



# MARITIME PERSPECTIVES 2024



## VIEWING MARITIME ACTIVITIES THROUGH A LEGAL LENS

Edited by:  
Vice Admiral Pradeep Chauhan  
Mr John J Vachaparambil

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VOLUME I: VIEWING MARITIME ACTIVITIES THROUGH A LEGAL LENS

**Editors: Vice Admiral Pradeep Chauhan and Mr John J Vachaparambil**

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## Foreword

For decades, the varying concepts and definitions of lawfare have been exploited by States and non-State actors alike, in order to achieve tactical advantages or politico-military objectives or both, in a manner that minimises the need to for kinetic military force. However, the ‘use’ of the law by one State to achieve such advantages/objectives is frequently perceived as its ‘misuse’ by another, leading to international conflicts/disputes. For instance, the propagation, in the 17<sup>th</sup> century, of the concept of ‘open seas’ by the Dutch jurist, Hugo Grotius, in his treatise *Mare Liberum*, led to the contemporary establishment under international law, of the freedom of seas, which encompasses the freedom of navigation on the high seas. Today, however, the ‘misinterpretation’ and ‘misuse’ of the provisions of international law, especially (although not solely) the United Nations Convention on the Law of the Sea (UNCLOS)-1982, by States, such as China in the South China Sea, has raised eyebrows globally. The situation is further exacerbated by the various tactics and techniques of lawfare deployed by States, which could incorporate legal ‘location’, i.e., international — and even national — legal ‘forums’ or legal ‘provisions’ (i.e., provisions of the law) or both. For instance, in February of 2022, following the outbreak of armed conflict between Russia and Ukraine, the latter developed a comprehensive strategy of “lawfare” against the former, including a website detailing the various aspects of its ‘Lawfare Project’.

While the West is becoming a ‘hotbed of conflicts’, the situation in the East is still precarious. For instance, the provisions of the national laws of the People’s Republic of China (PRC), which define the extent of its maritime zones, contradict the relevant provisions of the UNCLOS, 1982. China’s domestic laws seek to legitimise China’s recently developed “ten-dash line”, and strengthen Beijing’s claims of having sovereign rights over almost the entire area of the South China Sea (SCS). The increase in threats from China’s maritime militia to non-Chinese Flag-State vessels,

and the rapid conversion of naturally submerged formations into artificial islands by China, serve to highlight Beijing's disdain for international law when it does not suit China, and its disregard of the sovereign rights of other States in the region. The ambiguous provisions of the PRC's recently issued "Coast Guard Regulation No. 3" (CCGR-3) — particularly with regard to geographical coverage, use of force methodology, arbitrary powers of detention and arrest of foreign ships, and the status of warships with regard to their immunity from prosecution — will only exacerbate the existing situation in this subregion.

While international law remains the most effective of the tools available to enable collective responses to global challenges and to manage conflict between States, the maritime domain has always had more than its fair share of challenges in terms of public international maritime law (PIML). For instance, the need for protecting submarine communication cables became a global cause of concern when the *'New Polar Bear'* container ship dragged its anchor (deliberately?) in the Baltic Sea, rupturing a gas pipeline and damaging two undersea communication cables. At another level, it is increasingly important to understand the interplay between law and technology, especially with States using advanced technology for developing UUVs, etc. The rapid development of technology in the maritime domain has once again proved to be challenging in the application of international law. That said, it is equally important to analyse India's role within the International Maritime Organisation (IMO) and its legal committee (LEG), and New Delhi's own compliance with international laws that govern various activities in the maritime domain, including ship recycling, as also the safety of fishers and fishing vessels. Likewise, with the Government of India having made an application to the International Seabed Authority (ISA) on 18 January 2024, seeking approval for its plan-of-work for the exploration of polymetallic sulphides in the Carlsberg Ridge, and for cobalt-rich ferromanganese crusts at the Afanasy-Nikitin seamount in the Central Indian Ocean, it is crucial to understand the applicable legal regime, and assess India's preparedness, for seabed mining.

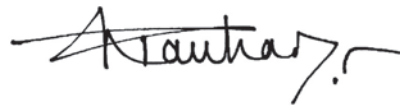
On a far more immediate level, the challenge of illegal, unreported, and unregulated (IUU) fishing continues to adversely impact India's food security and her holistic maritime security. Despite robust legal frameworks for the conservation

and protection of fish stocks, illegal fishing by distant water fishing fleets (DWFFs) in the close proximity of India's EEZ, and unreported and unregulated fishing by India's own artisanal fishers within her EEZ, threaten local fish stocks. IUU fishing and its impact on India's economy is further exacerbated by the limitations in monitoring, control and surveillance (MCS) of the fisheries infrastructure. Moreover, these limitations have led to an increase in the illegal trade of protected marine species, both import and export, despite international ban.

In this context, this volume of Maritime Perspectives on Public International Maritime Law entitled "*Viewing Maritime Activities Through a Legal Lens*" presents the reader with a series of well-written and well-researched articles that delve into legal aspects of a wide range of maritime activities. Importantly, each article also includes useful policy-recommendations to better secure India's maritime interests.

I am positive that this edition of Maritime Perspectives will enable readers to better appreciate the legal nuances of the diverse challenges facing India and the global community in the maritime domain. I believe that it will also serve as an extremely useful resource for policymakers and policy-shapers, academicians, independent researchers, strategic analysts, and maritime practitioners, alike.

I wish you enjoyable reading!



**Vice Admiral Pradeep Chauhan**  
AVSM and Bar, VSM, IN (Retd)  
Director-General  
National Maritime Foundation



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# *Lawfare Facets*



# Lawfare: Definitions and Concepts

*Mr Mayank Mishra*

Lawfare is an umbrella term for a wide variety of practices and techniques that are increasingly deployed by States as well as non-State actors to achieve tactical advantages or politico-military objectives or both, in a manner that minimises (sometime to zero) the need to use military force for achieving aforesaid advantages or objectives. This article seeks to unpack the term and explore some of the definitions and concepts associated with it.

## Lawfare: Definitions and Concepts

A variety of definitions, conceptions and justifications are to be found in the literature associated with the term 'lawfare'. David Kennedy, for instance, characterised it as a "*struggle*" (or *the struggle*) in international law and/or international relations. According to him, this struggle is characterised-by (and even constituted-of) "*distribution through coercion*", and the law is a means to inflict such coercion. His views define and contextualise lawfare, and are reproduced below:

"Warfare is but one instance, one tactic, one tendentious label applied to particular struggles and adversaries. Even war is not only or even mainly a matter of bombs, bullets, or boots on the ground. Sometimes threats can work. Sometimes the Security Council—or the global financial system—can do the work for you. Enemies can be coerced by economic rearrangements, physical changes in the landscape, shifts in the arrangement of allies and enemies, changes in community sentiment or in the economies of honour and shame, legitimacy and illegitimacy, or the application of effective administration. As the neologism "lawfare" suggests, war can also be waged by law: law as a weapon, a strategic asset, a force multiplier. As a result, global struggle is a matter of persuasive arguments, strong armies and big bank accounts at the same

time. It is at once a material struggle waged with words and a struggle over values and ideas waged by force. Bargaining power is as much a matter of knowledge as leverage is a matter of persuasive authority. When distribution is accomplished without the use of force, the coercion may not be obvious on the surface. But it is there.”<sup>1</sup>

General Charles Dunlap distinguished between the use and misuse of law:

“Although I’ve tinkered with the definition over the years, I now define “lawfare” as the strategy of using—or misusing—law as a substitute for traditional military means to achieve an operational objective. As such, I view law in this context much the same as a weapon. It is a means that can be used for good or bad purposes.”<sup>2</sup>

However, Dunlap’s distinction between the use and misuse of law is, in the opinion of this author, tenuous at best, since what may be the ‘use’ of law to one person may well be its ‘misuse’ to another, and *vice versa*. Jill Goldenziel, who broadened the definitions provided by General Dunlap and by Orde Kittrie (the latter referred to it as “compliance leverage disparity lawfare”),<sup>3</sup> offered the following two definitions of lawfare:

1. The purposeful use of law taken toward a particular adversary with the goal of achieving a particular strategic, operational, or tactical objective, or
2. The purposeful use of law to bolster the legitimacy of one’s own strategic, operational, or tactical objectives toward a particular adversary, or to weaken the legitimacy of a particular adversary’s particular strategic, operational, or tactical objectives.”<sup>4</sup>

On the issue of using law to attain socio-political objectives, the concept of ‘climate-change lawfare’, introduced by Gloppen and Lera St Clair, is noteworthy. It emphasises the social use and/or utility of lawfare outside war or conflict—that is, in peacetime. Apart from climate change, such use may also take the form of legal advocacy to address class fault lines, or public interest litigation initiated to address deficiencies in governance. Gloppen and Lera St Clair defined and explained lawfare, and in particular their idea of climate change lawfare, in the following words:

“The concept of climate change lawfare builds on the concept of social lawfare. The role of law in social transformation has been growing and evolving over the last few decades. An array of diverse factors—operating very differently in different contexts—have combined to increase the importance of rights, courts, and various

legal and quasi-legal institutions as sites of political struggle. These include systematic weakness in political systems, with (more or less) democratic institutions marked by elite capture and lack of responsiveness and a consequent unwillingness or inability to tackle pressing social problems, from severe poverty and inequality to environmental challenges. Alongside a sometimes-deteriorating political opportunity structure, the legal opportunity structure has, in many cases, improved. Many countries have adopted new rights-rich constitutions; many policy areas see denser national and international regulation; judiciaries have been reformed; and many places are experiencing a stronger rights consciousness. In some places, of course, law remains distant from these debates. But where these conditions obtain, actors within the State and civil society, nationally and internationally, have turned to legal strategies and arenas to fight battles that traditionally had been resolved in the political domain. This battle of legal perspectives and use of the law is what is meant by the concept of lawfare. Included in this is the notion that “the weak may use the law strategically to thwart the will of the powerful.”<sup>5</sup>

Howsoever, one was to define or justify it, the basic premise and idea of lawfare is unsurprising. The political nature and content of the law is pervasive and even fierce; law contains and confers power(s) to legitimise, authorise, humanise, tame, restrain, declare, limit, justify or condemn. These powers extend in varying degrees to individuals, organisations, regimes, and States, and the strategic potential and application of such powers forms the subject-matter of this article.

The idea of lawfare is not new either. Its history goes back to at least the seventeenth century when Hugo Grotius, a Dutch jurist widely considered to be the father of international law, used law to achieve an objective for which he was hired by the Dutch East India Company—that of strengthening Dutch military and maritime power against the Portuguese in the Indian Ocean. Towards achieving the immediate objective(s) for which he was commissioned, Grotius wrote the treatise *Mare Liberum* in which he made the case that the sea is common to all, and all nations are free to use it for seafaring trade. As time progressed through the 1700s, most States adopted the idea of the freedom of the seas. Grotius thus, in the process of satisfying his immediate objective(s), also became instrumental in embedding (to the extent it is embedded) the concept of freedom of the seas in modern international law.<sup>6</sup>

In the contemporary world, decision(s) by social media companies like Facebook and Instagram to “temporarily” allow hateful and/or violent online content against

Russia during the conflict with Ukraine, by creating overnight exceptions to company rules and policies is only the latest demonstration of lawfare.<sup>7</sup>

To summarise the arguments set forth thus far, lawfare may be defined as the shaping of power—or the battlefield—through epistemic means. It may also be understood as a very precise form-and clinical use of perception management.

Critical perspectives on lawfare remain important.<sup>8</sup> It is true, as Dunlap observed, that “*substituting lawfare methodologies for traditional military means can reduce the destructiveness of war, if not its frequency,*”<sup>9</sup> However, much like the State or the individual, lawfare is not necessarily or always benign. The moral and ethical context within which it is practiced, including the moral content of the laws of war (*Jus in Bello* and *Jus ad Bellum*), has not been sufficiently explored. Instead, notions and invocations of morality have been used as yet another tool in the practice of lawfare.

The political content and nature of law is real. For instance, law is invoked or used—presumably in good faith—in public interest litigation(s) to attain a political objective, and it is unclear if such litigation constitutes law or lawfare. To the extent that law as well as lawfare can be used to attain a social or political objective, it is difficult to functionally differentiate between the two. Further, distinguishing between ‘good faith invocations of law’ and ‘bad faith invocations of law’, or between ethical and unethical lawfare, is also conceptually difficult. Answering such questions about the moral content of law—and its moral and ethical relevance to practitioners, policymakers, decision-makers and statesmen—will require exploration(s) separately and outside the importance accorded to it within the ‘legal’ domain and in ontologies of legal expertise.

To be sure, these questions and answers thereto deserve attention and scrutiny because the morality of law and/or lawfare is a significant issue. As a case study of lawyers being reduced to the cause of the State *alone* and the wide-scale consequences thereof, one may consider the role of lawyers, judges and the bar in Nazi Germany.<sup>10</sup> Scholars have variously observed and recorded as follows on aforesaid roles and consequences:

“The solution which the Hitler’s State embarked upon was the gradual elimination of the lawyer’s role in modern society as an independent servant of justice. Instead, the entire profession was to be transformed into a facile instrument for State, i.e., National Socialist rule. This confrontation from 1933 to 1945 between the German Bar and National Socialism witnessed a major reversal in the historical development of the legal profession and raises serious questions of professional responsibility and fidelity to the law which remain relevant to our own contemporary period.”<sup>11</sup>

“The Third Reich was not a State without law, or without concern for legitimation. In fact, the National Socialist (Nazi) State began its tyranny in the name of “law and order”: Legal zur Macht (Lawfully to Power) was an oft-repeated Nazi slogan. Industry, army and high-ranking state officials, the leading forces behind the 1933 putsch by the Nazi Party, did not seek to overthrow a legal order which had hitherto allowed them to dominate German society. They did seek, however, in collusion with the Nazi party, to abolish the limitations imposed by the legal order on their power by denying the individual and collective rights of those who opposed their political and military aims. The fascist legal order developed into a system of law without rights, an order of duties.”<sup>12</sup>

Therefore, even as one proceeds on this study of lawfare, it is important to reiterate that the jurisprudence of lawfare as *application of law*—including in particular the ethical, moral and critical aspects thereof and therein—remain relevant-to and an intrinsic part of the study of *law itself*.

25 September 2023

## About the Author

Mr Mayank Mishra was engaged as an Associate Fellow within the Public International Maritime Law (PIML) Cluster of the National Maritime Foundation (NMF). While his research essentially focused on the vitally important intersection of maritime law with maritime ‘hard security’ policy, he was also keenly interested in the equally critical and fascinating interplay between PIML and technology, especially where relevant to the maritime domain. The views expressed are those of the author. He may be contacted at [socialsectorlaw@gmail.com](mailto:socialsectorlaw@gmail.com).

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## Lawfare: Tactics and Techniques

*Mr Mayank Mishra*

This article explores the tactics and techniques of lawfare and focuses upon the practice of offensive as well as protective facets of lawfare—for the most part in the USA. As the following paragraphs will indicate, the exploitation of the various provisions of international law for ‘lawfare’ is much more common than the current sharp focus on the usage of ‘lawfare’ by the People’s Republic of China (PRC) might indicate. It is, of course, true that the PRC has elevated ‘lawfare’ to the level of formally enunciated Statecraft. For those strategic analysts who are increasingly concerned (and quite rightly, too!) about the ongoing attempt by the PRC to engage in what some are terming ‘narrative-warfare’ through the promulgation of the Global Civilisational Initiative (GCI), the Global Development Initiative (GDI) and the Global Security Initiative (GSI), it would be instructive to examine other tactics and techniques that have been effectively deployed (and which continue to be so deployed) in international forums and that may well be the inspiration propelling the PRC’s own efforts in terms of ‘lawfare’ through subtle narrative changes.

Indeed, a review of the existing literature on the subject shows multiple tactics or techniques as having been deployed by State as well as non-State actors. Orde Kittrie refers collectively to these tactics and techniques as “*Instrumental lawfare*” or the instrumental use of legal methods and/or forums to achieve outcome(s) that would otherwise have had to be achieved through weaponry, the expenditure of ordnance, or military operations.<sup>1</sup> According to Kittrie, tactics and techniques of ‘lawfare’ can incorporate legal ‘location’, i.e., international—and even national—legal ‘forums’ or legal ‘provisions’ (i.e., provisions of the law) or both.

## ‘Offensive Lawfare’

A series of examples of tactics and techniques used in ‘offensive lawfare’ are presented in the succeeding paragraphs.

1. **Linguistic Alterations to Create International Law(s) so as to Disadvantage another Party/State.** A telling example of this technique or approach may be seen in the strong and persistent advocacy by the Arab League (as a collective) that led to the legally problematic but nevertheless successful insertion into the Rome Statute of a completely new offence that was specifically designed to categorise Israeli settlements as ‘war crimes’. This was done through the addition of the words “*directly or indirectly*” into Article 8(2)(b)(viii) of The Rome Statute. For successful advocacy of this addition, the State of Palestine invoked Article 12(3) of The Rome Statute when “*In January 2009, Palestine’s Minister of Justice flew to The Hague and sought an ICC (International Criminal Court) investigation. In so doing, Palestine relied on a provision of the Rome Statute that allows non-member States to give the court jurisdiction on their territory.*”<sup>2</sup> Although newly formed, this legal provision nevertheless takes away *de jure* legitimacy from settlements that the State of Israel sees as vital to its strategic interests. Further, it exposes Israeli State officials to the risk(s) and stresses of ICC prosecution(s). Finally, it serves as ammunition (with kinetic as well as deterrent potential) for lawfare in fora other than the ICC.
2. **Reinterpreting the Provisions of Existing International Law so as to Disadvantage an Adversary.** The People’s Republic of China (PRC) is engaged in a variety of initiatives to reinterpret the law of the sea, space law, and cyber law, in its favour. If it succeeds, these ‘reinterpretations’ will considerably tilt future maritime, space, and cyber battlefields in favour of the PRC. A fuller examination of PRC lawfare is contained in the case study later in this article.
3. **Generating Criminal Prosecutions Relevant to International Law, in International Tribunals.** Ever since the Palestinian Authority (PA) joined the ICC, it has proactively sought to initiate prosecutions of Israeli officials

under Article 14 of the Rome Statute for alleged war crimes relating to combat in Gaza and Israeli settlements in the West Bank. Although it is yet to be formally initiated by the PA, this proactive quest is nevertheless used as a bargaining chip by it at the negotiating table with Israel. Even before joining the ICC, the PA's practice of 'lawfare' was effective. This can be gauged from the fact that Israel released 78 Palestinian prisoners (many of whom had been convicted of murdering Israeli civilians) in exchange for the PA slowing down its own movement (the PA accordingly stopped itself for 8 months) on the latter's membership of the ICC and other international organisations and treaties.<sup>3</sup>

4. **Exploiting International Law to Generate Intrusive and Protracted Investigations by International Organisations.** This method is frequently adopted by Palestinian Non-Governmental Organisations against the State of Israel.<sup>4</sup> The BDS ("Boycotts, Divestment, and Sanctions") movement against the State of Israel generated a 17-month long government investigation, in the UK, of G4S—a British vendor of security technology to Israel. The BDS, in its complaint, asserted that G4S contributed to alleged Israeli war-crimes in violation of guidelines issued by the Organisation for Economic Cooperation and Development (OECD).<sup>5</sup> This investigation contributed to G4S announcing its withdrawal from future business in Israel.<sup>6</sup>
5. **Generating Votes Within an International Organisation/Forum to Disadvantage an Adversary.** The PA and its allies successfully campaigned for passage of the UN General Assembly (UNGA) Resolution that granted 'Non-Member Observer State' status to Palestine.<sup>7</sup> The new status, as well as other provisions of the resolution, strengthened Palestine's claim to statehood and the legal rights that come with it—without the PA having to make any concessions to Israel or defeat it on the kinetic battlefield.<sup>8</sup>
6. **Generating Advisory Opinions in International Legal Forums.** The PA won a major 'lawfare' victory against Israel through an International Court of Justice (ICJ) Advisory Opinion of 2004 entitled, "*Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*".<sup>9</sup> This Advisory

Opinion came about when the PA and its allies (e.g., the Arab League) campaigned against a 2002 Israeli decision to construct a security fence separating Israel from much of the West Bank territory. First, Arab States successfully campaigned for a UN General Assembly resolution requesting the ICJ for the aforesaid Advisory Opinion.<sup>10</sup> Subsequently, the ICJ declared that the security barrier and Israel's West Bank settlements were in violation of international law, and that Israel was "*under an obligation*" to dismantle the barrier.<sup>11</sup> This Advisory Opinion is contentious because it came about despite assertions by Israeli officials—as well as reported admissions by Hamas leaders—that the security barrier hindered suicide bombing attacks against Israel.<sup>12</sup> While it is true that in this case, Palestinian lawfare did not make the wall or the settlements go away, it did succeed in putting continual pressure on the UN Secretary General who, in turn, applied pressure on the State of Israel to dismantle the wall and the settlements. This Advisory Opinion also subsequently became the basis for actions in European courts against companies doing business with the settlements.<sup>13</sup> It served as the basis for a three-year long Dutch criminal investigation of a Dutch company for alleged war crimes. The alleged war crime/offence was that the Dutch Company had rented out to the Israeli government—for a total of 16 days—construction equipment used in construction of the wall and settlements.<sup>14</sup> It is apparent that this Advisory Opinion could in future, too, serve as the basis for more criminal prosecution(s) in national courts.

7. **Exploiting International Law for 'Universal Jurisdiction' Prosecutions for Alleged War Crimes.** In the past, the Iraqis have brought prosecutions to Belgian courts—using the principle of universal jurisdiction in international law and invoking a domestic Belgian law—against then US Secretary of Defence, Donald Rumsfeld, and Secretary of State, Colin Powell, for allegedly committing war crimes in Iraq.<sup>15</sup> After the US threatened to withdraw NATO from Belgium (exposing Belgium to its own security risks), the Belgian law was changed and prosecutions eliminated. On the domestic Belgian law, amendments thereto and subsequent dropping of prosecutions, it was observed that:

“The contentious law caused Brussels much diplomatic grief because it gave courts the power to try war crimes cases irrespective of where the alleged crimes were committed and regardless of the victim or perpetrator’s identity. It flooded the country’s courts with cases against a number of world leaders including Cuban President Fidel Castro and Palestinian leader Yasser Arafat. Under intense international pressure, Belgian legislators drastically amended it last month. The changes stipulated that human-rights complaints can be filed only if the victim or suspect was a Belgian citizen or long-term resident at the time of the alleged crime. In addition, the Belgian parliament also guaranteed diplomatic immunity for world leaders and other high-level officials visiting the country.”<sup>16</sup>

However, many States other than Belgium continue to have such laws that allow invocation of universal jurisdiction for certain offences. For instance, US President, George W Bush, was forced to cancel a trip to Switzerland in 2011 amid talks of legal action against him—in Switzerland and during his official visit—for alleged maltreatment of suspected militants at the US extra-territorial prison / detention camp at Guantanamo Bay in Cuba.<sup>17</sup>

8. **Exploiting International Law for Criminal Prosecutions of Domestic Companies in National Courts for Alleged War Crimes.** The Palestinian NGO *Al-Haq* instituted a Dutch criminal investigation of the Dutch company Riwal for war crimes allegedly committed in Riwal’s rental to Israel of equipment that Israel used in constructing the separation fence and settlements in the West Bank. The complaint referenced the ICJ’s Advisory Opinion (mentioned above) that the fence and settlements violated international law. The investigation lasted three years, included Dutch police raids on Riwal’s headquarters and the homes of its officials, and concluded without prosecution only after Riwal halted all activities anywhere in Israel.<sup>18</sup>
9. **Exploiting International Law as a Defence against Criminal Prosecution.** Activists of the NGO, ‘BDS’, twice broke into and damaged the Northern Ireland site of Raytheon (a major weapons manufacturer and exporter) yet managed to get acquitted on both occasions. Their defence was that Raytheon was a supplier of arms to Israel and that they were acting to prevent alleged Israeli war crimes against the people of Gaza and Lebanon. Citing these acquittals, Raytheon eventually closed its facility.

## Protective ‘Lawfare’

It is instructive to note that in order to protect American and Israeli officials from the tactics and techniques of ‘offensive lawfare’, the US, amongst other nations, has developed a set of tactics and techniques of ‘protective lawfare’. One technique deployed by the US government is entering into what are referred to as “Article 98 Agreements” with many foreign governments, especially U.S. allies. These ‘Article 98 Agreements’ are also referred-to as ‘Bilateral Immunity Agreements’ or ‘Bilateral Non-surrender Agreements’ or ‘Impunity Agreements’ (‘impunity’ literally means exemption from punishment). Article 98 of the Rome Statute is reproduced below to demonstrate its potential for ‘lawfare’, which the US government continues to utilise:

### “Article 98

Cooperation with respect to waiver of immunity and consent to surrender

1. The Court may not proceed with a request for surrender or assistance which would require the requested State to act inconsistently with its obligations under international law with respect to the State or diplomatic immunity of a person or property of a third State, unless the Court can first obtain the cooperation of that third State for the waiver of the immunity.

2. The Court may not proceed with a request for surrender which would require the requested State to act inconsistently with its obligations under international agreements pursuant to which the consent of a sending State is required to surrender a person of that State to the Court, unless the Court can first obtain the cooperation of the sending State for the giving of consent for the surrender.”

Article 98 Agreements are signed pursuant to a US law called the “**American Service-Members’ Protection Act of 2002**” (ASPA), which incorporates language that seeks to protect US citizens and those of close US allies.<sup>19</sup> Section 2008 of this Act specifies that “*the President is authorised to use all means necessary and appropriate to bring about the release of any person described in subsection (b) who is being detained or imprisoned by, on behalf of, or at the request of the International Criminal Court.*” The persons described in subsection (b) include “*covered United States persons*” and “*covered allied persons.*” Countries that enter into such Article 98 Agreements with the USA agree—as a matter of law—to *not* surrender US persons to the jurisdiction of the ICC.<sup>20</sup> The US has since concluded such agreements with at least 100 countries.<sup>21</sup>

Further, US Congress even made US military aid to some countries contingent upon their agreeing to enter into such Article 98 agreements with the USA.

As previously stated, ‘lawfare’ is a collective term used to describe practices and techniques to achieve politico-military objectives without the use of kinetic military force, it must be admitted that a very large number of nations engage in more proactive forms of ‘**protective lawfare**’ by creating or exploiting their *domestic* law in a manner that seeks to shape and/or control the *international* behaviour of parties over which the domestic law in question would normally not be applicable. This is most commonly used by States to curb ‘terrorist’ activity. This, of course, is in and of itself a problematic concept, given that a universally acceptable definition of a ‘terrorist’ continues to elude the community of nations. However—and more disturbingly—it is also used to control adversarial or ‘presumed-to-be-threatening’ sovereign States by labelling them as ‘rogue States’ in an entirely subjective—if not arbitrary—fashion. Both categories are touched upon in the succeeding paragraphs.

1. **Creation of National Laws to Enable Litigation against Terrorist Groups and their Supporters and State Sponsors.** An illustrative example of this technique is the case of Mr Stephen Flatow. This lawyer and father of a victim of Iranian-sponsored terrorism, successfully worked for multiple amendments to US law that led to the success of his subsequent lawsuit holding Iran accountable for his daughter’s death. These amendments also facilitated numerous successful lawsuits by other plaintiffs against Iran and other state sponsors of terrorism including Cuba, Iraq, Libya, North Korea, and Syria.
2. **Criminal Prosecutions of Organisations that Fund Terrorist Groups.** The US government criminally prosecuted the “Holy Land Foundation” and multiple individuals for providing assistance to Hamas, which the US had declared as being a terrorist organisation. These prosecutions resulted in the incarceration of multiple leading Hamas funders, contributed to the closure of the Holy Land Foundation, and helped reduce Hamas’ fundraising in the US.

However, once the concept of ‘rogue States’ is introduced, techniques and tactics adopted by States become far murkier and difficult to outrightly defend, since it

is State practice that is now predominant. Tactics and techniques adopted against 'rogue States are often sought to be given legitimacy or at least acceptability through the inclusion of 'terrorist groups' as an adjunct expression.

A good example is the institution of criminal or civil proceedings against banks that provide financial services to terrorist groups and, by extension, to 'rogue States'. In this context, the Treasury of a State can act as a new front for 'lawfare' that may be opened at a time of the State's choosing—including at any time in the future—by that State. For example, the US Government mounted a multifaceted campaign of enforcement actions to discourage foreign banks from transacting financial business with Iran and other States that the US considered to be 'rogue States'. These efforts resulted in most of the world's top financial organisations stopping or significantly reducing their transactions with Iran. Iran's total foreign currency reserves dropped by as much as US\$ 110 billion, and the value of Iran's currency dropped by more than 50 per cent. Such economic lawfare created pressure(s) and thereby coerced Iran to make concessions regarding its nuclear program. Elaborating the legal provisions invoked by the US government to do this, Kittrie states that:

“U.S. financial lawfare against Iran relied heavily on two Executive Orders: Executive Order 13224 and Executive Order 13382. The key statutory authority for both executive orders was the International Emergency Economic Powers Act (IEEPA), a little-known statute that provides the President with extraordinarily powerful authority “to deal with any unusual and extraordinary threat, which has its source in whole or substantial part outside the United States, to the national security, foreign policy, or economy of the United States, if the President declares a national emergency with respect to such threat.” In addition, the Executive Order authorised Treasury to block the assets of persons that provide support, services, or assistance to, or are “otherwise associated with” terrorists and terrorist organisations designated under the Order.”

“Blocking (sometimes also referred to as “freezing”) assets is a principal tool deployed by Treasury in its financial lawfare against Iran and other targets. When an asset is blocked, the title to it remains with the targeted person or entity. However, the exercise of the powers and privileges normally associated with ownership, including transfers or transactions of any kind, is prohibited without authorisation from Treasury's Office of Foreign Assets Control.”

Another example is that of the use by the US of its Comprehensive Iran Sanctions, Accountability and Divestment Act of 2010 (CISADA).<sup>22</sup> This law allows

the US Government to present foreign companies with a mafia-like choice between providing petroleum-products to Iran and facing sanctions including exclusion from US markets. As a result, the US managed to reduce Iran's imports of petroleum-products by nearly 90 per cent without having to resort to kinetic means such as the interception and interdiction of tankers or the firing of ordnance/ ammunition—classic 'lawfare'. Elaborating on how it was used, Kittrie states:

“Following CISADA's enactment, the Obama administration took, with foreign companies doing business with Iran's energy sector, an analogous approach to the Treasury Department's direct outreach to key foreign private financial institutions. In doing so, the administration applied a “special rule” contained in Section 102(g) of CISADA, which allowed the President to, on a case-by-case basis, terminate, or not initiate, an investigation of certain sanctionable activities under the Act if the President certified that the sanctionable entity had stopped the sanctionable activity or had “taken significant verifiable steps toward stopping the activity” and the President had “received reliable assurances” that the sanctionable entity would “not knowingly engage in such activities in the future.””

“As a result, by October 2010, Reliance Industries, Vitol, and each of the other companies that had, two years before, been one of the top five suppliers of gasoline to Iran, had dropped out of supplying gasoline to Iran. The total volume of gasoline imported by Iran in September 2010 was reportedly as much as 90 per cent less than what Iran imported in months prior to the 01 July 2010, enactment of CISADA.”<sup>23</sup>

Sometimes, the mere 'intention' to enact new legislation or exploit existing legislation can be enough to have an effect. For example, in 2008, eight members of the US Congress corresponded with the US Export-Import Bank, asking it to re-evaluate over US\$ 900 million in loan guarantees for Reliance Industries, an Indian company that was providing 10 per cent of Iran's monthly consumption of petroleum-products. On the first day of trading after the story broke in the Indian press, shares of Reliance Industries on the Indian stock exchange dropped by over a billion US dollars. Reliance soon stopped supplying petroleum-products to Iran. Additionally, just the awareness that the CISADA was likely to be enacted had a notable effect on the export of petroleum-products to Iran—even before the enactment of the Act—with multiple companies stopping their exports at different stages of the CISADA Bill's passage.

Another example of this tactic is offered by the Shurat HaDin Law Centre (Shurat)—an Israeli NGO headed by an Israeli private sector litigator. Shurat put dozens of maritime insurers on notice that they could be sued and held liable in U.S. courts for any terrorist acts by Hamas if they provided material support to Hamas by insuring boats departing from Greece to breach the Gaza blockade. The insurers withdrew their insurance coverage, and the flotilla was prevented from departing for Gaza or breaching the Israeli blockade imposed on Gaza.<sup>24</sup> Documenting how Shurat did this, Kittrie elaborates:

“Shurat HaDin sent letters to each of the several dozen relevant maritime insurance companies. The letters placed the companies “on notice” concerning the Gaza flotilla. Specifically, the letters warned that if the companies knowingly insured boats being used to breach the Gaza blockade and conduct smuggling into Gaza, the companies would find themselves open to charges of materially supporting terrorism and legally liable for any future terrorist or rocket attacks perpetrated by Hamas, on the grounds that the boats provided material support to Hamas... (Shurat’s head) said that in her letters, she referenced or included copies of the US Supreme Court decision in *Holder v. Humanitarian Law Project* in support of her assertion that the flotilla’s breach of Israel’s blockade and its transportation of goods to Gaza was tantamount to providing material support or resources to Hamas and thus inconsistent with US law. The Humanitarian Law Project case centred on USC Section 2339B, which makes it a federal crime to “knowingly provide material support or resources to a foreign terrorist organisation”... (where) “material support or resources” is defined to include “any property, tangible or intangible, or service.””

Greek officials subsequently confirmed the lack of insurance and stopped the ships from sailing.

## **Civil Lawsuits as an Instrument of Coercive Warfare**

Civil lawsuits, too, can be used to achieve the results of what might otherwise have been possible only through military kinetic action against a targeted State.

An example of this is the lawsuit filed in a US federal court by three families of “Brothers to the Rescue” pilots shot down by the Cuban Air Force, which resulted in a US\$ 187.6 million judgment against the State of Cuba and resulted in three families collected this amount by seizing US\$ 96.7 million in Cuban assets in the United States.<sup>25</sup>

Likewise, a lawsuit in a US court led to Arab Bank being held liable for damages suffered by victims and family members of victims killed or injured in terrorist attacks by Hamas.<sup>26</sup> The amount by way of damages was estimated to be around US\$1 billion. This verdict did not just set a precedent that deterred other banks from providing financial services to terrorist groups, but also galvanised other subsequent lawsuits against such providers. Thus, a litigation in a US court, on behalf of the family of a seventeen-year-old U.S. citizen killed by Hamas, resulted in a judgment worth US\$ 156 million in damages, etc., against multiple US-based funders of Hamas.<sup>27</sup> This judgment also helped end Hamas' fundraising network in the US, contributed to US executive action against the aforesaid network, and set a precedent that continues to deter others considering raising funds for terrorists. Once again, it, too, mobilised a number of subsequent lawsuits against material supporters of terrorism in the US.<sup>28</sup>

In somewhat similar fashion, a lawsuit was successfully litigated against Iran in a US court on behalf of victims and family members of victims of the 1983 bombing of the US Marine barracks in Beirut, a terrorist attack allegedly sponsored by Iran.<sup>29</sup> In this and subsequent similar cases, Iran was ordered to pay over US\$ 9 billion to the aforesaid victims. The plaintiffs also succeeded in freezing nearly US\$ 2 billion in Iranian government funds when the US government informed them about the funds' location in a bank account in New York.<sup>30</sup>

Even outside of the legal process, there are instances of Non-Governmental Organisations (NGOs) coercing private companies into stopping business with targeted nation-States through a process of 'naming and shaming' companies. For instance, the US-based NGO, "United Against Nuclear Iran" has systematically uncovered and publicised information about US companies that were doing business with Iran in violation of US sanctions. Faced with massive and uniformly adverse public reactions, these companies responded by cutting ties with Iran.

Similar techniques have been deployed by the US Government at different points in time against targeted State actors such as Iran, Cuba, and even South Africa (against apartheid). Some illustrative examples of the effectiveness of these techniques are as follows:

1. 27 US states and 22 US cities were divested from foreign companies engaged in specific types of business with Sudan.<sup>31</sup>
2. 24 US states were divested-from—and six states have prohibited—public contracts with foreign companies with substantial investments in Iran’s energy sector. Levers like these pressured Iran to make concessions regarding its nuclear program.
3. Multiple US states and cities carried out targeted divestments during the anti-apartheid movement against South Africa.<sup>32</sup>
4. Several US states/cities—particularly centres of knowledge or industry such as Berkeley, California, Ann Arbor, Michigan, Cambridge, Massachusetts, and New York City—enacted selective purchasing legislation as part of the ‘Free Burma’ movement. Subsequently, the US Supreme Court did strike down a Burma-related Massachusetts law in the case of *Crosby v. National Foreign Trade Council*.<sup>33</sup> This decision was widely expected to lead to fewer laws enacting foreign policy sanctions. However, the enactment of such laws has continued unabated. One reason is that the decision in *Crosby* did not specifically prohibit states and localities from imposing their own sanctions when expressly authorised to do so by US federal law. Such federal laws expressly authorising state sanctions have subsequently been enacted with regard to both Iran and Sudan.<sup>34</sup>
5. The US state of Massachusetts divested itself from corporate entities that were supplying military hardware which was found being used in Northern Ireland.<sup>35</sup>
6. Multiple US states enacted laws to legally counter the Arab League’s boycott of Israel.
7. The U.S. state of Florida enacted multiple laws penalizing companies doing business with Cuba.

## Concluding Comments

As maybe observed from the foregoing accounts and examples, lawfare is not restricted to the increasingly aggressive and assertive actions of China. Yet, while it is almost certain that the Chinese playbook on lawfare draws heavily from that of the US, Chinese applications of lawfare are less subtle, more ‘in-your-face’ and, at least for the nations that are located in the South China Sea and the East China Sea, even more effective. In this regard, and before drawing this particular article on ‘lawfare’ to a conclusion, two contemporary case studies merit serious examination—one demonstrates ‘lawfare’ in the ongoing Ukraine conflict, while the other focuses upon lawfare practices adopted by the People’s Republic of China.

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Mr Mayank Mishra was engaged as an Associate Fellow within the Public International Maritime Law (PIML) Cluster of the National Maritime Foundation (NMF). While his research essentially focused on the vitally important intersection of maritime law with maritime ‘hard security’ policy, he was also keenly interested in the equally critical and fascinating interplay between PIML and technology, especially where relevant to the maritime domain. The views expressed are those of the author. He may be contacted at [socialsectorlaw@gmail.com](mailto:socialsectorlaw@gmail.com).

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# Considerations of Lawfare: Case Studies and State Responses

*Mr Mayank Mishra*

In this article, two contemporary case studies of lawfare are examined. Although several additional aspects (and cases) of lawfare remain to be explored, national judiciaries and policymakers alike have noted with concern the increasing use of lawfare in their respective areas of jurisdiction, and consequently, an outline of some judicial and policy responses and recommendations are also provided in this article.

## **Contemporary Case Study I: Lawfare during the (ongoing) Ukraine Conflict**

With the outbreak of armed conflict in February 2022, Ukraine has what appears to be a fairly comprehensive strategy of lawfare against Russia. The nation even put up a website about its ‘Lawfare Project’ which declared:

“One of the key areas of confrontation is the legal one. The legal front is inconspicuous, but extremely important. Its key feature is that there is no noticeable disproportion in weight with the enemy. It is not subject to force-sharing agreements. Where there are no weapons, there is international law, sanctions, and a tribunal. In the West, “legal war” received a special term—lawfare, and on this front, Ukraine (State bodies and State-owned enterprises) fighting quite well”.

“We are moving from the sometimes-chaotic hit-skip tactics to a well-thought-out, comprehensive and coordinated legal defence of our rights and interests, and for this purpose we have involved leading foreign legal advisers who help to develop a strategy for legal confrontation.”<sup>1</sup>

Eric Chang elaborates on Ukraine’s lawfare against Russia:

“In the immediate aftermath of Russia’s invasion of Crimea, Ukraine launched a legal blitzkrieg against Russia, including several inter-State proceedings before the European Court of Human Rights (ECtHR), an ad hoc proceeding under the dispute settlement procedures of UNCLOS 1982, a proceeding before the International Court of Justice, and three consultations at the World Trade Organisation. Ukraine further lodged two declarations under Article 12(3) of the Rome Statute of the International Criminal Court, voluntarily accepting the jurisdiction of the ICC in order to allege crimes committed in Crimea from 21 November 2013 to 22 February 2014, and from 20 February 2014, onward. The Office of the Prosecutor of the ICC opened preliminary investigations in response to both declarations. Beyond the Ukrainian government’s direct involvement as a Party in these proceedings, over 8,500 individual applications relating to the conflict in Crimea and eastern Ukraine have been submitted to the ECtHR. (Ukraine continued its legal proceedings in the aftermath of the February 2022 invasion, filing further cases against Russia at the ICJ and the ECtHR.”<sup>2</sup>

In addition to the above-mentioned legal proceedings by Ukraine, individual Ukrainian investors in Crimea, relying to the Bilateral Investment Treaty between Ukraine and Russia, have been conducting their own forms of lawfare against Russia:

“International investment law is a specialised subset of public international law, and its defining feature is a unique dispute resolution forum known as investor-State dispute settlement (ISDS), which has allowed private Ukrainian investors to file international arbitration claims directly against Russia for damages arising out of Russia’s 2014 invasion and subsequent occupation of Crimea. These claims allege Russia’s breach of treaty protections to Ukrainian investments in various industry sectors. The initial arbitration awards have uniformly found Russia liable, issuing damages collectively worth billions of US dollars (USD). These awards are accruing compounding legal interest, which will increase indefinitely until paid, settled, or until Russia withdraws from Crimea. Of equal significance, these investment claims have creatively leveraged LOAC principles to allow the Ukrainian investors to avail themselves of the ISDS forum and, ultimately, accomplish Ukraine’s lawfare objectives.”

Of course, both Russia and Ukraine have been engaging in lawfare against each other for a while. As the Ukrainian lawyer and author, Dr Zakhar Tropin, notes:

“An example of connecting lawfare with other dimensions of hybrid warfare was the mutual blocking of international carriage by the Russian Federation and Ukraine in 2016. It is necessary to remember that individuals started to block movement of trucks from Russia to the territory of Ukraine. In response, the Russian government decided to prohibit transit of Ukrainian cargo through the territory of the Russian Federation.

Ukraine referred to the mechanisms for the settlement of international disputes within the World Trade Organisation stating that the Russian Federation had violated the principle of freedom of transit. In this case, Ukraine at least received an informational and economic advantage due to the fact that the Russian Federation responded to the actions of individuals (non-governmental persons) with a legislative act...<sup>3</sup>

“An additional example of the use of international institutional mechanisms is the situation involving the distribution of Crimea’s international dialling code. The Russian Federation intentionally increased the number of its representatives in the International Telecommunication Union before it met. Due to these actions, Ukraine failed to obtain prohibition from the ITU for Russia to use its international code for Crimea (NKRZI). This is used by the Russian Federation as one of the indirect arguments for Crimea belonging to the Russian Federation.”

Against its developed adversaries that were supporting Ukraine directly or indirectly or both, Russia, too, adopted its own lawfare measures. For instance, in March 2022, it decriminalised “*parallel imports*” under its domestic law.<sup>4</sup> This effectively weakened—inside Russia—the Intellectual Property right(s) and protection(s) hitherto accorded to products imported from developed nations.<sup>5</sup> In professing its adherence to law even as it passed this law, Russia argued—and formally submitted to the World Intellectual Property Organisation—as follows:

“Under the international exhaustion principle, its implementation cannot be considered as the violation of the exclusive rights to the goods which were sold under the rightsholder’s authorisation in any other country of the world. The international exhaustion principle allows the parallel import of original goods, that is the import of goods protected by intellectual property rights can be carried out by the person not authorised by the rightsholder.”

“The international treaties, including the 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), allow the implementation of the international exhaustion principle. Most States in the world apply this instrument to prevent anticompetitive practices and abuse of the rightsholders’ market position.”<sup>6</sup>

On the other hand, the United States and the European Union also undertook a whole slew of lawfare measures against Russia, including sanctions stemming *inter alia* from US domestic law such as the Countering America’s Adversaries Through Sanctions Act, 2017 (CAATSA) and the International Emergency Economic Powers Act (IEEPA). Further, selected Russian banks were removed from the SWIFT global electronic payment system.<sup>7</sup>

US-based social media giants such as Facebook and Instagram—which extol the virtues of free speech and expression—decided to “temporarily” allow hateful and/or violent online content against Russia during the conflict in Ukraine. This was done by creating overnight, exceptions to company rules and policies against hateful or abusive content. The phrase ‘death to Russian invaders’ was specifically allowed.<sup>8</sup>

Others invoked and used law differently. Switzerland, for instance, maintained its famed ‘Swiss neutrality’ during the conflict by invoking its domestic legislation to first withhold arms requested by Poland.<sup>9</sup> Two days later, it also publicly disallowed/vetoed requests by The Federal Republic of Germany to “re-export” Swiss-made ammunition to Ukraine.<sup>10</sup> This Swiss legislation is called ‘The Federal Act on War Material 514.51’, and Articles 18(2), 19(2) thereof that deal with exemptions, revocations, etc., pertaining to “*War Materiel*” and licence(s) thereto, were invoked by Switzerland as a low-cost but effective way of maintaining Swiss neutrality in an environment in which staying neutral was difficult.<sup>11</sup> This is not to say that Switzerland did not apply sanctions against Russia, which it certainly did, but it did so by adopting the EU sanctions regime *into* Swiss municipal law.<sup>12</sup> However, invoking its domestic law in the manner and at the time it did has helped Switzerland walk a diplomatic tightrope during the (still ongoing) Ukraine conflict, while at the same time achieving its own political objectives during the crisis in which it found itself.

## **Contemporary Case Study II: Lawfare by The People’s Republic of China**

To circumvent international law on fishing and Exclusive Economic Zones (EEZs), The People’s Republic of China (PRC) advances its own particularistic interpretations of international law that selectively pick and apply legal provision(s) to manipulate international legal norms, validate its invalidated claims, and accommodate its anti-access strategy.<sup>13</sup> In this context, Orde Kittrick notes:

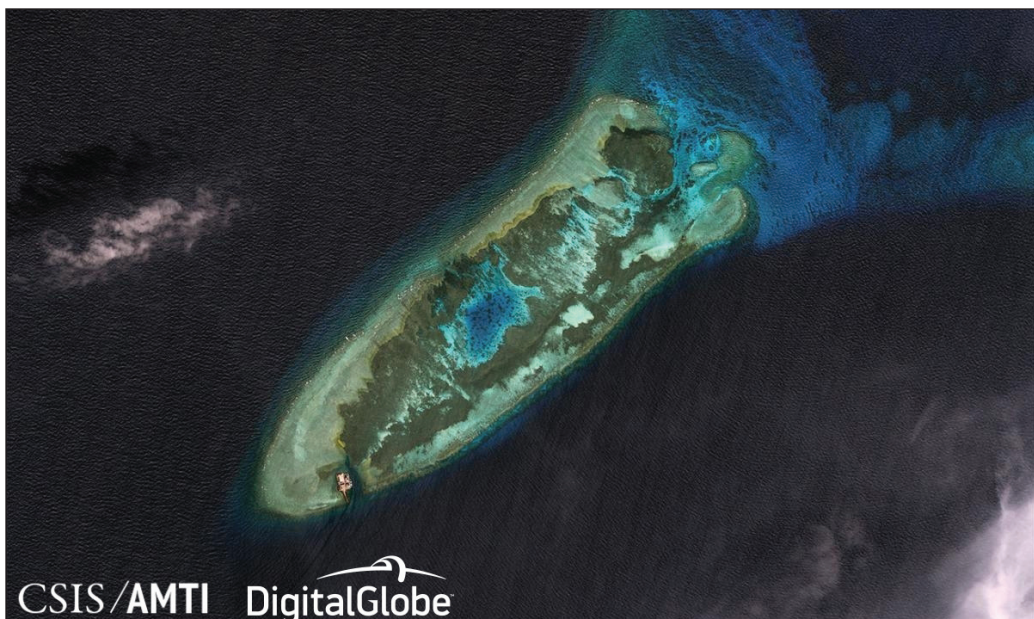
“China has used its inaccurate interpretation of EEZ law to justify the interception and harassment of US and other nations’ ships operating within its EEZ, and of US and other nations’ aircraft flying above its EEZ. From time to time, ostensibly private

Chinese cargo ships and fishing vessels are used as government proxies to interfere with US ships. Using fishing vessels in this manner provides the Chinese government with some level of plausible deniability from a legal perspective, although from a practical perspective the pattern of behaviour is easily ascribable to the Chinese government.”<sup>14</sup>

“In addition to its maritime operations, China’s EEZ lawfare strategy includes declaratory statements incorporated into China’s UNCLOS 1982 ratification depositary instrument, domestic legislation formally claiming security interests in its EEZ, development of supportive legal scholarship, and a strategic communications campaign.”

In addition to lawfare in the Exclusive EEZs of other States, PRC also attempts to expand its sovereign right(s) and jurisdictional claim(s) in the South China Sea by turning submerged reefs into *de facto* inhabited islands. These island-building activities are typified by the conversion of Fiery Cross Reef in the Spratly Islands Group within the South China Sea, into an ‘island’, between the years 2006 and 2022 (Fig 1 and 2 refers).<sup>15</sup>

**Figure 1:** Fiery Reef on 22 January 2006, before conversion by the PRC



*Source: Centre for Strategic and International Studies, “Asia Maritime Transparency Initiative”*

Figure 2: Fiery Reef on 17 June 2022, after conversion by the PRC



Source: Centre for Strategic and International Studies, “Asia Maritime Transparency Initiative”

Likewise, Figure 3, 4, and 5 below,<sup>16</sup> show the systematic nature of PRC island-building activities on Mabini Reef (also known as Johnson Reef), which is, once again, located in the Spratly Island group and is additionally claimed by the Philippines, Taiwan, and Vietnam.

The manner in which PRC turns submerged reefs into *de facto* inhabited ‘islands’ is not accidental. These activities represent attempts to expand its sovereign right(s) and jurisdictional claim(s) in the South China Sea, while at the same time delegitimising the claim(s) of others. They also effectuate *de facto* area-denial and thereby significantly improve China’s strategic position against other stakeholders in the South China Sea.

**Figure 3:** Mabini (Johnson) Reef on 29 November 2004, before conversion by the PRC



Source: Centre for Strategic and International Studies, “Asia Maritime Transparency Initiative”

**Figure 4:** Mabini (Johnson) Reef on 19 July 2014, after partial conversion by the PRC



Source: Centre for Strategic and International Studies, “Asia Maritime Transparency Initiative”

**Figure 5:** Mabini (Johnson) Reef on 11 February 2022, after conversion by the PRC



Source: Centre for Strategic and International Studies, “Asia Maritime Transparency Initiative”

By creating such “facts” on the sea, PRC fundamentally changes what would have been a geographical inevitability and a persistent *status quo* into a new reality that works in its favour. Over time, it will “become harder and harder to document which features were ‘rocks,’ which were ‘islands’ and which were neither prior to construction—and these determinations may be essential to resolving contested maritime claims in the region.”<sup>17</sup>

The PRC’s revisionist interpretations and assertions are also aimed at changing customary international law through

State practice. This is because customary international law can be nullified or even changed through State practice undertaken in conjunction with an assertion that such practice is consistent with international law.<sup>18</sup> Of course, such assertions by the PRC will be complemented by its diplomatic efforts to get other States to acquiesce to such assertions.

In addition to instrumental uses of new or existing legal provisions, another type of lawfare practised by the PRC is what Kittrie terms “*Compliance-leverage disparity lawfare*” or the phenomenon of leveraging existing disparity, inequality or comparative advantage between actors to achieve advantage(s) over an opposing actor.<sup>19</sup> This type is typically undertaken on the kinetic battlefield or in an armed conflict, where the processes and transparency of international law exert greater force on State actors than on non-State ones.

Professor Douglas Guilfoyle of Australia’s University of New South Wales makes a telling point when he states:

“For China, law is one of the key domains in which it is pursuing its strategy to consolidate its control over the South China Sea. The Chinese gamble has been that it can pursue this strategy in the name of legitimate self defence against perceived United States encroachment without disrupting regional stability. The flaw in its approach has been to underestimate the extent to which its policy has impinged on other States’ core national interests in the maritime domain, interests which they conceptualise in legal terms.”<sup>20</sup>

However, it can also be undertaken outside a kinetic battlefield, and is most notably undertaken by PRC in the non-proliferation arena. Kittrie demonstrates, as an example— “*the PRC’s long history of gaming the international legal system by entering into legally binding nuclear non-proliferation obligations with which its rivals (including the United States, Japan, and South Korea) tend to comply, while China secretly violates those obligations by providing nuclear technology to its allies, often through proxies.*”<sup>21</sup>

These nuclear transfers by the PRC do not stop at well-established recipient States such as Pakistan and the Democratic People’s Republic of Korea (North Korea). Silently but effectively, and whether under direct or tacit PRC approval, these illegally transferred nuclear materials and technologies also find their way much farther afield

to States such as Libya and Iran.<sup>22</sup> In so doing, the PRC exploits loopholes in the compliance regime(s) of international law to deliberately and seriously damage as well as contain its regional rivals (such as Japan and India) and its global ones such as the US, too.

## Recommendations

*“Countries are bound by treaties, national agreements, and special relationships.  
Private citizens do not have these limitations.”*

— Nitsana Darshan-Leitner.<sup>23</sup>

At the tactical level, small teams of private litigators who are outside the government appear best suited to wage or counter lawfare against State(s) or other actor(s), whether the target is inside or outside State jurisdiction(s). Such small teams would ride-upon and, *inter alia*, rely upon the power of historical narratives as a tool of both lawfare as well as counter-lawfare. Such teams can be remarkably effective, particularly when their impact is measured in cost-benefit terms. Indeed, such small teams of specialised litigators ought to form part of a State’s centralised legal strategy to ensure the protection of State interests—on an international field—during a hybrid conflict. Centralisation of control, and the planning and implementation of legal actions at an international level, would constitute core elements of such a strategy especially for actions in international institutions or under foreign jurisdiction(s). Additionally, indirect State involvement in or with such litigating teams would be preferable to direct involvement because it would avoid setting precedents that could be used against the deploying State by its adversaries. Low-key sharing of information can make this practical, but such public-private collaboration in lawfare can also have its risks.

Even so, such teams are an idea worth exploring. One clear domain for exploitation by such teams is the prosecutorial discretion built into the Rome Statute and into practical procedures at the ICC.

Finally, Indian policymakers would be well-advised to note the following successful instances of lawfare by small teams of lawyers:

1. A small team of two attorneys—comprising a father-daughter duo—successfully litigated against (and closed down) an organisation that was raising funds for *Hamas* in the US.<sup>24</sup>
2. Litigation in the form of a lawsuit by another small team of lawyers resulted in a favourable verdict for the US Government, which held that a bank which knowingly provides financial services to a terrorist group can be held liable for the group's terrorist acts.<sup>25</sup> This verdict continues to deter banks around the world from doing or continuing to do business with whoever or whatever the US Government deems 'terrorists'.
3. A small team of lawyers successfully sued Iran for the deaths of 241 US marines killed by *Hezbollah's* bombing of a US Marine Corps barrack in Beirut, in 1983.<sup>26</sup>

## Conclusion

Given its versatility and low cost-benefit ratio, the uses of lawfare across forums and jurisdictions will in the future multiply, diversify, and become more complex in terms of provisions and concepts invoked. This article shows that lawfare may be deployed by a variety of State and non-State actors towards attrition as well as manoeuvre in the pursuit of their respective politico-military objective(s).

In a comparative sense, lawfare is, indeed, less costly to human life; moreover, it is almost invariably less expensive than traditional or kinetic forms of warfare that have hitherto formed the predominant forms of fighting between States and their adversaries. Lawfare often reduces chances of military conflict and lowers the costs of military preparation. This frees vast national resources that may then be deployed to public benefit and welfare within States, especially developing States like India.

Thus, as an asymmetric tool that can be effectively deployed in hybrid conflict(s) of the future, the use of lawfare will only grow in a world and international legal order that is—continually and at speed—evolving and changing.

The growing use of lawfare should not surprise us. The world is continually made, unmade and re-made by experts of all shades and hues, and legal experts

are no different. In a world where public opinion gets increasingly tired of armed conflict, but where flux and fault lines persist and even worsen, the role of legal experts as peaceful negotiators and builders of rules, norms and consensus is likely to be enhanced. Professor David Kennedy, Director of the Institute for Global Law and Policy at Harvard Law School, opines that:

“The professional practices of legal experts inside and outside the military illustrate the work of expertise in contemporary world making and management. Warfare has been a central preoccupation and presented a kind of ultimate test for international law. It is hard to think of international law governing the relations among States without having something to say about war—when war is and is not an appropriate exercise of sovereign authority, how war can and cannot be conducted; which of war’s outcomes will and will not become components of a postwar status quo, and so on. It is conventional to imagine that international law restrains war by making distinctions: this is war, and this is not; this is sovereignty, and this is not; this is legal warfare, and this is not. The terms with which these legal distinctions are drawn change over time. The vernacular may be more or less sodden with ethical considerations, more or less rooted in the specific treaty arrangements entered into by States. The distinctions may be drawn more or less sharply, may be matters of kind or degree. What goes on one or the other side of these distinctions may change, but the idea that law is about distinguishing war from peace, sovereign right from sovereign whim, legal from illegal conduct, on the battlefield and off, endures.”<sup>27</sup>

Finally, one would add a note of caution to legal experts and advise them against abandoning integrity and becoming mere mouthpieces of the State. For a liberal democratic State such as India, political control over rule-making processes is less dangerous than the spectre of political power dictating the application of law. As Reifner observes:

“Authoritarian forces have always stressed the primacy of the role of the government and the courts rather than that of parliaments, of law rather than rights, and of the judge rather than the defence lawyer. Traces of this struggle are visible in the very nomenclature of the profession. The counterpart of the old Roman *advocatus*, the “helper on call”, whose role persists in the profession of the English defence advocate, was banned by the counter-revolutionary Prussian kings at the beginning of the nineteenth century. In German, the word “advokat” has always been the object of ridicule. In its place, the German word “rechtsanwalt” (attorney at law), originally used to denote a court functionary who defended the law (*recht*) as opposed to the individual, has come to be used as the equivalent of the English word “lawyer”.”<sup>28</sup>

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## About the Author

Mr Mayank Mishra was engaged as an Associate Fellow within the Public International Maritime Law (PIML) Cluster of the National Maritime Foundation (NMF). While his research essentially focused on the vitally important intersection of maritime law with maritime ‘hard security’ policy, he was also keenly interested in the equally critical and fascinating interplay between PIML and technology, especially where relevant to the maritime domain. The views expressed are those of the author. He may be contacted at [socialsectorlaw@gmail.com](mailto:socialsectorlaw@gmail.com).

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# Setting the ‘Dragon’ Amongst the Pigeons: China Coast Guard Regulation-3 Takes Effect

*Captain Kamlesh K Agnihotri (Retd)*

## Abstract

*China has been trying assiduously, through a variety of means to assert greater control over the area encompassed by its so called ‘Nine-dash Line’ in the South China Sea. While it seeks to enforce its supposed rights in the area by deploying the Chinese Coast Guard (CCG) ships and maritime militia vessels for ‘grey zone’ warfare, the promulgation, in 2024, of China Coast Guard Regulation Number 3 (CCGR-3) legally empowers the CCG in execution of these aggressive tasks. However, certain ambiguous provisions related to geographical coverage, use of force methodology, arbitrary powers of detention and arrest of foreign ships accorded to the CCG, and omission of the status of warships with regard to their immunity from prosecution, have caused great concern to the global community. India’s interests could also be adversely impacted, since the Indian Navy ships which have been operating in the South China sea at an increased frequency, scale and intensity over the last decade, may also fall foul of this regulation. Therefore, all global stakeholders who value the ‘freedom, openness and security’ of the oceans as provided for under the existing rules-based order, must come together to challenge this Chinese propensity towards maritime expansion through promulgation of various domestic laws and regulations which do not conform to the customary international laws.*

The South China Sea and the related contestation for various features and adjoining maritime zones therein, have found a lot of prominence in global media and strategic circles, of late. The last couple of years have particularly witnessed hectic jockeying for positions, influence, diplomatic and political brinkmanship by two disputants—China and the Philippines—in various measures, as per their capability and firmness of intent. The area has specifically witnessed aggressive employment of ‘grey zone’ tactics by the Chinese Coast Guard (CCG) ships and People’s Armed Forces Maritime Militia (PAFMM) vessels to secure control over maximum maritime

space around the disputed features; with an objective of eventually enforcing the Chinese jurisdiction over the entire area enclosed by the ‘so called’ nine-dash lines.

## South China Sea as Core Chinese Interest

In this context, it would be instructive to recall that in March 2010, the then Chinese State Councillor, Dai Bingguo, conveyed to the visiting US Deputy Secretary of State, James Steinberg, that the South China Sea was part of the Chinese ‘core interests’ with regard to its sovereignty and territorial integrity.<sup>1</sup> This assertion followed an official note to the United Nations Commission on the Limits of Continental Shelf (UN CLCS) on 07 May 2009, wherein it was stated that China “*enjoyed sovereign rights and jurisdiction over the islands in the South China Sea and the adjacent waters, as well as seabed and sub-soil thereof*”.<sup>2</sup> A map of the region which was attached to this official note, showed the ‘nine-dash lines’ marked therein (Figure 1 refers).

Figure 1: Map submitted to the UN by China on 07 May 2009 showing Nine-Dash Lines



Source: UN CLCS

One must, however, remember that the South China Sea has always been of ‘core interest’ to China, but was not formally articulated to the World as such till March 2010. Various skirmishes that occurred between China and the other parties to the dispute in the region—be it with Vietnam in the 1970s and the Philippines in the 1990s—have only reinforced this premise. A relatively overlooked fact is that internally, China has always regarded the South China Sea as part of its own territory; and has ensured that this position permeates down to the lowest possible echelons of the Chinese governance and administration. The author personally observed two specific instances of this persistent endeavour. The map of China printed inside the in-flight magazine of Air-China, the official Chinese civil-air carrier, depicted the entire South China Sea enclosed by dotted lines, and appended to the mainland Chinese boundary. The same illustration was again observed in the elementary Chinese language textbook that the author happened to refer to, as part of his formal learning of the Chinese language in India.

After taking an official position vis-à-vis ‘nine-dash lines’ with the May 2009 communication to the UN CLCS, Beijing has carried out many administrative reforms and enacted appropriate laws and regulations to integrate various features and adjoining maritime areas lying within the so called ‘nine-dash lines’, under its sovereignty and jurisdiction. China conferred the status of prefecture to ‘Sansha’ County on 21 June 2012 and tasked it with the administration of the Paracel and Spratly Island chains, in addition to that of Zhongsha Island (Macclesfield Bank).<sup>3</sup> In addition, the ‘Regulation for Management of Public Order for Coastal and Border Defence’, promulgated by the provincial Government of Hainan took effect on 01 January 2013. This regulation authorised Hainan’s ‘Public Security Border Defence’ units to board or detain foreign vessels, in case they were found to be ‘landing illegally on islands, as also engaging in five other misdemeanours in “waters under the administration of Hainan”—which could presumably extend to sea areas beyond the Chinese territorial waters of 12 nautical miles (NM).<sup>4</sup>

### **China Coast Guard Law (2021) and Regulation-3 (2024)**

The CCG was brought under overall control of the Central Military Commission (CMC) in July 2018—as part of the wider reorganisation of the People’s Armed

Police Force. The CCG was accorded additional and quite wide-ranging powers by promulgation of the Chinese Coast Guard Law in January 2021; so as to enable it to better ‘safeguard the Chinese maritime rights and interests’.<sup>5</sup> That law caused serious concerns amongst global community on account of its non-conformance with the provisions of the Convention on the Law of the Sea (UNCLOS) 1982; and more importantly, due to the lack of clarity over its geographical jurisdiction, use of force methodology and the linkage of CCG role with that of “national security and defence”.<sup>6</sup>

Subsequently, the CCG Regulation No. 3 (CCGR-3) was issued on 15 May 2024, which supposedly lays down detailed guidelines for implementation of that 2021 Law. The CCGR-3, spread over 16 chapters and encompassing 281 articles, came into force on 15 June 2024.<sup>7</sup> The regulation, by referring to the phrase “*waters under the jurisdiction of our country*” in Article 11, is equally ambiguous on the specific geographical coverage as the CCG Law of 2021—which also uses the same terminology in its Article 25.<sup>8</sup> The most damning aspect of the CCGR-3 is contained in Article 105 which authorises the CCG to detain foreign ships that illegally enter “territorial waters”—a term not clearly defined either in the CCG Law-2021 or the CCGR-3. The fact that this detention—including that of offending personnel too—can extend up to six months under the provisions of Article 257 of CCGR-3, makes it even more draconian.

Interestingly, while the applicability of CCGR-3 to the foreign ships has been mandated vide Article 105 as mentioned above; the regulation per-se, makes no mention of foreign ‘State-owned vessels and warships’. This could possibly imply that such ‘State-owned vessels including warships’ also fall within the purview of the CCGR-3; and thus enjoy no special status or immunity. This glaring omission—whether deliberate or otherwise—leaves room for troubling interpretations by a concerned global community. The most obvious concern emanates from the fact that the United Nations ‘Convention on Jurisdictional Immunities of States and Their Property-2004’ avers that “a State enjoys immunity, in respect of itself and its property, from the jurisdiction of the courts of another State...”<sup>9</sup> Article 16 of this Convention further clarifies that this immunity applies to “warships, naval auxiliaries, and other vessels owned or operated by a State and used, for the time being, on government non-commercial service”.

A detailed reading of Article 35 of the CCGR-3—which allows the CCG to promulgate “temporary maritime security zones”, either for security or military related reasons—and then ensure denial of access to others therein—lends further arbitrariness to the area under consideration, in addition to the so called “territorial waters”. Yet another provision which makes a broad-based assertion of “surveying and mapping” in “waters under China’s jurisdiction” as “grave and serious” is stipulated in Article 263 of CCGR-3. In effect, this provision seeks to curb the freedom of other States with regard to the conduct of Marine Scientific Research (MSR) in the Exclusive Economic Zone (EEZ) of coastal States; and hence is in direct contravention to the stipulations laid down in Part XIII of the UNCLOS 1982.<sup>10</sup>

Consequently, even a prima-facie perusal of this provision is sufficient to draw alarm from various stakeholders, who value the ‘freedom, openness and security’ of the Indo-Pacific as part of customary international law. For instance, the military-survey activities, hitherto carried out by US Navy’s auxiliaries like *USNS Impeccable* Ocean surveillance ship or *USNS Bowditch* hydrographic ship in the Chinese EEZ, could earlier pass off under the claim of MSR in accordance with UNCLOS 1982—even though such missions were objected to by China and often physically obstructed.<sup>11</sup> However, such activities would henceforth, be considered as “grave and serious” as per the provisions laid down in CCGR-3, and thus be liable to appropriate penal/administrative action by the CCG and the Chinese legal system.

### **Impact on India’s Maritime Interests**

As far as India is concerned, the promulgation and enforcement of CCGR-3, does point to certain ominous portends. About 55 per cent of India’s trade by volume transits the South China Sea and the interconnected western Pacific sea-lanes. The Indian Navy ships are also generally present in the South China Sea and the adjoining maritime areas for at least two months in a year, as part of their overseas operational deployment (OOD). In the current year (2024), three Indian Navy ships viz. the missile Destroyer *INS Delhi*, ASW Corvette *INS Kiltan*, and replenishment ship, *INS Shakti* were present in that region for two months, viz. May and June, wherein they visited Singapore and various ports in Malaysia, Brunei, Vietnam, Cambodia

and the Philippines.<sup>12</sup> These ships also carried out bilateral exercises with the navies of some of these countries. In addition, *INS Shivalik*, the indigenously built missile frigate, transited through the area on its way to Hawaii for the Rim of the Pacific Exercise (RIMPAC)-2024; and will probably return through the same area.

The fact that both, the CCG Law-2021 and the recently promulgated CCGR-3, are silent on the exclusion of warships and ‘ships on formal government employment’—unlike UNCLOS 1982 which specifically makes this distinction and stipulates separate rules for them—does rightly raise uncomfortable questions, as to their status under these Chinese domestic legal instruments. In this context, a “non-incident”<sup>13</sup> of 2011 certainly merits a mention. The PLA Navy allegedly challenged an Indian amphibious landing ship, *the Airavat* in the South China Sea in July 2011, when the ship was undertaking a legitimate passage between Nha Trong and Hai Phong ports of Vietnam.<sup>14</sup> The challenge, heard over the ship’s radio to the effect “*you are entering Chinese waters*” even though the Indian warship was just about 45 nautical miles (NM) from the Vietnamese coastline—and thus, well within the Vietnamese EEZ—was quite a surprising occurrence. The Indian Ministry of External Affairs (MEA), of course called out this “non-incident” by stating thus:

“India supports freedom of navigation in international waters, including in the South China Sea, and the right of passage in accordance with accepted principles of international law. These principles should be respected by all.”

However, the geopolitical situation in the South China Sea has taken a decisive downturn in the intervening period of more than a decade. With Beijing clearly displaying a far more aggressive stance in the area—including in the adjacent waters around Taiwan and the East China Sea—the ambiguous and draconian provisions of the domestic CCG Law-2021 and the CCGR-3 do afford the much undesirable discretion to the CCG, to engage in some sort of misadventure against warships operating in the region.

The Indian Naval ships’ deployments in the South China Sea and beyond—as part of India’s ‘Look East’ policy—have become more institutionalised over the last decade and half, with their activities, including port calls and exercises with the Southeast Asian countries, having increased in scale, scope and frequency. These

interactive efforts require the Indian Naval ships to criss-cross the South China Sea including through the ‘so called’ nine-dash lines, over which Beijing aims to exert greater control through promulgation of domestic laws and regulations. It is thus entirely feasible that the CCG’s actions—duly empowered by statutes like the CCG Law-2021 and the CCGR-3—will hereinafter be much more aggressive, if a situation similar to 2011 as described above, repeats itself.

## **Multilateral Approach to Check the Chinese Expansionist Agenda**

It has been observed that long-drawn dialogue and discussions—particularly of bilateral kind—with China rarely yield any results to the satisfaction of both the parties. India’s experience of prolonged bilateral negotiations post-Galwan skirmish, to convince China to revert to status-quo-ante of April 2020 along the Line of Actual Control (LAC) in eastern Ladakh—with the 30<sup>th</sup> meeting on India-China border talks recently concluding with no tangible outcome<sup>15</sup>—bears testimony to this assertion. The only course of action which has reasonable chance of success against the ‘illegal and unlawful’ Chinese agenda of maritime expansionism—by empowering its maritime law and order agencies through overarching domestic regulations like the CCG Law-2021 and CCGR-3—for the affected global community in the Indo-Pacific region is, to vehemently oppose it in unison.

The US has certainly been challenging the excessive Chinese claims and assertions in the South China Sea and the Taiwan Strait which tend to restrict the internationally recognised ‘freedom of the seas’ as afforded by UNCLOS 1982. It has therefore been mounting the freedom of navigation operations (FONOPs) to “uphold the rights, freedoms, and lawful uses of the sea recognised in international law”—the most recent one being conducted by the US Navy Destroyer, *USS Halsey* (DDG-97) on 10 May 2024.<sup>16</sup> Some European countries, as also Canada, have carried out joint transits through the Taiwan Strait. In fact, a Canadian frigate, *HMCS Montreal* (FFH-336) undertook a transit through the Taiwan Strait in end July 2024. While the Canadian Joint Operations Command termed the passage of its frigate “in accordance with international law”; the Chinese Eastern Theatre Command expressed its displeasure by stating that the event had created instability in the Taiwan Strait and had also undermined peace in the region.<sup>17</sup>

Philippines, on its part, has shown great courage and gumption to stand up to the blatantly offensive tactics of the CCG and the PAFMM vessels over last couple of years. The country has brought the Chinese efforts to capture various features in the Spratly chain of islands by use of strong-arm ‘grey zone’ tactics, to the notice of the World at large through sustained press and social media campaign. India on its part, has also nuanced its position vis-à-vis July 2016 ruling of the Arbitral Tribunal in favour of Philippines, by “*underlining the need for peaceful settlement of disputes and for ‘adherence’ to international law, especially the UNCLOS 1982 and the 2016 Arbitral Award on the South China Sea.*”<sup>18</sup>

## Final Thoughts

The bottom line is that the Chinese hegemonic agenda of unilaterally changing the status quo in the South China Sea and the adjoining areas, as also forcing the global stakeholders to accept the ‘new normal’ it seeks to establish—by overtly aggressive ‘grey zone’ warfare, implied muscle flexing through the PLA Navy and enacting wholly unacceptable domestic laws which are in contravention to the established global conventions—must not be allowed to gain traction.

Towards that objective, the adoption of a multilateral approach and presentation of a unified front to oppose the Chinese expansionist mindset by calling out the restrictive provisions of each and every domestic Chinese Law and regulation that seeks to challenge the extant rules-based order, and threatens the freedom of navigation and overflight, merits serious consideration. A fleeting glimpse of this front taking shape, was somewhat apparent when eight countries—including India, Malaysia, Vietnam, the Philippines, Russia and Taiwan—officially called out the Beijing’s endeavour to reappropriate greater areas under its control through unilateral cartographic over-reach of promulgating ten-dash line in August 2023.<sup>19</sup>

It is therefore in the interest of all States which have a stake in upholding a ‘free, open secure and inclusive’ Indo-Pacific and other parties across the globe which would be adversely impacted on account of such Chinese revisionist propensities, to come together and act in unison with greater intensity and visibility. And the

promulgation of CCGR-3 presents just the right opportunity for the global strategic, legal and maritime community to do that, as an immediate measure.

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*International Legal Facets  
of Marine Pollution*



## Sustainable Ship Recycling in India - Legal, Economic and Political Analysis

*Ms Rhythmia Kaul and Commodore Debesh Lahiri (Retd)*

Alang, a small village in Bhavnagar, Gujarat, situated in the Gulf of Khambhat, hosts one of the largest ship recycling industries in the world thanks to its conducive geographical location which facilitates the beaching of vessels for their subsequent recycling. Alang's hydrological advantages include a very large tidal range (the difference between its high tide and low tide levels) of the order of 10-11 metres, and a 15-degree beach gradient that aids in the beaching of ships. Additionally, because of its location well inside the Gulf of Khambhat, ships are afforded protection whilst at anchorage during inclement weather. Today, the ship recycling industry has expanded beyond Alang and includes the neighbouring village Sosiya to create the Alang-Sosiya Ship Recycling Yard (ASSRY).

Ship recycling is a process that involves anchorage, beaching, ship breaking and recycling of a ship's parts for disposal and reuse. Currently, 58,000 merchant ships<sup>1</sup> operate on the world's seas, and a substantial number of end-of-life ships are sent on their final voyage to Alang-Sosiya for decommissioning and ship recycling. The following table provides some beaching data of ships that have been brought for recycling at Alang-Sosiya in the last five years.

Historically speaking, ship breaking in Alang commenced in the 1980s and, since then, over 8000 ships have been successfully beached, representing more than 70 million tonnes of light displacement tonnage (LDT)<sup>2</sup>, with the industry continuing to grow rapidly.<sup>3</sup> A wide array of end-of-life ships, including large super tankers, cruise liners, special purpose vessels, bulk carriers, warships, ro-ro ships, container ships, etc., make their final voyages to Alang-Sosiya. The ship recycling industry is

**Table 1.** Year-Wise Beaching Data

Year	Number of Ships	LDT in MT
2019-20	202	162280.18
2020-21	187	1760641.28
2021-22	209	1456655.12
2022-23	131	1147480.52
2023-24 (up to August 2023)	40	348494.88

*Source: Information provided by Captain Rakesh Mishra, Port Officer, Bhavnagar, Gujarat Maritime Board, “Year-Wise Beaching Data”, LDT in MT – Light Displacement Tonnage in Metric Tonnes.*

a significant source of revenue for Gujarat as it generates substantial quantities of re-rollable steel—thus providing an alternative to the non-renewable source of iron ore required for steel-making—accounting for 15 per cent of the country’s total steel output.<sup>4</sup> This industry is also a valuable source of supply for second-hand goods viz. onboard machinery, equipment, pumps, pipes, valves, furniture, fittings and fixtures, other scrap material, etc.

In addition to ship recycling, Alang-Sosiya has several other identities. For example, it is a tourist destination for visitors to see how the dismantling of decommissioned ships is done, a shopping destination to buy what comes out of these ships, and an inventory-in-transition of different equipment, fittings etc. which can be recycled and reused. Therefore, a question that requires to be answered is, who benefits the most from the industry? Is it the developed nations, who have found a cheap way to dispose of their waste? Or is it the Gujarat Maritime Board (GMB) and the shipyard owners who see their profits increase year on year? Or is it the workers, who find employment which is otherwise hard to come by? There is, therefore, a pressing need to identify who is bearing the cost of the benefits of ship recycling.

In August 2023, as part of its ongoing research, a research-team from the NMF undertook a field visit to Alang-Sosiya and interacted with a variety of stakeholders in the ship recycling industry including the officials of Gujarat Maritime Board (GMB) at Alang, Bhavnagar and Gandhinagar. The NMF team interacted with the Port Officer, GMB (Bhavnagar); the Chief Engineer, the Deputy Executive Engineer and Manager (Environment) of GMB, Gandhinagar; the Vice President, Alang-Sosiya

Ship Recycling and General Worker's Association (ASSRGWA); the President and Honorary Secretary of the Ship Recycling Industries Association (SRIA) (India); and the Operations Manager, Green Gene Enviro Protection and Infrastructure Private Limited (GGEPIL). The team also visited a few ship-recycling plots, including those of Ms Arya Steel, Ms Priya Blue, and the Bansal Group; the GMB Red Cross Multi-Speciality Hospital, Alang; the GMB Safety Training and Labour Welfare Institute; the GMB Common Hazardous Waste Treatment Storage Disposal Facility (CHW-TSDF), which is operated and managed by Gujarat Environment Protection and Infrastructure Pvt Ltd (GEPIL) and the Accommodation Complex of ship-recycling workers, which is managed by the SRIA.

It would be appreciated that before examining the legal, economic and political aspects of ship recycling—which is, of course, the focus of this article—it is important to be clear about the entire process of ship recycling in India from anchorage to final disposal of dismantled parts.

### **Ship Recycling: Step-by-Step Process**

According to The Recycling of Ships Act, 2019, ships must be recycled according to a ship-specific recycling plan. There are ten essential steps that need to be taken, starting from the anchoring of a ship to finally sending the ferrous and non-ferrous parts for recycling, as also the disposal of various waste material generated during ship recycling.<sup>5</sup> These steps may be summarised as follows:

1. A ship upon entering India's internal waters, is anchored at about 12 nm from Ghogha Port, Bhavnagar, Gujarat. The ship is then boarded by Customs officials and accorded customs clearance, following which the GMB and the Gujarat Pollution Control Board (GPCB) officials inspect the ship's Inventory of Hazardous Materials (IHM) and provide the necessary clearance certificate.
2. The next step after anchorage is seeking permission from the GMB and the GPCB for beaching of the ship at one of the ship breaking yards at Alang-Sosiya. The ship is allowed to be beached along the Alang-Sosiya coast for dismantling and recycling only after due permission is accorded.

3. After the ship is beached, oil is drained from the bilges and tanks, fuel tanks are cleaned and fuel and lubricant lines are disconnected from the ship. Oily waste including oily sand, rags, garbage and plastic wastes are then transported to the nearby Common Hazardous Waste Treatment Storage Disposal Facility (CHW-TSDF) that has been set up by the GMB.
4. Thereafter, the Safety Officer of GMB inspects, identifies, and marks the different types of gas cylinders, batteries and chemicals on board. The recovered empty cylinders, batteries and chemicals are safely carried from the ship to their assigned locations in the yard and temporarily stored until they can be transported by an officially contracted firm (assigned by the regulatory authorities) to a site where a final decision about their further usage/disposal is taken.
5. The next step is the collection and disposal of bilge water and associated wastes. The bilge water tanks, after being emptied, are cleaned with the help of beach sand.
6. The sixth step entails the obtaining of a Decontamination Certificate from the GPCB and a Hot Work Permit from the GMB to subsequently cut the ship using gas-cutting.
7. Upon receipt of the Decontamination Certificate and the Hot Work Permit, the usable materials on the ship are removed from the ship and sold to the highest bidder. These materials are, prior to their sale, identified by both, the Safety Officer and the ship dismantling yard owner, and an inventory list of such items is prepared.
8. In this step, insulating material including asbestos, glass wool, and thermocol, are removed from the ship by trained workers.
9. Gas cutting is the ninth step where the ship is cut into large sections with the help of gas cutting torches, during high tide. Cranes and winches are used to pull the ship's cut sections, resulting in the sections falling in the inter-tidal zone due to gravity. Once the water recedes completely to the low tide level, pieces of this sliced section, are cut in the inter-tidal zone itself so as to make

smaller pieces, which can be conveniently lifted by the cranes and carried to the work area ashore.

10. Finally, of the steel obtained from the cutting of ships, that which is in good condition is sent to nearby re-rolling mills that convert it into plates, bars, and rods, which are used in the construction sector. The remaining steel, called scrap, which cannot be sent for re-rolling and cannot be used directly, is sent for melting.

## Legal Perspective

In essence, ship recycling deals with end-of-life ships, which are considered to be a form of hazardous waste. Trading in hazardous waste from developed to developing countries has a history going back to the latter half of the 20th century, when the production and consumption of goods in developed countries increased exponentially.<sup>6</sup> Developed countries were introduced to mass marketing, high consumption, and improved ease of access to products. Consumers began to enjoy the availability of greater varieties of clothing, food, and other consumer goods. However, with the rise in consumption came a rise in the amount of waste generated. When people of these developed countries started protesting against the creation of landfills in their cities, legislations against the dumping of waste became stringent and, eventually, the cost of waste dumping increased. To solve this problem, these countries then began transporting their waste to developing countries, since the waste management policies there were lax and human resource available was cheap and readily available. The developed countries, having found inexpensive ways to process and dispose of their waste, adopted the system of “waste flow”—a phenomenon often termed as “garbage imperialism”.<sup>7</sup>

Two decades into the 21st Century, these wastes continue to flow. The developing countries either find this waste directly dumped on its land or they recycle or reuse the dumped waste. An example of this are fast-fashion castoffs, which end up becoming fleece or mattress stuffing, or are directly sold in second-hand markets of Asian and African nations.<sup>8</sup> The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989, was introduced due to this reason.

Consequent upon increased environmental awareness and economic heft over the last few years, several developing nations have now begun to ban the import of all or specific types of waste. India, for instance, has banned waste dumping by passing the Hazardous and Other Wastes (Management and Transboundary Movement) Rules in 2016 and in 2019.<sup>9</sup> However, the global shipping industry remains an exception to this, especially with the passing of The Recycling of Ships Act of 2019, which allows the recycling or dismantling of end-of-life ships in India.

The relocation of the market of the ship recycling industry from the developed to the developing countries has been complemented and further strengthened by rising demand for steel in developing domestic markets, lax environmental regulations, and a cheap workforce. End-of-life ships that arrive in Alang-Sosiya for ship recycling are primarily sold based on weight to the shipbreaking companies either directly or through cash buyers.<sup>10</sup>

## **Overview of Governing Authorities at Alang-Sosiya**

Several central and state government authorities are involved in the management of Alang-Sosiya ship breaking yards. These include the Ministry of Environment, Forest and Climate Change (MoEF&CC) and the Ministry of Ports, Shipping and Waterways (MoPSW) in New Delhi, and the Gujarat Maritime Board (GMB), the Labour and Employment Department of Gujarat, the State Coastal Regulation Zone Authority, the Gujarat State Pollution Control Board (GPCB), the Customs Department, the Occupational Health and Safety Inspector, and the Factories Inspector in the state of Gujarat.

The GMB is the nodal agency at Alang-Sosiya with the responsibility of allocating plots for shipbreaking, developing the required infrastructure, acquisition of land, planning and the provisioning of water, electricity, roads, and communication, and so forth. The GMB has been vested with the power to ensure that the shipyards follow the norms and regulations laid down under various state and central government laws and policies. All yards at Alang-Sosiya are mandated to have a Recycling Facility Management Plan and in case any component of the Recycling Facility Management Plan of a particular yard is not functional during the GMB inspection, then the

GMB has the power to cancel the permission for that ship recycler to beach any ship until the non-functional components are made functional in accordance with the laid down requirements.

## **International Laws**

International conventions relating to ship recycling are The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (Hong Kong Convention), The International Convention for the Prevention of Pollution from Ships, 1973, and the amendment protocol of 1978, both of which are together known as MARPOL 73/78; The Stockholm Convention on Persistent Organic Pollutants, 2001; The Maritime Labour Convention, 2006; The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989, (Basel Convention) and The Basel Convention Ban Amendment, 2019 (Ban Amendment). It is pertinent to note here that the European Union has its own regulations, i.e., the European Union Ship Recycling Regulation, 2013 (EU SRR), and the European Union Waste Shipment Regulation, 2006, with the EU SRR running parallel to the Hong Kong Convention. India is not party to the Ban Amendment and the EU regulations.

The most recent and relevant international convention is the Hong Kong Convention which will enter into force on 26 June 2025. It will introduce global regulations to ensure ships at the end of their operational lives are recycled safely and without posing unnecessary risks to human health and the environment. The Convention had laid certain conditions and upon the fulfilment of which it was to enter into force 24 months after the following required criteria were met, viz., not less than 15 member States; not less than 40 per cent of the world's merchant shipping by gross tonnage; and ship recycling capacity of not less than three per cent of the gross tonnage of the combined merchant shipping of those States mentioned above. The date of the Convention's entry into force was triggered when Bangladesh and Liberia became contracting States to it, marking the moment that all necessary criteria were met.

The Basel Convention is an important legislation that came into force in the 1980s. It protects human health and the environment from the adverse effects

of wastes, in particular considering the vulnerabilities of developing countries. It obligates member States to (1) reduce and minimise waste at source; (2) manage wastes within the country in which they are generated; (3) reduce transboundary movement of wastes to a minimum; (4) manage wastes in an environmentally sound manner; and (5) strictly control waste trade that does occur via a notification and consent mechanism known as “prior informed consent”. In relation to the Basel Convention, the Ban Amendment is an agreement between the Basel Convention Parties to prohibit the member States of the Organisation for Economic Cooperation and Development (OECD), the European Union (EU), Liechtenstein, and the countries that have ratified the Ban Amendment from exporting hazardous wastes to other countries—especially developing countries or countries with economies in transition.

Alang-Sosiya houses 153 shipbreaking yards out of which only 131 are operational. Currently, 106 shipbreaking yards have received Statements of Compliance (SoC) under the Hong Kong Convention and around nine of them have applied for the certification under EU SRR.<sup>11</sup>

## **National Laws**

Laws in India relating to ship recycling can be grouped in two segments, namely, labour laws, and environmental laws. There is a wide range of laws in India for the protection and improvement of working and living conditions at Alang-Sosiya. These include the Worker’s Compensation Act, 1923; the Payment of Wages Act, 1936; the Factories Act, 1948; the Employee’s State Insurance Act, 1948; The Minimum Wages Act, 1948; the Employee’s Provident Funds Act, 1952; the Payment of Bonus Act, 1965; the Contract Labour (Regulation & Abolition) Act, 1970; the Payment of Gratuity Act, 1972; and the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979. The applicability of these laws is discussed in the Economic Perspective below.

Environmental laws regulating ship recycling are the Water (Prevention and Control of Pollution) Act, 1974; The Air (Prevention and Control of Pollution) Act, 1981; the Environmental (Protection) Act, 1986; the Customs Act, 1962; and the

Explosives Act, 1884. Regulations framed under the Environmental (Protection) Act, 1986 are Hazardous Waste (Management, Handling & Transboundary movement) Rules, 2008; The Batteries (Management and Handling) Rules, 2001; The Bio-medical Waste (Management and Handling) Rules, 1998; the Noise Pollution (Regulation & control) Rules, 2000; the Municipal Solid Waste Rules, 2000; the Ozone Depleting Substances (Regulation and Control) Rules, 2000; and the Manufacture, Storage and Import of Hazardous Chemical Rules (MSIHS) Rules, 1989.

The Government of Gujarat has enacted some additional laws. These include the GMB Ship Recycling Regulations, 2003; the Petroleum Rules, 1937 & 1976; the Explosives Rules, 1983; the LPG/Oxygen Gas Cylinders Rules, 1981; the Hazardous Waste (M&H) Rules and other Environmental Rules, 1989; and the Provision of Heavy Penalty in case of Fatal Accidents, 1855. Lastly, India has also enacted the Ship Breaking Code (Revised) 2013 (Code) and The Recycling of Ships Act 2019.

India ratified the Hong Kong Convention by passing The Recycling of Ships Act, 2019 whose provisions are the same as those of the Convention. However, the Code was enacted in 2013. In accordance with the specific provisions of the Code, whenever a new facility is being planned, an Environmental Impact Assessment (EIA) is required to be undertaken, and the facility should comply with appropriate Coastal Regulation Zone (CRZ) notifications.<sup>12</sup> The Code focuses on the safe disposal of hazardous material generated by ship recycling activities and suggests in detail the appropriate disposal options.<sup>13</sup> It mandates that ship recyclers hand over such hazardous materials to authorised waste management facilities, viz., CHW-TSDF for treatment and disposal.<sup>14</sup> The hazardous material from the ship recycling yards is to be transported to TSDFs, where the same is disposed in an environmentally sound manner. The obligation of the ship recycler ends once the hazardous material reaches a TSDF. Additionally, the Code also mandates that the State Pollution Control Boards (SPCBs)–(1) set up air quality monitoring stations within a ten-kilometre radius of shipbreaking facilities to take measurements in terms of National Ambient Air Quality Standards; (2) periodically monitor soil, sediment quality, work-zone air quality, and marine water quality near shipbreaking facilities;<sup>15</sup> (3) create facilities for the removal, storage, and disposal of hazardous material and wastes;<sup>16</sup> and (4) register as members of the TSDF<sup>17</sup> facilities for treatment, storage, and disposal of hazardous waste in an environmentally sound manner.<sup>18</sup>

An end-of-life ship is simultaneously a ship and a hazardous waste. Ships have to remain compliant with the admiralty and maritime legal corpus, and standards required by international laws on navigation, safety at sea, and flag-related issues, until they are delivered to the ship breaking yards. All international laws governing a ship and hazardous waste are applicable to an end-of-life ship, until the ship is anchored. Thereafter, from the time it is anchored to the time it is beached, domestic laws of the country where it is anchored are applicable to it. However, as soon as the end-of-life ship is beached, it ceases to be a ship and becomes a hazardous waste. The obligation of the ship recycler to dispose of the hazardous material begins as soon as the ship touches the beach head, which is governed under the Recycling of Ships Act and the Code. Waste material originating from the ship recycling process, which reach the TSDF, are governed by the Hazardous Waste (Management and Handling) Rules, 1989, and the Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016, which make the operator of the TSDF liable for environmentally safe disposal of the material.<sup>19</sup>

Breaking of a ship falls under the category of ‘waste’ under the Basel Convention,<sup>20</sup> and both the Basel Convention and the Ban Amendment apply to the process of ship recycling. India ratified the Basel Convention in 1992, and it has made changes to its hazardous waste management rules to align itself to the Convention.<sup>21</sup> However, India has not ratified the Ban Amendment<sup>22</sup> which prohibits export of hazardous wastes, including electronic wastes and obsolete ships from OECD to non-OECD countries. Consequently, Alang-Sosiya is exempt from the ambit of the Ban Amendment.

## **Beaching**

At Alang-Sosiya, ships are beached for ship recycling. According to Rule 3.3 of the Code, beaching is “*the process in which a ship is taken ashore to land and grounded deliberately in shallow water, either on its own power or under tow. A beached ship is rendered immobile and cannot be re-floated. Beaching is thus irreversible*” (Fig 1 refers).

India is in conformity with the Hong Kong Convention, 2009, which does not explicitly prohibit beaching. In 2020, India’s National Green Tribunal (NGT) held

that the beaching method was permissible<sup>23</sup> basing its conclusion on a 2007 Supreme Court of India judgement.<sup>24</sup> In that case, the Hon'ble Supreme Court of India had applied the principle of sustainable development based on the concept of "balance" to allow the dismantling of a ship at Alang-Sosiya, Gujarat, thus allowing and permitting the use of beaching for ship recycling. The NGT, in its 2020 judgement, opined that if the beaching method is not followed, there would be no shipbreaking activity in India, thereby depriving the country of a major business activity, which would in term lead to unemployment of a large labour force.<sup>25</sup> The tribunal further observed that an expert study, independently conducted under its auspices had not reported any adverse effect of the beaching method since 1982.<sup>26</sup> The observation of the tribunal, while aligned with the EUSR (which does not ban the process of beaching), is in sharp contrast with the EU decision to ban beaching for the ship recycling process in respect of all EU-flagged ships, due to the safety and environmental issues arising from the beaching method, based on its independent scientific findings.

**Figure 1:** Beached Ships at Alang-Sosiya.



*Source: Photograph by one of the Authors of the Article*

## Economic Perspective

As explained earlier in this article, during the process of ship recycling, the ship's structural members are cut into pieces by trained personnel using the gas cutting method from the bow (front portion) of the ship and gradually working their way towards the stern (the rearmost portion). Even the most impregnable and sturdy ships are torn down in a matter of months by the assiduous labour of workers, assisted by variety of tools and machines such as acetylene torches, sledgehammers, winches and cranes, at the 131 operational yards (of the 153 shipbreaking yards in all) (Fig 2 refers) in Alang-Sosiya. Currently, 22 plots are vacant and an overall employment—direct and indirect—of 515 hundred thousand (lakh) people is generating an annual revenue of INR 55 crores per annum.<sup>27</sup> Beachfront plots of various sizes are being leased out by GMB in Alang-Sosiya to the owners of shipbreaking yards. This practice has been going on since 1994. The beach-front width of these plots varies from 30 m, 50 m and 120 m. However, with the increase in the size of the ships there is a clear need to rationalise the beach-front width sizes to accommodate ships with wide beams.

**Figure 2:** A Ship Recycling Yard at Alang-Sosiya.



*Source: Photograph by one of the Authors of the Article*

The time taken for the complete dismantling process of a ship depends entirely on the type of ship in question. For instance, an oil tanker takes comparatively lesser time to be scrapped than does a passenger liner as the latter has a more complex internal structure than the former. Currently, an average ship of 10,000 LDT to 20,000 LDT is broken in approximately three to five months. Yards at Alang-Sosiya employ a variety of workers for the various shipbreaking operations. Workers employed at these yards hail from different states of the country, such as Odisha, Uttar Pradesh, Bihar and West Bengal, and are essentially migrant workers who come to Alang-Sosiya in Gujarat in search of employment.

Depending on their skills and experience, workers are very often categorised into “Muqaddams” (supervisors), gas cutters (who work on the ships and at the yards), winch and crane operators, loaders, and yard cleaners. They are paid daily wages according to these classifications. A gas cutter’s wage is around INR 800 to INR 2000 per day, as compared to a yard cleaner who earns around INR 500 to INR 1000 per day.<sup>28</sup> The constant search for better employment opportunities than that available in their home states, brings large numbers of workers to Alang-Sosiya, where they are termed “migrant workers”. As such, they usually travel without their families and tend to stay and work at the shipbreaking yards for relatively short periods of time (6 months to 2 years). Accountability of workers and applicability of various domestic labour laws to the ship recycling Industry at Alang-Sosiya, has been a big challenge due to the transient nature of this migrant work force. Apart from direct employment, these ship recycling yards also create indirect employment opportunities for tens of thousands of workers employed in downstream industries, such as re-rolling mills, oxy-acetylene plants, and the real estate market, thereby contributing to the economic growth of the country.

## **Price Structure of Ships Sold for Ship Recycling**

Once ships are placed on the recycling market, they are no longer considered as means of transport but become mere commodities, viz., secondary raw material in the form of a floating inventory of ferrous and non-ferrous metal. Shipping markets all around the world remain closely inter-connected, each having its own fundamentals,

with the ship recycling market being dependent on several heterogeneous factors, two main ones being:

1. **Supply:** The supply of ships for recycling is driven by freight rates and is related to the international shipping market—impacted by global trade and world economy—and is common knowledge to the inter-connected global community of shipowners. The sales of ships are in hard currencies (currently US\$).
2. **Demand:** The demand of ships for recycling is primarily driven by local demand in re-rolled steel and secondarily-driven by the demand for melted scrap products. The demand side is domestic and mainly concentrated in five shipbreaking countries, with around 400 significant players. Purchases are financed and executed in local currencies only.<sup>29</sup>

The above factors are the driving force in determining the price paid by ship recyclers for acquiring tonnage. The price offered for recycling ships also depends on how the shipbreakers anticipate the market and what they are ready to pay for ships considered as raw material. The re-rolled steel products produced from shipbreaking activities compete with other recycled products. Since these ships are purchased in hard currencies (mainly US\$) but resold in local currencies, an exchange rate exposure affects the industry. Currently the number of ships being sent for ship recycling is low as shipowners continue to exploit their vessels to maximise their profits because of increased freight rates.

Each of the above-mentioned factors can have an impact on the ship recycling industry in India and the price offered for recycling ships. Five countries, i.e., Bangladesh, China, India, Pakistan and Turkey, have emerged as major ship recycling centres in the world, primarily because they can afford to offer the highest prices to buy the ships for recycling. A pertinent point that merits mention is that the proportion of scrap from recycled ships versus imported ferrous scrap is not the same across all the afore-mentioned countries.<sup>30</sup> Bangladesh (and to some extent Pakistan) is much more dependent on recycled ships for the supply of steel to meet their domestic steel requirements than are the three other three, viz., China, India, and Turkey.

During the COVID-19 pandemic, there was a plunge in global trade and lowering of freight rates. Ship owners now found it more profitable to simply sell their ships off for recycling rather than continuing to maintain them (in the absence of freight availability). Consequently, from the second quarter of 2020 onward, a noticeable rise in the number of vessels bought for ship breaking was observed as compared to the muted activity in the first quarter.<sup>31</sup> The key to profit-making in ship recycling lies in the sale of higher value non-ferrous metals, oil, and furniture found on the ship, all of which form a sizeable part of the recycled products other than steel. Our on-ground interactions in Alang-Sosiya revealed that the average purchase price of steel in the Indian sub-continent is around US\$ 500 or EUR 458 (currency exchange rate of 0.92) per Lightweight Tonnes.<sup>32</sup> In comparison, the price offered in the EU countries for such product is around EUR 235 to EUR 250<sup>33</sup> with the price gap being attributed to the fact that the end products of ship recycling in the Indian subcontinent are not primarily used as melting scrap for furnaces but as re-rolled steel for the construction industry.

## **Alang Market**

Lastly, while discussing the economic aspect of ship recycling in Alang-Sosiya, it is important to note that ship recycling not only covers the steel of the hull and superstructure, but also includes the various fittings inside a ship. Items that are stripped from the ship, even before the commencement of the dismantling process, such as electronics, furniture, fitting, cooking ware, machinery, wiring, plumbing, and many other items, are sold in second-hand markets, collectively known as the “Alang Market”. This market, which is one of its kind in the world, runs for miles and is situated close to the shipbreaking yards at Alang-Sosiya.

## **Political Perspective**

The Government of India promulgated the “Maritime India Vision 2030” (MIV 2030) in February of 2021, subsuming within it, the SAGARMALA mega-project, and including the enhancement of the country’s ship recycling capacity. This vision document promotes the concept of ‘Waste to Wealth’ through modification of

Bureau of Indian Standards (BIS) regulations and the development of ship recycling infrastructure. The document also identified three major interventions to drive demand in the ship recycling industry:

1. Relaxation in BIS (steel scrap standards) to enhance the yield per tonne of scrap and exempt ship-scrap use in re-rollable bar manufacturing based on mechanical strength and quality in lieu of the earlier-specified norms of metallurgical history.
2. Redevelopment of plots at Alang-Sosiya and the creation of a ship-repair cluster on the east coast of India to enhance market share.
3. Set up a facilitation centre to promote India's ship recycling industry through the hosting of trade fairs and exhibitions.

As far as the modification of BIS regulations (IS 1786:2008) is concerned (which governs Thermo-Mechanical Treatment (TMT) bar production through ship scrap material), the current regulation limits the usage of recycled steel scrap in manufacturing re-rollable bars, driving prices in India lower. Due to the imposition of the Quality Control Order (QCO), the percentage share of recycled ship steel-scrap usage for re-rollable steel dropped from 70 to 80 per cent to 40 to 50 per cent. The Government of India, vide MIV 2030, has proposed two modifications to the BIS regulations on the requirement of metallurgical history of steel scrap from ship recycling:

1. Exemption to steel scrap from ship recycling for use in re-rollable bar manufacturing.
2. Use of quality and strength tests in lieu of metallurgical history for determining its end use.

Key initiatives for infrastructure development include the development of a ship recycling park behind the ship recycling yards at Alang. Secondly, MIV 2030 considers Alang-Sosiya as a 14 km "port" and stipulates an area of 02 km inland from the seashore as being a Port Area. This area is planned to be sealed-off with walls and gates and all re-rolling and melting mills would be housed inside this port,

with only end-products such as steel bars and ingots, furniture and wastes going outside the gates. Consolidating several small yards into large ones (each with a width of 120+ metres) and increasing the length of the current plots to about 200 m; and the development and establishment of an ISO 17025 accredited laboratory for the testing of hazardous waste, are the other two planned initiatives designed to promote infrastructural development. Finally, India has resolved to adopt a zero-residue model for ship recycling at all plots and work towards ensuring zero leakage of liquid waste to sea from underground waste water/oily water collection from all yards to waste treatment plant.

### **Maritime *Amrit Kaal* Vision 2047**

The MoPSW released the *Maritime Amrit Kaal Vision 2047* in October 2023, after extensive consultations with stakeholders across central ministries, state government departments, private sector, financial institutions, and academia. Building upon MIV 2030, this document articulates, *inter alia*, India's aspirations to be a global player in ship recycling and proposes various measures to facilitate an eco-system that provides adequate infrastructure and policy enablers to achieve its desired goal. The 2047 Vision intends to implement the following:

1. Short-, medium-, and long-term goals for ASSRY expansion, by relaxing annual charges for plots, allotting new plots and obtaining Coastal Regulation Zone (CRZ) clearance and initiating the widening of the current two-lane road to a four-lane one.
2. Reduction in tax/ duties, i.e., import duty (2.5 per cent), and GST (18 per cent), in line with the imported baled scrap.<sup>34</sup>
3. Collaboration with the EU by seeking the intervention of Ministry of External Affairs, Government of India to encourage EU and OECD countries to send their vessels directly to Alang-Sosiya (at present, owners of vessels flying the flag of EU member-States resort to first reflagging their vessels under Flags of Convenience (FOC) and only then send them to Alang-Sosiya) with subsidised selling price considering that many ship breaking yards in Alang-

Sosiya are fully compliant with the Hong Kong Convention. In order to facilitate this line of effort, the Government of India invited a delegation from the European Union to visit Alang-Sosiya, to assess and analyse the actual conditions in the ship recycling yards and their level of compliance. It is reliably learnt that these visits would be regularly facilitated in the future to achieve transparency with respect to environmental compliance by yards.

4. Re-rolled steel, generated from the process of ship recycling is of good quality. Thus far, however, BIS has not been permitting this steel to be used in large construction projects due to lack of metallurgical history or traceability. The effort is now to permit steel generated from ship recycling to be used for large construction projects based on mechanical tests and stringent quality checks rather than metallurgical history. This will not only increase the demand of re-rolled steel but also raise the competition for domestic virgin steel.

## **Recommendations**

The ship recycling industry at Alang-Sosiya has the potential to not only significantly contribute to the economic development of Gujarat in particular and the country in general but also create substantial direct and indirect employment opportunities for a large skilled- and unskilled work force. All stakeholders in the ship recycling industry have shown a willingness to comply with environment sustainability norms. Some important recommendations that would aid in correctly projecting the ship recycling activities at ASSRY are:

1. Promote transparency by allowing public access to reports from monthly, quarterly and yearly audits.
2. Demonstrate the political will to adopt and execute stringent standards in accordance with the current international practices.
3. Evolve multi-pronged strategies to incentivise the migrant workers to stay on for periods longer than the current six months to two years by providing married accommodation, better health care, education facilities for children. etc. This would result in retention of skill sets, thereby preventing accidents

and reducing the load of training a large number of fresh workers at regular intervals.

## **Conclusion**

India has embarked upon a journey of establishing a robust governance and legal framework to ensure that the ship recycling industry is in strict conformity with the international standards, while addressing the aspirational and employment requirements of its citizens in accordance with the Maritime *Amrit Kaal* Vision 2047. The ship recycling industry in India has been identified as a focus area in the Vision 2047 as it makes a significant contribution in producing the country's steel requirements and generates direct and indirect employment for skilled and unskilled workers. The challenge lies in adhering to international norms for environmental sustainability. The observations made during the field trip to Alang-Sosiya as part of the project by the NMF team are indicative of the substantial and positive efforts being put in by all stakeholders to promote an environmentally sustainable and safety-conscious ship recycling industry. In the future, we must re-assess and re-evaluate our existing ship recycling industry practices at regular periodicity and, refine them to withstand stringent scrutiny and audit.

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- 16 The Shipbreaking Code 2013, Rule 6.5 requires facilities be created for ballast water disposal, oil sediments removal; disposal of asbestos; to treat bilge water; and removal of waste oily sludge, mineral oil and paint chips generated during the ship breaking process
- 17 The Shipbreaking Code 2013, Rule 5.3 (i)(b)
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- 21 India became a party to the Basel Convention in 1992 and made numerous amendments to the Hazardous Wastes (Management and Handling) Rules, 1989 to give effect to the convention
- 22 The Ban Amendment to the Basel convention prohibits shipments of hazardous waste from parties listed in the Annex VII of Basel Convention which are destined for operations according to Annex VI A, to States not listed in Annex VII (Article 4A (1)). The amendment also inserts a new preambular paragraph 7 bis, which recognizes that transboundary movements of hazardous wastes, with regards to developing countries, have a high risk of

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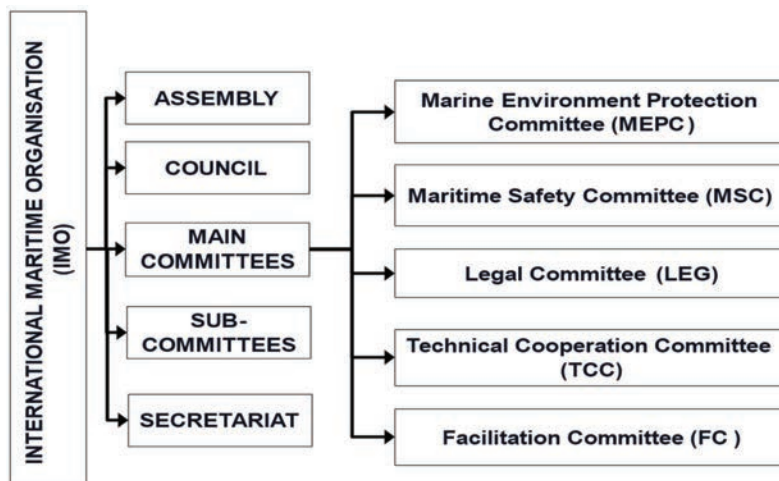
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# A Study of Engagement and Influence at the International Maritime Organisation's Legal Committee

*Mr Mayank Mishra*

The International Maritime Organisation (IMO) is a specialised agency of the United Nations (UN) that sets standards and creates regulatory frameworks for the safety, security, and environmental performance of international shipping.<sup>1</sup> The structure of the IMO encompasses an Assembly, a Council, five Main Committees, and a number of Sub-Committees that support the work of the main committees. The broad structure of the organisation and its main constituent committees, is depicted in Figure 1.<sup>2</sup>

Figure 1: IMO and its constituent Main Committees



*Source: IMO Website*

The Council is the executive organ of the IMO and is responsible for supervising the work of the IMO. It is elected by the Assembly for two-year terms, beginning after each regular session of the Assembly. Council members are grouped in three categories, namely, Category (a) comprising the 10 States with the largest interest in providing international shipping services, Category (b) comprising 10 States of those not elected under Category (a) with the largest interest in international seaborne trade, and Category (c) comprising 20 States not elected under (a) or (b) above, which have special interests in maritime transport or navigation and whose election to the council will ensure the representation of all major geographic areas of the world.<sup>3</sup> The importance of the IMO Council is almost self-evident. Informed commentators have correctly noted that:

“Organisations like the IMO will play a defining role in guiding various governments and industries to set standards and processes”.<sup>4</sup>

As a major maritime nation, it is important for New Delhi to ensure that it takes “...steps to ensure that it does not get left out”<sup>5</sup> of the Council. India does, indeed, appear to be taking such steps. In December 2023, for instance, India was re-elected, for the biennium 2024-25, to the IMO Council (the executive organ of IMO under IMO’s highest governing body, the IMO Assembly). With 157 votes out of 167, India got the highest tally of votes in its re-election to the IMO Council.<sup>6</sup> India is clearly aware of her interests (and the stakes) at the IMO and continues to engage proactively and constructively with IMO Member States and Participants. Indeed, as India seeks to position herself in international affairs as a rule-maker instead of mere rule-taker, she recognises that her engagement with and at IMO should increasingly focus on the standard-setting and rulemaking processes at IMO.<sup>7</sup>

Accordingly, this article argues that India must pay particular attention to the Legal Committee (the IMO-LEG) and accordingly seeks to provide baseline information on the functioning and interface mechanism(s) of this critical committee. It specifically draws the attention of Indian policymakers and policy-shapers to the potential of organisations outside the governments of IMO Member States. It also highlights issues relevant to transparency (or lack of it) within the IMO-LEG. The article will, it is believed, bring clarity, precision, and coordination to India’s engagements at-and with the IMO-LEG, and facilitate the larger promotion and advancement of Indian interests and views at IMO.<sup>8</sup>

## Overview of IMO's Legal Committee (the IMO-LEG)

The IMO-LEG began in 1967 as an *ad hoc* Legal Committee established to address legal questions that arose in the aftermath of the *MT Torrey Canyon* oil spill (“*the first major oil spill in British and European waters*”).<sup>9</sup> Subsequently, it was given *de jure* status and became a permanent subsidiary organ of the IMO Council.<sup>10</sup>

Within the wide ambit of the IMO's rulemaking/law-making role, the IMO-LEG is empowered to deal with any and all legal matters.<sup>11</sup> These include, *inter alia*, issues of liability and compensation in the operation of ships (for example, damage, pollution, passenger claims, wreck removal, etc.), fair treatment of seafarers, and the suppression of unlawful activities at sea which affect navigational safety. It can also perform other duties as may be assigned to it by the IMO or by under any other international instrument that is accepted by the IMO.<sup>12</sup>

Unfortunately, the organisation, functioning and interface mechanisms of an especially critical committee, namely the IMO-LEG, remain inadequately explored. This may be because the academic literature thereon is relatively sparse, and official documentation on rules, etc., is not easily available. Consequently, in the following sections, the functioning and interface mechanism(s) of the IMO-LEG is ‘unpacked’ by examining its foundational legal texts and other substantive and procedural provisions.

### IMO-LEG: Foundational Texts

This article first examines The Convention on The International Maritime Organisation, 1948 (“IMO Convention”) as a foundational text for the IMO-LEG. Article 2(b) of the IMO Convention specifies the legislative capacity of the IMO. The IMO-LEG itself is established under Article 11 and Part VIII (Articles 32-36).<sup>13</sup> Article 32 mandates that the IMO-LEG shall consist of all IMO Members. Article 34 lays out an obligation to submit drafts developed (of international conventions or amendments thereto) and reports to the IMO Council. Article 35 mandates, *inter alia*, that the IMO-LEG shall adopt its own rules of procedure, while Article 36 elaborates other rules and procedures that must be followed by the IMO-LEG in its functioning.

An important interface mechanism with the IMO-LEG is afforded by intergovernmental organisations and non-governmental international organisations, which play a significant role under the IMO Convention.<sup>14</sup> Article 33 of the IMO Convention lays down certain duties of the IMO-LEG, and also mandates that “upon request” by the IMO Council or Assembly, the IMO-LEG will interface with “other bodies.” (Of course, this interfacing will take the form of “such close relationship...as may further the purposes of the IMO”). Article 33 is reproduced below:

- (a) *The Legal Committee shall consider any legal matters within the scope of the Organisation.*
- (b) *The Legal Committee shall take all necessary steps to perform any duties assigned to it by this Convention or by the Assembly or the Council, or any duty within the scope of this Article which may be assigned to it by or under any other international instrument and accepted by the Organisation.*
- (c) *Having regard to the provisions of Article 25, the Legal Committee, upon request by the Assembly or the Council or, if it deems such action useful in the interests of its own work, shall maintain such close relationship with other bodies as may further the purposes of the Organisation.*

Article 25, which is referred to in Article 33(c) above, further legitimises the relationship of the IMO-LEG with “other bodies.” Separately and in broader terms, Article 62 mandates that the IMO “may, on matters within its scope, make suitable arrangements for consultation and cooperation with non-governmental international organisations.”

Thus, the potential of intergovernmental organisations and non-governmental international organisations as ways in which to engage and influence the IMO-LEG can be clearly seen in the IMO Convention. This potential is reflected in another foundational legal text of the IMO-LEG, namely, its “**Rules of Procedure**”.<sup>15</sup>

An observation by Professor Nicholas Gaskell (Emeritus Professor of Maritime and Commercial Law at the University of Queensland), who has attended many meetings of the IMO-LEG over the years, is especially relevant:

“In practice, it is very rare for anybody to refer to the Rules of Procedure, i.e., to take technical procedural points. Many delegates are unfamiliar with the Rules of Procedure and it is often left to experienced delegates to assist IMO-LEG if an issue arises.”<sup>16</sup>

Nevertheless, Rule 35 categorically mandates that the Chair of the IMO-LEG shall “*ensure observance*” of the Rules of Procedure. Accordingly, and consequently, these rules remain important and ought to be factored into analyses undertaken by Indian delegates/attendees or any other participant(s) seeking to put forth their views at IMO-LEG. They are examined below.

Like the IMO Convention, the IMO-LEG’s Rules of Procedure also make allowance for the participation of intergovernmental and non-governmental international organisations in the work of the IMO-LEG. Rules 5(3)-(4), on ‘Observers’, are reproduced below:

“(3) The Secretary-General shall invite to be represented by observers at each session of the Committee at which matters of direct concern to them are on the agenda:

1. other intergovernmental organisations with which an agreement or special arrangement has been made; and
2. non-governmental international organisations with which the Organisation has established relationships in accordance with the rules governing consultations with such organisations.

(4) Upon invitation by the Chair and with the consent of the Committee concerned, such observers may participate without vote on matters of direct concern to them.”<sup>17</sup>

It can be seen how Rule 5 makes provision(s) for representation of and consultation with intergovernmental organisations and non-governmental international organisations. Rule 47 (entitled, “*Invitation of Experts*”) similarly enables the IMO-LEG to “*invite to an IMO-LEG meeting, any person whose expertise it may consider useful for its work.*”

Thus, it can be seen that despite the absence of voting rights, such representation and consultation provide significant opportunities to engage and influence the IMO-LEG and its rulemaking functions.

## **Openness and Transparency**

The next segment of this article examines issues relating to the openness and transparency of the IMO-LEG meetings or sessions. Here, Rule 10 (entitled “*Publicity*”), which is reproduced below, leaves much to be desired:

“1. The Committee may decide to hold meetings in private or public. In the absence of a decision to hold meetings in public, they shall be held in private.

2. Notwithstanding the aforesaid, and in accordance with the Guidelines for media access to meetings of Committees and their subsidiary bodies approved by the Council, the media may attend meetings of the Committee unless the Committee decides otherwise. Meetings of working and drafting groups established by the Committee shall be held in private.

It is quite evident that Rule 10 does not lay down clear, objective criteria for when exactly a meeting *may* be held in private, or when it *must* be held in public. Instead, the language of Rule 10 appears to encourage “*private*” meetings, and thus hinders transparency and accountability. This is particularly true for meetings of working and drafting groups, and it is unclear why such meetings have been made unavailable for public viewing under the Rules of Procedure. A 2018 report on IMO governance thus found:

“While audio recordings of committee and subcommittee meetings are available to participants and observers, they are not made accessible to the public. This makes it hard in practice for the public to understand the arguments and policy positions taken by their national representatives, because written reports do not normally attribute statements or policy positions to delegates. The terms of reference for working groups and correspondence groups are not routinely published. There is also no available information on the procedures for nominating and electing chairs and vice-chairs or appointing secretaries to committees and groups.”<sup>18</sup>

This report also found that a similar spirit of exclusion prevails in IMO’s guidelines (including media accreditation procedures) governing media reporting of IMO proceeding(s).<sup>19</sup> It noted:

“There are reporting restrictions in place across the IMO: the Assembly, the Council, the committees, and their subsidiary bodies. Journalists must be accredited to report on the proceedings of these IMO organs. However, press accreditation is provided by the IMO on a discretionary basis. The terms and conditions of media accreditation state that members of the media can be excluded from IMO meetings if “their presence would have a negative impact on the efficient and effective conduct of the Committee’s business.” Journalists who are accredited must also “report accurately the outcome of discussions” and refrain from naming individual speakers without obtaining their prior consent, according to the terms and conditions. These rules effectively mean that journalists cannot report on the policymaking process—including the negotiations and favoured policies of Member States—but only the outcomes of meetings. These rules are enforced in practice.”<sup>20</sup>

The issue of access to information and transparency was considered by the IMO Council at its 127th session in 2022. The official summary of this session declares:

**“Reform–Live Streaming of IMO Meetings**

The Working Group discussed measures to enhance access to information and transparency, including live streaming of IMO meetings. The Council agreed in principle, that, some meetings, or parts of meetings, could be live streamed to the public, and agreed that clear criteria and procedures should be developed for the selection of such meetings or parts of meetings to be live streamed.”<sup>21</sup>

The IMO Assembly subsequently did consider this matter but appears to have taken a limited view thereon. The relevant extract from the proceedings’ summary is reproduced below (emphasis added):

“The Assembly agreed to live-stream to the public its public plenary meetings, commencing from the start of the current session, with the following exceptions: any time a vote is cast (not limited to voting by secret ballot); any matter related to the appointment of the Secretary-General; and any other discussion the Assembly may decide should be in a private meeting.”<sup>22</sup>

It may be reasonably concluded that the issue of transparency in proceeding(s) of and decision-making at IMO-LEG remains unresolved and insufficiently addressed.

## **Agenda Setting**

The rules for agenda-setting (a crucial functional step in any international organisation) at the IMO-LEG offer a clear potential that could well be leveraged as a way of setting the agenda for discussion(s) at the IMO-LEG.<sup>23</sup> Rule 14, for instance, stipulates which item(s) will be included in the provisional agenda of each session of IMO-LEG. Since this rule fortunately has a wide scope, it can effectively ensure discussions on any issue(s) that may need to be addressed. Rule 16 further provides for the inclusion of a supplementary provisional agenda “*in circumstances of urgency.*”

## **UNCLOS 1982 as a Foundational Text**

In considering the role of The United Nations Convention on The Law of The Sea, 1982 (UNCLOS) as a foundational text for IMO-LEG, the IMO-LEG appears to

play a significant role(s) in at least two settings. The first is in terms of drawing up and maintaining a ‘list of experts’ under Article 2(2), Annex VIII of UNCLOS relating to matters of ‘Special Arbitration.’ The second, and more important one is in assisting the IMO in the latter’s functions as the ‘competent international organisation’ under UNCLOS. For instance, the IMO-LEG recently played a role in the preparation of guidelines (for further consideration by a Joint ILO-IMO Tripartite Working Group) on the fair treatment of seafarers detained on suspicion of having committed maritime crimes.<sup>24</sup>

The IMO itself has reiterated on multiple occasions:

“Although IMO is explicitly mentioned in only one of the articles of UNCLOS (Article 2 of Annex VIII), several provisions in the Convention refer to the “competent international organisation” to adopt international shipping rules and standards in matters concerning maritime safety, efficiency of navigation and the prevention and control of marine pollution from vessels and by dumping. In such cases the expression “competent international organisation”, when used in the singular in UNCLOS, applies exclusively to IMO, bearing in mind the global mandate of the Organisation as a specialised agency within the United Nations system established by the Convention on the International Maritime Organisation (the “IMO Convention”).”<sup>25</sup>

In the succeeding section, this article continues the examination of the IMO-LEG’s functioning and the interface mechanisms under its procedural texts.

## **The IMO-LEG: Procedural Texts**

Broadly speaking, the functioning of the IMO-LEG (till 2029) is expected to be guided by the IMO’s Strategic Plan for 2024-2029.<sup>26</sup> There are, however, indications that despite the presence of elaborate Rules of Procedure (including on matters of voting), the practical functioning of IMO-LEG is far from rigid. In this context, Professor Gaskell, a regular attendee at meetings of the IMO-LEG, notes:

“The formal sessions of negotiating committees such as IMO-LEG produce debate and decisions, but the general IMO approach is to proceed by consensus. That is, the Chairman does not normally call for formal votes on a particular proposal. Delegations are asked to express a view upon it. At the end of a debate, the Chairman will sum what he considers to be the prevailing mood. If there is a clear or overwhelming majority in favour, he will normally conclude that the “sense” of the discussion was that the proposal be accepted.”<sup>27</sup>

The professor's view notwithstanding, the IMO-LEG, in October 2023, promulgated a document entitled, "*Organisation and Method of Work of The Legal Committee*" and directed that it "*should be observed strictly.*"<sup>28</sup> The following extracts therefrom throw light on the functioning of the IMO-LEG:

1. "The document is applicable to the work of the Committee as well as to working groups, drafting groups and correspondence groups. The Chairs of the Committee and of working groups, drafting groups and correspondence groups should make all efforts to ensure strict compliance with the document."
2. "The Committee shall function as a policymaking body and its working, drafting or other groups as purely technical bodies."
3. "The Committee shall regularly review the status of all conventions, protocols and other major instruments under its purview."
4. "The Committee, in determining the acceptance of an output and its inclusion on its biennial or post-biennial agenda, shall at all times be guided by the Strategic Plan, and shall, in particular, take due account of:
  - i. the specific necessity for an output to be started during the current biennium;
  - ii. the potential impact that the inclusion of an output on the biennial agenda may have on the timely delivery of outputs during the biennium;
  - iii. the potential impact that the inclusion of an output may have on the workload of the Committee;
  - iv. the personnel and budgetary resources available;
  - v. the potential adverse impacts on the ability of the Organisation to meet its objectives if a decision is made not to accept a proposal for inclusion of an output in the biennial or post-biennial agendas; and
  - vi. the potential impact that the inclusion of an output may have on Small Island Developing States (SIDS) and Least Developed Countries (LDCs)."

5. “Proposals for the inclusion of outputs submitted to the Committee by non-governmental organisations shall be co-sponsored by Governments.”— Paragraph 4.7 details the information and documentation that must accompany proposals submitted to IMO-LEG, and paragraph 4.11 defines the criteria that must be satisfied before a proposal can be accepted by the IMO-LEG. Paragraphs 6.1-6.12 provide elaborate instructions on preparation and submission of documents to the IMO-LEG, including file format, font size and email address for correspondence.
6. “In respect of subjects requiring research, contributions from other organisations and appropriate entities should be encouraged and considered. Exchange of information on technological development should be encouraged.”
7. “In the context of resolution A.911(22) on Uniform wording for referencing IMO instruments, the Committee should be guided in its work, as appropriate, by the guidelines annexed thereto.”<sup>29</sup> These guidelines are a source of guidance and recommendations on words and expressions that should be used in submissions or proposals, although the resolution itself is not directed explicitly at submissions or proposals to IMO-LEG. The resolution seeks to “provide a standard text for inclusion in new IMO conventions and other mandatory instruments.... in order to ensure that, where reference is made to IMO and other instruments, a uniform wording is used in order to indicate clearly the legal status of the instrument in question after the IMO body concerned has decided on such a status.”

Another significant aspect of this document are its provisions concerning “*working arrangements*” for Working Groups (paragraphs 5.1-5.6), Drafting Groups (paragraph 5.7) and Correspondence Groups (paragraphs 5.8-5.17). Correspondence Groups in particular offer an interesting interface mechanism:

1. “Participation in correspondence groups is open to all delegations (Governments and organisations) which can provide the necessary expertise on a timely basis or which have a particular interest in the issue under consideration. Any Member Government or international organisation can join in the work of the correspondence

group subsequent to the establishment of the group and any contribution should be accepted at any stage of the work of the group.”<sup>30</sup>

2. “When establishing a correspondence group, a “lead country”, “lead organisation” or the Secretariat should be designated to coordinate the work of the group.”

It is thus evident that the IMO-LEG’s foundational as well as procedural law provides wide-ranging opportunities to engage and influence the Legal Committee and its functioning. It is also seen that intergovernmental and non-governmental organisations offer particularly useful ways to undertake such engagement and influence. In the final section below, this analysis is concluded, and recommendations is offered—for those seeking to engage.

## Conclusion and Recommendations

Professor Gaskell has made the following relevant observation on the importance of the work (particularly the legal drafting work) that takes place in IMO-LEG:

“Although the Legal Committee may take a variety of decisions, the ones of most interest here are those concerning the drafting of international maritime law conventions. Whatever decisions are taken by the Legal Committee, however, they are mostly irrelevant unless later agreed at a diplomatic conference.... A general problem about international negotiations is the failure of some states to engage in the drafting and decision-making process at an early enough stage to have a significant influence. It is not enough to turn up at the diplomatic conference and hope that radical changes can then be made to any draft text. At this stage, drafting has advanced too far and other delegations which have put in years of work are reluctant to see the undoing of delicate compromises, whereby the change to an apparently small provision may have the effect of altering the balance of the text where many provisions are interrelated.”<sup>31</sup>

It is thus clear that even before IMO’s diplomatic conferences (and also as part of preparation for such conferences), very close attention should be paid to the functioning and interface mechanism(s) of IMO-LEG, and fuller engagement should be sought therewith. The rules pertaining to IMO-LEG’s engagement with “*other bodies*”, “*non-governmental international organisations*” and “*intergovernmental organisations*” have already been examined earlier in this article. They demonstrate that these entities can, indeed, be additional vectors for Indian views and interests at IMO, and their potential should not be underestimated. Dr Md Saiful Karim,

Professor of Law, and leader of the Ocean Governance Research Group at Queensland University of Technology, has commented on the role played by international non-governmental organisations at IMO, opining that:

“International non-governmental organisations (INGOs) play a significant role in the IMO law-making process despite not having any voting rights in IMO organs.... INGOs represent a variety of interests.....including different types of shipping interests (for example ship-owners and operators), cargo interests (for example cargo owners and charters), seafarers and other labour organisations, environmental organisations, research organisations, training organisations, classification societies, organisations representing marine-related industries, protection and indemnity insurance clubs and other marine insurers.....Non-governmental organisations do not just influence the law-making process merely by their submissions and participation in the meetings of MEPC and other IMO organs. Their main influence comes via IMO Member States who also share similar interests.”<sup>32</sup>

Thus, India must identify such “*other bodies*” and “*non-governmental international organisations*” (referred to in Articles 25, 33 and 62 of IMO Convention) that can put forward views and interests of Indian stakeholders at the IMO-LEG. Ministries that deal extensively with the IMO, such as the Ministry of Ports, Shipping and Waterways (MoPSW), and the Ministry of Environment, Forests, and Climate Change (MoEFCC), should take the lead in identifying such organisations and entities. A starting point for this identification is the lists provided online by IMO (of intergovernmental and non-governmental organisations that interface with the IMO in consultative and cooperative capacities).<sup>33</sup>

The Ministry of External Affairs (Government of India) needs to facilitate the attainment of ‘consultative status’ for specific, identified organisations, which can then put forward at IMO-LEG the views and interests of Indian stakeholders and market(s). Separately, the formulation of official Indian positions can also be guided by (and possibly even coordinated-with) the perspectives offered by such bodies and organisations at the IMO-LEG. In this context, the IMO’s “*Rules and Guidelines for Consultative Status of Non-governmental International Organisations with The International Maritime Organisation*” may be seen to be more permissive than restrictive.<sup>34</sup> For instance, Rule 6 of the aforesaid ‘Rules and Guidelines’ stipulates that even where a non-governmental organisation is not “*truly international*”, consultative status may still be granted on a provisional basis.

In conclusion, the importance of fuller engagement at IMO-LEG, including through organisations outside government, is reiterated. Such engagement will enable India to exercise constructive influence over rulemaking at IMO and, as stated earlier, help in the larger promotion and advancement of Indian views and interests.

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*Marine Technology  
and International Law*



# An Introduction to the Interplay of Law and Technology within the Maritime Domain

*Mr Mayank Mishra*

As it always has, science and technology (“*technology*”) continue to revolutionise the maritime domain.<sup>1</sup> Its civilian as well as military spheres are affected in lasting ways by technological advancements such as autonomous shipping and weapons, artificial intelligence, blockchain, etc. At the same time, these technological developments do not occur in a legal vacuum. Law is increasingly invoked today to regulate present as well as future deployment (and development) of technology. Regulation aside, law also has a wider relationship with technology and technological advancement, and the interplay between them is complex.<sup>2</sup>

This article seeks to introduce this complexity as manifested in the maritime domain. A history of the relationship between law and technology is briefly explored, and the more significant of the influences of one upon the other are outlined. The contemporary interplay between the two is illuminated by highlighting legal issues raised by a few representative new ‘autonomous’ technologies and their use in civilian and military spheres.

## **Background**

Some general propositions can be made on the interplay between law and technology—*first*, technological advancement frequently necessitates legal action. This can be in the form of amendment of existing legal provision(s), or introduction of new provision(s), or both. The dynamics of this aspect have been characterised by Prof David D Friedman (Professor Emeritus at Santa Clara University’s School of

Law) who observed that technological change and/or advancement can affect the law in “*at least*” three ways:

1. By changing the cost of violations, or the cost of enforcement, or both.
2. By changing underlying facts that justify legal rules.
3. By altering underlying facts that are implicitly assumed by the law, such that existing legal categorisation and conceptualisation become obsolete or meaningless.<sup>3</sup>

History is full of instances where technological change affected—even necessitated—law and legal development. For instance, the introduction of railroads demanded the resolution of a slew of legal issues relating to property rights, liability for damages, etc. Likewise, the advent of computers necessitated legal clarity about the evidentiary value of computer printouts, the ability of computer storage to constitute legal writing (like for a will), the tangibility of computer software for purposes of taxation, etc.<sup>4</sup> Similarly (and more aligned to the maritime domain), modern development of the law of the sea that occurred through the extensive provisions of the United Nations Convention on The Law of The Sea, 1982 (UNCLOS), addressed the factual technological gap between developed and developing States.<sup>5</sup> Another example is offered by the technological advancements in resource-extraction, including in fishing, which led (as will be discussed below) to expanding maritime jurisdictional claim(s) by States.

*Second*, the law generally—if not invariably—lags behind technology, and the growth of international law is particularly glacial. There can be many reasons for this lag. Among other things, it has been attributed to “*the dichotomy between the cautious approach of lawyers and the “move fast and break things” mentality of technologists, whose work disrupts societies and norms at unprecedented speeds.*”<sup>6</sup> Prof PW Singer, who served as a consultant for the US intelligence, military and law enforcement community (among other appointments in and outside government), observed:

“During World War I, for example, all sorts of new technologies, from airplanes dropping bombs to cannons shooting chemical weapons, were introduced before anyone agreed on the rules for their use. As to be expected, the warring sides sometimes took

different interpretations.... This lack of legal clarity even helped induce America to join the war; the submarine attacks on merchant ships that the Germans saw as justifiable were instead viewed as war crimes on the other side of the Atlantic..... Chemical weapons were first introduced in World War I, but they were not fully banned until eighty-two years later.”<sup>7</sup>

Despite its slow pace, the law does respond to technological change. Advancements in technology have enabled—since at least the 11th century—ever growing abilities to exploit marine resources such as fish.<sup>8</sup> This has, in turn, necessitated (or served as a justification for, depending on perspective) legal responses to address issues of overexploitation, the rights of coastal States, etc. Thus, in 1945, President Truman of the USA issued the Truman Proclamations, setting out US policy on the oceans and its resources. The press release accompanying these proclamations noted how they had been necessitated by technological advancement(s):

“The advance of technology prior to the present war had already made possible the exploitation of a limited amount of minerals from submerged lands within the 3-mile limit. The rapid development of technical knowledge and equipment occasioned by the war now makes possible the determination of the resources of the submerged lands outside of the 3-mile limit. With the need for the discovery of additional resources of petroleum and other minerals, it became advisable for the United States to make possible orderly development of these resources. The proclamation of the President is designed to serve this purpose.”<sup>9</sup>

In this instance, legal responses to technological change did not end with the proclamations. The proclamations, in turn, sparked a practical “*movement*” among other States to unilaterally expand their own maritime jurisdiction(s).<sup>10</sup> In addition to the precedent set by the USA, the actions of other States were further catalysed by the inadequacy (real or perceived) of the prevailing legal regime to respond to new technologies and concomitant economic realities. In a book on the law and politics of ocean governance, the authors explained:

“Most regional fisheries organisations established during the old high seas regime proved inefficient. The freedom of the seas doctrine did not differentiate between the rights and duties of States to high seas fisheries resources, nor did it establish any sanctions for fishing nations that did not cooperate or abide by measures established under regional fishery regimes.... From the end of the Second World War onwards, a growing number of States came to regard the high seas regime as both inequitable and inefficient. Some coastal States reacted by making unilateral claims to jurisdiction over the waters

beyond their territorial seas and the living marine resources there.... Agreement on the introduction of exclusive economic zones (EEZs) was reached at an early stage and was widely acknowledged by the second half of the 1970s. The expectation was that EEZs would provide coastal States with the authority and incentives to conserve and manage the living marine resources in a sustainable manner.”<sup>11</sup>

Thus, a third general proposition can be distilled, namely, that technology has direct and indirect effects upon law. Consider fishing regulations as an example of direct effect. As the ability to exploit resources (including fish) increased, it was felt necessary to adapt the law to restrict fishing activity, prevent overexploitation, conserve rights of coastal States, etc. Algerian author M Dahmani thus observed on the legal regime for fishing and fisheries:

“Insofar as the fishery resources of the sea were concerned, as long as those resources were believed to be inexhaustible, no form of regulation or restriction upon the freedom of the seas could be justified. Thus, freedom of fishing, as one of the freedoms of the seas, meant that no nation could validly assert jurisdiction over fishing activities beyond the narrow limits of the territorial sea, whatever the circumstances might be... Freedom of fishing also meant there could be no limitation on the number of people or vessels, the fishing effort or number of fish to be caught, whatever the circumstances might be... From the beginning of the 20th century however, the need to adapt the traditional concept of the freedom of the seas, to the State of affairs created by the development of new techniques in the use and exploitation of the sea, became quite clear and pressing. It was only logical that this freedom should come under attack once its premises of unlimited resources and unrestricted exploitation were no longer valid.”<sup>12</sup>

On the other hand, when technological advancement alters the economics underpinning legal systems, it exercises indirect effect(s) upon law. In the case of expanding maritime jurisdictional claims by States (above), this phenomenon was characterised by Gilbert Apollis (Professor of International Law) as a “*transformation of economic sovereignty into political or territorial sovereignty*.”<sup>13</sup>

Of course, even while it is informed by technology, law simultaneously regulates (and incentivises) many areas of maritime technological advancement, such as engine design, emission control, biotechnology, artificial intelligence, cyberspace, etc.<sup>14</sup>

Having thus set the background, the subsequent section of this article outlines some facets of contemporary interplay between law and technology.

## Contemporary Interplay

Modern maritime law is (largely) informed by evidence, and technology remains a powerful source of such evidence. It reveals in ever growing detail the maritime world—including its resources— to lawmakers, policymakers, and decision-makers. Its tools are harnessed as a fundamental part of informed decision-making and evidence-based policies. Modern technologies such as uncrewed underwater vehicles (UUVs), satellite imaging, remote sensing, etc., have transformed the collection and analysis of data. They inform (and sometimes misinform) the making and enforcement of rules and policies on maritime matters such as security, biodiversity, pollution, etc.<sup>15</sup>

Consider fishing. Contemporary national and international law on fishing is informed in formulation—and assisted in enforcement—by technology-enabled collection and analysis of data. This was noted, for instance, in a 2017 Issue Paper by “The Organisation for Economic Cooperation and Development” (OECD):

“New information and monitoring technologies are potential game-changers for fisheries management and can be of help in achieving green growth of the sector. Application of new technologies has allowed governments to collect more data on fish stocks, better monitor, enforce and evaluate the environmental impacts of fisheries activities and improve the effectiveness of policies to sustainably manage fisheries. To this end, there are many recent technological developments including the increased computing power of handheld devices; the proliferation of user-friendly Global Positioning System (GPS) and Global Navigation Satellites Systems (GNSS) applications; increased capacity for “big data” storage, sharing, and analysis; variety and improved durability of drones and low-maintenance radar stations; accessibility and accuracy of satellite imagery; continuous improvements in on-board digital cameras and recorders; expanded use of Automatic Identification Systems (AIS) and Vessel Monitoring Systems (VMS), and the internet at sea.”<sup>16</sup>

In addition to informing law and policy, technology impacts existing frameworks by enabling communication and information-exchange between all kinds of actors (not just States), including in real time and beyond spatial boundaries. This facilitates transboundary collaboration and coordination and, is particularly helpful in addressing transboundary challenges such as climate change.<sup>17</sup>

This article now undertakes a short, contemporary case-study illustrating the manner in which emerging technologies can give rise to legal issues.

Autonomous technologies in ships, vessels, etc., are a rising phenomenon.<sup>18</sup> However, legal uncertainties also arise in their wake. In December 2021, the Legal Committee of the International Maritime Organisation (IMO) published the results of a “*regulatory scoping exercise and gap analysis*” it undertook in the context of what it termed “maritime autonomous surface ships” (MASS). The exercise identified the following as “*the main potential common gaps and/or themes*” which require clarity in the context of MASS:<sup>19</sup>

1. **The Role and Responsibility of the Master.** The IMO noted the ambiguity of the terms ‘master’, ‘crew’, and ‘responsible person’ in the context of MASS, and the difficulty of apportioning liability in the absence of clear definitions.<sup>20</sup> It observed the need to “*clarify who, if anybody, would have to satisfy the role of the master in the case of a MASS with no master on board; if an owner (or charterer) would have additional duties or liabilities when operating a semi-autonomous or fully autonomous vessel; or if certain responsibilities that would normally belong to the master would transfer to those actually on board a vessel in cases of semi-autonomous vessels with limited crews; or could be carried out by personnel not on board the MASS.*” Indeed, a common conclusion arrived at by two committees of the IMO, namely, the Legal Committee, and the Maritime Safety Committee, was that the role and responsibilities of the master (and remote operator, considered below) were “*high priority issues that must be addressed as a foundation for any further work.*”
2. **The Role and Responsibility of the Remote Operator.** Noting the emergence of remote operators of ships as new actors in fact and in law, the IMO observed that “*it may be necessary to clarify the role and responsibility of the remote operator.*” It noted, in particular, the need to clarify “*whether the remote operator might fall within the scope of the terms, including but not limited to, “operator” or “servant or agent”, which are used within the liability and compensation regime, in order for the liability, channelling and subrogation provisions in those conventions to clearly accommodate MASS.*” Others have

pointed out that even the qualifications required to legally operate a MASS are neither currently clear nor uniform.<sup>21</sup>

3. **Questions of Contractual and Tortious Liability.** When MASS go wrong, should it be considered a human fault or technical failure? It is unclear if or how existing legal regimes for liability and compensation can be applied to MASS. This was highlighted by the IMO, which noted that there is little clarity on how or whether the new actors introduced by MASS—like remote operators, remote control centres/stations, providers of network or computer systems, and system developers—will be covered by existing legal frameworks. It emphasised, in particular, the necessity to consider “*whether the current list of exonerations, the provisions on channelling of liability and the provisions regarding subrogation are sufficient.*”<sup>22</sup>
4. **Definitions/Terminology of MASS.** The Legal Committee emphasised the importance of terminology in the context of MASS and stressed that it needed to be “*revisited.*”<sup>23</sup> It noted that agreement on terminology would be needed, for instance, to consider amendments to legal instruments or develop new legal instruments. In particular, it identified for examination concepts of ‘fault’, ‘negligence’, and ‘intention’ in the context of MASS.
5. **Insurance Certificates.** These are required, by international liability conventions (such as the International Convention on Civil Liability for Oil Pollution Damage, 1992, for example) to be carried or kept on board a ship. The IMO wondered how the insurance certificate for a MASS—without any seafarers on board—could or would be accessed for purposes of Port State Control.

Autonomous technologies have legal as well as safety implications. Thus, in addition to the aforementioned issues identified by the Legal Committee, “*potential gaps*” were also pointed out in a similar scoping exercise conducted by the IMO’s Maritime Safety Committee. These are tabulated in Table 1.<sup>24</sup>

**Table 1: List of potential gaps found by the IMO’s Maritime Safety Committee, in Instruments under its purview**

Sl. No	Common Potential Gaps and/or Themes	Instruments where Potential Gaps were Identified
1	Meaning of the terms “master”, “crew”, or “responsible person”.	<ul style="list-style-type: none"> <li>• International Convention for the Safety of Life at Sea (SOLAS), 1974: chapters II-2, III, V, VI, VII IX and XI-1.</li> <li>• Convention on the International Regulations for Preventing Collisions at Sea (COLREG), 1972.</li> <li>• International Convention on Tonnage Measurement of Ships, 1969.</li> <li>• International Convention on Load Lines, 1966 (LL Convention) and its 1988 Protocol.</li> <li>• Intact Stability Code.</li> <li>• IMO Instruments Implementation Code (III Code).</li> <li>• International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW Convention); and Seafarers’ Training, Certification and Watchkeeping (STCW) Code.</li> </ul>
2	Remote Control Station/Centre	<ul style="list-style-type: none"> <li>• SOLAS chapters II-1, II-2, III, IV, V IX and XI-1.</li> <li>• International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW Convention); and Seafarers’ Training, Certification and Watchkeeping (STCW) Code.</li> <li>• FSS. International Code for Fire Safety Systems (FSS Code).</li> <li>• International Safety Management (ISM) Code.</li> <li>• International Convention on Load Lines, 1966 (LL Convention) and its 1988 Protocol.</li> <li>• Casualty Investigation Code.</li> </ul>
3	Remote Operator as a Seafarer	<ul style="list-style-type: none"> <li>• SOLAS: Chapter IX.</li> <li>• International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW Convention).</li> <li>• International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F), 1995.</li> <li>• International Safety Management (ISM) Code.</li> </ul>
4	Provisions containing manual operations, alarms to the bridge.	<ul style="list-style-type: none"> <li>• SOLAS chapters II-1, II-2, VI and IX.</li> <li>• International Convention on Load Lines, 1966 (LL Convention) and its 1988 Protocol.</li> </ul>

		<ul style="list-style-type: none"> <li>• Intact Stability Code.</li> <li>• IMO Instruments Implementation Code (III Code).</li> </ul>
5	Provisions requiring actions by personnel. (Examples included but are not limited to fire, spillage, cargo-management, onboard maintenance, etc.)	<ul style="list-style-type: none"> <li>• SOLAS: Chapters II-2, VI, VII, IX and XII.</li> </ul>
6	Certificates and Manuals on board.	<ul style="list-style-type: none"> <li>• SOLAS chapters III, XI-1, XI-2 and XIV.</li> </ul>
7	Connectivity, Cybersecurity	<ul style="list-style-type: none"> <li>• SOLAS chapters IV, V and IX.</li> </ul>
8	Watchkeeping	<ul style="list-style-type: none"> <li>• SOLAS chapters IV and V.</li> <li>• COLREG.</li> </ul>
9	Implications of MASS in Search and Rescue (SAR).	<ul style="list-style-type: none"> <li>• SOLAS: Chapters III, IV and V.</li> <li>• Search and Rescue (SAR) Convention</li> </ul>
10	Information to be available on board and required for the safe operation.	<ul style="list-style-type: none"> <li>• SOLAS: Chapters II-1 and II-2.</li> </ul>
11	Terminology	<ul style="list-style-type: none"> <li>• SOLAS: Chapters II-1, IV and V.</li> <li>• COLREG</li> <li>• International Code for Fire Safety Systems (FSS Code).</li> <li>• International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (IBC Code).</li> <li>• International Code of the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code).</li> <li>• International Code for the Safe Carriage of Grain in Bulk (International Grain Code).</li> <li>• International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on board Ships (INF Code).</li> <li>• International Convention on Load Lines, 1966 (LL Convention) and its 1988 Protocol.</li> <li>• Intact Stability Code.</li> <li>• Search and Rescue (SAR) Convention.</li> <li>• International Convention on Tonnage Measurement of Ships, 1969.</li> <li>• Code of Safe Practice for Cargo Stowage and Securing (CSS Code).</li> <li>• Casualty Investigation Code.</li> </ul>

It is evident that a wide range of legal issues are thrown up by the advent of autonomous technologies. Legal clarity is similarly also required due to the increasing use of other technologies—like blockchain, artificial intelligence, encryption, etc., -in the maritime domain.<sup>25</sup>

## **Conclusion**

As epistemic methods, law and science play their own roles in human existence and societal development. As such, the interplay between the two (including in the maritime domain) is rich, complex, and multi-layered.<sup>26</sup> The relationships between maritime law and technology, including the legal issues thrown up by emerging technologies in the maritime domain, remain particularly significant for governments as well as civil society.

This article has introduced this thematic area. As an introduction, it has not attempted to provide an exhaustive list of new maritime technologies or conduct an in-depth examination of all legal issues raised in their wake. Further research on the complex interplay between law and technology in the maritime domain is needed, and this remains a topic of ongoing research at the National Maritime Foundation.

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Mr Mayank Mishra was engaged as an Associate Fellow within the Public International Maritime Law (PIML) Cluster of the National Maritime Foundation (NMF). While his research essentially focused on the vitally important intersection of maritime law with maritime ‘hard security’ policy, he was also keenly interested in the equally critical and fascinating interplay between PIML and technology, especially where relevant to the maritime domain. The views expressed are those of the author. He may be contacted at [socialsectorlaw@gmail.com](mailto:socialsectorlaw@gmail.com).

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## Enhancing Capacity-of and Capabilities-In Repair of Submarine Communication Cables Through International Cooperation

*Mr Soham Agarwal*

The resilience of submarine communication cables—which are integral to international connectivity—is receiving increasing attention at the international level.<sup>1</sup> Increasing the resilience of submarine communication cable systems would involve, *inter alia*, introduction of redundancies, i.e., introducing greater number of cables with greater carrying capacity, as well as increasing the capacity-of and capability-in prompt maintenance and repair of cable systems. Given the cost factors associated with the installation of more cables with greater carrying capacity—estimated cost for a cable system can range from US\$ 2.0 million to US\$ 6.8 million per kilometre<sup>2</sup>—prompt repair capabilities provide a more effective method of introducing resilience in the cable system. Moreover, it allows for a shorter turnaround time no matter the cause of the initial disruption. This also reduces the loss suffered from cable disruptions, which includes costs for routing data through different cables, and the losses accumulating from slower or disrupted data connectivity. This is particularly significant for India, 7.5 per cent of whose GDP comes from the IT/Business Process Management industry.<sup>3</sup>

On an average, there are 150 cable faults each year and as of 2015,<sup>4</sup> the average time for cable repair in India's maritime zones was 50 days.<sup>5</sup> As the bulk of global data travels through submarine communication cables, disruptions may have an economy-wide impact and even affect national security at larger scales.<sup>6</sup> Therefore, going forward, effective maintenance and repair capacity and capability is essential for cable resilience. This article speaks to the Ministry of Communications, Ministry

of External Affairs, Ministry of Ports, Shipping and Waterways, and the National Security Council Secretariat, Government of India. It first describes the process, mechanism, and challenges to submarine cable repair; and then explores how India's international engagements can be leveraged to enhance India's capacity-of and capability-in submarine cable repair.

## Process of Cable Repair

The process of cable repair generally begins with identifying the site of the fault.<sup>7</sup> Thereafter, a cable repair vessel with a specialised crew and repair equipment proceeds to the identified fault location. A large cutting grapnel is towed along the seabed until the cable is caught which is then raised and cut. The portion to be repaired is brought aboard and the other end hooked to a buoy.<sup>8</sup> Once the cable is repaired/ or spare cable is attached, the cable is then joined together to the piece previously buoyed off and the final splice is lowered back to the seabed.<sup>9</sup> At shallower depths, remotely-operated vessels (ROV) equipped with cameras and actuators are deployed for fault detection, cable retrieval (as at these depths the cables are generally buried), and final (post-repair) cable reburial.<sup>10</sup> Therefore, this process requires a ROV, a cable repair ship, spare parts, and a highly specialised crew, each of which constitutes scarce and expensive resources. Recently, Moyle Interconnector Ltd has tested an *in-situ* repair method at 25 m depth without requiring the retrieval of the cable to the surface.<sup>11</sup>

## Current Challenges

The submarine cable maintenance and repair industry face a severe capacity-and-capability crunch. Globally, as of 2022, around 60 maintenance and repair ships exist for communication cables, a bulk of which are in old condition and close to retirement.<sup>12</sup> The cable repair vessel market has been segmented on grounds of cable-carrying capacity, water depth, and end-use.<sup>13</sup> On the basis of carrying capacity they are below 1000 tonnes, 1000-3000 tonnes, 3001-5000 tonnes, 5001-7000 tonnes, and above 7000 tonnes. For non-armoured cables the carrying capacity of a cable ship is determined by the metric capacity of its cable tanks.<sup>14</sup>

Since, cables can be both, telecom and power cables, the end-user could vary from the offshore oil and gas industry, offshore wind farms, and the telecom sector. Therefore, there is a division of investment in each of these sectors. Moreover, there has been a profound increase in the number communication cable projects without a corresponding increase in a maintenance and repair fleet.<sup>15</sup> New ships require steep investments (above US\$ 100-150 million), which are ever increasing due to soaring input costs.<sup>16</sup> Hence, the current practice frequently involves retrofitting ships for the purpose of cable repair. A notable recent example is the acquisition by SB Submarine Systems Company Ltd—a submarine cable installation and maintenance company based out of Shanghai, China—of an offshore construction vessel originally built for servicing the oil and gas industry.<sup>17</sup> This vessel was then retrofitted for submarine cable laying and maintenance operations and inducted as the *CS Fu Tai* within a year—July 2021 (bought) and February 2022 (inducted).

More problematic is the lack of capabilities, i.e., a specialised and trained crew. Lack of awareness about the industry, its small and competitive size, national security concerns, and the time required to train people in cable repair, all contribute to the low recruitment and availability of skilled personnel.

Even for ships currently in service, the ownership structure is highly skewed to a handful of private companies. The following table lists a few repair vessels by ownership, flag state registration, and base port:<sup>18</sup>

Table 1. Global Cable Repair Vessels

Country	Base Port to Number of Vessels	Total Number of Vessels Flag-Registered	Ownership (Number of vessels)	Other Base Ports (Number of vessels)
France	4	9	ASN Marine/Alcatel (4) Orange Marine (4) OMS Group (1)	Cape Town (1) Cape Verde (1) Worldwide (3)
Marshall Islands	Nil	6	SubCom LLC (6)	Baltimore, USA (4) New Caledonia (1) Taiwan (1)
Panama	Nil	3	S.B. Submarine Systems Co. Ltd (3)	Wujing Cable Depot, Shanghai, China (3)

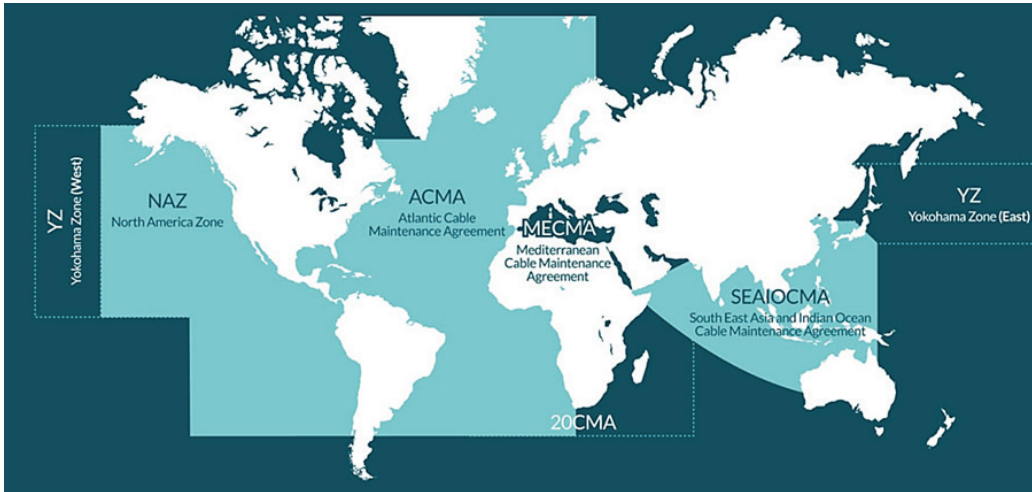
Indonesia	3	4	OMS Group (3) PT Limin Marine & Offshore (1)	Batam, Malaysia (1)
Japan	3	4	NTT World Engineering Marine (1) KDDI Cablesheets & Subsea Engineering (3)	Worldwide (1)
Singapore	2	4	ASEAN Cablesheet Pte Ltd. (3) Global Marine Systems Limited (1)	Colombo (1) Subic, Philippines (1)
United Arab Emirates	5	5	E-Marine	
United Kingdom	3	5	Global Marine Systems Ltd.	Curacao (1) Canada (1)
United States	5	1	SubCom LLC	

*Source: Compiled by Author from ICPC, "Cable Repair Ships of the World"*

It is, therefore, evident that cable repair ships are concentrated with a few corporations and in a few base ports. We see that France, Japan, the UAE, the USA, and the UK, lead in cable repair capacity globally. Unfortunately, India does not feature in the list, with not a single cable repair vessel being either Indian-flagged, Indian-owned, or India-stationed. With India's growing data needs, and with India acting as the hub for east-west connectivity, having effective repair capabilities is important not only for India but also for the wider Indian Ocean region.<sup>19</sup>

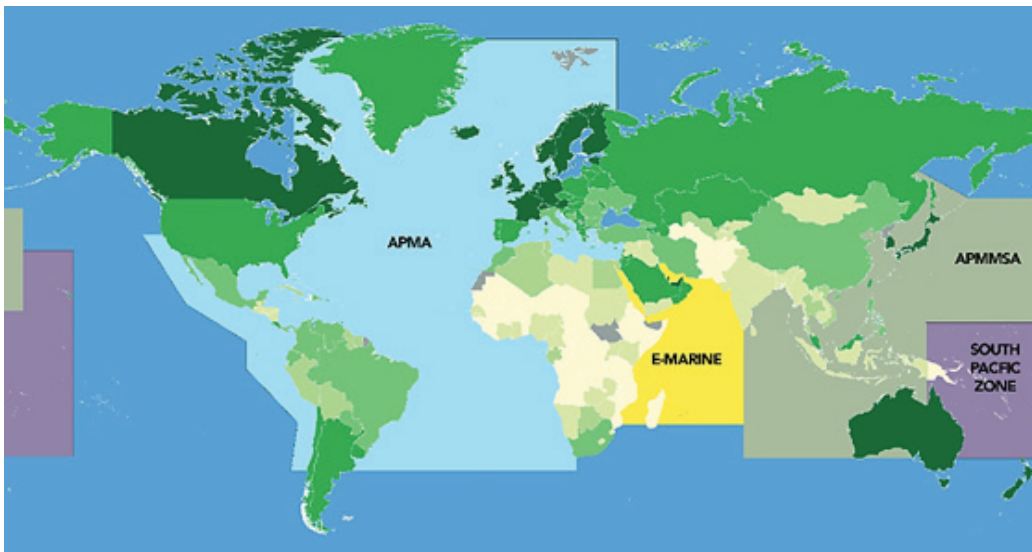
In current practice, the maintenance and repair of submarine communication cables is a shared service wherein the resources within a defined operational area are shared between cable owners.<sup>20</sup> This happens in two ways: Traditional Club Agreements and Private Maintenance Agreements. In the former, the agreement conditions and prices are linked with all the participating cable owners, while in the latter, negotiations and agreements are done on a bilateral basis between the ship operator and the cable owner. There are six traditional maintenance agreements and four private maintenance agreements, with each agreement corresponding to a particular geographical area that is supported by vessels and facilities available in that particular zone, as depicted in Figures 1 and 2 respectively.<sup>2</sup>

Figure 1. Cable Maintenance Zones



Source: “Subsea Cable Maintenance”, Global Marine

Figure 2. Private Maintenance Agreement Zones



Source: “2022-2023 Industry Report”, Submarine Telecoms Forum

India is within the Southeast Asia and Indian Ocean Cable Maintenance Agreement (SEAIOCMA) zone. This zone is primarily serviced by the Global Marine Systems Ltd and the ASEAN Cables Pte Ltd (ACPL).<sup>22</sup> ACPL (of which

Singapore Telecom is a shareholder) owns the ship, which is based at a cable depot in Galle in Sri Lanka. This cable depot is owned by the Galle Submarine Cable Depot Pvt Ltd, which is a joint venture between SLT-Mobitel, Sri Lanka, and the Indian Ocean Cable Ship Pte Ltd (IOCL). IOCL, in turn, is a joint venture between Singapore Telecom and Orange Marine of France.<sup>23</sup> This demonstrates how Singapore Telecom's investment expands the operations of ACPL and benefits Sri Lanka through capacity building.

Global Marine Systems has a ship stationed in Subic, Philippines, to service the SEAIOCMA. On the private agreement front, which is on a bilateral basis, the Abu Dhabi-based firm, E-marine, is the predominant supplier of repair services in India.

Even though such arrangements are in place, the average response time for repairs and associated costs are substantial. The average response time for E-marine in Indian waters is 3-5 months, while that for SEAIOCMA is 4-5 months.<sup>24</sup> Prolonged response times can be attributed to the travel time between depot to the repair site; import and export clearance procedures; and naval, customs, and crew member clearance. However, it must be noted that shallow water repairs, i.e., those undertaken in depths less than 15 m, are done through local contractors who have available the barges, permissions, and the knowledge of local conditions.<sup>25</sup> It is this shallow water repair that is even more vulnerable and may take up to a year due to the unavailability of a requisite cable ship, jointing equipment, and skilled personnel in India.

While cable redundancy within the Indian system can withstand the relatively infrequent disruptions to cables, any intentional sabotage, which may affect multiple cables simultaneously, will leave India's digital connectivity extremely vulnerable. This threat is accentuated during times of conflict—especially prolonged conflict—where deliberate damage to submarine cables is likely to be used as part of planned operations, and to counter which, prompt restoration is crucial. Foreign dependence for cable repairs in times of conflict is a major vulnerability to India's communications architecture. Times of conflict may trigger *force majeure* clauses of cable maintenance agreements rendering them unenforceable on the basis non-performance. The mechanism involving determining repair priority, clearances for foreign-crew and

foreign-flagged vessels, the willingness of ship operators/crew to operate in contested waters, and likely-to-soar insurance premiums are additional issues that will arise during conflict.<sup>26</sup> For India, submarine cables are increasingly more important for internal connectivity, especially for its island chains, i.e., the Andaman and Nicobar Islands, and Lakshadweep Islands.<sup>27</sup> Therefore, having indigenous capacity and capability for repair in both shallow and deep-water is essential, especially for times of conflict.

Recognising this vulnerability the United States, through legislation in 2019, established a Cable Security Fleet.<sup>28</sup> It essentially seeks to establish a fleet of active, commercially viable, cable vessels that would be privately-owned and US-documented to meet national security requirements.<sup>29</sup> Such vessels, on application—and after the execution of an Operating Agreement—would be inducted into the fleet, for which USD 5,000,000 (Five Million) would be paid by the US government to the ship operator as a stipend.<sup>30</sup> In addition to the Operating Agreement, a Contingency Agreement would also be executed between the US government and the operator, stating that the operator will make the vessel, including all necessary resources to engage in cable services available upon request.<sup>31</sup> In this manner, a set of US-flagged, US-crewed vessels is available to the United States for prompt cable repair, which is treated as a national security requirement. Such is the importance of prompt cable repair.

This fact has not been lost on the Government of India. The Telecom Regulatory Authority of India (TRAI), in its *Recommendations on Licensing Framework and Regulatory Mechanism for Submarine Cable Landing in India*, has a dedicated segment on submarine cable repair where these issues are highlighted and addressed with potential solutions having duly evolved after industry-stakeholder consultations. The essence of the recommendations made by the TRAI are:

1. Constitute a government committee to recommend a variety of financial viability models for Indian Flagged Cable Repair Vessels.
2. Approach repair ship operators in the Indian subcontinent to persuade them to relocate and reflag their repair vessels at suitable Indian ports as per requirement.

3. Incentivise and facilitate the setting-up of cable depots on the east and west coast of India, with Special Economic Zone (SEZ) status, for storing submarine cable equipment and as a base for any future cable repair ships.
4. Review clearance and permit requirements for submarine cable repair activities in India.

One aspect which features in the analysis but not in the final recommendations is the possibility of retrofitting vessels for cable repair. The document acknowledges that the facility to retro-modify a general-purpose vessel exists in India, although that ability had been mentioned in the context of fitting survey equipment.<sup>32</sup> Such retrofits for cable repair, too, could achieve the desired results. As seen in the case of *CS Fu Tai*, an offshore construction vessel was acquired and converted into a cable repair vessel. Since cable repair vessels need not to be particularly large—with cable capacity up to 1000 tonnes—a whole host of vessels may be acquired for addition to the cable repair fleet. There is also a strong commercial case for acquiring such vessels as the cable laying and repair industry (both power and telecom) is forecasted to grow at a CAGR of 9.88 per cent, with the largest segment being for cable repair.<sup>33</sup>

In addition to these recommendations—which are important to establish the entire ecosystem of submarine cable repair in India—international cooperation as a tool to improve cable repair capacities and capabilities needs to be explored. Since India does not currently possess either the capacity or capability for cable repair, leveraging current partnerships and investments during peace time could reap rich dividends during conflict. International cooperation can be used in addition-to and in support-of the internal regulatory and commercial measures recommended by the TRAI.

### **International Partnerships for Cable Repair**

Cable resilience is interconnected. Cable connectivity is structured in such a way that each cable serves as a restoration/alternative path for the other.<sup>34</sup> Hence, disruptions to one make the others increasingly more vulnerable. Since cable protection is increasingly becoming a matter of concern for States (as opposed to being a purely

commercial issue), the issue of cable protection is more likely to be welcome in dialogue and cooperation between States.

It is posited that cooperation can proceed on three fronts:

1. Expediting the permits and clearance processes for specified States on an agreement basis.
2. Joint Ventures between Indian and foreign telecom entities to jointly build, acquire, or retrofit cable repair vessels.
3. Development of a skilled global workforce for cable repair through training facilities and opportunities. This aspect is particularly crucial to focus on and does not find mention in the final recommendations of the report even though it formed a fleeting part of the discussion.

A strong example of regional cooperation for cable protection is found between ASEAN member States (AMS).<sup>35</sup> The ASEAN ICT Masterplan 2020 includes (in Action Point 4.1.1) the objective to promote cooperation to strengthen the resilience and repair of submarine cables by “*developing a framework among all AMS to expedite repairs of submarine cables within their waters by minimising permit requirements and costs*”.<sup>36</sup> This includes developing a template for Service Level Agreements for submarine cable repair. Here we see an attempt at setting the commercial parameters of an activity by State-level agreements. To this effect, non-binding guidelines, called the ASEAN Guidelines for Strengthening Resilience and Repair of Submarine Cables, have been finalised that seek to streamline information requirements for application of permits, and to establish best practices for expediting application approvals.<sup>37</sup> In fact, the ASEAN Cables Pte Ltd. (ACPL) referred-to earlier, is a joint venture—set up by the ASEAN Telecommunications Authorities—of the public telecom companies of Thailand, Philippines, Indonesia, Brunei, Singapore, and Malaysia.<sup>38</sup> It owns three cable repair vessels and has become one of the leading companies in the cable maintenance industry, including being an active player in the SEAIOCMA Maintenance Zone.

With ACPL already having a presence in Sri Lanka, a joint venture can be conceived with this corporation on jointly acquiring a vessel, retrofitting it in India

as a cable repair ship, and stationing it on India's east coast. This arrangement benefits India due to the acquisition of a vessel and experience in retrofits for cable repair vessels. Such arrangement has benefits to ACPL, too, as India may be able to provide a cost-effective quality retrofit, and increased business for the new vessel from Indian cable operators. Such an engagement could proceed either in an India-ASEAN interaction, or even bilaterally with Singapore or Indonesia, both of which possess experience in cable repair vessel design and operation. This vessel, if based on the east coast of India will be able to service the rest of the Bay of Bengal littorals effectively, too. Similarly, additional west coast-based vessels would also be able to promptly repair submarine cables of island States in the Indian Ocean, and thus will not only have an available market but will also exert a positive influence in the region.

There are also other existing mechanisms—of which India is a part of—under which such cooperation can take place. Most notable is the “Quad Partnership on Cable Connectivity and Resilience”, which has within its scope, the strengthening of cable systems in the Indo-Pacific by drawing on the world-class expertise of several Quad countries “in manufacturing, delivering *and maintaining cable infrastructure*”.<sup>39</sup> Therefore, cable maintenance is already a part of the Quad programme. Drawing from this initiative, Australia has launched an Indo-Pacific Cable Connectivity and Resilience Program, which will “*commission technical and policy research, share best-practice policy frameworks and provide technical assistance to the Indo-Pacific*”.<sup>40</sup> Additionally, the United States has pledged US\$ five million for technical assistance and capacity building on security of undersea cable systems.

India, hence, could utilise these programs to develop capacity and capabilities in subsea repair on all three fronts that have been listed earlier. Such cooperation could take the form of the joint purchase of offshore vessels, and the licensing of cable repair vessel designs from major cable repair vessel operators in Japan and USA, which can then be used for retrofitting in India. This way, vessels would be available for India and in India, which also provides a geostrategic advantage for the Quad Member countries to repair cables in the Indian Ocean, such as the Oman Australia cable connecting Australia, Diego Garcia, and Oman.<sup>41</sup> Additionally, the establishment of crew training centres, which can be fed by the talent from India and QUAD member

countries, could address the shortage of skilled workforce. Such engagement may be undertaken on a bilateral basis between India-USA and India-Japan, too.

In a similar vein, the India-France-UAE trilateral also offers exciting possibilities. As evident from Table 1, France and UAE, between themselves, have 14 cable repair vessels which represents 23.3 per cent of global cable repair vessels. Therefore, France and UAE possess significant capacities and capabilities in cable repair, which could be leveraged through the trilateral. However, unlike the QUAD grouping, protection of submarine cables or critical infrastructure does not feature within the initial objective of the trilateral, which focuses primarily on clean energy, climate protection, defence, and technological cooperation.<sup>42</sup> Nevertheless, the strategic nature of submarine communication cables and their underlying security imperative makes cooperation in their resilience a natural inclusion within the scope of technological cooperation of the trilateral. The intent of joint development and co-production in the defence sector, and encouragement of technology transfer and entrepreneurship, bodes well for collaboration in cable repair and maintenance. Moreover, the importance of India for east-west connectivity both in strategic and commercial terms can hardly be overstated. Any cable planned between Europe and Southeast Asian countries will necessarily land in India.<sup>43</sup> Additionally, the availability in India of a skilled workforce and the requisite ecosystem necessary for ship building will create a mutually beneficial partnership.

The nature of collaboration may follow the same three lines of effort as indicated above. While the long-term objective may involve joint production of cable repair vessels *ab initio*, in the intervening period, transfer of technical expertise of cable repair ship design and operation will be hugely beneficial. As mentioned above, a bilateral engagement may be considered between India and France and/or India and the UAE, for this purpose. The former may be more likely to succeed as E-marine (which is a UAE-registered company) has competing commercial interests in the region as opposed to France. That said, however, French presence in the Indian Ocean has greater strategic overtones as opposed to the UAE for whom commercial interests may well be higher. Thus, the UAE may be interested if a more lucrative commercial arrangement is achieved, such as making the vessel available to E-marine for commercial contracts it executes at a subsidised rate.

Additionally, ROV design and production presents an additional spoke on which this partnership may be developed. India has been investing in the research and development of ROV capabilities. The Ministry of Science and Technology, and the Ministry of Education have funded an Indian Institute of Technology (IIT) Bombay project on the design and development of underwater ROV for inspection and surveillance for applications such as pipeline inspection, which will be designed and produced by Larsen & Toubro Ltd.<sup>44</sup> Moreover, Planys Technology, which is an IIT-Madras incubated start-up, indigenously manufactures ROVs and is “*first in the world to offer ROVs integrated with advanced sensing and diagnosis tools*”.<sup>45</sup> Therefore, India has demonstrable capability in ROV production. Since ROVs are an important component for cable laying and repair, a joint venture for upscaling ROV design and production for cable repair may be a mutually beneficial and hence enduring partnership.

## Conclusion

The foregoing arguments demonstrate that it is extremely important that the capacity and capability for cable repair are acquired by India. The imperative is much greater for times of conflict than it is for times of peace. The recommendations made by the TRAI offer an excellent starting point and are necessary to build the entire ecosystem of cable repair in India. India’s international engagements can, indeed, be leveraged—either through bilateral or multilateral means—to develop and enhance India’s capacities and capabilities in submarine cable repair. This capacity and capability can then, in turn, be leveraged to India’s advantage in its own regional engagements. Such engagements may take the form of transfer of technical expertise in cable repair vessel design, joint acquisition of an offshore vessel for retrofitting in India, development of training centres for cable repair crew, or ROV design and production. Each of these segments affect the resilience of cables not only in India but also globally given the interconnected nature of submarine telecommunication cables. India is, therefore, well-placed to lead such an initiative.

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*International Legal Facets  
of Seabed Mining*



# Assessing India's Legal Preparedness for Seabed Mining

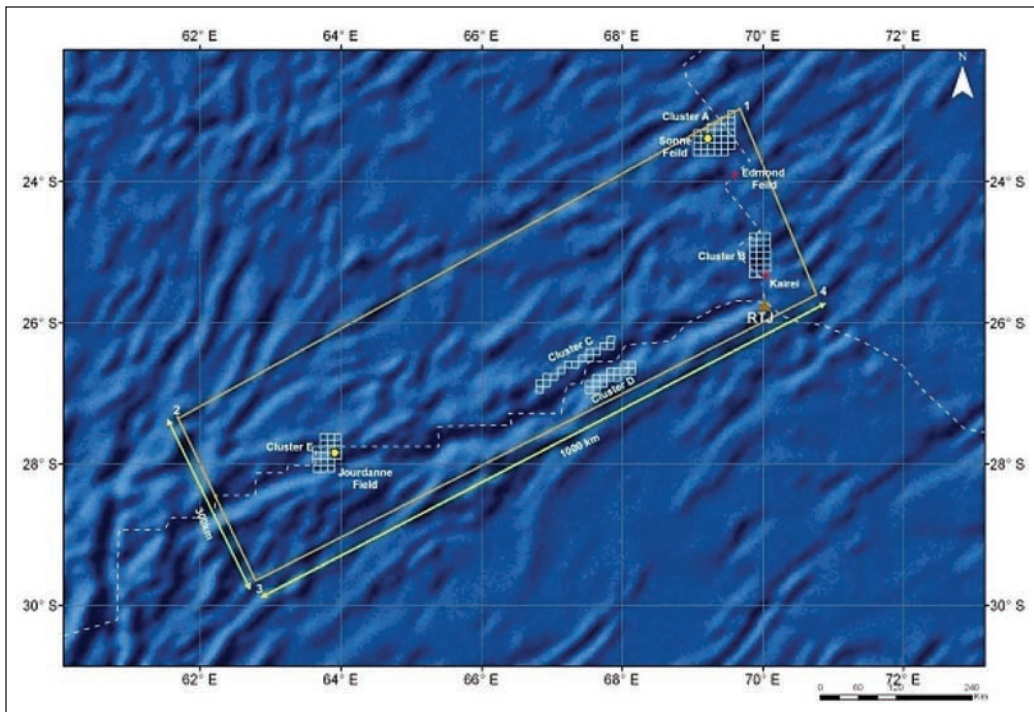
*Mr Soham Agarwal*

The Government of India's application to the International Seabed Authority (ISA) on 18 January 2024, seeking approval for its plans-of-work for the exploration of polymetallic sulphides in the Carlsberg Ridge, and for cobalt-rich ferromanganese crusts at the Afanasy-Nikitin seamount in the Central Indian Ocean, demonstrates increasing interest in India for minerals from the seabed.<sup>1</sup> The exploration and exploitation of mineral resources from the seabed generally referred to as seabed mining—has been theoretically known since *HMS Challenger's* discovery of polymetallic nodules on the ocean floor in 1876,<sup>2</sup> and its economic argument proposed in John L Mero's "Mineral Resources of the Sea"<sup>3</sup> in 1965. Commercial exploitation, however, is yet to commence anywhere.<sup>4</sup> That said, the rapid acceleration in technology,<sup>5</sup> the strategic demand for critical minerals,<sup>6</sup> and commercial aspirations for exploiting new value-chains has increased the likelihood of commercial seabed mining.<sup>7</sup>

India has been an active participant in the exploration of seabed resources. The National Institute of Oceanography's research vessel (RV), the *RV Gageshani*, collected polymetallic nodules from the Indian Ocean in 1981<sup>8</sup> which, coupled with a capital investment of at least US\$ 30 million, earned India the status of a 'Pioneer Investor'. This granted her exclusive rights to identify, discover, and evaluate the technical and economic feasibility for exploitation of polymetallic nodules in the Central Indian Ocean Basin.<sup>9</sup> Since then, India has obtained two exploration licences from the ISA for the exclusive right to undertake exploration for polymetallic nodules and polymetallic sulphides in the Indian Ocean (Fig.1 refers).<sup>10</sup> Additionally, India's Deep Ocean Mission and Draft Blue Economy Policy Framework demonstrate New Delhi's interest in deep-sea mining and provides policy guidance to the endeavour by

emphasising the “*development of technology for deep-sea mining, manned submersibles, and underwater robotics; technology innovations for exploration and conservation of deep-sea biodiversity; and deep-ocean survey and exploration*”.<sup>11</sup> It needs to be noted that the idea of deep-sea mining includes both genetic and non-genetic (mineral) resources found in the deep-sea—i.e., within the water column as well as the seabed.<sup>12</sup> However, the scope of this paper is limited to the non-genetic mineral resources found on the seabed.

**Figure 1:** India’s Exploration Area for Polymetallic Sulphides in the Indian Ocean Ridge



*Source: ISA Contract for Exploration (Polymetallic Sulphides, Government of India)*

While the exploration stage relates primarily to survey, research, and resource estimation, efficient commercial exploitation requires a strong foundation of law and policy. With commercial mining an increasingly likely proposition (the ISA seeks to adopt exploitation regulations during its 30th Council Session in 2025)<sup>13</sup>, India needs to have its domestic legal and policy structures in place to ensure readiness when exploitation does begin.

This paper focuses on the legal and institutional structures related to seabed mining both within India and internationally, and steps to be undertaken to reconcile India's domestic law with its international obligations. The target audience for this paper is primarily the Ministry of Earth Sciences (and its associated autonomous institutions); the Ministry of Mines; the Ministry of Environment, Forest, and Climate Change; the Ministry of External Affairs; the National Security Council Secretariat; and the private industry in India. Provisions of international law and established norms pertaining to seabed mining will be collated to furnish baseline information that will then be used to develop the analysis of *India's* national structures, explore the structures in foreign jurisdictions, and culminate in recommendations on how the legislative and administrative framework within India is to adapt to prepare India for capitalising on a nascent yet critical industry.

## Seabed Mining Within and Beyond National Jurisdiction

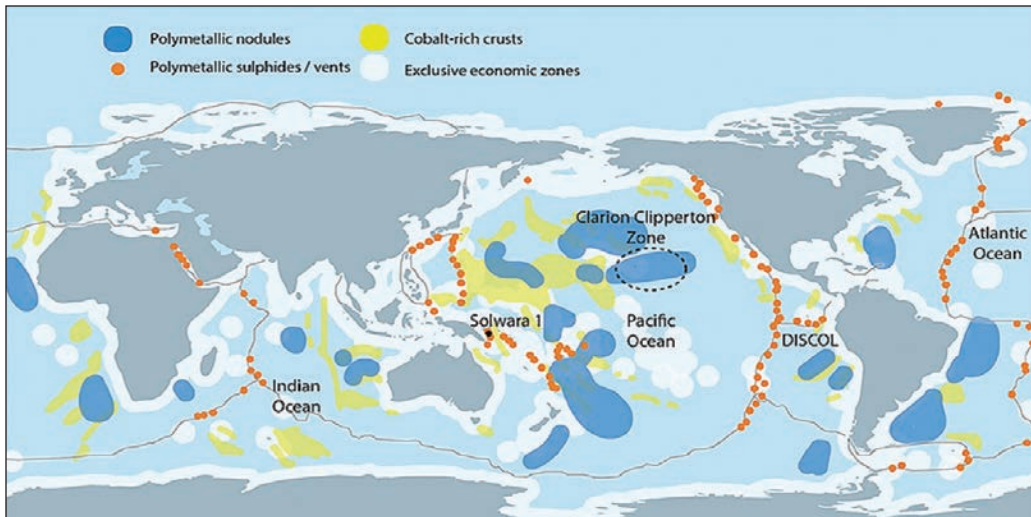
At the outset, it is important to highlight that limits of jurisdiction are legal fiction created over continuous geography, and seabed mining can occur both within and beyond areas of national jurisdiction. This limit, however, does have implications for the norms that govern similar activity. The United Nations Convention on the Law of the Sea, (UNCLOS) 1982 forms the overarching treaty through which seabed mining—both within and beyond national jurisdiction—is regulated. However, both these areas of jurisdiction are regulated distinctly, albeit within the same treaty. This notwithstanding, understanding the differences is important as the latter need to be correctly reflected in national legislations.

A key difference between the two jurisdictions in question lies in the right that coastal States exercise over the resources found in the respective jurisdictions. Article 1(1)(1) of UNCLOS, 1982 defines the “Area” as the seabed and ocean floor and subsoil thereof, *beyond the limits of national jurisdiction*. Therefore, Article 1(1)(1) is a residual definition and addresses those areas that do not fall within identified limits of national jurisdiction. Hence, the delimitation of national jurisdiction, i.e., the outer limit of the legal continental shelf (LCS) is necessary to mark the points from which the international seabed or “Area” begins.

The seabed and subsoil of the submarine areas that extend beyond the territorial sea throughout the natural prolongation of the land territory of a coastal State to the outer edge of the continental margin, or to a maximum distance of 350 nautical miles (nm) from the baselines, has been classified as the continental shelf of a coastal State (Article 76, UNCLOS, 1982). States require to make an application to the Commission on the Limits of the Continental Shelf (CLCS) whose recommendations will finally establish the outer limits of the continental shelf of each coastal State.

The coastal State exercises exclusive “*sovereign rights*” for the purposes of exploring and exploiting its “*natural resources*” which includes “*mineral and other non-living resources of the seabed and subsoil*” and does not depend on occupation or express proclamation (Article 77, UNCLOS 1982). In contrast, the resources of the Area—defined as “*solid, liquid or gaseous mineral resources in situ in the Area at or beneath the seabed, including polymetallic nodules*” (Fig.2 refers)<sup>14</sup> (Article 133(a), UNCLOS 1982)—are the “*common heritage of mankind*” (Article 136, UNCLOS 1982), and a claim or exercise of sovereignty or sovereign rights over the Area or its resources is expressly prohibited (Article 137, UNCLOS 1982). Hence, we see a distinction in not only the right over the resources but also the type of resources over which such right is exercised.

**Figure 2:** Seabed Resources Beyond Areas of National Jurisdiction



Source: J Hein, et.al, “Deep-ocean mineral deposits as a source of critical metals for high- and green-technology applications: comparison with land-based resources”.

Sovereign rights over resources entails that States are free to extract and dispose these resources without any external interference.<sup>15</sup> They are entitled to the resources and the proceeds of sale of those resources. A minor difference exists for the continental shelf beyond 200 nm where a coastal State (except a developing State who is a net importer of a mineral resource produced from its continental shelf) has to make a payment or contribution to the ISA from the total value or volume of production (Article 82, UNCLOS 1982). This mechanism developed as a compromise considering that a claim for an extended continental shelf encroaches on the Area, the resources of which are the common heritage of mankind.<sup>16</sup> This principle, in the form it is encapsulated within UNCLOS, 1982 vests rights in humankind as a whole over the resources of the Area, with equitable sharing of benefits from the exploitation of these resources—with particular regard to the interests of developing States—through a common management regime (Article 136, 137, 140, and 156 UNCLOS 1982).<sup>17</sup> This is distinct from the regime in UNCLOS, 1982 pertaining to fishing in the high seas where, while no one State has exclusive rights over the resources, they are not prohibited (barring environmental protection norms) from extracting resources from the water column and exercising property rights over such resources once extracted.

Further, the inclusion of other non-living resources within the continental shelf as within the scope of coastal State's sovereign rights is perceived to include a broader category of resources that may not be considered mineral in nature. This could include hydrocarbons, sand, coral, or aggregate rock.<sup>18</sup> Such non-inclusion in the Area regime of other non-mineral resources poses questions about the management regime for hydrocarbons in the international seabed Area which is increasingly becoming a likely proposition.<sup>19</sup> The non-consideration of hydrocarbons in the discussions within the ISA may point to these resources being out of its scope of work. However, the provision declaring the Area, too, as common heritage of mankind may preclude a first-come-first-served mechanism for hydrocarbon exploitation in the Area.<sup>20</sup>

These distinctions have implications for the roles that national and international law play in regulation of this activity and the institutional structuring for this activity. Naturally, mining within national jurisdiction is primarily regulated by national legislation of the coastal State, while that beyond national jurisdiction lies

predominantly within the ambit of international law. However, international law too, imposes obligations on coastal States for activities within its continental shelf and national law has important implications for regulating seabed mining beyond national jurisdiction.

## International Law – Institutions and Obligations

1. **The Area.** In consonance with the principle of common heritage of mankind, UNCLOS, 1982 establishes the ISA through which the State parties organise and control the activities in the Area, particularly with a view to the administration of its resources (Article 156, 157 UNCLOS 1982). Hence, the ISA serves as the common management structure through which seabed mining in the Area is regulated.

The norms for seabed mining are found in Part XI, Annex III and IV of UNCLOS, 1982 and the subsequently concluded 1994 Agreement relating to the Implementation of Part XI of UNCLOS, 1982.<sup>21</sup> Additionally, Article 153(1) UNCLOS, 1982 states that activities in the Area, i.e., all activities of exploration-for and exploitation-of the resources of the Area “*shall be organised, carried out and controlled... in accordance with this article as well as other relevant provisions of this Part and the relevant Annexes, and the rules, regulations and procedures of the Authority.*” This gave rise to the “Mining Code” of the ISA, which thus far includes three regulations for exploration (and prospecting) of resources, since exploration represents the first phase of any mining activity.<sup>22</sup> Each regulation pertains to a particular mineral resource, i.e., polymetallic nodules,<sup>23</sup> polymetallic sulphides,<sup>24</sup> and cobalt rich ferro-manganese crusts.<sup>25</sup> Regulations for exploitation—which constitute the recovery and extraction for commercial purpose of minerals from resources in the Area along with its supporting processes—still remain to be adopted.<sup>26</sup>

As per Article 153(2)(b) of UNCLOS, 1982 activities within the Area (both exploration and exploitation) may be carried out by (i) State parties or State enterprises, or (ii) natural or juridical persons who are either nationals of the State party or effectively controlled by nationals of the State party when sponsored by the State. In order to undertake these activities, a formal written plan of work, in addition to a sponsorship agreement,<sup>27</sup> needs to be submitted which, when authorised by the ISA,

takes the form of a contract (Article 153(3) UNCLOS 1982). Therefore, this creates (a) the distinction between a 'Contractor' and a 'Sponsoring State' and (b) additional contractual obligations on the Contractor both from the exploration/exploitation contract with the ISA and the sponsorship agreement with the State party. It is possible that the State party itself submits the plan of work and acquires the status of both sponsoring State and Contractor too (as is in India's case).<sup>28</sup>

The responsibilities-of and obligations-on State parties, with respect to activities in the Area, were dealt with extensively in the Advisory Opinion of the Seabed Disputes Chamber on the *Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area*.<sup>29</sup> While the nature of sponsorship has not been clarified in text of the Convention itself, the language of the advisory opinion seems to suggest a legal commitment or backing rather than financial or administrative sponsorship. The rationale underpinning the requirement for sponsorship is to ensure that natural or legal persons, who generally do not enjoy international legal personality and thus are not strictly under the purview of international law, are obligated to follow the norms stipulated in the Convention as well as the Mining Code, by the domestic legal system.<sup>30</sup> The stipulation of sponsorship makes the process of enforcement more effective due to the tools available within the domestic legal systems of States. Hence, the role of domestic legal systems becomes critical in the entire international regulatory scheme.

State parties have two kinds of obligations under the international legal regime, namely, (i) the responsibility to ensure compliance by sponsored contractors (with the terms of the contract and the obligations set out in the Convention and related instruments), and (ii) direct obligations of State parties.<sup>31</sup> The obligation to "ensure", set out in Article 139 of the UNCLOS, 1982 has been interpreted as an obligation of conduct and due diligence rather than that of result.<sup>32</sup> It does not require compliance by the contractor in each and every case but rather it is an obligation to deploy adequate means to exercise the best possible efforts and to do the utmost to obtain this result. According to the Seabed Disputes Chamber, the "due diligence" obligation "to ensure" requires the sponsoring State to take measures within its legal system and that the measures must be "reasonably appropriate".<sup>33</sup> The reasoning is drawn from the provisions of Article 153 paragraph 4 and Annex III,

Article 4, Paragraph 4, which explicitly requires the sponsoring State to adopt “laws and regulations” and to take “administrative measures” that are within the framework of its legal system, reasonably appropriate to securing compliance. Further, In the *Pulp Mills on the River Uruguay Case*, the ICJ held that an obligation of due diligence “*entails not only the adoption of appropriate rules and measures, but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators*”.<sup>34</sup> This concept is a variable that may change over time in the light of new scientific or technical knowledge and also in relation to the risks involved in that activity.<sup>35</sup> These measures must be enacted in good faith and cannot be less stringent than the applicable legal regime.<sup>36</sup> Therefore, mining for different kinds of minerals may require different standards of diligence which may have to be higher for riskier activities.

The direct obligations of States are primarily:<sup>37</sup>

1. The obligation to assist the Authority in the exercise of control over activities in the Area (Article 153 Paragraph 4).
2. The obligation to apply a precautionary approach (Regulation 31, Paragraph 2, of the “Nodules Regulations”, and Regulation 33, Paragraph 2, of the “Sulphides Regulations”). The obligation is a codification of Principle 15 of the Rio Declaration, which essentially requires that “*where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.*” This obligation is applicable to the Authority, the sponsoring State, and the Contractor (Section 5.1 Annex 4, “Sulphides Regulations”).
3. The obligation to apply best environmental practices (Regulation 33, Paragraph 2, of the “Sulphides Regulations”). In addition to the application of best environmental practices, Article 209 of the UNCLOS 1982 requires that the coastal State enact laws and regulations to prevent, reduce, and control pollution of the marine environment from activities in the Area not only under their sponsorship but also from activities undertaken by vessels, installations, structures, and other devices flying their flag or of their registry.

4. The obligation to take measures to ensure the provision of guarantees in the event of an emergency order by the Authority for protection of the marine environment (Regulation 32, Paragraph 7, of the “Nodules Regulations”, and in Regulation 35, Paragraph 8, of the “Sulphides Regulations”). This obligation is to ensure that the sponsoring State has the ability to either mandate the Contractor to guarantee protection of the marine environment, or for the State to be able to take prompt emergency measures towards this end.
5. The obligation to ensure the availability of recourse for compensation in respect of damage caused by pollution (Article 235 Paragraph 2). This seeks to secure remedy within national legal systems for any damage caused by the Contractor in line with their obligations under Annex III Article 22 of UNCLOS 1982 to provide reparation for damages caused by wrongful acts committed in the Area.
6. The obligation to conduct environmental impact assessments. While the Contractor is required to submit an assessment of the potential environmental impacts of the proposed activity,<sup>38</sup> the sponsoring States have a direct obligation to “*cooperate with the Authority in the establishment and implementation of programmes for monitoring and evaluating the impacts of deep seabed mining on the marine environment*”.<sup>39</sup> Reading this in conjunction with programmes and UNCLOS, 1982, the sponsoring State has the twin obligation to establish and implement monitoring programmes, and ensure that the Contractor conducts the environment impact assessment. Fulfilling the former also requires the creation of “impact reference zones” and “preservation reference zones” (Regulation 31 of the “Nodules Regulations” and Regulation 33 of the “Sulphides Regulations”). “Impact Reference Zones” are areas to be used for assessing the effect of activities in the Area on the marine environment and require to be representative of the environmental characteristics of the Area. “Preservation Reference Zones” imply areas in which no mining is permitted to occur so as to ensure representative and stable biota of the seabed, in order to assess any changes in the biodiversity of the marine environment. The “Legal and Technical

Commission” of the ISA has developed “Recommendation for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area (ISBA/25/LTC/6) (EIA Recommendations)”,<sup>40</sup> which details activities that require an impact assessment, baseline data requirements, and the data collection, reporting and archival protocol. These recommendations pertain to the activity of exploration. However, the environmental impact assessment (EIA) for the exploitation stage is yet to be finalised.<sup>41</sup> In January 2020, in compliance with the EIA Recommendations, India submitted an environmental impact statement to the ISA while testing a nodule collector pre-prototype machine in the Central Indian Ocean Basin (CIOB).<sup>42</sup>

Underscoring the importance of environmental protection and management, the ISA Council has also adopted a “Regional Environmental Management Plan” (REMP) identifying “*Areas of Particular Environmental Interest*” within which no application of a formal plan of work shall be accepted, in order to protect the seabed in those regions.<sup>43</sup> Currently, only an REMP for the Clarion-Clipperton Zone (CCZ) has been developed where thirteen such zones have been identified, with four more (Indian Ocean Triple Junction, Northwest Pacific Ocean, Northern Mid-Atlantic Ridge, and South Atlantic Ocean) being under development.

While these direct obligations are distilled and treated as separate obligations from the “responsibility to ensure”, they are critical to fulfilling the “due diligence” obligation under Article 139 of the UNCLOS, 1982. Further, while UNCLOS, 1982 and the ISA Mining Code is the central regulatory regime for deep seabed mining, it is far from being the only international regime applicable to the activity. While interpreting the scope of the term “*activities in the Area*”, the Seabed Disputes Chamber concluded that it included the recovery of minerals from the seabed and their lifting to the water surface, and activities directly connected with these processes such as the evacuation of water from the minerals and the preliminary separation of materials of no commercial interest, and their disposal at sea. Interestingly, it was held that transportation to points on land from the part of the high

seas superjacent to the part of the Area in which the contractor operates cannot be included in the notion of “*activities in the Area*”.<sup>44</sup> This aspect would be covered by IMO regulations on safety of navigation, pollution, and bulk cargo. It includes the Convention on the Safety of Life at Sea, The International Maritime Solid Bulk Cargoes Code, and the International Convention for the Prevention of Pollution from Ships, to name a few. Therefore, all these measures need to form a part of the national legal and administrative measures taken by the sponsoring State.

2. **Continental Shelf.** For seabed mining within national jurisdiction, the nature of rights over resources results in greater coastal State control over the mechanism through which seabed mining is regulated. The sovereign right of States to exploit their natural resources needs to be in accordance with their duty and the general obligation to protect and preserve the marine environment (Article 193 and 194 of UNCLOS). This includes taking measures against pollution from vessels, and “*from installations and devices used in exploration or exploitation of the natural resources of the seabed and subsoil in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, and regulating the design, construction, equipment, operation and manning of such installations or devices*” (Article 194(c) UNCLOS, 1982).

## National Regime

Evidently, national regimes play a critical role in the international regulatory system for seabed mining and the adoption of which forms a part of the international obligations of coastal States wishing to engage in such activity.

In order to understand the state of national regimes within sponsoring States, the Council of the International Seabed Authority (ISA) requested sponsoring States to provide information on, or texts of, relevant national laws, regulations and administrative measures adopted on seabed mining in the Area.<sup>45</sup> Pursuant to this, India submitted the Offshore Area Minerals (Development and Regulation) Act 2002 as the governing national legislation.<sup>46</sup> However, the scope of the Act covers “offshore areas” which as per s4(n) are defined as the “*territorial waters, continental*

*shelf, exclusive economic zone and other maritime zones of India under the Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976*". This *prima facie* implies that this Act applies to minerals within India's maritime zones and any activity in the international seabed Area falls outside the scope of the present Act.

Since India conducts exploration activity in the Area, it may seem that India conducts such activity in breach of its international obligations. However, since the Government of India directly engages as a Contractor, international law applies *in toto* and the requirement of sponsorship is waived.<sup>47</sup> Thus, it is correct to hold that the due diligence obligations are not breached at this stage from the lack of governing national legislation. This system, however, is not sustainable. Enterprises—whether State-owned or private—infuse efficiency and commerciality into operations, and these are essential attributes for long-term and effective resource-development. Hence, opening this domain to the private sector or State-owned commercial enterprises is both, desirable and likely, with which comes the importance of adopting national legislation for activities in the Area. Regulatory clarity promotes private participation in industry; and is especially crucial in an activity like seabed mining which has high attendant capital costs and risks.

A key issue that may be delaying the adoption of a legal framework in India, is the lack of clarity on whether seabed mining in the Area is going to proceed at all. The lack of scientific data, issues of assessment and quantification of permissible environmental harm, and limited implementation and oversight capacity of the ISA, all act as major drivers of caution (as, indeed, they should!) in the commencement of seabed mining.<sup>48</sup> The push for a global moratorium on seabed mining coupled with the slow pace on the finalisation of exploitation regulations is generating a 'wait and watch' approach.<sup>49</sup> On the other hand, there is tremendous pressure by at least some States with the capacity to undertake such operations to simply "get on with it". China, for instance, reportedly managed to prevent a discussion on a precautionary pause at the ISA's Council meeting and is aggressively pushing to adopt regulations for exploitation.<sup>50</sup> Further, even nations that have called for a moratorium or precautionary pause to seabed mining have adopted legislation to regulate such activity.<sup>51</sup> India's launching of the Deep Ocean Mission and the development of the *Matsya 6000* indicates a policy inclination within India to engage in extracting

resources from the seabed sooner rather than later.<sup>52</sup> For that eventuality therefore, base national legislation for mining in the Area should be adopted even if it will be implemented only once seabed mining in the Area is greenlit by the ISA.

The Offshore Areas Minerals (Development and Regulation) Act 2002 (Offshore Minerals Act) and Offshore Areas Mineral Concession Rules 2006 (Offshore Minerals Rules) accompanied by the environmental protection norms form the core instruments through which extraction of offshore minerals is regulated. Following the entry into force of the Offshore Areas Mineral (Development and Regulation) Amendment Act 2023, the Ministry of Mines has prepared new drafts of (1) Offshore Areas Mineral Auction Rules & (2) Offshore Areas Existence of Mineral Resources Rules.<sup>53</sup> It is also in the process of framing Offshore Areas Mineral Conservation and Development Rules; Offshore Areas Mineral Concession Rules; and Offshore Areas Mineral Trust Rules. This demonstrates the increasing focus of the Government of India upon the extraction of offshore minerals.

While the Offshore Minerals Act is geographically limited to areas within national jurisdiction, it nonetheless serves as a base structure that can be adapted to the Area, given the similarities in the nature of the activity. The underlying principle of the Act—namely, the prohibition of the conduct of any reconnaissance operation, exploration operation or production operation in the offshore areas, except under and in accordance with the prescribed terms and conditions of a granted permit / license / lease—is in consonance with the requirement under international law for regulatory oversight for mining in the Area. Further, the three phases of mining activity, that is, prospection, exploration, and exploitation, have indeed been included and regulated-for within the Act, albeit using different terminology.

The adaptability of the Offshore Minerals Act to incorporate mining in the Area will be assessed. A metric to make this assessment will be the comparative analysis of foreign laws, along with an analysis of literature on ‘model legislations’ for seabed mining in the Area.<sup>54</sup> In this process, salient features of the mining law within national jurisdiction will be expounded upon.

Key common elements identified in national legislations are:<sup>55</sup>

1. Purpose, General Principles, and Terms and Interpretation.

2. Competent Authorities.
3. Licensing Regime.
4. Marine Environmental Protection.
5. Monitoring and Implementation.

This broadly correlates to the provisions that the sponsoring State may find necessary to include in its national laws as indicated by the Seabed Disputes Chamber—*inter alia*, financial viability and technical capacity of sponsored contractors; conditions for issuing a certificate of sponsorship; and penalties for non-compliance by such contractors.<sup>56</sup> Each of these will be considered in turn.

#### Purpose, General Principles, and Terms and Interpretation

1. **Purpose and General Principles.** The purpose of the Offshore Minerals Act is “*to provide for development and regulation of mineral resources in the territorial waters, continental shelf, exclusive economic zone and other maritime zones of India and to provide for matters connected therewith or incidental thereto.*” The first material amendment that needs to be made is the inclusion of “sponsored activities in the Area” to bring them within the scope of this Act.

The “*development and regulation of mineral resources*” is broad, general terminology. The legal texts of China and Japan employ similar language but seek to additionally “*secure sustainable use or rational development of deep seabed resources*”.<sup>57</sup> These legislations—by virtue of their being specific to the Area—have drawn directly from the language of UNCLOS, 1982 with explicit reference to the regulation of exploration and exploitation in the Area (China, Singapore); safeguarding the common interest of mankind (China); and fulfilling obligations, or ensuring compliance with the provisions of UNCLOS, 1982 (Germany and Singapore). On the same note, some States—especially the Pacific Island States which have similar legal structures developed together under one programme—have incorporated the principles on which activity in the Area is to be undertaken, that is, peaceful use, cooperation and sharing, and precautionary principles for protection of the marine environment. Such reference to international law may be included—either at this

stage or subsequently—for assisting judicial interpretation of provisions, that is, bringing-in consistency with international law.

2. **Terms and Interpretations.** The Offshore Minerals Act provides for three stages of mining activity, namely, reconnaissance, exploration, and production, which overlaps with the activity envisaged in the Mining Code even if it differs in terminology used. Section 4(u) of the Offshore Minerals Act defines reconnaissance operation as “*any preliminary geo-scientific survey undertaken for the purpose of searching or locating mineral deposits*”, exploration operation in Section 4(e) as “*any operation undertaken for the purpose of exploring, locating or proving the mineral deposits*”, and production operation in Section 4(s) as any “*operation undertaken for the purpose of winning any mineral from the offshore area and includes any operation directly or indirectly necessary there for or incidental thereto*”. These definitions, as per the Mining Code of the ISA, differ in two ways. First, the Mining Code definition of exploration is more detailed and includes explicitly within its scope the use and testing of equipment, processing facilities, and *carrying out environmental, technical, economic, and commercial studies*. The Offshore Minerals Act on the other hand expressly lists only exploring, locating, or proving the mineral deposits. Therefore, the scope of “*exploration*” under the Mining Code is arguably broader than under the Offshore Minerals Act. Similarly, “*prospecting*” under the Mining Code includes the estimation of the composition, size, and distribution of deposits, and their economic value while “*reconnaissance*” under the Offshore Minerals Act is limited to “*preliminary geo-scientific survey*”. The nature of the survey being limited to geo-scientific, it may or may not include a technical and economic evaluation of minerals even under a broad interpretation of that term. An analysis of the template deeds for reconnaissance and exploration in Form D and Form K respectively (Offshore Mineral Rules, 2006) demonstrates that the latter envisages the extraction of some mineral quantity while the former does not. Interestingly, in the Mines and Minerals (Development and Regulation) Act 1957 (MMRDA), which is used to govern onshore mining, the term “*prospecting*” is used for the activity of “*exploration*” and the term “*reconnaissance*” has been used for “*preliminary prospecting... through regional, aerial, geophysical or geochemical surveys and geological mapping, but does not include pitting, trenching, drilling.*”<sup>58</sup> Inconsistent use of terminology for the same activity conducted (1) onshore, (2) offshore but within

national jurisdiction, and (3) offshore beyond national jurisdiction, is likely to create confusion and increase litigation. Hence, even if mining in the Area is sought to be legislated through a separate instrument, consistency in the use of terminology needs to be ensured. Secondly, under the Mining Code, exclusive rights are conferred upon those undertaking an exploration operation, while prospecting licenses confer non-exclusive rights. Such distinction does not seem to exist in the Offshore Minerals Act. The Offshore Minerals Act in Section 2(t) expressly provides exclusive rights only in the case of a production lease (exploitation stage). If an analogy is to be drawn from the MMRDA, only reconnaissance permits were specified to be non-exclusive (the grant of which has been subsumed under composite licenses after the 2021 amendment).<sup>59</sup> This may imply that exploration rights are exclusive but to express language to that effect may be problematic.

Additionally, the Offshore Minerals Act does not delve into the definition of minerals beyond excluding hydrocarbons from the scope of the Act. On the other hand, the draft Offshore Areas (Existence of Mineral Resources) Rules do have detailed exploration norms for different types of deposits including Deep Sea Minerals such as Rare Earth Elements, hydrothermal minerals/iron manganese crusts and nodules,<sup>60</sup> thus bringing commonly identified deep sea minerals within the scope of the Act.

### **Competent Authority**

In pursuance of Section 4(a) of the Offshore Minerals Act, the Central Government notified the Additional Director General, National Mission Head-II, Geological Survey of India (GSI), as the administering authority for the purpose of the Act.<sup>61</sup> This makes the Ministry of Mines (to which GSI is attached) the nodal ministry for offshore mining in India. However, since the Deep Ocean Mission is run by the Ministry of Earth Sciences (MoES) and its autonomous institutions, and the MoES is the Contractor with the ISA, close involvement of the MoES is warranted. Hence, the Central Geological Programming Board (CGPB)—which coordinates activities on geological mapping, mineral prospecting, exploration, and exploitation in the country—has been identified as the mechanism through which offshore exploration is going to be conducted.<sup>62</sup> The CGPB includes members from the MoES and

the Ministry of Environment, Forest, and Climate Change which are critical to the activity of offshore resource development. This mechanism, while envisaged for mining within national jurisdiction, can be replicated for the Area. This decision is the prerogative of the State and international practice ranges from creating new special ministries (Pacific Island States) to authorising existing ministries such as Mining, Energy and Geology (Germany), Oceanic Administration (China), and Secretary of State (the United Kingdom) for this purpose.

## Licensing Regime

The licensing regime stipulated in the Offshore Minerals Act (the Act), offers two types of operating rights to the private sector through auction by competitive bidding, namely, a “composite license” and a “production lease”.<sup>63</sup> While a “reconnaissance permit” has still been included, it has largely been subsumed under the “composite license”. A composite license defined as a “*exploration license-cum-production lease*” grants a two-stage operating right for exploration and subsequent exploitation on application (Section 4(ca) of the Act). An operating right can be granted to an Indian national or a company incorporated within India that fulfils the conditions as prescribed (Section 6 of the Act). The Offshore Mineral Rules 2006 did not stipulate eligibility conditions for the grant of such an operating right. The draft Offshore Areas Mineral (Auction) Rules, however, prescribes (Rule 6, Schedule 1) net worth requirements for a production lease and composite license depending on the value of the estimated resources. Once successful, the bidder will execute a license deed or a production lease deed which contains the terms and conditions by which the licensee or lessee must abide.

Under the current structure, the broad conditions for an exploration license and production lease are stipulated in the Offshore Minerals Rules 2006 (Rule 18 and Rule 28). These rules govern payment of charges, permits and clearances, quantity of withdrawal, data collection and reporting, indemnity, inspection, foreign personnel, and safety measures. In addition, the conditions for a production lease include compliance with rules for environmental protection (Rule 28 (i)). This is supported by the terms and conditions stipulated in the deed itself (Rule 16). The

terms of the exploration and production deed expand upon the conditions stipulated in Rules 18 and 28 of the Offshore Minerals Rules 2006, with the notable addition of the obligation to comply with “*all the international conventions or treaties to which India is a party and the laws and customs governing the High Seas and will all the laws and regulations/instructions and orders issued by the Government for the protection of navigation, aircraft, fishing and fisheries*” (Part II Clause 19 Form K). Specific obligations to prevent pollution of the sea and prevent danger to shipping have also been added. The environmental provisions will be analysed subsequently. Rule 7 and Rule 8 of the Draft Offshore Areas Operating Right Rules retain much of the terms and conditions from the Offshore Mineral Rules 2006 and incorporate into the main body of the Rules terms and conditions previously incorporated in the deed. Further, Rule 14 of the Draft Operating Right Rules explicitly provides for the termination of the lease or license if the lessee or licensee fails to comply with international conventions and treaties to which the Central Government is a party, in addition to non-compliance with any of the terms, covenants and conditions contained in the Offshore Minerals Act, rules framed thereunder, or other Indian laws and regulations.

Recalling the Seabed Disputes Chambers’ dicta, the Offshore Minerals Act, and the rules thereunder—both current and draft—establish the financial viability criteria, conditions for issuing a license, and penalties for non-compliance by such contractors. Therefore, the structure already exists and can readily be adapted to the Area. While technical capacity requirements are not explicitly spelled out, the net worth requirement coupled with the requirement to submit a performance guarantee and rent for the block would translate into only entities with the technical capacity likely to undertake such an activity. A potential mismatch may occur in the requirements and format of the plan of work to be submitted to the ISA after such a license/sponsorship agreement is obtained from the national authority. However, since that requirement is in addition to the requirement of sponsorship, it is a relatively easy amendment to make to the scheme. This stands true even in respect of the contributions to be made to the International Seabed Authority which have been envisaged in compliance with India’s obligations under Article 82 UNLCOS for extractions in the Legal Continental Shelf (Section 18 of the Act).

Suitable amendments can be made once the benefit-sharing regime is finalised at the international stage.

A potential issue that may arise is the maximum size of blocks that may be applied for under the Offshore Minerals Act. Section 12(4) of the Offshore Minerals Act stipulates that the area granted under a composite license shall not exceed thirty minutes latitude by thirty minutes longitude. Subsequently, an area for which a production lease is granted—either from the composite license or independently—shall not exceed fifteen minutes of latitude by fifteen minutes of longitude (Section 12(6), 13(4) Offshore Minerals Act). Additionally, Section 13A imposes a maximum limit of an area to forty-five minutes of latitude by forty-five minutes of longitude, which may be granted to a person through one or more exploration license(s), composite license(s) and production lease(s) all taken together. These limits are, however, significantly lower than the size of the exploration blocks that have been licensed by the Government of India from the ISA. The Indian Contract Area in the Central Indian Ocean Basin for polymetallic nodules extends from 10.25°S to 15.0°S and 73.5°E to 79.25°E.<sup>64</sup> This corresponds to an area of 5.75° by 4.75° (decimal degrees) which far exceeds the maximum limitations incorporated in the Act. Hence, an exception will need to be carved into the Act for private players seeking to enter into exploration licenses in the Area.

## **Marine Environmental Protection**

Ensuring marine environmental protection is a core issue surrounding seabed mining and is the subject of five out of six direct obligations on States as per the Seabed Disputes Chamber.<sup>65</sup> Section 20 of the Offshore Minerals Act along with its three sub-sections has the following effects: (1) it makes applicable, in addition to the Offshore Minerals Act and its rules, “*any other law and rules made thereunder, for the time being in force for the prevention and control of pollution and protection of marine environment*”; (2) makes the holder of the operating right liable for any pollution of, or damage to, the marine environment resulting from his activities, and who shall pay compensation as remedies; and (3) empowers the Central Government to prescribe measures for the prevention and control of pollution, and protection of

marine environment. Further the Act empowers the Central Government to issue directions (Section 21) and to make rules (Section 35) for the protection of the marine environment.

The Act is supported by Chapter VI of the Offshore Mineral Rules 2006, which is dedicated to protection of the environment and marine life. It mandates compliance with international conventions to which India is a party, and requires the taking of all precautions and measures for protection of the marine environment, including steps to control pollution.<sup>66</sup> Additionally, it requires the licensee/lessee to inform the administering authority of any damage and comply with any emergency orders made in those circumstances.<sup>67</sup> These provisions comply with India's international obligations to ensure the application of the precautionary principle, and provision for emergency measures to protect the marine environment. As highlighted earlier, the rules are also supported by terms in the deeds executed for exploration/production. Since the Ministry of Mines is still in the process of framing the new Draft Offshore Areas Mineral Concession Rules, care must be taken to preserve these provisions from the 2006 Rules.<sup>68</sup> Additional inclusions includes the requirement of submitting, as part of contents of the feasibility report: (1) a brief description on the baseline marine environment condition, the potential impacts of production, and suggested mitigation measures;<sup>69</sup> (2) biotope map of the seabed showing critical marine habitats,<sup>70</sup> and (3) details of the marine geophysical and geochemical surveys conducted.<sup>71</sup> Further, under Section 16A of the Act, an Offshore Areas Minerals Trust has been established to provide support upon the occurrence of any disaster in the offshore Area.

Section 20(1) makes the entire gamut of environmental legislation in India applicable to the activity of seabed mining within national jurisdiction. This includes *inter alia* the Water (Prevention and Control of Pollution) Act 1974 and its rules, the Air (Prevention and Control of Pollution) Act 1981 and its rules, the Environment Protection Act 1986 and its rules, and the Public Liability Insurance Act 1991. Of particular importance is the Environmental Protection Act 1986 under which the Environmental Impact Assessment Notification 2006 (as amended)<sup>72</sup> (EIA Notification) and the Coastal Regulation Zone (CRZ) Notification, 2011<sup>73</sup> has been issued. The former requires prior environmental clearance from the Central Government with respect to activities with potential environmental impacts

undertaken in any part of India. The notification clarifies that India includes the territorial sea. This raises questions as to whether this notification is applicable to the continental shelf. A broad reading of Section 20(1) may make this notification applicable to such activities undertaken beyond the territorial sea. This reading is supported by the Coastal Regulation Zone notification of 2011 which includes the “*water and the bed area between the Low Tide Line to the territorial water limit (12 nm)*” as a Coastal Regulation Zone (CRZ), and prohibits the mining of sand, rocks, and other sub-strata materials (except those rare minerals not available outside the CRZ area, and exploration and exploitation of oil and natural gas). Further, Section 29 of the Act enables the Central Government to extend by notification any enactment for the time being in force in India to the offshore area. Hence, such notification should be promulgated in the interest of clarity.

However, the EIA notification also needs to be adapted to include offshore mining for minerals. The Schedule to the EIA notification includes mining of minerals but requires Category A clearance. That is, from the Central Government, only for a mining area of greater than equal to 50 hectares. Areas less than 50 hectares and greater than equal to 5 hectares requires clearance from the State Environment Impact Assessment Authority. Since Section 2 of the Act brings the regulation of mines and the development of minerals in offshore areas under Union control, this categorisation within the notification may not be appropriate. Additionally, rules and methods adept to the conditions of offshore mining need to be incorporated. While the EIA mechanism for offshore oil and gas production can be drawn from, the special conditions of offshore mineral mining need to be considered. While this recommendation is applicable to mining within national jurisdiction, the ISA issued guidelines for conducting EIAs may also be taken into consideration for sponsored activities in the Area.<sup>74</sup>

While implementing Section 20(2) of the Act, a potential issue that may arise is that the standard at which “damage” is gauged is not clarified. While the section itself gives the administering authority the discretion to impose damages as compensation, such a mechanism may be arbitrary without the promulgation of science-based guidelines to make this adjudication. This may open the floodgates of litigation as damage is to be expected from any mining activity.

## Monitoring and Implementation

Ensuring the monitoring and implementation of the Act and its rules forms an important aspect of the regulatory system. Such measures contribute to the fulfilment of the due diligence obligation under UNCLOS, 1982. At the outset, the Act creates a criminal offence to engage in any mining activity without a permit/license/lease. Further, even if such right is granted, any failure to furnish the required data also attracts criminal penalty. The Act also empowers the Central government the power of entry, inspection, search and seizure, detention and even arrest without warrant persons or vessels to ascertain whether or not the requirements of the Act or any rule made thereunder is being complied with (Section 22 of the Act). Additionally, the powers to issue directions and seek compliance therewith confer active powers to the Central Government. This will also allow the State to direct through national tools any request or direction by the ISA.

Non-compliance with the conditions of the operating right creates civil liability with the provision of hefty fines (Section 28) and is a ground for non-issuance of a production lease (Section 12(6)(a) of the Act). Rule 14 of the Draft Operating Right Rules further provides for the termination of the operating right for non-compliance with the terms and conditions.

With respect to the safety and security of personnel and infrastructure, the Act provides for the creation of a safety zones (Section 19(2) of the Act). While they have a legal basis in the exclusive economic zone and continental shelf, a safety zone may be considered for sponsored activities in the Area too. State practice demonstrates that at the very least, warning zones may be promulgated for military activities and may be sustained if “*they have no appreciable effect on navigation and no significant effect on the environment or resources of the region*”.<sup>75</sup> Hence such safety zones/warning zones for contracted Areas may be explored in conjunction with empowering Coast Guard presence for their enforcement.

## Key Recommendations

The following recommendations in terms of amendments to the Offshore Minerals Act merit careful consideration:

1. 'India-sponsored activities in the Area' should be included within the scope of the Act (the Act is currently restricted to the maritime zones of India).
2. References to sustainability may be included within the scope of the Act to lay equal emphasis on environmental protection and sustainable development as is given to mineral resources.
3. Consistency in use of terminology needs to be maintained for the activities involved in the mining life cycle.
4. With respect to the licensing regime, the net worth requirements and technical capacity for the bidder must be adapted considering the complexity and risk of mining in deeper seas. A template sponsorship agreement may be included within the Rules under the Offshore Minerals Act like templates of deeds currently included. Further, an exception needs to be carved out within the maximum size of blocks that may be auctioned or held by a person.
5. The EIA Notification for Environmental Impact Assessments needs to be amended to incorporate offshore mining both within and beyond national jurisdiction. For the manner in which impact assessments are to be conducted in the Area, reference should be made to ISA guidelines on the subject. Similarly, the application for sponsorship/license to conduct an activity in the Area would require the delimitation of the impact reference zones and preservation reference zones as mandated by UNCLOS, 1982.
6. A warning/safety zone around the contract area in the Area enforced by Coast Guard presence may be explored.

## **Conclusion**

As elucidated in this article, the Offshore Areas Minerals (Regulation and Development) Act 2002 and the rules formulated thereunder lay out a detailed scheme for seabed mining within national jurisdiction. This scheme also forms a base structure, albeit one that needs to be tweaked, to incorporate sponsored activity in the Area. Such amendments could be notified once the international community

finalises the manner in which such activity is to be undertaken. However, India must be prepared for that eventuality.

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*Fisheries Governance:  
Legal Issues*



# Indian Responses to the Challenge of IUU Fishing: A First Look At

*Mr Mayank Mishra*

IUU Fishing, as a well-known abbreviation for “Illegal, Unreported, and Unregulated Fishing”, is a collective term for a broad range of fishing activities considered illegal, unreported, or unregulated in law.<sup>1</sup> In August 2021, India’s Union Minister of Fisheries, Animal Husbandry, and Dairying (“Union Fisheries Minister”) was asked in the Lok Sabha if IUU fishing posed a threat to India, and he responded as follows:

“Illegal, unreported and unregulated (IUU) fishing remains one of the threats to marine ecosystems due to its potential to undermine national and regional efforts to manage fisheries sustainably as well as endeavours to conserve marine biodiversity. Presence of unregistered boats in Indian waters can be a potential threat to national maritime security.”<sup>2</sup>

This is, of course, true. IUU fishing is a genuine public policy issue for India, and one that deserves attention from policymakers and the general public alike. While the internet is full of studies and articles on IUU fishing, India-centric examinations of IUU fishing as a domestic policy issue in India remain few.<sup>3</sup> Furthermore, despite its connections-to and implications-for matters of ‘hard security’ (which this article will subsequently discuss), IUU fishing takes a back seat to other issues that might appear more obviously related to matters of maritime security.

Accordingly, this article seeks to add to analyses of IUU fishing in the *Indian* context. It will lay down baseline facts and figures pertaining to IUU fishing and demonstrate the inadequacy of available data. It will also undertake a broad examination of India’s responses to IUU fishing in her maritime zones and highlight

the significance of fish landing centres/points along India's coastline. In collating official data on IUU fishing, the article will also attempt to address the impact of IUU fishing upon the Indian economy and its fisherfolk. It is hoped that this article will inform and mould public opinion in India on an important issue that touches multiple policy areas, including but not limited to food security, unorganised employment and, of course, national security. The article ends by recommending the reform of complex domestic administrative structures and the commission of further research on the continuing impact of IUU fishing on India.

## The Challenges

The importance of India's marine resources is borne out *inter alia* by the facts recorded in the National Policy on Marine Fisheries, 2017 (reproduced below)<sup>4</sup>:

1. Marine fisheries wealth was estimated (in 2017) at an annual harvestable potential of 4.412 million metric tonnes.
2. An estimated 4.0 million people depend for their livelihoods on marine fisheries resources. When one considers the provision of livelihood and nutritional security to citizens in longer fisheries value chain(s), this number goes up to “*over 28 million stakeholders.*”<sup>5</sup>
3. The contribution of marine fisheries to economic wealth is valued at about INR 65,000 crores (US\$ 7.78 billion).<sup>6</sup>
4. Marine fisheries are an important source of food, nutrition, employment and income generation.<sup>7</sup> Food harvested from the sea (such as fish, but not limited to fish alone) also forms a fundamental part of diet and culture in many parts of India.
5. Marine fisheries wealth contributes significantly to India's export earnings and balance of trade.<sup>8</sup> The value of marine fisheries products exported in 2022-23 alone was INR 63,969.14 crores (US\$ 7.6 billion), which constituted an increase of over INR 6000 crores (US\$ 718.6 million) compared to the corresponding figure for the previous year.<sup>9</sup>

6. Marine fisheries of the country are highly diverse but predominantly comprising small-scale and artisanal fishers.<sup>10</sup>

IUU fishing poses a threat to these marine resources, livelihoods, and ecosystems, at the national as well as regional levels. The range and dynamics of this threat can be understood by looking at the acts and/or activities that are understood as constituting IUU fishing. Under the FAO's "International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing" (IPOA-IUU), a voluntary instrument that applies to all States, entities, and fisherfolk), IUU fishing has been defined thus:

"3. In this document:

3.1 Illegal fishing refers to activities:

3.1.1 conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations;

3.1.2 conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organisation but operate in contravention of the conservation and management measures adopted by that organisation and by which the States are bound, or relevant provisions of the applicable international law; or

3.1.3 in violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organisation.

3.2 Unreported fishing refers to fishing activities:

3.2.1 which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or

3.2.2 undertaken in the area of competence of a relevant regional fisheries management organisation which have not been reported or have been misreported, in contravention of the reporting procedures of that organisation.

3.3 Unregulated fishing refers to fishing activities:

3.3.1 in the area of application of a relevant regional fisheries management organisation that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organisation, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organisation; or

3.3.2 in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.”<sup>11</sup>

It is obvious that the term “IUU Fishing” covers a wide range of acts/activities by a multitude of actors, domestic as well as foreign. The challenge it poses is thus multi-faceted and complex. The Food and Agriculture Organisation of the United Nations (FAO) observed:

“Illegal, unreported, and unregulated (IUU) fishing remains one of the greatest threats to marine ecosystems due to its potent ability to undermine national and regional efforts to manage fisheries sustainably as well as endeavours to conserve marine biodiversity.....IUU fishing is found in all types and dimensions of fisheries; it occurs both on the high seas and in areas within national jurisdiction, it concerns all aspects and stages of the capture and utilisation of fish, and it may sometimes be associated with organised crime. Fisheries resources available to bona fide fishers are removed by IUU fishing, which can lead to the collapse of local fisheries, with small-scale fisheries in developing countries proving particularly vulnerable. Products derived from IUU fishing can find their way into overseas trade markets thus throttling local food supply. IUU fishing therefore threatens livelihoods, exacerbates poverty, and augments food insecurity.”<sup>12</sup>

As a developing country, India must ensure judicious the use—and the prevention of pilferage—of her resources. IUU fishing is a threat to these resources and, accordingly, must be countered and addressed.<sup>13</sup>

Given that IUU fishing is an acronym for a wide range of acts/activities, framing the response is part of the problem. However, like all other States, India has its own laws, regulations, and reporting requirements. Thus, the ‘definition’ by the IPOA-IUU notwithstanding, act(s) that constitute IUU fishing in the jurisdiction of a given State may well be considered lawful in another. The absence of a common understanding hinders regional collaboration against IUU fishing. Secondly, while the term IUU ‘fishing’ indicates that the resource in question is fish alone, this is not so in actuality. In addition to many kinds of fish, India’s marine living resources include crustaceans, molluscs, sponges, squids, jellyfish, etc.<sup>14</sup> Further, in the larger scheme of the marine food web, all living resources—not just fish—play their own ecological roles and are thus additionally worthy of conservation.

Lack of data is an additional issue. In July 2022, India's Union Fisheries Minister was questioned in the *Rajya Sabha* (India's Upper House of Parliament) about the impact of IUU fishing upon the Indian economy, and whether the Government of India was aware of “*any parameter to assess the Illegal, Unreported and Unregulated (IUU) fishing in India.*”<sup>15</sup> He responded:

“Illegal, Unreported and Unregulated Fishing (IUU Fishing) ‘inter alia’ means fishing activities undertaken by fishing vessels or operators without permission or in contravention of the laws and regulations of the country or in contravention of the conservation and management measures of the relevant regional fisheries management organisation to which a country is a party, or fishing activities not reported or fishing activities in unregulated areas of high seas. Countries determine IUU fishing as per their national framework of laws, regulations and/or administrative procedures. While there is no specific report available on the impact of IUU fishing on Indian economy, the overall economic loss resulting from illegal catches is estimated at USD 26 billion to USD 50 billion globally, as per independent researchers.”

Two things may be concluded from this response: (1) that at least as of July 2022, the Government of India had not formulated its own definition(s) or assessment parameters for IUU fishing; and (2) that at least as of July 2022, the Government of India was not in possession of accurate data on the impact of IUU fishing on the Indian economy. Both these issues certainly need to be addressed.

Next, consider the issue of India's fish landing centres/points, and the need for effective governance and regulation thereof. The significance of these points for a country like India is noted, for instance, by the FAO:

“Fish landing centres or sites are associated with small-scale marine and inland fisheries. They provide a location for first point of sale for products and provide a place where fishers can leave their boats and obtain supplies such as food, fuel, and ice. Many landing centres have developed in association with local communities. The facilities, services and access to market vary. It is these characteristics, as well as the capacity of the users, which influences how fish and fish products are handled and traded.... It is important to note that the way in which fish is treated at landing centres will have implications for food loss and waste at downstream stages of the value chain. In the artisanal fisheries sector, limitations or deficiencies in infrastructure at landing sites mean that individual productivity is low, and levels of spoilage and waste are high.”<sup>16</sup>

The data collected at fish landing centres/points is important not just for marine spatial planning and fisheries management, but also for national and coastal

security.<sup>17</sup> Thus, while handing over to the Indian Navy a Geographic Information System (GIS)-based database of 1,278 fish landing points along the Indian coast, Dr A Gopalakrishnan (then Director of Central Marine Fisheries Research Institute (CMFRI) noted, in 2017, that “*GIS based documentation of the marine fish landing centres is important since they are the reference points for mapping marine fisheries resources along the coast and such mapping will serve as the basic data for the fisheries conservation and management.*”<sup>18</sup> The importance of this data in matters of national security, disaster management, and maritime crime, was also-correctly-highlighted.<sup>19</sup> Since the Indian Coast Guard is now responsible to transform data obtained from (inter alia) fish landing stations/points into actionable-as well as trend-based intelligence, this is an important issue for both these maritime-security agencies of India.<sup>20</sup>

Indeed, the nexus between IUU fishing and local crime/criminals is a particularly vexed issue. Recent events in Sandeshkhali (West Bengal, India) demonstrate the complexity of this nexus. In Sandeshkhali, vested interests at the local level allegedly grabbed viable agricultural land and converted it into fishing ponds. This was done by contaminating coastal farm fields with salt water from the sea, and thereafter forcing the landowners to flee under threat of violence.<sup>21</sup>

The collection of identificatory and regulatory data on India’s fish landing points—such as GIS location, type(s) of fishing activity, seasonality of fishing, extent of fishing operations, etc., is important because it informs, complements, and supplements law enforcement efforts against IUU fishing. Separately, the geo-tagging of fish landing centres/points that have not thus far been geo-tagged/identified (pointed-to with concern by security practitioners) is doubly important from a law enforcement and national security perspective.

In the present day however, an updated inventory/database of India’s fish landing centres/points appears unavailable. This may be because fish landing centres are inherently nebulous and change in accordance with local conditions. Many landing centres are temporary and are used and then abandoned by small-scale and artisanal fisherfolk in accordance with local tidal/weather conditions. Thus, an October 2023 assessment provided by FAO stated that India has “*1,914 traditional fish landing centres*”.<sup>22</sup> However, India’s official statistics for 2023 recorded a figure of 1,457 (Table 1 refers).<sup>23</sup>

**Table 1:** Numbers of Fish Landing Centres along India's Coastline

State/Union Territory	Number of Fish Landing Centres
Andaman and Nicobar	51
Andhra Pradesh	350
Dadra and Nagar Haveli, and Daman and Diu	8
Goa	32
Gujarat	107
Karnataka	115
Kerala	174
Lakshadweep	20
Maharashtra	173
Odisha	55
Puducherry	22
Tamil Nadu	301
West Bengal	49
Total	1457

*Source: Handbook on Fisheries Statistics, 2023*

Incidentally, the numbers in the 2023 edition of India's official statistics (above) are a reproduction of the numbers in the 2022 edition.<sup>24</sup> This suggests that in the intervening period of 2022-23, little or no work was done on identifying and/or geo-tagging fish landing centres/points.

Amidst this lack of data, the economic activity—lawful or otherwise—at these landing centres continues unabated and at a frenetic pace. The estimated value of marine fish landings during 2022 at the landing centre level was INR 58,247 crores (US\$ 6.9 billion)—an increase of 8.57 per cent over 2021, —and at the retail centre level was INR 79,865 crores (US\$ 9.56 billion)—an increase of 4.21 per cent over 2021.<sup>25</sup>

The evident absence of reliable data on and at fish landing centres/points in India clearly needs to be addressed. In particular, efforts need to be made to geo-tag those fish landing points that are not presently geo-tagged.

Having discussed in this section the challenge of IUU fishing (particularly at the local and state levels), the next section will take a brief, *prima facie* looks at India's responses to IUU fishing.

## India's Responses: A First Look

In July 2023, the Union Fisheries Minister outlined the following in Parliament as India's response(s) to the challenge of IUU Fishing in India's Exclusive Economic Zone (EEZ)<sup>26</sup>:

1. Authorisation to the Indian Coast Guard under the Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act, 1981 to prevent illegal fishing by foreign fishing vessels in Indian waters. (There is also another statutory provision enabling action against IUU fishing in India's EEZ, namely, Section 7(5) of The Territorial Waters, Continental Shelf, Exclusive Economic Zone and other Maritime Zones Act, 1976.)<sup>27</sup>
2. Regulation, monitoring, control, and surveillance, by enforcement agencies of maritime states/Union Territories (UTs), under their respective Marine Fishing Regulation Acts (MFRAs), to prevent IUU fishing.
3. Implementation of ReALCraft, a web based online portal for mandatory registration of fishing vessels under the Merchant Shipping Act 1958, and licensing of fishing vessels under respective MFRAs by the coastal States/UTs.<sup>28</sup>
4. Issuance of Biometric Identity cards, for identification purpose(s), to marine fisherfolk.
5. Sanction and release by the Government of India (to the state government of Tamil Nadu) of funds amounting INR 18.01 crores (US\$ 2.16 million), to be used, under the 'Blue Revolution' scheme, to fit transponders on mechanised fishing vessels of Tamil Nadu.
6. Support provided under *Pradhan Mantri Matsya Sampada Yojana* (PMMSY) for the fitment of communication and tracking devices on fishing vessels.

However, India can and should do more. Yet, to be fair, matters of policy formulation and enforcement in India are complicated by the country's federal structure, and the consequent overlaps of both, jurisdictional and functional matters.

*“Fishing and fisheries beyond territorial waters”* is a matter for the Union of India as per Entry 57 of the Union List in the Seventh Schedule of the Constitution of India, while *“Fisheries”* (presumably within territorial waters, although the Constitution does not explicitly state this) is a matter for the concerned state government (as per Entry 21 of the State List).

The Indian Coast Guard (ICG) in its capacity as an organ of the Central Government, handles law enforcement action(s) against IUU fishing in India’s EEZ (and frequently, in the territorial sea as well). In addition to constitutional provisions, the legal basis for the ICG’s actions against IUU fishing is provided by Extraordinary Gazette Notification S.R.O. 16(E) dated 05 December 2019 (reproduced below):

“S.R.O. 16(E). - In exercise of powers conferred by sub-section (3) of Section 121 of the Coast Guard Act, 1978 (30 of 1978), the Central Government hereby authorise every member of the Coast Guard, constituted under Section 4 of the said Act, to visit, board, search and seize vessel, or arrest any person, or seize any artificial island or any floating or moored object or any underwater object including any maritime property involved or suspected to be used or likely to be used in the commission of any offence punishable under any of the Central Acts including the Acts specified in clause (i) of sub-section (1) of Section 121 of the said Act, within the area of maritime zone of India extending up to exclusive economic zone, as defined in clause (m) of Section 2 of the said Act.”<sup>29</sup>

Police forces and fisheries departments of respective state governments handle enforcement (under their respective Marine Fishing Regulation Acts as has already been earlier mentioned) in the territorial sea adjoining the concerned state. Thus, security and law enforcement aspects relating to IUU fishing are handled primarily by the police forces and the ICG, while aspects like such as those related to the welfare of fisherfolk, etc., are handled by the fisheries departments of states. Border Management Division-II (or BM-II Division) under the Ministry of Home Affairs’ Department of Border Management coordinates action(s) between various state and central agencies and departments, particularly for matters of coastal security. As per the Ministry of Home Affairs:

“BM-II Division deals with matters relating to Border Area Development Programme (BADP), Coastal Security Schemes (CSS) and Land Ports Authority of India (LPAI). The BADP is a Core Centrally Sponsored Scheme being implemented through the state governments as a part of comprehensive approach to the border management. The

Coastal Security Scheme is implemented in Phases for providing financial assistance for creation of infrastructure relating to coastal security in the Coastal States/UTs. BM-II Division is also responsible for establishment matters of LPAI, which is entrusted with construction, development and maintenance of Integrated Check Post (ICPs) on the land borders of the country and coordination with various stakeholders for development of ICPs.”<sup>30</sup>

Separate, however, from matters of law enforcement and border management, IUU fishing also demands administrative and regulatory controls in matters of fishing and fisheries. Under the Indian governance framework, the nodal Central department for matters concerning fishing and fisheries in India’s EEZ is the Department of Animal Husbandry, Dairying & Fisheries (DADF) under the Ministry of Fisheries, Animal Husbandry and Dairying.<sup>31</sup>

It is evident that India’s responses cover a range of statutory, administrative, and other measures. While this is not a bad thing *per se*, it does make coordination difficult to achieve in practice and with consistency. As mentioned earlier, this problem is magnified in a federal system such as that which prevails in India, where overlaps in authority, function, and jurisdiction (of the kind outlined above) complicate matters further.

Once again separate from the issue of enforcement, matters of policy also remain works in progress. The following, an operative extract from “The National Policy on Marine Fisheries, 2017” is illustrative of this:

“India being a party to several International Agreements/Arrangements to deter, prevent and eliminate Illegal, Unreported and Unregulated (IUU) fishing, the Government will establish a sound mechanism both at the port and at sea to ensure that the Indian fishing fleet does not engage in any IUU fishing within its own EEZ, high seas and EEZs of other nations.”<sup>32</sup>

It may be noted that while this policy addresses IUU fishing by “*the Indian fishing fleet*”, it remains silent on the aspect of IUU fishing by non-Indian fishing fleets and entities, such as those operated by the People’s Republic of China (PRC). While Indian law is certainly equipped with provisions that can be invoked against IUU fishing (as seen above), clarity of policy nonetheless requires that the issue of IUU fishing by non-Indian entities be explicitly addressed in the text. Thankfully, the

draft revised policy under consideration does cover IUU fishing by foreign vessels, and this is a step in the right direction.<sup>33</sup>

## Conclusion and Recommendations

As a ‘non-traditional’ maritime security threat, IUU fishing receives far less attention than do issues of ‘hard security.’ Nevertheless, it is a genuine public policy issue for India, with domestic as well as international facets. As such, it deserves attention and study, and continues to be a subject of research at the National Maritime Foundation. This article has sought to sensitise policymakers and the general public to the economic and security challenges that arise out of IUU fishing, and which confront India.<sup>34</sup>

Finally, in light of the analysis undertaken thus far, this article recommends the following:

1. Given the seeming absence of specific research on the *impact* of IUU fishing upon the Indian economy (as also admitted by the Union Fisheries Minister in Parliament), the Government of India needs to undertake and/or commission a specific report in this regard. Captain Anurag Bisen recently published (at the Vivekananda International Foundation) an extensive analysis of the PRC’s IUU fishing activities in the Indian Ocean region.<sup>35</sup> More such research is needed.
2. The geo-tagging of fish landing points in India is a requirement for effective marine spatial planning and fisheries management. More significantly, it is also a national security imperative. Therefore, an updated survey of these points needs to be undertaken by the CMFRI or some other agency with requisite capabilities. The Chief Hydrographer to the Government of India, who is presently mandated to produce official nautical charts and hydrographic surveys for India, may be tasked with overseeing and coordinating this exercise at the national level.<sup>36</sup> The 2017 technical report provided to the Indian Navy by the CMFRI could be good starting point for this survey.<sup>37</sup> Captain Himadri Das (*IN*), a practitioner and noted academic,

has opined that the *Pradhan Mantri Matsya Sampada Yojana* (PMMSY) can be a “*key enabler*” for such initiatives at fish landing centres/points.<sup>38</sup>

3. In December 2023, the Indian Parliament was informed that “*till date, 2,55,348 fishing boats are registered under ReALCraft portal.*”<sup>39</sup> Nevertheless, given the vast numbers of Indian fisherfolk, the sufficiency of this registration coverage remains unclear, and is likely to be inadequate. Consequently, registration drives, at the local and state levels, should seek to expand registration coverage on the ReALCraft portal. Furthermore, the underlying infrastructure of this portal needs to be upgraded to enable interfacing and exchange with the sensors of India’s Coastal Security Network (or CSN—a network of radars and sensors along India’s coastline and islands).<sup>40</sup> Such interfacing will allow India’s forces and agencies to distinguish—at sea and on land—between *bona fide* fishing vessels and criminal/terrorist elements. It will also enable faster search and rescue (SAR) of fisherfolk or vessels in distress.
4. It is well known that the ICG as well as state police forces remain inadequately provisioned in their material wherewithal, financial outlay, and training.<sup>41</sup> This needs to be addressed, whether by the Border Management-II Division in its capacity as overall coordinator, or at a higher level.

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### **About the Author**

Mr Mayank Mishra was engaged as an Associate Fellow within the Public International Maritime Law (PIML) Cluster of the National Maritime Foundation (NMF). While his research essentially focused on the vitally important intersection of maritime law with maritime ‘hard security’ policy, he was keenly interested in the equally critical and fascinating interplay between PIML and technology, especially where relevant to the maritime domain. The views expressed are those of the author. He may be contacted at [socialsectorlaw@gmail.com](mailto:socialsectorlaw@gmail.com)

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## Identifying the Implications of Unreported and Unregulated Fishing for India

*Mr John J Vachaparambil*

The term ‘fisheries crime’ encompasses illegal activities throughout the entire fisheries sector, from illegal harvesting and processing to consumer-level frauds.<sup>1</sup> The global economic impact of Illegal, Unreported and Unregulated (IUU) fishing is estimated to range between USD 25.5 and 49.5 billion annually. Various reports indicate that the impacts are particularly damaging to the economies of nations in Asia, Africa, and Latin America, which account for an estimated 85 per cent of global losses. Available data suggests that 11-26 million metric tonnes (MMTs) of annual fish catches result from illegal fishing. Additionally, 08-14 MMTs of unreported catches are potentially traded per year, generating gross revenues of USD 09-17 billion. The estimated annual economic loss to countries’ tax revenues ranges from USD 02-04 billion.<sup>2</sup>

In India, between 2003-04, an estimated 10-20 kg of fish were bartered by fishers for groceries and other commodities. A study revealed that unreported catches from both artisanal and industrial fishing were not accounted for in official catch statistics. In 2009, Indian authorities apprehended around 100 Sri Lankan tuna longliners. It was estimated that the Indian Government lost around USD 57 million (the current market value of one tuna vessel is approximately USD 57,631) from those 100 vessels, which were handed over to the flag State authorities after arrest.<sup>3</sup> Moreover, the recently released IUU Fishing Risk Index, 2023 lists India as the fourth ‘worst performing country’ with an IUU score of 2.97.<sup>4</sup> This underscores (i) the blatant violations of national laws and regulations that mandate fishers to retain onboard, record, and surrender surplus catch,<sup>5</sup> and (ii) the reason for India’s SDG 14 Index being stagnant during the period 2019-20.<sup>6</sup>

The primary reason for the increase in unreported and unregulated fishing in India, compared to 'illegal' fishing, is that the latter is explicitly prohibited under the national law, namely the Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act, 1981. Moreover, the vast coastline, dotted with numerous fishing villages, fish landing centres, harbours, and ports, creates hotspots for fishers to engage in unreported and unregulated fishing.<sup>7</sup> In 2022, the value of marine fish landings in mainland India was estimated to be more than INR 58,000 crores.<sup>8</sup> Last year, the total marine fish landings reported in the country were estimated to be around 3.5 million metric tonnes (increase in 1.2 per cent).<sup>9</sup> However, the lack of data on unreported fish landings in India each year highlights the inefficiency in monitoring, control, and surveillance (MCS) of fisheries infrastructure. This is further exacerbated by India's non-signature of the FAO's Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (PSMA), 2010.<sup>10</sup> It is also perplexing to note that while both India and the European Union have agreed to engage bilaterally on important matters, including the PSMA and other issues,<sup>11</sup> in a report prepared by TRAFFIC for the European Commission, in 2022, a total of 3,642 CITES-related seizures were reported, including seizures of coral, fisheries products, and marine mammals, among others.<sup>12</sup>

Despite the threat of unreported and unregulated fishing, and India being non-signatory to the PSMA, 2010, available data reveal that in 2022-23, India exported more than 1.7 million metric tonnes of fisheries products valued at INR 63,969.14 crore (an increase in 111.73 per cent). This enabled India to contribute around 8.92 per cent to global fish production. Of the 129 export nations, USA is the largest importer of fisheries products from India (around 32.52 per cent).<sup>13</sup> Additionally, the Marine Products Export Development Authority (MPEDA) has proposed a roadmap to increase marine exports to USD 14 billion by 2025.<sup>14</sup> These export numbers raise a plethora of questions regarding the value of unreported and unregulated fishing and its impact on India's economy.

This article, therefore, aims to provide feasible solutions for the Department of Fisheries to prevent, deter, and eliminate unreported and unregulated fishing, thereby reducing the loss of national revenue.

## IUU Fishing: Challenges in India

Meeting the targets under Sustainable Development Goal (SDG) 14 is crucial for India. However, in its effort to prevent, deter, and eliminate IUU fishing and promote sustainable harvesting of marine resources, India faces numerous challenges, including:

1. **Limitations in Monitoring and Surveillance.** India has an exceedingly high number of fishing villages, estimated to be around three thousand,<sup>15</sup> which creates significant challenges in monitoring fishing activities. Additionally, the use of traditionally built fishing crafts further hampers the ability of enforcement authorities to track these activities. Notably, most of these fishers engage in small-scale fishing or fishing for personal consumption, leading to an increase in unreported catches.
2. **Unregulated Fish Landing Centres.** One of the strategic priorities of the Pradhan Mantri Matsya Sampada Yojana (PMMSY) is to provide modern fishing harbours and landing centres.<sup>16</sup> In this context, an estimated investment of INR 2,477.96 crore was approved during 2021-23 for the development, upgradation, modernisation, and maintenance of fisheries infrastructure.<sup>17</sup> However, it is estimated that the number of non-geo-tagged fish landing centres, which are hotspots for landing unreported fish catches, remains exceedingly high compared to the geo-tagged centres. This disparity limits enforcement authorities' ability to control and monitor fishing activities effectively. Additionally, there is a discrepancy in the number of fish landing centres mentioned in the Fisheries Handbook 2023. The impact of unreported fish catches is further exacerbated by India's non-signature of the FAO's Port State Measures Agreement (PMSA), 2010, leading to failure in implementing effective port State control measures.
3. **Overexploitation by Foreign-flagged Fishing Vessels.** While India's national laws prohibit foreign-flagged fishing vessels from fishing within her maritime zones, activities in areas beyond national jurisdiction (ABNJ) remain beyond her control. For instance, the rapid increase in Chinese Distant Water Fishing Fleets (DWFFs) in unregulated areas, particularly in the squid fisheries of the northwest Indian Ocean (NWIO), pose significant threat to India's

fisheries sector. It is estimated that around 100,000 Chinese fishing vessels are actively engaged in fishing activities in this region.<sup>18</sup> Research indicates that these fishing vessels target not only squid but also tuna and other pelagic species. Indian enforcement authorities have reported instances of these vessels entering India's EEZ at night, turning off their AIS, and engaging in illegal fishing activities.<sup>19</sup> In 2019, during Cyclone Vayu, ten Chinese fishing vessels that sought 'emergency shelter' were found to be involved in illegal fishing operations within India's EEZ. Upon investigation, these boats were found to be equipped with 500,000 KW of LED lights for purse seine, squid jigging, and pelagic trawling, and some had banned fishing gear on board such as drifting gill nets, bottom trawl nets, and dolphin attracting devices.<sup>20</sup>

4. **Increase in Transhipments.** The impact of transshipment on fisheries and the global fish supply chain remains elusive. In exchange for fuel and other essential supplies, artisanal fishers often transfer their catch directly to refrigerated ships (reefers). Although the FAO's 'Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels' (Global Record) aims to increase transparency and traceability, its voluntary nature allows fishers to circumvent existing port control measures on IUU activities. In 2020, a study revealed that 416 reefers worldwide were using 'flags of convenience' to reduce costs and evade strict environmental and labour regulations.<sup>21</sup>
5. **Indian-flagged Vessels Listed by RFMOs for IUU fishing.** The combined IUU vessel list prepared by Trygg Mat Tracking (TMT) reveals that approximately seven Indian-flagged fishing vessels have been listed by various RFMOs for engaging in IUU fishing activities and violating specific RFMO regulations.<sup>22</sup>

## **IUU Fishing: Implications for India**

Unreported and unregulated fishing not only affect India's fisheries sector but also raise significant concerns about the conservation and protection of the marine

environment and biological diversity, including certain species protected under law. In a study conducted, it was revealed that, of the 135 fish stocks assessed in India, 4.4 per cent were subject to overfishing and 8.2 per cent were overfished.<sup>23</sup> The implications for India of unreported and unregulated fishing could include:

1. **Increase in Bycatch.** The unintentional capture of marine species, commonly known as bycatch, poses significant threats to the conservation of marine biological diversity.<sup>24</sup> Bycatch mainly occurs when fishing vessels fail to comply with the correct mesh size for the fishing net.<sup>25</sup> In India, while the MZI Act, 1981 (Section 2(b)), broadly defines ‘fish’ to include various marine species, the Indian Marine Fisheries Bill, 2021 (Section 3(d)), excludes marine mammals, reptiles, and sea birds from this definition. This exclusion exacerbates the implications of bycatch for India. A study from the early 1990s estimated that India’s total bycatch was 40,410 metric tonnes, with 32,420 discarded and 8,258 landed.<sup>26</sup> Additionally, it is estimated that around 56.3 per cent of the total catch of shrimp trawlers is bycatch.<sup>27</sup> The increase in bycatch is further aggravated by the non-compliance with the FAO’s ‘International Guidelines on Bycatch Management and Reduction of Discards’.<sup>28</sup>
2. **Increase in Discards.** Overfishing is considered as one of the reasons for increase in bycatch discards. As per the FAO data, between 1992-01, the discard rate in the IOTC area was significantly higher than in FAO Statistical Area 51 (western Indian Ocean) and Statistical Area 57 (eastern Indian Ocean).<sup>29</sup> Most marine fishery discards result from the dumping of bycatch overboard fishing vessels. Fishers also dump marine species to facilitate the illegal trade of certain prohibited items (shark fin trade).<sup>30</sup> Notably, Annex I of the London Protocol, 1996, provides a list of items that can be considered for dumping by nations, including ‘fish waste or material resulting from industrial processing operations’. The increase in discards not only impacts the marine environment but invariably impacts India’s fisheries sector.
3. **Increase in the Illegal Trade of Protected Species.** The global demand for certain species of marine biological diversity, driven by the desire for profit, perpetuates illegal trade. Between 2010-22, 17 incidents of illegal shark derivative seizures were reported in India. Of these, 82 per cent of

the seizures were shark fins, with the remainder constituting cartilage and teeth. Additionally, 35 per cent of seizures involved sea cucumbers, sea horses, pipefish, coral, and other marine species. Despite regulations under the Customs Act 1962 prohibiting trade of certain ‘prohibited items’, most of these seizures were destined for countries in East Asia and Southeast Asia.<sup>31</sup> Notably, most of the marine species caught for illegal trade are protected under India’s Wildlife Protection Act, 1972, which aligns with the CITES Convention, 1973. These species are often classified as vulnerable, endangered, or critically endangered by the IUCN.

4. **Violations of the Fishing Ban.** In 2022, the Ministry of Fisheries, Animal Husbandry and Dairying issued a ‘uniform fishing ban’ applicable within India’s EEZ, covering both the east coast (including Andaman and Nicobar Islands) and west coast (including Lakshadweep Islands). However, the notification contains a significant gap: ‘*traditional non-motorised units are exempted from this ban*’.<sup>32</sup> According to the available data, there are more than 54,000 non-motorised units in India.<sup>33</sup> Despite various state governments providing compensation and aid to fishers during the ban,<sup>34</sup> instances of fishers violating the ban persist across India’s vast coastline.<sup>35</sup> Enforcement authorities have apprehended fishers violating the ban and engaging in fishing within certain marine protected areas (MPAs).
5. **Absence of a ‘National Plan of Action on IUU Fishing’.** Section 9 of the Indian Marine Fisheries Bill, 2021, mandates the Central Government to notify a ‘National Plan of Action on IUU Fishing’ derived from the FAO’s IPOA-IUU (Regulation 25). However, to date, India does not have a national plan to prevent, deter and eliminate IUU fishing. Astonishingly, other nations, including Bangladesh, and Saint Kitts and Nevis, have already implemented their respective plans of action to address IUU fishing.<sup>36</sup>

## **The Indian Marine Fisheries Bill, 2021: Relevance**

While the MZI Act, 1981, is limited in its applicability within India’s EEZ, the Bill is an all-inclusive piece of legislation aimed at (i) preventing, deterring and eliminating IUU fishing both within India’s EEZ and on the high seas, and (ii) promoting the

conservation and sustainability of fisheries. In this context, the specific provisions of the Bill aim to:

1. Prohibit the use of destructive fishing practices, including the use of dynamite, poison or noxious substances, or any destructive methods (Section 13).
2. Prohibit the capture of juvenile fish in the EEZ or on the high seas by any person (Section 14).

The Bill has provided for an increase in penalties as a deterrent to IUU fishing. It imposes higher fines on foreign-flagged fishing vessels found fishing within India's EEZ (Section 30) and introduces penalties for such vessels violating regulations while transiting India's maritime zones (Section 30(ii)). Additionally, the Bill penalises Indian-flagged fishing vessels violating regulations both within the EEZ (Section 31) and on the high seas (Section 32). Notably, the Bill also incorporates relevant provisions from the MZI Act, 1981, among others. However, once the Bill becomes law, it will repeal the existing MZI Act, 1981 (Section 43).

### **Solutions to Counter Unreported and Unregulated Fishing**

Although the Bill, 2021 aims to address IUU fishing, to prevent the loss of national revenue from unreported and unregulated fishing, it is recommended that the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying consider the following solutions:

1. The Department of Fisheries should undertake a project to identify the fish landing centres, both non-geo-tagged and geo-tagged, along India's vast coastline. The NMF could actively contribute to this endeavour.
2. The NMF could actively contribute to the drafting of a 'National Plan of Action on IUU Fishing', as mandated by the Indian Marine Fisheries Bill, 2021.
3. Enhance MCS across fisheries infrastructure and onboard fishing vessels using advanced technology, including AI, to effectively track fishing activities and ensure sustainable harvesting of marine resources. Special budgetary allocations under PMMSY can be made for the same.

4. Promote the Lifestyle for the Environment (LiFE) concept in fisheries to prevent overfishing and ensure the sustainability of marine fisheries.

## Way Forward

While the impact of unreported and unregulated fishing on India's national revenue remains unknown, the broader implications are significant. To address the looming threat of IUU fishing and make progress towards achieving SDG 14, the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying should consider the solutions mentioned herewith. India could also consider acceding to the FAO's Port State Measures Agreement, 2010, to enhance MCS and effectively implement port State control measures to reduce bycatch and landings of unreported fish catch. Additionally, it is also crucial for the Indian Marine Fisheries Bill, 2021, to come into force for the effective application of its provisions to curb IUU fishing within India's EEZ and on the high seas, thereby promoting the sustainable harvesting of marine resources. It is also necessary to collate data on the number of unreported fish landings along India's vast coastline to assess the loss of national revenue from unreported and unregulated fishing.

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# Examining India's Rationale for Non-Accession: Cape Town Agreement, 2012

(Agreement on Safety of Fishing Vessels)

*Mr John J Vachaparambil*

*“Further transformation is required to address the challenges in fisheries and aquaculture to safeguard the livelihoods and to ensure sustainability in fisheries.”<sup>1</sup>*

— Qu Dongyu, Director General,  
Food and Agriculture Organisation (FAO)

On 03 June 2024, Mrs Rekha Karthikeyan, India's only deep-sea fisherwoman, lost her livelihood when her fishing boat capsized after encountering strong waves while coming ashore. Another fishing boat in the vicinity rescued them. Efforts by the Indian Coast Guard (ICG) to retrieve her capsized boat failed, and it sank. The estimated loss incurred by Mrs Rekha is around INR 6 lakhs.<sup>2</sup>

This incident is not the first of its kind. Recent Maritime Search and Rescue (SAR) cases reveal several incidents involving Indian fishing boats (IFBs),<sup>3</sup> raising concerns about safety at sea and occupational health in fisheries.

According to the IMO, fishing is considered to be the most dangerous profession worldwide, with an estimated 80 lives lost per 100,000 fishers. With the global number of fishing vessels now reaching approximately 4.6 million compared to 4.1 million in 2020,<sup>4</sup> there is an increase in the number of people engaged in marine fisheries. In 2022, about 61.8 million people were employed in the primary sector of fisheries, with 54 per cent specifically engaged in marine fisheries.<sup>5</sup>

It is estimated that 85 per cent of fisheries employment is generated in Asia, followed by Africa with 10 per cent, Latin America and the Caribbean with 04 per

cent, and Europe, Oceania, and North America combined accounting for 01 per cent.<sup>6</sup> Despite this, safety at sea and occupational health in fisheries are not adequately addressed globally. Many nations have not ratified international conventions governing the safety of fishing vessels, including the Cape Town Agreement, 2012 (CTA),<sup>7</sup> thereby compromising the minimum safety standards required onboard fishing vessels worldwide. The CTA is applicable to vessels greater than 24 metres in length, and it is estimated that nearly such 64,000 vessels engaged in fishing are operating on the high seas.<sup>8</sup>

The increase in number of fishing vessels and persons engaged in fishing can also be linked to the global increase in seafood consumption, being a potential source of protein. This has also resulted in fishers spending more days at sea.<sup>9</sup> In 2022, approximately 89 per cent of global fisheries and aquaculture production was used for direct human consumption, at a rate of 20.7 kg per capita. The potential increase in per capita consumption of seafood is also linked to the projected increase in the global population.<sup>10</sup> In India, annual per capita fish consumption increased from 7.43 to 12.33 kg, an increase of 4.9kg (66 per cent).<sup>11</sup>

Furthermore, the estimated total population of fishermen in India, for the period 2019-20 exceeded 20 million, with over 4.9 million engaged in marine fisheries and an estimated 64,000 or more engaged in deep-sea fishing.<sup>12</sup> These numbers, combined with challenges including (i) use of sub-standard fishing boats by fishers; (ii) lack of minimum safety gear and equipment onboard fishing vessels/boats; and (iii) insufficient safety inspections by fisheries authorities, leads to an increase in SAR incidents involving IFBs.

According to a report, Mrs Rekha's boat, which capsized and sank on 03 June 2024, was devoid of minimum safety gear (Fig.1 refers).<sup>13</sup> It is perplexing that while the fisheries authorities denied her a fishing license, the Central Marine Fisheries Research Institute (CMFRI) intervened and issued her one for deep-sea fishing.

These issues are exacerbated by India's decision not to accede to the Cape Town Agreement, 2012. While the official reasons remain undisclosed to the public, this article aims to assess India's rationale for non-accession to the CTA, 2012. Additionally, the article also aims to improve the safety of fishing vessels in the Indian Ocean Region (IOR) under India's SAGAR policy.

Figure 1. Mrs Rekha on her fishing boat



Source: Down to Earth

## Indian Fishing Boats (IFBs) – Recent SAR Cases

In 2001, India ratified the International Convention on Maritime Search and Rescue (SAR). The Indian Coast Guard (ICG) is responsible for coordinating SAR Ops. in the Indian Search and Rescue Region (ISRR).<sup>14</sup> Among the numerous SAR cases, the following incidents specifically involve Indian fishing boats (Table 1 refers).<sup>15</sup>

Table 1: Recent SAR cases involving Indian Fishing Boats (IFBs)

Sl. No	Indian Fishing Boat (IFB)	Date of Incident	Reason for SAR
1	IFB MV Tiger (IND-AN-SA-MO-354)	23 Feb 2024	Loss of propulsion due to engine failure
2	IFB Vaazhivin Manna (IND-TN-15-MM-1816)	23 Feb 2024	Loss of propulsion due to engine failure
3	IFB Akash (IND-TN-15-MM-5661)	23 Feb 2024	Loss of propulsion due to engine failure
4	IFB Harish Fishing (IND-AN-SA-MM-995)	25 Feb 2024	Engine failure
5	IFB Ajmeer-I	20 Mar 2024	Flooding onboard
6	IFB Prem Sagar (IND-GJ-25-MM-1278)	24 Mar 2024	Flooding onboard

Source: Compiled by Author from Indian Coast Guard, “SAR Incident – Maritime Search and Rescue Cases”

## India's Rationale for Non-Accession

India's official reasons for not acceding to international treaties remain undisclosed to the public, and the same applies to the Cape Town Agreement, 2012. Possible rationales for India's non-accession to CTA 2012 could include:

1. **Application of Customary International Law (CIL).** Article 253 of the Constitution of India stipulates that an act of Parliament is necessary to incorporate aspects of international treaty law into India's municipal law. However, the Hon'ble Supreme Court has reiterated in certain cases that CIL, which is not contrary to municipal law, shall be deemed incorporated into India's domestic law,<sup>16</sup> including international treaties that India has not signed. In this context, the DG Shipping, Ministry of Ports, Shipping, and Waterways, Government of India, mentions that the provisions of the Torremolinos International Convention on Safety of Fishing Vessels, 1977 (which predates CTA 2012), are taken into consideration while approving technical plans for constructing new fishing vessels.<sup>17</sup>
2. **Existing National Laws and Regulations on Safety of Fishing Vessels.** Specific laws and regulations in India govern safety standards for fishing boats. These laws aim to ensure the safety of Indian fishermen and fishing vessels, emphasising the importance of compliance to mitigate risks and enhance maritime safety and security. These include:
  - i. **Merchant Shipping Act, 1958.** The 1982 amendment inserted Part XVA into the Act, which includes various safety provisions applicable to Indian fishing boats.<sup>18</sup> The Act requires every fishing boat to have a valid certificate of inspection detailing required safety equipment and appliances, and assessing the condition of the hull, rigging, equipment, and machinery. No Indian fishing boat can set sail without this certificate. Additionally, a surveyor, registrar, or officer is appointed to undertake safety inspections onboard an IFB. If safety standards are not met during the inspection, a notice is issued prohibiting the IFB from proceeding to sea.<sup>19</sup>
  - ii. **Merchant Shipping (Indian Fishing Boats Inspection) Rules, 1988.** Promulgated on 12 September 1988 via extraordinary notification G.S.R.

922(E), these Rules mandate the inspection of Indian fishing boats. Regulation 6(1) outlines the areas to be inspected with respect to fishing vessels. Additionally, Regulation 6(3) stipulates that every IFB must undergo inspection to verify the presence of life-saving equipment, fire safety appliances, lights, shapes, and sound signals.<sup>20</sup>

- iii. **Indian Marine Fisheries Bill, 2021.** The Bill aims to enhance the livelihood and socio-economic well-being of traditional and small-scale fishers. In this context, Section 8 specifies that the Central Government, in consultation with the State Governments, shall establish a system of MCS to support fisheries management and ensure the safety and security of fishing vessels and fishers at sea. The legislation also mandates the promulgation of MCS measures tailored for various classes or categories of fishing vessels and their respective areas of operation. Additionally, it also requires every fisherman and crew member onboard a fishing vessel to carry a valid proof of their identity.<sup>21</sup>
  - iv. **Draft Guidelines for Regulation of Fishing by Indian-flagged Fishing Vessels on the High Seas, 2022.** Promulgated on 30 August 2022, these guidelines apply specifically to Indian-flagged fishing vessels operating on the high seas.<sup>22</sup> Regulation 17 stipulates that operators must ensure their vessels carry essential safety, security, and communication equipment, including: (i) Automatic Identification System (AIS); (ii) Satellite-based Vessel Monitoring System (VMS); (iii) Distress Alert Transmitter (DATs); (iv) Emergency Position Indicating Radio Beacon (EPIRB); (v) Life buoys; (vi) Life jackets – 150 per cent of the authorised crew; and (vii) 25 watts VHF radio/satellite-voice communication. Similarly, Regulation 19 mandates that operators maintain the fishing vessel in seaworthy condition and ensure both the vessel and crew are adequately insured.<sup>23</sup>
3. **Insurance Scheme for Fishers under PMMSY.** Under the Pradhan Mantri Matsya Sampada Yojana (PMMSY), over 2.9 million fishers were insured under the ‘Group Accident Insurance Scheme’ during the period 2021-22. By 2022-23, this number had risen to more than 3.3 million.<sup>24</sup>

4. **Exemptions under CTA 2012.** If a nation believes that its fishing vessels fall under the ‘exemptions’ outlined in Chapter I, Regulation 3 of the Annex to the Agreement, then the provisions of the CTA 2012 do not apply to such vessels. India’s DG Shipping specifies that very few fishing vessels in the nation fall under the ambit of the Torremolinos International Convention on Safety of Fishing Vessels, 1977, which predates the CTA 2012.<sup>25</sup>

### **Accession to CTA: Challenges for India**

While India has not yet acceded to the CTA 2012, it remains a possibility for the future. The provisions of the CTA 2012 specifically apply to fishing vessels of 24 metres in length and above that are authorised to operate on the high seas. However, India will face certain challenges if it decides to accede to the Agreement, including:

1. **Discrepancy in Fishing Vessel Data.** For India to accede to the CTA 2012, it must deposit the number of fishing vessels measuring 24 metres in length and above that are authorised to operate on the high seas with the Depository (IMO Secretary General).<sup>26</sup> However, there is a discrepancy in the data available for the total number of fishing vessels in India. Under the Blue Revolution Scheme for 2015-16 to 2019-20, sanctions were given to construct 832 deep-sea fishing vessels (24m L<sub>OA</sub> and above) under the PPP mode.<sup>27</sup> However, under the PMMSY, the Government plans to upgrade 1,172 existing fishing vessels and acquire 463 new deep-sea fishing vessels.<sup>28</sup> Conversely, under the Pradhan Mantri Gati Shakti National Master Plan (PMGS-NMP), only 527 existing fishing vessels were considered for upgradation.<sup>29</sup> Additionally, according to the Marine Products Export Development Authority (MPEDA), India has a total of 254,457 fishing vessels (including the number of motorised non-mechanical, motorised mechanical, and non-motorised vessels).<sup>30</sup> However, a 2016 training manual released by the CMFRI mentions that the total number of fishing vessels in India is estimated to be around 166,333 (inclusive of various categories).<sup>31</sup>
2. **Limited Applicability of the Agreement.** The absence of data on India’s fishing vessels measuring 24m in length and above operating on the high seas presents another challenge. Moreover, past trends in fishing vessel

construction in India highlight the limited applicability of the CTA 2012. For instance, on 19 February 2019, the Indian Council of Agriculture Research-Central Institute of Fisheries Technology (ICAR-CIFT) signed an MoU with Cochin Shipyard Limited to provide technical consultancy for designing a 22.50m-long liner cum gillnetter. Similarly, the Government of India has entrusted the ICAR-CIFT with making technical specifications for a 22-23m-long liner cum gillnetter.<sup>32</sup> Additionally, a study reported that the majority of fishing vessels operating in the mechanised sector in India measure between 8.5 and 21m L<sub>OA</sub>.<sup>33</sup>

## Safety of Fishing Vessels: Challenges for India

In addition to the accession challenges for India, there are other challenges that raise concerns about safety at sea and occupational health in fisheries –

1. **Increase in ‘Dark Shipping’.** While ‘Dark Shipping’, or switching off the AIS onboard vessels, consistently creates gaps in acquiring current vessel position, fishing vessels switching off AIS can, in the event of distress, place constant strain on SAR capacities and capabilities, leading to delayed responses and potential loss of life at sea.
2. **Lack of Adequate Inspections.** The lack of adequate inspections by fisheries authorities of Indian-flagged fishing vessels is a significant concern for the safety of fishers. This gap leads to an increase in the use of sub-standard fishing vessels and a lack of adequate safety and communication equipment onboard fishing vessels. These issues are further exacerbated by gaps in the licensing regime for fishing activities in India.<sup>34</sup>

## Recommendations

1. **International Level:**
  - i. **Establishing a Regional Agreement.** The increasing number of SAR incidents in the IOR involving fishing boats/vessels under various flags

highlights the need for a 'Regional Agreement on Improving Safety of Fishers at Sea' between India and its littorals. India could take the lead in this initiative under its vision of Security and Growth for All in the Region (SAGAR).

- ii. **Creating a Regional SOP.** As the nodal agency for SAR Ops. in the Indian Search and Rescue Region (ISRR), the Indian Coast Guard could establish a regional SOP with agencies in the littorals for conducting SAR Ops. involving fishing vessels, regardless of their flag.

## 2. National Level:

- i. Expedite the approval of the Indian Marine Fisheries Bill, 2021, to improve the safety of Indian-flagged fishing vessels operating both within the EEZ and on the high seas.
- ii. Expedite the approval of the 'Draft Guidelines for Regulation of Fishing by Indian-flagged Fishing Vessels on the High Seas', 2022, to improve safety standards onboard Indian-flagged fishing vessels operating on the high seas.
- iii. Strict enforcement of existing national laws and regulations on the safety of fishing vessels, combined with appropriate penalties, would act as deterrent and ensure that fishers comply with minimum safety requirements onboard.
- iv. Ensure adequate safety inspections of Indian fishing boats by fisheries authorities to ensure the IFBs are in seaworthy condition and compliance with safety norms.
- v. Ensure that Indian fishing vessels' crew are well-versed the contents of the 'SEA SAFETY AND NAVIGATION' handbook provided by the NETFISH-MPEDA, under the Ministry of Commerce and Industry, Government of India.
- vi. Create an open-source database that categorises the total number of Indian-flagged fishing vessels by size ( $L_{OA}$ ) and type. This database will facilitate further research on the safety of fishers at sea.

## Conclusion

While the CTA 2012 has not yet entered into force, India's accession to it is imperative to enhance the safety standards of its fishing vessels and ensure the well-being of its fishers. Acceding to the CTA 2012 would position India as a leader in promoting safer, more sustainable fishing practices in the IOR, reinforcing its vision of SAGAR. Additionally, it would set a benchmark for maritime safety in the global fishing community, which is currently dominated by the EU. Alternatively, India could incorporate the provisions of the CTA 2012 into its national laws and regulations on fishing vessel safety and ensure strict compliance in the construction of new fishing vessels.

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## About the Author

Mr John J Vachaparambil is an Associate Fellow at the National Maritime Foundation and meaningfully contributes to the Foundation's 'Public International Maritime Law' (PIML) cluster. His current research focuses on the legal aspects of IUU fishing and the conservation of the marine biological diversity of areas beyond national jurisdiction (BBNJ). He may be contacted at [law5.nmf@gmail.com](mailto:law5.nmf@gmail.com).

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**See Also:** A ‘fishing vessel’ as per the Torremolinos Convention, 1977, means any vessel used commercially for catching fish, whales, seals, walrus, or other living resources of the sea

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**See Also:** Fish is also known as ‘brain food’, supports brain development and function, enhancing cognitive abilities. Consuming fish reduces risks of heart attacks and strokes

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