

Impact Analysis of the International Maritime Organisation¹²

How a lack of accountability, transparency, and community engagement led to human rights abuses following the 2020 Mauritius Oil Spill

Background

On 25th July 2020, the Japanese capesize bulk carrier MV Wakashio - owned and operated by the Japanese firms Nagashiki Shipping and Mitsui OSK Lines (MOL) respectively, and registered in Panama (despite never having been there) - ran aground on a coral reef at Pointe d'Esny, south of Mauritius, and began leaking bunkered VLSFO. This VLSFO (very low sulphur fuel oil) is an experimental maritime fuel oil produced by BP and has been mired in controversy due to its rushed international approval, and low sulphur content at the expense of high aromatic content and high black carbon emissions.³ Over the following weeks, approximately 1000 tonnes of VLSFO leaked into the surrounding areas and Indian Ocean, but not before the vessel broke in half, and was sunk allegedly with the permission of the Mauritius government and on advice of French experts. Twenty-seven square kilometres of Mauritius' south-east coast home to artisanal fishing villages and nature reserves, including two Ramsar sites: the Blue Bay Marine Park and the Pointe D'Esny Wetlands.⁴ In the months that followed what has been described as the worst ecological disaster in recorded Mauritian history, the Mauritian government, Nagashiki, MOL, IMO and BP have all been criticised and condemned for their handling of their responses to the spill. The accusations are legion and complex.

¹ Response to the Call for Submissions by UN OHCHR Special Rapporteur on Toxics and Human Rights <https://www.ohchr.org/EN/Issues/Environment/SRToxicsandhumanrights/Pages/analysis-imo.aspx> [accessed 29 March 2021]

² Word Count: 2500 excluding footnotes and appendix

³ VLSFO is used in approximately 70% of maritime vessels, yet industry reports indicate that 6% of all VLSFO is faulty (approximately 3600 vessels), a low estimate compared to the EU's 13.5% faulty VLSFO (or 8000 vessels). By some calculations, 4% of all voyages could be carrying faulty VLSFO. This highlights the importance of samples taken during ship fueling and in the aftermath of the spill. Importantly, there are allegations that the grounding of the MV Wakashio resulted from engine failure due to VLSFO, which underscores the significance of our approach to these submissions.

⁴ Josheena Naggea, Emilie Wiehe and Sandy Monrose, "Inequity in unregistered women's fisheries in Mauritius following an oil spill" <<https://spccfpstore1.blob.core.windows.net/digitallibrary/> accessed 28th March 2021.

Scope

It is trite law that the exposure of individuals to harmful substances (such as VLSFO) without their prior informed consent ('PIC') is a human rights issue for which regulatory regimes and solutions exist. Thus, it is germane to restrict our submission to why existing regulations and solutions available to the International Maritime Organisation ('IMO') were not applied or available in this case⁵, and whether - as a result of its structural governance deficiencies - it remains fit for purpose.

Introduction

The IMO is "the specialized UN agency with responsibility for maritime safety and security of shipping and prevention of marine and atmospheric pollution by ships. As a specialized agency of the United Nations, IMO is the global standard-setting authority for the safety, security and environmental performance of international shipping. Its main role is to create a regulatory framework for the shipping industry that is fair and

⁵ It is said that an ounce of prevention is better than a pound of cure. In the case of Mauritius, it is highly unlikely that the environmental damage resulting from the spill can be fully reversed. Nevertheless, a compensatory remedy exists under the civil liability regime of the Bunker Convention. Under a traditional reading of the Bunker Convention 2001, the shipowners as therein defined are strictly liable for pollution damage caused by bunker oil originating from the vessel, with such compensable "contamination" damage limited to reasonable measures of environmental reinstatement, preventive measures and loss of profits, and at all times limited by the Convention on Limitation of Liability for Maritime Claims, 1976 (LLMC). Thus, the available compensation available may be limited to approximately USD 18 million plus clean up costs under this interpretation. However, LLMC Art 2. only limits compensation for physical damage, which may provide a useful loophole to recover compensation for all other types of damage, which by some estimates may amount to approximately USD 10 billion. Furthermore, under LLMC Art 4, the available compensation may be unlimited if it can be proven that the losses occurred due to the act, omission or recklessness of the shipowner (i.e. proving an element of fault rather than strict liability). It should also be noted that Mauritius is a party to the LLMC 1976 but not its 1996 Protocol, which raises the compensation limit. Thus, although much can be said about the inefficacy of Bunker Convention, it should suffice for our current analysis to state: i) the limiting effect of the LLMC means that any potential Art 2 loophole would need to be litigated before and interpreted by a Court; ii) there exists no statutory Fund (unlike the CLC regime and its Fund Protocol and Supplementary Fund for cargo oil spills) out of which large bunker oil pollution compensation claims can be paid, severely handicapping the effectiveness of the regime; and iii) the handicapped compensation regime for bunker oil spills was established in 2001, long after the promulgation and expansion of the cargo oil spill regime, both under the auspices of the IMO - this is not a coincidence. We submit that this deliberate handicap resulted from the parameters of influence by certain Member States of the IMO and the lack of transparency at the IMO. Gap analysis of such oil pollution control treaties would be premature in light of the IMO's structural deficiencies.

effective, universally adopted and universally implemented.”⁶ Specifically, its conventional mandate is:

“ (a) To provide machinery for co-operation among Governments in the field of governmental regulation and practices relating to technical matters of all kinds affecting shipping engaged in international trade, and to encourage the general adoption of the highest practicable standards in matters concerning maritime safety and efficiency of navigation;...

(b) To encourage the removal of discriminatory action and unnecessary restrictions by Governments affecting shipping engaged in international trade ...

...(d) To provide for the consideration by the Organisation of any matters concerning shipping that may be referred to it by any organ or specialised agency of the United Nations;

(e) To provide for the exchange of information among Governments on matters under consideration by the Organisation.”⁷(emphasis added)

It is apparent that the IMO’s efficacy in achieving these lofty goals, in light of the Mauritius oil spill, is severely undermined by three important governance shortcomings:

1. unequal influence of States;
2. disproportionate influence of industry; and
3. lack of delegate accountability.

⁶ Introduction to IMO <https://www.imo.org/en/About/Pages/Default.aspx> [accessed 29 March 2021]

⁷ Art. 1, 1948 Convention on the International Maritime Organisation (Geneva), 289 UNTS 48 (March 6, 1948)

Unequal Influence⁸ of States

The IMO is largely financed by its 170 Member States (or rather, States' taxpayers), in accordance with an unpublished formula and unpublished financial regulations. This publicly-unknown formula includes a "flat base rate with additional components based on ability to pay and merchant fleet tonnage"⁹ Thus, States with greater tonnages contribute more funding - due to their greater maritime interests. However, there is a risk of unequal influence arising from unequal financing, in light of the fact that the Council's elections and activities are not substantively reported. Eight of the top ten IMO contributors occupy Council positions¹⁰, three of which operate open ship registries.¹¹ Five open registries¹² together account for more than half of the world's tonnage.¹³ Furthermore, States with larger tonnages have an advantage in the IMO policy-making process because their decision to ratify can have greater consequences - in proportion to their tonnage - for whether and when a convention comes into effect.¹⁴ On the other hand, many States -particularly low-income ones which may be threatened by climate change- lack the financial resources to participate in IMO policy-making. For example, Bangladesh sent only two representatives to the 71st Session of the MEPC in 2017 (MEPC 71),¹⁵ despite having robust export-import and shipbreaking industries.¹⁶ This can be contrasted with Japan's 45 representatives, the largest delegation for the

⁸Undue Influence: According to Transparency International, undue occurs when particular individuals or groups gain an unfair advantage over public decision-making at the expense of the public interest. This can particularly occur when decision-making is opaque, when public officials or third parties act unethically, or when access to the political system is skewed in favour of select interest. Thus, it should be noted that intentionality is not necessarily part of the concept, but rather it is based on an outcome analysis. See: www.transparency.org/files/content/corruptionqas/335_Influence_of_interest_groups_on_policy-making.pdf [accessed March 29, 2021]

⁹ IMO, Financial Report and Audited Financial Statements for the Year Ended 31 December 2019: <https://wwwcdn.imo.org/localresources/en/OurWork/Documents/Financial%20Statements/IMO%20Financial%20Statements%202019.pdf> [accessed March 29 2021]

¹⁰ *Ibid.* The top 10 financial contributors, in descending order, are: Panama, Marshall Islands, Liberia, Singapore, Malta, China, Bahamas, United Kingdom, Greece, United States of America.

¹¹ Panama, Malta, Bahamas

¹² Panama, Marshall Islands, Liberia, Bahamas, Malta

¹³ UNCTAD, Merchant Fleet: Building, ownership, registration and recycling of ships, 2019: <https://stats.unctad.org/handbook/MaritimeTransport/MerchantFleet.html> [accessed March 29, 2021]

¹⁴ Although it is common practice for States to work via consensus and resort to voting in rare cases where consensus cannot be attained. IMO policies are generally made on a one member one vote basis, and come into force after their ratification by a specified number of States that collectively represent a minimum specified percentage of the world's tonnage.

¹⁵ See Appendix Fig 2.

¹⁶ IMO, Marine Environment Protection Committee 71st Session List of Participants, (London: IMO, 2017)

same period.¹⁷ Delegation size¹⁸ is quite likely a proxy for influence at the IMO, as a large delegation may make more submissions to the IMO and delegates represent their Member State delegation at plenary and at working groups which occur simultaneously.¹⁹ Moreover, there exist no IMO guidelines on delegation size or composition, which is instead left to the discretion of each Member State which funds their delegation. Therefore, national delegations can (and do) comprise government officials, as well as industry representatives who may not be citizens of that Member State.

Lack of Delegate Accountability

Individual representative's positions are not reflected in IMO reports, and consultative members are apparently not free to criticise the organisation.²⁰²¹ Most surprisingly, delegates are unaccountable to the IMO itself, since there exist no regulations on delegate appointment, restrictions on secondary employment, conflicts of interest, gifts and hospitality. Delegates are instead subject to their Member State's code of conduct, which are by no means uniform and cannot address the issue of outsourcing delegates' participation to private registries.²² Thus, delegates' affiliations can sometimes be misleading or hidden, and can allow a specific company or group to be given the floor not via one but via multiple delegations in the same meeting.²³ There are also no rules which regulate switching among delegations. Overall, the public must take at face value the pledges of the IMO and Member States - since the IMO Code of Ethics only applies to the Secretariat, there is no jurisdiction to investigate delegate activity.²⁴

¹⁷ A reasonable estimate of the cost of more than 40 delegates travelling from Japan to London for a week to attend the MEPC alone is USD 150,000.00.

¹⁸ See Appendix Fig 3.

¹⁹ See Appendix, Fig1.

²⁰ IMO, 2010, Rules Governing Relationship with Non-Governmental International Organisations

²¹ IMO threatened to revoke the consultative status of Greenpeace following its guest representatives' criticism of the proceedings at an IMO shipbreaking conference in Hong Kong. See

https://www.jstor.org/stable/resrep20552.5?seq=1#metadata_info_tab_contents [accessed March 29 2021]

²² Transparency International, 2018. "Governance at the International Maritime Organisation: The case for Reform," Report, July 2018. https://www.transparency.org/whatwedo/publications/governance_international_maritime_organisation [accessed March 29 2021]

²³ Psaraftis, H. and Kontovas, C., 2020. Influence and transparency at the IMO: the name of the game. *Maritime Economics & Logistics*, 22(2), pp.151-172.

²⁴ IMO, *Code of Ethics*, (London: IMO, 2016)

Disproportionate influence of industry

Through the consultative membership scheme, external stakeholders are granted access to every level of policymaking through documents and meetings.²⁵ However, according to Transparency International, shipping industry groups made up 57% of all consultative members at the committee level and 67% of all members at the subcommittee level.²⁶ There exists no code of conduct for consultative members to hold industry and civil society organisations (CSOs) to objective standards of behaviour, and the IMO may expunge consultative membership at its discretion. We have already noted the appointment of shipping company representatives to national delegations. This presents a risk of undue influence as it may result in Member States disproportionately favouring industry concerns over other issues, such as climate change mitigation, environmental sustainability, or low hanging fruit such as fuel standards rather than market-based-mechanisms. It should also be noted that despite the scrutiny upon the Secretariat it has no obligation to disclose its staff interactions with external parties, which presents an opportunity for unaccountable lobbying, as its whistleblowing policy only applies to the Secretariat and not delegates, and does not include human rights violations.²⁷

According to InfluenceMap in 2018,²⁸ Japan scores as by far the most actively engaged country on climate, based on IMO data. It has taken over as MEPC chair from open registry state Panama for the current meeting and the two have a close commercial relationship on shipping and at the IMO. Japan is by far the largest owner of Panama-registered shipping (42%) and Panama is the IMO's largest funder. Panama registers 18% of the world's shipping tonnage yet accounts for less than 0.1% of global GDP. Of the eight delegates Panama sent to the key 2017 MEPC meeting it chaired,

²⁵ See Appendix Fig 4

²⁶ Transparency International, 2018, *supra*.

²⁷ IMO, "Policy and Procedures on the Prevention and Detection of Fraud and Serious Misconduct", in Appendix F of the *Staff Regulations and Staff Rules of the IMO*, (London: IMO, 2017)

²⁸ InfluenceMap. 2018. "Decision time for the IMO on climate: The polarized struggle among states for ambitious climate policy on shipping", April 2018, Report. https://influencemap.org/site/data/000/309/IMO_Shipping_Report_April_2018.pdf [accessed March 29 2021]

three were representatives of the company operating its shipping registry, the Panama Maritime Authority, of which Japanese shipping owners appear to be major clients.²⁹

As Transparency International presciently noted prior to the 2020 Mauritius oil spill:

“An effective GHG strategy would almost certainly impose short-term costs on the shipping sector through, for example, the use of cleaner more expensive fuels or the purchase of new efficient vessels. Should industry want to resist these measures, it is well-placed throughout the IMO to delay or dilute climate change policies to protect short-term financial interests.”³⁰

VLSFO and PIC - How does the IMO matter?

Likely done in response to protests about the Paris Agreement’s non-applicability³¹ to the shipping industry, implementation of the 2020 sulphur cap conceived in 2016 was high on the agenda of MEPC 72 (2018), wherein sulphur emissions would be reduced by 85% by limiting the amount of sulphur in bunkered fuel oil to 0.5%, down from 3.5%. Thus, the decision was taken to ban non-compliant fuel on ships through an amendment of MARPOL Annex VI.³² However, this meant that petrochemical companies only had approximately 14 months until the January 1 2020 deadline of the amended Annex VI to design, develop, monitor quality assurance and gradual testing, and scale up production of this uninvented fuel. However, this quality-assurance and testing process may have been flawed and/or rushed, based on numerous industry reports of operational distress/engine failure:

²⁹ *Ibid*

³⁰ *Ibid*

³¹ There is no reference to “shipping” in the Paris Agreement, despite the fact that the industry accounts for 2.4% of all GHG emissions.

³² Marine Environment Protection Committee (MEPC), 72nd session - Media Information.

<https://www.imo.org/en/MediaCentre/IMOMediaAccreditation/Pages/MEPC72.aspx> [accessed March 29 2021]

1. Veritas Petroleum Services (VPS)^{33,34} reported that between 24th December 2019 and 21st January 2020 it issued seven bunker alerts regarding fuel instability leading to sediment formation in VLSFO in Singapore, Piraeus, Amsterdam, Rotterdam, Miami, and San Vincente;
2. VPS reported in May 2020 that over 40 vessels suffered major engine damage following the switch to VLSFO³⁵, and later indicated in July 2020 that it had seen an increase in off-specification VLSFO from April to June;³⁶
3. Six samples of VLSFO in Singapore caused severe sludging at centrifuges, clogged pipelines, and overwhelmed fuel filters, first detected in April 13 when a dead ship had to be towed to Port Kelang, Malaysia with all fuel pumps damaged;³⁷
4. Viswa Lab reported that VLSFO can cause operational issues and partial or total engine failure, and also noted that the samples obtained were possibly contaminated by polymers, polymethacrylates, phenols, tall oils, chlorinated hydrocarbons, Estonian shale oil, and organic fatty acids which can all be related to the blending process;³⁸
5. VLSFO emits black carbon³⁹, which increases VLSFO's adverse climatic effects, and it is not clear whether manufacturers were aware of this;⁴⁰

³³ Elias, T. (2020, February 11). *Sediment problems within VLSFOs detected at six ports*. SAFETY4SEA. <https://safety4sea.com/sediment-problems-within-vlsfos-detected-at-six-ports/> [accessed March 29 2021]

³⁴ *Ibid* - According to Steve Bee, Group Commercial & Business Development Director for VPS: "I've never known such a concentrated frequency of bunker alerts to be issued in relation to a single fuel quality problem as we have seen with sediment problems in VLSFOs over the past four weeks."

³⁵ Manifold Times. (2020, May 15). *Manifold Times | VPS investigation identifies over 40 vessels with major engine damage since VLSFO switch*. <https://www.manifoldtimes.com/news/vps-investigation-identifies-over-40-vessels-with-major-engine-damage-since-vlsfo-switch/> [accessed March 29 2021]

³⁶ Ship & Bunker. (2020, July 29) *Testing Lab VPS Sees Increase in Off-Specification VLSFO*. <https://shipandbunker.com/news/world/352144-testing-lab-vps-sees-increase-in-off-specification-vlsfo> [accessed March 29 2021]

³⁷ Elias, T. (2018, July 30). *Marine fuel contamination reported in Singapore*. SAFETY4SEA. <https://safety4sea.com/marine-fuel-contamination-reported-in-singapore/#:%7E:text=Contamination%20in%20marine%20fuel%20that,warn%20them%20about%20the%20situation.&text=The%20contaminated%20fuel%20in%20Singapore,US%20type%20fracked%20shale%20oil.> [accessed March 29 2021]

³⁸ Mfame Editor. (2020, January 3). *VLSFO From Unknown Fuels Blend Can Cause Operational Issues*. Mfame.Guru. <https://mfame.guru/vlsfo-from-unknown-fuels-blend-can-cause-operational-issues/> [accessed March 29 2021]

³⁹ Black carbon is a short-lived GHG which traps 3,200 times more heat in the atmosphere than carbon dioxide, and is especially damaging in the Arctic as it diminishes the reflectiveness of snow/ice.

⁴⁰ Taylor, I. (2020, January 27). *GLOBAL: Clean Arctic Alliance calls for ban on ships burning 'super pollutant' VLSFO in the Arctic*. Bunkerspot - Independent Intelligence for the Global Bunker Industry. <https://www.bunkerspot.com/global/49765-global-clean-arctic-alliance-calls-for-ban-onships-burning-super-pollutant-vlsfo-in-the-arctic#> [accessed March 29 2021]

6. Over 8% of VLSFO batches tested in 2019 exceeded the 0.5% sulfur limit, rendering them non-compliant.⁴¹

Furthermore, a widely-circulated laboratory report published by SINTEF⁴² found that compliant LSFOs spilled in cold climate and moderate seawater temperatures indicated a high degree of persistence on the sea surface, and thus oil spill responses can be even more challenging than for traditional fuel oils (eg. IFO180/380). It concluded by stating that,

*“from an oil spill response point of view, it is therefore crucial to get a better overview and knowledge of the variability in the weathering processes, fate and behaviour and response capabilities to the new LSFOs. The ongoing change among refineries to comply with the new sulfur regulations require a need for further characterization of the increasing numbers of LSFOs coming on to the market,”*⁴³

and recommended more studies into the differences in chemical composition between traditional fuels and new VLSFOs (eg. biomarkers), weathering characteristics, and cooperation with the downstream refinery industry to refine VLSFO with improved oil response capabilities. Again, this study is indicative of oil spill behaviours in cold climates, and there is no comparable study completed for tropical climates such as in Mauritius.

⁴¹ S&P Global Platts. (2020, February 3). *Bunker fuel quality issues surge as VLSFO use gathers pace: sources*
<https://www.spglobal.com/platts/en/market-insights/latest-news/oil/020320-bunker-fuel-quality-issues-surge-as-ulsfo-use-gathers-pace-sources>

⁴² SINTEF. (2020). *Characterization of Low Sulfur Fuel Oils (LSFO) – A new generation of marine fuel oils. (2020).*
<https://hdl.handle.net/11250/2655946>. SINTEF Ocean AS.
<https://sintef.brage.unit.no/sintef-xmlui/handle/11250/2655946>

⁴³ Ibid, at pp 66.

Conclusion

The foregoing submissions prompt the following questions:

- If what little oil spill response information for VLSFO was limited to cold-moderate testing conditions (such information already judged as insufficient), then how did the IMO judge that the oil spill response in Mauritius would be effective?
- If the chemical formulae of VLSFO blends are not yet publicly known, how can it be assessed whether the Rotterdam Convention and its PIC procedure would apply to any of its chemical constituents?
- What information does the IMO possess on its “brainchild” VLSFO?
- Has the IMO consulted the OECD and FAO in relation to a potential listing of VLSFO on international information exchanges?
- In light of the above, what is the justification for the IMO’s involvement in the salvage operation and illegal deliberate sinking of the MV Wakashio?⁴⁴
- What documents support the assertion that the vessel was empty of pollutants prior to dumping, if the OPRC was limited to evaluating the risk of oil?
- If VLSFO was not on the vessel at the time of dumping, then did the IMO and the Mauritian government execute a new OPRC agreement?

Prior Informed Consent - and by extension public participation and access to information - are foundational concepts in any democratic society, ones that are required for actuating all other human rights. This lack of publicly available information on VLSFO prevents informed consent regarding the use and clean-up of the fuel, which has had knock-on effects on Mauritian’s health, livelihoods, properties, environmental and natural resources patrimony, and has had a disproportionate adverse effect on women - who traditionally bear the brunt of the adverse environmental impacts.⁴⁵

⁴⁴ Contrary to the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (Marine Dumping Convention)

⁴⁵ UN *Women Watch (2009): Women, Gender Equality and Climate Change*. WomenWatch.

https://www.un.org/womenwatch/feature/climate_change/factsheet.html

Since at least 2009 the IMO has been branded as “not fit for purpose”.⁴⁶ The fact that the same question is still being asked - especially in light of the IMO’s historic bureaucratic foot-dragging on observance of the Paris Agreement, its governance structure, and a lack of transparency - points to a fundamental imbalance in global maritime affairs governance. This imbalance favours developed States and States which rely on lax maritime regulations and enforcement, such as Japan and Panama, and whose precise influence on the IMO is opaque and not well-understood. This lack of transparency in public decision-making has had major human rights implications following the Mauritius oil spill. Considering Art 1 of the IMO Convention⁴⁷ in light of the rushed approval and development of VLSFO and the lack of publicly available information thereon, the IMO’s involvement therein and in the Mauritius oil spill, we submit that:

- The IMO has not encouraged “*the general adoption of the highest practicable standards in matters concerning maritime safety and efficacy of navigation*”⁴⁸; and
- The IMO has not provided “*for the exchange of information among Governments on matters under consideration by the Organisation.*”⁴⁹

Earth Love United concludes that the IMO is no longer fit for purpose. In so doing, we proffer the following IMO reform recommendations:

1. Regulate delegation size;
2. Member State delegates should be public servants/staff;
3. Observer organisation delegates should be organisation employees;
4. Regulate the outsourcing of representations at the IMO;
5. Prohibit advisors/observers from taking the floor;
6. Reveal delegate affiliations and multiple employers, if any;
7. Prohibit non-member-state entities from sending delegates to more than one delegation;
8. Regulate delegate switching
9. Implement a Delegate Conflict of Interest Policy and Declaration.

⁴⁶ John Vidal, “MPs attack shipping industry’s ‘irresponsible’ inaction on emissions” [\[https://www.theguardian.com/environment/2009/jun/01/travel-and-transport-climate-change\]](https://www.theguardian.com/environment/2009/jun/01/travel-and-transport-climate-change) [accessed March 29, 2021]

⁴⁷ *Supra*

⁴⁸ IMO Convention, Art 1(a)

⁴⁹ IMO Convention, Art 1(e)

Appendix

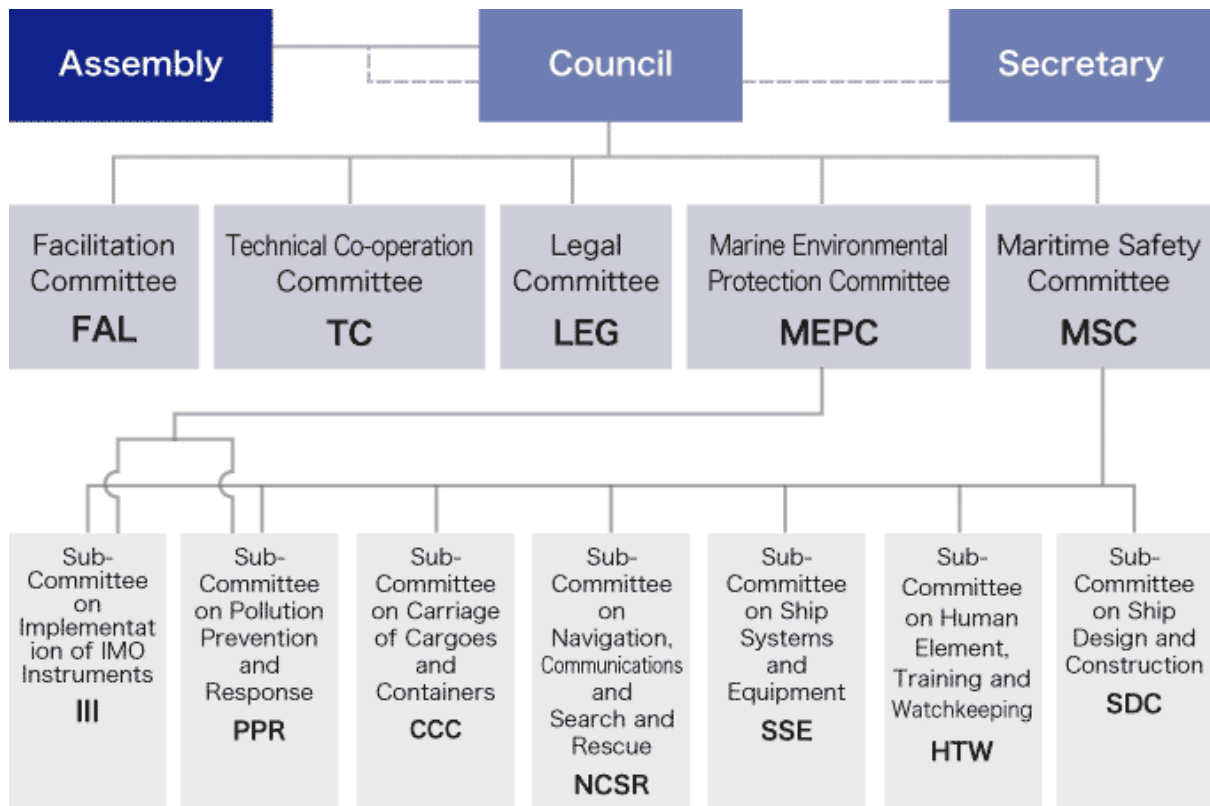


Fig 1. Structure of the International Maritime Organisation. *Source* ClassNK (2019) “Topics at IMO”, Nippon Kaiji Kyokai—ClassNK.
https://www.classnk.or.jp/hp/en/info_service/imo_and_iacs/topics_imo.html.
 [accessed March 29 2021]

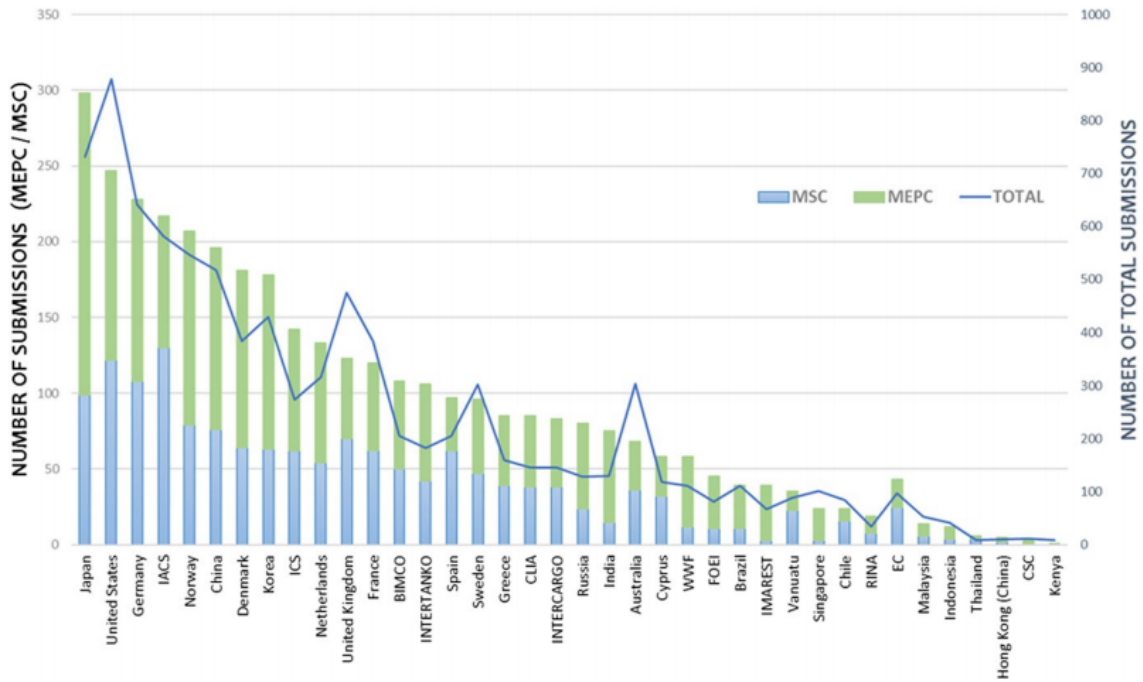


Fig 2. MSC & MEPC vs total IMO submissions since 2010. *Source* Psaraftis, H. and Kontovas, C., 2020. Influence and transparency at the IMO: the name of the game. *Maritime Economics & Logistics*, 22(2)

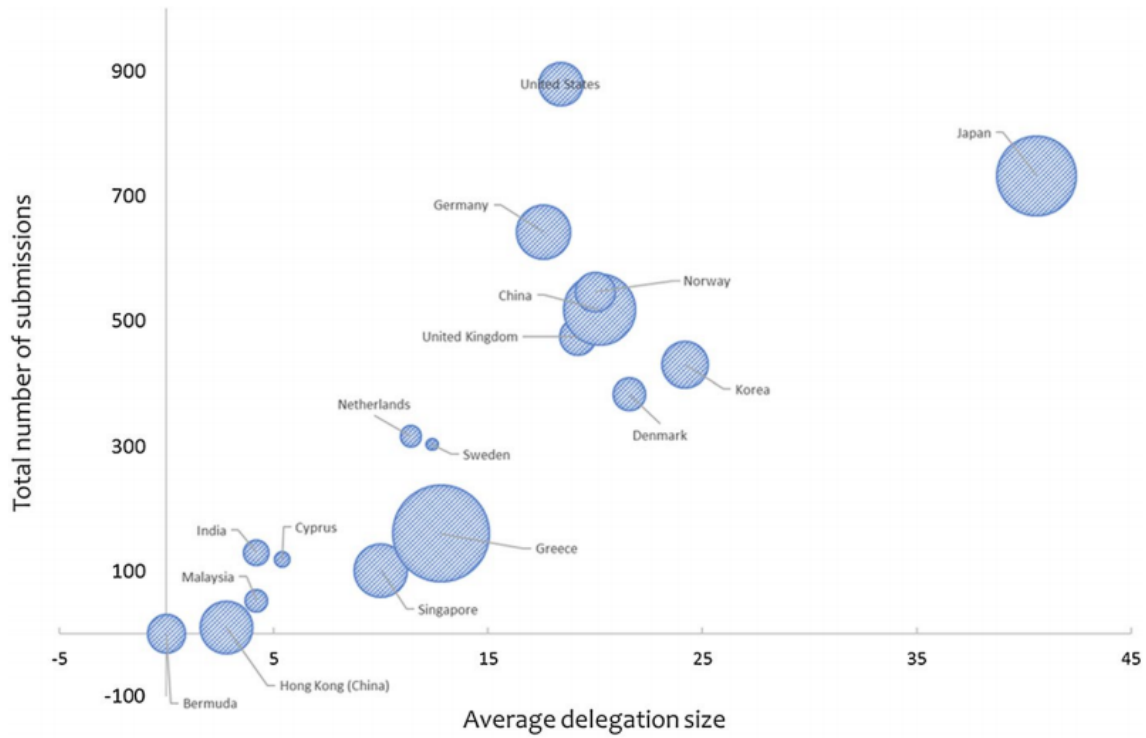


Fig 3. Average delegation size vs total number of submissions and fleet size for selected member states (size of circles is proportional to controlled fleet size in 2018). *Source* Psaraftis, H. and Kontovas, C., 2020. Influence and transparency at the IMO: the name of the game. *Maritime Economics & Logistics*, 22(2)

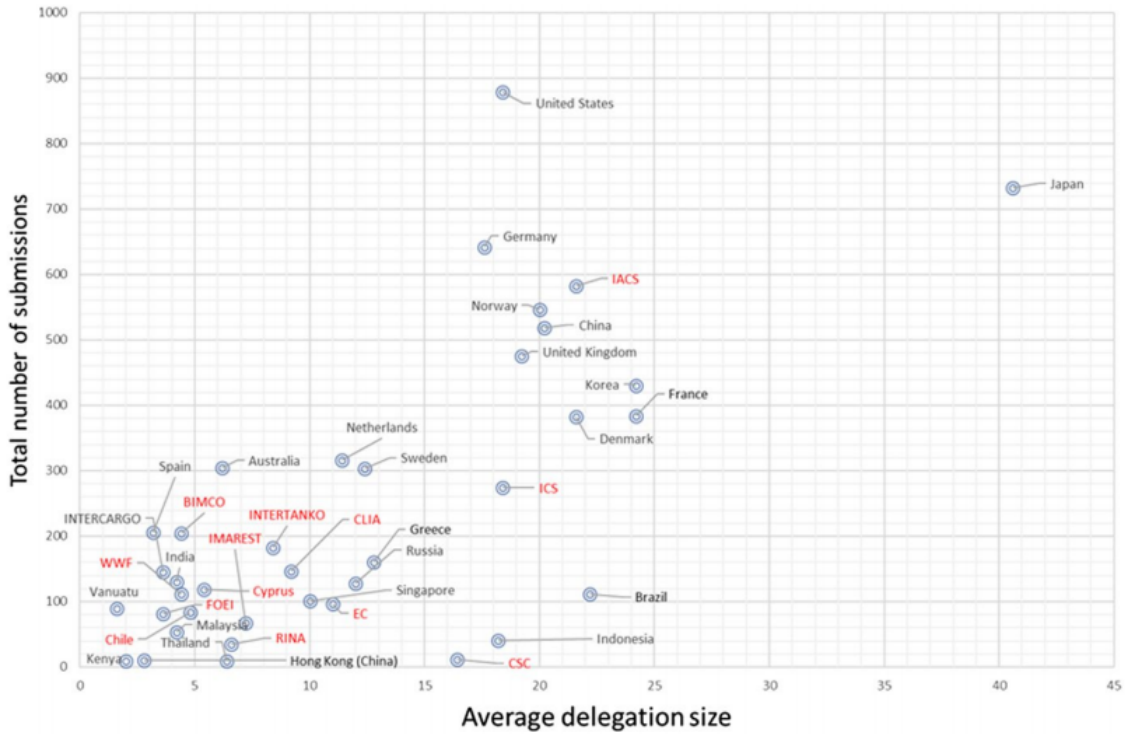


Fig 4. Average delegation size vs total number of submissions and fleet size for selected member states (blue) and observer organisations (red). *Source* Psaraftis, H. and Kontovas, C., 2020. Influence and transparency at the IMO: the name of the game. *Maritime Economics & Logistics*, 22(2)