Freedom to Regulate the High Seas

How countries can meet their Paris Agreement obligation to reduce the climate impact of international shipping without conflicting with existing international law

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A study by opportunity Green
Written by Aoife O’Leary, CEO of Opportunity Green on behalf of Transport & Environment

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About Opportunity Green

Opportunity Green is an NGO working to unlock the opportunities from tackling climate change using law, economics and policy. Opportunity Green helps countries, civil society and business access the solutions that reduce emissions and bring enormous opportunities for economic development, improved health and increased democracy. At Opportunity Green we believe lawyers are obligated to analyse the existing legal systems and regulations to stop climate change. We find pathways within the present legal structure to facilitate the legislation needed to slash carbon pollution.

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Further information

Aoife O’Leary
CEO, Opportunity Green
aoife@oppportunitygreen.org
www.opportunitygreen.org
Executive Summary

The Paris Agreement obliges countries to reduce emissions in line with the temperature goal of well below 2°C and to aim for only 1.5°C. One source of growing emissions is international shipping. If it were a country, international shipping would be the sixth largest GHG emitter in the world, responsible for more emissions a year than Germany. The Paris Agreement obligation to achieve the temperature goal, includes the emissions from the maritime sector, placing an obligation on countries to act nationally or regionally to reduce these emissions. There are no regulations from the International Maritime Organization that reduce these emissions in line with the Paris Agreement, and while countries can (and should) continue to push for ambitious action in the IMO, they cannot simply wait for the IMO act if they are to meet their international obligations.

This report draws on analysis of international law to explore the legal implications of action by one state or multiple states outside the IMO on GHGs from the maritime sector. It finds that provided a few important legal and enforcement considerations are respected and built into the design of any policy measure, there are no legal obstacles to national or regional action, indeed, countries are obligated to take such action. If the IMO enacts regulations in line with the Paris Agreement countries could then be relieved of that obligation but countries cannot simply wait for ambitious IMO regulation to appear. The primary obligation for Paris Agreement signatories is to reduce shipping emissions nationally or regionally.

The UN Convention on the Law of the Sea (UNCLOS) imposes a positive obligation on states to protect and preserve the marine environment and to cooperate regionally, directly or through competent international organisations, in formulating and elaborating international rules, standards and recommend practices and procedures consistent with UNCLOS for the protection and preservation of the marine environment. UNCLOS looks to generally accepted international rules and standards as the level of protection required. For climate, the Paris Agreement, ratified by all but four countries, is the internationally accepted standard and therefore UNCLOS imposes a duty on state parties to reduce emissions from international shipping in line with the temperature goals of the Paris Agreement.

Thus, there is an international obligation to act if no adequate action is taken at IMO level to reduce emissions in line with the Paris Agreement. Where that action is in accordance with international law, there can be no legal objection to any country or region acting.

Countries have nearly unlimited sovereign jurisdiction over their ports and thus can impose a very broad range of conditions on the entry of vessels into their ports. UNCLOS provides no automatic right of entry into foreign ports. Once vessels voluntarily enter the port of a state party, they are thereby agreeing to submit to the conditions of entry to that port, and this can extend to where these conditions have extraterritorial consequences.

It is important to note that several countries have already enacted maritime regulations which have extraterritorial effect, such as the EU and China’s respective rules on monitoring and reporting CO₂ emissions. Any new GHG policy with extraterritorial effect should be enacted by imposing liability as a condition of entry to port. For any measure covering emissions from the entire journey, enforcement should occur in Port or in connection with Port services. In those cases, the fact that the measure would cover the emissions for the whole travel length would only be an expression of the polluter pays and the proportionality principles. Under International law, these measures would have a sufficient link with the country that enacted them due to the territoriality principle and the sovereignty of third countries would be respected in the sense that the measure would not preclude them from imposing a similar system. Any entry of a port is voluntary and by voluntarily entering, the ship voluntarily submits to that port’s rules and regulations. This is true of any product regulation, any
country can set standards on any product entering their territory, and the exporting country can either meet those standards or simply choose not to export to that country.

Prescriptive jurisdiction to enact measures with extra territorial effect is available under general international law where there is "substantial and genuine connection between the subject-matter of jurisdiction, and the territorial base and reasonable interests of the jurisdiction sought to be exercised." This means that international law allows states to enact measures that have extra-territorial effect where there is a substantial and genuine connection between the State regulation and the reasonableness of the regulation. Every country has an obligation under the Paris Agreement to reduce emissions from the maritime sector and taking responsibility for the emissions from journeys to or from their ports is reasonable in the circumstances of climate change.

The main restrictions upon the imposition of conditions of entry to port is that they must not violate the principles of non-discrimination, good faith and non-abuse of right. Port States have the right to take all necessary measures to ensure that any vessel entering their ports complies with their regulations, including monetary penalties, refusal of access and even extending to actions taken outside the port, such as inspections. Where a measure is non-discriminatory it will not fall foul of the WTO Rules and such a measure would be in line with UNCLOS and thus acceptable to the UNCLOS Tribunal.

Therefore, if the regulation of shipping emissions is enacted in accordance with the principles of non-discrimination, good faith and non-abuse of right, and designed in ways that minimise impact on the right of innocent passage and freedom of high seas and respects the sovereignty of other countries, the measure will be in accordance with international law. A clear example of this is the EU’s proposed regulation of shipping under the Fit for 55 package that includes adding shipping to the EU’s Emission Trading System and the FuelEU Maritime Regulation.

This means that countries have many policy options which can be used to regulate GHG emissions from vessels to ensure they meet their obligations under the Paris Agreement including an emissions charge or levy; inclusion in an emissions trading system; fuel or emissions standards; imposing a mandatory operational or design efficiency standard; differentiated harbour dues and mandating slow steaming or imposing speed limits. However, this briefing confines itself largely to legal issues and does not take a position on the optimum policy solution. Suffice to say that whatever mitigation option is chosen, it must drive emissions cuts in line with the temperature obligations of the Paris Agreement if it is to meet the requirements of international law.

This briefing in no way aims to undermine momentum or the desirability of a global solution to maritime emissions adopted under the auspices of the IMO. While a global agreement in line with the Paris Agreement would be desirable, the IMO has yet to reach an agreement on a specific measure that meets the ambition of the Paris Agreement. Countries have an obligation under the Paris Agreement to reduce shipping emissions and that legal obligation requires countries to act nationally or regionally. Waiting for the IMO to act is not in line with the legal obligations discussed in this paper.
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1 Introduction

The world has committed in the Paris Agreement to keeping the temperature rise from climate change well below 2°C and pursuing a rise of only 1.5°C. International shipping is responsible for 3% of all emissions worldwide per year but the regulations to tackle those emissions agreed in the International Maritime Organization (IMO) are only consistent with a 3°C pathway or worse. This report considers the combined obligations upon countries from the Paris Agreement and the UN Convention on the Law of the Sea (UNCLOS), and the interaction of both with regulations on the emissions of GHGs agreed at the IMO. While not every country is a member of UNCLOS, the treaty has been treated as customary international law by courts, international organisations and countries who are not party to UNCLOS. Therefore, this paper is written assuming that countries will comply with their legal obligations under UNCLOS or even if not a signatory, not wish to act outside of its parameters. It is of course possible that countries will chose to act outside of international law, with regard to UNCLOS, the Paris Agreement or any other legal instrument. This paper sets out what the legal obligations are under the relevant international agreements for those countries who wish to comply. The report then examines the jurisdictional limits imposed by UNCLOS in which countries can act to meet any climate obligations imposed by the combination of the Paris Agreement and UNCLOS itself. The report concludes by considering the potential for enforcement and challenge to any country that acts outside regulations agreed at the IMO.

2 Paris Agreement Requirements

The Kyoto Protocol first looked at the challenge of emissions from the maritime sector in 1997, stating in Article 2(2) “the parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gases not controlled by the Montreal Protocol from... marine bunker fuels, working through ... the International Maritime Organisation.” When it came to the Paris Agreement, there was no specific mention of maritime emissions but a 2021 analysis has shown that the Paris Agreement includes maritime emissions in the temperature goal. Indeed, no common sense reading of the temperature goal of the Paris Agreement could exclude maritime emissions as the goal would be almost entirely unachievable were maritime (and aviation) emissions not included. In addition, achieving the temperature goal is binding:

The wording "holding the increase in the global average temperature to well below "2°C above pre-industrial levels ..." formulates a clear upper limit that must be regarded as binding hard law and an obligation of result, not only of conduct. The threshold of "well below 2°C" (emphasis added) is not an entitlement of Parties to exploit the 'space' up to 2°C. It is a maximum limit that shall not be reached. The Paris Agreement's temperature goal

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1 4th IMO GHG study, 2020, MEPC 75/7/15.
thus contains strong language of legal effect, leaving no discretion of Parties to follow divergent temperature goals.\textsuperscript{5}

This is a step change from the Kyoto Protocol which called on countries to use a process (working non-exclusively through the IMO in relation to maritime emissions). Instead, the Paris Agreement creates an obligation of outcome: to achieve the temperature goal. The method the Paris Agreement requires states to use is to “pursue domestic mitigation measures” to achieve the Agreement’s temperature targets. Domestic measures are nowhere stated not to include measures that would tackle the emissions of international shipping. ‘Domestic’ in this context means action taken at the national level to reduce emissions and does not limit countries from tackling international shipping. The 2021 analysis therefore further concludes that the Paris Agreement obliges countries to include maritime (and aviation) emissions in their Nationally Determined Contributions (“NDCs”), stating, “The obligation to include international aviation and shipping emissions in NDCs is particularly clearly imposed on developed country Parties, who are exorted in Article 4(4) to undertake economy-wide absolute emissions reductions targets. International aviation and shipping emissions are deeply integrated into countries’ economies and certainly fall within the definition of emissions involving the whole of a country’s economy.”

As reducing emissions from international shipping is required in order to meet the temperature goals and there are no IMO regulations to reduce shipping emissions in line with the Paris temperature goal, action on international shipping emissions is required nationally. Further, while the Paris Agreement does not prescribe any measures and allows individual countries to determine the mix of policy that will compromise that countries’ contribution to reducing emissions, it does require that measures be “ambitious”, “represent a progression over time” and be taken with a view to achieving the purpose of the Agreement (Article 3).

Thus, any reading of the Paris Agreement can only conclude that international shipping emissions are covered by that Agreement and that there follows a requirement on States to reduce those emissions and do so using national jurisdiction (without excluding the possibility of international agreements to tackle the emissions). This conclusion is only reinforced by the obligations set out in UNCLOS.

3 Law of the Sea Obligation

UNCLOS requires country parties “to protect and preserve the marine environment” in Article 192. Article 194 further requires states to “take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source”. This article further goes on to state that all sources of marine pollution including “the release of toxic, harmful or noxious substances, especially those which are persistent, from land-based sources, from or through the atmosphere or by dumping” are covered (Article 194(3)). This Article clearly addresses GHG emissions from maritime shipping. Boyle sums up the scope of the pollution covered in UNCLOS as “all airborne and land-based sources of marine pollution comprehensively, including those currently generating CO\textsubscript{2} emissions and other GHGs.”\textsuperscript{6}

The question then is what is required of States to comply with the obligation to protect and preserve the marine environment under UNCLOS? The obligation is very general: to “prevent, reduce and control”. UNCLOS goes on to require that national laws “shall be no less effective than” generally

\textsuperscript{5} Ibid.

accepted international rules and standards. When it comes to climate the generally accepted international rules and standards must mean the obligations set by Paris Agreement.\(^7\) Again Boyle sums it up thus: “any realistic view of what ‘generally accepted international rules and standards’ means for the purposes of [UNCLOS], the Paris Agreement would appear to fall within that category.”\(^8\)

The regulations put in place by the IMO are also relevant here as another source of generally accepted international rules and standards. However, regarding climate, the Paris Agreement is the preeminent international standard as it is more widely accepted (in terms of country parties) and in terms of specialised subject matter. While the IMO is the specialised agency for international shipping and has attempted to regulate emissions therefrom with the EEDI, EEXI, CII, DCS and SEEMP\(^9\) having been agreed, it is not enough to simply say that the IMO has acted. The signatories to the Paris Agreement must ensure that the temperature targets of the Paris Agreement are met. The cumulative effect of IMO measures does not put the shipping sector on a pathway consistent with the Paris Agreement.\(^10\) Therefore countries that are parties to the Paris Agreement and those countries that are parties to UNCLOS, or indeed, any country that is party to either of those treaties must act to reduce emissions from international shipping in line with the Paris Agreement. In the absence of global regulation that meets this standard from the IMO (or other source), the obligation falls upon individual states to regulate.

Thus, the question is what jurisdiction countries have over emissions from international shipping. The next section will examine the jurisdictions defined in UNCLOS and how these ensure any country can enact regulations that are effective while not conflicting with any existing international law.

## 4 National Jurisdiction under UNCLOS

Having established that the Paris Agreement creates an obligation to reduce emissions from maritime transport in line with the temperature goal therein, this paper will now turn to the United Nations Convention on the Law of the Sea (“UNCLOS”)\(^11\) which defines the rights and responsibilities of nations in their use of the world’s oceans. For countries which are signatories to UNCLOS, the provisions of UNCLOS usually become part of the internal legal order of that state, however an examination of the internal legal arrangements of all IMO member states is beyond the scope of this paper.

### 4.1 Outline of UNCLOS Regulation

UNCLOS distinguishes between several zones in terms of the territory of its members which are summarised below:

- internal waters (which includes ports)

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\(^8\) Ibid pg 95.

\(^9\) These are the Energy Efficiency Design Index, the Energy Efficiency Design Index for Existing Ships, the Carbon Intensity Indicator, the Data Collection System and the Ship Energy Efficiency Management Plan.


territorial waters (up to 12 miles from shore)
contiguous zone (a further 12 miles from shore)
exclusive economic zone ("EEZ") (up to 200 miles from shore)
the high seas (everything else)

UNCLOS grants its members varying degrees of jurisdiction over the first four types of territory, but the high seas are reserved as beyond the jurisdiction of any State. In addition, the varying geographical jurisdiction, there are three types of State jurisdiction under UNCLOS:

4.1.1 Flag States:
- Full jurisdiction over all ships flying their flag or registered at the registry, though any regulations imposed cannot be lower than the internationally agreed standards. (UNCLOS Article 211(2))
- Ships under a State flag shall be subject to exclusive jurisdiction of that flag State on the high seas. (Article 92 UNCLOS)
- Every State shall effectively exercise its jurisdiction over ships flying its flag and shall take necessary measures to ensure that the master, officers and, to the extent appropriate, the crew are fully conversant with and required to observe the applicable international regulations concerning the prevention, reduction and control of marine pollution. (Article 94 UNCLOS)

4.1.2 Coastal States:
- This is where a country regulates all ships that pass through its coastal waters.
- In the EEZ, countries have jurisdiction for the protection and preservation of the marine environment (Article 56(1)(b)(iii) but limited to “generally accepted international rules and standards established through the competent international organization.” (Article 211(5))
- In territorial waters coastal States have general jurisdiction except regarding construction, design, equipment and manning standards (“CDEM Standards”) (Article 211(4))

4.1.3 Port States
- Unlimited jurisdiction over all ships in port, as long as regulation is in accordance with the general principles of non-discrimination, good faith and non-abuse of right. (Article 211(3))

4.2 Prescriptive Jurisdiction: What can countries regulate?
Countries can regulate pollution from ships flagged in their countries without any restriction. However, it is unlikely any one country would impose strict environmental standards on their ships as the maritime sector is inherently transnational, where ships have the possibility of changing flag quite easily even if in the high seas. Further the member states will likely be cognisant that any regulation based on the flag state of a vessel could cause a significant distortion in competition due to the discriminatory implementation of the measures that the jurisdiction entails and thus this paper will only assess the extent to which countries can regulate pollution as a coastal or port State.

12 UNCLOS Article 89
13 UNCLOS Article 211(5)
14 UNCLOS, Article 211(4) not hamper innocent passage of foreign vessels. And see also UNCLOS Article 21(2): “Such laws and regulations shall not apply to the design, construction, manning or equipment of foreign ships unless they are giving effect to generally accepted international rules or standards.”
15 UNCLOS, Article 211(3)
4.3 As a Coastal State

In the EEZ coastal States have the right to regulate to protect the marine environment but this must be limited to "generally accepted international rules and standards established through the competent international organization." This is generally understood to be the IMO in general but for climate, the regulations of the UNFCCC, and in particular the Paris Agreement are relevant. An important note here is that with shifting sea levels, the designation of where a coast begins is changing and in this respect the Marshall Islands, Kiribati and Tuvalu have enacted regulations to prevent the physical change to their coastline from changing their baseline and maritime zones. With climate change more and more countries will have this difficulty which further indicates that using coastal state jurisdiction to regulate shipping emissions is not an optimal pathway.

In the territorial sea, jurisdiction is broader but still restricted by the fact that coastal States cannot unduly hamper the innocent passage of vessels, except in accordance with UNCLOS (Article 24(1)). Non innocent passage is considered as passage that is prejudicial to the peace, good order or security of the coastal State such as an act of wilful and serious pollution contrary to UNCLOS. A violation of a coastal State GHG reduction regulation would not be serious enough to render the passage of a vessel non-innocent.

However, coastal States do have jurisdiction to regulate (without hampering) vessels under Article 21 of UNCLOS. This article limits the right of innocent passage and allows coastal States to adopt laws and regulations, in conformity with UNCLOS and international law, in respect of the “conservation of the living resources of the sea” and the “preservation of the environment of the coastal state and the prevention, reduction and control of pollution thereof.” The only restriction placed upon this right is that regulations cannot relate to CDEM Standards unless applying generally accepted international rules.

Thus, UNCLOS signatories, acting in their coastal State capacity can impose regulations to reduce GHG emissions from vessels, including foreign vessels in their territorial waters if those regulations do not impose any new CDEM standards. This, however, only applies to the 12 mile zone around the coastline (the territorial sea), and in the EEZ the country is restricted to internationally recognised standards, thus it is unlikely that a country would choose coastal State jurisdiction as a basis for regulation and would rather look to enacting a measure as a port State.

4.4 As a Port State

The sovereignty of a State over its internal waters is stated in Article 2(1) of UNCLOS and it follows from Articles 8, 11 and 12 that ports form part of those waters which thereby gives the port State jurisdiction over all vessels therein. UNCLOS Article 211(3) further states explicitly that States may “establish particular requirements for the prevention, reduction and control of pollution of the marine environment as a condition for the entry of foreign vessels into their ports or internal waters or for a call at their off-shore terminals.” One of the leading experts in Maritime Law, Henrik Ringbom states

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18 Non innocent passage is considered as passage that is prejudicial to the peace, good order or security of the coastal State such as an act of wilful and serious pollution contrary to UNCLOS. See: International Law Association, Final Report of the International Law Association’s Committee on Coastal State Jurisdiction over Marine Pollution, in Report of the 69th Conference, London, 2000 at 13.
in no uncertain terms that, “the voluntary presence of the ship [in a port] subjects it to the essentially unlimited territorial jurisdiction of the port State under general international law.”

Port state jurisdiction is restricted somewhat though by the principles of non-discrimination, good faith and non-abuse of right contained in UNCLOS Article 227 which states that port and coastal States “shall not discriminate in form or in fact against vessels of any other State.” In addition, countries could have given rights in other international agreements to other states to enter their ports without restriction. While a full analysis of every international agreement is beyond the scope of this paper, there are no such rights given in UNCLOS, nor the IMO Convention, or any treaties agreed at the IMO.

This essentially means that States cannot discriminate between vessels by nationality. As the IMO acknowledges, any regulation of GHG emissions must not discriminate between ships based on flag state but can consider “appropriate differences” that are based on such factors as ship type, structure, manning and operational features. This echoes the Paris MoU on Port State control, which is a regional body that already regulates environmental matters in European waters but distinguishes between vessels according to non-discriminatory bases, such as ship type, without drawing any objections under international law. Indeed, the Paris MoU is regarded as a worldwide index of flag state performance and is used to decide which ships merit additional scrutiny upon arrival in Paris MoU member ports. This has direct relevance to GHG regulation as it will allow States to distinguish between the necessary operational features to impose regulation based on appropriate emissions criteria. Where a country regulates GHG emissions in a general non-discriminatory way then such a regulation is unlikely to be deemed abusive and as Ringbom comments, “the mere fact that the requirement in question may not be the optimal or least intrusive method of addressing those concerns hardly constitutes an abuse of right.”

This is simply the codification of customary international law as every country has always had sovereignty over its ports that has not been signed away through UNCLOS or elsewhere. Indeed, it is often recognised in IMO agreements themselves. The most recent example of this is the MEPC 77 Resolution on Protecting the Arctic from Shipping Black Carbon Emissions which encourages “Member States [of the IMO] to commence addressing the threat to the Arctic from Black Carbon emissions, and report on measures and best practices to reduce Black Carbon emissions from shipping.” This is a call for States to enact their own national measures to tackle emissions in a particularly sensitive ecosystem, which may be partially in their territory, but not necessarily. It is important to note the encouragement was not directed solely at Arctic Member States but the broader membership of the IMO, acknowledging that states have virtually unlimited port State jurisdiction, setting a precedent for other climate mitigation policies. A state could, for example, impose a penalty on any ship calling at its ports that used heavy fuel oil in the Arctic in the previous calendar year, regardless of whether that state was an Arctic State or not.

Finally, port States are given “the right to take the necessary steps to prevent any breach of the conditions to which admission of ... ships to internal waters or such a call at port is subject.” This explicitly allows States to take such enforcement measures as they think necessary to uphold the

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22 It is to be noted this is even more extraordinary when considering the Arctic as a location of regulation as Article 234 of UNCLOS gives Arctic coastal states additional powers to tackle marine pollution.
conditions attached to port access and there is no restriction on such powers in UNCLOS (further discussed below).

5 Regional Regulation

UNCLOS encourages regional regulation between States adopting the same or similar environmental protection measures in Articles 197, 211(3) and 212(3). Article 197 provides that States should cooperate on a regional basis through competent international “organizations for the protection and preservation of the marine environment.” The IMO is generally regarded as the “competent international organisation” for the purposes of UNCLOS, however Article 197 illustrates that the drafters contemplated a plurality of organisations being competent with regard to the enactment of measures to protect the marine environment and as discussed above, with regard to climate that must include the UNFCCC and especially the Paris Agreement.

There is however, one restriction on concluding regional arrangements contained in Article 311(3) UNCLOS:

“Two or more States Parties may conclude agreements modifying or suspending the operation of provisions of this Convention, applicable solely to the relations between them, provided that such agreements do not relate to a provision, derogation from which is incompatible with the effective execution of the object and purpose of this Convention, and provided further that such agreements shall not affect the application of the basic principles embodied herein, and that the provisions of such agreements do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention.”

Action outside of the IMO to meet the obligations the Paris Agreement imposed on countries need not modify or suspend the operation of any of the provisions of UNCLOS nor affect other State Parties' rights or performance of their obligations under the Convention.

6 Extraterritorial Jurisdiction

Stringent GHG regulations by any one country or group of countries could very easily have extraterritorial effect by, for example, regulating all the emissions (including those on the high seas) on any journey that ends in a port of that country. The non-discrimination principle of international law as well as environmental considerations justify a measure covering emissions from the entirety of a ship’s journey. There are also sound practical reasons, particularly regarding attribution, that support the chosen measure covering emissions from the whole trip. This section will assess the extent to which a country can enact a measure restricting or influencing GHG emissions from the maritime sector, where that measure covered emissions from the entirety of a ship’s journey – which may include the territorial waters of a third state, or the high seas before or after calling at a particular country’s Port.

There is no definitive statement in UNCLOS on whether a port State can impose regulations that have an effect on activities carried out on the high seas. Article 89 states that "no State may validly purport to subject any part of the high seas to its sovereignty." However, it is important to note that a measure to regulate GHG emissions from the maritime sector by a port State would not necessarily be characterised as exercising sovereignty on the high seas but rather restricting the GHG emissions derived from the activity of the vessel during the trip either in the high seas or elsewhere. Indeed, consequences for conduct, or static measures (such as design standards) that apply on the high seas

23 UNCLOS Article 311(3)
may be a natural corollary of port state conditions. Port States can impose CDEM Standards as a condition of entry to ports and these will travel with the ship outside the regulating State's jurisdiction. Frank notes (echoing the above outline of port State jurisdiction):

“The "extra-territorial" effects of port access conditions concerning CDEMs are purely incidental since these standards by their very nature cannot exclusively apply when the ship is in port, but necessarily extend to vessels before entry. Presumably, when foreign ships decide to operate in a particular country or region they accept the sovereignty of the port State and implicitly agree to comply with its higher safety and environmental standards, including CDEMs.”

Thus, States could require vessels to install equipment that reduced emissions before calling at their port. This would almost certainly necessitate that equipment being installed while the vessel also travels on the high seas but this does not restrict the right of the port State to require that equipment to be installed before the ship is allowed entry to port.

Secondly, under general international law a state may regulate extra-territoriality where there is a "substantial and genuine connection between the subject-matter of jurisdiction, and the territorial base and the reasonable interests of the jurisdiction sought to be exercised." This means that international law allows states to enact measures that have extra-territorial effect where there is a substantial and genuine connection between the State regulation and the reasonableness of the regulation. Any regulation in this area would be reasonable as countries have a mandate to act under the Paris Agreement.

It is relevant to any consideration of jurisdictional competence and protective port State measures, that greenhouse gases and their effects are inherently transboundary in nature. To ensure any regulation was in line with the goals of the Paris Agreement, then that regulation would have to regulate emissions extraterritorially due to the nature of international shipping.

The voluntary presence of a ship in port suggests that that ship has subjected itself willingly to the requirements for port entry. Where a country or region regulates GHG emissions on the high seas and a ship voluntarily enters that country's ports, then it can be said that the vessel has accepted that country's jurisdiction over its GHG emissions. There can be no contemplation of that country overstepping its jurisdictional competence where that competence is accepted by the vessel in question. This means that States can impose a penalty upon a vessel that does not comply with port regulations where that ship still attempts to enter the port in question. To avoid conflict with international customary law (including those parts codified in UNCLOS) it is important to exclude ships that do not enter voluntarily – for example due to duress.

Any regulation having an incidental effect on activity outside the jurisdiction of the state in question would not be the first of its kind. The quintessential example is the US ban on single hull tankers in the 1990 Oil Pollution Act, which the EU followed, driving the creation of a worldwide ban. The EU

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24 Frank, The European Community and Marine Environmental Protection in the International Law of the Sea, Martinus Nijhoff Publishers, 2008 at 213
26 For a full discussion see ClientEarth, the Legal Implications of EU action on GHG Emissions from the International Maritime Sector (2011).
proposals on the Emissions Trading System\textsuperscript{27}, FuelEU\textsuperscript{28} and other related shipping emissions measures, as well as the Chinese Regulation on Data Collection on Energy Consumption of Ships\textsuperscript{29} are further examples of countries that have used port State authority to regulate with an incidental effect on activity outside the jurisdiction of the state in question.

7 Enforcement of Jurisdiction

It has been shown that regulation of GHG emissions by countries outside of the IMO is justified under the international interest in protecting the environment. The applicable international laws provide for and anticipate such regulation. Finally, the Paris Agreement mandates such action. Thus, the final analysis of the legality of any regulation is whether the enforcement mechanisms utilised are also lawful.

7.1 Enforcement as a Coastal State

There are specific restrictions on enforcement measures that a coastal State can take to ensure compliance with its laws and regulations. Thus, the only enforcement measures that can be taken for a breach of a coastal State regulation are as follows:

- UNCLOS Article 220(1) - vessel in port: the right to institute proceedings against a vessel in respect of violation of its laws and regulations adopted in accordance with the Convention.
- UNCLOS Article 220(2) - vessels navigating in the territorial sea: the right to inspect and institute proceedings against a vessel where there are clear grounds for believing a violation has taken place.
- UNCLOS Article 220(3) - vessel in the EEZ: the right to request information to establish whether a violation of applicable international rules/standards or of laws and regulations of the state has occurred.

7.2 Enforcement as a Port State

Article 25(2) of UNCLOS gives States “\textit{the right to take the necessary steps to prevent any breach of the conditions to which admission of ... ships to internal waters or such a call at port is subject.}” This explicitly allows States to take such enforcement measures as they see necessary to uphold the conditions attached to port access and there is no restriction on such powers in UNCLOS.

Similarly, Article 194 UNCLOS recognises that States have the power to take, individually or jointly, all measures consistent with the Convention that are necessary to prevent, reduce and control pollution of the marine environmental from any source. This provision should be interpreted as including enforcement measures. Article 212(2) requires States to take “other measures” such as enforcement measures, as may be necessary to prevent, reduce and control such pollution.

UNCLOS determines in Article 218(1) and (2) that when a vessel is voluntarily within a port, the State may undertake investigations and, where the evidence so warrants, institute proceedings in respect of any discharge (which includes those to the atmosphere) from that vessel outside the internal


waters, territorial sea or exclusive economic zone of the State in violation of applicable international rules and standards established through the competent international organisation. Proceedings can be opened by any State whose internal waters, territorial sea or exclusive economic zone are affected or likely to be affected by pollution.

Monetary penalties are allowed to be imposed by UNCLOS in cases of violation or national laws/regulations or international rules and standards for the prevention, reduction and control of pollution of the marine environment committed by vessels in and beyond territorial sea.

Thus, the enforcement measures that can be taken as a port State include:

- inspection and requests for information
- refusal of access to the port (or port services)
- banning the ship from returning to port
- refusing to land or process cargo
- detention of a vessel\(^{30}\)
- fines, penalties, confiscation of cargo
- prosecution for violation of the regulation

The enforcement jurisdiction of a Port State is subject to requirements that the enforcement measures should be imposed in a non-discriminatory way, cognisant of the principles of good faith and non-abuse of right. Enforcement measures should also seek to balance UNCLOS rights and, for example, avoid undue delay to the vessel. Restriction of the right of innocent passage in territorial sea and on the right of freedom of high seas could be imposed because of the vessel's voluntary entry into port but those rights should not be disproportionately hampered. Proportionality must therefore be considered.

Designing any policy measure to ensure that any necessary enforcement always occurs in port would easily ensure compliance with UNCLOS. Any enforcement measures should be imposed in a non-discriminatory way, cognisant of the principles of good faith and non-abuse of right. In addition, they should not cause undue delays or hamper the innocent passage and respect non-discrimination, good faith and non-abuse of right. The distinction between monitoring and enforcement can be helpful here, and to allow a workable system where enforcement only takes place in port, the monitoring of data or conduct in connection with the whole journey of the vessel will be needed. Examples could include satellite monitoring for speed limits or utilising data already collected on emissions under IMO provisions.

Port State jurisdiction provides wider enforcement options than coastal State jurisdiction. If a country acts on its Paris Agreement obligations to regulate maritime emissions, it would be better to do so using port State jurisdiction in order to be able to utilise wider enforcement powers.

### 8 Challenges to Emissions Regulation

Any challenge to regulation of the Maritime Sector by a country with regard to GHG emissions can be based on claims that the regulation enacted conflicts with the national law of that country, regional law (where applicable - e.g. EU law) or international law. A review of all the national legal orders of

\(^{30}\) In this regard, Ringbom points out that “the EU (and Paris MOU) regimes have increasingly through numerous amendments, provided for detention even in the absence of an established immediate threat, and even in the absence of a more detailed inspection. Most notably, certain amendments have introduced provisions that trigger more-or-less automatic detention on the basis of failure to comply with a specific provision.” In Ringbom, The EU Maritime Safety Policy and International Law, Martinus Nijhoff Publishers, 2008 at 283.
any country that might regulate maritime emissions is beyond the scope of this briefing. However, this paper has outlined the applicable international law in the form of UNCLOS and thus this section will now go on to discuss the different courts before which a legal challenge could be brought.

### 8.1 World Trade Organization Law

Parties to the World Trade Organisation (WTO) could bring a case to the WTO Dispute Settlement Body to claim that any unilateral action by a country or region on GHG emissions would violate the General Agreement on Tariffs and Trade (the "GATT") or the General Agreement on Trade in Services (the "GATS").

The WTO rules are based on the principles of freedom of trade, reciprocity, most favoured nation and national treatment which are non-discretionary under the GATT. A Member Party to the WTO could argue that an EU measure imposing conditions related to GHG emission reduction and control on arrival to or departure from the port would affect freedom of transit regulated under Article V of the GATT, which states:

"Goods (including baggage), and also vessels and other means of transport, are in transit across the territory of a contracting party when the passage across such territory is only a portion of a complete journey beginning and terminating beyond the frontier of the contracting party across whose territory the traffic passes. There shall be freedom of transit through the territory of each contracting party. No distinction shall be made which is based on the flag of vessels, the place of origin, departure, entry, exit or destination, or on any circumstances relating to the ownership of goods, of vessels or of other means of transport."

First, this article clearly only applies when vessels are in transit through a territory, rather than calling a port. Secondly, as long as a country applied any GHG measure in a non-discriminatory manner, e.g. using kilometres travelled rather than final destination as metrics to calculate total emissions, there is no reason country measures would fall foul of this GATT rule.

Similar rules exist under XVII of GATS requiring (with certain discretionary power) States to grant treatment no less favourable than that it accords to its own like services and service suppliers.

In line with this requirement, Article III of GATT requires Parties to ensure that no requirements are imposed in order to protect domestic production. It states:

"The contracting parties recognize that internal taxes and other internal charges, and laws, regulations and requirements affecting the internal sale, offering for sale, purchase, transportation, distribution or use of products, and internal quantitative regulations requiring the mixture, processing or use of products in specified amounts or proportions, should not be applied to imported or domestic products so as to afford protection to domestic production."

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31 General Agreement on Tariffs and Trade 1994, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 187. It can also be argued that applying a environmentally-differentiated shipping charges would be a tax or charge on a service, rather than a product and thus subject to General Agreement on Trade in Services ("GATS" General Agreement on Trade in Services, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1B, 1869 U.N.T.S. 183.). In addition to a similar prohibition on discrimination in the provision of services, there is also a similar exemption for environmental measures in Article XIV(b) GATS where the measure is "necessary to protect human, animal or plant life or health." Thus this briefing will mainly deal with the GATT provisions and just referred to GATS provisions as arguments for both are the same.
This rule is applied to charges and taxes under Article III.2 of the GATT requiring the principle of non-discrimination in their imposition. It states:

"The products of the territory of any contracting party imported into the territory of any other contracting party shall not be subject, directly or indirectly, to internal taxes or other internal charges of any kind in excess of those applied, directly or indirectly, to like domestic products. Moreover, no contracting party shall otherwise apply internal taxes or other internal charges to imported or domestic products in a manner contrary to the principles set forth in paragraph 1."

Therefore, any rule imposing conditions aiming at GHG emission reductions in the maritime sector, would have to be worded in such a way that no claim can be made that it protects national production and that it is applied in a non-discriminatory manner. There is no reason that any regulation should do so as there are a variety of policy options which would reduce emissions without discrimination as banned in GATT.

However, even if a measure regulating GHG emissions from the maritime sector does discriminate between vessels by some such prohibited classification, there is an exception for environmental measures in GATT Article XX(b) and (g):

"Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: ...

(b) necessary to protect human, animal or plant life or health; ...

(g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption."

Thus, any measure regulating GHG emissions in the maritime sector would have to ensure that it is not arbitrary or unjustifiable discrimination, which can be ensured if it was adopted and applied in an open and transparent way with regard given to due participation, publication and notification.

In the Shrimp-Turtle case\(^{32}\) the WTO Dispute Settlement Body held further that unilateral trade measures can be justified under Article XX(g) of the GATT if serious negotiation efforts do not lead to a multilateral effort. Thus, it is important as discussions have been ongoing for decades in the IMO without resulting in ambitious measures that regulate maritime GHG emissions.

In the US (Gasoline)\(^{33}\) and the Brazil (Rethreaded Tyres)\(^{34}\) cases the WTO Dispute Settlement Body affirmed WTO members’ autonomy to determine their own environmental objectives. Policies aimed at mitigating climate change have not yet been discussed by the WTO Dispute Settlement Body, but the US (Gasoline) case is relevant. In this case the panel agreed that a policy to reduce air pollution from the consumption of gasoline was protected by GATT Article XX(b) and a policy to reduce the depletion of clean air was a policy protected by GATT Article XX(g) thus it is likely that any measure

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\(^{34}\) Brazil — Measures Affecting Imports of Rethreaded Tyres, Report adopted, with recommendation to bring measure into conformity on 20 August 2009.
regulating GHG emissions in the maritime sector adopted by individual countries or regions would not fall foul of any WTO rules.

Similar rules exist under Article XIV(b) of the GATT enabling States to adopt or enforce measures to protect human, animal or plant life or health. It is interesting to note that where the WTO did find a breach of a rule of the GATT, the Dispute Settlement Body can award the claiming State the right to take retaliatory measures. Thus, it would be important for any country or region enacting measures to ensure that in enacting any regulation of GHG emissions in the maritime sector, that it contains an exemption for States that have equivalent measures in place (even if put in place in the name of retaliation). Of course, countries could put in place bilateral agreements to regulate the emissions between them so that one country or region regulated the entire emissions between the countries or split the emissions between the countries.

In conclusion, a challenge before the WTO dispute settlement body against an act by one or more countries imposing GHG emission reduction measures would not be likely to succeed provided the measure respects the principle of non-discrimination. Practically as well, the WTO Dispute Settlement Mechanism is essentially paralysed due to a lack of appointed judges and until that is resolved there is effectively no probability of having any such case resolved. 35

8.2 Tribunal for the Law of the Sea

UNCLOS establishes a Tribunal on the Law of the Sea (the “UNCLOS Tribunal”) in Annex VI and an Arbitration Procedure in Annex VII. Not all the 168 signatories to UNCLOS have accepted the jurisdiction of the Tribunal. There have been only 29 cases submitted to the UNCLOS Tribunal36 to date. However, there are several relevant judgments that reinforce the argument that UNCLOS places a positive obligation on states to take steps to preserve and protect the marine environment and that the Tribunal would uphold that right if such a case came before it.

In the MOX Plant Case37, the UNCLOS Tribunal referred to Article 197 (cooperation on a global or regional basis for the protection and preservation of the marine environment) as “fundamental”. The South China Sea Arbitration38 established that any state party to UNCLOS can bring proceedings related to non-compliance with the obligation to protect the marine environment to the Tribunal. This case further established that the protection and preservation of the marine environment covered both current and future impacts on the marine environment and that the marine environment meant “rare and fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life’. The Chagos Arbitration39 reached a similar conclusion in stating “Article 194 is … not limited to measures aimed strictly at controlling pollution and extends to measures focused primarily on conservation and the preservation of ecosystems.” In both cases the ecosystems in question were coral reefs. GHG emissions from international shipping endanger coral reefs,40 along with other delicate ecosystems and this broad interpretation of the marine environment that deserves protecting in no way excludes any damage done by international shipping from its scope. While any

37 Ireland v UK, No.10 2001 ITLOS.
39 Chagos Marine Protected Area Arbitration (Mauritius v. United Kingdom) [2015] PCA Case no. 2011–3
country can reject the ruling of the UNCLOS Tribunal (as China as done with regard to the South China Sea Arbitration and the UK has not recognised the Chagos Arbitration), a court ruling creates an international legal precedent that can be used in multiple forums.

Therefore, any case brought to challenge GHG emissions regulations on shipping by one country (or group of countries) would be unlikely to succeed before the UNCLOS Tribunal. Far more likely, is that a case could be brought asking the UNCLOS Tribunal to rule against States that are not enacting measures to ensure international shipping reduces emissions in line with the Paris Agreement. Such a case would require a dispute between parties and the remedy should be an order to ensure the requirements of the Paris Agreement are met, which could include an order to draft a nationally determined contribution ambitious enough to put international shipping emissions in line with the temperature requirements of the Paris Agreement. Indeed, Antigua and Barbuda and Tuvalu have formed a Commission of Small Island States on Climate Change and International Law that is considering requesting an advisory opinion from the UNCLOS Tribunal on the legal responsibility of States for carbon emissions, marine pollution and rising sea levels. It is entirely possible that a state could request an advisory opinion from the UNCLOS Tribunal on what national responsibility is to reduce emissions from international shipping.

9 Conclusion

This paper has analysed international law with regard to emissions from international shipping. It has concluded that the Paris Agreement and UNCLOS place a positive obligation on countries to reduce maritime emissions. If the IMO enacts regulations that drive the required emissions reductions then countries would have no further obligation to act but absent action in the IMO in line with the Paris Agreement, all countries individually must reduce maritime emissions. UNCLOS gives states virtually unlimited sovereign jurisdiction over their ports and any manner of conditions can be imposed on the entry of vessels to ports. Once vessels voluntarily enter the port of a Member State, they are thereby agreeing to submit to the conditions of entry to that port, even where these conditions have extraterritorial effect. It is unlikely that any challenge to a national or regional regulation of GHG emissions from vessels could succeed. Such a measure would be in line with UNCLOS and thus acceptable before the Tribunal for the Law of the Sea. Therefore, if the regulation of shipping emissions is designed to be consonant with the principles of non-discrimination, good faith and non-abuse of right, it will not impact on any other countries' sovereignty. Such measures can be lawfully imposed. There is no restriction on regulating GHG emissions from vessels as a condition upon the right of entry to the ports of any country, and provided the law is designed utilising port state control, the prospects of a successful legal challenge are very low. Due to the obligations of the Paris Agreement, regulating international shipping emissions outside of IMO regulation does not violate international law, rather, not enacting regulations to reduce international shipping emissions in line with the Paris Agreement violates international law and must be remedied immediately.
