Ship Fuel Consumption Data: Considerations for Broader Access

An analysis of DCS & CII data

CE Delft

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Content

Summary

The IMO Ship Fuel Oil Consumption Database contains data and information that ships of 5000 GT and above have to report under the IMO Data Collection System (DCS). Since 2023 this data also forms the basis of a calculation which assigns a Carbon Intensity Indicator (CII) rating to certain ships relative to agreed reference lines per ship type. MARPOL amendments (discussed in Chapter 2) will also increase the granularity of the data that needs to be reported, including also new data fields.

The collected DCS data, held within the IMO Ship Fuel Oil Consumption Database, is the only global database of verified data on fuel consumption and technical characteristics of international shipping. However, access to that database, including the CII rating of a ship, is restricted to a limited audience of Flag Administrations and Recognised Organisations acting on their behalf, as well as the IMO Secretariat. There is no open access for the general public and even for Flag Administrations only parts of the database are accessible (see Chapter 2).

In place of open access to the IMO Ship Fuel Oil Consumption Database, the IMO does publish an annual report, summarising the results of the data that is collected and, since 2023, also publishes additional reporting on the carbon intensity and efficiency of ships (based on the DCS data). Both of these reports are publicly available, but no specific ship or their reported data can be identified. To some degree, accessibility of the reported data is also available via the 'Statement of Compliance' (SoC). A ship receives as proof it has fulfilled the obligations of the respective MARPOL Annex VI regulations for DCS and CII reporting because those issued from 2024 onwards also include the CII rating of a ship (where applicable). Although the SoC is by no means in the public domain, it can be subject to inspection from authorities such as Port State Control. Other interested stakeholders could ask the ship/shipping company to share evidence of this SoC and thereby receive the verified CII rating. There are also commercial parties which do offer ship data as a service, including environmental data like emissions per day or even CII ratings.
While this data can offer interested stakeholders an insight into the GHG emissions of a ship, such sources are not considered as offering true accessibility to DCS or CII data. This is because such services are at a cost and thus not freely accessible to all. The data is also likely to be an estimation and not data that has been verified within the IMO DCS reporting processes (explained in Chapter 2).

This report therefore considers several advantages and disadvantages of increasing accessibility to IMO DCS data, including CII ratings (see Chapter 3). Some scenarios which may eventually increase accessibility to this data are also discussed in Chapter 4 and summarised below. This starts with scenarios to increase accessibility to the IMO Ship Fuel Oil Consumption Database, which appears most logical since the data is in any case already stored there having gone through the IMO reporting and verification process. However, increasing access to the IMO Ship Fuel Oil Consumption Database requires consensus among IMO Member States, which see different advantages and disadvantages. As such, alternative scenarios are also considered which could increase accessibility in more indirect (and potentially cumbersome) ways.

Table 1 - Summary of scenarios to increase accessibility of DCS/CII data and potential advantages/disadvantages (for more detail, see Chapters 3 and 4).

Increased accessibility to the data via the currently available channel (IMO Ship Fuel Oil Consumption Database)		
Scenario	**Advantage**	**Disadvantage**
More access for current users (Flag Administrations and their ROs) such as to information for ships *outside* their fleet.	– Increase the number of stakeholders who can analyse the data to support policy making and better tailor regulations.	– The information remains restricted to a limited audience.
Provide access to stakeholder groups who currently have no access. A list of stakeholders could be considered together with their reasons for accessing the data and rules for how they use the information to support the decarbonisation of the industry.	– Better enable stakeholders to incentivise ships that meet a certain CII rating or demonstrate other steps towards decarbonisation such as consumption of less carbon-intensive alternative fuels. – Make use of the existing data to support national, regional or local shipping GHG reduction plans/policies (for instance plans for alternative fuels infrastructure, with better knowledge on the number of ships consuming certain fuels or connecting to on-shore power supply). – Reduce the time and costs involved with parallel attempts to collect similar data by other means across the shipping industry. The data within the IMO DCS is verified and already exists.	– Ships have widely differing operating profiles and opening up this data and CII rating, without further context, could lead to misinterpretation about the true efficiency of a ship. – Potential commercial sensitivities. – Costs associated with making the data accessible and secure.
Increased accessibility to the data via other channels		
Scenario	**Advantage**	**Disadvantage**
Accessibility of IMO/CII data via other environmental regulations which increasingly ask companies to report on Environmental, Social, Governance factors of their business.	– Companies could disclose verified fuel consumption or CII scores within these reports, which are publicly available.	– These regulations are unlikely to ever cover the full scope of ships in scope of the IMO DCS and CII. – Even for shipping companies that may be subject to such reporting obligations, a firm requirement to publish DCS/CII data is unlikely. Shipping companies that do decide to publish DCS/CII data may do so without any reporting uniformity.

Increased accessibility to the data via other channels		
Scenario	**Advantage**	**Disadvantage**
Incorporation of DCS data and CII scores in existing ship environmental schemes.	– Some schemes already exist which assign a ship a score based on parameters that give an indication of the sustainability performance of the ship. – The scores are visible to participants within that scheme and there is likely to be some overlap between the data required for ships to obtain such a score and data required to be reported for the IMO DCS, such as the technical characteristics of the ship or installation of innovative technology.	– Even if parts of DCS data or CII scores would be incorporated in these schemes, the score is still only accessible to a limited audience and it may only be the total score that is published, not the individual components that resulted in that score.
Accessibility of DCS/CII data via ship vetting schemes.	– For vetting schemes that would place a focus on DCS and CII, the results could be shared with interested charterers or participants within the vetting programme.	– There is no certainty such schemes will ever include relevant DCS or CII data as vetting is more about the full class/statutory/industry compliance and suitability of the ship and not only environmental matters. – Ship vetting inspection results are also not in the public domain but only to interested charterers of participants in the vetting programme.

Acronyms

Acronym	Meaning
AIS	Automatic Identification System
CII	Carbon Intensity Indicator
EEDI	Energy Efficiency Design Index
EEXI	Energy Efficiency Existing Ship Index
GISIS	Global Integrated Shipping Information System
RO	Recognised Organisation, meaning an entity authorised to work on behalf of a Martime Administration
MEPC	Marine Environment Protection Committee
SIRE	Ship Inspection Report

1 Introduction

1.1 Background

At its 70th session, the IMO Marine Environment Protection Committee (MEPC) adopted the IMO Data Collection System (DCS) as part of a three-step approach to collect data, to analyse data, and to use the data to inform decision-making on GHG reduction measures.

The IMO DCS is now in its 6th reporting year. Building on the data collected and analysis thereof, MEPC 76 adopted in 2021 amendments to MARPOL Annex VI which established the operational Carbon Intensity Indicator (CII) as a short-term GHG reduction measure[1]. Since calendar year 2023, the reported DCS data thus form the basis of a calculation which assigns an efficiency rating to ships relative to agreed reference lines[2] per ship type. Partially supported by IMO DCS data, the IMO also adopted a revised GHG reduction strategy in 2023.

The collected DCS data, held within the IMO Ship Fuel Oil Consumption Database is the only global database of verified data on fuel consumption and technical characteristics of international shipping. However, access to that database, including the CII rating of a ship, is restricted to a limited audience of Flag Administrations and Recognised Organisations acting on their behalf, as well as the IMO Secretariat. There is no open access for the general public and even for Flag Administrations only parts of the database are accessible.

1.2 Outline of the report

This report discusses the present level of accessibility to the IMO Ship Fuel Oil Consumption Database and explores advantages and disadvantages of increasing accessibility to it. Chapter 4 discusses scenarios which could lead to greater accessibility of this data, either via the IMO processes or through other actors.

Throughout the report, references are made to IMO documents which are either submissions from IMO Member States or observers or summaries of IMO MEPC meetings. Each of these documents can be accessed by the public.[3]

[1] The Energy Efficiency Existing Ship Index (EEXI) was adopted as another short term measure. This measure is, however, less related to the IMO DCS.

[2] Reference lines are stated in MEPC.353(78).

[3] www.webaccounts.imo.org/Public/

2 Status quo of accessibility

2.1 Which data is reported/documented and how?

Since 2019, MARPOL Annex VI regulation 27 requires ships of 5,000 GT and above to collect data related to fuel consumption. For each calendar year, the aggregated data then needs to be submitted to the ship's Flag Administration or a Recognised Organisation (RO) which acts on behalf of the Flag Administration. This party then reports the aggregated data to IMO. This Data Collection System (DCS) has, since calendar year 2023, also been the basis for calculating the Carbon Intensity Indicator (CII) for the ship types that are covered by MARPOL Annex VI regulation 28. The full process and timeline for reporting fuel consumption information is outlined in the following table[4]:

Table 2 - Timeline for IMO Fuel Consumption Data Collection System (DCS) reporting

Timeline	Action to be taken by relevant entity
Step 1	Ships of 5,000 GT and above collect data throughout the year (see data requirements in Table 3). – The methodology used to collect this data has to be set out in a Ship Energy Efficiency Management Plan (SEEMP[5]).
Step 2: by 31 March each year	Ship data from the previous calendar year has to be aggregated and reported to the Flag Administration or Recognised Organisation acting on the Flag's behalf. – IMO developed a standardised reporting format for this aggregated reporting[6]. As well as the reported aggregated data, the disaggregated data that underlies the reported data should also be kept readily accessible for at least 12 months and made available to the Flag Administration upon request. This disaggregated data is however not part of the official DCS reporting and is not made available to any other parties.
Step 3: until 31 May each year	The appointed verifier checks the reliability and consistency of the data. – Verification is performed either by the Flag Administration or an entity approved by them for this task. Guidelines for verification have been established[7] specifying the kind of additional documentation the verifier may request to ensure the reliability and correctness of the reported data, such as bunker delivery notes or ship logbooks, etc. Other documents can also be requested if the verifier deems them relevant.
Step 4: also until 31 May each year	A (renewed) Statement of Compliance (SoC) for the ship will be issued by or on behalf of the Flag, subject to the reported and verified data being found satisfactory. – The SoC for the DCS and CII are combined into one document and will be valid (under normal circumstances) until 31 May of the following year, see Table 5.

[4] Based on the timeline set out in MARPOL Annex VI regulation 27 and presented here: IMO Data Collection System (DCS)

[5] There are various parts to a SEEMP as detailed in in MARPOL Annex VI regulation 26: A basic version for ships > 400 GT, a more advanced SEEMP for ships > 5,000 GT which must include a methodology for gathering IMO DCS Data (sometimes referred to as the SEEMP Part II), and an enhanced SEEMP for ships > 5,000 GT that are also subject to the CII (see Table 3). Only the last two parts of the SEEMP need to be approved by the flag or RO.

[6] It can be found in the 2022 Guidelines for Administration verification of ship fuel oil consumption data and operational carbon intensity (resolution MEPC.348(78)). In practice this standardised form may not always be used because shipping companies use dedicated tools by data verifiers who are very often also Recognised Organisations.

[7] Verification guidelines are available within MEPC.348(78).

Timeline	Action to be taken by relevant entity
Step 5: by 30 June, or 1 month after issuing the SoC	The Flag Administration or RO should report the verified aggregated data to the IMO Ship Fuel Oil Consumption Database. Access to this database is restricted to select parties as discussed hereafter. Note: Only aggregated data is reported to IMO. None of the disaggregated data or any other data requested by the Flag/RO during verification is shared with the IMO.
Step 6	IMO produces an annual report summarising the fuel consumption reported across the global fleet in scope of the regulations. The most recent report for year 2023 indicates that 28,620 ships reported to the system.

The list of information to be submitted to the IMO Ship Fuel Oil Consumption Database is specified in Appendix IX of MARPOL Annex VI. The full list, including new information that needs to be reported on the basis of amendments, upon entry into force in August 2025[8], is set out hereafter.

Table 3 - IMO DCS, list of information to be submitted

Ship type	Information required to be reported as per MARPOL Annex VI regulation 27 and related Appendix IX *Italics indicates new information following resolution MEPC.385(81)*
All ships of 5,000 GT and above, trading internationally and propelled by mechanical means. Platforms, rigs or fishing vessels are not covered.	Identity of the ship: — IMO number; — Period of calendar year for which the data is submitted.
	Technical characteristics of the ship: — Year of delivery; — Ship type; — Gross Tonnage; — Net Tonnage; — Deadweight tonnage; — Power output (rated power) of main and auxiliary reciprocating ICEs over 130 kW; — Attained EEDI (if applicable); — Attained EEXI (if applicable); — Ice class.
	Fuel oil consumption data: — Total fuel oil consumption by fuel oil type (metric tonnes); — *Total fuel oil consumption by fuel oil type per consumer type (main engine, auxiliary engine…);* — *Fuel oil consumption while the ship is not under way by fuel oil type per consumer type.*
	Total distance travelled (nautical miles).
	Laden distance travelled (on a voluntary basis).
	Hours under way.
	Total amount of onshore power supplied (kWh).

[8] These amendments were adopted in March 2024 (MEPC.385(81) and will enter into force on 1 August 2025 under the IMO tacit acceptance procedure with an invitation for early application from 1 January 2025 on. The International Association of Classification Societies has proposed a circular to be drafted by the MEPC Committee to clarify implementation dates (MEPC 82/6/15).

Ship type	Information required to be reported as per MARPOL Annex VI regulation 27 and related Appendix IX *Italics indicates new information following resolution MEPC.385(81)*
Ships of 5,000 GT and above: — Bulk carriers — Combination carriers — Container ships — Cruise ships — Gas carriers — General cargo ships — LNG carriers — Refrigerated cargo carriers — Ro-Ro cargo vessels — Ro-Ro passenger vessels — Vehicle carriers — Tankers	Information relating to regulation 28 of MARPOL Annex VI, namely the Carbon Intensity Indicator: — *Total transport work;* — Applicable CII (AER/cgDIST). — Required annual operational CII — Attained annual operational CII before any correction — Attained annual operational CII — Installation of innovative technology, if applicable (A/B-1/B-2/ C-1/C-2) — Operational carbon intensity rating (A/B/C/D/E) — CII for trial purpose (on voluntary basis) (EEPI/cbDIST/clDIST/EEOI)

2.2 Who has access to which data and how?

Accessibility to the IMO Ship Fuel Oil Consumption Database remains restricted to a limited range of parties which will be discussed hereafter.

2.2.1 Accessibility to data via the IMO Ship Fuel Oil Consumption Database

As stated in the above timeline, by 30 June each year Flag Administrations or their ROs are required to transfer a ship's verified annual data to the IMO Ship Fuel Oil Consumption Database. The database was launched in 2018 within the Global Integrated Shipping Information System (GISIS) platform.

GISIS functions as a hub of shipping related data, organised in various modules such as 'Port Reception Facilities', 'Status of Treaties', and 'Marine Casualties and Incidents'. Members of the general public who register for a free account to view IMO resources can access some of these modules or parts of them – for instance certain Maritime Safety Investigation Reports. Other modules of GISIS, including the IMO Ship Fuel Oil Consumption Database, are currently restricted to maritime administrations and the IMO Secretariat.

The IMO Ship Fuel Oil Consumption Database is managed by the Secretary-General of the IMO with access restricted as presented in the following table.

Table 4 - Accessibility to IMO Ship Fuel Oil Consumption Database, based on MEPC.349(78) and IMO Circular Letter No. 3827

Type of entity	Level of access to the IMO Ship Fuel Oil Consumption Database
IMO Secretariat	Non-anonymised access
Flag administration (and its RO) **for ships flying its flag**	Non-anonymised access
Flag administration of a Party to MARPOL Annex VI and its RO *for ships not under that flag*	Anonymised access only
Flag administration not Party to MARPOL Annex VI and its ROs *for ships not under that flag*	No access
Other stakeholders, for example IMO observers, banks, insurers, port and local authorities, shipping companies, general public	No access

As indicated in Table 4, only the IMO Secretariat has access to all, non-anonymised data. For Flag Administrations (and their ROs), non-anonymised ship data is accessible only for ships flying that flag. For ships subject to the Carbon Intensity Indicator, these Flag Administrations/RO's will also have access to all reported data for the preceding calendar year for that ship regardless of flag history (MEPC.349(78)).

For all other access to the database, the data is anonymised to the extent that identifying a specific ship is not possible (MARPOL Annex VI regulation 27.12). This is managed as follows (MEPC.349(78)):

1. IMO number and ship flag should not be shown.
2. Gross tonnage (GT), net tonnage (NT), deadweight tonnage (DWT) and power output (rated power) should be rounded to two significant digits.
3. Attained EEDI and attained EEXI should be rounded to two decimal places.
4. Required annual operational CII (AER or cgDIST), attained annual operational CII (AER or cgDIST), attained annual operational CII (AER or cgDIST) before any correction and operational carbon intensity indicators for trial purpose on voluntary basis (e.g. EEPI, cbDIST, clDIST and EEOI) should be rounded to one decimal place.
5. Ship types other than those defined in MARPOL ANNEX VI regulation 2 [9] should be shown as 'others'.
6. Ice class should be shown as 'Yes' or 'No'.

Although the annual data of fuel oil consumption, distance travelled and hours under way are provided in full without modification (for those with access to the database), the aforementioned rules make it largely impossible to associate this data to any particular ship.

Notably, forthcoming amendments to MARPOL Annex VI regulation 27 will, upon entry into force in August 2025, increase the potential for other parties to access the data in the IMO Ship Fuel Oil Consumption Database.

In particular, these amendments, reflected in MEPC.385(81), will allow the Secretary- General of the IMO to:

- on an ad hoc basis, share data with analytical consultancies and research entities, under strict confidentiality rules;
- on request of a (shipping) company, grant access to the fuel oil consumption reports of the company's owned ship(s) in a non-anonymised form to the general public.

It remains to be seen exactly what confidentiality rules will apply to Point 1 above, or which kinds of analytical consultancies and research entities may be eligible and for what purposes. During MEPC 81, when these amendments were adopted, an observer from the International Chamber of Shipping noted that the effectiveness of the confidentiality arrangements would depend on the wording of the non-disclosure agreement which was requested to be shared with delegates for comment (MEPC 81/16 3.22).

[9] The following ship types are defined in regulation 2: bulk carriers, combination carriers, container ships, cruise ships, gas carriers, general cargo ships, LNG carriers, refrigerated cargo carriers, Ro-Ro cargo vessels, Ro-Ro passenger vessels, vehicle carriers, tankers.

2.2.2 Accessibility to data via IMO annual reports

On the basis of MARPOL Annex VI regulation 27.10, the IMO Secretariat produces an annual report to MEPC summarizing the fuel consumption data collected. The report is to include the following information (as stated in MEPC.349(78) of 10 June 2022):

- the aggregated annual amount of each type of fuel oil consumed by all ships of 5,000 GT and above engaged on international voyages;
- the aggregated annual amount of each type of fuel oil consumed, distance travelled and hours under way for ships of 5,000 GT and above engaged on international voyages, by ship type and size category;
- the number of ships of 5,000 GT and above engaged on international voyages reported to the database, by ship type and size category;
- the number of ships of 5,000 GT and above engaged on international voyages registered with the Party of Annex VI for which data was *not* received;
- and (following amendments agreed in 2022) the annual development in operational carbon intensity of the ship types and international shipping.

The reports are publicly available:

- reporting year: 2019
- reporting year: 2020
- reporting year: 2021
- reporting year: 2022

The annual report for year 2023 was made available on 9 August 2024, as a document to the MEPC 82 and is available to registered (including public) users of IMO Documents (MEPC 82/6/38). In addition, a first 'Report on annual carbon intensity and efficiency of the existing fleet' was published in November 2023, presenting data for the period 2019 to 2022. A more recent report on the carbon intensity and efficiency of the fleet for reporting year 2023 is available to registered (including public) users of IMO Documents (MEPC 83/6).

2.2.3 Accessibility to parts of the data via the ship's Statement of Compliance

A ship which has fulfilled its obligations with respect to MARPOL Annex VI regulation 27 (DCS) and/or 28 (CII) will receive a Statement of Compliance (SoC) covering both regulations in the format as set out hereafter. For ships that are only subject to the DCS (e.g., offshore and dredging ships) the section of the SoC on CII will remain blank.

Table 5 - Data points included in a ship's Statement of Compliance - Fuel Oil Consumption Reporting and Operational Carbon Intensity Rating (MEPC.328(76))

Data area	Specific data points
Government	1. Full designation of the country. 2. Full designation of the competent person or organisation authorised under the provisions of the Convention.
Particulars of ship	1. Name. 2. Distinctive number or letters. 3. IMO number. 4. Port of Registry. 5. Gross tonnage. 6. Deadweight. 7. Type of ship.

Data area	Specific data points
Declaration	1. That the data required by regulation 27 of MARPOL Annex VI (Collection and reporting of ship fuel oil consumption data) was submitted to the Administration in the relevant period). 2. That the data was collected and reported in accordance with the methodology and processes set out in the ship's SEEMP.
For a ship to which regulation 28 ('Operational Carbon Intensity') applies	1. The attained annual CII of the ship. 2. CII rating (A/B/C/D/E) of the ship. 3. Declaration that a corrective action plan has been developed and included in the SEEMP for a ship rated as D for 3 consecutive years of rated ad E.
Validity of the Statement of Compliance	Date *(in principle until 31 May the following year)*.
Issuance	Place and date of issue.

Notably, the SoC does contain a ship's CII rating but not all the data which underpins this rating (such as total fuel consumption and distance travelled or any correction factors that were applied). Although the SoC is by no means in the public domain, it can be subject to inspection from authorities such as Port State Control. Other interested stakeholders could ask the ship/ shipping company to share evidence of this certificate and thereby receive the verified CII rating.

The SoC that ships received to document compliance to the IMO DCS by 31 May 2024 will, for ships in scope of the CII, be the first time the CII rating is visible on the SoC.

2.2.4 Accessibility to DCS and CII data on an unofficial basis

It should be noted that there are commercial parties which do offer ship data as a service, including environmental data like emissions per day or even CII ratings. While this data can offer interested parties an insight into the GHG emissions of a ship, such sources are not considered as offering true accessibility to DCS or CII data. This is because such services are behind a 'paywall' and require a paid subscription, thus not freely accessible to all.
The data provided is also likely to be an estimation[10] and not data that has been verified via the steps indicated in Section 2.1 and has been provided by the ship.

[10] For instance, based on known ship specifics such as fuel and engine type and AIS data covering distance travelled and speed.

3 Purposes of increased accessibility

As explained in Section 2.2.1, access to DCS and CII data is presently restricted to a limited audience. However, in recent years differing opinions on this issue have emerged across IMO delegations and observers.

A catalyst for wider IMO discussion on the accessibility of IMO DCS data appears to have been the introduction of the Carbon Intensity Indicator. RINA, for instance, noted in an MEPC submission in 2021 that the anonymised and restricted nature of the DCS database hampered transparent analysis and discussions between stakeholders on the very complex topic of CII development (MEPC 76/7/51). EU Member States and the European Commission also made similar remarks during MEPC 77, describing how the current IMO DCS provisions limit the capability of IMO Members to access, analyse and comprehend the dataset and considered the situation no longer justified (MEPC 77/7/11). On the other hand, in subsequent discussions on the topic at MEPC, other delegations supported the current practice where only the Secretariat can access the full, non-anonymised DCS data set (MEPC 80/17 6.17).

The following tables present arguments for (Table 6) and against (Table 7) increased accessibility of IMO DCS and CII data, including also certain limitations to these arguments. Where applicable, references to IMO submissions and MEPC reports are made.

Table 6 - Possible advantages of increased accessibility to IMO DCS and CII data

Argument	Possible limitations of argument
Support MARPOL Annex VI Reg 28.1 (Operational carbon intensity, corrective actions and incentives) which reads: "Administrations, port authorities and other stakeholders as appropriate, are encouraged to provide incentives to ships rated A or B". – There is presently no freely accessible source providing verified DCS data or CII ratings, which may be a barrier for stakeholders to actually incentivise ships with an A or B rating. Without easy access to CII ratings, stakeholders may face the following challenges to provide incentives: • Costs: to obtain data, or parts of it, via commercial parties. • Time: for repeated data re-collection, also bringing costs. • Reliability: data from commercial databases may be unverified or estimated. • Regional bias: toward incentivising only ships with meaningful data available (e.g. those making EU voyages and available in EU MRV).	– An 'A' or 'B' rating might not present the full picture about a ship's energy efficiency (see Table 7, the first disadvantage). The data may also be complex for a broader public less familiar with the industry and uncertainties with the CII rating. – Parties interested in offering incentives to A or B rated ships could just ask to see the ship's Statement of Compliance, which lists its CII rating. *However* • Other data points such as total fuel, distance, type of fuel, etc. are not mentioned on the SoC. • Exchanging of (paper) certificates from the ship/office to multiple different parties can be time consuming and inefficient. The data on the IMO database has been verified and registered there: it may save time, cost and effort across the wider industry if verified data could simply be retrieved from that database. Doing so may be more in line with the FAL Convention principles, a goal of which is to secure the highest practicable degree of uniformity in formalities and other procedures.

Argument	Possible limitations of argument
– Increasing the accessibility of these ratings, via the IMO Ship Fuel Oil Consumption Database or versions thereof, could simplify data collection stakeholders need to organise and implement incentive schemes. – The use of incentives was identified as a focus element for the review of the GHG short-term measures (MEPC 80/17/Add.1, Annex 13) which runs until 1 January 2026. In fact, with better accessibility to data, incentive schemes may be conceivable for more than just CII ratings but also other data parameters that demonstrate a ship's decarbonisation journey. Examples could be the use of alternative fuels, use of shore power, or installed technologies recognised in MEPC.1/Circ.896 like air lubrication systems or wind assisted propulsion – all of which will be reported from calendar year 2026 (see Table 3).	
Increase data analysis to support policymaking, better tailor regulations and demonstrate the work of IMO towards GHG reductions. – The collection of data for global shipping since 2019 is an achievement of the IMO. Greater accessibility of that data can demonstrate IMO's actions towards address shipping's decarbonisation challenge to a wider public as well as enable stakeholders (e.g. industry, NGOs, local/national authorities) to make the fullest use of this data to support their decision-making for GHG reduction measures. – The value of publicly accessible data is evident in the EU MRV database, which has been used by the IMO in developing policy (ISWG-GHG 13/7 cites use of MRV data in CII guidelines correspondence group and validation of 4th GHG study) as well as by the EU in developing its subsequent policy measures like the FuelEU Maritime Regulation. Also, third party research like that presented in MEPC 81/INF.27 uses available EU MRV data to support fine-tuning of the CII. As such, making fuel and emission data available to a broad public has clear value in guiding/fine-tuning policy. Notably, shipping industry groups also want DCS data to constructively engage in the review of the CII, however they can't recover this data from the IMO and therefore need to approach shipping companies *again* for the same data[11]. – The use of DCS data could also be leveraged by national and local authorities towards shipping GHG reduction policies. For instance, if a port authority could use DCS to verify that a ship consumed onshore power supply, they can conclude that the ship has infrastructure onboard to connect to at least certain OPS installations.	– IMO already produces an annual report on verified DCS data and, since 2023, also a report on carbon intensity and efficiency. Therefore, one could argue the data is already analysed to guide policy and no further accessibility is needed. *However*, • this annual report on DCS data is limited in content; • there is no means for third parties to validate or build on the conclusions of these reports by using the underlying data; • without an ability to identify specific ships, the conclusions can't be applied to regional or national contexts for policymaking e.g. *how many ships calling this port consumed biofuel during 2023?* – Commercial parties can provide this data for analysis. *However*, as discussed in Section 2.2.4. not everybody has access to these databases and the data can be estimations. – IMO will, pending amendments and on an ad hoc basis, be able to share data with analytical consultancies and research entities from August 2025, under strict confidentiality rules. *However*, the process for this is not clear and does not include all the stakeholders mentioned above (industry groups, local authorities, etc).

[11] An example is the ICS CII Data Collection System: www.ics-shipping.org/supporting-shipping/ics-cii-data-collection-system/

Argument	Possible limitations of argument
– Knowing, through own information, the names or IMO numbers of ships that called that area, they could use the DCS database to check how many of these ships are 'OPS ready'. Such information could be an important basis for considering the necessary shore side infrastructure for OPS. The same may apply for different types of alternative fuels reported within the IMO DCS (e.g. LNG, methanol, ethanol, or 'other' based on the current SEEMP guidelines set out in MEPC 78/17/Add.1).	
Reduce time and costs of data collection across the whole industry and focus on actually reducing emissions. – Today, shipping companies are likely to receive requests for their emission data from multiple parties/stakeholders in addition to the current obligations from DCS e.g. their cargo owners (with their climate commitments, alongside those of their own customers), investors (who may need to report ESG data), charterers (who may want to engage the most fuel-efficient ships), regional regulators, and potentially banks and insurers – for example those that are party to initiatives like the Poseidon Principles. The combined cost and time involved in parallel attempts by companies and initiatives to build up a complete and accurate picture of climate performance of shipping activity may be significant. Relying on one source for this verified data (i.e. the IMO Ship Fuel Oil Consumption Database) may promote efficiency, reliability and reduce costs.	Other parties may also be in a position to share verified data/ratings to other stakeholders (e.g. a data verifier/RO with a shipping company's permission). *However*, there are multiple verifiers with multiple different platforms. Cost may be involved for stakeholders to gather data from these parties with the shipowner/manager's permission.

Table 7 - Possible disadvantages of greater accessibility to IMO DCS and CII data

Argument	Possible limitations of this argument
The risk of the data or the CII rating being misinterpreted — Some parties have expressed the view that the CII in its current form may not give a correct impression of the energy efficiency of a vessel. This may be for various reasons, such as the influence of port waiting times on the calculation (during which the ship may consume fuel but not travel much distance) or the fact that actual cargo carried is not presently part of the calculation. Because of these concerns, some parties have called on stakeholders not to utilize CII, or its metric for assessment of energy efficiency or regulatory compliance risk (MEPC 81/6/6)	— The uncertainties around this rating grade can be explained with context. MEPC80/6/9 proposed general methodological explanations about these ratings e.g. explaining that D or E ratings for certain ship types cannot be compared with similar ratings for other ship types. — Greater data accessibility may also help contextualise a ship's CII rating and assuage some of the concerns about CII's metric. For instance, data on fuel consumption while not underway may help stakeholders better understand the influence of in-port emissions, when it is reported separately as described in Table 3. The reporting of transport work may also enable stakeholders to use alternative metrics to the CII.
Commercial sensitivity — Commercial sensitivity is cited as a reason for some IMO delegation's reluctance towards greater accessibility of DCS data (MEPC 80/6/9). It is understood that the concern around commercial sensitivity relates to the potential increase of ship information to a broader public, which may influence the competitiveness of a vessel in the shipping market.	— DCS data is aggregated over a full calendar year and individual voyages are not included. If competitors are interested in where a ship has been sailing or trading, they likely already have access to this via AIS. — DCS presently does not contain information on the cargo ships actually carried. This will change only in 2026, as explained in Section 2.1. which may then increase concerns about commercial sensitivity. That being said, ship data (even on a more granular scale and on more identifiable voyages) has been publicly available in the EU MRV system since calendar year 2018. According to ISWG-GHG 13/7 from the EU Commission and EU Member States, there have been 'no *reported* negative impact to shipping companies and respective maritime operations'.
Cost of making the data accessible and secure via the database — In order to make the IMO Ship Fuel Oil Consumption Database open to a broader public, changes in the online set up or architecture would be needed which would result in a cost.	The IMO Ship Fuel Oil Consumption Database already exists as does the GISIS platform, which already has some modules open to the public. For example, anybody registered as a public user to the IMO can freely access *parts* of the EEDI database or Maritime Safety Investigation Reports. As such, the capacity for the IMO to open modules to a wider public without security risks appears to exists. Costs can be expected to be higher for tailored access solutions compared to a broad general access.

4 Scenarios which could increase accessibility of DCS data

Several scenarios which could increase the accessibility of DCS and CII data are conceivable and are presented in this chapter. These scenarios could be considered within two tracks:

1. Increased accessibility of the data via the currently available channel (IMO and the IMO Ship Fuel Oil Consumption Database).
2. Increased accessibility of the data via other channels (such as data publication through other regulations, reporting schemes or environmental initiatives).

4.1 Greater accessibility to the IMO Ship Fuel Oil Consumption Database

As described in Chapter 2, all IMO DCS data and CII ratings (so including all of the data presented in Table 3) are maintained on a database managed by the IMO Secretariat: the IMO Ship Fuel Oil Consumption Database. This data has undergone the process of verification and is presently available to the restricted audience as described in Table 4, with some of these parties having access only to anonymised and rounded data.

A logical track towards increasing accessibility of IMO DCS and CII data would therefore be increasing access to the database via:

1. More access for current users:
   a Granting access to flag administrations Party to MARPOL Annex VI to view non-anonymised data for ships *outside* their flag.
   b Granting access to flag administrations *not* Party to MARPOL Annex VI to the wider database.
2. Access for stakeholders groups who currently have no access.

   As described in Table 4, access to the database is presently restricted to the IMO Secretariat and IMO Member States or Recognised Organisations acting on their behalf. At the same time, Chapter 3 of this report considered that there are other stakeholders who could potentially benefit from access to the data including local authorities, port authorities, industry associations, NGOs, technical and research bodies, insurers, banks, fuel suppliers, equipment manufacturers, shipping companies, as well as the general public. Other stakeholders may also benefit. In theory, a list of stakeholders could be considered together with their reasons for accessing the data and rules for how they use the information to support the decarbonisation of the industry. Granting access first to a limited range of stakeholders with a demonstrated need for the data could be a bridge towards full public access of the database.

   To some degree, a framework for increasing access to the database (or parts of it) is already in progress. Section 2.2.1 described forthcoming amendments to MARPOL Annex VI[12] which would enable a shipping company to request the IMO to grant access for the fuel consumption reports of the company's owned/managed ships in a non-anonymised form to the general public.

[12] MEPC.835(81).

Although it remains to be seen how many (if any) shipping companies will choose to take this step and exactly what format the reports would be shared in, shipping companies that do make this request could encourage their competitors to do the same.
In particular for shipping companies already exposed to the EU MRV system, where data is publicly available, the decision to publish IMO DCS data might not be a big stretch.
In particular, shipping segments transporting more consumer-facing goods may feel higher pressures from their customers to be transparent on the environmental impact of their services. Notably, some industry bodies such as the World Shipping Council have already voiced openness towards increased accessibility of DCS data at IMO-level. In an IMO submission in 2023 advocating for cargo data to be included in the DCS, WSC indicated its preference for full transparency of DCS data i.e., public access to non-anonymised data (ISWG-GHG 14/4/2). Should there prove to be willingness among shipping companies to allow their data to be accessible, options to simplify this process could be considered – such as 'Yes/No' checkpoint on the list of information to be submitted to the DCS.

Similarly, the provisions on access to the data for analytical consultancies and research organisations, subject to the same MARPOL amendments, open a door to increased access to the database for the entities concerned. However, at the time of writing this report, the rules that will apply to such access are uncertain, for example: which entities and for which purposes can they use the data? Will there be restrictions on them to publish their findings?

Increasing access to the IMO Ship Fuel Oil Consumption Database requires consensus among IMO Member States, which see different advantages and disadvantages as discussed in Chapter 3. Nonetheless, changes to the present accessibility level of DCS and CII data are conceivable during ongoing IMO work which is presented hereafter.

4.1.1 IMO review of the CII in context of short-term measures review

In July 2023 (MEPC 80), IMO adopted the 2023 Strategy on Reduction of GHG Emissions from Ships which includes a series of milestones to meet the level of ambition. One of the milestones is to review by 1 January 2026 the 'short-term measures' the IMO agreed to in 2021, namely the Carbon Intensity Indicator and Energy Efficiency Existing Ship Index.
A review plan for these short-term measures was set out in MEPC 80/17/Add.1 which identified the following focus areas:

1. Effectiveness of the short-term measure in reducing the carbon intensity of international shipping.
2. Experiences with enforcement of the short-term measure by flag and port States, including the review of (plans of) corrective actions, and the use of incentives by relevant stakeholders.
3. Data needs and need for enhancement of the ship fuel oil consumption data collection system (IMO DCS).
4. Impacts on States.
5. Revision of the Z factor and CIIR values as set out in the CII guidelines G3 and G2 to reduce the carbon intensity of international shipping in accordance with regulation 20 of MARPOL Annex VI.
6. Consideration on further amendment to the CII metrics, as set out in the CII guidelines G1.
7. Consideration of further amendments to the correction factors and voyage adjustments for CII (Guidelines G5).
8. Application of the LCA Guidelines.
9. Any consequential amendments to existing instruments.

Focus area 2 (on incentives by relevant stakeholders) and focus area 3 (IMO DCS data needs) are in particular relevant for accessibility of data. The review starts with a 'data gathering stage' until MEPC82 in Autumn 82, to which interested Member States and international organizations are invited to submit information and proposals. According to the review plan, a working group will be established at MEPC 82 to analyse the information and data relevant to the review plan which will be continued by a correspondence group.

The above review puts the DCS (being the basis of the CII) higher on the agenda at IMO-level and a discussion is already underway on how accessibility can or should be increased. In particular, a submission from the European Commission and EU Member States proposed differentiated access rights to the IMO Ship Fuel Oil Consumption Database, or parts of it, for different groups of actors like shipping companies, IMO observer organisations and the general public (MEPC 80/6/9). During MEPC 80, several delegations saw merit in this proposal as an appropriate balance between enhanced data accessibility and preservation of data confidentiality. The Committee instructed the Working Group on Air Pollution and Energy Efficiency to further consider that submission, where – according to MEPC 80/17 6.30.1 – there was broad support to improving accessibility of IMO DCS data. The Committee invited interested organisations to submit proposals to a future session on how to address the comments and concerns made on this issue.

As such, there is momentum at IMO on this topic and a clear preference by some delegations and observers for more accessibility. Developments at IMO in the way of increased accessibility to DCS data for certain stakeholders (if not the full general public) are therefore conceivable, but the IMO process takes time to build consensus.

4.2 Accessibility of DCS and CII data via other channels

While the promotion of DCS and CII data via the IMO Ship Fuel Oil Consumption Database has clear advantages (it already exists and contains verified data), other scenarios can be considered that could also increase accessibility of DCS and CII data in a more indirect way.

These scenarios come on top of the commercial data providers referred to in Section 2.2.4, which already exist and offer paying customers access to (generally estimated) ship emission data as well as the traditional method of sharing ship certificates/Statements of Compliance between parties.

These alternative scenarios towards increased access of DCS and CII are discussed hereafter.

4.2.1 Accessibility of data via other environmental regulations

Societal and regulatory attention on the impact of industry on people and the environment has increased in recent years. This is true for all industries, including shipping. The International Chamber of Shipping has noted that ESG (Environmental, Social, Governance) sustainability factors is fast becoming integral to maritime transport business operations (ICS, ongoing). This societal trend, as well as the regulations that are put in place, bring potential demands for greater access to the GHG impact of shipping companies or individual ships. In theory this could include DCS or CII data.

One example of such a regulation is the EU Corporate Sustainability Reporting Directive which entered into force on 5 January 2023. The CSRD requires all companies established in the EU and with a certain size and turnover to report on sustainability related matters, starting for the first (publicly listed) companies for financial year 2024[13]. The goal is to better enable investors, civil society organisations, consumers and other stakeholders to evaluate the sustainability performance of companies (EC, ongoing). Companies are required to report on various topics, organised under European Sustainability Reporting Standards (ESRS) such as climate change' or 'water and marine resources'.

Although the ESRS standards are designed to be applied to a wide array of companies and industrial sectors and, as such, don't include maritime industry specifics like DCS or CII data, there's nothing to stop companies including this kind of information in their reports. Afterall, the IMO DCS is the global system capturing fuel consumption for ships internationally and companies have already made the effort to monitor, report and have the data verified for ships in its scope.

With this example, it is therefore conceivable that the CRSD or future regulations like it could be a pathway towards greater accessibility on ship or company fuel consumption and generated emissions.

4.2.2 Accessibility of DCS/CII data via environmental schemes

Various schemes, independent from IMO, exist today which enable a shipping company to demonstrate efforts made towards reducing emissions or other environmental of shipping.

The principle of these schemes is that a ship is assigned a score based on parameters that give an indication of the sustainability performance of the ship, such as the NOx Tier Code of the engines, use of alternative fuels, use of shore power, etc. The score is then visible to participating parties within the scheme, such as port authorities, who may offer more sustainable ships a discount on, for example, port dues. In some cases, the scores are visible for a wider public. Examples of environmental schemes are the Environmental Ship Index (ESI), the Clean Shipping Index (CSI) and Green Marine.

One could consider that within these schemes, a ship's score could be improved either by publishing its CII rating to scheme participants or a wider public *or* for attaining a certain CII rating like an A or B. Although, to our knowledge, these schemes do not directly include a ship's CII rating today[14], there is likely to be some overlap with the overall IMO DCS reporting parameters such as the technical characteristics of the ship or installation of innovative technology (see Table 3 for the full list of DCS reporting parameters). Wider accessibility of ship environmental performance through these schemes may therefore increase access to *some* parts of DCS data, at least to participants within the environmental scheme.

[13] For details and timing see (EC, ongoing).

[14] It is known that for at least one of the schemes (the ESI) the CII will not be integrated in the index because it does not cover all ships and cannot always provide an accurate indication of ship performance, particularly for certain industry segments and ship types (MEPC 82/6/29).

It should however be noted that for at least one of the schemes (ESI), a ship's CII rating will not be included in the methodology for that scheme. The International Association of Ports and Harbors, which manages the scheme, has noted its decision not to integrate the CII into the scheme because it does not cover all ships and cannot always provide an accurate indication of ship performance, particularly for certain industry segments and ship types (MEPC 82/6/29). Instead, a new ESI GHG performance module will be developed.

4.2.3 Accessibility of DCS/CII data via ship vetting schemes

Ship vetting concerns the practice of assessing the suitability of ships for transport or projects, usually for a future charterer. The practice normally involves a vessel inspection where safety, quality, security and environmental compliance is verified by a qualified inspector, supported by a checklist of regulatory requirements and industry best practice. Certain vetting schemes targeted to specific segments of shipping, such as tankers (OCIMF Ship Inspection Report Programme) or offshore ships (IMCA Common Marine Inspection Document) while others cover the industry as a whole

The principle is that the results of vetting steer the charterer/client to the ship which demonstrates strong compliance and avoid those with identified non-conformities. Although the results of ship vetting inspections are not in the public domain, they are accessible for interested charterers or participants within the vetting programme who have been granted access by the ship manager/owner.

The scope of such inspections is broad and not only focussed on environmental matters or GHG emissions. However certain vetting inspection questionnaires do already give attention to the regulations within MARPOL Annex VI which are relevant to the DCS and CII.
For instance, the SIRE questionnaire (focussed on tankers) asks:
'Does the vessel have a Ship Energy Efficiency Management Plan (SEEMP) and are officers aware of the general requirements relating to the plan?' (OCIMF, 2019).

To the extent that ship vetting would ever include a ship's CII rating or other related data like the installation of innovative technologies, the vetting results could be another way of increased access to these scores or wider IMO data – at least for participants within the vetting programme.

5 References

EC. (ongoing). *Corporate sustainability reporting*. European Commission. https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en

ICS. (ongoing). *Esg in shipping*. ICS. https://www.ics-shipping.org/explaining/esg-in-shipping/

OCIMF. (2019). *Ship inspection report (sire) programme - vessel inspection questionnaires for oil tankers, combination carriers, shuttle tankers, chemical tankers and gas tankers, seventh edition (viq7)*.