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EVALUATING INTERNATIONAL LEGAL FRAMEWORKS FOR MARINE NOISE POLLUTION

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Introduction

This article focuses upon the analysis of the current guidelines and regulations available in international law regarding the problem of marine noise pollution. The article first begins with chronology that will help in understanding the evolution of Marine Noise Pollution (hereinafter referred to as MNP), right from the first instance wherein, MNP was actually acknowledged as a problem that needs to be addressed to bringing in legal regulations regarding the same and implementing it.

This article first explores the legal regulations and guidelines by major entities that were brought in to regulate marine noise pollution so as to mitigate the risks arising therefrom to species in the marine environment. It first begins with the evolution of regulations in this department from 2 decades ago to the present time.

The second part of the article will analyse and evaluate provisions present in UNCLOS, IMO, in relation to marine noise pollution, and will include to analyse as to how the law caters to countering the noise and the consequences thereof to the species in the marine environment.

The problem of Marine Noise Pollution (MNP) was at first established around two decades ago. Then onwards, there have been periodical developments regarding the same at various organisational levels having international reach. Most notable of which have been included in this article chronologically.

2005: UNGA

In a first, the problem of underwater noise pollution was acknowledged at the international level at the UNGA (United Nations General Assembly) in the Sixtieth General Assembly meeting titled ("improved understanding, protection of the world's marine environment, sustainable fishing practices") held in New York dated 28 November 2005.¹

¹ GENERAL ASSEMBLY HEARS CALLS FOR IMPROVED UNDERSTANDING, PROTECTION OF
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The agenda of this meeting/assembly had an objective for "improved understanding of deep sea biodiversity, protection of marine ecosystems and better control of the fishery industry, as they embarked on an annual consideration of oceans and law of the sea, as well as sustainable fisheries."

The state of Monaco made a mention of the trouble caused by rising noise pollution in the maritime environment. Which they stated as "a newer phenomenon" that is responsible for impacting the behavioural changes of the seafaring mammals, that is often leading to deaths.²

Monaco further stated that there is no existing law or regulation for the same in international law and that they called for attention on this issue from the international community. Wherein the need for having regulations against the noise pollution was acknowledged. It was discussed and deliberated in detail as to what harms and consequences it is having upon the species in the marine environment. This marks the first instance of MNP at the UN level.³

2008:

IMO's MEPC Committee (Marine Environment Protection Committee) in its meeting on 25th June in 2008 was held titled as "Minimizing the introduction of incidental noise from commercial shipping operations into the marine environment to reduce potential adverse impacts on marine life".

⁴The meeting had proposals from the United States, the paper consisted of numerous research studies that proved the detrimental effects of noise on the marine species, also touching upon intricate details as to how especially the low-frequency noise emitted from the ships is causing harm to marine species.

In a summary, the meeting proposed prioritising the work programme upon the issue of noise in the sea. It emphasised upon noise from commercial shipping operations and its impact on the marine environment, and measures to reduce the potential adverse impact on marine life. It is further followed by "Proposals" which stated that it invites the Committee to add this issue as a "high-priority" work item. Further, they specifically added to develop guidelines for

WORLD'S MARINE ENVIRONMENT, SUSTAINABLE FISHING PRACTICES | Meetings Coverage and Press Releases, <https://press.un.org/en/2005/ga10425.doc.htm> (last visited Mar 31, 2024).

² Id

³ Id

⁴ MINIMIZING THE INTRODUCTION OF INCIDENTAL NOISE FROM COMMERCIAL SHIPPING OPERATIONS INTO THE MARINE ENVIRONMENT TO REDUCE POTENTIAL ADVERSE IMPACTS ON MARINE LIFE (2024), https://www.gc.noaa.gov/documents/MEPC_58-19%5B1%5D.pdf.

minimising noise from commercial shipping, but this was titled as "non-mandatory".⁵

Additionally, the following were proposed:

- a) To have a "Correspondence Group" to identify and address ways to minimise the incidental noise.
- b) To provide reports to the committee

Annex-I stated that, provided commercial shipping works on reducing noise, it will be economically advantageous to them since the noise is a "wasted energy", regulating/controlling the same would reduce operational cost of the ship. Adding to this, it was suggested that such changes in the ships that reduce noise can be made as a part of the design phase of a ship, instead of limiting to making changes in the existing ships.

In conclusion, it acknowledged that IMO being the concerned body pertaining to international shipping, it is crucial for the organisation to establish a forum for bringing out global strategies to address the issue of noise pollution in the sea and introducing measures to mitigate the same.⁶

2009:

The Parties to the UN Convention on the Conservation of Migratory Species (CMS Convention) under 16th ASCOBANS (Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas) committee meeting in its document titled "Adverse Anthropogenic Marine/Ocean Noise Impacts on Cetaceans and Other Biota" promises to propose strategies for the mitigation of MNP in marine protected areas in a subsequent meeting held between 20 and 24 April in 2009. The document emphasises that the mammals are disturbed due to anthropogenic noise. It also proposes to call upon parties to adopt preventive measures to mitigate the noise in order to prevent the harmful impact on the marine species. consequences⁷

2012:

Convention on Biological Diversity (CBD) underlined the impact of anthropogenic activities for MNP and how it is affecting marine species.⁸

⁵ Id

⁶ Id

⁷ CMS Res.9.19: Adverse Anthropogenic Marine/Ocean Noise Impacts on Cetaceans and Other Biota , https://www.ascobans.org/sites/default/files/document/AC16_46_CMSRes9-19_OceanNoise_1.pdf.

⁸ UNEP/CBD/SBSTTA/16/INF/12, <https://www.cbd.int/kb/record/meetingDocument/86665?Subject=MAR> (last visited Apr 3, 2024).

2014:

The International Maritime Organisation (IMO) issued guidelines for reducing the noise of commercial ships and proposed certain potential remedies that will help lower the level of MNP. More importantly, these guidelines were put out under general advice and were not binding upon any ship operator or corporation.⁹ The document containing the guidelines first defined various causative factors of noise. Starting with the components of the ship that contribute to noise. The guidelines recommended design-changes in the ship that can be considered to reduce the noise. It also focussed on the role played by the speed of the ship on noise and that it can potentially reduce the noise.

2017:

MNP or underwater noise is recognised, if not as a form of pollution, but as a stress factor forming part of the action plan under (SDG) Sustainable Development Goal 14 “Life under Water”.¹⁰ Although this did not directly mention noise pollution in the sea, it can be derived that importance is given to the species in the marine environment under SDG.

2022:

The European Union (EU) introduced limits and regulations for emission of noise for MNP and marked a certain threshold for the emissions and also the time period over which species can be exposed to MNP, thereby taking care of biodiversity. It also sets out guidelines for the maximum emission levels for impulsive noise. This marks the first-ever regulation a country has introduced that has been implemented and being followed.¹¹

> UNCLOS and Marine Noise Pollution:

It is important to analyse the UNCLOS document as it serves as the most comprehensive convention with over 157 signatories and 169 state parties. UNCLOS, 1982 came into force on 16 November 1994.¹² UNCLOS was established with an aim to have a mutual understanding

⁹ GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, <https://cetsound.noaa.gov/Assets/cetsound/documents/MEPC.1-Circ%20883%20Noise%20Guidelines%20April%202014.pdf>.

¹⁰ Goal 14 | Department of Economic and Social Affairs, <https://sdgs.un.org/goals/goal14> (last visited Apr 3, 2024).

¹¹ Zero pollution and Biodiversity: First ever EU-wide limits for underwater noise - European Commission, https://environment.ec.europa.eu/news/zero-pollution-and-biodiversity-first-ever-eu-wide-limits-underwater-noise-2022-11-29_en (last visited Apr 3, 2024).

¹² United Nations Treaty Collection, https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=_en (last visited Apr 17, 2024).

among state parties upon matters relating to law of the sea in order to maintain peace and progress for the world over.

The following were taken into consideration:

- a) sovereignty of the states,
- b) facilitating international communication,
- c) promote peaceful uses of seas and oceans, and
- d) equitable utilisation of resources.

UNCLOS, most importantly, mentions that beyond the limits of a national jurisdiction of a state, the resources belong to mankind equally. That is, it's a common heritage of mankind and that the activities carried out shall be for the benefit of mankind as a whole.¹³

As seen in the earlier part of this article, marine noise pollution gained attention very recently, just 2 decades ago. UNCLOS, which came in 1982 did not have any agenda to cater to noise as a form of pollution. It was during the early 2000s that the states and intergovernmental organisations began to acknowledge the significance of addressing the problem of noise given the grave consequences it is leading to. However, certain provisions in the UNCLOS can be inferred to include noise as one of the forms of pollution and interpreted accordingly.

-Article 194 of UNCLOS "Measures to prevent, reduce and control pollution of the marine environment", of which, Article 194(1) mentions that the states shall be expected to take all appropriate measures to counter pollution. It suggests doing so by preventing, reducing, and controlling pollution in the marine environment. It further provides that the states shall bring in policies in light of this issue.

Article 194(2) puts an obligation on the states to "ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other states and their environment". This essentially reflects the principle that a state should not cause transboundary environmental harm, and that appropriate precautions shall be taken not to spread the pollution arising beyond the area of their jurisdiction. This provision holds immense relevance in light of marine noise pollution as, for example, State A carries out a seismic survey for the purpose of

¹³ Id

exploration of oil, and the noise emissions through that survey is likely resulting in harm to the marine species located within state B's jurisdiction.

Article 194(3) expressly mentions that the term "pollution" includes all kinds of pollution from all sources that is caused in the marine environment. Although this article does not expressly make a mention of "noise", in fact the entire UNCLOS document is deficient in acknowledging "noise" as a pollutant. However, since the article provides a broader connotation of including "all sources of pollution of the marine environment", from this, it can be inferred that it also includes "noise" as a form of pollution.¹⁴

Further, article 194 (5) mentions having necessary measures to preserve and protect rare or fragile ecosystems. This provision is potentially fit to be applied in the context of MNP, as it has direct consequences of affecting the ecosystem or habitat of the species, be it zooplanktons or even cetacean species.

-Article 211:

Article 211 of UNCLOS mentions "Pollution from vessels". Of which, article 211(1) emphasises upon "international standards" that direct towards the prevention, reduction and control of marine noise pollution.

Article 211 of UNCLOS provides for the states and international organisations to control and regulate marine noise pollution from vessels, that is commercial shipping which is a major source of noise pollutant in the sea.

Article 211 of UNCLOS provides for the states and international organisations to control and regulate marine noise pollution from vessels, that is commercial shipping which is a major source of noise pollutant in the sea. Although, none of the provisions in the article expressly mention "noise", but the extent of the provision can be safely inferred given the article emphasises upon the fact that the ultimate goal is to protect the species in the marine environment, and that "noise" being a form of polluter can be included.

¹⁴ Dwyer, G. and Orgill, T., 2020. Do the Conventions on the Law of the Sea and Biological Diversity adequately protect marine biota from anthropogenic underwater noise pollution?. *Asia Pacific Journal of Environmental Law*, 23(1), pp.6-38.

Article 211, for the states under the convention, provides for two duties- (a) control, prevent noise, and (b) reduce pollution in the marine environment.

Firstly, Article 211 provides for states to work through international organisations "“to establish international rules and standards to prevent, reduce and control pollution in the marine environment from vessels”

Secondly, the article mentions "adopt [national] laws and regulations for the prevention, reduction and control of pollution of the marine environment from vessels flying their flag or of their registry." These stated obligations under UNCLOS infer that the global community has since time agreed to have binding provisions for marine environmental protection.

> **IMO:**

As seen in the earlier part of this article, marine noise pollution gained attention very recently, just 2 decades ago. UNCLOS, which came in 1982 did not have any agenda to cater to noise as a form of pollution. It was during the early 2000s that the states and intergovernmental organisations began to acknowledge the significance of addressing the problem of noise given the grave consequences it is leading to.

History of IMO:

The International Maritime Organisation (IMO) is a specialised agency of the UN established under the Convention of the Intergovernmental Maritime Consultative Organisation, headquartered in London.¹⁵ IMO was first called as IMCO (Intergovernmental Maritime Consultative Organisation), it was in 1982 that the name was changed to IMO. IMCO initially addressed solely for the safety of humans aboard ships at sea. With IMO coming into picture, the spectrum was expanded. As per IMO's convention, its objective lies in the safety and security of shipping and the prevention of marine and atmospheric pollution by ships.

The strategic plan of IMO for 2012-2017 affirmed that one of the purposes of the organisation is "to promote safe, secure, environmentally sound, efficient and sustainable shipping through cooperation." Thus, it can be inferred that the mission objective of IMO's priorities is two-pronged between marine conservation and commercial shipping activities.

¹⁵ <https://www.imo.org/en/About/Pages/Default.aspx>

IMO is primarily a legislative body having the ability to develop and maintain international treaties and other international legislation to address pollution from ships in the sea. IMO's limb, the MARPOL. The guidelines provided by IMO can potentially be regarded as 'international standards' of the UNCLOS Article 211(1) directed towards preventing, reducing and controlling the noise pollution. However, the IMO guidelines do not in any way take the shape of "international rules" or "laws" as per usage in Article 211(1) of UNCLOS. This is due to the fact that, as per para 3.1 of the IMO Guidelines, that they are mere guidelines and are not mandatory to be followed. However, the guidelines may be regarded as of crucial importance as they take a step in furthering the objective of mitigation of marine noise pollution.¹⁶

The IMO guidelines can be summed up as follows:^[SEP]

1. It recognises and acknowledges the problem of emission of noise from commercial ships and that it can have short-term as well as long-term negative effects on the species in the marine environment,
2. It emphasises upon the importance of measurement of noise, thereby helping keep a track of the same,
3. It encourages the existing ships to consider using noise-reducing technologies
4. It provides for considering design changes that can help reduce noise from various components from the ship that greatly emit noise.
5. And that relevant considerations that can help in minimising marine noise pollution can be implemented.

>MARPOL:

MARPOL Protocol (The International Convention for the Prevention of Pollution from Ships) was primarily adopted in response to the instance of pollution from an oil tanker accident in 1976-77.¹⁷ The protocol contains procedures for the prevention and control of pollution in the sea. MARPOL consists of regulations aimed at prevention and minimisation of pollution from ships, that includes both accidental pollution and that arise from routine operations.¹⁸ The annex(s) of MARPOL protocol provides for the pollution arising from oil, noxious liquid substances, sewage,

¹⁶ Chen, F., Shapiro, G.I., Bennett, K.A., Ingram, S.N., Thompson, D., Vincent, C., Russell, D.J. and Embling, C.B., 2017. Shipping noise in a dynamic sea: a case study of grey seals in the Celtic Sea. *Marine Pollution Bulletin*, 114(1), pp.372-383.

¹⁷ [https://www.imo.org/en/About/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](https://www.imo.org/en/About/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx)

¹⁸ Id

garbage and air pollution.¹⁹

It does not currently regulate “noise” as a pollutant arising from the ships, hence does not particularly count as a legal framework relating to marine noise pollution.

> **Laws in the EU:**

The European Union (EU) introduced limits and regulations for emission of noise for MNP and marked a certain threshold for the emissions and also the time period over which species can be exposed to MNP, thereby taking care of biodiversity. It also sets out guidelines for the maximum emission levels for impulsive noise. This marks the first-ever regulation a country has introduced that has been implemented and being followed.²⁰ The legal framework made by the EU is important to understand as this is the first ever, one of a kind “Zero Pollution Action Plan” at a global level.

Experts in the EU have adopted certain recommendations and put a threshold on the maximum amount of noise acceptable levels for both impulsive (noise emission from oil and gas extraction, etc) and continuous noise (noise emission from shipping). The threshold values have been brought under MSFD (Marine Strategy Framework Directive).²¹ Under which, it requires the states in the EU to develop and implement strategies to protect the marine environment and ultimately the species. The new limits specify that in a given area in the sea, not more than 20% of it can be exposed to continuous underwater noise over the period of a year. Additionally, not more than 10% of the marine habitat can be exposed to impulses over the period of a year and not more than 20% on a given day. In the EU, maritime traffic (due to ships, cargo vessels) is a major contributor to continuous underwater noise pollution. With over 27% of the area being subjected to shipping in the Mediterranean Seas, it is home to the highest shipping traffic in the EU, followed by 19% in the Baltic sea.

Such limits are binding and must be followed, breach of which shall lead to legal consequences.²²

¹⁹ *Id*

²⁰ Zero pollution and Biodiversity: First ever EU-wide limits for underwater noise - European Commission, https://environment.ec.europa.eu/news/zero-pollution-and-biodiversity-first-ever-eu-wide-limits-underwater-noise-2022-11-29_en (last visited Apr 3, 2024).

²¹ *Id*

²² Historical EU mandatory limits on underwater noise pollution, IFAW, <https://www.ifaw.org/international/press-releases/eu-historical-mandatory-limits-underwater-noise-pollution> (last visited Apr 21, 2024).

Underwater noise pollution in the EU in fact counts as a criminal offence.²³ It provides strategies for regulating and limiting noise by measures such as reducing ship-noise, making changes in the design that will help in minimising the noise, by imposing restriction upon anthropogenic activities that emit noise.

> **Impact of legal framework in the EU:**^{[1][SEP]}

The work carried out under MSFD (Marine Strategy Framework Directive)²⁴ sets out an example having implemented regulations in this field and a “law” in place, potentially forming a landmark across all states for making of regional laws/convention(s) to counter the issue of noise and to assess the state of marine environment and impact on marine biota. Additionally, this becomes a point of discussions in meetings under IMO to reduce levels of ship-noise in the sea.

The Arctic countries have agreed to implement the requisite measures to mitigate or reduce the impact of noise on marine mammals. In addition to this, to improve their knowledge of the auditory function, including their communication and behaviour. It is also essential to determine/ascertain the exposure of migrating stocks because of noise.²⁵

Conclusion:

Upon analysing various legal frameworks in the realm of international law pertaining to marine noise pollution, it is understood that it is inadequate to regulate/mitigate anthropogenic noise, in spite of the fact being well established that the impact so caused because of it is life threatening for the marine biota. There needs to be a regulation on transboundary noise pollution, this is only possible provided there is an active involvement of the international community. IMO’s guidelines being non-binding in nature does not do much good. However, it does make an appreciable attempt at acknowledging the problem. Additionally, in the EU where marine noise pollution is actually regulated under the law and made binding, can be considered as an example/model by other states in the International community in order to bring in a legal framework that is increasingly becoming more and more necessary, considering the serious threat to the species in the marine environment.

²³ Id

²⁴ Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (Text with EEA relevance), 164 OJ L (2008), <http://data.europa.eu/eli/dir/2008/56/oj/eng> (last visited Apr 21, 2024).

²⁵ PHILIPPE SANDS ET AL., PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW (Fourth edition ed. 2018).