



WATSON INSTITUTE
INTERNATIONAL & PUBLIC AFFAIRS

BROWN UNIVERSITY

**CLIMATE
SOLUTIONS
LAB**

**The Politics of Climate Change at the
International Maritime Organization**

CSL White Paper

August 2021

The Climate Solutions Lab is housed at the Watson Institute of International and Public Affairs at Brown University, dedicated to *creating, learning, and distributing* solution-oriented climate knowledge, at Brown and across the world. The Watson Institute is a community of scholars, practitioners, and students whose work aims to help us understand and address these critical challenges. It is dedicated to meaningful social science research and teaching, and animated by the conviction that informed policy can change systems and societies for the better.

Watson Institute for International and Public Affairs
Brown University
111 Thayer Street, Box 1970
Providence, RI 02912-1970
Email: watson_institute@brown.edu
Web: <https://watson.brown.edu/>
Twitter: @WatsonInstitute

Statements and views expressed in this report are solely those of the author(s) and do not imply endorsement by Brown University or the Watson Institute for International and Public Affairs.

Author: Jan Stockbruegger

White Paper Editor: Jeff D. Colgan

Dr. Jan Stockbruegger is a Ph.D. graduate of the Department of Political Science at Brown University. In 2021-22, he serves as a Dean's Faculty Fellow.

Dr. Jeff D. Colgan is Director of the Climate Solutions Lab and the Richard Holbrooke Associate Professor in the Department of Political Science and Watson Institute for Public and International Affairs at Brown University. Follow him on Twitter @JeffDColgan.

Seaborne vessels carry up to 90 percent of world trade. Shipping is the most fuel-efficient means of global transportation, but the sector also contributes [1,056 million tons of](#) greenhouse gas (GHG) emissions annually¹ – a figure that rivals the emissions of [Germany](#).² Reducing GHG emissions from shipping is difficult because low carbon fuels, such as [hydrogen](#), are not yet readily available for large vessels.³ If left unchecked, however, emissions from shipping will continue to rise and could account for up to [17 percent of global GHG emissions by 2050](#).⁴ Decarbonizing shipping has thus become a major challenge for states and the maritime industry.

The International Maritime Organization (IMO) is the United Nations agency responsible for shipping. It is tasked with reducing this sector’s pollution, but as a June 2021 [New York Times exposé](#) revealed, the IMO is mostly failing to address climate change.⁵ This research brief explains the politics of climate change at the IMO and describes the major interest groups and policy options to reduce GHG emissions from vessels. It concludes with a brief outlook and implications.

Climate change and the IMO

Shipping was excluded from the 2015 Paris Climate Agreement because it is an international activity that is not easily addressed through national efforts and commitments alone. Instead, states delegated climate regulations to the IMO, which is the United Nations agency responsible for shipping. Established in 1959 and headquartered in London, the IMO facilitates technical cooperation and standard setting for marine transportation. Climate change is addressed in the IMO’s [Marine Environment Protection Committee \(MEPC\)](#), which is chaired by Japan and “[has the](#)

[power to adopt and amend legislation governing marine pollution from ships, including GHG emissions and energy efficiency regulations.](#)⁶ Yet efforts at the IMO to address climate change and reduce GHG emissions from shipping have remained very limited. The [IMO's 2018 strategy](#) on climate change, for instance, does not even include specific targets for achieving carbon neutrality, let alone binding regulations to meet such targets. At its meeting in [June 2021, the MEPC](#) failed to adopt effective short-term measures to increase the energy efficiency of vessels and reduce GHG emissions from shipping over the next few years.⁷

Actors and their interests

The major political challenge in decarbonizing shipping are divisions within the IMO between those who support climate change regulations – the pro-climate regulation camp – and those who don't – the anti-climate regulation camp. The **anti-climate regulation camp** dominates the IMO. It consists of countries and industry associations who benefit from maritime trade and low shipping rates, in three main groups. First, there are countries for whom shipping is a major source of income. This includes open ship registries – so-called Flags of Convenience like Panama and Liberia – and major ship owning countries like Greece and Japan. Second, there is a group of poor and middle-income countries opposed to climate regulations, including political heavyweights like China, Brazil, and Russia. These states are concerned that tighter environmental regulations will undermine growth and increase the costs of raw materials and basic consumer goods. And third, the [shipping industry](#) is another important member of the anti-regulation camp at the IMO. [Major shipping companies](#)

[and industry associations](#) not only participate in IMO working groups as observers, but they also have representatives in national delegations and often represent smaller nations and Flags of Convenience at the IMO. This allows the shipping industry, in collaboration with other actors, to shape major regulatory debates and policy decisions on climate change at the IMO.⁸

The small but growing **pro-climate regulation camp** is trying to challenge the influence of the anti-regulation camp at the IMO. Again, this camp has three main groups. The first and most important is [the European Union \(EU\)](#) and major EU member states, including Germany and France, which aim to reduce emissions from shipping as part of their ambitious climate change agenda to achieve net-zero carbon emissions by 2050.⁹ The second group consists of small Pacific Island States who view climate change and rising sea levels as an existential threat. This group is led by the Marshall Islands, who is an influential actor at the IMO and one of the world's largest Flags of Convenience.¹⁰ Third, civil society organizations and environmental justice NGOs, such as the [Clean Shipping Coalition](#),¹¹ lobby for more effective climate change regulation for shipping. They put pressure on the IMO to adopt a more ambitious agenda to decarbonize maritime transportation.

Under President Biden, the United States is supporting the pro-regulation camp. Special Envoy for Climate John Kerry promised to “[work with countries in the IMO to adopt the goal of achieving zero emissions from international shipping by 2050](#)”.¹² The United States' position is not consistent, however. Under the Trump administration, climate change was not a priority.

Policy options

Three policy options to reduce GHG emissions from shipping are currently being discussed at the IMO and in other international forums and organizations: (1) a business-as-usual approach, (2) a global carbon tax, and (3) regional governance regimes such as including shipping in the European Union's Emission Trading System (ETS). A nascent fourth option, focusing on port cities, is also worth consideration.

The **business-as-usual** approach is favored by the anti-climate regulation coalition that dominates the IMO. Under the [IMO's climate change strategy](#), climate regulations would be tightened over the years but remain below a level that would force ship owners to reduce GHG emissions. The IMO's current aim is to reduce the shipping sector's emissions by 50 percent by 2050.¹³ Not only is that goal incompatible with the 2015 Paris Climate Agreement, but the IMO has also failed to take effective measures to implement this limited objective. [The IMO's short term energy efficiency measures](#), for instance, not only contain many loopholes such as allowing non-compliant ships to continue operating for three years, but they also fail to provide enforcement and compliance mechanisms, such as revoking a ship's operating license.¹⁴ Improvements in shipping energy efficiency over the past few years have thus been driven not by IMO regulations but by cyclical [higher fuel prices and low freight rates](#).¹⁵

The second option, a **global IMO carbon tax on shipping**, is spearheaded by the Marshall Islands (which is, ironically, also one of the largest Flags of Convenience) and other small Pacific Island States. The tax would start at [\\$100 per ton on all GHG emissions from shipping](#) and increase every five years until it reaches \$250 to \$300 per

ton. The tax would not only level the playing field for alternative sources of energy, such as hydrogen, but it would also raise revenues to fund climate change adaptation in vulnerable countries and to subsidize the development of low-carbon technologies.¹⁶ The proposal has received a mixed response. Many European countries support the idea of a carbon tax but regard the price of \$100-\$300 as too high. Panama and other major shipping nations, on the other hand, have [rejected](#) a carbon tax, arguing that it would increase shipping rates and increase the costs of trade.¹⁷ The International Chamber of Shipping, the world's largest shipping association, has instead proposed a [small carbon fee of only \\$2 on every ton of fuel consumed by ships](#) to fund research and development efforts. The proposal is backed by Greece, Japan, Liberia, and other shipping nations.¹⁸ Maersk, the world's largest shipping company, on the other hand has recently floated the idea of a [carbon tax of \\$50 to \\$150 per ton](#).¹⁹

The lack of progress on climate change and the dominance of the anti-climate regulation camp at the IMO is a major source of frustration for the EU and other pro-regulation actors. Consequently, the EU is currently developing plans to decarbonize the maritime industry without the IMO. The EU wants to include shipping in its **Emission Trading System (ETS)** gradually from 2023 and ensure that all emissions from shipping are covered by the ETS in 2026. In addition to putting a price on total GHG emissions, the EU also seeks to [introduce](#) goal-based fuel "GHG intensity" targets for ships, as measured by tons of Well-to-Wake (WTW) carbon dioxide equivalent "to account for all the life-cycle GHG emissions (CO₂, CH₄, N₂O) of the different fuels and relevant engine technologies."²⁰ The EU wants to [reduce](#) ships' GHG intensity by 2 percent from 2025, stepping up to 6 percent in 2030 and eventually

75 percent in 2050.²¹ Non-compliant ships and companies could be [banned](#) from EU ports.²²

Whether the EU can go through with its plans will depend in part on actions by the US and other major trading and shipping nations. Nevertheless, the shipping industry is increasingly worried that the EU's move will lead to the emergence of a patchwork of regional regimes that not only complicates global shipping operations but that also weakens the IMO and undermines the industry's influence over global maritime regulations.²³ For that reason, the IMO's current minimal approach to climate change might backfire against the anti-climate regulation camp that supports that very approach.

A fourth option, not yet under active consideration at the IMO or elsewhere, is to support [port cities](#) in their efforts to reduce GHG emissions. Ports are not currently [regulated by the IMO](#),²⁴ but they can play a major role in decarbonizing the maritime industry. Port cities need to provide the infrastructure required to switch from oil to natural gas and renewable fuels for vessels. Port cities can also adopt "green port dues" for ships that fail to comply with certain environmental standards to incentivize energy efficiency measures such as speed limits and investments in hydrogen and bio-fuel technologies.²⁵ port cities have incentives to adopt such measures, even though they affect port competitiveness, because rising sea levels [threaten port operations](#) as well as coastal settlements and infrastructures.²⁶

This strategy could work in the following way. Regional initiatives could strengthen cooperation between the leading ports in [Europe](#), [North America](#), and [East Asia](#), the world's largest trading and economic regions. Each initiative could bring

together the top 10 to 20 regional ports to ensure market power and to limit the problem of competitive pricing by non-participating ports in the area. These regional ports could then adopt common energy efficiency standards and set fines for non-complying vessels. The income from “green port dues” and other activities could be redistributed among participating ports to compensate for port business losses and help finance climate adaptation measures and the construction of climate-friendly port infrastructures. Such payments would also provide incentives for other ports to join these initiatives and strengthen them against IMO’s efforts to undermine port city initiatives.

Outlook and implications

The IMO can expect to face growing pressure from the EU, the United States, and civil society to take more effective measures to decarbonize shipping operations. The United States has not yet articulated a policy on how to reduce GHG emissions from vessels but is publicly supporting efforts to decarbonize the maritime industry. In addition, China is increasingly willing to cooperate with the US and the EU to tackle climate change, as indicated by its commitment to help meet global emissions targets and achieve carbon neutrality by 2060.²⁷ Moreover, it is not just national governments that are changing. Major shipping companies are starting to promote higher energy efficiency standards to increase their market share and to raise the costs for small and mid-sized companies with extremely low profit margins.²⁸

The IMO thus risks being outflanked by other initiatives if it continues to block climate change mitigation efforts, as the EU’s move to include shipping in the ETS has

demonstrated. It remains to be seen whether the IMO will eventually adopt more ambitious decarbonization measures to shore up its monopoly over global maritime regulation. Even if it does, however, it might choose to do as little as possible, and still fail to go far enough to achieve the 2015 Paris Agreement temperature goals. The maritime industry's continued strong influence at the IMO as well as in the United States and major EU shipping and trading nations like Denmark, Germany, and Greece, make that minimal approach all too plausible.²⁹ The NGO Transport & Environment, for example, has [criticized](#) that the [EU's draft proposal](#) to reduce emissions from vessels would "lead to shipping mostly switching to fossil natural gas and an unsustainable amount of dubious biofuels in the foreseeable future."³⁰ The conflict between pro- and anti-climate regulation actors will therefore continue – at the IMO and elsewhere.

¹ Jonathon Saul: "Shipping's share of global carbon emissions increases." Reuters, August 4, 2020. <https://www.reuters.com/article/us-shipping-environment-imo/shippings-share-of-global-carbon-emissions-increases-idUSKCN2502AY>.

² BBC: "Reality Check: Are Ships more Polluting than Germany?" BBC, April 12, 2018, <https://www.bbc.com/news/world-43714029>.

³ Dempsey, Harry: "Shipping Looks to Hydrogen as it Seeks to Ditch Bunker Fuel." *Financial Times*, April 24, 2021, <https://www.ft.com/content/b3cd9b09-584e-4205-8c98-2185466c9f81>.

⁴ ICCT: The International Council on Clean Transportation, Marine. <https://theicct.org/marine>.

⁵ Apuzzo, Matt and Sarah Hurtes: Tasked to Fight Climate Change, a Secretive U.N. Agency Does the Opposite. *New York Times*, June 3, 2021.

<https://www.nytimes.com/2021/06/03/world/europe/climate-change-un-international-maritime-organization.html>.

⁶ Influence Map: *Corporate Capture of the International Maritime Organization: How the Shipping Sector Lobbies to Stay Out of the Paris Agreement*. October 2017, p. 9.

<https://influencemap.org/report/Corporate-capture-of-the-IMO-902bf81c05a0591c551f965020623fda>.

⁷ Dempsey, Harry: "Global Shipping Summit all at Sea over Carbon Emissions." *Financial Times*, June 16, 2021. <https://www.ft.com/content/5090ba09-300f-4622-b001-9d444c1b3921>.

⁸ Apuzzo, Matt and Sarah Hurtes: Tasked to Fight Climate Change, a Secretive U.N. Agency Does the Opposite. *New York Times*, June 3, 2021.

<https://www.nytimes.com/2021/06/03/world/europe/climate-change-un-international-maritime-organization.html>. See also Influence Map: *Corporate Capture of the International Maritime Organization: How the Shipping Sector Lobbies to Stay Out of the Paris Agreement*. October 2017.

<https://influencemap.org/report/Corporate-capture-of-the-IMO-902bf81c05a0591c551f965020623fda>.

⁹ European Commission: “Reducing emissions from the shipping sector.”

https://ec.europa.eu/clima/policies/transport/shipping_en

¹⁰ The Marshall Islands account for 13 percent of the world’s merchant fleet tonnage. UNCTAD: *Review of Maritime Transport 2020*. United Nations Conference on Trade and Development, 2020, p. 44.

¹¹ Clean Shipping Coalition, <http://www.cleanshipping.org/>

¹² Costas Paris: “U.S. Push for Carbon-Neutral Ships Expected to Reveal Industry Divisions.” *Wall Street Journal*, May 5, 2021. <https://www.wsj.com/articles/u-s-push-for-carbon-neutral-ships-expected-to-reveal-industry-divisions-11620207002>.

¹³ IMO: “Initial IMO GHG Strategy.”

<https://www.imo.org/en/MediaCentre/HotTopics/Pages/Reducing-greenhouse-gas-emissions-from-ships.aspx>.

¹⁴ Degnarain, Nishan: “UN Shipping Regulator Breaks Climate Pledge. What Next for Global Shipping?” *Forbes*, November 18, 2020.

<https://www.forbes.com/sites/nishandegnarain/2020/11/18/un-shipping-regulator-breaks-climate-pledge-what-next-for-global-shipping/?sh=6da19acd3792>.

¹⁵ Transport & Environment: “Shipping and Climate Change”.

<https://www.transportenvironment.org/what-we-do/shipping-and-environment/shipping-and-climate-change>.

¹⁶ Coren, Michael J: “Shipping Now Faces the Highest Price on Carbon for Any Global Industry.” *Quartz*, May 8, 2021. <https://qz.com/2006668/the-global-shipping-industry-faces-a-carbon-tax/>.

¹⁷ Lo, Joe: “Pacific Islands Make Lonely Case for Carbon Price on Shipping.” *Climate Home News*, June 16, 2021. <https://www.climatechangenews.com/2021/06/16/pacific-islands-make-lonely-case-carbon-price-shipping/>.

¹⁸ Fiona Havey: “Shipping industry proposes ‘moonshot’ fossil fuel levy.” *The Guardian*, March 10, 2021. <https://www.theguardian.com/environment/2021/mar/10/shipping-industry-proposes-moonshot-fossil-fuel-levy>.

¹⁹ Wittlells, Jack: “Maersk Seeks \$150-a-Ton Carbon Tax on Shipping Fuel.” *Bloomberg*, June 2, 2021. <https://www.bloomberg.com/news/articles/2021-06-02/shipping-giant-maersk-seeks-150-a-ton-carbon-tax-on-ship-fuel>.

²⁰ Transport & Environment: “Draft FuelEU Maritime proposal - Quantifying the risks of a climate and environmental disaster in the making.” June 2021, p. 1.

https://www.transportenvironment.org/sites/te/files/publications/2021_06_TE_analysis_Draft_FuelEU_Maritime_proposal.pdf.

²¹ Saul, Janathan and Kate Abnett: “EU Proposes Adding Shipping to its Carbon Trading Market.” *Reuters*, July 14, 2021. <https://www.reuters.com/business/sustainable-business/eu-proposes-adding-shipping-its-carbon-trading-market-2021-07-14/>.

²² Saul, Jonatha: “U.N. Adopts New Measures to Cut Ship Emissions, Critics Call for More.” *Reuters*, June 17, 2021. <https://www.reuters.com/business/sustainable-business/eu-steers-shipping-towards-carbon-trading-market-curb-emissions-2021-06-30/>.

²³ Dempsey, Harry and Peggy Hollinger and Mehreen Khan: “Shipping Boss Warns EU Carbon Plans Threaten to Raise Industry’s Emissions.” *Financial Times*, June 22, 2021.

<https://www.ft.com/content/787c5746-9925-462c-a3ff-0b3337d7a4a5>. Knowler, Greg: “Shipping Lobby Questions Legality of Europe’s Emissions Trading System.” *The Journal of Commerce Online*, September 10, 2020. https://www.joc.com/maritime-news/shipping-lobby-questiKnowons-legality-europe%E2%80%99s-emissions-trading-system_20200910.html.

²⁴ The Maritime Executive: “IMO Considers Regulating Ports.” September 12, 2019.

<https://www.maritime-executive.com/article/imo-considers-regulating-ports>.

²⁵ Isbell, Paul, and Bart Édes: “Port Cities Are Key to Reducing Maritime Carbon Emissions.” *Brink*, April 27, 2021, <https://www.brinknews.com/port-cities-are-key-to-reducing-maritime-carbon-emissions/>.

²⁶ Asariotis, Regina: “Climate change impacts on seaports: A growing threat to sustainable trade and development.” *UNCTAD Transport and Trade Facilitation Newsletter N°90 - Second Quarter 2021*. June 4, 2021. <https://unctad.org/news/climate-change-impacts-seaports-growing-threat-sustainable-trade-and-development>.

²⁷ Frogatt, Antony and Daniel Quiggin: *China, EU and US cooperation on climate and energy*. Chatham House Research Paper. March 2021. <https://www.chathamhouse.org/2021/03/china-eu-and-us-cooperation-climate-and-energy>.

²⁸ Alger, Justin, Jane Lister, and Peter Dauvergne: "Corporate Governance and the Environmental Politics of Shipping." *Global Governance* 27, no.1 (2021): 144-66.

²⁹ Greece has the world's largest fleet in terms of vessel ownership, while Germany still has the world's sixth largest fleet. Maersk, the world's largest shipping company, is based in Denmark. UNCTAD: *Review of Maritime Transport 2020*. United Nations Conference on Trade and Development, 2020, p. 41.

³⁰ Transport & Environment: "Draft FuelEU Maritime proposal - Quantifying the risks of a climate and environmental disaster in the making." June 2021, p. 1. https://www.transportenvironment.org/sites/te/files/publications/2021_06_TE_analysis_Draft_FuelEU_Maritime_proposal.pdf.