



WHEN TRUST MATTERS



# EEI and CII

Regulatory Framework to Reduce Carbon Emission

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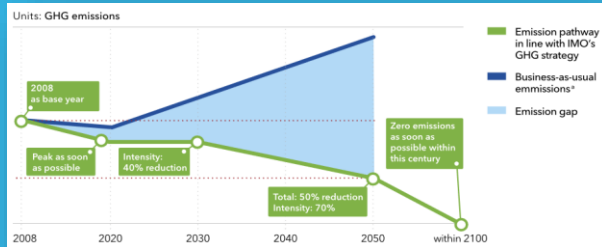


# GHG industry framework

# The IMO has set its ambitions...

...however Financial Institutions, Cargo owners and Charters are increasing their influence...

## IMO Ambitions



## Banks assessments



POSEIDON  
PRINCIPLES

## Charterer requirements



SEA CARGO  
CHARTER



Climate  
INITIATIVE  
Bonds

Who is next?

## Some of the Signatories



Nordea

DNB

Danske Bank

## Some of the Signatories



# The IMO ambitions



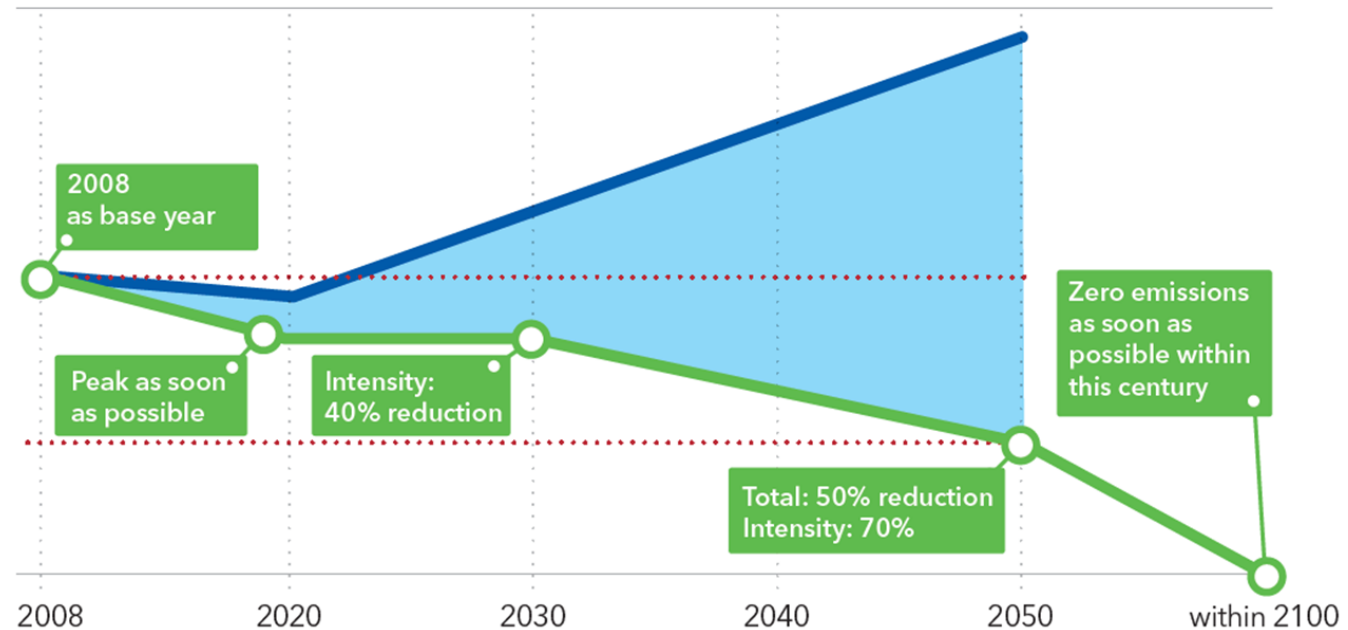
## Vision:

- “IMO remains committed to reducing GHG emissions from international shipping and, as a matter of urgency, aims to phase them out as soon as possible in this century”

## Ambitions:

- Reduce the average carbon intensity (CO<sub>2</sub> emissions per transport work) by 40% in 2030 and 70% in 2050 compared to 2008.
- Reduce total GHG emissions from shipping by at least 50% in 2050 compared to 2008

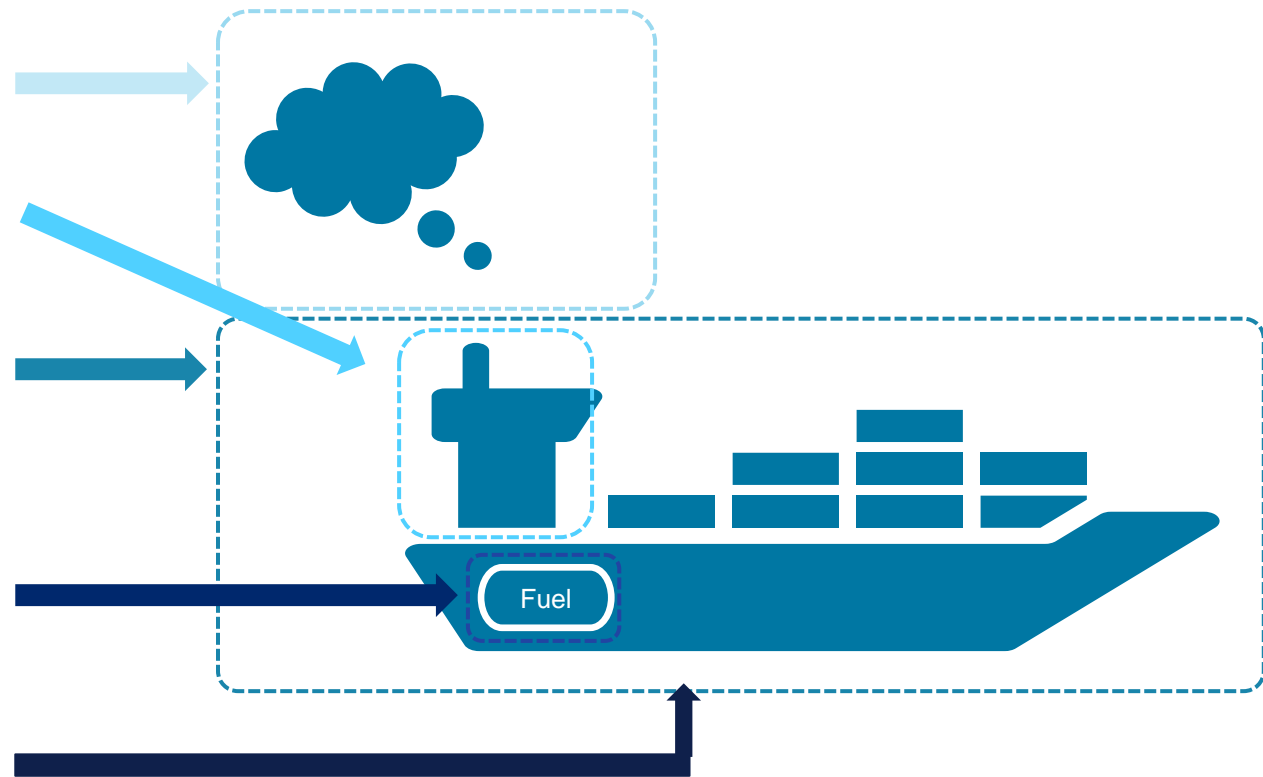
Units: GHG emissions



Total: Refers to the absolute amount of GHG emissions from international shipping.  
Intensity: Carbon dioxide (CO<sub>2</sub>) emitted per tonne-mile.

# The regulatory framework to reduce GHG emissions

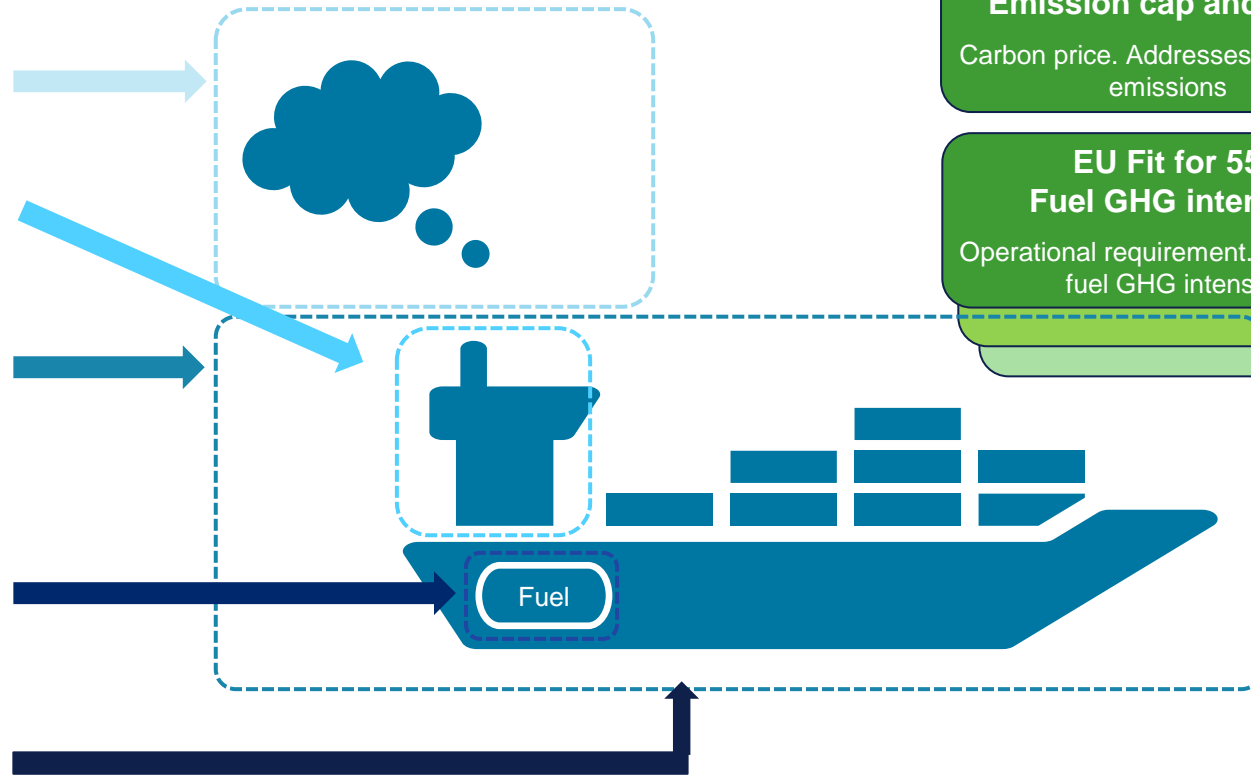
<b>CII</b>	Operational requirement - actual carbon intensity	2023
<b>SEEMP III</b>	Operational requirement - continuous improvement, "enhanced SEEMP"	2023
<b>EEXI</b>	Design requirement - carbon intensity	2023
<b>DCS</b>	Operational requirement - actual fuel oil consumption	2018
<b>EU MRV</b>	Operational (ECA) req. - actual fuel oil consumption	2018
<b>EEDI</b>	Design requirements for new ships	2013



Other regulatory bodies, like the EU, will likely set additional requirements. Hence, this is not the end of the story...

# .... but there is more to come

<b>CII</b>	Operational requirement - actual carbon intensity	2023
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**IMO:** Well-to-wake GHG emission factors, CO2 pricing, accelerated timeline, ...

**EU Fit for 55: Emission cap and trade**  
Carbon price. Addresses total GHG emissions

**EU Fit for 55: Fuel GHG intensity**  
Operational requirement. Addresses fuel GHG intensity

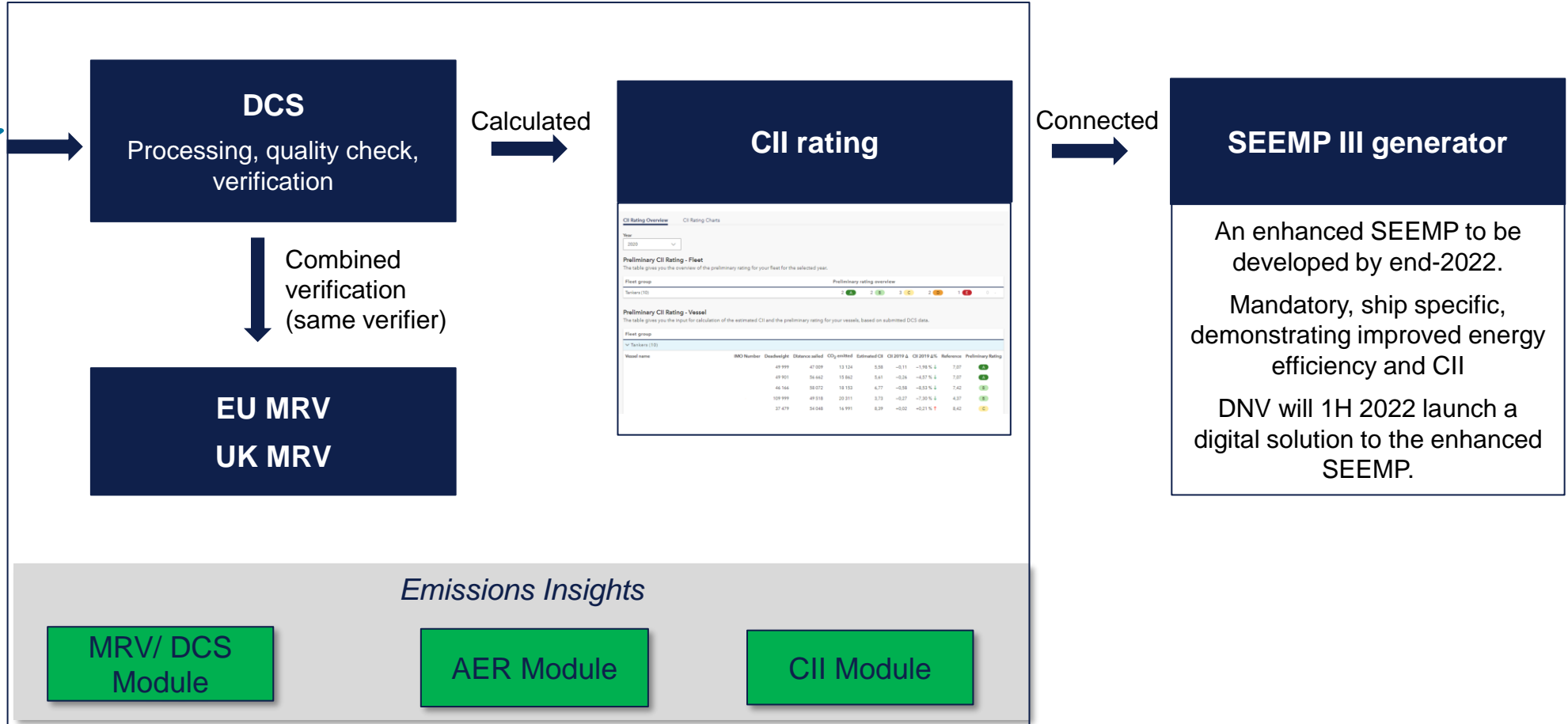
# The regulations explained

# It starts with DCS data (EU MRV)

- IMO DCS
- CII
- EEXI
- SEEMP



Fuel consumption data, data transfer



**SEEMP III generator**

An enhanced SEEMP to be developed by end-2022.

Mandatory, ship specific, demonstrating improved energy efficiency and CII

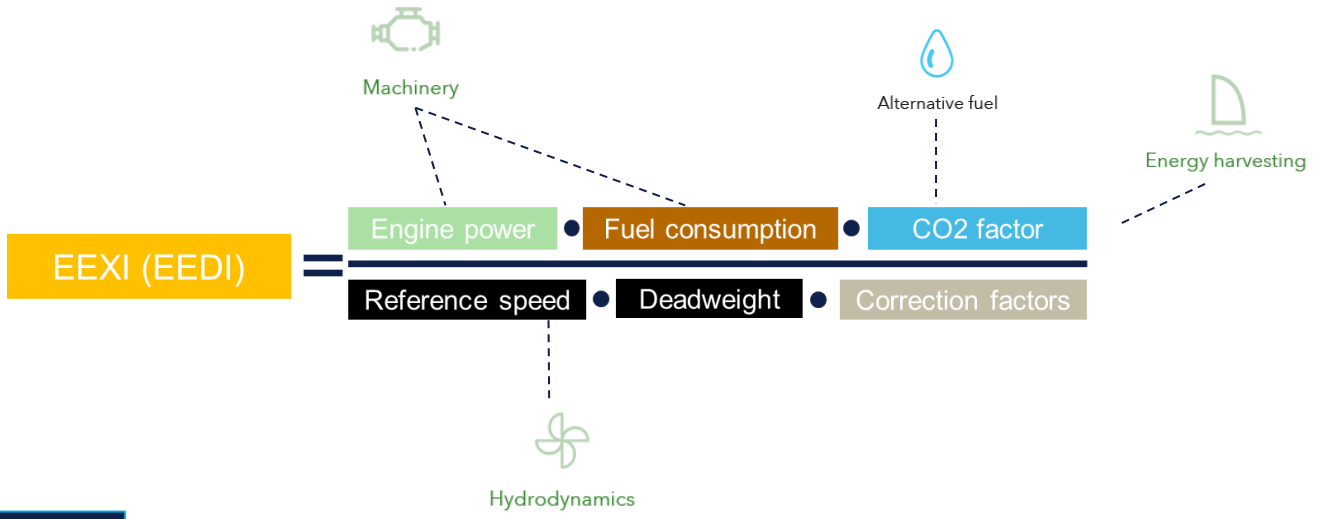
DNV will 1H 2022 launch a digital solution to the enhanced SEEMP.



# EEXI (and EEDI) explained

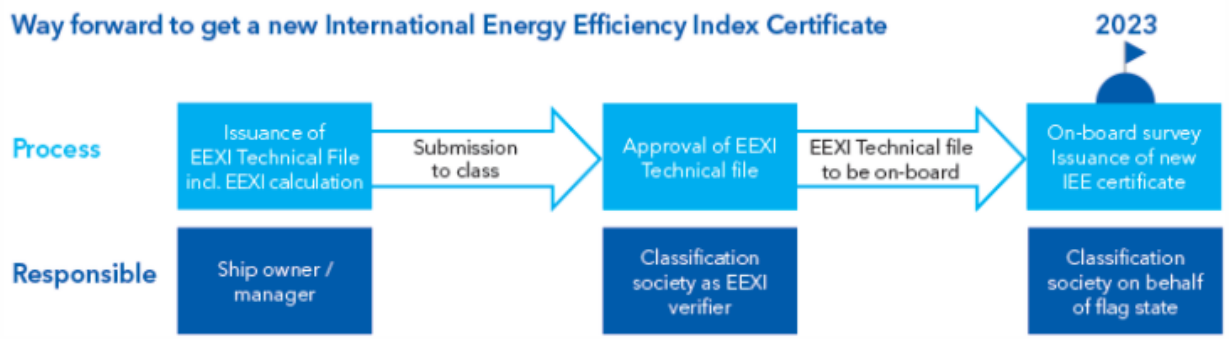
**Design measures to reduce CO<sub>2</sub> emissions:**

- Energy Efficiency Design Index (EEDI) (for NBs)
- Energy Efficiency Existing Ship Index (EEXI)



**EEXI:**

- Calculated once in a lifetime – a design index, not operational
- Is based on standard reference conditions, no onboard measurements needed
- Ships to comply with the EEXI by the end of 2023
- EEXI Technical File must be submitted to class for approval. The new IEE certificate will subsequently be issued.



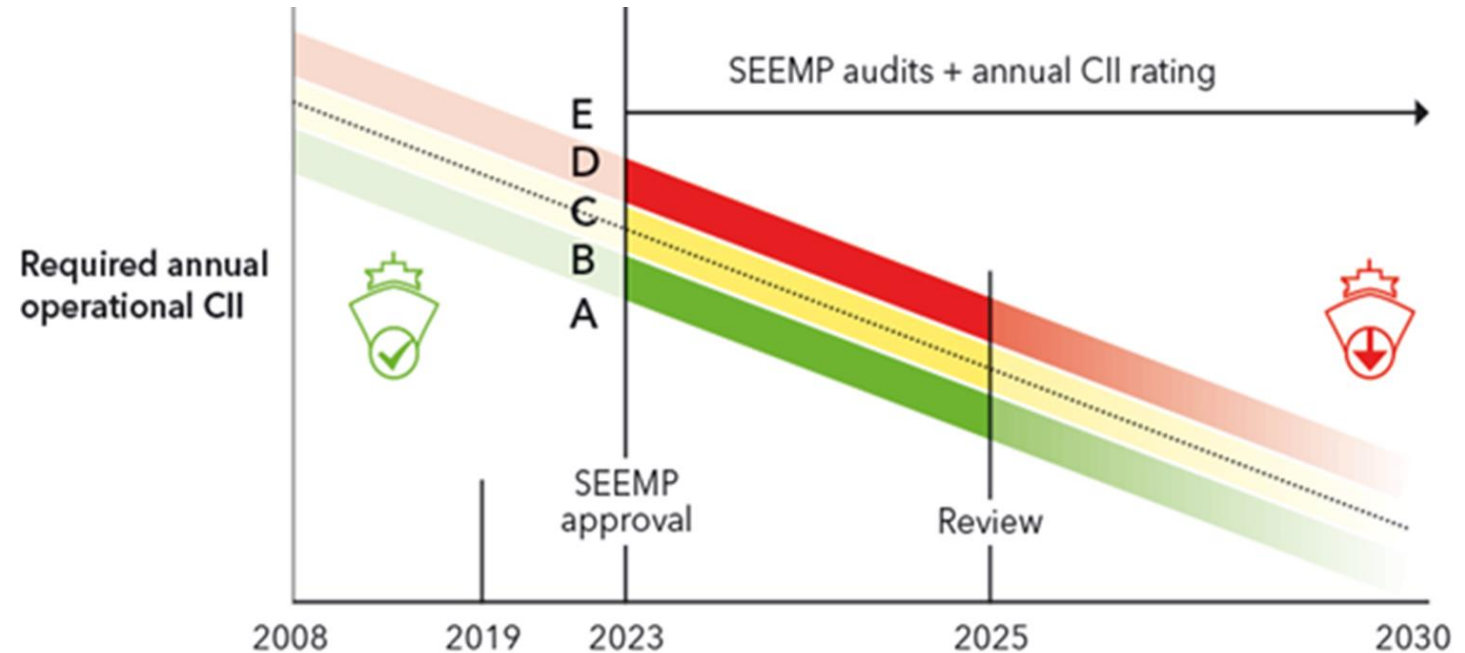
# SEEMP III – individual plan for improvement

## Scope:

- Mandatory elements added to the SEEMP:
  - Measuring the CII (eg, EEOI, AER)
  - Setting a mandatory CII target in line with IMO ambitions

## Requirements:

- Operational: Enhanced SEEMP with mandatory rating scheme (rating A-E)
- Ships must document the CII and at verification audits prove that they are compliant with reduction trajectory towards abt 40% in 2030
- Application scope and handling of inferior ships to be resolved
- Technical guidelines to be developed – these include definitions, the ship reduction rates and calculation guidelines
- To be developed by end-2022



# CII - Carbon Intensity Indicator rating

**Scope:**

- Cargo, ro-pax and cruise ships above 5000 GT

**Requirements:**

- Every year from 2023: Annually calculate and report Carbon Intensity Indicator and rating A to E. Each ship needs to achieve rating C or better

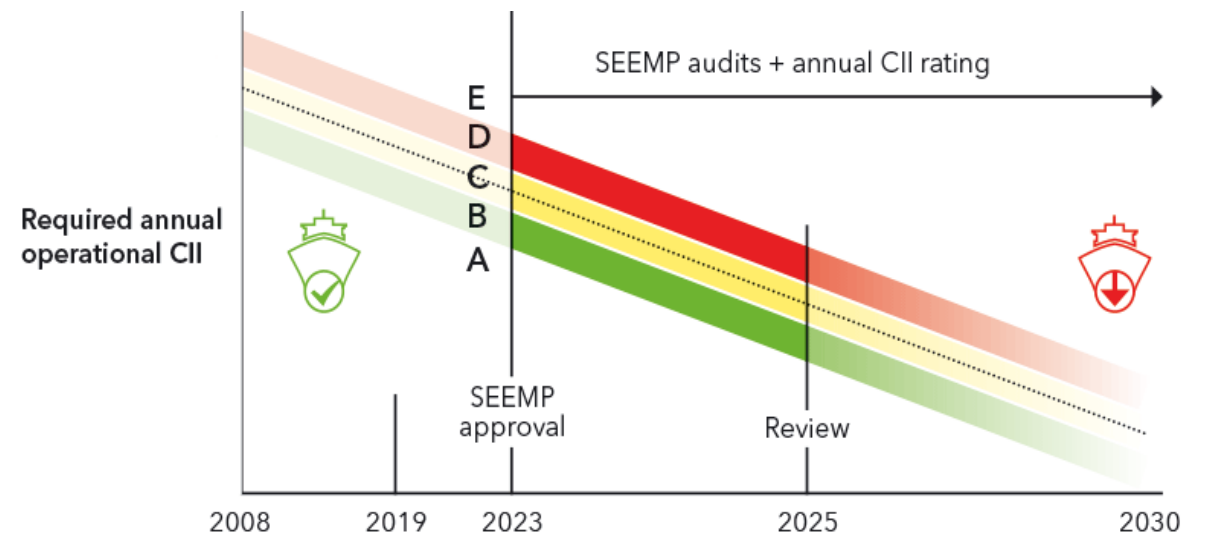
**Enforcement:**

- If rating D for 3 consecutive years or rating E: develop and implement an approved corrective action plan as part of SEEMP to achieve rating C or better
- Annual Statement of Compliance issued.

**Other elements:**

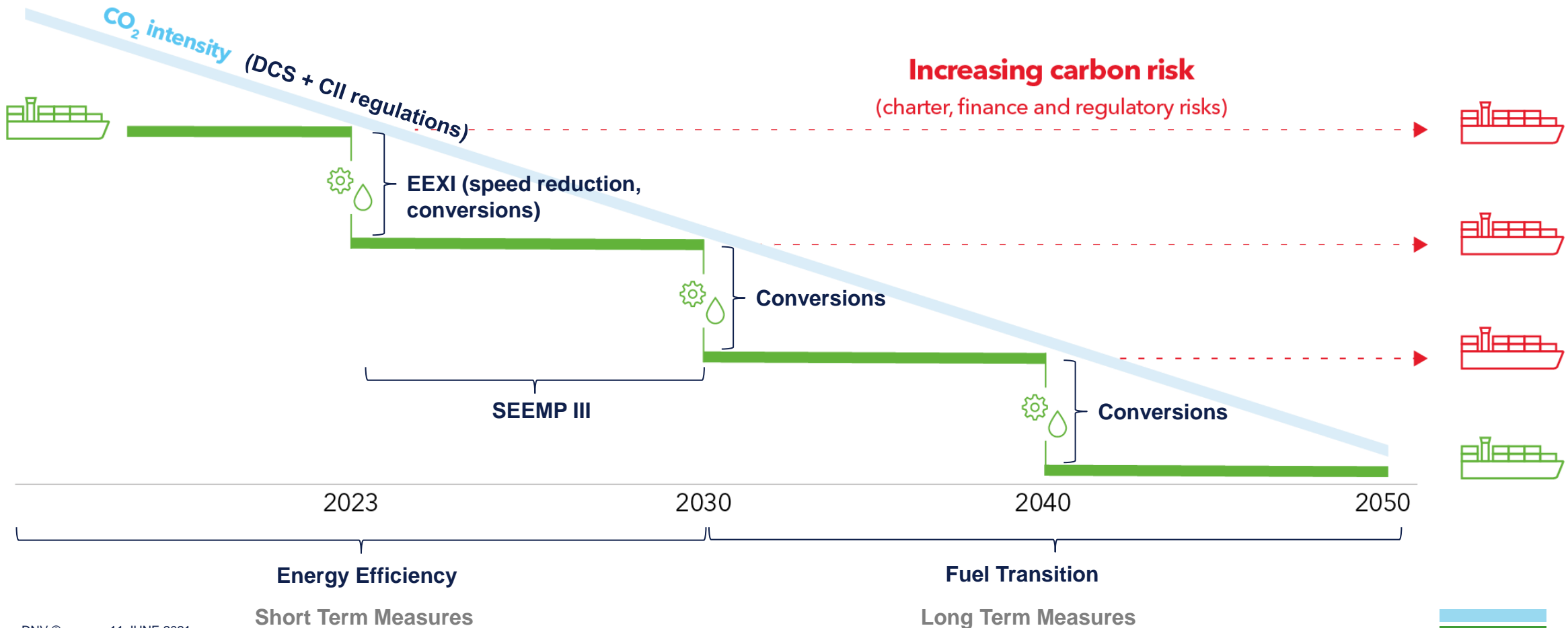
- Review to be conducted by 1 January 2026, e.g.:
  - Reduction factors for 2027-2030
  - Strengthened corrective actions
  - Need for enhancement of the enforcement mechanism

$$\text{CII} = \frac{\text{Annual fuel consumption} \times \text{CO}_2 \text{ factor}}{\text{Annual distance travelled} \times \text{Capacity (DWT or GT)}} \times \text{Correction factors}$$



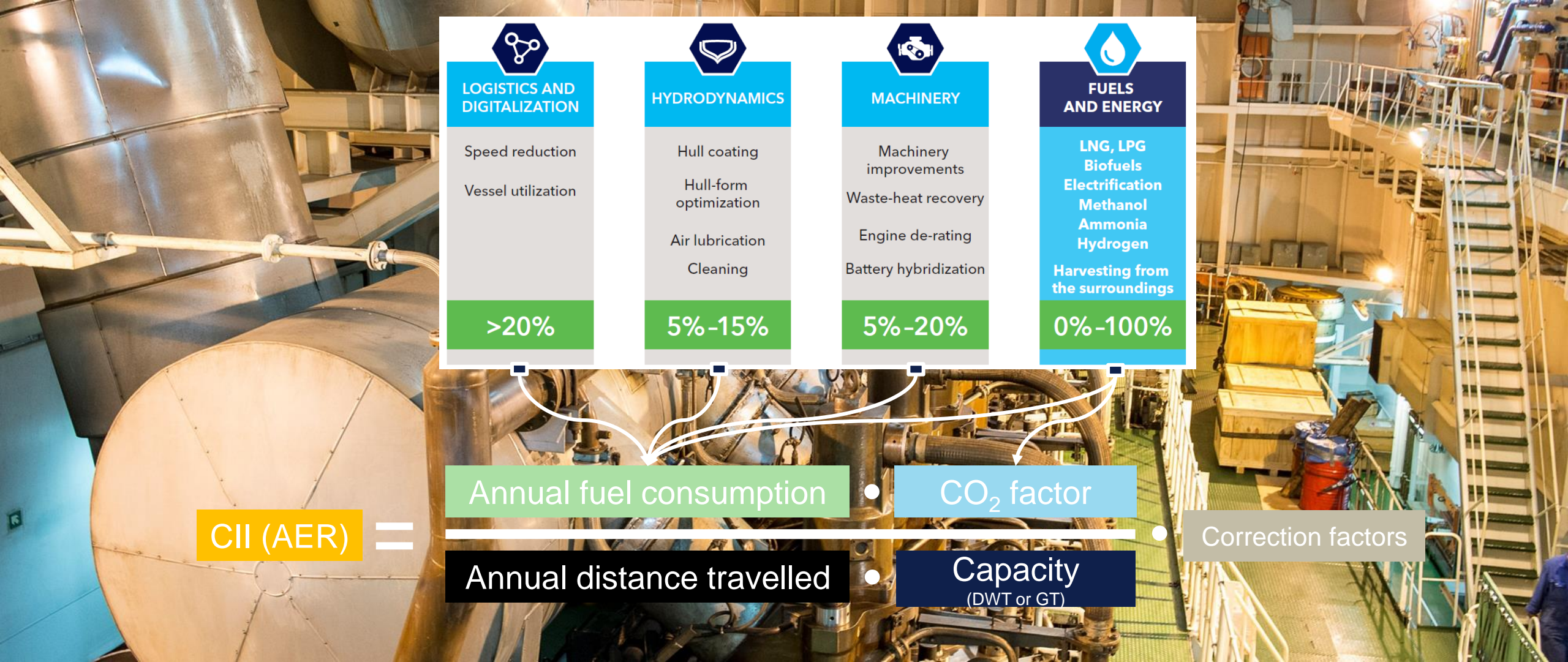
# Your ships, your fleet – what now?

# Owners must identify their own "decarbonization stairway" to manage carbon risk





# CII compliance options: there are many ways to Rome...



Thank you for your attention!