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Decarbonizing International Shipping: Potential Roles of the IMO's Initial Strategy and the UN Climate Regime

Meinhard Doelle¹, Aldo Chircop²

Introduction

In April 2018, the International Maritime Organization (IMO) adopted the 'Initial IMO Strategy on Reduction of GHG Emissions from Ships', the first tangible achievement of the roadmap it set for itself in November 2016.³ It represents the IMO's initial contribution to the global goals set out in the Paris Agreement adopted in December 2015 to respond to climate change by maintaining global average temperature increase to 'well below' 2 degrees centigrade above pre-industrial levels and to strive for 1.5 degrees.⁴ It seeks to tackle the greenhouse gas emissions (GHG) of the international shipping industry, which are comparable to Germany's total emissions. International shipping currently represents just over 2 percent of global emissions. Its share would, however, increase significantly if the industry were to continue to operate on a business as usual scenario.

The IMO strategy represents a key milestone after a two-decade long effort to agree on measures to reduce GHG emissions from international shipping under the UN Climate Regime and the IMO. It comes on the heels of the Paris Climate Agreement, and of an agreement by ICAO for international aviation that was celebrated for its symbolism by some, but criticized for its lack of substance by others.⁵

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³ *Initial IMO Strategy on Reduction of GHG Emissions from Ships*, MEPC Resolution MEPC.304(72) (13 April 2018) [*Initial IMO Strategy*].

⁴ *Adoption of the Paris Agreement*, 12 December 2015, Dec CP.21, 21st Sess, UN Doc FCCC/CP/2015/L.9/Rev.1 (entered into force 4 November 2016) [*Paris Agreement*].

⁵ *Consolidated Statement of Continuing ICAO Policies and Practices related to Environmental — Global Market-based Measure (MBM) Scheme*, ICAO Resolution A39-3 (October 2016); Aldo Chircop, Meinhard Doelle & Ryan Gauvin, *Shipping and Climate Change: International Law and Policy Considerations – Special Report* (Waterloo, ON: CIGI, 2018) at 57-60 [*CIGI Report*].

This article assesses the IMO's 2018 Strategy in light of the long-term goals of the Paris Climate Agreement, and considers its ambition, adequacy and effectiveness in ensuring a fair contribution to the global decarbonization effort.⁶ The article proceeds in four parts. In Part 1, we offer a brief history of efforts to reduce emissions from international shipping under the UN Climate Regime. This is followed in Part 2 with a similar overview of historical efforts under the IMO. In Part 3, we discuss the key elements of the 2018 IMO Strategy, followed by an assessment of its strengths and weaknesses in Part 4.

1. Brief History of Efforts under the UN Climate Regime

The effort to address international shipping under the United Nations Framework Convention on Climate Change, 1992 (UNFCCC) was initiated with a UNFCCC secretariat report in 1995 shortly after the entry into force of the UNFCCC in 1994. The main challenge at the time was that the UNFCCC was allocating emissions to individual State Parties, and it was not clear whether or how emissions from international shipping would be accounted for. The report identified eight options for dealing with emissions from international shipping under the UNFCCC. These options were then reduced to five through deliberations by the Subsidiary Body for Scientific and Technological Advice (SBSTA).⁷ The five options selected by the SBSTA included the 'no allocation' option, as well as allocation to the State where the bunker fuel is sold, allocation to the State of registration or ownership of the vessel, allocation to the State of origin or destination of the vessel, and allocation to the State of origin or destination of the cargo or passengers.⁸ None of these options have ever been selected under the UNFCCC, but all remain open for adoption in the future.

The 1997 Kyoto Protocol to the UNFCCC does not allocate emissions from international shipping to individual Parties. Rather, Article 2.2 requires developed country Parties to work through the IMO. Reducing emissions from this growing sector, of course, remained important for the achievement of the ultimate objectives of the UNFCCC, so it is not surprising that the issue resurfaced once the attention of Parties to the UNFCCC turned to the post-Kyoto negotiations, starting at the Bali Climate Change Conference in 2007. GHG emissions from international shipping remained on the agenda of the negotiations until their conclusion in 2015 in Paris. In the end, the final Paris Agreement does not repeat the call in the Kyoto

⁶ *CIGI Report*, *supra* note 5.

⁷ *Methodological Issues, Decision 4/CP.1*, Report of the Conference of the Parties on its First Session, UN Doc FCCC/CP/1995/7/Add.1 (7 April 1995), art 1(f), at 16.

⁸ See Sebastian Oberthür, "Institutional Interaction to Address Greenhouse Gas Emissions from International Transport: ICAO, IMO and the Kyoto Protocol" (2003) 3:3 *Climate Policy* 191 at 193.

Protocol for Parties to work through the IMO to address GHG emissions from international shipping. The legal status of the Kyoto Protocol, and with it the status of Article 2.2, is unclear at this time. This raises interesting questions about the potential impact for the mandate of the IMO in case of the formal and complete replacement of the Kyoto Protocol with the Paris Agreement in 2020. Of course, the IMO is generally considered ‘the competent organization’ with respect to international shipping for the purposes of the United Nations Convention on the Law of the Sea, 1982 (LOSC),⁹ including for the regulation of atmospheric emissions,¹⁰ and its own constitutive convention which provides it with a broad mandate for the ‘... general adoption of the highest practicable standards in matters concerning the ... control of marine pollution from ships ...’¹¹

It is important to note that the draft negotiating text of the Paris Agreement did include proposals from some Parties for specific reference to international shipping and aviation. The draft text included the following options:

“23bis. [In meeting the 2°C objective, Parties agree on the need for global sectoral emission reduction targets for international aviation and maritime transport and on the need for all Parties to work through the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) to develop global policy frameworks to achieve these targets].”¹²

“47.5

b. Encourage the International Civil Aviation Organization and the International Maritime Organization to develop a levy scheme to provide financial support for the Adaptation Fund.
c. In establishing the levy scheme, ICAO and IMO are encouraged to take into consideration the needs of developing countries, particularly the LDCs, SIDS and countries in Africa heavily reliant on tourism and international transport of traded goods.”¹³

⁹ *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 396, 21 ILM 1261 (entered into force 16 November 1994) [LOSC]. For a list of competent international organizations under this instrument, see UN, Division for Ocean Affairs and the Law of the Sea Office of Legal Affairs, “‘Competent or Relevant International Organizations’ under the United Nations Convention on the Law of the Sea” in *Law of the Sea Bulletin No 31* (New York, NY: UN, 1996) at 79-95.

¹⁰ *LOSC*, *ibid* at art 212 specifically and art 211 more generally.

¹¹ *Convention on the Inter-Governmental Maritime Consultative Organization*, 6 March 1948, 289 UNTS 3 (entered into force 17 March 1958) as amended and renamed the *Convention on the International Maritime Organization* at art 1(a) [*IMO Convention*].

¹² *Outcomes of the United Nations Climate Change Conferences held in Lima in December 2014 and in Geneva in February 2015*, Note by the Secretariat, IMO Doc MEPC 68/5 (18 February 2015) at 3.

¹³ *Ibid* at 4.

These proposals were not included in the final version of the Paris Agreement. For now, international shipping has also not been included in the emission reduction commitments of Parties in the form of their nationally determined contributions (NDCs). Of course, as indicated above, there is nothing in the Paris Agreement to prevent a party from voluntarily reporting on emissions from international shipping, or from including international shipping in some form in its NDC.

While the Paris Agreement does not specifically mention emissions from international shipping, and the IMO is continuing its efforts, the absence of any reference to this mandate in the Agreement has the potential to strengthen the hand of the UN climate regime going forward compared to the situation under the Kyoto Protocol. If the Paris Agreement had made specific reference to the IMO, the result may have been to discourage Parties to the UN climate regime, from taking responsibility for these emissions. By remaining silent on the efforts of the IMO, it remains somewhat uncertain to what extent the UN climate regime can be taken to have endorsed the mandate of the IMO or to have delegated the issue to it. At the same time, of course, the IMO already had a mandate to deal with this issue as a result of its responsibilities under the LOSC and its constitutive agreement.¹⁴ However, what is clear is that the UN climate regime will continue to monitor progress as part of the Talanoa Dialogue in 2018 and the Global Stocktake under the Paris Agreement thereafter, and that the pressure on Parties to the UN climate regime, who are also IMO Member States, to act in case of inadequate progress at the IMO, will remain.

So what avenues are there in the Paris Agreement to become more actively involved in efforts to reduce emissions from international shipping and aviation? Most importantly, perhaps, unlike the Kyoto Protocol with its focus on the emissions of developed country (Annex 1) Parties, the overall focus of the Paris Agreement is on global emissions and a global temperature goal of 'well below 2° C while striving for 1.5° C. Article 4.1 of the Paris Agreement refers to all emissions, and does not exclude emissions from international shipping. Article 4(4) refers to developed countries 'undertaking economy-wide absolute emission reduction targets'.

The expectation is that both the Talanoa Dialogue and the Global Stocktake under Article 14 (including the science input from the IPCC) will include emissions from international shipping. In

¹⁴ Under the LOSC, the provisions on the protection and preservation of the marine environment 'are without prejudice to ... agreements which may be concluded in furtherance of the general principles set forth in this Convention', LOSC *supra* note 9 at art 237(1). Further the LOSC 'shall not alter the rights and obligations of States Parties which arise from other agreements compatible with this Convention and which do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention.' *Ibid* at art 311(2). Whether overriding the mandate of the IMO on GHG emissions regulation is 'compatible' with the LOSC and the IMO Convention remains to be seen.

addition, the issue remains on the agenda of the SBSTA, the subsidiary body of the UN climate regime mandated to provide information and advice on scientific and technological matters. In theory, this provides the possibility, if efforts under the IMO in populating the strategy with a range of measures fail to provide an adequate response, of revisiting, and taking a decision on the five options identified by the SBSTA in the lead up to Kyoto, and thereby clarifying and standardizing the allocation of emissions from international shipping to Parties. This would require the same States that adopt measures considered inadequate or who could not agree through the IMO, to agree to consider the matter outside the IMO. State Parties to a convention are sovereign and *pacta sunt servanda*. They have the authority necessary to interpret their commitments under international conventions and to determine whether their decisions, in bypassing a competent international organization, would be considered 'compatible' with the LOSC. Finally, Article 6, dealing with market and non-market mechanisms, could potentially provide avenues for measures under the Paris Agreement to address emissions from international shipping.¹⁵ It is arguable that given their non-technical and non-operational nature, these mechanisms might be well suited for complementary regulation from outside the IMO.

All this means that, at a minimum, every five years, starting in 2018 with the Talanoa Dialogue, and in 2023 in the form of the Global Stocktake under the Paris Agreement, Parties will expect to receive reports on emissions from international shipping as part of the overall exercise to determine progress toward the temperature goal. In a scenario where most Parties are meeting or exceeding their individual mitigation commitments, but the collective effort continues to fall short due in part to insufficient efforts to reduce emissions from international shipping, the political pressure for the UN climate regime, or Parties thereto, to take charge of these emissions will be immense.

A critical element in ensuring the international shipping sector will do its part will be full transparency. One option would be for the IMO, i.e., its member States acting through the agency of the IMO, or State Parties to the Paris Agreement as part of their NDC submissions, to take the initiative to report on emissions from the sector as part of the Talanoa Dialogue and the Global Stocktake. As important will be reporting on efforts and targets going forward, and consistency of methodologies for estimating and reporting on emissions from shipping between the IMO and the UNFCCC. For the Talanoa Dialogue, a particularly important question will be the contribution of the sector to closing the 2030 emissions gap. Of course, individual Parties to the Paris

¹⁵ The potential under Article 6 of the Paris Agreement is, of course, not limited to situations where the Parties to the UN climate regime conclude that efforts by the IMO are inadequate. There is every opportunity for a cooperative approach, certainly with respect to market-based mechanisms under Article 6, technology under Article 10, transparency under Article 13 and the Global Stocktake under Article 14.

Agreement can also be asked to report on emissions from these sectors in their inventories under Article 13.

Either way, it will be critical that accurate and consistent information about emission trajectories from the sector is available every five years starting in 2018. Ideally, this would lead to an assessment of what approaches have been implemented, which have been effective, and which have not. This will allow Parties to the UN climate regime to determine, in the context of the overall five-year review and stocktake cycles, whether adequate efforts are being made outside the climate regime, and whether there is a need to take additional measures either within the UN climate regime or in coordination with the IMO. Since Parties to the climate regime and IMO Member States are the same actors, consistency should be expected, though this has not always been the case in the past. In addition, as discussions on sources of funding for climate mitigation, adaptation and loss and damage continue under the UN climate regime, the idea of imposing a levy on emissions from international transport is likely to continue to surface in the climate negotiations.¹⁶

In short, the effort to influence, control and eventually eliminate GHG emissions from international shipping and aviation within the UN climate regime is far from over. Full transparency during the review and stocktake cycles will be critical to ensure the sector contributes its fair share to the global effort. Since States are Parties to the climate, law of the sea and maritime regimes, they would benefit from exploring opportunities for consistency and cooperation, including the possibility to utilize institutions and instruments under the Paris Agreement for market mechanisms, finance and technology to help with speedy and effective implementation of measures negotiated under the IMO process.

In the short- and medium-term, until technology breakthroughs point to a clear zero emission path, the sector will need to take further efficiency measures, and take measures to incentivize and accelerate technology breakthroughs, if it is to make a fair contribution to the global effort. A controversial option would be to set up a carbon levy to fund emission reductions outside the international shipping sector in some form. Aviation has taken tentative steps in this direction. In the long-term, the science is clear that meeting the temperature goal set in Paris will require a “balance of emissions and removals”, and very likely significant net negative emissions, making anything short of a zero emissions solution for these sectors untenable.¹⁷

¹⁶ The sharing of proceeds under Article 6 for international transfers of emissions obligations (ITMOs) provides a sound basis for implementing such a levy under Article 6.

¹⁷ IPCC, *Climate Change 2014: Synthesis Report*, Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [IPCC 2014].

2. Brief History of Efforts under the IMO

As discussed above, the Kyoto Protocol requires Annex I States Parties to the UNFCCC to pursue the reduction of GHG emissions from marine bunker fuels not addressed by the Montreal Protocol through the IMO.¹⁸ In 1997, an IMO air pollution conference invited the organization's Marine Environment Protection Committee (MEPC) to consider what CO₂ strategies might be feasible in light of the relationship of that gas with other atmospheric pollutants, citing the IMO's task under the Kyoto Protocol.¹⁹ Since MEPC 42 there has been ongoing cooperation between the Secretariats of IMO and UNFCCC, including SBSTA,²⁰ for example through the provision of information to the various sessions of the latter.²¹

Several Member States submitted ideas, including for technical, operational and market-based measures to a correspondence group and which were reported to MEPC 57.²² The correspondence group undertook an in-depth and systematic discussion of proposed measures and their suitability for the short or long-term, including pros and cons. The group identified policy issues, including the respective roles of the fundamental principles of no more favourable treatment (NMFT) in the IMO conventions and common but differentiated responsibilities (CBDR) in multilateral environmental agreements, considered the feasibility and implication of global, regional, and national approaches, and assessed whether shipping could be considered under the clean development mechanism (CDM) of the Kyoto Protocol.²³ A collective submission by delegations and industry organizations with consultative status proposed that any future regulations should be based on fundamental principles that would inform the future IMO framework for GHG regulation.²⁴ This was embraced by MEPC 57, concluding that the framework:

- (1) must be effective in contributing to the reduction of total global greenhouse gas emissions;
- (2) binding and equally applicable to all flag States in order to avoid evasion;
- (3) cost-effective;

¹⁸ *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 11 December 1997, 2303 UNTS 148, 37 ILM 22 (entered into force 16 February 2005) at art 2(2) [*Kyoto Protocol*].

¹⁹ *Resolution 8 of the 1997 Air Pollution Conference*, referred to in *Report of the MEPC on its 45th Session*, IMO Doc MEPC 45/20 (16 October 2000) at 55.

²⁰ Following an initial request by MEPC 41. *Report of the MEPC on its 42nd Session*, IMO Doc MEPC 42/22 (16 November 1998 at 32–33 [*MEPC 42 Report*].

²¹ See e.g. *Report of the MEPC on its 44th Session*, IMO Doc MEPC 44/20 (12 April 2000) at 39–40 [*MEPC 44 Report*].

²² *Report of the Intersessional Correspondence Group on Greenhouse Gas Related Issues*, Submitted by Australia and the Netherlands, IMO Doc MEPC 57/4/5 (21 December 2007).

²³ *Report of the MEPC on its 57th Session*, IMO Doc MEPC 57/21 (7 April 2008) at 46 [*MEPC 57 Report*].

²⁴ *Future IMO Regulation Regarding Greenhouse Gas Emissions from International Shipping*, Submitted by Denmark, Marshall Islands, BIMCO, ICS, INTERCARGO, INTERTANKO and OCIMF, IMO Doc MEPC 57/4/2 (21 December 2008).

- (4) able to limit, or at least, effectively minimize competitive distortion;
- (5) based on sustainable environmental development without penalizing global trade and growth;
- (6) based on a goal-based approach and not prescribe specific methods;
- (7) supportive of promoting and facilitating technical innovation and R&D in the entire shipping sector;
- (8) accommodating to leading technologies in the field of energy efficiency; and
- (9) practical, transparent, fraud free and easy to administer.²⁵

The principles were adopted by a majority vote called by the chair after a difficult debate.

By MEPC 71, the Committee had before it numerous new submissions by Member States and organizations with consultative status, submitted to the Committee directly as well as to the Intersessional Working Group on Greenhouse Gas Emissions Reduction (ISWG-GHG 1). The ISWG-GHG 1 met in June 2017 for intensive discussions on the directions for the strategy and work plan for consideration at MEPC 71. Following consideration of submissions and the ISWG-GHG 1 report, the Committee adopted the latter's proposals, including the outline proposed for the initial strategy developed at a parallel meeting during MEPC 71.²⁶ The outline, while little more than a provisional table of contents, set the structure and foundation for the Initial Strategy. It included the following:

- Preamble/introduction/context including emission scenarios
- Vision
- Levels of ambition
- Guiding principles
- List of candidate short-, mid- and long-term further measures with possible timelines and their impacts on States
- Barriers and supportive measures; capacity building and technical cooperation; R&D
- Follow-up actions towards the development of the revised strategy
- Periodic review of the Strategy

3. Key Elements of the 2018 Initial IMO Strategy

The IMO deliberations that led to the Initial Strategy took place at MEPC 72 after hard, protracted and divisive negotiations. The agreement was reached under persistent pressure for the IMO to show leadership on this critical issue, not least because of the urgency of the climate crisis, the

²⁵ *Report on the MEPC on its 56th Session*, IMO Doc MEPC 56/23 (30 July 2007) at 47 [MEPC 56 Report].

²⁶ *Report of the MEPC on its 71st Session*, IMO Doc 71/17 (24 July 2017) at 48-49 [MEPC 71 Report].

potential for unilateral European Union (EU) efforts on the same issue, and the need to bridge wide differences between major maritime states, while demonstrating sensitivity and responsiveness to the plight of developing countries, most notably small island developing states.

The 2018 strategy, which follows the structure previously adopted by the MEPC is a framework document and is light on detail. The focus is on long-term intensity, emission reduction, and decarbonization goals in combination with some more concrete steps and expectations for the period 2018-2023, following which the strategy will be 'revised'. The strategy was adopted by 100 member states at MEPC 72, which is evidence of substantial support, but it should be borne in mind that the IMO has over 170 member states representing 97.30 percent of the global shipping tonnage.

In addition to the need to bring on board states that have not participated actively and have not voiced their views on the strategy, the cooperation of a critical mass of the reluctant states, representing large markets or industry sectors, such as Brazil, China, India, Panama, Saudi Arabia and the United States, will be important. Saudi Arabia has become perhaps the most vocal critic of the 2018 strategy, taking the extraordinary step of voicing its concern in the Bonn climate negotiations immediately following the conclusion of the IMO negotiations.²⁷

The broader context within which the strategy will have to operate is clearly acknowledged through reference to the UNFCCC, LOSC and the UN sustainable development goals. In addition, the objectives and guiding principles of the strategy highlight the need to reconcile the principles of NMFT for industry actors (including compliance by all actors regardless of flag) with the need to consider the impact of the implementation of the strategy on developing states, particularly least developed countries (LDCs) and small island developing states (SIDS) through the application of CBDR. Additional principles referenced include the need for evidence based decision-making, while taking a precautionary approach in the face of uncertainty. The strategy's vision is phrased as a generic commitment to reducing GHG emissions from international shipping and "as a matter of urgency, aims to phase them out as soon as possible in this century." There is disagreement on the pace of decarbonization required, but agreement on the need to eventually fully decarbonize represents an important milestone against which the implementation of the strategy can be measured.

The IMO strategy's vision sets the overall goal of full decarbonization, supported by levels of ambition in terms of intensity targets and emission reductions for 2030 and 2050, largely tied to technological innovation, operational measures (such as speed reduction) and fuel switching to

²⁷ Jennifer Allan et al. "Summary of the Bonn Climate Change Conference: 30 April – 10 May 2018" (2018) 12:726 Earth Negotiations Bulletin at 11.

low or zero carbon sources of energy. The benchmarks toward decarbonization are threefold and all appear to use 2008 as the baseline year.

1. The ship's carbon intensity is to decline in response to successive phases of the existing tiered energy efficiency design index (EEDI) applicable to new ships as set out in Annex VI of the International Convention for the Prevention of Pollution from Ships, 1973/78. Applying to individual ship types, the EEDI anticipates periodical scaling up of efficiency standards. This benchmark essentially restates what had already been in place since 2011, though further enhancements are possible.²⁸
2. The industry's carbon intensity is to decline by a minimum of 40 percent by 2030 while pursuing efforts towards a 70 percent reduction by 2050. Although the bulk of international shipping is involved in the carriage of goods and passengers, it is not clear to what extent this goal will include ships engaged in non-transportation work, for example towboats and other vessels providing services to ships.
3. Absolute GHG emissions from international shipping are to peak and decline as soon as possible to reduce the total annual GHG emissions by at least 50 percent by 2050 while pursuing efforts to phase them out completely within timeframes consistent with the Paris Agreement goal.

The strategy proceeds to identify an initial number of concrete actions to achieve these benchmarks. It does so through a framework for short, medium and long-term measures and a process to ascertain impacts of specific measures on states and to review efforts and the strategy itself. For the short-term (2018-2023), the focus is on the implementation and possible enhancement of the EEDI and SEEMP. This is to be complemented with measures to improve the technical and operational efficiency of ships, an existing fleet improvement program, measured to address methane emissions and volatile organic compounds (VOCs), enhancement of national efforts, including port efforts, research and development into zero emission technology, and incentives for first movers.

The operationalization of the mandatory fuel consumption data system will play an important role in determining emission levels more precisely as well as providing an empirical basis for reviewing the EEDI. There will be other short-term measures, such as speed management and other operational measures. However, while implementable in relatively short order, these measures are expected to have a modest impact on the long-term decarbonization effort and

²⁸ In force since 2013

will need to be assessed for their impact, especially on safe navigation and on particular economic sectors of developing countries such as agricultural exports. Speed management poses various challenges such as the optimal cruising speed design of the various classes of ships, carriage of agricultural product, commercial considerations for just in time delivery, transparency and so on. Other important short-term measures will include activities for research development and incentives for first movers to develop and adopt new technologies. At the most recent MEPC 73 in November 2018, IMO member states were invited to submit proposals for short-term measures to be considered at MEPC 74 in April 2019.

Most of the measures adopted for the short-term are expected to be carried forward into the medium-term (2023-2030). Additional medium-term measures will include a program for effective uptake of alternative low-carbon and zero-carbon fuels and the opportunity to consider whether a market-based measure, such as a carbon levy or a cap and trade system, is needed and realistic. The long-term measures (2030+), which, subject to technological developments, will likely include a continuation and further scaling up of prior measures, are expected to set the path to the 50 percent reduction by 2050 and the eventual full decarbonization of the sector.

The strategy anticipates the need to overcome barriers and introduce supportive measures, especially on capacity-building, technical cooperation and research and development. The IMO already has a technical assistance program designed to enhance uptake of energy efficiency through the Global Maritime Energy Efficiency Partnerships Project (GloMEEP Project) supported by the Global Environment Facility (GEF) and the United Nations Development Program (UNDP). It also cooperates with the EU to administer the Maritime Technology Cooperation Centres (MTCCs) in Africa, Asia, the Caribbean, Latin America and the Pacific, also dedicated to maritime energy efficiency and low carbon transport. Although these are clearly important initiatives, much more will be needed to address the needs of the large number of developing states whose economies depend on marine transportation for export purposes.

4. Assessment of the 2018 IMO Strategy

Before considering the substance of the 2018 Strategy, it is important to note its legal status. It is a political declaration rather than a legally binding document, so none of its targets, commitments or obligations are binding on States or industry actors. This means that even more than a binding international law instrument, the impact of the strategy will have to be measured based on the actions taken to implement the strategy rather than on the aspirational targets it contains. There was some debate in the lead up to the strategy on whether the emission reduction targets should be binding or not. A fair expectation might have been that the targets

would either be binding and based on what can clearly be achieved, or be aspirational and be based on an assessment of what would represent a fair contribution to the global effort under the Paris Agreement. Some of the proposed short-term measures, such as the EEDI and SEEMP, are already stipulated in the legally binding MARPOL Annex VI, but others, such as speed measures, are likely candidates for future prescription. Ensuring that measures under the strategy are couched in a prescriptive instrument will be important signals about the effective supporting action the IMO and its member states are willing to take to implement the Strategy to meet its goals and objectives as well as the targets themselves.

The 2030 and 2050 intensity and absolute emission reduction targets in the Initial Strategy appear to be based on what the Parties to the IMO currently consider to be feasible. There is certainly no indication that they are based on an objective assessment of what would be a fair contribution to the global effort, rather than on pragmatic and political considerations. It is hard to see how full decarbonization well after 2050 can be considered a fair contribution.²⁹ Given the non-binding nature of the whole strategy including the targets, it is disappointing that the targets appear to be based on what seems ‘achievable’ rather than based on what would constitute a ‘fair contribution’.

The targets, while clearly not sufficient to represent a fair contribution to the long-term goals of the Paris Agreement, are nevertheless significant, especially considering the complexity of this global industry. The language of decarbonization as soon as possible is particularly encouraging, and provides much needed clarity on the ultimate goal. What is insufficient is the pace of decarbonization between now and 2050, and the overall timeline the 2050 goals suggest for full decarbonization, especially in light of reports that suggest full decarbonization is technically feasible before 2050 and the dire warnings of the latest IPCC report on 1.5 degrees. A study produced by the Organization for Economic Cooperation and Development (OECD) in early 2018 indicated that shipping could essentially decarbonize by 2035.

Prior to the April 2018 MEPC meeting, the European Union and several Pacific island states had advocated for a 70 to 100 percent reduction by 2050. Although 50 percent by 2050 is significantly lower, it is nonetheless the most far-reaching ambition in the strategy. Periodical reviews could increase the level of ambition, though it is not clear whether the focus of reviews is intended to

²⁹ *CIGI Report*, *supra* note 5 at 68-71. It makes sense, given the global nature of the industry, to assume the level of effort is equal to the global average needed to meet the long term goal of the Paris Agreement. While the PA talks about GHG neutrality in the second half of the century, this is based on 2 degrees, not well below 2 degrees, and not based on 1.5 degrees. See also Robert B Gibson et al, *From Paris to Projects: Clarifying the Implications of Canada’s Climate Change Mitigation Commitments for the Planning and Assessment of Projects and Strategic Undertakings – Full Report* (Metcalf Charitable Foundation 2018) for the level of effort needed in Canada to meet these goals.

include the level of ambition or be limited to efforts to meet the current goals. Much of the strategy is framed in terms of ‘best endeavours’ rather than firm commitments, leaving the further adoption or enhancement of actual regulatory tools to further consideration by MEPC 74 in 2019 as it populates the initial strategy, as well upgrades to the EEDI.

The IPCC report on 1.5 degrees, perhaps in combination with the outcomes of the Talanoa dialogue under the UN Climate regime should provide a basis for reconsideration of the adequacy of the overall targets and perhaps a harder look at the measures in time for the revised strategy in 2023. An aspirational full decarbonization goal in combination with binding shorter term steps would offer perhaps the best combination of short-term certainty in light of what is practical and a clear signal about the long-term ambition needed from the sector. It will be vital for the strategy to be responsive and adaptive to the changing understanding of the nature of the GHG reduction challenge and increasing urgency to decarbonize.

At this time the strategy is short on concrete measures to meet the 2030 and 2050 targets. This is not surprising given the state of the negotiations leading up to the April session, and the divisive nature of the negotiations. There was progress at the recent MEPC 73, however much of the hard work to ensure the targets are met remains. The direction is clear, but the devil is in the detail. At MEPC 73 a program of initial follow-up actions was agreed and states were invited to submit detained proposals.³⁰

Full decarbonization will require a combination of improvements in technical and operational efficiencies and fuel switching. The basic mechanism to continue to improve energy efficiency of vessels is in place in the form of the EEDI, but the strategy does not yet include concrete measures to enhance the EEDI, and, more critically, there is are no concrete measures for the IMO to incentivize fuel switching to non-carbon-based fuels.

³⁰ This has been reported by the IMO as follows:

- candidate short-term measures (Group A) that can be considered and addressed under existing IMO instruments;
- candidate short-term measures (Group B) that are not work in progress and are subject to data analysis;
- candidate short-term measures (Group C) that are not work in progress and are not subject to data analysis;
- candidate mid-/long-term measures and action to address the identified barriers;
- impacts on States;
- Fourth IMO GHG Study – set to be initiated in 2019;
- capacity-building, technical cooperation, research and development; and
- follow-up actions towards the development of the revised Strategy – set to be adopted in 2023.

‘Next Steps to Deliver IMO GHG Strategy’ IMO Press Briefing (22 October 2018), online <<http://www.imo.org/en/MediaCentre/PressBriefings/Pages/18-MEPCGHGprogramme.aspx?platform=hootsuite>>.

For an industry that operates on long-term investment cycles, the three-staged approach is vital. However, the inadequacy of the long-term goal, and the lack of concrete measures at this time may offer less certainty than necessary to ensure appropriate investment decisions are made to facilitate the full decarbonization of the sector. Nevertheless, there is hope that the strategy is clear enough about the need for full decarbonization that it can help incentivize the development and commercialization of the technologies needed to reach this goal.

The international shipping industry is now arguably ahead of its sister global industry, civil aviation, with which it has been negatively compared, but which has not yet adopted a long-term strategy for decarbonization. However, the implementation challenges that lie ahead must not be underestimated. While the strategy reflects the IMO's commitment to mitigation as a matter of urgency, it adopts a cautious, pragmatic and gradual approach to the decarbonization of the industry. The strategy does not contain new binding measures, so it remains to be seen what actual impact it will have on the decarbonization of the international shipping sector. It is hoped that fully implemented and enhanced over time, it will mark an important turning point in the decarbonization effort.

The past difficulties in achieving consensus on this issue within the IMO is a reason for concern. Finding a way to overcome the resistance from key IMO member states will be important. Parties may be tempted to overcome this resistance to the consensus by watering down the ambition of the IMO's efforts to reduce emissions. Such an approach could hide rather than resolve the fairness issues that are driving the resistance from some key developing countries. Rather, IMO member states will have to tackle the fairness issue head-on and make fairness and ambition conditional on each other. In the process, the position of Parties who are using the fairness argument to try to undermine the ambition of the strategy will have to be exposed.

Conclusion

The initial reactions from the IMO itself, and from member states, industry bodies, environmental NGOs and external stakeholders and observers have been reasonably positive, with some hailing it as a landmark achievement, and others expressing more cautious optimism. This may be in part in comparison to the approach of ICAO, which has taken a more concrete but less ambitious approach. It may also reflect that the long-term goal, while not adequate, is significant and ambitious for a global industry, leaving more room for optimism that the strategy marks and important turning point toward the decarbonization of the sector.

The IMO and the international shipping industry may be breathing a temporary sigh of relief, but both will have to maintain and build on the momentum during the next stage of the strategy, by turning it into an effective ‘Comprehensive IMO Strategy on Reduction of GHG Emissions from Ships’ populated with realistic and concrete measures toward the ultimate goal of decarbonization as soon as possible. The IMO will have to maintain a credible process and the good will to enable the strategy to deliver on the compromises made in the Initial Strategy and overcome its limitations and catch up with the goals of the Paris Agreement.

The following will be key to the successful implementation of the 2018 IMO Strategy:

- An effective mix of regulatory tools, financial incentives, and compliance and enforcement tools to ensure emission reduction opportunities that are currently viable are implemented immediately, additional opportunities to reduce emissions are created through innovation and are implemented as they become viable
- Effective incentives need to be created to motivate industry actors to reduce emissions through a combination of improved efficiency of ships, operational measures and fuel switching
- An urgent and serious effort is needed to understand and address the implications of full decarbonization for the LDCs) and SIDS, while preserving the NMFT status for industry actors
- Serious efforts are needed to design and implement an effective carbon pricing mechanism, as it has the greatest potential to combines creating adequate incentives to reduce emissions with the ability to address legitimate equity concerns of LDCs and SIDS, and the ability to incentivize innovations that will lead to the technology innovations needed to ensure the full decarbonization of the sector
- A commitment to enhance ambition over time to bring it in line with Paris Agreement climate goals and in light of the IPCC report on 1.5 degrees.³¹

This will not be an easy process, in part because the current support for the strategy reflects the state of understanding of climate change and the response needed based on the 2015 IPCC assessment report. The 2018 special IPCC report on 1.5 degrees, released after the 2018 Strategy was developed, already portrays a much grimmer picture and highlights the inadequacy of current national commitments and efforts under the Paris Agreement, let alone the IMO strategy. The message from the IPCC is clear. What is required is nothing short of the best efforts of the

³¹ IPCC, *Global Warming of 1.5°C – Special Report: Summary for Policymakers*, Formally approved at the First Joint Session of Working Groups 1, II and III of the IPCC and accepted by the 48th session of the IPCC, Incheon, Republic of Korea, 6 October 2018.

shipping sector to decarbonize as quickly as possible. The next five years of the strategy will involve difficult choices.