% below reference (9)
- > 15% below reference (12)
- > 20% below reference (15)

NOx

NOx main engines

● No data	(0)
● Engines 2000-2011, above or within Tier 1 levels	(0)
● Engines prior year 2000, Tier I levels	(6)
● Engines prior year 2011, Tier II levels	(9)
● ≥ 40% below Tier I	(15)
● Tier III levels	(21)

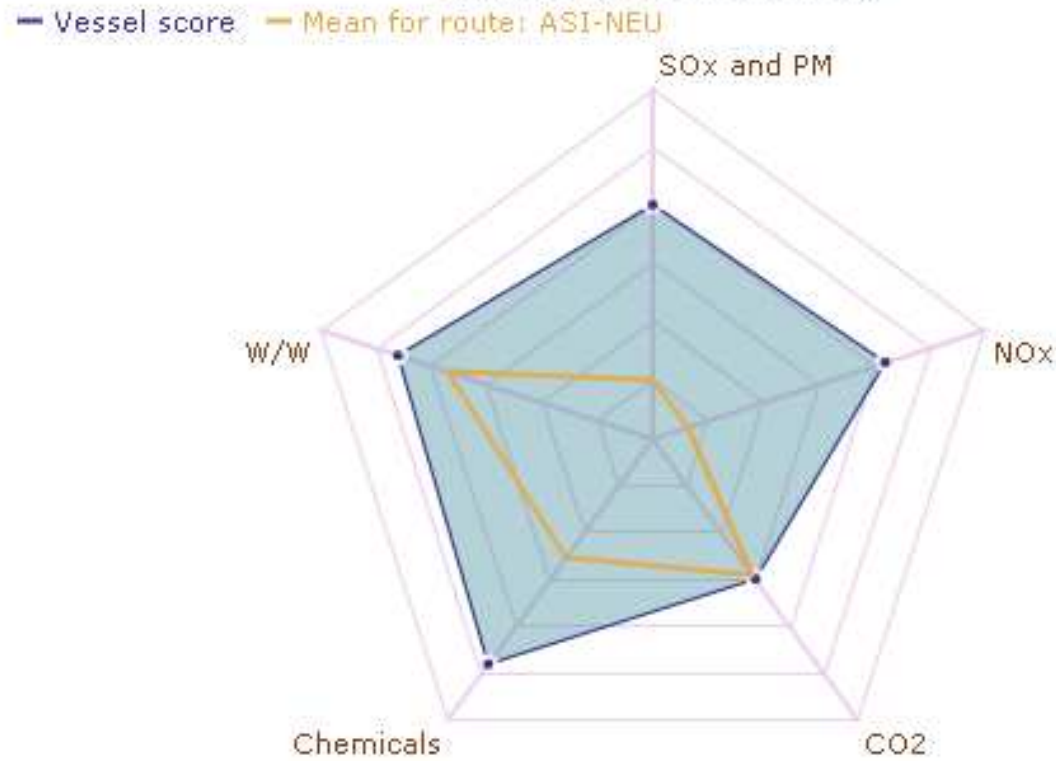
- **Score op basis van prestatie ten opzichte van IMO curves**

Sox en PM

SO_x/PM main engines
Operations in non-ECAs
and ECAs
(total yearly average)

● No data	(0)
● Operation <i>only</i> in ECAs	(9)
● Fuel quality \geq 2.5% S	(0)
● Fuel quality $<$ 2.5% S	(1)
● Fuel quality $<$ 2.3% S	(2)
● Fuel quality $<$ 2.0% S	(3)
● Fuel quality $<$ 1.5% S	(5)
● Fuel quality $<$ 1.0% S	(7)
● Fuel quality $<$ 0.5% S	(9)
● LPG / LNG / Biogas	(11)

Bruinvis (IMO8888888)



Good performance

Total score: 68.67%

Fullfilled requirements:

- Vessel is verified
- A score of atleast 35% in each category
- Scoring in all subgroups of Chemicals and Water & Waste
- Total score \geq 50%

Statistics

[Search](#)

[Mean comparison](#)

[Vessel ranking](#)

Carrier

[Home](#)

[Add vessel](#)

Guidance Doc.

[Document](#)

[Appendix](#)

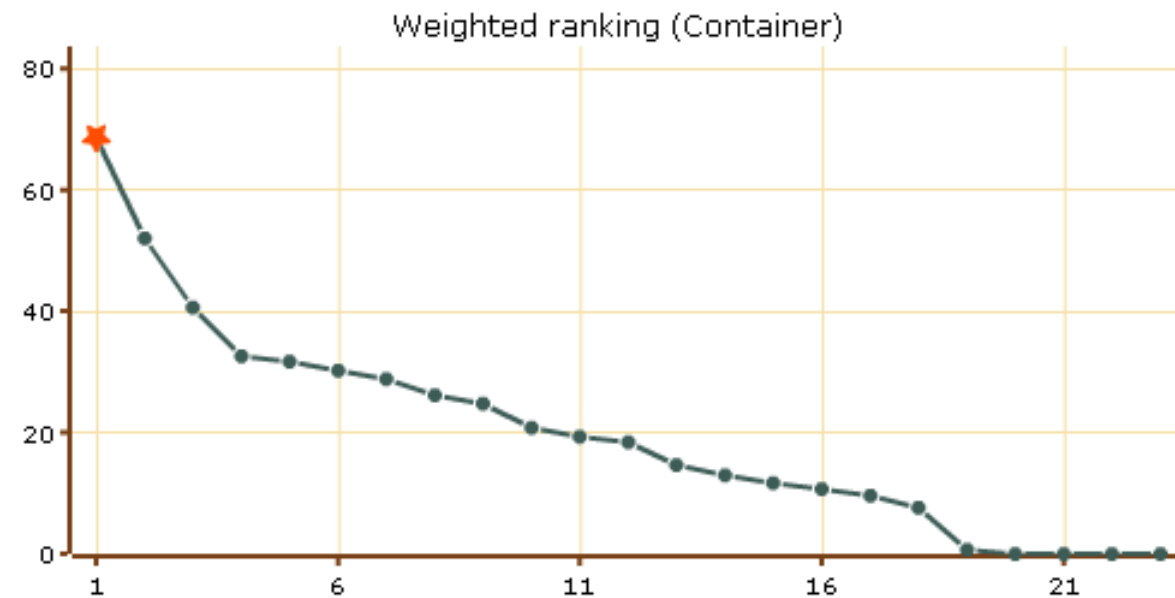
Sign out

[Sign out](#)

Carrier NorthSeaShipping

[\[list of vessels\]](#)

[\[edit information\]](#)



Good performance

Reported vessels: 100.00%

Weighted total score: 76.00%

Fulfilled requirements:

-Reported vessels \geq 90%

-Weighted total score \geq 40%

Statistics

[Search](#)

[Mean comparison](#)

[Vessel ranking](#)

Carrier

[Home](#)

[Add vessel](#)

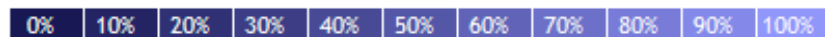
[Guidance Doc.](#)

Vessel ranking for NorthSeaShipping

-All types-

Vessel	SO _x and PM	NO _x	CO ₂	Chemicals	Water and waste	Total
1 Jan van Gent (IMO9999999)	66.67%	80.00%	90.00%	80.00%	100.00%	83.33%
2 Bruinvis (IMO8888888)	66.67%	70.00%	50.00%	80.00%	76.67%	68.67%

Colour scale





Clean Shipping Network

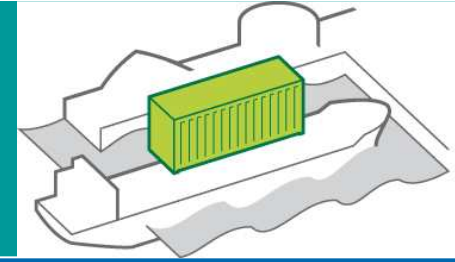


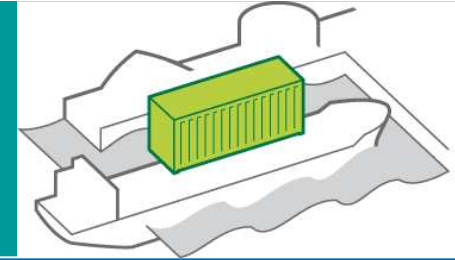
ABB	PREEM
ALFA LAVAL	SANDVIK MATERIALS
ASTRA ZENECA	TECHNOLOGY
ERICSSON	SCANIA
FINDUS SVERIGE	SETRA GROUP
GUNNEBO	SKANSKA Sverige
H&M	SKF
INDISKA	STORA ENSO LOGISTICS
KAPPAHL	TETRA LAVAL
LINDEX	VATTENFALL
NEW WAVE GROUP	VIN & SPRIT
PERSTORP	VOLVO LOGISTICS

"We want to show our intention to place environmental demands on our shipping suppliers and we intend to use the Clean Shipping Index as a support in our procurement process"



Clean Shipping Index

- Dynamische Index
- Ambitieuus en alle scheepsemissies worden meegewogen
- Verladers kunnen beoordelen op relevantie
- Makkelijk in gebruik en transparant
- Ketenbenadering
- Geeft invulling aan MVO beleid



Seminar 11 november:

New perspectives on sea freight

European launch of the Swedish Clean Shipping Index

Locatie: Hotel New York, Rotterdam

Sprekers:

Clean Shipping Project

Volvo Logistics Corp.

Lloyd's Register

Contact: m.hougee@noordzee.nl

Bedankt voor uw aandacht



www.Noordzee.nl

M.Hougee@Noordzee.nl