

International Marine Contractors Association

Improving performance in the marine contracting industry

Fuel Consumption Data Call for action IMCA Marine Members

Margaret Fitzgerald

Head of Marine Policy and Regulatory Affairs

IMO's Initial Green House Gas Strategy

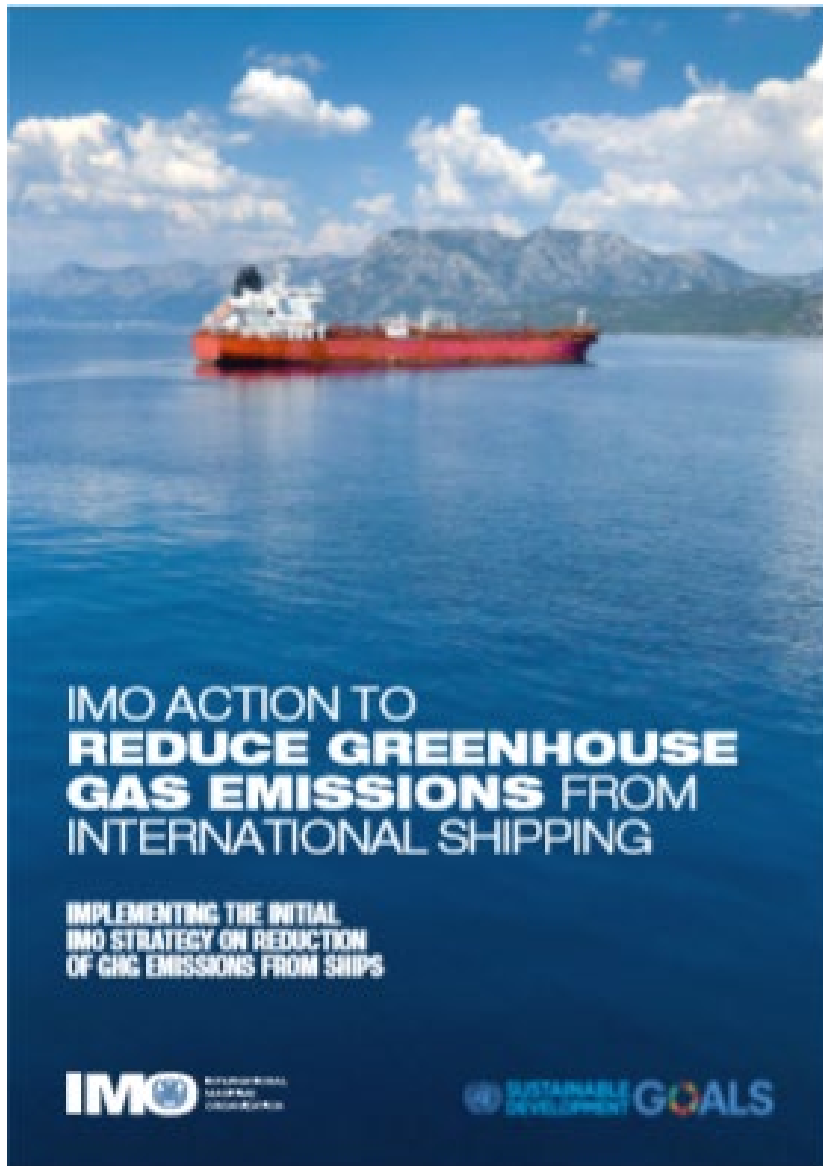
Adopted in 2018

Sets out a vision to reduce GHG emissions from international shipping and phase them out, as soon as possible in this century

The strategy includes a specific reference to “a pathway of CO₂ emissions reduction consistent with the Paris Agreement temperature goals”



IMO's Initial Green House Gas Strategy



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 and 70% by 2050 compared to 2008 levels



Green House Gas emissions from international shipping to peak as soon as possible and then decline

This requires efficiency improvements beyond Business as Usual

Will require ships to change operational practices and/or technical specifications

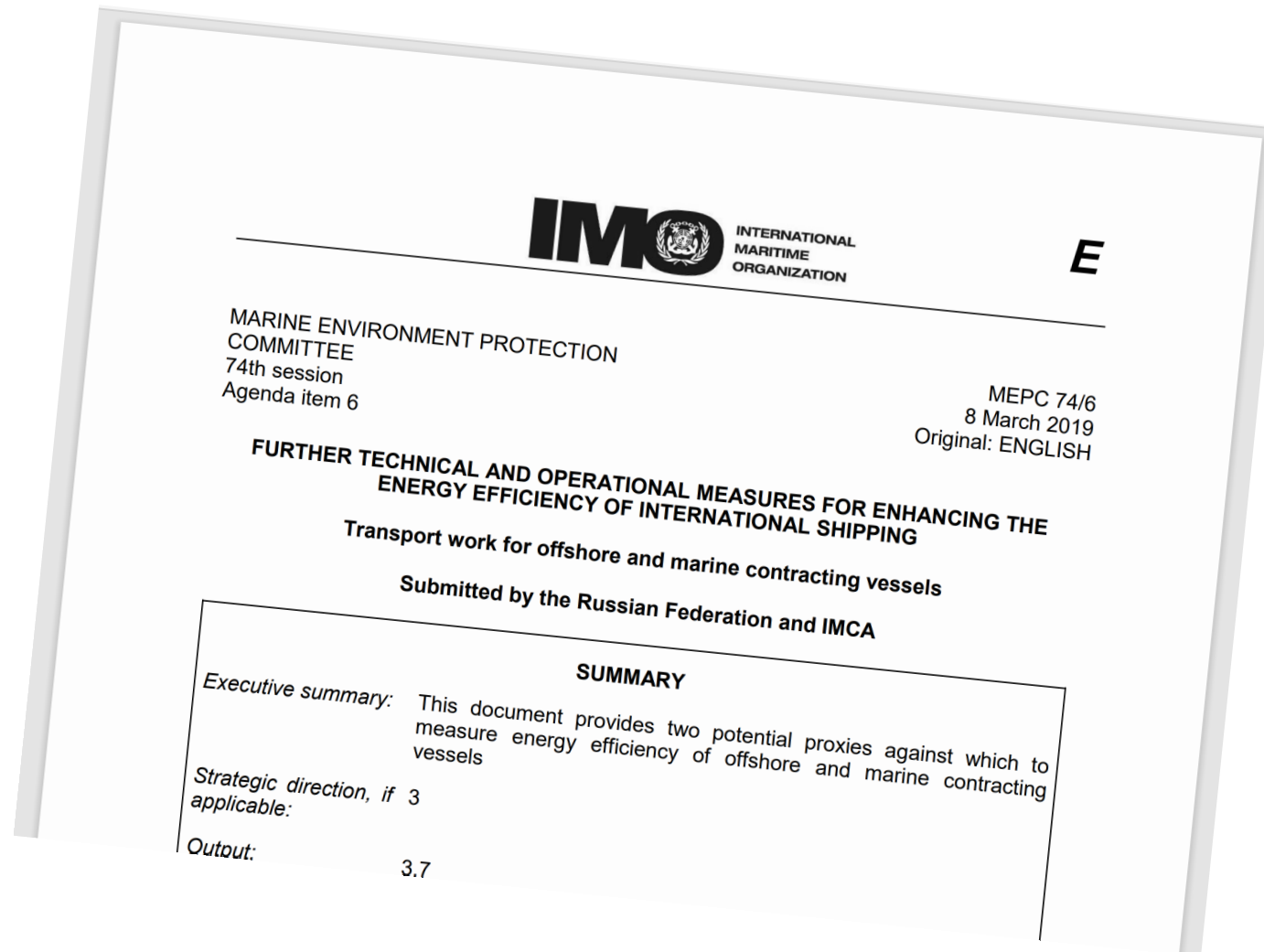
Measures should have an impact on operational efficiency from 2023 onwards

Revision of IMO's Initial Green House Gas Strategy



- Initial Strategy applies up to 2023
- After which it will be revised with further stricter measures brought in
- The IMO adopted a mandatory Fuel Oil Data Collection System (DCS) for international shipping, requiring ships of 5,000 gross tons or above to collect and report data to an IMO database from 1 January 2019.
- Data from the DCS will feed into the process of determining how IMO's GHG Strategy will be revised in 2023
- IMCA's fuel consumption data exercise will feed into this and determine how our sector is handled in terms of regulating its' Carbon Intensity

‘Transport work’ and consideration of the offshore sector



'Transport work' and consideration of the offshore sector

- Instead of 'Transport Work', IMCA proposed two possible proxies to be used by IMO as a Carbon Intensity Indicator for our sector:
- **Proxy A** – based on yearly energy consumption
 - Installed rated power
 - Yearly running hours
 - Total kg CO₂ emitted per year, calculated on the basis of fuel consumed per year and applicable conversion factors for each type of fuel
- **Proxy B** – based on effective (operational) utilisation time of the vessel
 - Total hours underway
 - Total kg CO₂ emitted per year, calculated on the basis of fuel consumed per year and applicable conversion factors for each type of fuel

'Transport work' and consideration of the offshore sector

- In March 2021 IMO's Intersessional Working Group on Green House Gases considered IMCA's proposal and decided that data, in support of each of the proxies is needed, before it is able to agree what the proxy should be.
 - .1 in addition to the IMO DCS data, offshore and marine contracting vessels should collect "engine running hours and installed power, for each engine" for trial on a voluntary basis;
 - .2 using that data, offshore and marine contracting vessels should calculate both proxies A and B and report them to the IMO; and
 - .3 the IMO should develop an anonymized dataset of proxies A and B for analysis and consideration by the IMO Member States who will decide which of the two proxies, if any, should apply.

Parallel Work Stream



Applies to vessels of 5,000 GT and above

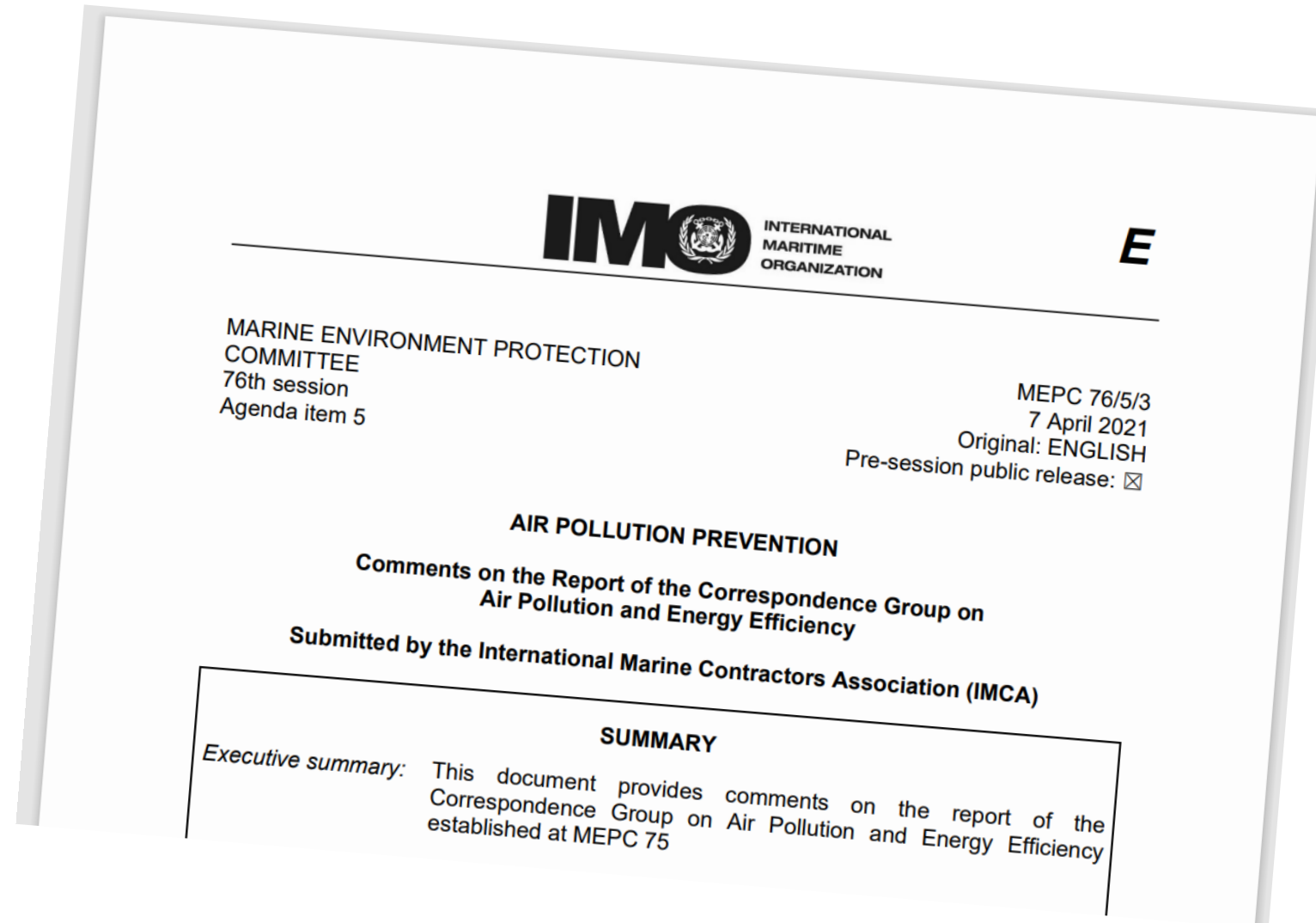
Fuel consumption data to be reported to IMO

- IN ADDITION – For vessels with a gross tonnage of 5,000 GT or above offshore and marine contracting sector instructed to collect Fuel consumption and
- Engine running hours
Installed power
- Calculate Proxy A
- Hours underway
- Calculate Proxy B



For EACH ENGINE
For EACH ENGINE

IMCA Submission to MEPC 76



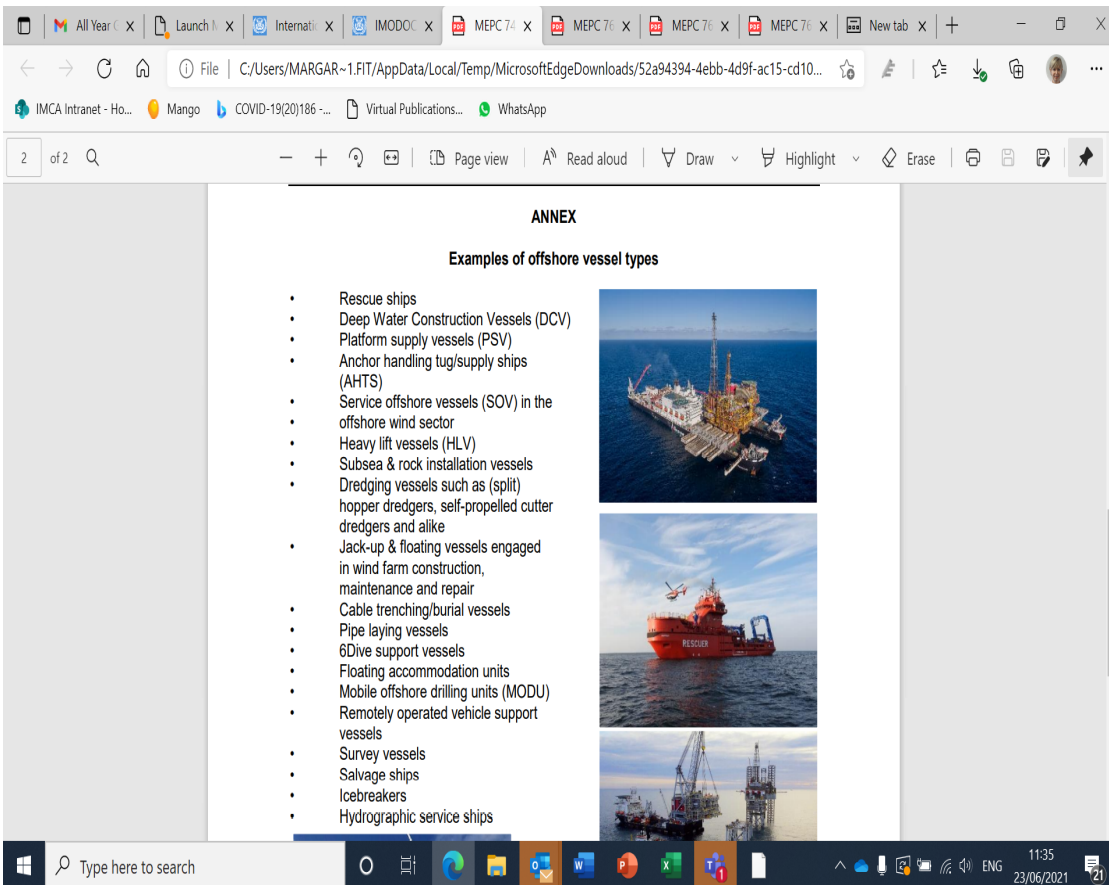
In its paper IMCA expressed concern about the proposed data collection process, warning that:

"care is needed to ensure that voluntary submission of data is carefully managed in a clear process to minimize the possibility of selection bias and inadequate quality control leading to a distorted impression when analysing the different proxies".

IMCA Submission to MEPC 76



- IMCA drew attention to its information paper which had been submitted to MEPC 74 in which we highlighted the fact that more than 20 vessel types fall within the scope of 'offshore and marine contracting vessels'
- We advised that any decision on a proxy needs to be based on sufficient data representative of all these vessel types
- We argued that IMCA would be best placed to oversee the collection of data from our members to ensure that there was sufficient data representative of all vessel types within our sector available to IMO before any final decision is taken



Outcome of MEPC 76



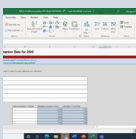
On the basis of our proposal, IMCA has been granted permission to collect and submit data on CO₂ emissions to IMO on behalf of its' members



IMCA has identified 564 vessels in its internal database which fall within the scope of this data collection requirement





We are writing to Members in respect of these vessels to encourage them to submit data to us for onward dissemination to IMO





We have updated the original spreadsheet to not only collect fuel consumption data but also to calculate the two proxies and to make this information transparent to IMO and the member states


FileHomeInsertPage LayoutFormulasDataReviewViewHelp


PivotTable
▼


Recommended PivotTables


Table


Illustrations
▼


Get Add-ins


My Add-ins
▼


Recommended Charts



Charts


Maps
▼


PivotChart
▼


3D Map
▼
Tours


Line


Column


Win/Loss
Sparklines


Slicer

Timeline
Filters

Link
▼
Links




New Comment
Comments

Text
▼

Symbols
▼

ShareComments

H43

A

B

C

D

E

F

G

H

I


J

K

L

M

N

 **Vessel Fuel Consumption Data for 2020**

CONFIDENTIAL - COMMERCIALLY SENSITIVE

A separate copy of this spreadsheet should be submitted for each vessel to fueldata@imca-int.com

Access is limited to authorised IMCA secretariat staff only, with only anonymised aggregate data published

Submission Summary

- Identifying information is not used in any reports, but may be useful in case of a query regarding your submission
- Vessel type is used for classification of aggregate data

Company name			
Submitted by (name)			
Email address			
Vessel name			
Vessel type			
Vessel type (other)			

Fuel Consumption	Fuel consumption in tonnes	Applicable conversion factor	Calculated CO ₂ emitted
Marine diesel oil/marine gas oil consumption		3.206	0.00
LFO consumption		3.151	0.00
HFO consumption		3.114	0.00
LPG (Propane) consumption		3.000	0.00
LPG (Butane) consumption		3.030	0.00
LNG consumption		2.750	0.00

x

✓

Total hours underway

Calculations

Proxy A

E - Total kg CO₂ emitted per year (calculated above, all fuels with conversion factors)

Pg - Total calculated gross kWh generated per year (calculated above, all engines)

R value for Proxy A

Proxy B

E - Total kg CO₂ emitted per year (calculated above, all fuels with conversion factors)

U - Total hours underway

R value for Proxy B

Definitions

Vessel type - select primary purpose from the drop-down, or choose 'Other' then enter another vessel type below

Applicable conversion factor - $t(CO_2)/t(Fuel)$, emission calculation for each fuel, as defined by IMO - this is incorporated into the calculations above

Proxy A - based on yearly energy consumption

Installed rated power - input for each engine individually

Yearly running hours input for each engine individually.

FuelData

	A	B	C	D	E	F	G	H
52								
53								
54	Definitions							
55	<i>Vessel type</i> - select primary purpose from the drop-down, or choose 'Other' then enter another vessel type below							
56	<i>Applicable conversion factor</i> - $t(\text{CO}_2)/t(\text{Fuel})$, emission calculation for each fuel, as defined by IMO - this is incorporated into the calculations above							
57								
58	Proxy A - based on yearly energy consumption							
59	<i>Installed rated power</i> - input for each engine individually							
60	<i>Yearly running hours</i> - input for each engine individually							
	<i>R value for Proxy A</i> is the average energy ratio based on a measure of E and Pg:							
	R = E/P_g = kg CO ₂ per gross kWh							
	E = Total kg CO ₂ emitted per year, calculated on the basis of the fuel consumed per year and applicable conversion factors for each type of fuel.							
61	Pg = Total gross power output generated per year. i.e. $\sum(\text{installed rated power per engine} \times \text{yearly running hours per engine})$							
62								
63	Proxy B - based on effective (operational) utilisation time of the vessel							
	<i>R value for Proxy B</i> is the average energy ratio based on a measure of E and U:							
	R = E/U = kg CO ₂ per operational utilisation hour							
	E = Total kg CO ₂ emitted per year, calculated on the basis of the fuel consumed per year and the applicable conversion factors for each type of fuel.							
	U = Total hours under way per year							
64	(total hours at sea either steaming or on DP - time spent undergoing repairs or mobilising in port should not be included in the calculation)							
65								
66								

Reporting

- **Initial Reporting Periods for Fuel Consumption**
 - 1 January 2019 – 31 December 2019
 - 1 January 2020 – 31 December 2020
- **IMCA Reporting to IMO**
 - End of November 2021 – for 2019 data
 - End of February 2022 – for 2021 data

In Summary

- Data will drive decision-making on the revision of IMO's GHG Strategy beyond 2023
- 'Transport work' is considered to be the appropriate proxy for assessing the Carbon Intensity (CI) of cargo vessels
- The offshore and marine contracting sector will be assessed by a different metric – Proxy A, Proxy B or an alternative such as total carbon emissions
- Additional data is required from the offshore and marine contracting sector to enable the alternative proxies to be considered
- Hence our Call to Action for members support for this initiative!

Improving performance in the
marine contracting industry