

DatamarLab is building a Collaborative Decision-Making framework for maritime transport in South America, so shipowners, shippers, terminals and regulators can work from the same independent, scientifically grounded data. Right now our focus is decarbonization.

The IMO Votes on a Global Carbon Price in December

On 4 December, IMO member states resume the session that will vote on the Net-Zero Framework, which would set the first global carbon price for shipping. If it is adopted as it stands, one set of rules would apply worldwide from April 2028, with the first compliance year likely in 2029: December decides the regime, not the first bill. If it fails, shipping may eventually be left with a patchwork of regional systems. Either way, the question of how much carbon each voyage carries is not going away.

HERE'S THE PROBLEM

September made the global rulebook less certain, not more.

At the IMO's September talks in London, 38 states spoke in favor of the carbon-pricing mechanism in the IMO's Net-Zero Framework, and 17 against, according to a count by University College London (UCL). Three weeks later, the US President told the UN General Assembly there would be "no global taxes" while he is in office. The deciding session resumes on 4 December.

And none of that changes what's already in force, or on the way.

The EU has charged shipping for its emissions since 2024 and has capped the life-cycle intensity of ship fuel since 2025. Brazil is phasing in its own carbon market, the SBCE: a Finance Ministry proposal, put to public consultation in July and August, would bring waterborne transport into mandatory reporting by 2031.

If the IMO framework is adopted, a voyage calling in Europe would face both the IMO charge and the EU's rules, and nothing yet stops the same tonne of CO₂e from being charged twice. Brussels has said it will revise its own rules once a global measure exists, to avoid double payment, but nothing has been drafted yet, and what changes depends on what is adopted in December.

Three systems, three timetables — and every one of them lands on the same number: how much carbon each voyage, and each shipment on it, actually carries. Uncertain rules are a reason to measure sooner, not later. This issue shows why.

THE SCOPES, EXPLAINED

What moved this month

An emission can be **REPORTED** under multiple scopes, and for now it can also be **PAID FOR** more than once.

The scope map from issue #002 still holds; what September made clear is that nothing yet guarantees a single charge. Here's what shifted for each group in September. New to the newsletter? Write to datamarlab@datamar.com.br and we'll send you issue #002 with the full map.

Shipping lines & operators

IS THIS ME? You operate or charter the vessel

Scope that matters: scope 1 (fuel burned); scope 3 (well-to-tank fuel, chartered-in tonnage).

What moved in September

IMO pricing survived the September talks but is not adopted. The draft keeps two price tiers — US\$100 and US\$380 per tonne of CO₂e of deficit — and covers ships over 5,000 GT, around 85% of international shipping's CO₂. Early readouts suggest the fuel-intensity targets may be softened at first.

Ports & terminals

IS THIS ME? You run a port or terminal

Scope that matters: scope 1 (own equipment); scope 2 (grid power, including shore power).

What moved in September

New cruise-industry data shows ships are outpacing ports: shore-power-capable cruise ships rose from 55 in 2018 to 193, but only 40 cruise ports worldwide have even one equipped berth. In Brazil, Porto do Açu, which has supplied shore power to tugs and support vessels since 2024, signed a letter of intent with Perenco on 22 September to power offshore platforms from shore through an 80 km subsea cable, targeting early 2028.

Exporters, importers & freight forwarders

IS THIS ME? You ship or receive cargo

Scope that matters: scope 3 (your allocated share of the voyage).

What moved in September

The EU's carbon border levy, in force since 1 January, is being widened: Parliament voted to scrap its emergency brake and extend it to more products. It prices the carbon in the goods, not the freight — but it's a signal of where buyers' carbon questions are heading.

Nothing changed in Brazil this month: the SBCE proposal still places waterborne transport in its final phase, with mandatory reporting by 2031, and CVM climate disclosure remains comply-or-explain.

THE MONTH IN DECARBONIZATION

What happened in September

IMO carbon price heads for a 4 December showdown

Nearly 1,200 delegates met in London on 1–4 September for the IMO's working-group talks on greenhouse gases. UCL's readout counted 38 states backing a price and a shared fund, 17 against, with opposition concentrated among the United States, Saudi Arabia and other fossil-fuel-aligned states. Japan's proposal to replace pricing with shipowner-directed contributions was firmly rejected. The next working group meets 23–27 November, MEPC 85 follows on 30 November–3 December, and the adjourned adoption session is due to resume on 4 December.

Sources: [UCL](#); [ShipUniverse](#); [Safety4Sea](#).

UCL: the direction is set, the details are wide open

UCL's Shipping and Oceans Research Group, which counted the position of every state that spoke at the talks, found no significant support for abandoning the Net-Zero Framework, but warned that unresolved details could still weaken it. Its readout expects the fuel-intensity targets to be softened around 2030 and then tightened more steeply toward 2040. Most states opposed letting energy-efficiency measures earn tradable surplus units, and China's proposal to net penalty and reward payments into a single transaction won broad support. UCL's advice to companies: don't treat September as a signal to finalize investment decisions, and beware of short-term dead ends, naming LNG, before stronger incentives for zero-emission fuels arrive.

Source: [*UCL Shipping and Oceans Research Group*](#).

DatamarLab comment

A soft start followed by a steep climb means a ship that complies comfortably in 2030 could be in deficit a few years later. A fuel choice has to be judged against the whole trajectory, and against more than one possible set of rules, not just the first compliance year.

UCL's warning on LNG matches what we saw in our proof of concept: the same fuel gave different answers depending on the engine it runs through. And if surplus units become tradable, their value will rest on intensity figures that a buyer can check. Either way, the decision starts with a credible number for each voyage.

DNV maps four ways December could go

DNV's Maritime Forecast to 2050, launched on 1 September at the SMM trade fair in Hamburg, sets out four regulatory scenarios for the IMO decision. If the framework is adopted as it stands, it enters into force in April 2028, with the first compliance year likely in 2029. If member states instead approve a revised text in December and formally adopt it in 2027, it takes effect in 2030 at the earliest. If it is rejected, DNV sees either a reset, with a new measure in force around 2032 and a patchwork of regional rules modeled on the EU's in the meantime, or an open-ended gridlock. In none of the four do the EU's own rules go away soon: even under a revised framework, DNV expects them to run well into the 2030s.

Source: [DNV](#).

DatamarLab comment

None of DNV's scenarios puts a global carbon price on a voyage before 2029, and in one of them it never arrives. The timetables differ; the input doesn't. Every regime on the table asks for the same thing: what a voyage burned, where, and how that is split across the cargo on board.

A company that can produce that number, in a form someone else can check, is ready for whichever path December takes.

Trump takes the fight to the UN

Addressing the General Assembly on 23 September, President Trump called the Net-Zero Framework a global carbon tax that would raise shipping costs "by 10 to 20 percent," adding that "while I'm president, there will be no global taxes." The framework is designed as a system of penalty fees on fuel intensity rather than a tax, with an expected fund of roughly US\$10–15 billion a year.

Source: [The Maritime Executive](#).

DatamarLab comment

Tax or fee, the bill would be worked out the same way. Each ship's fuel is scored on its life-cycle greenhouse gas intensity, and any shortfall against the targets is charged at US\$100 or US\$380 per tonne of CO₂e, depending on how far it falls short. The money goes to a new IMO fund, not to national treasuries. That is a large part of why the framework has become so political: it would be the first mandatory, industry-wide carbon charge collected by an international body.

For whoever ends up paying, the practical question doesn't change with the politics: can you evidence your ship's intensity figure, voyage by voyage?

EU ETS: shipping's second surrender deadline passes

Shipping companies had until 30 September to surrender EU allowances covering 70% of their reported 2025 emissions, up from 40% for 2024. From next year the share rises to 100%. Missing the deadline costs €100 per allowance, adjusted for inflation, and the allowances still have to be surrendered; persistent defaulters can be barred from EU ports. The legal obligation sits with the registered "shipping company," even where a charterer has agreed to supply the allowances, and patience with late transfers from charterers to owners and managers is running out. The UK's own scheme requires no surrender until 2028.

Source: [*Reed Smith*](#).

DatamarLab comment

With 2026 emissions covered in full, the same voyage will need roughly 40% more allowances next year than this year. As the bill grows, so does the argument over who carries it: owner, manager, charterer and, through surcharges, the cargo on board.

Every one of those conversations starts from the same reported emission figure. The more money rides on it, the more it matters that each party can check how it was calculated and how it was split.

Delay is already costing the transition

The Global Maritime Forum's annual progress report, launched at New York Climate Week on 22 September, found that policy uncertainty is slowing the transition. One of its authors, at UCL, called last year's failure to adopt the framework "the single most transition-regressive event" in the report's five years. Zero-emission-capable ships fell from 9.5% to 5.7% of tonnage on order. Supply kept moving anyway: the first ammonia bunkering and sea trials, and ports offering methanol bunkering up from 19 to 29.

Source: [*Global Maritime Forum*](#).

Brazil and Norway talk green corridors

The VII Brazil–Norway Seminar, held at FGV Direito Rio on 22 September, brought the Navy's Directorate of Ports and Coasts, ANTAQ and Petrobras together with shipowners to discuss low-emission corridors between Brazil and Europe. Corridors were framed as a commercial and regulatory testing ground for fuels, bunkering, certification and emissions measurement.

Source: [*Defesa em Foco*](#).

DatamarLab comment

A corridor is only green if someone can show it. Fuels, bunkering and certification can be agreed around a table; proving the saving on each voyage, and for each shipment on it, takes voyage-level data that a third party can check.

That is the gap our proof of concept was built to test: rebuilding a real voyage from port events and giving every bill of lading on board its share of the emissions. A Brazil–Europe corridor would be a natural next case.

Porto do Açu plans a terminal for sustainable fuels by 2030

The port in northern Rio de Janeiro state plans to produce and handle ethanol, green ammonia, sustainable aviation fuel and biomethane on site. The project is still in environmental licensing.

Source: [*CNN Brasil*](#).

DatamarLab comment

Brazil's strongest decarbonization card, biofuels, is one most global models barely price. Our own proof of concept is no exception: its fuel scenarios cover LNG, methanol and ammonia pathways, not ethanol or biomethane.

What it does show is that a fuel's life-cycle footprint depends on where and how the fuel is made, and that clean power grids like Brazil's can make synthetic fuels considerably cleaner than catalog values suggest. A terminal making these fuels on Brazilian soil turns that from a modeling assumption into something that can be measured.

USP's carbon registry adds satellite verification

The RCGI-USP Carbon Registry — the arm of USP's Research Centre for Greenhouse Gas Innovation that DatamarLab partnered with last issue — has signed with Greenline to use satellite and geospatial data in verifying carbon-credit projects.

Source: *Estadão*.

DatamarLab comment

A carbon credit is only as good as the evidence a third party can audit, and satellite data gives verifiers something they don't have to take on trust. Shipping has the same problem: an emission figure is only worth something if someone outside the company that produced it can check it.

That is why our method keeps what was observed, what was derived and what was assumed separate, and why every tonne allocated to a shipment adds back exactly to the voyage total.

DATAMARLAB ADVANCES

What one voyage can tell you

The scientific paper behind our proof of concept is complete and will be published in October. The Executive Report, which turns its findings into decisions, follows in late October. The paper models one real container voyage, the M/V EVER FAME, over 11 port calls and 13,913 nautical miles between the east coast of South America and Asia, using Datamar's own event data: arrivals, berthings, departures, draft at each call and cargo ownership at both ends. Here are the questions it opens up.

10

fuel, engine and speed
scenarios run on the same
voyage

982

exporters identified on a
single ship

3,251

shipment records, each
given its share of the
voyage's emissions

Fuels

Clean at the smokestack, not across the life cycle

Two fuels with identical emissions on board, and a very different result once production is counted. The Executive Report shows which alternatives hold up well-to-wake, the basis of both FuelEU and the IMO's standard.

Same fuel, different engine, different answer

LNG run through three engine technologies. How much does methane slip change the climate case for a fuel that is often sold as a single option?

Operations

Which legs carry the carbon

The voyage is split into ten legs. The Executive Report shows how unevenly the emissions fall between them, and why a voyage-wide average hides it.

Days in port versus days at sea

The ship spent 17 days in port and 44 at sea. How does fuel burned at berth and at anchor compare with fuel burned on passage?

What a knot costs

The same voyage rerun at 11, 16 and 23 knots. How sharply do emissions climb as a ship speeds up, and what does slow steaming really save?

Where the uncertainty actually lives

Speed, engine efficiency at low load, draft, hull condition: which inputs move the result, and which barely matter.

Allocation

The carbon cost of empty boxes

Empty containers travel too. What share of the voyage's emissions do they carry, and who ends up paying for it when they're left out of the calculation?

One voyage, several right answers

Per TEU, per tonne, per TEU-kilometre, with or without the empties: how much the headline carbon intensity shifts depending on what you divide by.

The Executive Report answers each of these questions and sets out what the answers mean for shipping lines, terminals and cargo owners. It goes first to DatamarLab's Pioneer Sponsors.

A note on precision: the paper reports model estimates for one ship on one voyage, built from engineering principles rather than onboard fuel measurement. They show what the method can see; extending it across more vessels and routes is the work now under way.

COMING IN LATE OCTOBER

The Executive Report

The paper shows the method works. The Executive Report shows what to do with it. Written for decision-makers rather than reviewers, it comes in three parts: why measure, what we measured, and what it lets you decide.

It takes the questions raised by one voyage and turns the answers into decisions:

- **Fuels.** Which fuel and engine choices hold up across the life cycle and under every regulatory scenario — IMO, EU or SBCE — and which only look good under one.
- **Operations.** Where a voyage's carbon actually sits, from leg to leg, at sea and in port, and why an industry-average emission factor penalizes operators who perform better than average.
- **Allocation.** Why exporters on the same ship, on the same route, end up with different carbon intensities.
- **Contracts.** How a shipment-level carbon number can move from something you declare to something you can put in a freight quote, next to rate and transit time.

IF YOU ARE...	THE REPORT GIVES YOU...
A shipping line or operator	An independent, voyage-level baseline to defend your numbers under EU ETS, FuelEU and whatever the IMO adopts
A port or terminal	A view of where time at berth and at anchor shows up in a voyage's footprint
An exporter, importer or forwarder	A way to check the carbon surcharge on your invoice against your own shipment's share

GET INVOLVED

Pioneer Sponsors

The Executive Report goes first to DatamarLab's Pioneer Sponsors, and a few founding places remain. Sponsors who join now also:

- Get early access to the Executive Report
- Help shape the next topics and frontiers covered by DatamarLab
- Influence feature development directly
- Are recognized as founding sponsors of DatamarLab

Write to datamarlab@datamar.com.br to reserve a Pioneer Sponsor place before the report is released.

DATES TO WATCH

Four dates this quarter, one deadline set and one proposed



Not to scale

The weeks between now and 4 December decide the global rules. The EU's deadlines stand either way, and Brazil's timetable is still a proposal. We'll be back in November with more news.