



Sjøfartsdirektoratet
Norwegian Maritime Authority

Sjøsikkerhetskonferansen 2018

Nå



IMO's klimastrategi

Sveinung Oftedal

Fagdirektør, *Klima- og miljødepartementet*



Norwegian Ministry
of Climate and Environment

IMO's klimastrategi

Sveinung Oftedal

Fagdirektør





Når?



Når blir det å løse utfordringen viktigere enn mulige negative konsekvenser for den etablerte økonomien





When to act is priority!

- **1989: Exxon Valdez** – Dbl tankers (OPA 90 → IMO/MARPOL requirement)
- **1999: ERIKA** – Accelerated phase out single hull tankers (EU → IMO/MARPOL requirement)
- **2002: Prestige** – Enough is enough! Single hull out by 2010. (EU → IMO/MARPOL requirement)



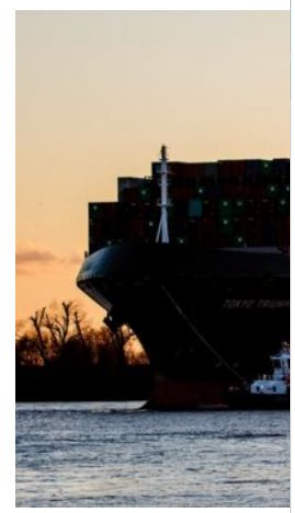


Global shipping



David Shukman
Science editor

13 April 2018



The global shipping industry is a major source of greenhouse gases.

The move comes after talks between the industry and the International Maritime Organization (IMO) in London.



Violeta Bulc
@Bulc_EU

Følg

#Shipping sector has delivered! The agreement reached this week at the @IMOHQ is a significant step forward in the global efforts to tackle #ClimateChange. Work must now continue on further steps. #MEPC72 [▶ europa.eu/!wC68RK](https://europa.eu/!wC68RK)



08:58 - 13. apr. 2018

48 retweets 82 liker

EU Transport, IMO og European Commission

1 48 82



Violeta Bulc @Bulc_EU · 13. apr. Congrats to #IMO SG Lim, Chair Oftedal, and #EU Member States on their commitment to reach this deal.

1 1 13



Carbon emissions from shipping to IMO

Industry is going to cut its emissions. It's a big deal.

Industry has agreed to cut its emissions. It's a big deal.

Andrew Wong
Published 12:34 AM ET Fri, 27 April 2018



Le transport maritime, maillon faible

Le transport maritime négocie les premiers objectifs chiffrés de réduction de CO2 à effet de serre.



Cette fois, au rendez-vous ? Réunis à Londres, les dirigeants de l'Organisation maritime internationale (OMI) doivent convenir de objectifs chiffrés de réduction de leurs émissions. Le sujet, inscrit au calendrier des

It's possible — but difficult — to halve shipping emissions, official says

"Ambitions for 50 percent reduction by 2050 are definitely difficult, but it's achievable. And now we have a situation where we really have to start with developing green shipping that we need for the future," Norway's Minister of Climate and Environment Ola Elvestuen said.

Andrew Wong
Published 12:34 AM ET Fri, 27 April 2018



Climate-Changed Nations Strike Historic Deal to Curb Shipping Emissions

By Anna Hirtenstein and Jeremy Hodges
13. april 2018 16.11 Updated on 13. april 2018 17.00

- ▶ Industry agrees to cut emissions by at least 50% by 2050
- ▶ U.S., Russia and Saudi Arabia object to emissions proposals

LISTEN TO ARTICLE
▶ 2:59

Most of the world's nations agreed to an historic deal that for the first time will limit emissions from the global shipping industry.



Important IMO Achievements on Climate Change

Norway proposes to establish an emission target for international shipping
March 2004 (MEPC 51)

MARPOL requirements on energy efficiency enters into force
January 2013

Amendments to MARPOL Annex VI adopted – the data collection system for fuel oil consumption of ships
MEPC 70 (Oct 2016)

Roadmap for developing an IMO Strategy on GHG emissions reduction - agreed
MEPC 70 (Oct 2016)

Amendments to MARPOL Annex VI – the data collection system for fuel oil consumption of ships entered into force
March 2018



The IMO mandate on GHG emissions established through the 1997 MARPOL Conference Resolution 8 on “CO2 emissions from ships”
Sept 1997

Resolution A.963(23)
“IMO Policies and Practices related to the Reduction of Greenhouse Gas Emissions from Ships”
Dec 2003

Amendments to MARPOL Annex VI – to include requirements on energy efficiency -
Adopted through a vote
July 2011 (MEPC 62)

Tony De Brum (MI): Proposal to establish a GHG emission reduction target for international shipping consistent with keeping global warming below 1.5°C
MEPC 68 May 2015

IMO Strategy on Reduction of GHG emissions from ships – Adopted
April 2018 (MEPC 72)

Key Challenges

"Vision – levels of ambition – guiding principles"

Meaningful strategy – vs – meaningless strategy

Ambition:

High Ambition – vs – No Ambition

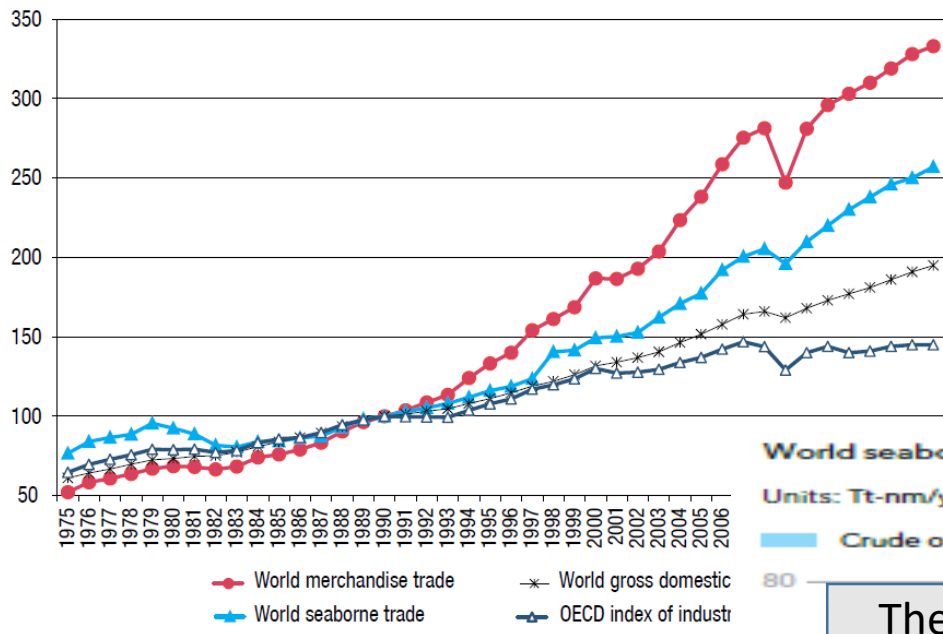
Efficiency only! – vs – efficiency for the ship and efficiency for the sector and
reducution of total emissions

Numbers – vs – No numbers

Principles:

Differentiation – vs – No differentiation

Figure 1.1. Organization for Economic Cooperation and Development index of industrial production and world indices: Gross domestic product, merchandise trade and seaborne shipments, 1975–2016 (1990 = 100)



Sources: UNCTAD secretariat calculations, based on data from OECD, 2017; United Nations, *Transport*, various issues; World Trade Organization, 2012.
 Note: Index calculations are based on GDP and merchandise trade in dollars, and seaborne trade

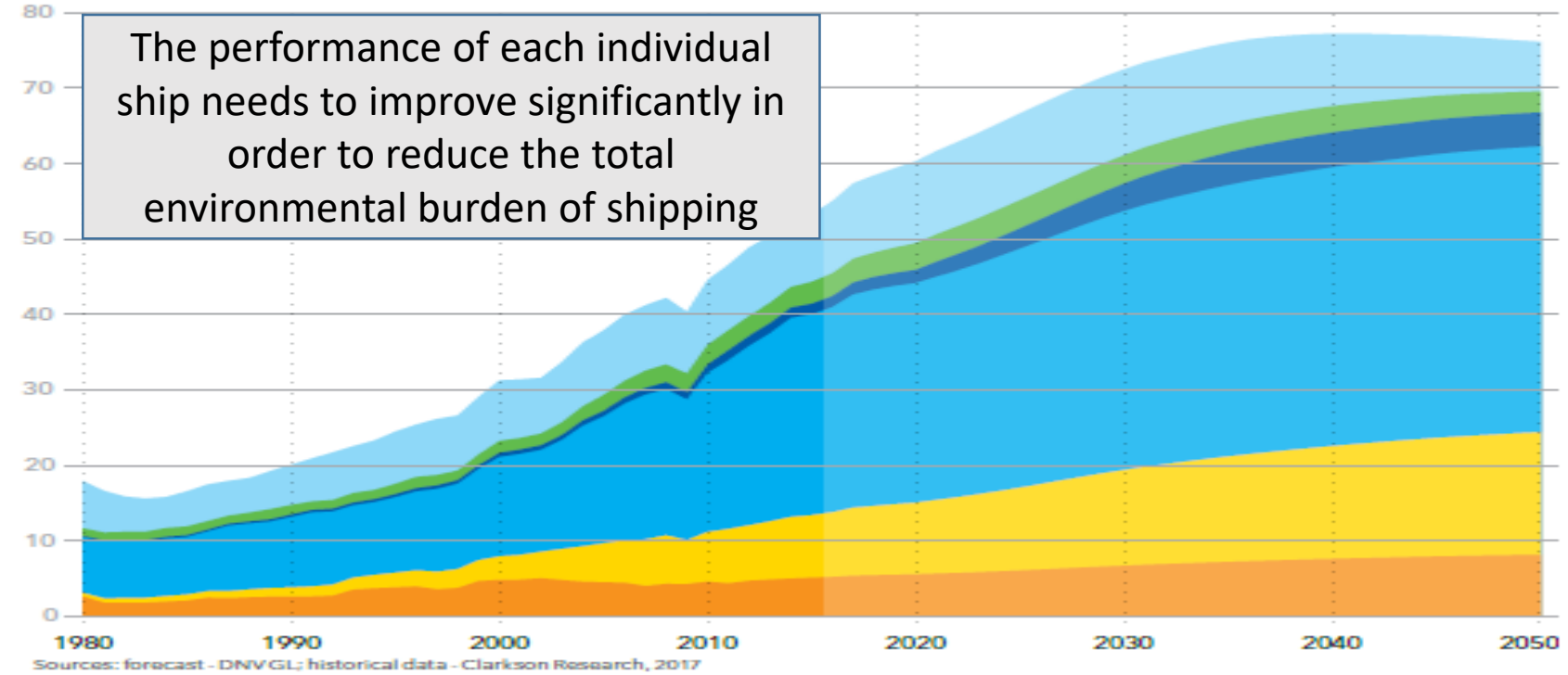


Demand for seaborne transport will grow 37% towards 2050

World seaborne trade: tonne-miles

Units: Tt-nm/yr

Crude oil Oil products Natural gas Bulk Container Other cargo



The performance of each individual ship needs to improve significantly in order to reduce the total environmental burden of shipping

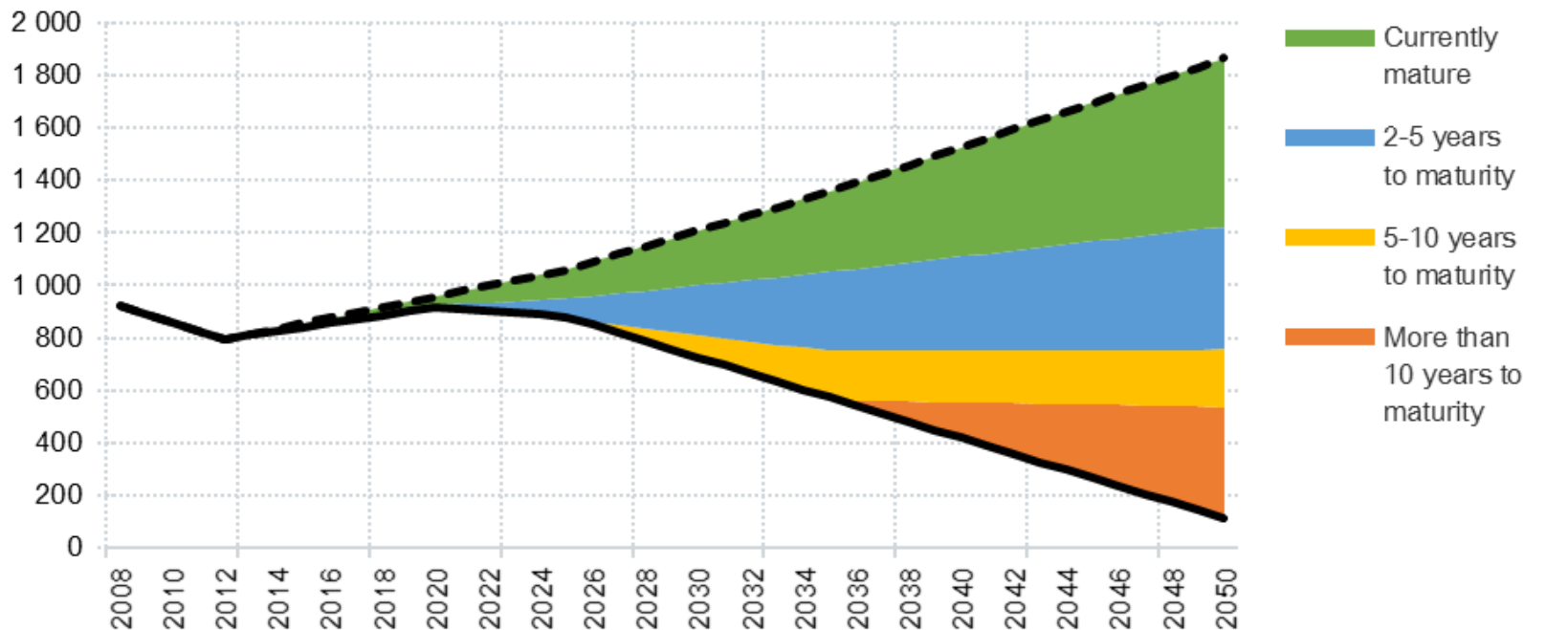
Average growth of 2%/yr to 2030, then 0.2%/yr towards 2050

Source: DNV GL

Sources: forecast - DNVGL; historical data - Clarkson Research, 2017

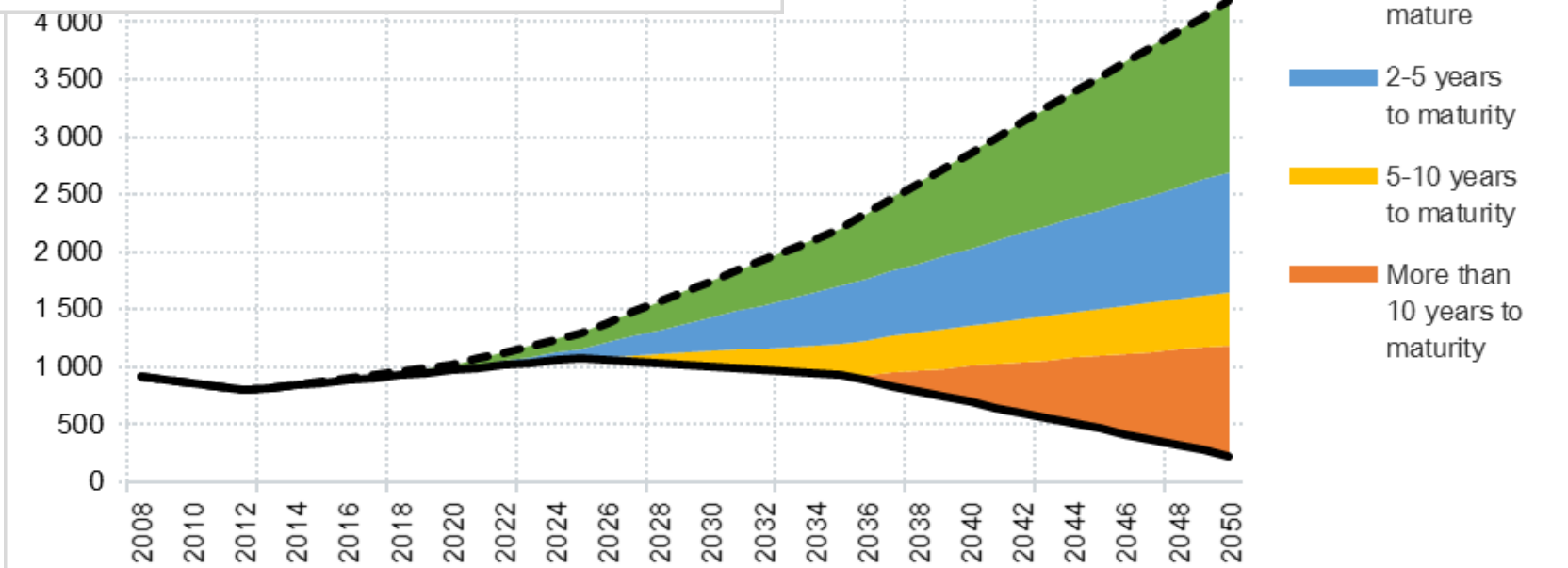
CO₂ EMISSION REDUCTION POTENTIAL 2008 TO 2050 - LOW GROWTH

Units: **Million tonnes CO₂**



En stor utfordring i forhandlingene var at vi har ikke i dag et klart svar på hvordan drastiske utslippskutt skal kunne nås i internasjonal skipsfart.

CO₂ EMISSION REDUCTION POTENTIAL 2008 TO 2050 - HIGH GROWTH



Important elements of the Initial GHG Strategy

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.

Extract from the Ambition

.1 carbon intensity of the ship to decline through implementation of further phases of the energy efficiency design index (EEDI) for new ships

to review with the aim to strengthen the energy efficiency design requirements for ships with the percentage improvement for each phase to be determined for each ship type, as appropriate;

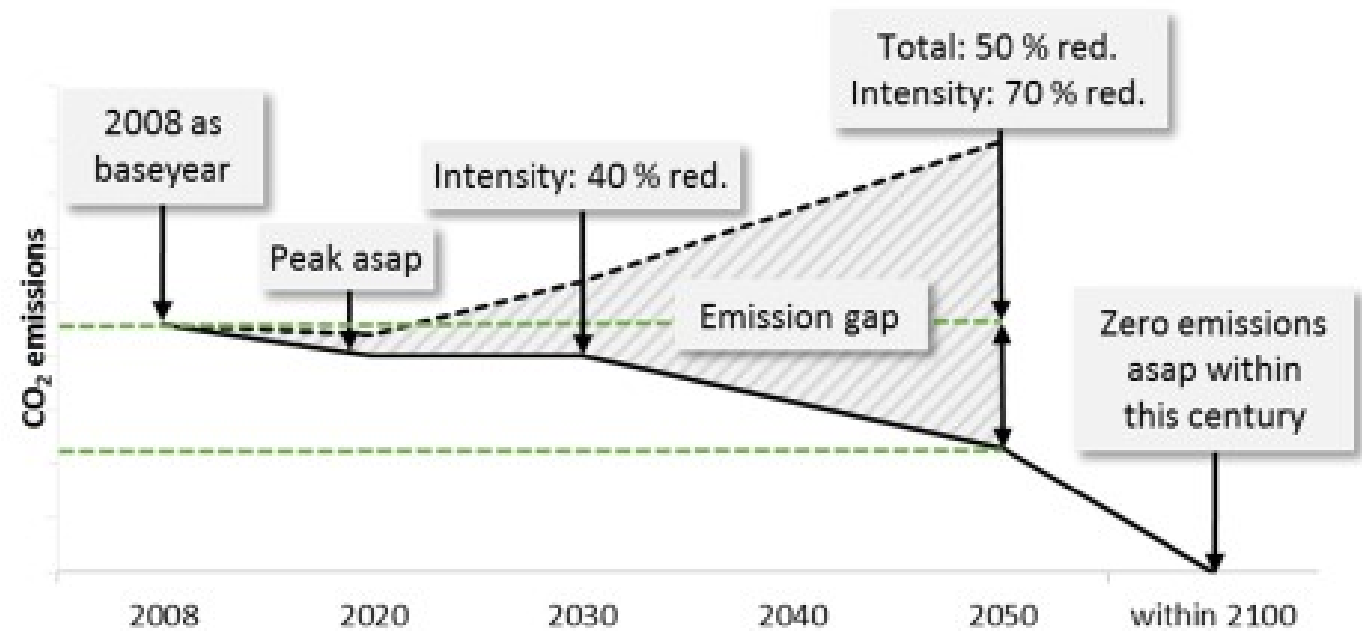
.2 carbon intensity of international shipping to decline

to reduce CO₂ emissions per transport work, as an average across international shipping, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008; and

.3 GHG emissions from international shipping to peak and decline

to peak GHG emissions from international shipping as soon as possible and to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008 whilst pursuing efforts towards phasing them out as called for in the Vision as a point on a pathway of CO₂ emissions reduction consistent with the Paris Agreement temperature goals.

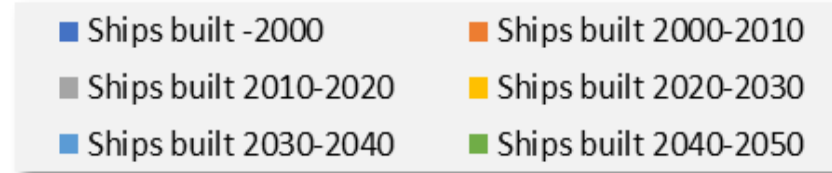
Initial IMO Strategy on reduction of GHG emissions: Vision and ambitions



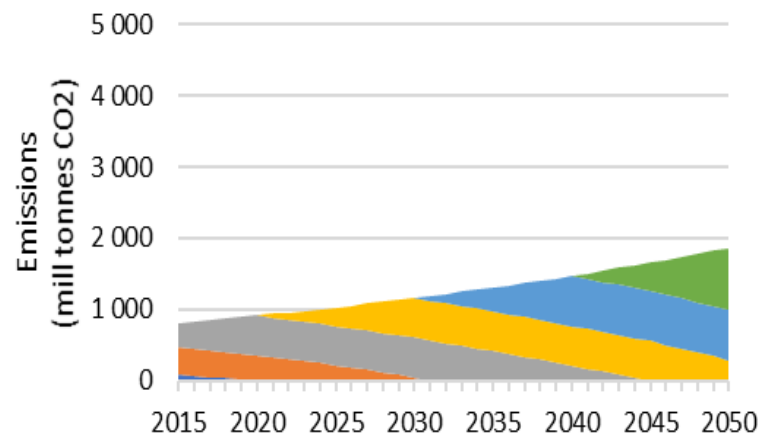
Fleet profiles in 2030 and 2050 – assuming no changes in carbon intensity

Distribution of emissions per generation of ships:

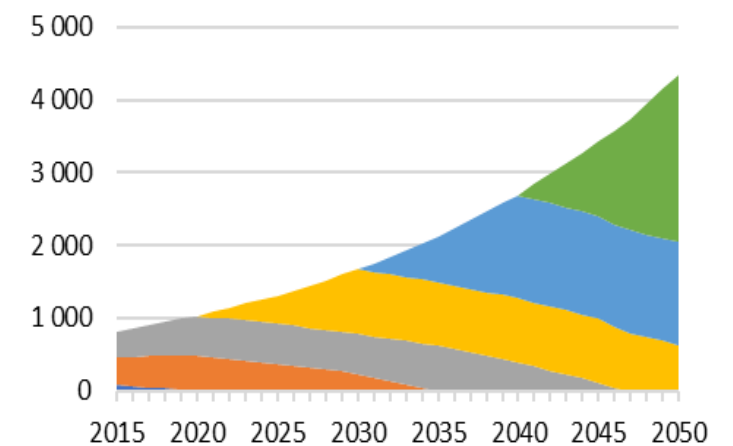
Generation	Current	Low growth		High growth	
	2015	2030	2050	2030	2050
Ships built before 2000	24 %	-	-	-	-
Ships built 2000-2010	40 %	7 %	-	12 %	-
Ships built 2010-2020	36 %	45 %	-	36 %	-
Ships built 2020-2030		48 %	16 %	52 %	15 %
Ships built 2030-2040		-	38 %	-	33 %
Ships built 2040-2050		-	46 %	-	52 %



Fleet composition - low growth



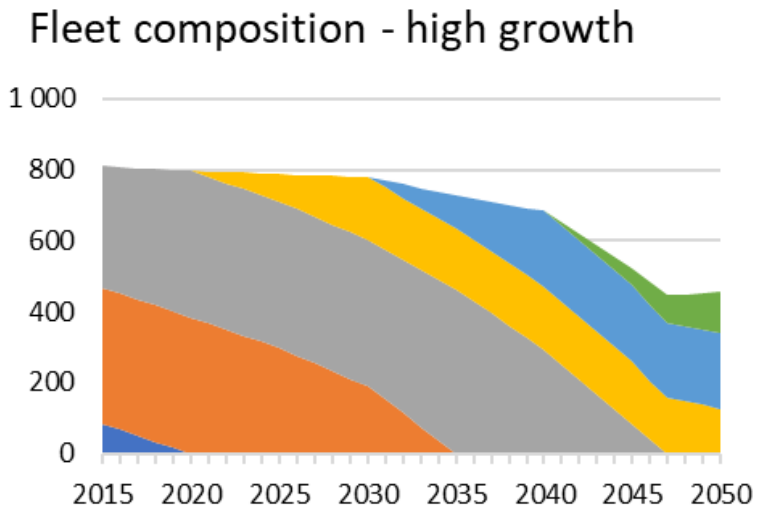
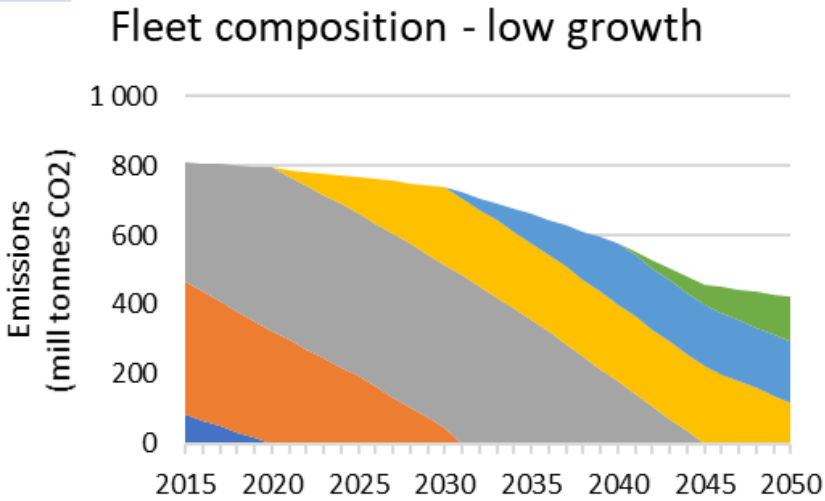
Fleet composition - high growth



Fleet profiles in 2030 and 2050 – Improvements in carbon intensity to reach ambitions

Reduction needed compared to 2015 fleet average:

Generation	Low growth	High growth
Ships built 2000-2010	-10 %	-20 %
Ships built 2010-2020	-15 %	-25 %
Ships built 2020-2030	-50 %	-70 %
Ships built 2030-2040	-75 %	-85 %
Ships built 2040-2050	-85 %	-95 %



IMO – Follow-up actions on Climate Change

2018-2023

Action plan

Initiate GHG-study

Approach to
Impact on States

Development of
measures such as:

- Energy efficiency
- Assess fuels
- Tech. Cooperation
- National Action Plans

Develop revised
GHG strategy

2023-2030

Development of
measures such as:

Energy efficiency

Implementation
programme for uptake of
low-carbon and zero-
carbon fuels

New and innovative
emission reduction
mechanism(s)

Develop revised
GHG strategy

2030 →

Development of
measures such as:

Provisions for low-
carbon and zero-carbon
fuels

Adoption of new and
innovative emission
reduction mechanism(s)

Develop revised
GHG strategy



Når?

2018→2023 →2030 →

- IMO's klimastrategi vil måtte kreve en betydelig skjerping av tiltak
 - Nye skip må bli stadig mer klimavennlige
 - Vi er avhengig av et drivstoffskifte for å klare IMO's klimamål
- **Det å løse utfordringen blir i større grad viktigere enn mulige negative konsekvenser for den etablerte økonomien – Mulighetene for en ny økonomi vokser**

Takk for oppmerksomheten!



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