

Sailing towards a global carbon price

IN THE MARITIME INDUSTRY?

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Introduction

Discussions and negotiations on carbon pricing for the international maritime sector are starting to pick up steam again at the International Maritime Organisation (IMO).

This is an opportunity to finally get urgently needed, meaningful global climate regulation for this international sector. The maritime sector is the last emitting sector globally not to be covered by greenhouse gas emission reduction policies. An ambitious and effective carbon price can help decarbonise this sector in line with the 1.5°C temperature goal of the Paris Agreement. It would also support the Paris Agreement ideal that every country and sector needs to contribute to slowing down and averting the worst impacts of the climate crisis.

However, there is a significant risk that the negotiations turn into a prolonged political process that concludes with a weak and ineffective price on pollution. The recently concluded talks on short-term measures are an indication of what to expect: instead of reducing GHG emissions, governments agreed to allow shipping emissions to grow for another decade.¹ Ships are already responsible for approximately 3% of global climate pollution.² This is a trend set to continue, rising in tandem with increased international trade in the absence of any meaningful climate action at the global level.

What should governments at the IMO (and other stakeholders) keep in mind when negotiating on pricing shipping's significant climate impact?



A global pricing scheme on climate pollution from ships should:

Bring the shipping sector in line with the Paris Agreement's 1.5°C target.

Decrease pollution from ships as soon as possible in this decade.

Support countries most at risk from climate change impacts, and countries and workers most dependent on shipping.

Raise revenues to help decarbonise the sector by supporting research and infrastructure development.

Be negotiated and implemented fast without pilot phases to avoid further delays in global action.



It should NOT:

Include offsets, free allocations or generous exemptions that would let polluters off the hook.

Be used to undermine more climate ambitious regulations in countries or regions.

¹ NGO press release on [the outcome of IMO negotiations on short term climate measures](#)

² 4th IMO GHG Study (2020)

1. What is a carbon price or market-based measure?

Carbon pricing is a policy instrument to impose a cost on emitting greenhouse gases (GHGs), creating an economic incentive, and using market forces to decarbonise. At the International Maritime Organisation, the term market-based measures (MBM) is used to describe carbon pricing instruments, with the two key types mentioned for potential implementation being:

- A carbon tax or levy (including fuel levies that are dependent on greenhouse gasses embedded in fuels)
- An emissions trading scheme (ETS)

2. Hasn't the IMO already discussed carbon pricing?

Yes, negotiations at the IMO on market-based measures already took place a decade ago. In 2003, there was a first decision to consider carbon pricing at the IMO.³ This was followed by a 2008-2011 submission of over ten proposals from various stakeholders. These proposals included a variety of MBMs, such as:

- A global ETS with a price and a cap on emissions at the global level.
- A fuel levy that would (partially) recycle revenues to 'good performance ships' that used less energy than others.
- Improving efficiency standards through a levy for ships that didn't reach the standard, or the possibility for trading efficiency credits.

However, governments didn't reach an agreement, and the carbon pricing discussion ended. Since 2018, the focus of the talks has been on the list of potential short-term measures - which does not include carbon pricing. The IMO had agreed to restart the talks on carbon pricing in 2023. However, the topic is now rapidly gaining momentum. This is because the European Union is forging ahead on its own with their price on climate pollution from ships, and climate measures for the shipping sector are gaining momentum in the United States and China.

The IMO is due to decide on carbon pricing by 2030 under its Initial IMO Strategy on Reducing GHGs (a strategy document outlining how the IMO will tackle shipping GHG emissions).

If shipping is to start contributing to reaching the Paris Agreement's goals, mid-to-long-term measures need to have an impact this decade. This was highlighted in the International Panel on Climate Change (IPCC) 1.5°C Special Report, which made it clear that climate action across all sectors has to be drastically scaled up pre-2030.

3. Can carbon pricing have an impact on the global maritime transport sector?

Yes, carbon pricing, if well designed, can reduce greenhouse gas emissions from shipping through two distinct mechanisms. Firstly, it could change behaviour. With actors in the sector moving towards climate-friendly ships and technologies, the price it forces polluters to pay could bridge the potential cost gap between currently used dirty technologies and (future) clean technologies. This needs to be at the core of global carbon pricing for ships. Clean technologies might need initial (potentially risky) funding to be developed and deployed before they can be considered scalable solutions to put the sector firmly on the path to decarbonisation.

³ Resolution A.963(23)

The Fourth IMO GHG Study shows that by 2030, 13% of GHGs from international shipping can be reduced by even relatively low carbon prices of 100 USD/tonne of CO₂e; through investing in wind power and reducing the speed of ships for example. Zero-carbon fuels would need prices of 416 USD/tonne of carbon to reduce shipping emissions by 64% by 2050. The height of an IMO carbon price strongly depends on the political will among member countries. Prices of over 400 USD/tonne should be firmly on the table.

Second, carbon pricing could raise revenues for investing in research, innovation, and zero-carbon infrastructure, including designing and deploying zero-carbon ships. Estimates on the amount of funding necessary vary widely. Maritime consultancy UMAS estimated⁴ the total investment necessary for decarbonising the shipping industry by 2050 at \$70-95 billion annually between 2030 and 2050 - just for capital expenditure.

These are huge sums, and the investments in infrastructure might be front-heavy (as in, large investments at the beginning) to ensure other technologies and fuels are feasible for large-scale deployment. Therefore, carbon pricing would need to raise significant revenues early, while it might be politically easier to start with lower prices that increase over time.

An International Monetary Fund (IMF) working paper,⁵ however, estimates that a global carbon price could raise funds as follows: a carbon price of \$75 per tonne in 2030 (increasing to \$150 per tonne by 2040) would be able to raise \$75 billion in 2040 and \$150 billion in 2050.

To have a climate impact, shipping companies must understand and trust that they will pay an actual and effective price for their pollution. There should be no free allocation of permits or access to cheap project-based offsetting credits as they would render the system far less effective at decarbonising this sector - or not effective at all.

4. Will carbon pricing be enough?

Carbon pricing alone will most likely be insufficient to clean up the shipping industry.

Firstly, some technologies and practices that would save money AND emissions are still not being rolled out universally (propeller maintenance, for example). Split incentives (those owning the ships and those running them are different companies) likely play a role here and need to be addressed. A carbon price alone will not magically remove all hurdles to implementing these financially beneficial climate solutions.

Second, we cannot afford to wait for what will likely be a very slow political process at the IMO before a carbon price is implemented. The world needs urgent climate action in this decade. The IMO needs to speed up its slow pace and rectify its low ambition on short-term climate action. Countries at the IMO must not let a prolonged MBM discussion divert attention from other effective greenhouse gas reducing measures such as slow-steaming and fuel efficiency standards.

If the political will is lacking to enforce high enough carbon prices, other policies (such as stringent energy efficiency targets) will need to pick up the slack to ensure the sector does decarbonise.

Therefore, carbon pricing should become one key tool in the climate policy toolbox that tackles the decarbonisation of the shipping sector from various angles. The critical question is whether the final toolkit of complementary policies can actually deliver a decarbonised shipping sector.

4 UMAS (2020), *"The scale of investment needed to decarbonize international shipping"*

5 IMF (2018), *"Carbon taxation for International Maritime Fuels: Assessing the Options"*

5. What should revenues be spent on?

Deciding on what to spend revenues on is likely to be highly politicised; not only the areas to be invested in, but also where the funds will end up geographically.

If the revenues are earmarked to too many causes and concerns, they risk becoming watered down and ineffective. Therefore, carbon pricing revenues should be invested in a limited number of areas:

A. Financing in-sector climate action should lead to substantive emission reductions, for example through the use of renewable energy and investing in energy savings technologies. The list of potential climate areas to invest in includes:

- Proving new technologies on the water with whole ship demonstrations
- Retrofitting existing ships
- Shoreside electrification
- Investing in R&D, sustainable supply and infrastructure related to renewable fuels (e-fuels/fuel cells etc.)

B. Revenues should be used to **address equity and fairness concerns** (including so-called Common But Differentiated Responsibilities and Respective Capabilities - CBDR-RC). The Paris Agreement implies that all countries and sectors must decarbonise. However, less developed countries must be shielded from undue burden. For example, they could be exempted from climate action related costs such as potential increased costs of transport or imports, through rebates. These rebates could also finance the climate transition and increased climate resilience in specific countries and regions.

C. Carbon pricing revenues could also be used to **alleviate socio-economic concerns** and impacts related to carbon pricing for example through financing re-skilling schemes for workers.

6. How to implement the Common But Differentiated Responsibilities and Respective Capabilities in a fair and effective way?

Implementing exemptions could have significant perverse impacts, as actors play the system to minimise their carbon price exposure. This could cause two potential types of regulatory avoidance: reflagging and rerouting. Reflagging would result from carbon pricing coverage based on flag nation or country of genuine control - with some countries/regions exempted from the scheme. However, this could lead to the reflagging of ships to exempted countries to avoid any carbon pricing costs.

Regulatory avoidance through rerouting, on the other hand, could result from a route-based approach. For example, suppose that routes involving Least Developed Countries (LDCs) or Small Island Developing States (SIDS) are exempted from the scheme. In that case, more emitting ships could be rerouted to cover those routes, or additional and unnecessary port calls would take place in exempted countries.

Both types of regulatory avoidance undermine the carbon pricing scheme's environmental effectiveness and could shift air pollution and related health impacts on exempted countries and/or routes.

Exempting routes or countries is therefore not the way forward. Exemptions should instead take the shape of rebates: revenues routed to a specific list of countries.

But who should be granted rebates? The 1992 United Nations Framework Convention on Climate Change divided the world into developed and developing countries - but these groups have remained fixed since then and are outdated. Therefore, whom to shield should shift from "all developing countries" to a set of "deserving countries", a very political question.

The IMO should focus on countries that have low incomes and/or are at greater risk of climate change induced destruction; especially if these countries bear no historical responsibility for the climate crisis. The group of “deserving” countries should be limited to Least Developed Countries and low-income Small Island Developing States.

If well implemented, CBDR-RC concerns could have positive impacts on those countries considered “deserving” and increase international support and buy-in for climate change action - both among negotiators and citizens from those countries.

7. No free pollution permits or offsetting

Allowing operators of ships to use offsets for compliance is to be avoided at all costs for a variety of reasons.

Firstly, the environmental integrity and additionality of offsetting projects are problematic at best. Öko-Institut⁶ for example, estimates that only 2% of projects under the UN offsetting scheme the Clean Development Mechanism (CDM) were highly likely to be additional. Every project that was not additional, increased emissions globally, as countries and companies relied on these credits to compensate for their own lack of emission reductions.

Second, carbon pricing needs to reduce emissions in the maritime sector itself, setting it on a path to full decarbonisation, and contribute to the globe as a whole reaching the goals of the Paris Agreement. Offsets and the zero-sum-game logic behind them can only postpone climate action in the sector.

Finally, it would limit revenues. For the carbon pricing scheme to raise significant revenues, companies must pay an actual price for their pollution instead of buying cheap offsetting credits to “compensate” for their emissions.

It would be in the interest of the shipping industry to support carbon pricing that recycles revenues back into the maritime sector - funding the climate solutions that they will use. An offsetting mechanism that might be cheaper in the short-term would not help decarbonise shipping in the long run.

8. How can we enforce a carbon budget?

The shipping sector needs to have a transparent and environmentally ambitious carbon budget in line with the 1.5°C target. How to do this depends on the type of carbon price enforced:

- In an emission trading scheme, a clear cap that decreases over time and reaches zero can be built in - forcing carbon prices upwards as the annual cap tightens.
- A carbon budget related to levy would be more complicated to implement. The height of a carbon levy does not automatically translate into a total amount of carbon emissions annually (as an ETS cap does). This problem can be solved by (a) setting a clear long-term decarbonisation target with frequent intermediate milestones and (b) regularly reviewing the levy’s height to see if it is delivering emission reductions in line with the long-term and intermediate targets. If the levy seems to lead to insufficient emission reductions, its height would then be revisited.

⁶ Öko-Institut (2016), “How additional is the Clean Development Mechanism?”, 2016

9. Who should be responsible for paying the carbon price?

To maximise the impact of the carbon pricing mechanism, those with the most power for making the operational and investment decisions that determine emissions should be responsible for compliance.

In the shipping sector, these are the operators of an individual vessel. They can take operational measures to reduce emissions and have an incentive to charter only the most fuel/emission efficient vessels. This creates an indirect incentive for owners to invest in greening their vessels.

10. How should a global maritime carbon price interact with national and regional measures?

Some countries and regions are considering their own climate actions for the shipping sector in the absence of progress at the global level. The most relevant is the EU's process to include incoming and outgoing ships in their emissions trading scheme (EU ETS). The European Commission is expected to propose this as part of the upcoming Fit for 55 climate and energy policy package. In September 2020, the European Parliament already backed the inclusion of international shipping to and from EU ports into the EU ETS.⁷

What happens if and when the IMO also adopts a carbon pricing scheme?

The difference in climate ambition between the two schemes should be a key factor when addressing this interaction. More environmentally ambitious measures should not be watered down or discarded just because a global measure is in place. Countries and regions should retain the right to go above and beyond any international measure, especially if they deem it insufficiently effective and not in line with the 1.5°C target. Two of the main findings of the 4th IMO GHG study highlight why:

- Emissions from shipping continue to increase, and we are running out of time.
- Approx. 30% of shipping emissions are domestic, not international.

⁷ For more details, [see the CMW press release](#)

What are the conclusions?

There are various elements that need to be considered when designing a global carbon pricing scheme for shipping. First and foremost, it must deliver on the environmental side. A clear, zero-emissions pathway in line with the 1.5°C target is essential, pushing behavioural change, and research and investment towards a zero-carbon maritime transportation sector. Offsetting and exempting countries from the scheme would undermine this.

Governments at the IMO should not lose sight of countries and people likely to be affected most by the measures' economic impacts and climate change itself. Rebates should focus on ensuring countries, communities and people are not left behind during the transition.

There continues to be a strong need for complementary policies to work hand-in-hand with carbon pricing to ensure at scale, fast and sustained uptake of mitigation measures. Carbon pricing is unlikely to deliver full decarbonisation alone but can provide substantial support for other actions. Therefore, the design of a carbon pricing mechanism should accompany other measures and even support them.

Finally, international measures can under any circumstances be allowed to undermine more effective climate action at national or regional level.

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