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The Legal Basis for IMO Climate Measures

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THE LEGAL BASES FOR IMO CLIMATE MEASURES

By Aoife O'Leary and Jennifer Brown

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EXECUTIVE SUMMARY

This paper investigates the potential legal bases for the International Maritime Organization (IMO) to enact climate measures. It finds that the IMO has broad powers to enact almost any required measure, and quickly via a tacit amendment to the International Convention for the Prevention of Pollution from Ships (MARPOL).

The Convention on the International Maritime Organization establishes the IMO and gives it very broad objectives and powers to achieve those objectives. The objectives include the "prevention and control of marine pollution from ships." The powers to achieve this objective include the drafting of conventions, agreements or other suitable instruments, and performing functions related to the objectives of the IMO. The powers are very broad and nowhere limit the type of marine pollution that the IMO Convention covers to exclude emissions of greenhouse gases. Indeed, state practice both within the IMO and in wider climate venues such as the United Nations Framework Convention on Climate Change (UNFCCC) confirm that members of the IMO interpret the term "marine pollution" to encompass greenhouse gases.

The United Nations Convention on the Law of the Sea (UNCLOS) codified the rights and responsibilities of countries with regard to the world's oceans. Though it does not primarily regulate shipping, there are sections which overlap with IMO regulations and relate to marine pollution from shipping. A careful examination of those articles and how they relate to the IMO underscores that from the perspective of international law and institutions, while UNCLOS may also have competence to address greenhouse gases, UNCLOS Parties look to the IMO to regulate greenhouse gases.

This broad power of the IMO allows for economic measures or the establishment of an independent body to advise on the climate transition. Part XIII of the IMO Convention sets out the budgetary powers of the IMO but relates solely to internal IMO matters and nowhere prohibits the adoption of economic measures by the IMO.

Once the power of the IMO to adopt economic measures or an independent body is established, the next question is what vehicle should be utilized. Climate measures should be legally binding, enforceable and implemented on a global scale as quickly as possible, as the climate crisis is urgent. The final section of this paper examines several options: the adoption of an entirely new treaty; the adoption of an entirely new agreement or other suitable instrument; or amending an

already existing instrument. While all are possible, amending an existing instrument, most likely MARPOL, in the case of greenhouse gases, is the best option to ensure the fastest entry into force of the agreed measures, while also ensuring they are legally binding, enforceable and implemented globally.

There are two avenues for amending an existing annex to MARPOL, the "rejected unless accepted" procedure and the "accepted unless rejected" or tacit amendment procedure. The choice between the two procedures is purely a political decision and can be taken by the committee in which the proposed amendments are being discussed. The tacit amendment procedure can be utilized for the adoption of any amendments to an existing annex that do not go beyond the scope of the annex or MARPOL itself. The urgency of the climate crisis requires that the members of the IMO adopt effective climate measures by the tacit amendment procedure as soon as possible.

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1. INTRODUCTION

In April 2018, the International Maritime Organization (IMO) adopted an initial strategy for the reduction of greenhouse gases from ships.[1] The question now is, what policies and measures will the IMO implement to meet the goals set out in this strategy? This paper examines the foundational documents establishing the IMO and its Marine Environment Protection Committee (MEPC), the history of these bodies, and the broader legal context in which they operate, to address three questions: first, whether the IMO has legal competence to address greenhouse gases; second, whether the IMO has legal capacity to adopt measures such as: introducing a climate fund to support low carbon technologies or a carbon pricing measure (referred to as economic measures in this paper) or setting up an independent body to assist with climate governance; and third, how the IMO may institute these measures, e.g., via an amendment to an existing treaty such as the International Convention for the Prevention of Pollution from Ships (MARPOL), adoption of an entirely new treaty, or adoption of other legal instruments.

2. IMO LEGAL COMPETENCE ON GREENHOUSE GASES

In establishing the IMO, countries came together and vested certain powers in the IMO. The power of the IMO to do anything derives from these powers as vested in it by its members and laid down in the Convention of the International Maritime Organization (the "IMO Convention"). Therefore, in considering what powers the IMO has, the first place to turn is the IMO Convention.

2.1 The IMO Convention

The IMO Convention was agreed in Geneva on March 6, 1948.[2] It established the IMO (at that time called the Inter-Governmental Maritime Consultative Organization or IMCO). Article 1 of the Convention provides that the purpose of the Organization is, inter alia:

> To provide machinery for co-operation among Governments in the field of governmental regulation and practices relating to technical matters of all kinds

[1] 'UN Body Adopts Climate Change Strategy for Shipping' (IMO, 2018) <http://www.imo.org/en/MediaCentre/PressBriefings/Pages/06greenhousegasesinitialstrategy.aspx> accessed 18 April 2018.

[2] Convention on the International Maritime Organization, 1948, Article 1.

> affecting shipping engaged in international trade; to encourage and facilitate the general adoption of the highest practicable standards in matters concerning the maritime safety, efficiency of navigation and prevention and control of marine pollution from ships; and to deal with administrative and legal matters related to the purposes set out in this Article.

The Convention further empowers and requires the Organization to undertake specific steps to achieve these aims:

> [T]he Organization shall: consider and make recommendations… Provide for the drafting of conventions, agreements, or other suitable instruments, and recommend these to governments and to intergovernmental organizations, and convene such conferences as may be necessary; … Perform functions arising in connection with [the above activities], in particular those assigned to it by or under international instruments relating to maritime matters and the effect of shipping on the marine environment.[3]

These powers are very broad and nowhere limit the type of marine pollution that can be tackled to exclude greenhouse gases. Nor anywhere are the types of measures that can be taken limited (detailed further below), nor does the Convention limit certain types of measures to dealing with certain types of issues. Therefore, the Convention contains no explicit or implicit restriction on the types of measures that can be adopted nor does it restrict the types of marine pollution that the IMO can act to tackle.

2.2 The Practice of Regulating Greenhouse Gases in the IMO

When the IMO Convention was adopted in 1948, climate change had not yet become a widespread concern. For several reasons, it is now clear that the "marine pollution" over which the IMO has been given competence includes greenhouse gases. First, as noted above, the term "marine pollution" is extremely broad; nothing in the Convention provides a narrower definition that might exclude greenhouse gases; and neither the Organization nor any of its committees (detailed further below) has ever taken a decision limiting the term to exclude greenhouse gases.

Second, the practice of the Organization and the MEPC has been to take steps – albeit incomplete ones – to address greenhouse gases from international shipping (for example, through

[3] Convention on the International Maritime Organization 1948, Article 2.

the adoption of the Energy Efficiency Design Index[4]), demonstrating that the Members interpret the term "marine pollution" as encompassing these pollutants. In September 1997, the Organization convened an International Air Pollution Conference and, by Resolution, the member states invited the MEPC to begin work on CO2 reduction strategies.[5]

Third, in December 1997, after the IMO adopted Resolution 8, the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) unanimously adopted the Kyoto Protocol, Article 2.2 of which specified that work on this topic should be pursued (non-exclusively) in the IMO.[6] While the decision of the UNFCCC is not probative as to the competence of the IMO, it is evidence of states' views. All member states of the IMO are also member states of the Kyoto Protocol, except for the United States.

Article 38 of the IMO Convention specifically authorizes the MEPC to "perform such functions as are or may be conferred upon the Organization by or under other international conventions for the prevention and control of marine pollution from ships." While the UNFCCC is not a "convention for the prevention and control of marine pollution from ships," Article 38 foresaw the need for this type of inter-convention cooperation. Furthermore, in December 1997, when the UNFCCC adopted Article 2.2, every IMO ember state was also a party to the UNFCCC and accepted Article 2.2's directive to pursue control of these emissions in IMO, lends credence to the view that the IMO member states themselves regard addressing greenhouse gases as within the ambit of their Convention.

2.3 IMO Interaction with the UNFCCC

In the two decades since the UNFCCC adopted Article 2.2 of the Kyoto Protocol, UNFCCC Parties have continued to report their maritime international "bunker fuel" greenhouse gas

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[4] 'Energy Efficiency Measures' (IMO, 2018) <http://www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Technical-and-Operational-Measures.aspx> accessed 18 May 2018.

[5] International Convention for the Prevention of Pollution from Ships, 1973, Resolution MP/CONF.3/35 (22 October 1997).

[6] See Article 2.2 of the 1997 Kyoto Protocol to the UN Framework Convention on Climate Change, to which there were no state reservations and states, "The Parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gases not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively." Moreover, the IMO Convention authorizes the Organization to work in co-operation with other international organizations in Article 60.

emissions to the UNFCCC, in a separate category from their domestic emissions, in keeping with the Good Practice Guidance for Greenhouse Gases Inventory Reporting promulgated by the Intergovernmental Panel on Climate Change.[7] The IMO has also provided to the UNFCCC regular reports on the Organization's progress in addressing these emissions.[8] The fact that states regularly report these emissions to the UNFCCC, and that the IMO regularly updates the UNFCCC on its activities to address them, demonstrates the understanding of states that addressing these emissions is also within the legal purview of the UNFCCC, such that if the IMO failed to address them, the UNFCCC could; it also underscores the need and competence of the IMO to do so. The Paris Agreement did not specifically mention the maritime transport sector but it did provide a new urgency to the requirement to reduce all emissions, from all sectors.

2.4 United Nations Convention on the Law of the Sea (UNCLOS)

UNCLOS codified the rights and responsibilities of countries with regard to the world's oceans.[9] It is not primarily aimed at regulating shipping but there are substantial sections that overlap with IMO regulations. When UNCLOS was being drafted, IMO regulations in existence at that time were taken into account and the IMO is referred to several times within UNCLOS (usually by referring to the "competent international organization").[10]

The IMO has considered the interaction between UNCLOS and IMO's mandate and competence and found that "[w]hile UNCLOS defines the features and extent of the concepts of flag, coastal and port state jurisdiction, IMO instruments specify how state jurisdiction should be exercised to ensure compliance with safety and anti-pollution shipping regulations."[11]

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[7] 'Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories' (Intergovernmental Panel on Climate Change 2000) <https://www.ipcc-nggip.iges.or.jp/public/gp/english/> accessed 18 May 2018.

[8] International Bunker Fuels Under the SBSTA, United Nations Framework Convention on Climate Change (UNFCCC)' (Unfccc.int, 2018) <https://unfccc.int/topics/mitigation/workstreams/emissions-from-international-transport-bunker-fuels/bunkers-under-sbsta> accessed 18 May 2018.

[9] United Nations Convention on the Law of the Sea (UNCLOS), 1958.

[10] UNCLOS incorporated all existing international multilateral and bilateral treaties and customary international law with regard to the oceans. The International Convention for Safety of Life at Sea (SOLAS) and the 1954 International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL 54 – a predecessor to MARPOL) were duly taken into consideration.

[11] For a full discussion of the interaction between UNCLOS and the IMO, see: 'Implications of the United Nations Convention on the Law of the Sea for the International Maritime Organization (IMO 2014) <http://www.imo.org/en/OurWork/Legal/Documents/LEG%20MISC%208.pdf> accessed 18 May 2018.

The definition of pollution in Article 1 of UNCLOS includes "substances or energy…which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities." CO2 emissions must be included in this as they will increase ocean acidification, which has a deleterious effect on marine life, and increase extreme weather, which will be a hindrance to maritime trade. UNCLOS elaborately deals with vessel-source pollution in Article 211 where states are obliged to create international regulations for the prevention, reduction, and control of pollution by vessels in the marine environment. Articles 212 and 222 specifically deal with atmospheric pollution. Article 212 provides states with jurisdiction to take action against shipping-generated atmospheric pollution, which is subject to international rules and standards. Similarly, Article 222 of UNCLOS imposes an obligation on states to implement and enforce international rules and standards for the prevention of vessel-source atmospheric pollution, which are developed through competent international organizations. All of this is supported by Article 194, which calls for the use of "all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source." These provisions underscore that from the perspective of international law and institutions, while UNCLOS may also have competence to address greenhouse gases, UNCLOS Parties look to other "competent international organizations" – including and especially IMO – to do so.

3. IMO LEGAL COMPETENCE ON ECONOMIC MEASURES

As noted above, Article 2 of the IMO Convention confers extremely broad powers on the Organization to act to address marine pollution. They are not limited to certain types of measures, and the IMO Convention places no restriction on the IMO agreeing to measures that would raise money or set up an independent body. Indeed, the article specifically authorizes the IMO to "perform functions" and draft conventions, agreements or other suitable instruments arising in connection with these. It thus provides the legal basis by which the IMO may establish and administer economic measures and/or independent bodies.

3.1 Part XIII of the IMO Convention

It might be argued that the IMO Convention Part XIII limits the ability of the IMO to implement economic measures. Part XIII sets out that each delegation shall pay for their own delegation's expenses; that the IMO Assembly shall be responsible for approving the budget of the IMO; and that if a state's contribution is a year overdue, its voting rights will be suspended. Consequently, Part XIII simply sets out how the IMO should conduct its internal administration in relation to the IMO's operating budget[12] and says nothing in relation to whether or not the MEPC or the Organization itself is empowered to adopt instruments establishing economic measures to achieve their aims.[13]

It could be argued that these are the only express financial powers the IMO has, but this cannot be the case, considering that the wording in relation to adopting measures on maritime pollution is so broad, and nowhere in the Convention is it stated that the powers listed in Part XIII are the only financial rules the IMO can adopt. If the administrative and budgetary powers in Part XIII were the only financial powers of the IMO, that would have to be expressly stated in order to override the wide powers that are clearly expressed. Therefore, it is not correct to interpret articles that relate to the organization of the IMO's internal finances as limiting the measures the IMO could implement to reduce shipping's climate change impact. Part XIII relates to the functions of the Secretariat of the IMO but does not relate to the remit of the IMO Convention.

Nowhere in the Convention is there a limit placed upon the types of instruments that can be enacted by the members of the IMO. Therefore, the only legal limit upon what measures can be agreed at the IMO is the agreement of the members themselves. States came together to form the

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[12] Part XIII states in full: "Article 58: Each Member shall bear the salary, travel and other expenses of its own delegation to the meetings held by the Organization. Article 59: The Council shall consider the financial statements and budget estimates prepared by the Secretary-General and submit them to the Assembly with its comments and recommendations. Article 60: (a) Subject to any agreement between the Organization and the United Nations, the Assembly shall review and approve the budget estimates. (b) The Assembly shall apportion the expenses among the Members in accordance with a scale to be fixed by it after consideration of the proposals of the Council thereon. Article 61: Any Member which fails to discharge its financial obligation to the Organization within one year from the date on which it is due shall have no vote in the Assembly, the Council, the Maritime Safety Committee, the Legal Committee, the Marine Environment Protection Committee, the Technical Co-operation Committee or the Facilitation Committee unless the Assembly, at its discretion, waives this provision."

[13] Convention on the International Maritime Organization (IMO), 1948, Articles 58-61.

Organization in order to gain the benefits of working together across the international maritime sector. If the members of the Organization now agree that in order to reduce the impact of the maritime sector on the climate, the IMO should establish an economic measure or an independent body, there is nothing in the Convention preventing this.

Indeed, the IMO has already established an economic measure and an independent body: the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution and subsequent Conventions.[14] This shows that the IMO members interpreted the IMO Convention to give them the power to establish economic measures (the IOPC Fund collects revenues and distributes them in relation to oil spills) and establish an independent body.[15]

However, the establishment of an international fund requires political will, not only the legal feasibility to do so. Each country should be ready for any new IMO rules, which can be a challenge with regard to setting up national legislation, securing resources for enforcement and gaining the necessary expertise. The 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS) provided the opportunity to create an international fund, however political will for the convention as a whole was lacking, resulting in a low rate of ratification and ultimately the HNS Convention being superseded by a Protocol in 2010.[16]

3.2 Comparison with Aviation

In 2016, the International Civil Aviation Organization (ICAO) adopted a resolution establishing the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), a

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14 IOPC Funds, About Us' (Iopcfunds.org, 2018) <http://www.iopcfunds.org/about-us/> accessed 18 May 2018; For example the Fund Convention,1992 and the Supplementary Fund Protocol, 2003. Though the 71 Fund Convention has now been wound down and replaced by the 1992 Fund Convention and 2003 Supplementary Fund Protocol.

15 Of course there are differences between a fund that could be established for climate purposes and the IPOC, as the IOPC was created to deal with liability and compensation of victims of oil pollution as opposed to for the purpose of encouraging environmentally responsible behavior. In addition, it is imposed not on ships, but on cargo interests. However there is no reason that the IMO can create a fund for one reason and not the other.

16 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS), 1996.

market based measure.[17] ICAO's foundational document, the 1944 Chicago Convention on International Civil Aviation,[18] contains no express provision allowing ICAO to adopt any particular economic measure. But Article 37 of the Chicago Convention authorizes ICAO to adopt international standards and recommended practices (SARPs) addressing, inter alia, matters concerning the safety and efficiency of air navigation. After ICAO's Assembly of Member States adopted a resolution establishing global aspirational goals for addressing greenhouse gas emissions as an essential element of promoting the sustainable growth of international aviation, the Assembly then expressly recognized a market-based measure to reduce emissions as a necessary element of a broader set of measures to help it achieve these goals. This provided the foundation for ICAO member states to come together and formally request ICAO's Council to develop and adopt the SARPs, in effect exercising the authority provided under Article 37. This is a direct parallel with the IMO, as the IMO has no express authorization for agreeing to an economic measure but can do so, as ICAO has done. Arguably, the IMO is on even surer footing than ICAO would be as the IMO has express authority to adopt measures to deal with "marine pollution," unlike ICAO which adopted measures to deal with aviation greenhouse gas emissions under the guise of matters concerning the safety and efficiency of air navigation.

3.3 The Marine Environment Protection Committee (MEPC)

Article 37 of the IMO Convention establishes the MEPC as a committee of the IMO that includes all Members of the IMO.[19] Article 38 states MEPC's purposes, which are (among others) to:

> consider any matter within the scope of the Organization concerned with the prevention and control of marine pollution from ships and in particular shall:
>
> (a) Perform such functions as are or may be conferred upon the Organization by or under international conventions for the prevention and control of marine pollution from ships . . .

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[17] 'What Are The Mechanisms For The CORSIA Implementation? How Will ICAO Support States To Implement The CORSIA?' (Icao.int, 2018) <https://www.icao.int/environmental-protection/Pages/A39_CORSIA_FAQ4.aspx> accessed 18 May 2018.

[18] 'Convention On International Civil Aviation - Doc 7300' (Icao.int, 2018) <https://www.icao.int/publications/pages/doc7300.aspx> accessed 18 May 2018.

[19] Convention on the International Maritime Organization, 1948, Article 37.

> (e) Consider and take appropriate action with respect to any other matters falling within the scope of the Organization which would contribute to the prevention and control of marine pollution from ships including co-operation on environmental matters with other international organizations.[20]

There is no express or implied limit upon the powers of MEPC in this Article other than that it cannot act on measures falling outside the competence of the IMO (and the broad competence of the IMO is dealt with above). The language on its face is broad enough to allow the MEPC to consider and act in any way the committee deems appropriate upon any matter falling within the scope of the Organization which would contribute to the prevention and control of marine pollution from ships, including greenhouse gases.

The MEPC considers itself to be exercising competence under Article 38(a) in considering greenhouse gases measures.[21] It specifically has recognized UNCLOS, as an international convention conferring functions upon the IMO relating to the protection and preservation of the marine environment.[22] In addition, the broad language of Article 2 requires the IMO to "provide for the drafting of conventions, agreements, or other suitable instruments, and recommend these to governments and to intergovernmental organizations… Perform functions arising in connection with [these]." These provisions demonstrate that Article 38(a)'s enumeration of specific functions that MEPC must fulfill in no way restricts what functions the MEPC may fulfill – including establishing independent bodies and the institution of economic measures that can perform functions delegated to them under the instruments that the MEPC adopts.[23]

4. POSSIBLE LEGAL INSTRUMENTS

The IMO has the power to adopt economic instruments and establish new bodies to deal with greenhouse gases from international shipping. Climate measures should be legally binding, enforceable and implemented on a global scale as quickly as possible, as the climate crisis is urgent. The question arises whether a new treaty needs to be established to do so; whether an

[20] Convention on the International Maritime Organization, 1948, Article 38.
[21] Convention on the International Maritime Organization, 1948, Article 38.
[22] International Maritime Organization, Implications of the United Nations Convention on the Law of the Sea for the International Maritime Organization'' (2014) Available at http://www.imo.org/en/OurWork/Legal/Documents/LEG%20MISC%208.pdf accessed on 12 June 2018.
[23] Convention on the International Maritime Organization, 1948, Article 38.

existing treaty could be amended for the purpose; or whether the purpose could be accomplished through the adoption of a different "suitable instrument," in the words of Article 2 of the Convention.

This is an important question: the IMO has calculated that the average period from a decision to develop a new IMO treaty until it enters into force is 7.3 years.[24] This time period depends on several factors but one of the most important will be the requirements that are agreed at the time of adoption for entry into force – i.e. the number of states and percentage of tonnage that are required to ratify the instrument before it enters into force (more below on this point). Meanwhile, discussions in the IMO on the climate impact of shipping have been taking place since 1997 and the climate challenge is becoming ever more urgent. Amending an existing treaty, or adopting another suitable instrument or treaty that has minimal ratification requirements before entering into force, is therefore preferable.

The IMO recognizes this with the consideration of short term (among other) measures as part of the Initial Greenhouse Gas Strategy which could include economic measures (e.g. the existing fleet renewal program). While there is not yet an agreed date by which these short term measures would come into force, in order for them to operate in the "short term" under any reasonable meaning of that term in relation to the climate challenge, those policies would have to be operational within a couple of years, thus precluding the time required to adopt a new treaty. Each of the potential legal instruments below will be considered with the urgency of the climate crisis in mind.

4.1 A New IMO Treaty or Convention to Regulate Greenhouse Gases[25]

In the broad powers already discussed in Article 2, the IMO Convention gives the IMO the power to propose new treaties for adoption. The MEPC is further empowered to be the forum for these treaties to be discussed, by virtue of the broad powers provided to that committee in Article 38. However, as discussed above, the average time for treaties to enter into force is 7.3 years. which is too slow from a climate perspective. One of the main reasons for this length of time is the

[24] MEPC 61/Inf.2 'Reduction of Greenhouse Gas Emissions From Ships', (International Maritime Organisation 2010) <https://docs.imo.org/Search.aspx?keywords=mepc%2061%2Finf.2> accessed 18 May 2018.

[25] For the purposes of this paper there is no material difference between a treaty or convention and the terms are used interchangeably.

requirements that are agreed at the time of adoption for entry into force – i.e. the number of states and percentage of tonnage that are required to ratify the instrument before it enters into force. For example, the IMO Convention itself required "21 States, of which seven shall each have a total tonnage of not less than 1,000,000 gross tons of shipping"[26] to become parties to the Convention before the Convention entered into force. Since that time, it has been the practice of the IMO members when agreeing the text of a new treaty to include provisions in relation to the number of states and associated shipping tonnage required before that new treaty can come into force. Most treaties now require a certain percentage of the world tonnage to enter into force (e.g. Ballast Water Management Convention required 30 states representing 35% of the world's merchant tonnage[27]) rather than a specified amount of tonnage as in the IMO Convention. However, with 75% of the world tonnage shared between just five states, this can mean that it can take a long time to meet the percentage tonnage required for a treaty to enter into force.[28]

Importantly, nothing in the IMO Convention requires the IMO member states to set a particular tonnage or number of states before a new treaty could enter into force. Article 2(b) of the IMO Convention specifies that in order to achieve the purposes of the Organization, the IMO shall "[p]rovide for the drafting of conventions, agreements, or other suitable instruments, and recommend these to Governments and to intergovernmental organizations, and convene such conferences as may be necessary." There are no caveats or limitations accompanying this power, e.g. there is nowhere in the Convention which states that the drafting of new conventions must provide for a certain tonnage of world shipping to agree before the convention could enter into force. Indeed, this is reflected in the fact that over time the requirements have been changed as stated above. Therefore, if the members of the IMO decide that a new treaty is the most appropriate way forward, they should be mindful of the urgency of the climate crisis and require a low number of states and tonnage before the treaty enters into force. However, the impact and

[26] Convention on the International Maritime Organization, 1948, Article 79.

[27] The International Convention for the Control and Management of Ships' Ballast Water and Sediments (Ballast Water Management Convention) 2004.

[28] 'Flag State 2016 / 2017: Top 10 Ship Registers' (Lloyd's List, 2017) <https://lloydslist.maritimeintelligence.informa.com/infographics/flag-state-2016--2017-top-10-ship-registers> accessed 18 May 2018.

generally accepted viability of such a treaty with low state and tonnage participation to reduce greenhouse gas emissions may be questioned if major shipping countries do not ratify the treaty.

An important point to note here is that any new regulation dealing with greenhouse gases must contain the principle of "no more favorable treatment" (NMFT), to ensure adequate political capital behind an agreement. This is a standard principle in the IMO, included in most regulations to ensure they can be effective without worldwide ratification.[29] NMFT requires that any country which is a party to a particular treaty must apply the rules of that treaty to all the ships that stop in that country's ports, regardless of the flag of that ship. That includes ships that are flying the flag of a country which is not a party to the particular instrument. For example MARPOL Article 5(4) requires that "with respect to the ship of non-Parties to the Convention, Parties shall apply the requirements of the present Convention as may be necessary to ensure that no more favourable treatment is given to such ships." An example of this principle being applied can be seen in the guidelines on compliance with the Ballast Water Management (BWM) Convention by the U.S. Coast Guard to U.S. flagged ships which states, "The U.S. is not signatory to the BWM Convention, and the Coast Guard cannot mandate compliance with the BWM Convention's requirements either for U.S. flagged vessels or for foreign vessels operating on the navigable waters of the United States. In contrast, the parties to the BWM Convention are required to impose BWM Convention requirements on all Party and non-Party vessels when calling on their ports (Article 3, Paragraph 3: "no more favorable treatment clause"). U.S. flagged vessels operating in a party's waters should be prepared to demonstrate compliance with the BWM Convention or be at risk for Port State Control actions, including detention."[30] The application of NMFT will mean that if an economic instrument is established, the countries which decide to participate will be able to ensure there is no market distortion for any ships calling at their ports. This will also create pressure for other countries to sign up to the convention as in order to call at the ports of countries that have signed up, any ship would have to comply with the provisions of the new convention or be able to show that they had

[29] For example. The International Convention for the Control and Management of Ships' Ballast Water and Sediments (Ballast Water Management Convention) 2004 and the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978, Annex VI.

[30] United States Coast Guard, Guidelines for Volunatry Compliance with the International Convention for the Control and Management of Ship' Ballast Water and Sediments, 2004, 16711/Serial No. 1502 CG-CVC Policy Letter 17-05 September 6, 2017.

done so. Depending on what the final measure agreed is, this could be done in a number of ways. For example, if there was a levy placed on the sale of fuel, a ship calling into a port of a country which had signed up to the measure would have to show that they had paid the levy when they last bunkered, or alternatively could pay the equivalent price upon calling at the port of the country that is a member of the convention.

4.2 Adopting an Agreement or Other Suitable Instrument

Article 2(b) of the IMO Convention refers to the drafting of "conventions, agreements or other suitable instruments." Again, as stated, this is a very broad power and no limitations are provided in the Convention upon what or how these mentioned agreements or other suitable instruments could be agreed. If the IMO decides to adopt an agreement or "other suitable instrument" (rather than establishing a new convention or amending an existing convention) then it will be important that the IMO ensures that the requirements for that instrument to enter into force are reasonable enough to ensure that the climate crisis doesn't worsen before it becomes operational. One potential way to do it would be to adopt an instrument that does not require ratification (the Paris Agreement is an example of this type of instrument). However, parties must be mindful to ensure that there are appropriate enforcement and implementation provisions to ensure that parties to the Agreement comply so that the objectives of the treaty can actually be achieved. Therefore, a non-enforceable instrument along the lines of the Paris Agreement would not be suitable. The IMO has a number of treaties already existing which are built around the principle of NFMT, which ensures that they can be enforced against not only the ships of the parties to the particular treaty but also against any ships calling at those parties ports – regardless as to whether the flag state of that ship is a party to the particular treaty. MARPOL is one of those treaties and its suitability will be discussed below.

4.3 Amending an Existing Instrument: MARPOL

The MARPOL Convention was adopted on 2 November 1973. The Protocol of 1978 was adopted in response to a spate of tanker accidents in 1976-1977. At that time, the 1973 MARPOL Convention had not yet entered into force, so the 1978 MARPOL Protocol absorbed the parent Convention. The combined instrument entered into force on 2 October 1983. The combined instrument was originally conceived to minimize the discharge at sea of oil, noxious liquid

substances, sewage, and garbage – each under a separate Annex. Each Annex requires individual ratification by countries so that a country could ratify Annex IV on sewage but not Annex V on garbage if they so choose. In 1997, a Protocol was adopted to amend the Convention and a new Annex VI was added which entered into force on 19 May 2005 to limit air pollutants from ships. Annex VI was amended to include some climate measures in 2011[31]: the Energy Efficiency Design Index (EEDI) and the Ship Energy Efficiency Management Plan (SEEMP) which are technical requirements placed upon ships (via their flag states signing up to the relevant MARPOL regulations) to increase energy efficiency in order to address greenhouse gas emissions. Annex VI was further amended in 2016 to include the Data Collection System which requires ships to monitor and report their fuel oil consumption to their flag state on an annual basis.[32]

4.3.1 The Governing Principles of MARPOL

MARPOL is an instrument that focuses on technical and operational measures and has an enforcement system to match. While an economic measure or the establishment of a new body would not be a new departure for the IMO, it would be a new departure within MARPOL but not beyond the competence set out in MARPOL's governing principles. Article 1 of MARPOL sets out its purpose, which is that "the Parties to the Convention undertake to give effect to the provisions of the present Convention and those Annexes thereto by which they are bound, in order to prevent the pollution of the marine environment by the discharge of harmful substances or effluents containing such substances in contravention of the Convention." There is no restriction in MARPOL on the type of measure that can be contained within it. To date it has included operational and technical measures but there is no legal reason why this could not be expanded to include an economic measure or the establishment of an independent body. Indeed, there is a provision for financial compensation for ships under Article 7 of MARPOL where ships are unduly delayed as a result of the enforcement of the Convention.

4.3.2 MARPOL Regulates Countries (Not Ships)

The parties to MARPOL are countries. These countries then apply the regulations in MARPOL to ships. Article 5(4) of MARPOL refines this by stating that it applies not only to ships

[31] See MARPOL Annex VI Chapter 4.
[32] See MARPOL Annex VI, Regulation 22A.

which are flagged in one of the countries that are a signatories to MARPOL, but also that countries that are signatories to MARPOL can apply MARPOL regulations to ships that are flagged in other countries as well. This is the principle of 'NMFT' as discussed above. However, the actual obligations imposed by MARPOL apply to countries and not ships, as Article 1 states, "the Parties to the Convention undertake to give effect to the provisions of the present Convention and those Annexes thereto." Indeed, Regulation 18 of Annex VI requires all states to ensure the availability of fuel oils compliant with MARPOL rules at ports and terminals. MARPOL usually requires certificates as proof of compliance (though Annex III and V do not have a certificate regime and use other means). Article 5 of MARPOL provides for ships to hold certificates "in accordance with the provisions of the regulations." Whether certificates would be appropriate means of compliance with an economic measure depends on the specific design of the measure (for example if a fuel levy was imposed, this could be evidenced by a certificate received upon purchase of fuel and payment of the levy). Parties could even agree to new provisions of the Convention that did not primarily apply to ships (e.g. that all members of the Convention must charge a levy on all shipping fuel sold in their territory and remit that levy to the IMO or other designated recipients, or agree to the establishment of an independent body). There is nothing in MARPOL which restricts the design of measures to only apply to ships or to have a compliance regime based upon certificates (as long as the existing provisions of the Convention are not contradicted).

Once it has been established that MARPOL can be amended to include any necessary measures, there are several methods of doing so that must be considered. In order to introduce an economic measure into MARPOL, there are three options: amending an already existing chapter within a MARPOL Annex, introducing a new chapter into an existing MARPOL Annex or creating an entirely new MARPOL Annex.

4.3.3 Amending a Current MARPOL Annex

Article 16 of MARPOL sets out two restrictions upon amendments to the Convention. The first is in Article 16(6), which requires that any amendment which relates to the structure of a ship shall only apply to ships for which the building contract is agreed or, if no building contract, the keel laid, after the date on which the amendment comes into force, unless expressly provided otherwise. This should not affect any economic measures or the establishment of an independent body.

The second restriction is in Article 16(7), which states that any amendment to MARPOL "shall relate to the substance of that Protocol or Annex and shall be consistent with the articles of the present Convention." Firstly, there is no reason to suppose that any economic measure would conflict with the existing provisions of MARPOL, and care could be taken to ensure during drafting that it did not conflict. The parties to MARPOL are the ultimate arbiters of whether something relates to the substance of the Protocol and is consistent with the Convention. The IMO has now agreed to three measures in relation to greenhouse gases from international shipping and all three sit in MARPOL Annex VI. However, Annex VI when originally adopted in 1997 concerned only traditional air pollutants, i.e. sulphur oxides (SOx), nitrous oxides (NOx), deliberate emissions of ozone depleting substances (ODS), volatile organic compounds (VOC) and also regulated shipboard incineration. Annex VI was expanded first in 2011 to include greenhouse gases from shipping via the adoption of the EEDI and the SEEMP.[33] This expanded the scope of the Annex to include greenhouse gases – emissions of an entirely different order from those Annex VI originally regulated, i.e. those that caused direct harm to human health (ozone harms human health by depleting the ozone which increases the reach of harmful rays which can cause cancer) – to emissions that do not harm human health as directly but do affect the climate.

MARPOL originally only regulated discharges into the sea of oil, noxious liquid substances, sewage, and garbage but not any discharges into the air. The introduction of Annex VI was the first time air pollution was regulated under MARPOL and was regarded by the parties to MARPOL as relating to the substance of the Convention and consistent with its articles. On this basis, it seems that there is no reason to suppose that agreeing to an economic measure or independent body to further deal with greenhouse gases from shipping would conflict with the substance of MARPOL, as long as the parties agree to it. The parties to Annex VI already decided that greenhouse gases were close enough to traditional air pollutants that amending Annex VI to include greenhouse gases created no conflict, so there is no reason why they cannot decide that agreeing an economic measure to regulate greenhouse gases does not also relate to the substance of MARPOL.

[33] International Convention for the Prevention of Pollution from Ships (MARPOL), 1973, Annex VI amended 2011.

4.3.4 The Procedure for Amending MARPOL

Article 16 of MARPOL sets out two procedures for amending the Convention. These could be characterized as the "rejected unless accepted" procedure (the explicit amendment procedure) or the "accepted unless rejected" procedure (the tacit amendment procedure). For all amendments, Article 16(2)(a) requires the proposed amendment to be circulated six months before consideration by the IMO to all parties.

The **'rejected unless accepted' or 'explicit'** procedure outlined in Article 16(2)(d) states the amendment can be adopted by a two-thirds majority of the parties to the Convention (or particular Annex in question) who are present and voting, in MEPC unless a specific Conference of the parties was called under Article 16(3) of MARPOL. Following this, the amendment will be deemed to be accepted via Article 16(2)(f)(i), which requires acceptance by two thirds of the parties (to the Convention or the particular Annex as relevant), which make up 50% of the gross tonnage of the world's merchant fleet.

The **'accepted unless rejected' or 'tacit'** procedure is laid out in Article 16(2)(f)(ii) and (iii).[34] It states that an amendment to a MARPOL Annex shall be deemed to have been accepted at the end of a period (of at least 10 months) to be determined by the MEPC or Conference of the parties, unless one third of the parties, making up 50% of the gross tonnage of the world's merchant fleet object to the amendment. Parties can also declare that their express consent is required for the adoption of the amendment. Under Article 16(2)(g)(ii), the amendment then enters into force six

[34] International Convention for the Prevention of Pollution from Ships (MARPOL), 1973, Article 16(2)(f)(ii) and (iii) state: "(ii) an amendment to an Annex to the Convention shall be deemed to have been accepted in accordance with the procedure specified in subparagraph (f)(iii) unless the appropriate body, at the time of its adoption, determines that the amendment shall be deemed to have been accepted on the date on which it is accepted by two thirds of the Parties, the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet. Nevertheless, at any time before the entry into force of an amendment to an Annex to the Convention, a Party may notify the Secretary-General of the Organization that its express approval will be necessary before the amendment enters into force for it. The latter shall bring such notification and the date of its receipt to the notice of Parties;
(iii) an amendment to an appendix to an Annex to the Convention shall be deemed to have been accepted at the end of a period to be determined by the appropriate body at the time of its adoption, which period shall be not less than ten months, unless within that period an objection is communicated to the Organization by not less than one third of the Parties or by the Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet whichever condition is fulfilled;"

months after the end of the period as determined by the appropriate body, but not for those parties which reject the amendment during the time set out by the appropriate body or who declared that their express consent is required.

The authority to decide which amendment procedure is used is given to the MEPC or Conference of the Parties under Article 16(f) – this is a political decision and not a legal one, as long as the limits upon amendments as set out in section 4.3.3 above are observed. There are no further legal limits on using the tacit acceptance procedure in the MARPOL Convention itself and it can be used for amending existing Annexes or adding new chapters to Annexes, as long as the MEPC (or specific Conference of the Parties) so decides.

At first glance, for those unfamiliar with the IMO or other international forums, it might seem that there is little difference between the two procedures – both essentially require two thirds of countries to agree to the amendment. But there is a large difference between requiring explicit and implicit consent of countries. While countries might vote for a measure in MEPC (regardless of which procedure is required all amendments require the consent of at least two thirds of the present and voting parties, though in practice the IMO rarely calls for a vote and usually proceeds by consensus), getting a country to submit a formal acceptance of an amendment to the IMO can be a long drawn out process and essentially leads to the same delay on measures entering into force that new conventions also experience. Thus, it is essential that if any measure is to be implemented at a speed which will be able to adequately deal with the climate crisis, it is adopted via the tacit amendment procedure. Adopting amendments to MARPOL via the tacit amendment procedure is completely within the authority of the MEPC and they must exercise it for any IMO climate measures the committee deems necessary to ensure that the goals of the IMO's initial greenhouses gas strategy agreed in April 2018 are met.

4.3.5 Adding a New Chapter to a MARPOL Annex

In 2011, Resolution MEPC.203(62) added a new chapter 4 entitled "Regulations on energy efficiency for ships" to Annex VI of MARPOL. A new chapter could again be added to Annex VI to include new economic measures and the establishment of an independent advisory body. There is no limitation in MARPOL which would restrict this, and the tacit amendment procedure can be used. It is important to note that while the IMO usually proceeds by consensus, the rules for amendments (discussed above) provide for voting. This is only used if called for by a delegation

and only for controversial topics. Saudi Arabia called for vote on the adoption of the EEDI and SEEMP.[35] Only those IMO members which were members to Annex VI were entitled to vote. At the time 59 IMO members who were signatories to Annex VI were present and so entitled to vote, and an overwhelming 49 of those members (about 83%) voted in favor of the measures. These measures remain mandatory against those parties which voted against the amendments, the countries that do not wish to comply with the amendments must lodge a formal objection to the amendment with the IMO Secretariat or if the tacit amendment procedure has been used, require that their specific consent is required before the amendments apply to them. As of June 2018, there are now 91 members of Annex VI entitled to vote on any amendments to that Annex.[36]

4.3.6 Creating a New MARPOL Annex

As stated above, MARPOL was originally adopted in 1973 but was amended in 1978 to become known as 'MARPOL 73/78'. Originally Annexes I and II were obligatory annexes that countries had to become signatories to when they ratified the overarching MARPOL 73/78 text. The Annexes III-V, which were adopted later, are optional and can be signed up to individually by countries so that countries can be signatories to one Annex but not necessarily all (with the exception of Annexes I and II). MARPOL Article 16(5) provides that an entirely new annex would follow the same procedure as for the adoption and entry into force of an amendment to an article of the Convention. This means that, as per Article 16(2)(f)(i) an amendment shall be deemed to have been accepted on the date on which it is accepted by two thirds majority of the parties and the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet. Every new annex requires individual ratification and there is no provision in the Convention for countries which have signed up to the Convention or Annex(es) to automatically become parties to a new annex. Therefore, it must be assumed that adopting an entirely new annex to MARPOL would suffer from the same disadvantages that an entirely new

[35] http://www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Technical-and-Operational-Measures.aspx.

[36] Status of Treaties (IMO 2018) <http://www.imo.org/en/About/Conventions/StatusOfConventions/Documents/StatusOfTreaties.pdf> accessed 18 May 2018.

convention would – it could take a long time for the required number of country ratifications for that annex to come into force.

5. CONCLUSION

The IMO has the power to regulate the climate impacts of international shipping through the powers conferred on it by the IMO Convention. Steps taken by the parties to the UNFCCC, including Article 2.2 of the Kyoto Protocol, confirm the understanding of nations that IMO has authority to address climate issues. Nowhere are any of IMO's powers limited specifically to non-economic measures, nor is the establishment of an independent body prohibited. Similarly, there is nothing in MARPOL which restricts that Convention to non-economic measures, or prohibits the establishment of an independent body. As long as IMO members follow the correct procedures to amend MARPOL, then by virtue of the fact that the members voted to create an economic instrument under MARPOL, the measure can be created. The only explicit limits upon amendments to MARPOL are that they should relate to the substance of that Protocol or Annex in MARPOL and must be consistent with the articles of MARPOL. There is no reason to suppose that an amendment to MARPOL that includes economic measures or an independent body to advise on the climate trajectory for shipping would not be consistent with the substance of MARPOL. Further, MARPOL contains two procedures for amendment: the tacit or accepted unless rejected procedure and the explicit or rejected unless accepted procedure. There are no legal limits placed upon the use of the tacit procedure to amend existing Annexes, rather the use or otherwise of that procedure is political decision for the MEPC (or a specific Conference of the Parties if called).

The climate crisis has been discussed in the IMO for over 20 years and is now urgent. The IMO must act immediately to introduce measures so that investments can be made in low and zero greenhouse gas emissions solutions at scale and international shipping's contribution to climate change can begin to reduce. There is simply no legal reason not to do so; the only things required are an effective strategy and the political will to enact it. This paper has set out how the IMO has the power to do so and to do so quickly, without the need for an entirely new Convention. Climate measures can and should be agreed quickly through the tacit amendment procedure to Annex VI of MARPOL.