Progressing through currents of change

An update on Cargill's work to decarbonize bulk shipping

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More than shipping

Cargill | Ocean Transportation

Table of Contents

This report covers calendar year 2024. Information in this report is for that time period, unless otherwise noted. For our previous decarbonization reports, visit our website.

Photo courtesy of Anemoi Marine Technologies

The courage to move forward

When I look at the state of our industry's decarbonization journey, 2024 was in many respects a year of contrasts. Cargill continued making progress on our overall emissions reductions, with our Ship Energy Efficiency Operational Indicator (EEOI) improving 3% year-on-year (see more on page 5). This means we avoided 1.35 million metric tons of CO_2e emissions on an efficiency basis in 2024 compared to 2017, according to our estimates.

And alongside our partners, we continued to gain important learnings from the decarbonization solutions we have available today as well as those that we're investing in for the future. Wind propulsion, biofuels, vessel optimization, and more: This flexible set of options can help our customers meet a wide range of ambitions and targets, while also demonstrating possible pathways forward for the industry (see page 8). When I look back at where we were in 2017 when Cargill started many aspects of this journey – or where we were even just a few years ago – the distance traveled is impressive.

Yet I know we are not where we want to be. Cargill Ocean Transportation remains 12% above the minimum trajectory for the Sea Cargo Charter (SCC – see more on page 5). Meanwhile, geopolitical disruptions and a fragile macroeconomic environment caused higher prices, longer routes, and greater uncertainty in the maritime sector – all of which led some companies to take a "wait and see" approach to major investments and limited demand for our decarbonization solutions.

As we talked to customers, the sentiment throughout the year was what I would describe as ambition mixed with pragmatism. More than ever, organizations across our industry are committed to decarbonization and know that it's necessary. And yet to many, scaling the solutions of tomorrow – even the solutions of today – may seem out of economic reach on a voluntary basis in a highly competitive industry.

I believe that to move forward in a time with strong currents of change, we must make courageous and bold decisions. As I said at the Global Maritime Forum (GMF) summit last October, this means challenging the status quo, stepping out of our comfort zones, and embracing risks. We need to explore what might seem impossible, let go of solutions or ideas that aren't working, and accept some discomfort.

Consider the SCC, which was formed in 2020 to essentially make all of us uncomfortable with the status quo. Dozens of the world's largest charterers and shipowners agreed to voluntarily disclose their progress against targets that would get increasingly stringent each year. This was bound to create tension as we grappled with the need to make more rapid progress. Some of that tension is now resolved as the International Maritime Organisation (IMO) agreed in April to a framework that includes greenhouse gas (GHG) emissions intensity targets and financial penalties for exceeding them. The framework will be voted on in October and, if adopted, is expected to be effective from January 1, 2028.

This is a historic milestone because one of our learnings over the past few years is that it will be very difficult to achieve our shared ambitions for decarbonization on a voluntary basis. The IMO's Net Zero Framework will provide a regulatory environment within which to innovate and find market-based solutions.

1.35 million metric tons of CO_2e

Estimated emissions avoided in 2024 on an efficiency basis compared to our 2017 baseline

And yes, it will no doubt cause more discomfort along the way. It will require courage to take both large steps and small ones. It will require hard conversations about what's possible and what we need to *make* possible. No matter where you are in solving your own company's equation for decarbonization, we at Cargill Ocean Transportation want to continue the conversation with you.

We also intend to continue leading. It's why in recent weeks we launched Seascale Energy, a bunker procurement joint venture with leading tanker shipping company Hafnia that aims to set a new standard for marine fuel procurement by delivering considerable cost efficiencies, transparency, and access to biofuels and other non-conventional fuels at scale. We remain optimistic about broad, shared progress in decarbonization.

Thank you all for your partnership,

Jan Dieleman
President
Cargill Ocean Transportation

About Cargill Ocean Transportation

We are a leading mover of dry and wet bulk cargo and one of the world's largest traders of freight markets.

With an average daily fleet of about 640 chartered vessels worldwide in 2024 and 70% of our activities executed for our third-party customers, we have been operating in the industry since 1956. Headquartered in Geneva, Switzerland, Cargill Ocean Transportation maintains a strong presence with 10 offices worldwide.

Every day, we move our customers' bulk goods around the world so they can help keep the global economy running. We combine our deep expertise in shipping, logistics, and risk management with the latest digital technology and green solutions, to ensure unparalleled execution for our customers across our portfolio of freight, fuel, and sustainability solutions.

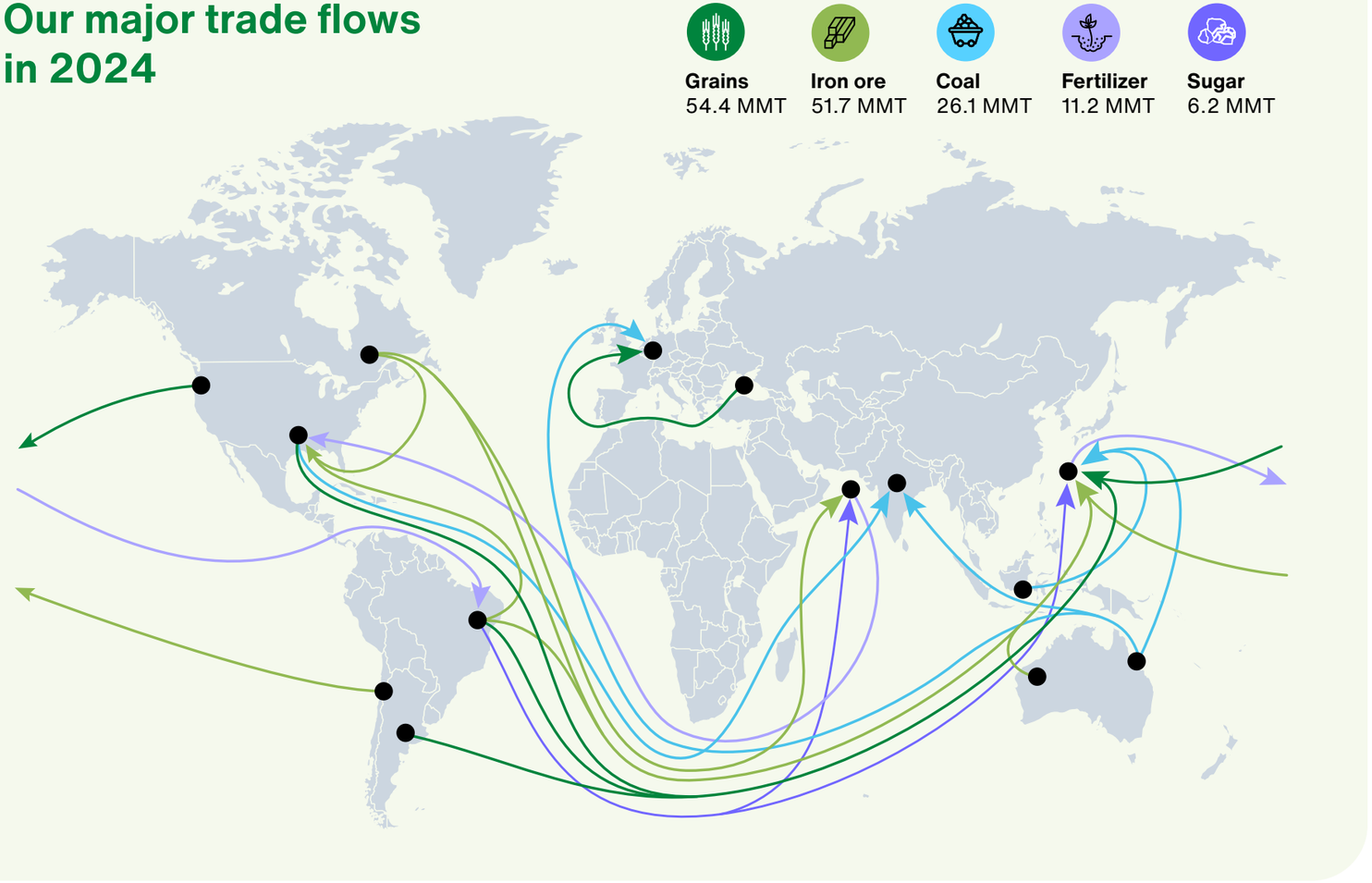
2024 snapshot

1,803 different ships operated

3,603 voyages

191 million metric tons (MMT) of cargo carried

Our major trade flows in 2024



Our progress in 2024

This year, the SCC revised its benchmark trajectories to include updated calculation methodologies based on IMO guidance. Accordingly, we have adjusted our own methodology to match and have recalculated our prior-year performance against the benchmark to be able to compare year-on-year progress. Although we continued our efforts to reduce emissions in 2024, we nevertheless remained 12% and 18.6% above the SCC revised trajectories for minimum and striving checkpoints, respectively.

Despite this challenge, we continued making a steady contribution to meeting Cargill's companywide target of reducing Scope 3 emissions 30% per ton of product sold by 2030 against a 2017 baseline. In 2024, we were 12% below our corresponding EEOI baseline to help meet that target.

We also improved our overall EEOI by 3% in 2024. This was driven by a mix of better tools like voyage and weather optimization combined with market conditions that affect speed, routes, laden legs, and other factors. Macroeconomic uncertainty in the industry also limited demand for our decarbonization solutions in some cases.

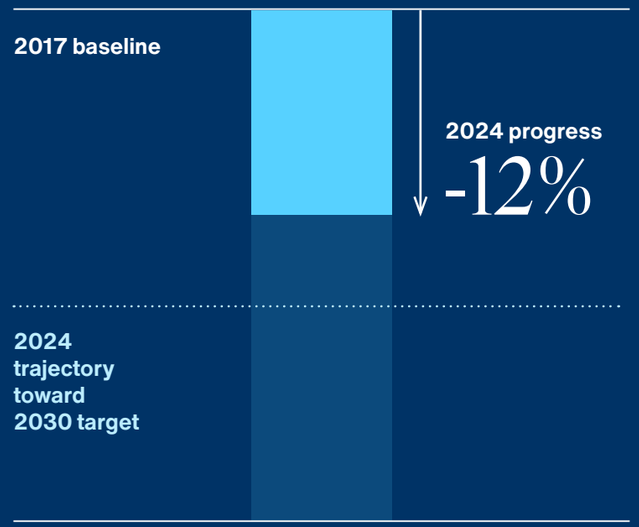
We continue to focus on developing and scaling a mix of short- and long-term solutions (see page 8), advancing sustainability through strategic partnerships and cutting-edge technologies. Meanwhile, we are encouraged by the IMO's forward momentum on a regulatory framework to incentivize and drive emissions reductions across the maritime sector.

3%

Overall year-on-year improvement in our EEOI

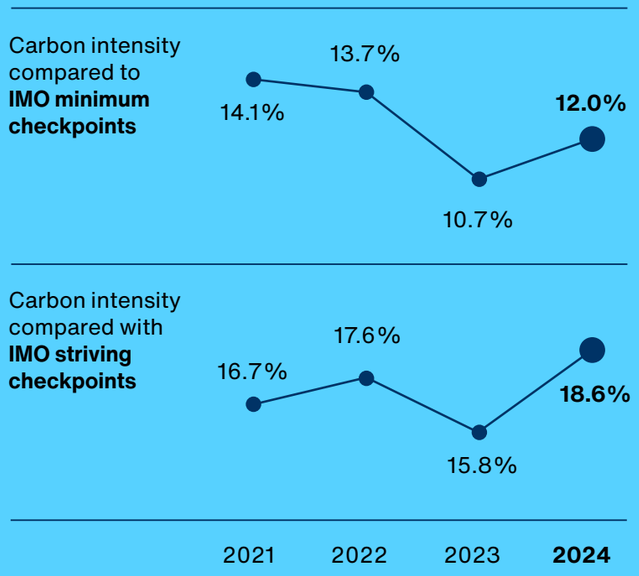
2030 target for internal Cargill customers

This chart shows our progress to contribute to Cargill's target of reducing Scope 3 emissions 30% per ton of product sold by 2030 against a 2017 baseline, measured in terms of our improved EEOI.



Comparison to SCC benchmark

This chart shows the carbon intensity for our chartered fleet compared with SCC reduction trajectories that achieve the IMO strategy of net-zero GHG emissions by 2050.



A deeper dive into our SCC results

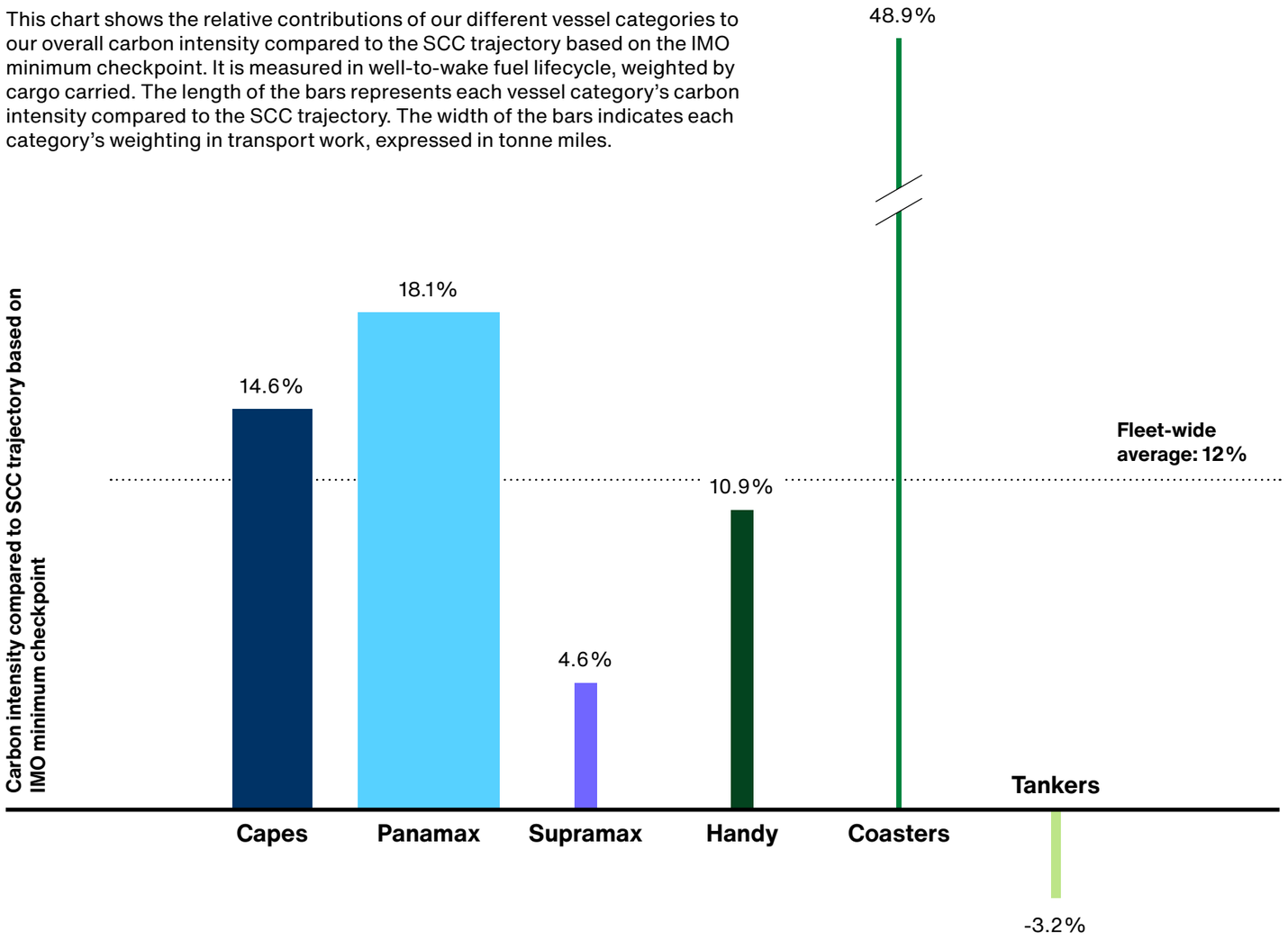
The SCC brings together 37 of the world's leading charterers and owners of cargo ships with the aim of reducing shipping's climate impact. Cargill Ocean Transportation played a leading role in its founding in 2020, and this is our fourth year reporting under its framework.

This framework enables companies to transparently disclose their progress on decarbonization based on the SCC's trajectory aligned with the 2023 IMO strategy to achieve net-zero GHG emissions in the shipping industry by 2050. Using the SCC's published methodology, companies assess their fleets' carbon intensity annually. Results above the trajectory (reported as positive percentages) indicate that additional work is needed to "catch up" with the IMO goal. Results below the trajectory (reported as negative percentages) indicate performance that is ahead of target. To learn more, visit www.seacargocharter.org.

In 2024, SCC revised its benchmark trajectories to include updated calculation methodologies based on IMO guidance. This led to a slightly less steep trajectory, relaxing the strenuousness of the checkpoints. This revision accounts for most of the difference between our reported figure last year and this year. On an absolute basis when both current and prior-year figures are adjusted for the new SCC methodology, our result in 2024 was 1.3% higher than 2023 compared with the SCC trajectory based on the IMO minimum checkpoint and 2.8% higher than 2023 compared with the SCC trajectory based on the IMO striving checkpoint. This increase occurred despite a 3% overall improvement in our EEOI, which illustrates the challenges facing the shipping sector in the years ahead as we must accelerate decarbonization to meet the IMO objective by 2050.

Comparison to SCC climate trajectory per vessel category

This chart shows the relative contributions of our different vessel categories to our overall carbon intensity compared to the SCC trajectory based on the IMO minimum checkpoint. It is measured in well-to-wake fuel lifecycle, weighted by cargo carried. The length of the bars represents each vessel category's carbon intensity compared to the SCC trajectory. The width of the bars indicates each category's weighting in transport work, expressed in tonne miles.



How we calculate our results

We track our decarbonization progress against two benchmark trajectories: the SCC's, which aligns with the 2023 IMO strategy of reaching net-zero GHG emissions from shipping by 2050, and Cargill's corporate target of a 30% reduction in Scope 3 emissions per ton of product by 2030 against a 2017 baseline.

To calculate both, we apply the IMO Guidelines for Voluntary Use of EEOI in our methodologies. A ship's EEOI represents its CO_2e emissions divided by actual transport work. It expresses the average carbon intensity of a ship in its real operating conditions, considering its actual speeds, draughts, capacity utilization, distance traveled, and the effects of hull and machinery design and condition, as well as weather. The unit for EEOI is $gCO_2e/t.nm$ (grams of CO_2 equivalents per tonne mile). In accordance with the SCC methodology, our calculations include ballast voyages prior to the commencement of our charters and are measured well-to-wake.

EEOI percentage change year-on-year by vessel size

EEOI fluctuates year-on-year and segment-by-segment under the influence of external factors, but overall we have seen an improvement of 3.0% in 2024 compared to 2023.

	2018	2019	2020	2021	2022	2023	**2024**
Capes	4.9%	-3.4%	-0.8%	2.3%	-11.0%	-9.6%	**1.1%**
Panamax	1.6%	-5.2%	0%	6.0%	-4.0%	-5.3%	**-1.7%**
Supramax	-1.7%	-5.4%	-5.0%	6.6%	-2.0%	-6.4%	**-5.8%**
Handy	-0.5%	-5.0%	-4.1%	6.0%	0%	-5.4%	**-5.3%**
Coasters	0.2%	24.2%	11.5%	-8.9%	-14.8%	9.3%	**-4.7%**
Tankers	-1.7%	-14.0%	4.1%	10.0%	8.6%	6.1%	**-5.6%**
Total							**-3.0%**

A flexible mix of solutions

Companies have a range of targets and objectives when it comes to decarbonization. To help our customers reach their goals, we have developed a portfolio of options for lowering voyage emissions today. We are also continuing to invest in breakthrough technologies for the future. These solutions are integrated in our day-to-day offerings as well as in customized long-term contracts. That's because at Cargill Ocean Transportation, we want to be our customers' decarbonization partner now and for the long haul.

Wind propulsion

Through a variety of vessel installations, we are pioneering new possibilities with our partners. This includes the WindWings® technology developed with BAR Technologies, Anemoi rotor sails, and Econowind VentoFoil® sails.

Drop-in biofuels

We continue to offer these fuels, which can be blended with conventional fuels without modifying current vessels. We are also finding new ways to bring scale to this market.

Next-gen fuels and ships

A new wave of possibilities is on the horizon, and we are propelling toward it by investing in fuels like methanol. Our first dual-fuel, methanol-powered ships will soon be available.

Digital optimization

We partner with ZeroNorth, which uses its innovative modeling platform to optimize routes for each vessel. Our internal team collaborates with ZeroNorth to account for weather, currents, fuels, speed, and more, so we can reduce emissions.

Physical optimization

There are many ways you can boost a ship's efficiency: devices to improve the flow of water around the ship, engine upgrades, hull cleanings, or even a new coat of antifouling paint. We work with shipowners to make these upgrades, which lower fuel consumption and emissions.

2024 highlights

24 port calls

Our three wind-enabled vessels made stops at numerous ports, gathering important logistics learnings for using these technologies.

91,000 metric tons

We continued lifting biofuel blends for customers, primarily through our bunker procurement business.

Arriving soon

We continued working with customers and suppliers to prepare for using our first methanol vessels in early 2026.

100%

All our time-chartered voyages used ZeroNorth's optimization technology.

↓31,500 metric tons CO_2e

We reduced emissions thanks to energy-saving upgrades installed on our time-chartered vessels.

Collaborating for change

Decarbonizing maritime shipping will be a monumental task extending over the coming decades. We are committed to helping lead the effort, but we know that no one organization can do it alone. Shipowners, ship builders, charterers, port operators, policymakers, NGOs, and other stakeholders all have an important role to play.

That's why we work across a broad coalition of partners to pool the best thinking and catalyze progress. This, combined with our internal efforts and our work directly with customers and shipowners, will help keep us on the pathway toward a sustainable future for shipping.

GLOBAL MARITIME FORUM

International Windship Association

SEA CARGO CHARTER

ZERO NORTH

GETTING TO ZERO COALITION
GLOBAL MARITIME FORUM

METHANOL INSTITUTE

QAPTIS
CO_2 CAPTURE TECHNOLOGY

SEASCALE ENERGY
A CARGILL & HAFNIA JOINT VENTURE

Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping

RIGHTSHIP

iaph
international association of ports and harbors

Certification statement from DNV

Company name: **CARGILL INTERNATIONAL SA**

Subject: **Verification of Sea Cargo Charter Reporting 2024**

Version No.: **2025 Report (2024 Performance)-v2**

Assessment date: **2025-04-16**

THIS IS TO STATE THAT

DNV Maritime Advisory has reviewed and assessed the report on the Sea Cargo Charter (SCC) climate alignment prepared by Cargill Ocean Transportation for its chartering activity in 2024. Calculations of EEOI and climate alignment of the eligible chartering activities are in accordance with the latest SCC guidelines (version 5.1). Other than in previous versions of guidelines, SCC is taking a well-to-wake perspective using granular emission factors and assessing climate alignment against revised 2023 IMO GHG Strategy - 'Minimum' and 'Striving' trajectories. Underlying data on fuel consumption and transport work have been validated based on random sampling and outlier checks.

Approach

1) Cargill's responsibility

Cargill oversaw the gathering and preparing voyage data for the full year 2024 as part of its reporting obligations under the Sea Cargo Charter. This process was carried out in line with the calculation and reporting standards defined by the Sea Cargo Charter's Technical Guidance (version 5.1). Cargill has computed voyage-level emissions intensity, valuated climate alignment, categorized vessels, and calculated the overall annual climate alignment for its fleet.

2) DNV's responsibility

DNV is a 3rd party verifier for Sea Cargo Charter data, providing verification statements for numerous signatories. In its role, DNV verifies the data and the methodology used by the signatory to ensure compliance with the guidelines outlined in Section 2 of the Sea Cargo Charter's Technical Guidance (version 5.1) and the recommendations in the Indicative Verification Guidelines.

DNV's verification process is based on professional judgment and procedures such as inquiries, observation of processes, document inspections (e.g. bill of lading), analytical reviews, and validation of quantification methods, ensuring consistency with underlying records.

DNV also serves as the Recognized Organization for the verification of IMO DCS and EU MRV data. Furthermore, it serves 14 signatories of the Poseidon Principles (both banks and insurance companies) in their reporting.

Results

DNV concludes that Cargill's data is of high quality and complies with Sea Cargo Charter requirements. Cargill provided satisfactory responses to all questions related to data quality and accuracy. To ensure thoroughness, DNV conducted random spot checks of selected voyages against bills of lading, AIS data, and IHS data, all of which confirmed the accuracy of Cargill's submissions.

Calculations of EEOI and climate alignment of the 2024 chartering activity are in accordance with defined latest Sea Cargo Charter's Technical Guidance (version 5.1). Underlying data on fuel consumption and transport work have been validated based on random sampling.

Based on our professional in-depth review and assessment, we conclude:

1) Total Annual Activity Climate Alignment: The **total annual activity climate alignment score** of the reported chartering activity for the year 2024 is **+12.0%** against the **minimum trajectory** and **+18.6%** against the **striving trajectory**. The **required EEOI** for the reported chartering activity under the **minimum trajectory** is **7.27 gCO_2e/t NM**, and for the reported chartering activity under the **striving trajectory** is **6.87 gCO_2e/t NM**, whereas the **attained EEOI** of the reported chartering activity is **8.14 gCO_2e/t NM**.

2) Climate Alignment by segment:

- The climate misalignment of the **bulk carrier** segment is **13.2%** against the minimum trajectory and **20.0%** against the striving trajectory.
- The climate (mis-) alignment of the **chemical tanker** segment is **-2.3%** against the minimum trajectory and **+0.9%** against the striving trajectory.
- The climate alignment of the **oil tanker** segment is **27.8%** against the minimum trajectory and **23.5%** against the striving trajectory.

3) Vessel Category Climate Alignment: The climate alignment scores for relevant vessel categories, as defined by SCC requirements, for 2024, are:

Bulk carrier	**Minimum trajectory**	**Striving trajectory**
0 to 9,999 DWT	+38.6%	+47.0%
10,000 to 34,999 DWT	+19.9%	+27.2%
35,000 to 59,999 DWT	+11.4%	+18.1%
60,000 to 99,999 DWT	+12.3%	+19.1%
100,000 to 199,999 DWT	+14.9%	+21.9%
200,000 & above DWT	+20.1%	+27.3%
Chemical tanker		
0 to 4,999 DWT	+21.8%	+25.8%
5,000 to 9,999 DWT	+0.9%	+4.2%
10,000 to 19,999 DWT	-9.3%	-6.3%
20,000 to 39,999 DWT	+4.0%	+7.4%
40,000 & above DWT	-2.9%	+0.3%
Oil tanker		
0 to 4,999 DWT	+87.6%	+98.9%
5,000 to 9,999 DWT	-9.0%	-3.5%
10,000 to 19,999 DWT	-35.8%	-31.9%

4) Reporting percentage: 93% of the signatory's eligible reporting chartering activities (3,345 out of 3,603 eligible voyages) are reported, 7% (258 voyages) are not reported.

Issued in Hamburg, 30th April 2025

Dr. Jan-Henrik Hübner Capt. Rudra Mishra

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More than shipping

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