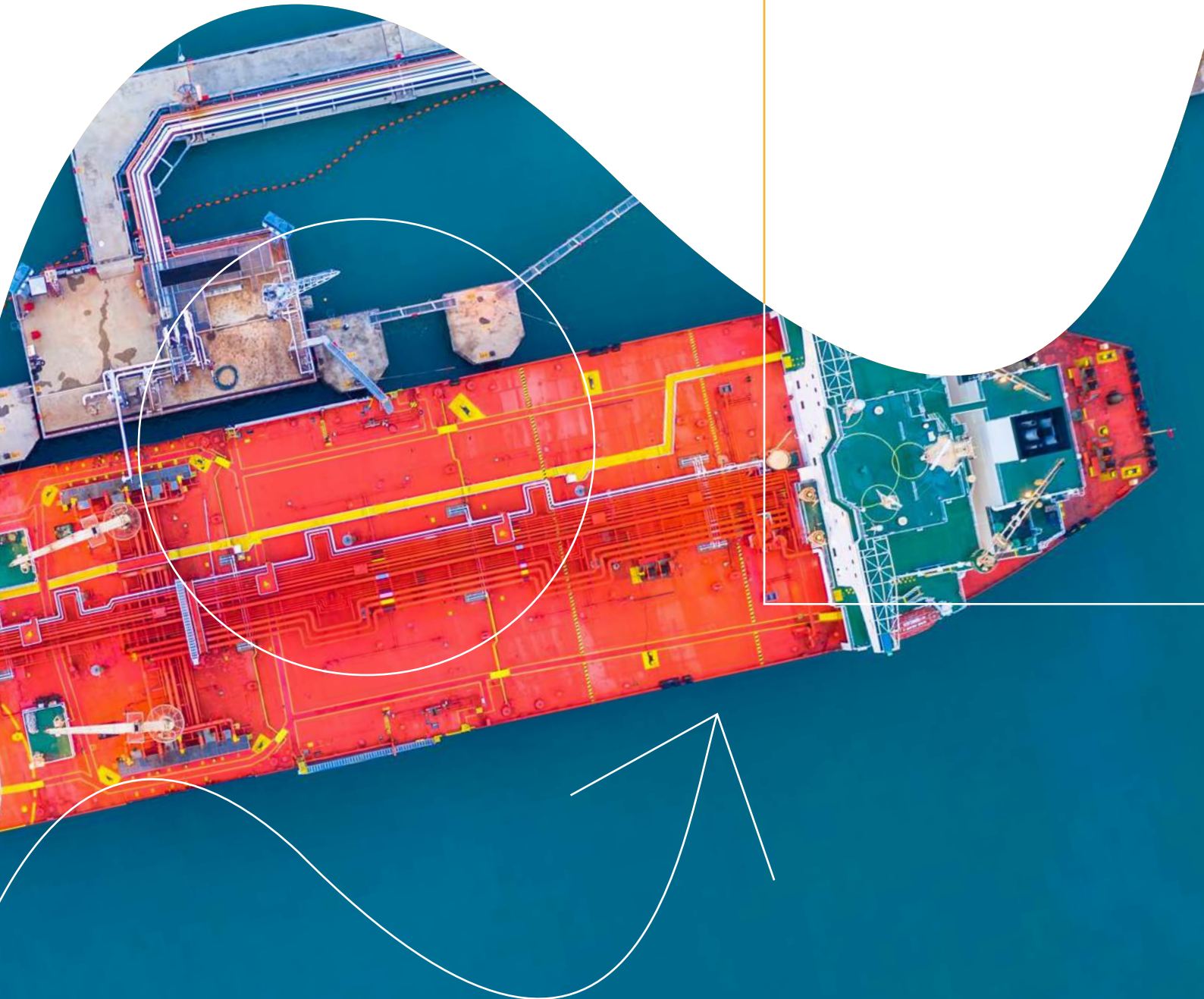




SEA CARGO CHARTER

Aligning global shipping
with society's goals



Version 1.2
12 April 2021

“Sea Cargo Charter” is a reference to the arrangements set out in the Membership Agreement and the Governance Rules of the Sea Cargo Charter Association, a non-profit association registered in Denmark, which are available on www.seacargocharter.org and any interested party is encouraged to consult. This document is intended only as guidance and does not interpret, replace or amend the Membership Agreement or the Governance Rules.

Sea Cargo Charter

Amaliegade 33 B, 2nd floor
1256 Copenhagen K
Denmark

www.seacargocharter.org
info@seacargocharter.org

© Sea Cargo Charter

The Sea Cargo Charter

As Signatories and members of the Sea Cargo Charter drafting group, we are proud to announce our commitment to addressing the environmental impacts of global seaborne trade.

Inspired by the launch of the Poseidon Principles in June 2019, the Sea Cargo Charter was developed in recognition of our role as charterers in promoting responsible environmental stewardship throughout the maritime value chain. We believe that industry-wide change is possible when we all take responsibility for contributing to meeting the greater goals of the society we serve.

The Sea Cargo Charter is aligned with the Poseidon Principles and is consistent with the policies and ambitions of the International Maritime Organization (IMO), including its ambition for greenhouse gas (GHG) emissions to peak as soon as possible and to reduce shipping's total annual GHG emissions by at least 50% by 2050 compared to 2008. As such, it sets a standard for reporting emissions, thus enhancing transparency and creating a global baseline to support and work towards the greater goals for our society and the goal to align our maritime activities to be environmentally responsible.

The Sea Cargo Charter is applicable to charterers with interest in the cargo on board; those who simply charter out the vessels they charter in; as well as the disponent owners and all charterers in a charterparty chain. They apply globally, to all chartering activities where a vessel or vessels fall under the purview of the IMO.

Currently, climate alignment is the only factor considered by the Sea Cargo Charter. However, we recognize that they are intended to evolve over time and agree to contribute to a review process to ensure that the Charter is practical and effective, aligned with the goals set by the IMO, and that further adverse impacts are identified for inclusion in due course. While the Sea Cargo Charter establishes a global baseline, we recognize that some Signatories may wish to go beyond this individually, and nothing in the Charter prevents that.

As Signatories, we commit to implementing the Sea Cargo Charter in our internal policies, procedures, and standards, and to work in partnership with our business partners on an ongoing basis to implement the Charter. The Sea Cargo Charter will not only serve our institutions to improve decision making at a strategic level, but will also shape a better future for the shipping industry and our society.

We believe now is the time to take this initiative, and we invite you to join us.

7 October 2020



Jan Dieleman
President,
Cargill Ocean Transportation



Richard Head
Head of Health, Safety,
Environment and Communities,
Trafigura



Peter Lye
Head of Shipping,
Anglo American



Jan Rindbo
Chief Executive Officer,
Norden



Lance Nunez
Marine and Terminal
Logistics Director,
Dow Chemical



Luc Gillet
Senior Vice President Shipping,
Total Trading & Shipping

Preamble

The maritime sector has provided efficient economic services that have played a key role in enabling the growth of global trade and global economic development. However, this has not been without some adverse consequences unique to the maritime sector. The continued success of the maritime sector is intrinsically linked to the well-being and prosperity of the society we serve. Therefore, all industry participants must play a role in addressing adverse impacts. Financial institutions already took the first step in June 2019 by launching the Poseidon Principles, which we as charterers support.

As charterers, we also recognize that our role in the industry affords us opportunities to promote responsible environmental stewardship throughout the maritime value chain. Thus, we have established the Sea Cargo Charter, which serves as a framework for creating common, global baselines that are consistent with, and supportive of, broader societal goals. This will enable us to better align our chartering activities with responsible management of environmental impacts.

The Sea Cargo Charter is consistent with the policies and ambitions of the IMO, including its ambition for GHG emissions to peak as soon as possible and to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008. They are aligned with the Poseidon Principles and are also intended to support other initiatives, such as the United Nations' Sustainable Development Goals, the Global Logistics Emissions Council (GLEC) Framework, the Carbon Disclosure Project (CDP), Energy Transitions Commission, and the many others that are developing to address adverse impacts.

As Signatories, we commit to implementing the Sea Cargo Charter in our internal policies, procedures, and standards. We will work in partnership with our business partners on an ongoing basis to implement the Sea Cargo Charter. We welcome the establishment of global baselines through the Sea Cargo Charter and recognize that some Signatories may choose to go beyond them. This offers significant benefits to us as Signatories, to the global maritime industry, and to society as a whole.

We recognize that the Sea Cargo Charter is intended to evolve over time and agree to contribute to a review process when we, as Signatories, decide to undertake it. This process will ensure that the Sea Cargo Charter is practical and effective, that it is linked to and supports the goals set by the IMO, and that further adverse impacts are identified for inclusion.

Scope

The Sea Cargo Charter is applicable to charterers: those with interest in the cargo on board; those who simply charter out the vessels they charter in; as well as the disponent owners and all charterers in a charterparty chain.

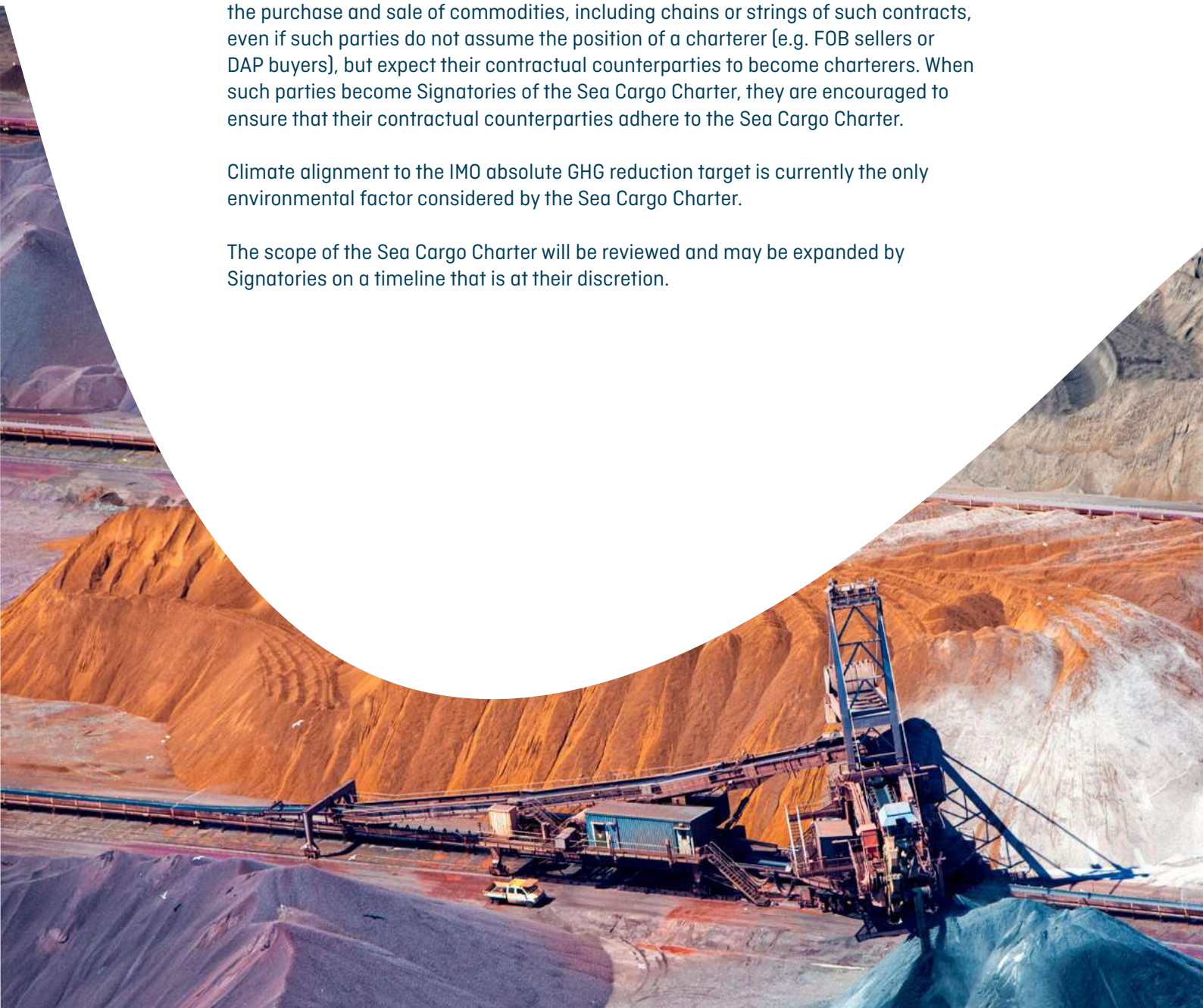
The Sea Cargo Charter must be applied by Signatories in bulk chartering activities that are:

1. on time or voyage charters, including contracts of affreightment and parceling, with a mechanism to allocate emissions from ballast voyages,
2. for voyages carried out by dry bulk carriers, chemical tankers, oil (crude and product) tankers and liquefied gas carriers ,
3. and where a vessel or vessels are of at least 5,000 gross tonnage and engaged in international trade.

In addition, the Sea Cargo Charter is applicable to parties involved in a contract for the purchase and sale of commodities, including chains or strings of such contracts, even if such parties do not assume the position of a charterer (e.g. FOB sellers or DAP buyers), but expect their contractual counterparties to become charterers. When such parties become Signatories of the Sea Cargo Charter, they are encouraged to ensure that their contractual counterparties adhere to the Sea Cargo Charter.

Climate alignment to the IMO absolute GHG reduction target is currently the only environmental factor considered by the Sea Cargo Charter.

The scope of the Sea Cargo Charter will be reviewed and may be expanded by Signatories on a timeline that is at their discretion.



SEA CARGO CHARTER

Principle 1

Assessment of climate alignment

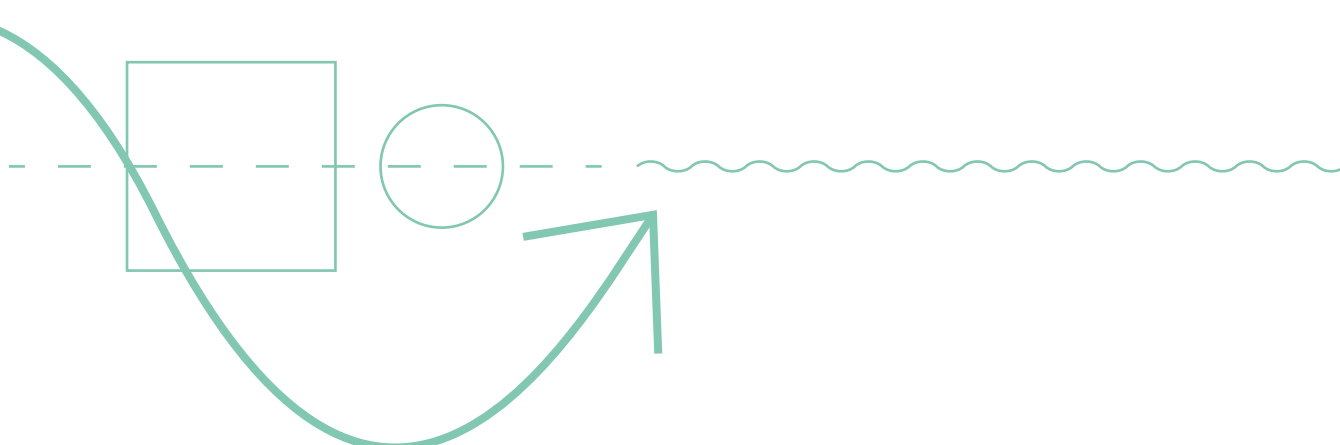


We will annually assess climate alignment in line with the Technical Guidance for all chartering activities.



Our commitment:

Signatories will, on an annual basis, calculate the GHG emission intensity and total GHG emissions of their chartering activities, and will assess their climate alignment (carbon intensity relative to established decarbonization trajectories). This requirement takes effect for each Signatory in the following calendar year after the calendar year in which it became a Signatory.



Principle 2

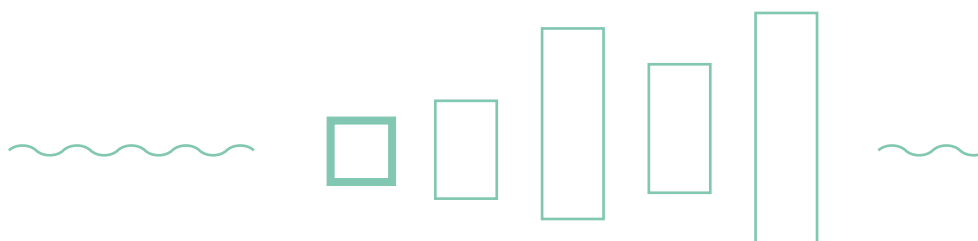
Accountability



We recognize the important role that verification mechanisms play in providing unbiased information to the industry. We will make our best effort to rely on such mechanisms, and any mandatory regulations, as explicitly identified in the Technical Guidance, for the provision of information used to assess and report on climate alignment.

**Our commitment:**

For each step in the assessment of climate alignment, Signatories will rely exclusively on the data types, data sources, and service providers identified in the Technical Guidance.



SEA CARGO CHARTER

Principle 3

Enforcement

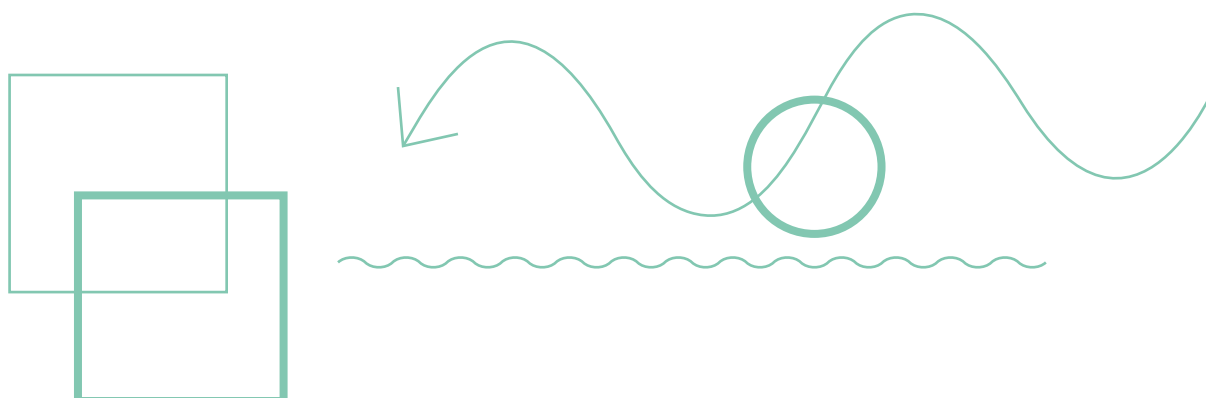


We will ensure ongoing compliance with the Sea Cargo Charter for new chartering activities through contractual means by using the Sea Cargo Charter Clause in charter parties. We will contribute to the update of the Sea Cargo Charter Clause through the annual review process.



Our commitment:

Signatories will agree to work with owners, disponent owners and business partners to collect and process the information necessary to calculate carbon intensity and total GHG emissions, and assess climate alignment.



Principle 4

Transparency

We will publicly acknowledge that we are a Signatory of the Sea Cargo Charter and we will publish the results of the climate alignment scores of our chartering activities on an annual basis in line with the Technical Guidance.

Our commitment:

- 1.** Upon becoming a Signatory, the Signatory will publicly acknowledge that it is a Signatory of the Sea Cargo Charter.
- 2.** On an annual basis, each Signatory will report the vessel category climate alignment scores and total annual activity climate alignment score of its chartering activities and supporting information, as per the Accountability requirements, to the Secretariat no later than April 30. This requirement takes effect for each Signatory in the calendar year after the calendar year in which it became a Signatory.
- 3.** On an annual basis, each Signatory will publish the vessel category climate alignment scores and total annual activity alignment score of its chartering activities in relevant institutional reports on a timeline that is appropriate for that Signatory. This requirement takes effect for each Signatory in the calendar year after the calendar year in which it became a Signatory.



Technical guidance

1 Introduction

10

2 Assessment of climate alignment

12

| | | |
|-----|--|----|
| 2.1 | Selecting the right metric for measuring climate alignment | 15 |
| 2.2 | Sourcing of data | 17 |
| 2.3 | Assessing climate alignment | 18 |
| 2.4 | Decarbonization trajectories | 20 |
| 2.5 | Aggregating alignment at the vessel category level and total annual activity | 20 |

3 Accountability and enforcement

22

| | | |
|-------|---|----|
| 3.1 | Accountability | 23 |
| 3.2 | Enforcement | 24 |
| 3.3 | Requirements at each information flow step | 25 |
| 3.3.1 | Step 1: Sourcing data | 26 |
| 3.3.2 | Step 2: Calculating voyage level carbon intensity and climate alignment | 28 |
| 3.3.3 | Step 3: Calculating vessel category and total annual activity climate alignment | 30 |
| 3.3.4 | Step 4: Disclosure | 32 |
| 3.4 | Recommended charter party clause | 36 |

4 Transparency

38

| | | |
|-----|------------------|----|
| 4.1 | Information flow | 39 |
|-----|------------------|----|

5 How to become a Signatory

42

| | | |
|-----|-----------------------|----|
| 5.1 | Standard declaration | 43 |
| 5.2 | Signatory application | 44 |
| 5.3 | Self-assessment | 42 |
| 5.4 | Timeline | 45 |
| 5.5 | Governance | 45 |

Appendices

47

Acknowledgements

59

1

Introduction

The purpose of the Technical Guidance is to clearly state the requirements and expectations for each Principle under the Sea Cargo Charter: Assessment, Accountability, Enforcement, and Transparency.

The Sea Cargo Charter is a framework for assessing and publishing the climate alignment of Signatories' chartering activities. It is supported by a robust and industry-appropriate climate alignment methodology and carefully considered accountability and enforcement requirements that support practical and robust data collection and analysis practices. The Sea Cargo Charter also establishes transparency requirements for Signatories.

These requirements are stated in the boxes at the top of each section of the guidance, followed by a more detailed overview of what these requirements entail. A general timeline of the requirements for Signatories is shown in Figure 1.

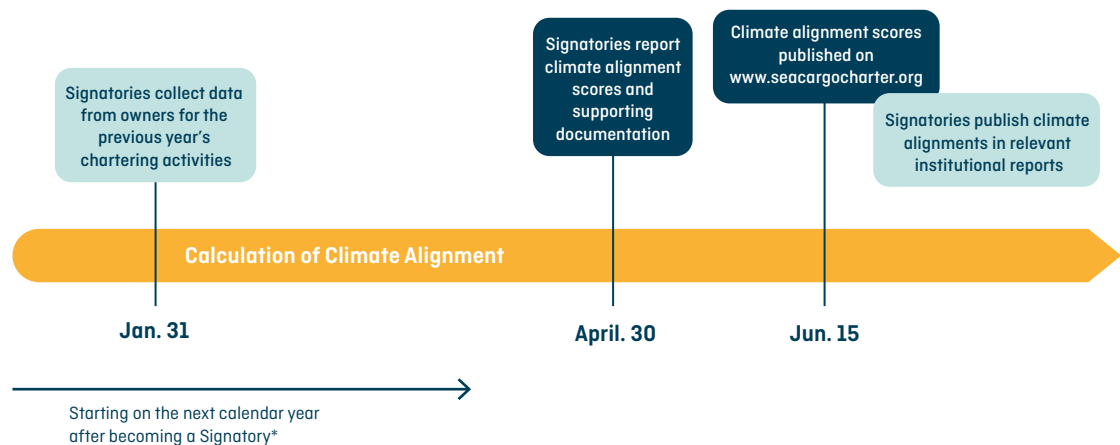


Figure 1.

Timeline for implementation of the Sea Cargo Charter

*The first calendar year of reporting, the Signatory reports on its chartering activities for the previous year (year of becoming a Signatory), starting from the next fiscal quarter date after the date of becoming a Signatory. Fiscal quarters starting dates are set as follows: Q1 - January 1st, Q2 - April 1st, Q3 - July 1st, Q4 - October 1st.

Starting from the second calendar year of reporting, the Signatory reports on the entire previous calendar year.

The Sea Cargo Charter is consistent with the IMO's ambition for GHG emissions from international shipping to peak as soon as possible and to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008.¹

It is recognized that some Signatories may choose to not only fulfil their obligations under the Sea Cargo Charter but to go beyond these obligations. Some Signatories may choose to do this through assessing their chartering activities relative to the Paris Agreement's well-below 2°C objectives, which require a steeper decarbonization trajectory. It is recommended that, where possible, these additional efforts rely on the assessment, accountability, enforcement, and transparency practices established by the Sea Cargo Charter to ensure that these further efforts are robust in their demonstration of industry leadership.

It should be noted that, while being a Signatory of the Sea Cargo Charter does not preclude the use of carbon offsetting, this mechanism is not considered when reporting emissions; thus the full extent of operational emissions are captured in the assessment of climate alignment.

¹ IMO. (2018). Resolution MEPC.304 (72) (adopted on 13 April 2018), Initial IMO strategy on reduction of GHG emissions from ships, IMO doc MEPC 72/17/Add. 1, Annex 11.



2

Assessment of climate alignment

PRINCIPLE

“ We will annually assess climate alignment in line with the Technical Guidance for all chartering activities ”

REQUIREMENTS

Signatories will, on an annual basis, calculate the GHG emission intensity and total GHG emissions of their chartering activities, and will assess their climate alignment (carbon intensity relative to established decarbonization trajectories). This requirement takes effect for each Signatory in the following calendar year after the calendar year in which it became a Signatory.



This section provides step-by-step guidance for measuring the climate alignment of Signatories' annual GHG emission intensity. The guidance is framed in the context of the existing IMO environmental regulations and climate agreements. This will apply for international voyages carried out by dry bulk carriers, chemical tankers, oil (crude and product) tankers and liquefied gas carriers over 5,000 GT.

Shipping's governing body, the IMO, approved an Initial GHG Strategy (**"the Initial Strategy"**) in April 2018 to reduce GHG emissions generated by shipping activity, which represents a significant shift in climate ambition for a sector that currently accounts for 2%–3% of global carbon dioxide emissions. This Initial Strategy sets out the following levels of ambition:

1. To reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008 (**"the IMO Absolute Target"**). See Figure 2.
2. To reduce CO₂ emissions² per transport activity by at least 40% by 2030, pursuing efforts towards 70% by 2050 compared to 2008 (**"the IMO Intensity Targets"**). See Figure 3.

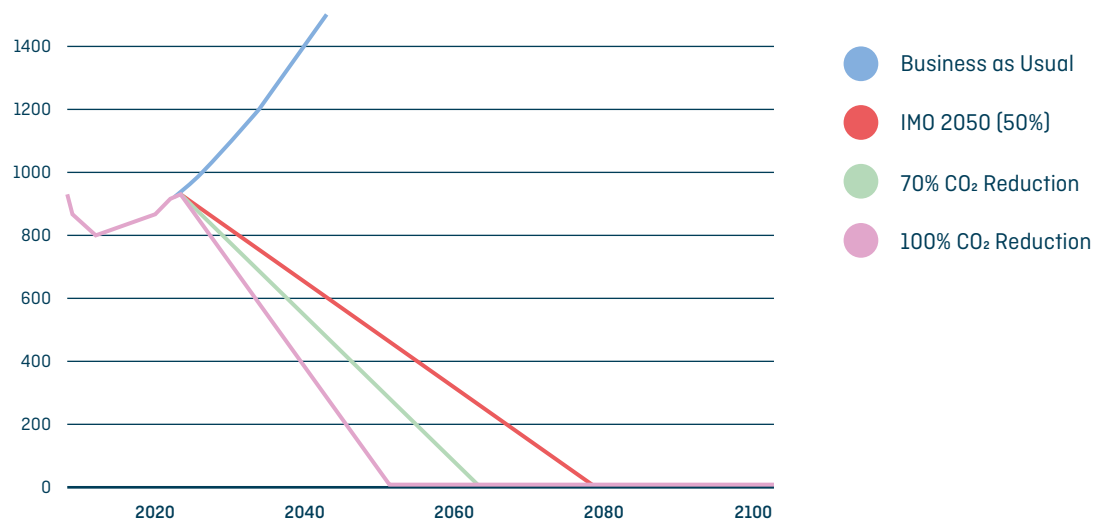


Figure 2.

Global fleet's CO₂ targets and trajectories under IMO targets (million tonnes of CO₂)

² The IMO's climate goals are currently expressed in terms of reducing operational CO₂ emissions. The quantification of GHG emission intensity according to the Sea Cargo Charter will, initially, also be expressed in terms of CO₂ emissions, with the intent to move to CO₂ equivalent in line with any changes agreed by the IMO.

The IMO Absolute Target can be converted into a relative (carbon intensity) target. Figure 3 shows three possible intensity trajectories consistent with the Initial Strategy compared to the pathway drawn using the IMO Intensity Targets. The IMO Intensity Targets lie significantly above the other pathways consistent with the IMO Absolute Target; i.e. there is some misalignment between the IMO Absolute Target and the IMO Intensity Targets:

1. The IMO Intensity Targets were set prior to the determination of the IMO Absolute Target. Depending on future demand for shipping services, the IMO Absolute Target and IMO Intensity Targets may or may not align. Alignment is unlikely, however.
2. The wording of the IMO Initial Strategy does not state that meeting the IMO Intensity Targets ensures compliance with the IMO Absolute Target.
3. It is expected that the IMO will update the IMO Intensity Targets to better align with the IMO Absolute Target during the forthcoming review process for the IMO's Initial GHG Strategy.

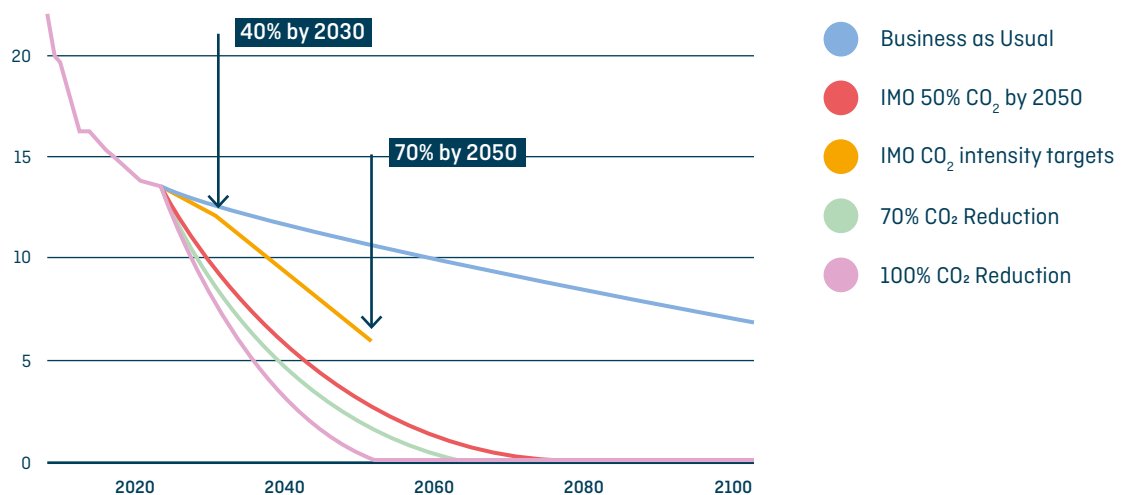


Figure 3.

Global fleet's carbon intensity targets and trajectories (grams of CO₂ per tonne-nautical mile [gCO₂/tnm])

2.1 Selecting the right metric for measuring climate alignment

Both absolute and intensity-level measurements of GHG emissions are useful to assess progress towards meeting the IMO levels of ambition, and both measurements are recommended by other initiatives (e.g. CDP, GLEC etc.). Absolute emissions are important as they represent the total emissions figure that will ultimately need to be reduced to mitigate climate change. However, an absolute emissions measure is not well-suited to the management or comparison of emissions/decarbonization at the level of individual voyages as these need to be compared on a like-for-like basis. For this reason, a relative intensity-level metric will be used in the Sea Cargo Charter.

Moreover, to enable alignment with climate goals (IMO), the intensity metric used in the Sea Cargo Charter will be linked to the IMO Absolute Target.

In shipping, carbon intensity represents the total operational emissions generated to satisfy a supply of transport activity (measured as grams of CO₂ per tonne-nautical mile [gCO₂/tnm]). To provide the most accurate representation of a voyage's actual climate impact, the carbon intensity of a voyage should be measured from its performance in real operating conditions (e.g. following the Energy Efficiency Operating Indicator (EEOI)), instead of using a design specification metric (e.g., the Energy Efficiency Design Index (EEDI)).

The selection of this single metric is guided by an ambition to use a carbon intensity metric which produces the closest measure of the voyage's true carbon intensity in operation, to a high level of granularity.

The EEOI does not distinguish between the role of the shipowner and the charterer in terms of subsequent use and reporting of this information, so implying that the approach is applicable to all stakeholders. The carbon intensity metric requires the following data to compute:

1. The amount of fuel consumption for each type of fuel in metric tonnes (over both ballast and laden legs)
2. The GHG emission factor³ of each fuel type
3. Actual distance traveled in nautical miles (while laden with transported cargo)
4. Amount of cargo discharged in metric tonnes over the given voyage

The IMO's EEOI sets out data requirements for calculating carbon intensity on a voyage basis as per Equation 1.

³ Emission factors for marine fuels can be found in the Third IMO GHG Study (2013) and MEPC.308(73). It should be noted that no correction is required for low sulfur fuels as the carbon content is not altered. As only operational emissions are captured in line with the IMO emission reduction ambition, carbon factors for net zero carbon fuels based on lifecycle emissions are not considered. If desired, the consumption of these fuels can be documented in the supplementary fuel fields in the recommended Sea Cargo Charter Clause for data reporting, which is available from the Secretariat. See Appendix 5 for the fuel carbon factors for alternative fuels. Methane slip (during operation) is not currently accounted for in the methodology. This is dependent on several factors including the propulsion system installed, and additional technologies applied. It is expected to be included in the methodology once a suitable method of quantification that includes non-CO₂ GHGs is established.

$$x_i = \frac{C_i}{T_i D_i}$$

Equation 1.

where C_i is the total CO₂ emissions computed using the fuel consumption and emission factor of each type of fuel, T_i is the amount of cargo transported⁴, and D_i is the laden distance travelled on voyage i .

For the purposes of this framework, a voyage shall be considered to start at the point of discharge of the previous cargo and continue to the point of discharge of the cargo for the voyage under consideration.

While there is no standardized method of operational data collection, the most basic form of reporting is the noon report which can provide all required information to calculate carbon intensity. Owners and operators are obliged to document this data to comply with the IMO Data Collection System (DCS) and the EU Monitoring, Reporting and Verification (MRV) schemes. However, charterers may not always have access to this data, prohibiting them from calculating carbon intensity directly. The carbon intensity is computed for all voyages that end during the reporting period, i.e. a calendar year.

⁴ See Appendix 3 for guidance on particular cases and exceptions. In the case of part-cargos, an amount of fuel proportional to the share of the total cargo carried should be used to calculate the emissions.

2.2 Sourcing of data

The chartering regime in bulk shipping can be broadly divided into time charters (TC) and voyage charters (VC)⁵. When on TC, charterers pay a daily rate for a fixed time period as well as all voyage costs including bunker. Given that the charterers also dictate operations, all three elements (fuel, load and distance) required to calculate carbon intensity on distinct voyages are already known to them. In situations where required data is not known to the charterer, the vessel owner, or the disponent owner, shall be requested to commit to provide noon reports or voyage reports to the charterer in the charter party, thus establishing an agreement to share the relevant data. In this case, all emissions from the laden leg, ballast leg and port emissions are included implying full transparency between owners and charterers.

More typical in the wet bulk market, on VC, the charterer pays a transactional rate (usually per tonne of cargo or on WorldScale) based on the route and amount of cargo transported, with the owner bearing both the operational costs and voyage costs. In this case, charterers do not, in normal circumstances, have access to fuel consumption for the voyage and, in the case of vessels carrying multiple cargos, the proportion of cargo each charterer has on board is unknown. For the purposes of calculating carbon intensity, the exact distance sailed is also unknown although it may be estimated or obtained from standard route tables.

In both cases, data and consent for use is to be provided by owners to Signatories of the Sea Cargo Charter through additional clauses in the respective charter parties as described under Principle 3 – Enforcement.

In some cases, there may be a chain of charters; for example, a company may take a vessel on a long-term TC arrangement and then charter out on a VC arrangement. In such a case it would be expected that the time charterer, who has all the necessary information, would provide the subset of information relevant for the voyage charterer to meet the requirements of the Sea Cargo Charter.

5 Bareboat charter can be considered a special case of TC.

2.3 Assessing climate alignment

For the purposes of the Sea Cargo Charter, climate alignment is defined as the degree to which voyage carbon intensity of a vessel category is in line with a decarbonization trajectory that meets the IMO ambition of reducing total annual GHG emissions by at least 50% by 2050 based on 2008 levels.

A decarbonization trajectory is a representation of how many grams of CO₂ can be emitted to move one tonne of goods one nautical mile (gCO₂/tnm) over a time horizon (as shown in Figure 3). The decarbonization trajectories rely on two assumptions:

- Projections of transport demand for different shipping sectors out to 2050, including those available in the Third IMO GHG Study⁶
- The total CO₂ shipping emissions permitted to be in-line with the IMO's 2050 target.

While these trajectories will be drawn and updated with the latest available research and will be aligned to or equal to the IMO's projections, there are uncertainties within them because of the two assumptions noted above.

To assess the climate alignment of a single voyage, the voyage carbon intensity is compared with the decarbonization trajectory for its respective ship type and size class. To assess climate alignments at the vessel category and annual activity level, the voyage carbon intensities are aggregated as discussed in Section 2.5

⁶ Smith, TWP, Jalkanen, JP, Anderson, BA, Corbett, JJ, Faber, J, Hanayama, S, O'Keeffe, E, Parker, S, Johansson, L, Aldous, L, Raucchi, C, Traut, M, Etfinger, S, Nelissen, D, Lee, DS, Ng, S, Agrawal, A, Winebrake, JJ, Hoen, M, Chesworth, S & Pandey, A. 2015, Third IMO Greenhouse Gas Study 2014. International Maritime Organization, London, UK.



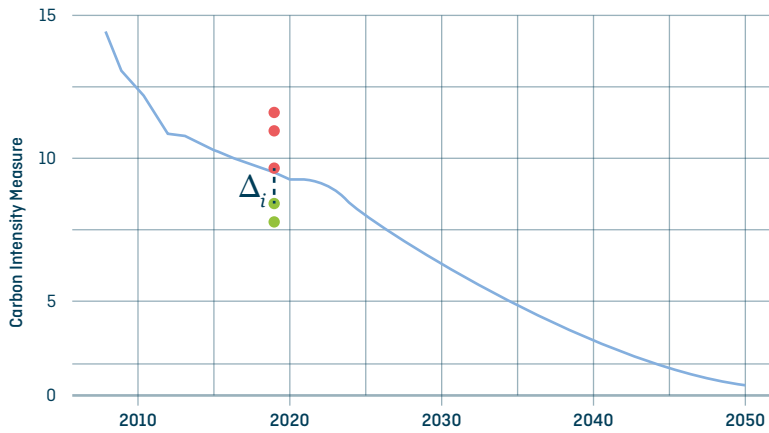


Figure 4.

Assessing alignment at the voyage level

In Figure 4, each dot represents the carbon intensity of a voyage and the blue curve represents the decarbonization trajectory for a given ship type and size (i.e. vessel category). The green dots are aligned, and the red dots are misaligned.

Climate alignment at the voyage level is the percentage difference between a voyage carbon intensity and the decarbonization trajectory at the same point in time. It is expressed as a (+/-) %. In mathematical terms, alignment at a particular year is:

$$\Delta_i = \left(\frac{x_i - r_s}{r_s} \right) 100$$

Equation 2.

where x_i is the carbon intensity (from Equation 1) of voyage i and r_s is the required carbon intensity for the vessel category for the year multiplied by 100 to convert into percentage terms. A positive alignment score means a voyage is misaligned (above the decarbonization trajectory), whereas a negative or zero score means a voyage is aligned (below or on the decarbonization trajectory).

2.4 Decarbonization trajectories

Standard decarbonization trajectories will be produced by the Secretariat of the Sea Cargo Charter based on agreed and clearly-stated assumptions. These will be produced for each ship type and size class specified in the Third IMO GHG Study and will be produced in a format that allows for simple weighting aggregation. This is to ensure that once the carbon intensity of voyages is understood, it is simple and practical to understand climate alignment. This also ensures that numbers are comparable between Signatories.

Appendix 4 describes the method used for establishing the target carbon intensity for a given ship type and size class in a given year. This is carried out by calculating a decarbonization-consistent carbon intensity trajectory from 2012 out to 2050. The method is derived from IMO Secretariat commissioned data sources, both the Third IMO GHG Study and IMO MEPC 68 Inf. 24 publication. Assumptions for formulating the trajectory are also taken from the Initial Strategy, including the use of a 2008 baseline.

2.5 Aggregating alignment at the vessel category level and total annual activity

In order to calculate annual activity climate alignment, one must first calculate the climate alignment of each voyage within the type and size category (also called vessel category)⁷.

Steps for calculating climate alignment by vessel category:

The vessel category activity alignment is computed by applying Equation 3.

$$\Delta_j = \left(\left(\frac{\sum_{i=1}^{N_j} CO_{2i}}{\sum_{i=1}^{N_j} W_i} \right) / r_{s_j} \right) - 1$$

Equation 3.

where Δ_j is the category activity alignment for N_j voyages by vessels in category j with carbon emissions CO_{2i} and transport work W_i with r_{s_j} being the required carbon intensity for the vessel category and year under assessment.

Steps for calculating climate alignment of total annual activity:

The annual activity alignment is computed similarly by applying Equation 4 over all voyages.

$$\Delta_k = \left(\left(\frac{\sum_{i=1}^N CO_{2i}}{\sum_{i=1}^N W_i} \right) / \left(\frac{\sum_{j=1}^J \left[\sum_{i=1}^{N_j} W_i \right] r_{s_j}}{\sum_{i=1}^N W_i} \right) \right) - 1$$

Equation 4.

where Δ_k is the annual activity alignment for J vessel type and size categories and N is the total number of voyages across all vessel categories.

⁷ See Appendix 3 for guidance on particular cases and exceptions and Appendix 4 for further clarification on the provision of trajectories and definition of vessel categories.

Example 1: Calculating alignment at the category level and total annual activity

In this example, a Signatory measures its climate alignment for 2021.

- Table 1 illustrates a simple example of a series of voyages showing the alignment deltas.
- The category alignment delta shown in Table 2 presents the weighted average for each vessel category (type and size).
- The annual activity alignment in Table 3 is calculated using a weighted average according to Equation 4. Weighting is applied according to transport activity undertaken by each category.

The Signatory's chartering activities are climate aligned because they are on average 2.6% below the carbon intensity required for decarbonization in 2021.

| Vessel type | Vessel size | IMO | Voyage ID | Year | Transport Work (Mtnm) | CO ₂ (t) | Actual CO ₂ Intensity (gCO ₂ /tnm) | Required CO ₂ Intensity (gCO ₂ /tnm) | Alignment Delta (%) |
|-------------|-------------|---------|-----------|------|-----------------------|---------------------|--|--|---------------------|
| Bulker | 1 | 9563456 | ##### | 2021 | 330.0 | 11856.0 | 35.9 | 35.73 | 0.6 |
| Bulker | 1 | 9563456 | ##### | 2021 | 510.0 | 16456.0 | 32.3 | 35.73 | -9.7 |
| Bulker | 2 | 9762148 | ##### | 2021 | 850.0 | 11456.0 | 13.5 | 12.36 | 9.0 |
| Bulker | 2 | 9112654 | ##### | 2021 | 1230.7 | 12456.0 | 10.1 | 12.36 | -18.1 |
| Tanker | 1 | 9293879 | ##### | 2021 | 201.0 | 12456.0 | 62.0 | 56.20 | 10.3 |
| Tanker | 1 | 9331879 | ##### | 2021 | 157.0 | 8456.0 | 53.9 | 56.20 | -4.2 |
| Tanker | 2 | 9268416 | ##### | 2021 | 842.0 | 28456.0 | 33.8 | 38.70 | -12.7 |
| Tanker | 2 | 8962134 | ##### | 2021 | 756.0 | 32514.0 | 43.0 | 38.70 | 11.1 |

Table 1.

Voyage alignment

| Vessel type | Vessel size | Year | Transport Work (Mtnm) | CO ₂ (t) | Actual CO ₂ Intensity (gCO ₂ /tnm) | Required CO ₂ Intensity (gCO ₂ /tnm) | Alignment Delta (%) |
|-------------|-------------|------|-----------------------|---------------------|--|--|---------------------|
| Bulker | 1 | 2021 | 840.0 | 28312.0 | 33.7 | 35.73 | -5.7 |
| Bulker | 2 | 2021 | 2080.7 | 23912.0 | 11.5 | 12.36 | -7.0 |
| Tanker | 1 | 2021 | 358.0 | 20912.0 | 58.4 | 56.20 | 3.9 |
| Tanker | 2 | 2021 | 1598.0 | 60970.0 | 38.2 | 38.70 | -1.4 |

Table 2.

Category alignment

| Year | Transport Work (Mtnm) | CO ₂ (t) | Alignment Delta (%) |
|------|-----------------------|---------------------|---------------------|
| 2021 | 4876.7 | 134106.0 | -2.6 |

Table 3.

Annual activity alignment

3

Accountability and enforcement

This section provides the requirements and technical guidance for both the accountability and enforcement principles for the sake of clarity and simplicity.

The accountability and enforcement principles are intended to ensure that the assessment and disclosure of climate alignment under the Sea Cargo Charter is practical, fair, and accurate. The intent of this approach is to ensure the development of trust in the Sea Cargo Charter and amongst Signatories.

The Technical Guidance for the accountability and enforcement principles lays out the steps in the Sea Cargo Charter's information flow process. At each step, the assessment and enforcement requirements are clearly identified.



3.1 Accountability

PRINCIPLE

// We recognize the important role that verification mechanisms play in providing unbiased information to the industry. We will make our best effort to rely on such mechanisms, and any mandatory regulations, as explicitly identified in the Technical Guidance, for the provision of information used to assess and report on climate alignment.



REQUIREMENTS

For each step in the assessment of climate alignment, Signatories will rely exclusively on the data types, data sources, and service providers identified in the Technical Guidance.



3.2 Enforcement

PRINCIPLE

// We will ensure ongoing compliance with the Sea Cargo Charter for new chartering activities through contractual means by using the Sea Cargo Charter Clause in charter parties. We will contribute to the update of the Sea Cargo Charter Clause through the annual review process. //

REQUIREMENTS

Signatories will agree to work with owners, disponent owners and business partners to collect and process the information necessary to calculate carbon intensity and total GHG emissions, and assess climate alignment.



3.3 Requirements at each information flow step

This section is broken into four steps with information flowing from one to the next. The intent of this section is to give appropriate background and clearly demonstrate how information flows between parties. Specific accountability requirements regarding data types, data sources, and service providers are stated at each step. The enforcement requirement of using a recommended charter party clause is detailed in Section 3.4, while the Sea Cargo Charter Clause itself is available from the Secretariat. The Sea Cargo Charter’s information flow process relies on data that owners are required to report to Signatories as stated in the recommended Sea Cargo Charter Clause.

Figure 5 provides an overview of the potential information flow pathways. The pathways are divided into “preferred pathways” and “allowed pathways” tracks. Preferred pathways are those that include verification mechanisms to maintain data veracity.

For sake of clarity, once a Signatory has chosen either the preferred or allowed pathways track, it may choose any option available for that step. For example, if a Signatory chooses the preferred pathways track, it may choose to use either of the two available options for steps 2 and 3.

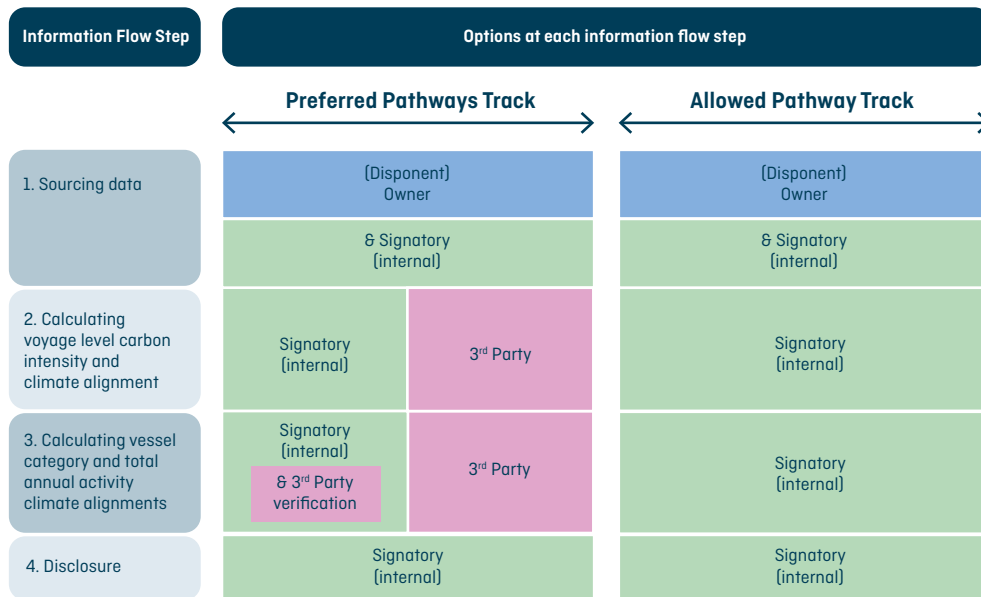


Figure 5.
Information flow pathway tracks

3.3.1 Step 1: Sourcing data

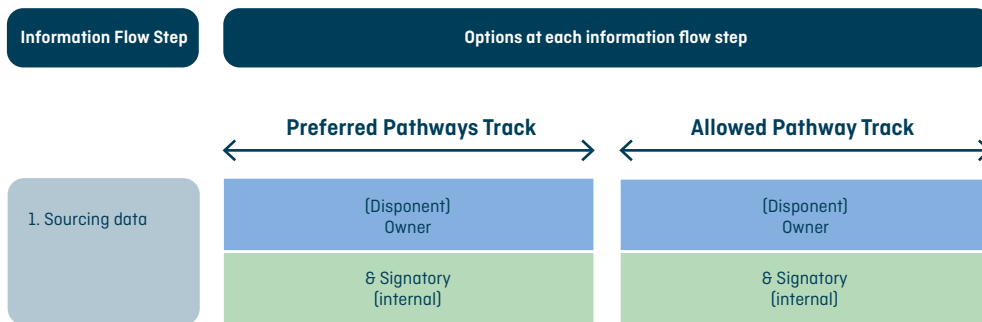


Figure 6.
Data sourcing

Step 1 requires the sourcing of data for the calculation of carbon intensity. As Figure 7 indicates, there is one method for sourcing measured data, which is applicable to both the preferred and allowed pathway tracks. Signatories are expected to already have all the necessary data for time charters, so will likely only need to source data from owners for voyage charters. If, and only if, measured data can't be sourced for ballast legs, the Signatory will source estimated data. The recommended charter party clause - the Sea Cargo Charter Clause - ensures that the appropriate data and information are requested by, and provided to, Signatories by their contractual counterparties, the appropriate consents are given for the sharing of data, and appropriate privacy protections are established.⁸

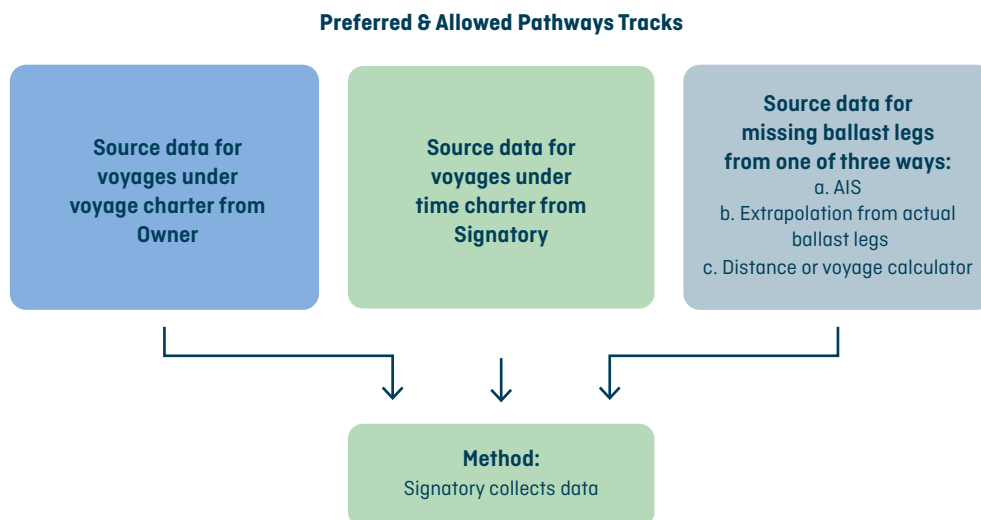


Figure 7.
Method for sourcing data

8 See Section 3.4 and Appendix 5. The Sea Cargo Charter Clause is available from the Secretariat.

Method (preferred and allowed pathways):

Owners provide measured data as noon or voyage reports for voyages under voyage charter⁹. Signatory provides data for voyages under time charter.

1. Signatory requests owners to provide noon or voyage reports for each voyage under voyage charter, containing:
 - a. Fuel type and consumption for all bunker consumed by main propulsion, auxiliary machinery, boilers, gas combustion unit, inert gas generators and all primary energy consumers in metric tonnes over the preceding ballast and laden leg of interest¹⁰
 - b. Actual distance sailed laden with the charterer's cargo in nautical miles¹¹
 - c. The amount of cargo discharged in metric tonnes over the given voyage
2. Owners provide the data as requested above.
3. Signatory gathers the same data (1.a, 1.b, 1.c) for each voyage under time charter.
4. If and only if measured data can't be sourced for ballast legs, the Signatory will source estimated data.¹² Estimated data can be sourced in one of three ways:
 - a. From AIS based estimated data.
 - b. From extrapolation from actual ballast leg data for other voyages or other vessels within the missing vessel's reporting category.
 - c. By using a distance table or voyage calculator with vessels' ballast speed and consumption.

Note that consent for the owner to share data with the Signatory is given through the recommended Sea Cargo Charter Clause.

How to meet the requirements:

Measured voyage data and related noon reports or voyage reports must be sourced from the owners for each voyage under voyage charter. Data must be gathered by the Signatory for each voyage under time charter. Estimated data must be sourced by the Signatory for missing ballast legs if measured data can't be sourced.

⁹ A set of guidelines or standards will be developed for owners to follow when submitting fuel/cargo data that supports the reporting requirements of the Sea Cargo Charter. It is anticipated that these will include recommendations with regards to the process for verification (e.g. by Recognized Organizations) as well.

¹⁰ If the charterer's cargo forms only part of the total amount of cargo transported, an amount of fuel (for each fuel type) proportional to the share of the total cargo carried should be used to calculate the emissions.

¹¹ In exceptional circumstances where owners are not able to provide the actual distance sailed, input from distance tables is accepted. Given that table distances are usually shorter than actual distances, this will increase carbon intensity making alignment more challenging.

¹² Estimated data can only be used for missing ballast legs and as a fallback option if measured data can't be sourced. This is to ensure that the methodology does not create disincentives to source data for ballast legs when the laden leg is reported. Estimated data can't be used for voyages other than ballast legs; other data gaps will be reflected in the percentage of eligible chartering activities non-reporting in line with the reporting requirements in Section 3.3.4.



3.3.2 Step 2: Calculating voyage level carbon intensity and climate alignment

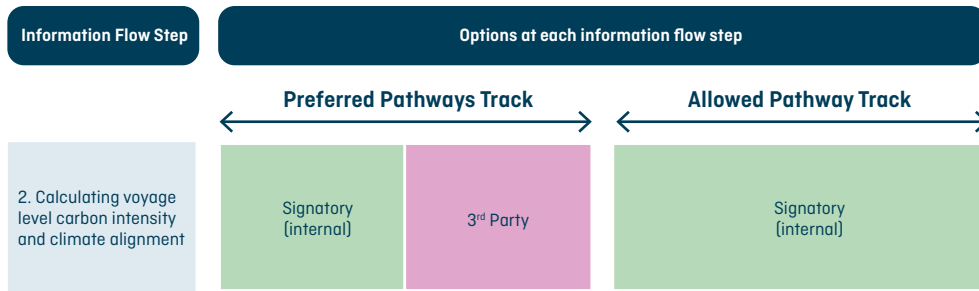


Figure 8.
Voyage climate alignment calculation

Step 2 requires the calculation of voyage carbon intensity using both data from the owner and from the Signatory itself, and the calculation of voyage climate alignment with decarbonization trajectories. There are 2 methods for undertaking these calculations: either internally by the Signatory itself or by a third party.

EEOI is used as the carbon intensity metric and is detailed in Section 2.1. Standard decarbonization trajectories for each ship type and size class are produced specifically for the purposes of the Sea Cargo Charter so that all calculations are made in the same way.¹³ These are available through the Sea Cargo Charter Secretariat. Figure 9 demonstrates where to source the information and who can perform calculations.

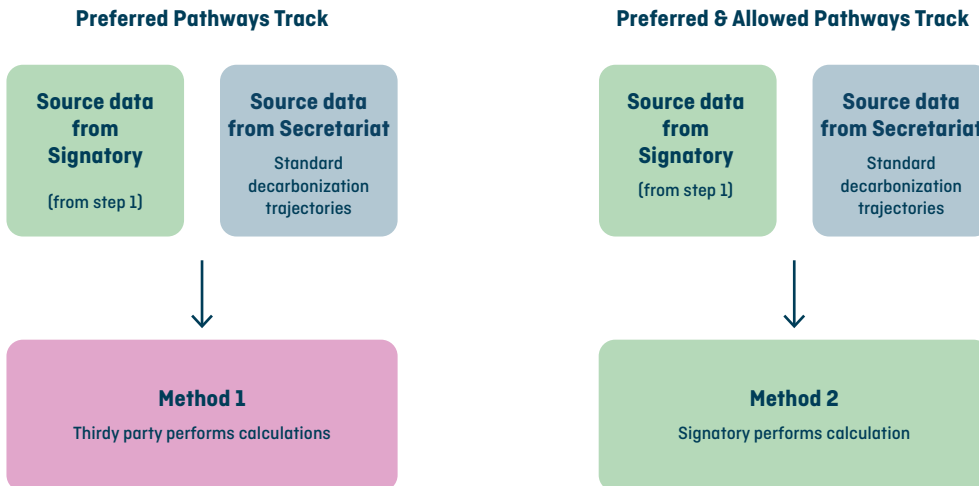


Figure 9.
Method for calculating carbon intensity & voyage climate alignment

¹³ See guidance in Section 2.4 and Appendix 4 for further clarification on the provision of trajectories.

Permissible methods for calculation

Method 1 (preferred pathway): Third party performs voyage carbon intensity and climate alignment calculations on behalf of the Signatory.

1. The third party will source the data for all voyages from step 1 from the Signatory and the standard decarbonization trajectories from the Secretariat.
2. The third party calculates the carbon intensity of the voyages and the decarbonization delta for the voyages.

Method 2 (preferred & allowed pathways): Signatory performs voyage carbon intensity and climate alignment calculations.

1. The Signatory will source the standard decarbonization trajectories from the Secretariat.
2. The Signatory calculates the carbon intensity of the voyages and the decarbonization delta for the voyages, using data from step 1 and the decarbonization trajectories.

How to meet the requirements

1. Voyage carbon intensity and climate alignment calculations must rely solely on reliable data for the voyages and on standard decarbonization trajectories provided by the Sea Cargo Charter Secretariat.
2. Voyage carbon intensity (EEOI) and voyage decarbonization delta calculations can be performed by a third party or by the Signatory.

3.3.3 Step 3: Calculating vessel category and total annual activity climate alignment

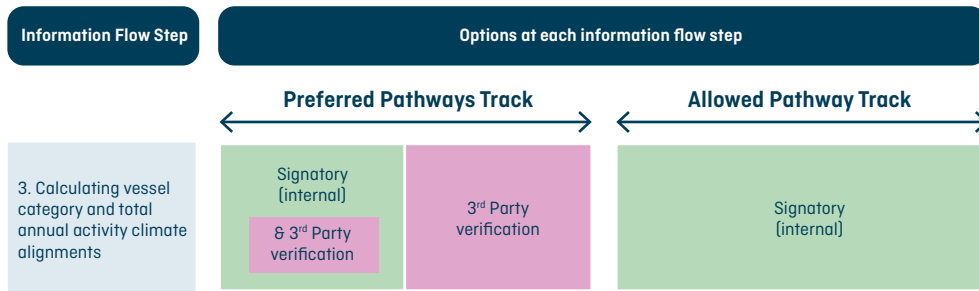


Figure 10. Vessel category and total annual activity alignment calculations

Step 3 requires the calculation of vessel category climate alignment and the total annual activity climate alignment using the voyage climate alignment data from step 2. There are three methods for undertaking these calculations: under the preferred pathway track, the calculation is either performed by a third party on behalf of the Signatory, or by the Signatory together with a validation of the data (from step 1) and verification of the methodology for the calculation (from steps 2 and 3) by a third party. The allowed pathway track allows the Signatory to perform the calculation internally.

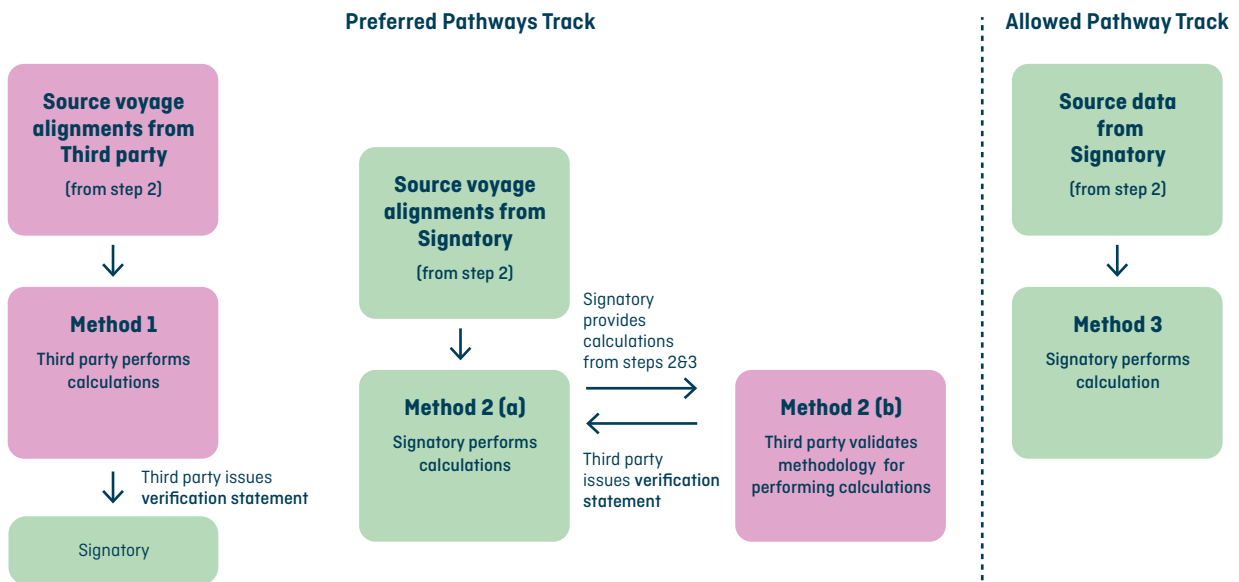


Figure 11. Method for calculating climate alignment of chartering activities

Permissible calculation methods

Method 1 (preferred pathway): Third party performs total annual and vessel category climate alignment calculations on behalf of the Signatory.

1. The third party calculates the decarbonization delta for each vessel category and the total annual decarbonization delta, using data from step 2.
2. The third party validates the data used to perform the calculations. The third party issues a verification statement / report.
3. The third party provides the Signatory with the alignment deltas and verification statement / report.

Method 2 (preferred pathway): Signatory performs total annual and vessel category alignment calculations which are verified by a third party.

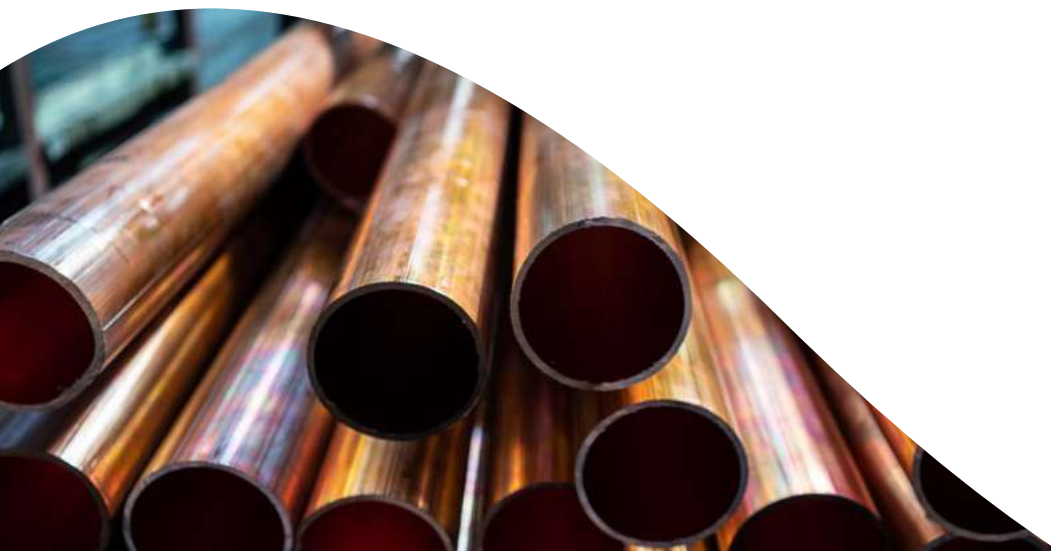
1. The Signatory calculates the decarbonization delta for each vessel's category and the total annual decarbonization delta, using data from step 2.
2. The selected third party sources calculations from the Signatory.
3. The selected third party validates the data and methodology used to perform the calculations by the Signatory, in line with the methodology outlined in Section 2.
4. The third party provides the Signatory with the verification statement / report.

Method 3 (allowed pathways): Signatory performs total annual and vessel category climate alignment calculations.

1. The Signatory calculates the decarbonization delta for each vessel's category and the total annual decarbonization delta, using data from step 2.

How to meet the requirements

1. Calculations of vessel category and total annual activity climate alignment must rely solely on reliable data provided by the owner and on standard decarbonization trajectories provided by the Sea Cargo Charter Secretariat.
2. Total and vessel category climate alignment can be performed by a third party or by the Signatory.
3. Under the preferred pathway, the third party issues a verification statement / report.



3.3.4 Step 4: Disclosure

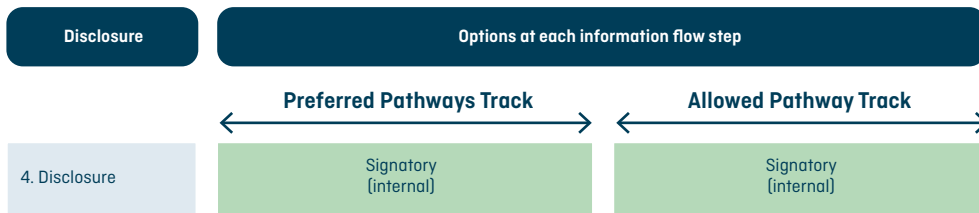


Figure 12.
Method for disclosure

Step 4 establishes disclosure requirements that will serve as a quality control mechanism. The information outlined below will be submitted to the Secretariat and made available only to Signatories with the intent of informing the actions of the Steering Committee. Information submitted under these requirements will not be made public. This is intended to establish a quality control mechanism for Signatories while also ensuring that information that may be regarded as sensitive by some Signatories is not publicly disclosed. There is one method, which is applicable to the preferred and allowed pathway tracks.

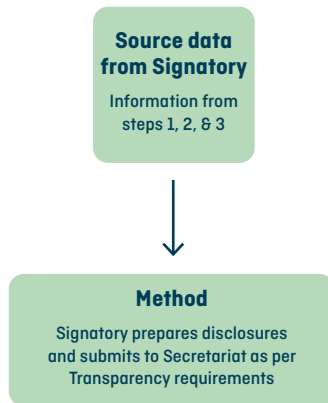


Figure 13.
Disclosure

Method (preferred and allowed pathways): Signatory prepares disclosures and submits to the Secretariat.

1. If the Signatory is unable to collect data for some portion of its chartering activities, the Signatory should calculate the percentage of its eligible chartering activities for which it cannot report. When calculating this percentage, the Signatory should rely on the methodology outlined in Section 2.5.
2. The Signatory should calculate the percentages of its chartering activities for which it used preferred and allowed pathways tracks. The Signatory should also calculate the percentages of eligible chartering activities for which measured and estimated data were used and list the source for estimated data (4.a, 4.b or 4.c as outlined in Section 3.3.1). When calculating these percentages, the Signatory should rely on the methodology outlined in Section 2.5. The Signatory should also list the names of service providers (i.e. third party) it used, if any, to complete steps 2, and 3 (i.e., those steps identified in Sections 3.3.2–3.3.3).
3. The Signatory should provide the following information to the Secretariat: percentage of eligible chartering activities non-reporting, percentages of the chartering activities for which preferred and allowed pathway tracks were used, percentages of eligible chartering activities for which measured and estimated data were used and list the source for estimated data, a list of the names of the third parties it used to complete steps 2 and 3 and the associated verification statement / report.

How to meet the requirements

The Signatory should provide the following information to the Secretariat in line with transparency requirements identified in Section 4:

- percentage of eligible chartering activities non-reporting,
- percentages of the chartering activities for which preferred and allowed pathway tracks were used,
- percentages of eligible chartering activities for which measured and estimated data were used and list the source for estimated data,
- a list of the names of the third parties it used, if any, to complete steps 2 and 3 and the associated verification statement / report.

Example 2: Meeting disclosure requirements

In this example, a Signatory successfully completes the assessment of its chartering activities climate alignment.

In addition to reporting its climate alignment scores to the Secretariat, it also reports the following information, which is demonstrated in Table 4 below¹⁴: percentage of eligible chartering activities non-reporting, percentage of eligible chartering activities for which preferred and allowed pathway tracks were used, percentages of eligible chartering activities for which measured and estimated data were used and the source for estimated data, and a list of the names of the third parties it used, if any, to complete steps 2 and 3.

The information in Table 4 is not made public by the Secretariat.

| % of eligible activities non- reporting, against % of eligible activities (i.e. % of cargo transported during the reporting period) (a) | % of eligible activities for which measured data were used (b) | % of eligible activities for which estimated data were used (c) and provider |
|---|--|--|
| 1% | 97% | 2% Source: [4.a.] AIS data |
| | % of eligible activities for which Preferred Pathways Tracks were used (d) | % of eligible activities for which Allowed Pathway Track was used (e) |
| | 90% | 9% |
| Step | Providers Used for Preferred Pathways Tracks | Providers used for Allowed Pathway Track |
| 2 | N/A – made calculations internally | N/A – made calculations internally |
| 3 | Made calculations internally Verification by third party – company name X | N/A – made calculations internally |

Table 4.
Example of disclosure requirement submission

¹⁴ (a) + (b) + (c) = 100%
(a) + (d) + (e) = 100%



3.4 Recommended charter party clause

Key to supporting the accurate assessment of climate alignment and to creating an equal burden on all Signatories is a contractual mechanism that ensures that the appropriate data and information are requested by, and provided to, Signatories by their contractual counterparties, that the appropriate consents are given for the sharing of data, and that appropriate privacy protections are established. The mechanism agreed for the Sea Cargo Charter to achieve this is a recommended clause to be proposed and included as part of the charterparty agreement negotiated with the contractual counterparty.¹⁵ The Sea Cargo Charter Clause and supporting definitions are available from the Secretariat.

The Sea Cargo Charter Clause -and supporting definitions- is designed to be generic and broad in its nature (so as to be consistent with any charter party form or type of trade) and non-prescriptive (so as to reduce the impulse for amendment from contractual counterparties).¹⁶ It is hoped that this approach will maximize the appeal and widen the future endorsement of a charter party clause linked to the Sea Cargo Charter.¹⁷

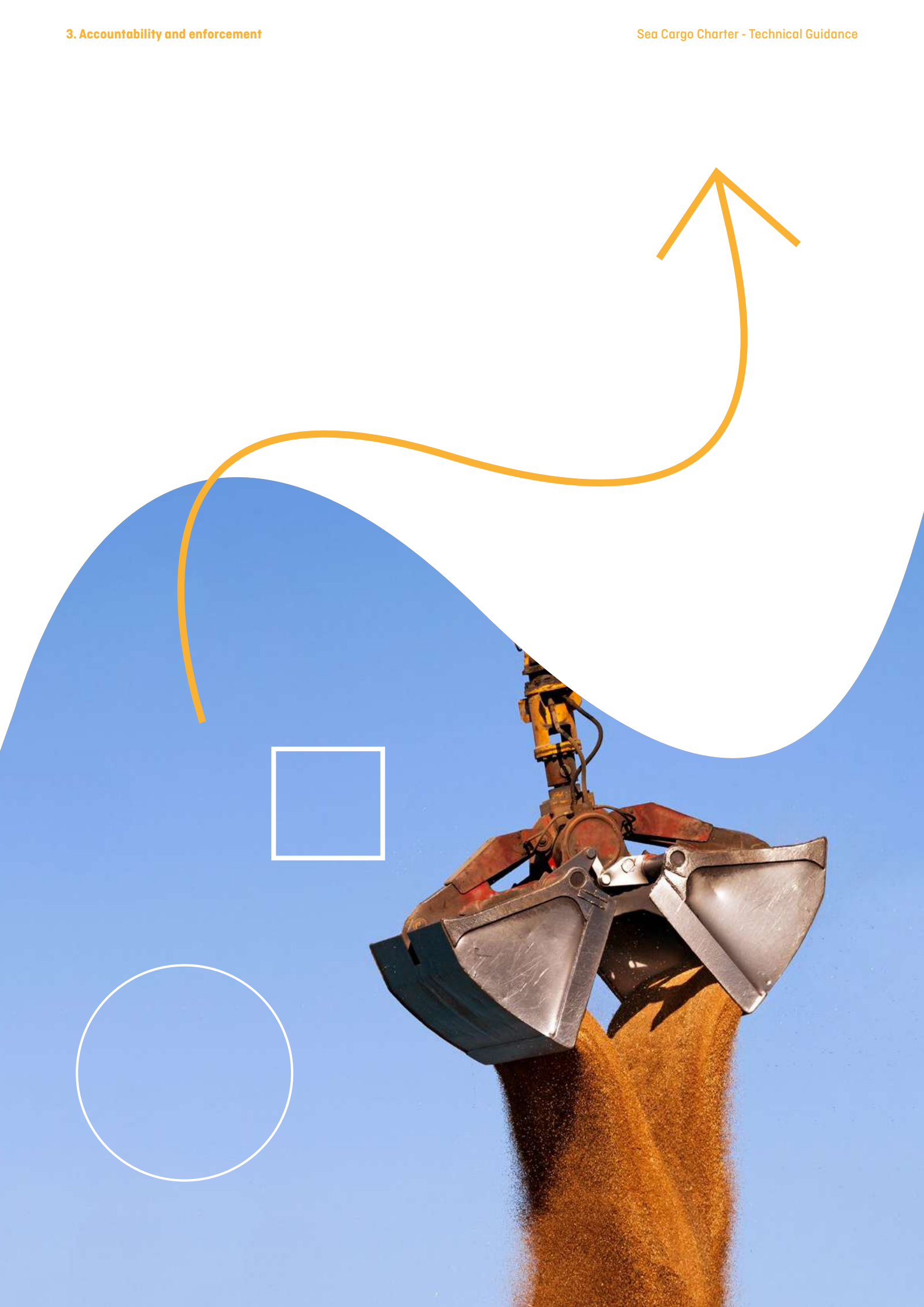
How to meet the requirements

In all new chartering activities that are finalized after a charterer becomes a Signatory of the Sea Cargo Charter, the Signatory must use commercially reasonable efforts to include the wording, and particularly the data requirement, set out in the recommended Sea Cargo Charter Clause in the negotiated charter party documentation.

¹⁵ See Appendix 5.

¹⁶ Because there are slight differences in the way that time and voyage charter agreements are formulated, it may be necessary in the future to develop two different charter party clauses.

¹⁷ The Secretariat will endeavor to engage with those organizations to whom the market has entrusted the production of contractual terms with a view to including the wording of this recommended charter party clause as part of the recognized industry standard terms.



4

Transparency

This section states the requirements for the transparency principle and provides the expectations and intent of each requirement. It also provides an outline of the timeline for the participation in and compliance with the Sea Cargo Charter.

PRINCIPLE

We will publicly acknowledge that we are a Signatory of the Sea Cargo Charter and we will publish the results of the climate alignment scores of our chartering activities on an annual basis in line with the Technical Guidance.

REQUIREMENTS

1. Upon becoming a Signatory, the Signatory will publicly acknowledge that it is a Signatory of the Sea Cargo Charter.
2. On an annual basis, each Signatory will report the vessel category climate alignment scores and total annual activity climate alignment score of its chartering activities and supporting information, as per the Accountability requirements, to the Secretariat no later than April 30. This requirement takes effect for each Signatory in the calendar year after the calendar year in which it became a Signatory.
3. On an annual basis, each Signatory will publish the vessel category climate alignment scores and total annual activity alignment score of its chartering activities in relevant institutional reports on a timeline that is appropriate for that Signatory. This requirement takes effect for each Signatory in the calendar year after the calendar year in which it became a Signatory.

4.1 Information flow

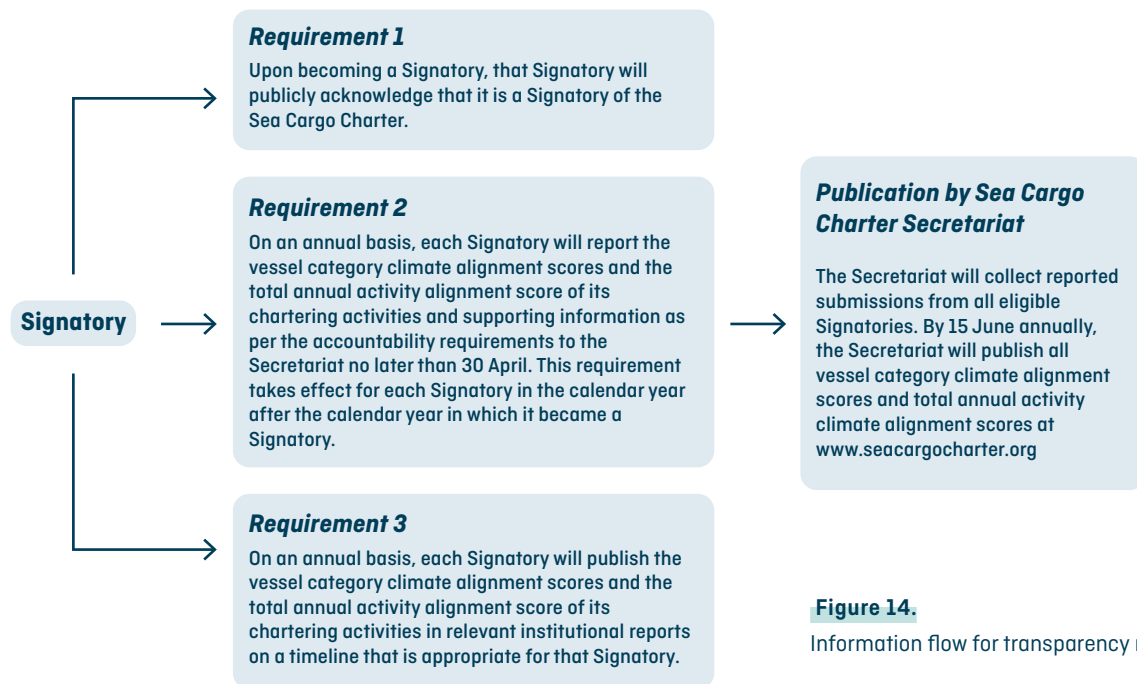


Figure 14.

Information flow for transparency requirements

Figure 14 demonstrates the information flow for each transparency requirement. Below, expectations and intent of each transparency requirement are further clarified.

How to meet the requirements

1. The expectations of transparency requirement 1 are that a Signatory should make publicly known that it is a Signatory of the Sea Cargo Charter in a manner that is suitable for its organization. The intent of this requirement is to simply ensure awareness of the Sea Cargo Charter and to ensure that it is clear which organizations are Signatories without creating any significant burden to them.
2. The expectations of transparency requirement 2 are that a Signatory should report all required information to the Sea Cargo Charter Secretariat (total annual and vessel category climate alignments and supporting information as per the accountability requirement) in a timely manner (no later than 30 April) in accordance with the Assessment, Accountability and Enforcement, and Transparency Technical Guidance. Figure 15 shows which information becomes public and which information remains confidential. The intent of this requirement is to ensure that accurate information can be published by the Sea Cargo Charter Secretariat to www.seacargocharter.org in a timely manner (no later than 15 June). The required reporting timeline is intended to create as little burden as possible to Signatories.
3. The expectations of transparency requirement 3 are that a Signatory should identify relevant institutional reports and ensure that the climate alignments of its chartering activities is included in them. Due to different institutional timelines, no specific expectations have been set for when reports including vessel category and total annual climate alignment scores should be published. The intent of this requirement is not to specify precisely where this information should be published or create a significant burden for Signatories. Instead, it is intended to ensure awareness of the Sea Cargo Charter and its approach.

Signatory reporting requirements

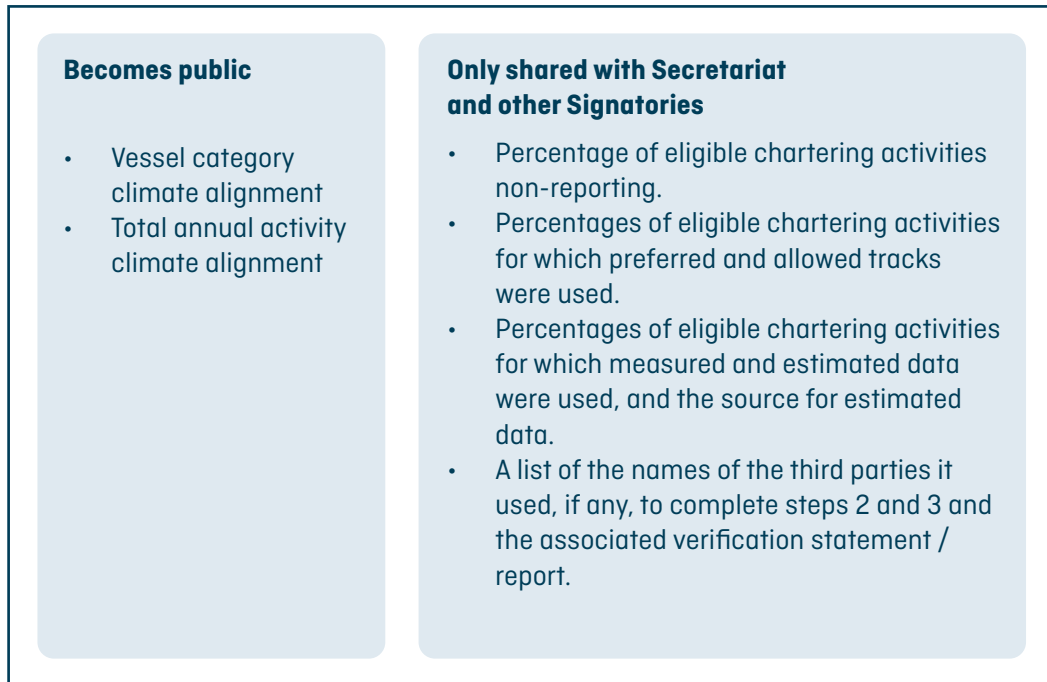


Figure 15.

Signatory reporting requirements

Specificities for the first calendar year of reporting:

For the first calendar year of reporting (i.e. the following calendar year after the calendar year of becoming a Signatory), the Signatory reports on its chartering activities for the previous year (i.e. for the year of becoming a Signatory) starting from the next fiscal quarter date after the date of becoming a Signatory.

Fiscal quarter dates are set as follows:

1. Q1 - starts January 1st
2. Q2 - starts April 1st
3. Q3 - starts July 1st
4. Q4 - starts October 1st

Starting from the second calendar year of reporting, the Signatory reports on the entire previous calendar year (from January 1st to December 31st of that year).



Example 3: Start of reporting obligations

Signatory A becomes a Signatory on 10 February 2021 (during Q1):

- Signatory A reports in 2022 on its chartering activities from 1 April 2021 (start of Q2) to 31 December 2021.
- In 2023, Signatory A will report on its chartering activities for the entire 2022 year.

Signatory B becomes a Signatory on 2 August 2021 (during Q3):

- Signatory B reports in 2022 on its chartering activities from 1 October 2021 (start of Q4) to 31 December 2021.
- In 2023, Signatory B will report on its chartering activities for the entire 2022 year.

Signatory C becomes a Signatory on 20 November 2021 (during Q4):

- Signatory C will not report in 2022 on its chartering activities for 2021.
- In 2023, Signatory C will report on its chartering activities for the entire 2022 year.

Example 4: Transparency

In this example, a lender becomes a Signatory of the Sea Cargo Charter in May 2021.

Requirement 1: Charterer issues a press release announcing that it is a Sea Cargo Charter Signatory in May 2021.

The Signatory starts collecting data for all its chartering activities from the beginning of the next fiscal quarter after becoming a Signatory; in this example from the beginning of Q3, which starts on 1 July 2021.

Requirement 2: Prior to 30 April 2022, the Signatory submits its climate alignment scores (total annual and by vessel category) for 2021 and supporting information as per the accountability requirements. In this example, the Signatory is climate aligned because it has a score of -2.6% indicating that it is 2.6% below the decarbonization trajectory.

Requirement 3: The Signatory includes in its annual sustainability report its vessel category and total annual climate alignment scores.

Publication by Sea Cargo Charter Secretariat: All eligible Signatories' 2021 vessel category climate alignment scores and total annual activity climate alignment scores will be published online prior to 15 June 2022.

5

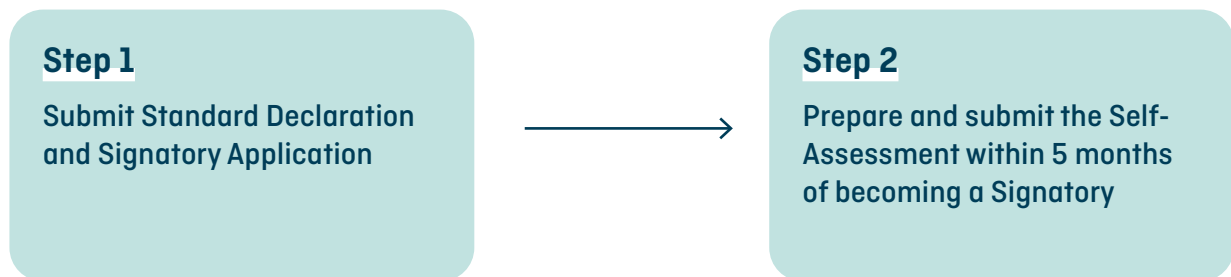
How to become a Signatory

The following outlines the process for charterers to become Signatories and highlights the necessary documents.

This document is intended to be a how-to guide for the administrative aspects of implementing the Sea Cargo Charter by proposed Signatories.

Charterers falling under the scope and wishing to become a Signatory of the Sea Cargo Charter must adhere to the following process:

1. Using the Standard Declaration and Signatory Application provided by the Secretariat, a charterer wishing to become a Signatory must complete and send both documents to the Secretariat.
2. The charterer must complete and submit the Sea Cargo Charter Self-Assessment to the Secretariat within five (5) months of becoming a Signatory.



5.1 Standard Declaration

The Standard Declaration is the formal commitment required of charterers to become a Signatory.¹⁸ Step one of the process, the Standard Declaration, announces the intent of the charterer to follow all legally binding requirements of the Sea Cargo Charter. This means that the institution is prepared to take the necessary steps to comply with all four Principles under the Sea Cargo Charter, and have this commitment and related reporting made public.

18

The Standard Declaration is available from the Secretariat.

5.2 Signatory Application

Along with the Standard Declaration, the charterer wishing to become a Signatory must also complete the Signatory Application document.¹⁹

This document outlines who is responsible for contact, reporting, invoicing, and other necessary functions to implement and maintain the Sea Cargo Charter within the Signatory's organization.

5.3 Self-Assessment

Upon becoming a Signatory, each Signatory has five (5) months to complete this Self-Assessment²⁰ and return it to the Sea Cargo Charter Secretariat.

The purpose of this is to ensure that each Signatory has made appropriate arrangements to fulfill its obligations under the Sea Cargo Charter and identified any challenges to doing so. The Self-Assessment is as brief as possible to reduce the administrative burden, while still addressing the core responsibilities of Signatories of the Sea Cargo Charter. The questions focus on ensuring that Signatories are aware of timelines and obligations under the Sea Cargo Charter, have engaged internal stakeholders, have engaged business partners, and have a plan for engaging the necessary third parties to verify their climate alignment assessment.

¹⁹ The Signatory Application is available from the Secretariat.

²⁰ The Self-Assessment questions are available from the Secretariat.

5.4 Timeline

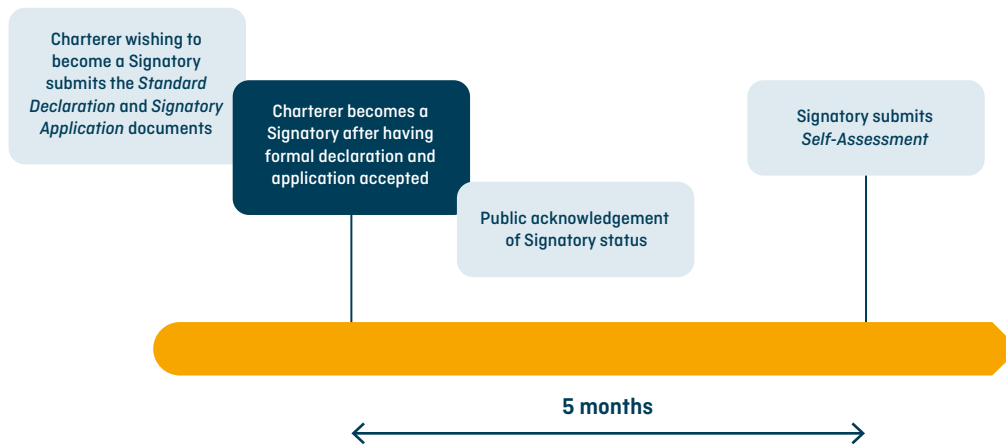


Figure 16.

Timeline for becoming a Signatory of the Sea Cargo Charter

Figure 16 details the steps to becoming a Signatory. The Sea Cargo Charter aims to be easily implementable and achievable for each Signatory. To these ends, the timetable for implementation in Figure 1 assists the Self-Assessment so that Signatories know when there are important deadlines for alignment and reporting to comply with the Sea Cargo Charter.

5.5 Governance

Information regarding the founding of the Sea Cargo Charter Association, the selection of the Steering Committee, and the role of the Secretariat can be found in the Articles of Association and Rules of Procedure.



Appendices

| | | |
|----------------------|--|----|
| 1 Appendix | Abbreviations | 48 |
| 2 Appendix | Glossary | 49 |
| 3 Appendix | List and guidance for particular cases and exceptions | 51 |
| 4 Appendix | Calculation of decarbonization trajectories per ship type and size class | 52 |
| 5 Appendix | Recommended charter party clause for voyage data reporting | 57 |

Appendix 1

Abbreviations

| | |
|----------------------|--|
| CBM | Cubic Meter |
| CDP | Carbon Disclosure Project <i>a not-for-profit charity that runs a global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.</i> |
| DWT | Deadweight Tonnes <i>a measure of how much weight a ship is designed to carry at maximum summer draught</i> |
| EEOI | Energy Efficiency Operational Indicator <i>developed by the IMO in order to allow shipowners to measure the fuel efficiency of a ship in operation. A carbon intensity metric calculated in accordance with Equation 1 as set out in Section 2.1 of the Technical Guidance.</i> |
| EEDI | Energy Efficiency Design Index <i>A design specification metric developed by the IMO.</i> |
| FOB & DAP | Free On Board & Delivered At Place <i>FOB and DAP are Incoterms (or International Commercial Terms), which are a series of terms of trade for the sale of goods published by the International Chamber of Commerce relating to international commercial law.</i> |
| GHG | Greenhouse Gas |
| GLEC | Global Logistics Emissions Council <i>an industry-led partnership to drive emission reduction and enhance efficiency across global logistics supply chains.</i> |
| IMO | International Maritime Organization <i>a specialized agency of the United Nations, and the global standard-setting authority for the safety, security and environmental performance of international shipping.</i> |
| IMO DCS | IMO's MARPOL Annex VI Data Collection System for Fuel Consumption |
| TC | Time Charter |
| tnm | Tonne-nautical mile |
| VC | Voyage Charter |

Appendix 2

Glossary

Ballast leg (also called ballast voyage) is a voyage that takes place between ports of discharge and loading ports where the vessel is carrying no cargo and hence takes on ballast (usually water) to make the vessel more manageable at sea. Ballast legs may result from strategic decision-making by the (disponent) owner to ensure the vessel is geographically well-placed to secure a higher rate for the subsequent charter, or may result from a charterer requesting a particular vessel.

Bunkering is the supplying of fuel for use by ships.

Charterers are defined as the party who buys freight services from a (disponent) owner under time or voyage charters.

Chartering activities are defined as business activities that are 1) on time and voyage charters, including contracts of affreightment and parceling, with a mechanism to allocate emissions from ballast voyages, and 2) for voyages carried out by dry bulk carriers, chemical tankers, oil (crude and product) tankers and LNG carriers, and 3) where a vessel or vessels fall under the purview of the IMO (i.e., vessels 5,000 gross tonnage and above engaged in international trade).

Decarbonization trajectories

Standard decarbonization trajectories are produced by the Secretariat based on agreed and clearly-stated assumptions. These are produced for each ship type and size class in a format that allows for simple weighting aggregation. This is to ensure that once the carbon intensity of voyages is understood, it is simple and practical to understand climate alignment. This also ensures that numbers are comparable between Signatories.

The method used for establishing the target carbon intensity for a given ship type and size class in a given year is derived from IMO Secretariat commissioned data sources, both the Third IMO GHG Study and IMO MEPC 68 Inf. 24 publication. Assumptions for formulating the trajectory are also taken from the Initial Strategy, including the use of a 2008 baseline.

Disponent Owner is a person or company that “displaces” or takes the place of the legal, registered owner in charter parties. References to owner or shipowner include the potential for a disponent owner to have taken their place and in this case to fulfil the requirement.

Signatory is a charterer that has sent a formal declaration to the Sea Cargo Charter Secretariat, has had that declaration accepted, and has had that declaration announced.

Third party is a reputable service provider that is commissioned by the Signatory to perform part of its obligations under the Sea Cargo Charter on its behalf.

Time charter is a contract for the hire of a named vessel from a (disponent) owner, for a specified period of time for the charterer’s purposes subject to agreed restrictions.

When on time charter, the (disponent) owner is responsible for the vessel’s running expenses; the (disponent) owner operates the vessel technically, and the charterer directs the ship’s commercial operations. Charterers pay a daily rate for a fixed time period and all voyage costs including bunker.

Vessel type and size (vessel categories)

Carbon intensities vary as a function of ship type and size, as well as a ship's technical and operational specification. To enable the carbon intensity of ships to be compared to a peer group of ships of a similar type and size, a classification system is applied. The classification system is taken from the Third IMO GHG Study, to enable consistency with the IMO's process. Under the Sea Cargo Charter, Signatories are required to report, among other, their vessel category climate alignments, which categories are defined by vessel type and size. They can be found in Appendix 5, Table 6.

Voyage charter is a contract for the transportation of a stated quantity by a stated type of cargo on a named vessel between named ports against an agreed price. On voyage charter, the charterer pays a transactional rate based on the amount of cargo transported and the route. The (disponent) owner bears both the operational costs and voyage costs. In this case, charterers do not have access to the actual fuel consumption during the voyage and, in the case of vessels carrying multiple cargos, the proportion of cargo each charterer has on board is unknown. Contracts of affreightment and parceling fall under voyage charter operated under the same cost regime.

- **Contract of Affreightment** is a contracting model that can be considered as being an agreement for several voyage charters over a period of time which may include parceling.
- **Parceling** is defined as when vessels are carrying cargo from various charterers. (Disponent) owners or operators are in a position to disclose the proportion of cargo to charterers in order to calculate carbon intensity.

Appendix 3

List and guidance for particular cases and exceptions

| Particular cases | |
|--|--|
| Ballast legs | Ballast legs are included in each voyage by accounting for the CO ₂ emissions from the preceding ballast leg while no transport work is carried out. |
| Drifting periods | Drifting periods, and associated emissions and distances, should be included in the overall duration of the voyage. |
| Parceling | Signatories are to account for the proportionate amount of the total cargo transported (not DWT of the vessel) and divide emissions accordingly. |
| Off-hire period | The amount of fuel consumption relating to off-hire periods are to be included in the voyage's overall fuel consumption unless the vessel is off-hire due to dry-docking, pre-agreed or emergency maintenance. |
| Voyages spanning multiple years | The voyage should be captured in the reporting period that it ends in. |

| Exceptions | |
|-------------------------|---|
| Floating storage | If the time the vessel is stationary is significantly higher than the sailing time, activity should be disregarded. |

Appendix 4

Calculation of decarbonization trajectories per ship type and size class

The following describes the method applied for establishing the target carbon intensity for a given ship type and size class in a given year. This is carried out by calculating a decarbonization -consistent carbon intensity trajectory from 2012 out to 2050. The method is derived from IMO Secretariat-commissioned data sources, both the Third IMO GHG Study²¹ and publication IMO MEPC 68 Inf. 24. Assumptions for formulating the trajectory are also taken from the Initial IMO GHG Strategy, including the use of a 2008 baseline.

Ship type and size definitions:

Carbon intensities vary as a function of ship type and size, as well as a ship's technical and operational specification. To enable the carbon intensity of ships to be compared to a peer group of ships of a similar type and size, a classification system is applied. The classification system is taken from the Third IMO GHG Study, to enable consistency with the IMO's process. Full details of the definitions can be found in that document. In the event that the IMO updates the classification system used in future work, a decision on whether to update the classification system used in the Sea Cargo Charter will be taken.

Estimating the ship type and size specific carbon intensity:

Publication IMO MEPC 68 INF. 24, commissioned by the IMO secretariat, is an addendum to the Third IMO GHG Study and contains a dataset estimating the carbon intensities of individual ship types and sizes between 2010 and 2012. The dataset currently provides the most up to date source of IMO-recognized information for the calculation of decarbonization trajectories, but as more recent data becomes available, the trajectories can be updated.

The most recent and the most accurate data in the publication is for the year 2012, and therefore this is used as the historical data edge for subsequent steps of the method²⁰.

Estimating the carbon intensity improvement required across all ship types:

The overall (all ship type and size categories included as international shipping) improvement required in carbon intensity is calculated from:

1. A projection of the foreseeable growth in CO₂ per tonne-nautical mile across all ship types between baseline (2012) and the target year (2050)
2. The target CO₂ emissions in 2050

21

Will be updated to the Fourth IMO GHG Study in late 2020/2021.

The projection of foreseeable growth is taken from the Third IMO GHG Study scenario RCP 2.6 SSP2. This scenario is selected because it is most aligned with decarbonization in the wider economy, and most closely represents the rate of GDP and trade growth that has been observed in recent years (between 2012 and 2018).

The estimate of the target CO₂ emissions in 2050 is taken by applying the IMO’s Initial Strategy Objective 3 minimum target (at least a 50% reduction), to the IMO Initial Strategy’s baseline year (2008) total CO₂ emissions (921Mt), taken from the Third IMO GHG Study. It should be noted that as indicated by the “at least”, this currently represents the minimum level of ambition and therefore the maximum absolute emissions and least ambitious aggregate carbon intensity. The estimate of 2012 emissions is taken from the Third IMO GHG Study.

Values for the total transport demand, total CO₂ emissions, and aggregate carbon intensity in 2008, 2012 and 2050 are given in Table 5.

| | 2008 | 2012 | 2050 |
|--|--------|--------|---------|
| Total transport demand (billion tonne nautical miles) | 42,000 | 49,000 | 169,000 |
| Total CO ₂ emissions (million tonnes) | 921 | 796 | 461 |
| Estimated aggregate carbon intensity (gCO ₂ /tnm) | 22.0 | 16.3 | 2.7 |

Table 5.
Transport demand, emissions and carbon intensity for international shipping

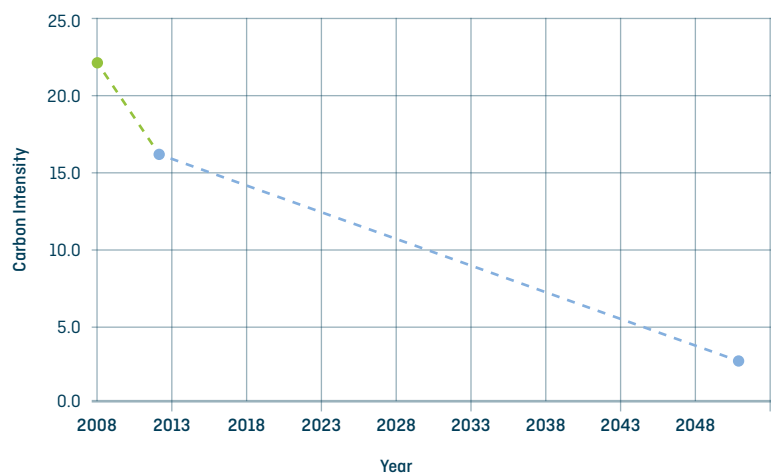


Figure 17.
Global carbon intensity trajectory

Figure 17 plots the intensity values in Table 5 and a linear trend line connecting them. There are many different assumptions that could be applied to specify the shape of the curve that defines the rate of carbon intensity reduction between 2012 and 2050. However, there is no strong justification for one or another, though it is acknowledged that the rate of carbon intensity reduction will not be linear in real conditions. The chosen trajectory thus represents a gradual and consistent rate of improvement on average across the fleet; the assumption applied here is for a constant improvement year-on-year, which is described by a straight line between 2012 and 2050.

The trajectory exceeds the IMO Initial Strategy Objective 2 intensity reduction values of 40% (2030) and 70% (2050), because it is derived to ensure achieving the IMO Initial Strategy Objective 3 (the absolute emissions objective). Meeting Objective 3 ensures that all IMO Initial Strategy Objectives are achieved.

Calculating the target carbon intensity in a given year as a function of the ship type and size class:

The rate of reduction required per year is relative to the last historical data point (2012). The trajectory is shown relative to 2012 carbon intensity (indexed to 2012 carbon intensity) in Figure 18.

While the trajectory is presented for the time period 2012 to 2050, it is consistent with the 2008 baseline year as specified in the IMO Initial Strategy Objectives as the end point is determined by a 50% reduction relative to the baseline. The formula²² for the trajectory is given in Figure 18, and allows the index value to be calculated for a given year. The index value represents the required carbon intensity value relative to the carbon intensity in 2012.

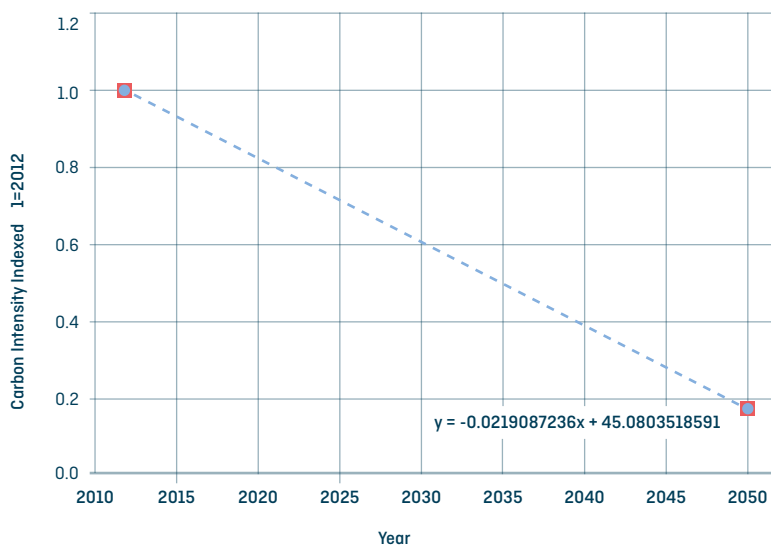


Figure 18. Indexed decarbonization trajectory, from 2012 to 2050

22 The formula for the trajectory is: $y = -0.0219087236x + 45.0803518591$

The index currently chosen for the Sea Cargo Charter is EEOI. The EEOI trajectory value for a given year is calculated in the following manner:

1. Calculate carbon intensity index for the given year
2. Multiply the carbon intensity index by the median 2012 EEOI value

The fleet type and size category median values in 2012 are included in Table 6. The EEOI trajectory values have been calculated for the years 2020, 2021, and 2022 and included in Table 6. The values in Table 6 can be extrapolated beyond 2022 using the linear relation presented in Figure 18.

| | | | 2012 | 2020 | 2021 | 2022 |
|----------------------|---------------|------|-------------------------------------|-----------------------|-----------------------|-----------------------|
| Type | Size | Unit | Median EEOI (gCO ₂ /tnm) | EEOI trajectory value | EEOI trajectory value | EEOI trajectory value |
| Bulk carrier | 0-9999 | DWT | 44.50 | 36.70 | 35.73 | 34.75 |
| Bulk carrier | 10000-34999 | DWT | 15.40 | 12.70 | 12.36 | 12.03 |
| Bulk carrier | 35000-59999 | DWT | 11.70 | 9.65 | 9.39 | 9.14 |
| Bulk carrier | 60000-99999 | DWT | 10.70 | 8.82 | 8.59 | 8.36 |
| Bulk carrier | 100000-199999 | DWT | 5.83 | 4.81 | 4.68 | 4.55 |
| Bulk carrier | 200000-+ | DWT | 5.13 | 4.23 | 4.12 | 4.01 |
| Chemical tanker | 0-4999 | DWT | 51.00 | 42.06 | 40.94 | 39.83 |
| Chemical tanker | 5000-9999 | DWT | 33.70 | 27.79 | 27.06 | 26.32 |
| Chemical tanker | 10000-19999 | DWT | 23.70 | 19.55 | 19.03 | 18.51 |
| Chemical tanker | 20000-+ | DWT | 15.60 | 12.87 | 12.52 | 12.18 |
| Liquefied gas tanker | 0-49999 | CBM | 30.40 | 25.07 | 24.41 | 23.74 |
| Liquefied gas tanker | 50000-199999 | CBM | 16.30 | 13.44 | 13.09 | 12.73 |
| Liquefied gas tanker | 200000-+ | CBM | 18.60 | 15.34 | 14.93 | 14.52 |
| Oil tanker | 0-4999 | DWT | 70.00 | 57.73 | 56.20 | 54.66 |
| Oil tanker | 5000-9999 | DWT | 48.20 | 39.75 | 38.70 | 37.64 |
| Oil tanker | 10000-19999 | DWT | 36.40 | 30.02 | 29.22 | 28.43 |
| Oil tanker | 20000-59999 | DWT | 24.00 | 19.79 | 19.27 | 18.74 |
| Oil tanker | 60000-79999 | DWT | 16.50 | 13.61 | 13.25 | 12.89 |
| Oil tanker | 80000-119999 | DWT | 13.20 | 10.89 | 10.60 | 10.31 |
| Oil tanker | 120000-199999 | DWT | 10.80 | 8.91 | 8.67 | 8.43 |
| Oil tanker | 200000-+ | DWT | 6.57 | 5.42 | 5.27 | 5.13 |

Table 6.

Fleet type and size specific EEOI in 2012 and trajectory values for 2020, 2021, 2022

Continuously updating the trajectories as further data becomes available:

Over the timescale that the decarbonization trajectories are estimated, a number of the parameters that are used in their calculation may change. These include:

- The IMO may modify the Objectives, including when the IMO revises its strategy (expected 2023) (e.g., if the Objectives increase in ambition, the carbon intensity trajectory will steepen).
- The Fourth IMO GHG Study (Summer 2020, initially expected Autumn 2020) and subsequent studies may update or modify the estimates of the historical carbon intensity and carbon intensity trends (e.g., if historical estimates are revised upwards, the carbon intensity objective will steepen).
- Transport demand growth may develop differently to the estimate used here to calculate the carbon intensity trend consistent with a 2050 absolute GHG objective (e.g., if demand growth exceeds the trend used in these calculations, the carbon intensity objective will steepen).
- Demand growth may develop differently between ship types and increase the demand for ships with different carbon intensity than the 2012 fleet (e.g., if demand modifies the fleet composition to increase the share of emissions by ships which have higher carbon intensity, the carbon intensity objective will steepen).
- Utilization may differ from the values estimated for 2012, which will modify the relationship between EEOI and mean the climate alignment trajectory set using EEOI will need to be modified (e.g., if utilization reduces relative to 2012, the carbon intensity objective will steepen).

While the decarbonization trajectory and the ship type and size specific trajectory values have been calculated using the best available data, there are a number of foreseeable reasons why these values may need to change in the future. For this reason, it is proposed that decarbonization trajectories are reviewed when new information becomes available. Any update to the decarbonization trajectories should be applied for future climate alignment, not re-analysis of historical climate alignment.

Appendix 5

Recommended charter party clause for voyage data reporting

In order to ensure consistent and complete data collection by Signatories of the Sea Cargo Charter, a recommended charter party clause for voyage data reporting has been developed. The basis for this approach is set out in the following paragraphs and the recommended charter party clause itself — the Sea Cargo Charter Clause — is available on the website.²³

In entering into charterparties envisaging carriage of goods by sea, Signatories shall use their best endeavors to incorporate into contracts with their contractual counterparties (head-owner or disponent owner) a contractual provision requiring the head owner or disponent owner to provide the information set out in Sea Cargo Charter Clause — the recommended charter party clause — for voyage data reporting within a reasonable time from the end of the performance of the relevant contract alternatively on a monthly basis.

Such information shall be provided by the owner or the disponent owner to the Signatory or a Third party designated by the Signatory solely for the purpose of calculating the EEOI and associated climate alignment.

Although the focus of the Sea Cargo Charter is on chartering arrangements, it is believed that incorporation of the recommended clause into sale contracts would also be beneficial.

Therefore, Signatories are also encouraged to include an equivalent contractual provision into their sale contracts with their contractual counterparties (FOB buyer or CFR/CIF/DAP seller).

Recognizing the wide variety of contracts, the Signatory and the contractual counterparty shall decide on the mechanism for incorporation into the contract, and the wording in the Sea Cargo Charter Clause is an example of a provision that may be appropriate.

Bunker emission factors:

In order to calculate the CO₂ emissions associated with the combustion of fuels, emission factors are found in MEPC.308(73). As alternative fuels become more commonplace in the market, a provision for reporting “other fuels” in the Sea Cargo Charter Clause is included. Due to the absence of emission factors for these fuels provided by the IMO, the fuel map below should be used to determine the appropriate carbon factor to be used to calculate voyage carbon intensity as per Equation 1.

23 The Sea Cargo Charter Clause is available here: <https://www.seacargocharter.org/resources/>

| | Reported Fuel | Reference | Matched fuel | Carbon factor (tCO ₂ /tfuel) |
|--------------------|-------------------------------|---------------------------------|--------------|---|
| Conventional Fuels | MGO/MDO | ISO 8217 Grades DMX through DMB | | 3.206 |
| | Light Fuel Oil (LFO) | ISO 8217 Grades RMA through RMD | | 3.151 |
| | Heavy Fuel Oil (HFO) | ISO 8217 Grades RME through RMK | | 3.114 |
| | Liquefied Petroleum Gas (LPG) | Propane | | 3.000 |
| | Liquefied Petroleum Gas (LPG) | Butane | | 3.030 |
| | Liquefied Natural Gas (LNG) | | | 2.750 |
| | Methanol | | | 1.375 |
| | Ethanol | | | 1.913 |
| Alternative Fuels | Bio-methanol | | MGO/MDO | 3.206 |
| | e-methanol | | MGO/MDO | 3.206 |
| | Bio-gasoil | | MGO/MDO | 3.206 |
| | e-gasoil | | MGO/MDO | 3.206 |
| | e-LNG | | LNG | 2.75 |
| | Methanol | | MGO/MDO | 3.206 |
| | Hydrogen (from natural gas) | | n/a | n/a |
| | e-Hydrogen | | n/a | n/a |
| | Ammonia (from natural gas) | | n/a | n/a |
| | e-Ammonia | | n/a | n/a |
| Electricity | | n/a | n/a | |

Table 7.

Fuel carbon factors for conventional and alternative fuels

These carbon factors are only a provisional option until a widely agreed set of carbon factors is put in place by the IMO which will ideally capture all GHG species and lifecycle emissions.

Acknowledgements

The Sea Cargo Charter was developed in an effort spearheaded by leading industry players – charterers and ship owners – as well as the Global Maritime Forum, Smart Freight Centre, and University College London Energy Institute/UMAS.

Project team

Global Maritime Forum

Johannah Christensen, Managing Director, Head of Projects & Programmes

Louise Dobler, Project Manager

Smart Freight Centre

Alan Lewis, Technical Development Director

University College London/UMAS

Jean-Marc Bonello, Consultant, UMAS

Tristan Smith, Reader in Energy and Shipping, University College London

Drafting group

Jan Dieleman, President, Cargill Ocean Transportation (Chair)

Andrew Barker, Global Operations and Sustainability Lead, Cargill Ocean Transportation

Peter Lye, Global Head of Shipping, Anglo American

Capt. Raghav Gulati, Safety and Technical Operations Manager - Shipping, Anglo American

Lance Nunez, Marine and Terminal Logistics Director, Dow Chemical

Hugo De Stoop, Chief Executive Officer, Euronav

Christof Van de Gaer, Head of Chartering, Euronav

Jan Rindbo, Chief Executive Officer, Norden

Henrik Røjel, Head of Fuel Efficiency and Decarbonisation, Norden

Erik Hånell, President and Chief Executive Officer, Stena Bulk

Vishnu Prakash, Head of Data Science, Stena Bulk

Luc Gillet, Senior Vice President Shipping, Total Trading & Shipping

Sebastien Roche, General Manager, Technical Department, Total Trading & Shipping

Richard Head, Head of Health, Safety, Environment and Communities, Trafigura

Matthew Shorts, Health Safety Environment and Community Manager, Trafigura

Haris Zografakis, Partner, Stephenson Harwood

Additional support

Peter Appel, Partner, Gorrissen Federspiel

Morten Berggreen, Managing Counsel, Gorrissen Federspiel

Bethanie John Esq., Legal Consultant, Gorrissen Federspiel

Michael Parker, Chairman, Global Shipping, Logistics & Offshore, Citi & Chair,
Poseidon Principles Association

Michael Søsted, Managing Director, Head of Operations, Global Maritime Forum

Torben Vemmelund, Head of Communications, Global Maritime Forum

Elyse Lawson, Project Manager, Global Maritime Forum

Tina Maver, Project Manager, Global Maritime Forum

Layout by Housatonic.eu





Sea Cargo Charter

Amaliegade 33 B, 2nd floor
1256 Copenhagen K
Denmark

www.seacargocharter.org
info@seacargocharter.org

© Sea Cargo Charter